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Highlights

In this issue

Who contributes to RRSPs? A re-examination

- In 1999, 44.8% of men aged 25 to 64 with RRSP room made an RRSP normal contribution, compared with 37.6% of women. However, men also had higher incomes than women had. When men's and women's RRSP participation rates were compared within the same income brackets, women had higher rates in every bracket.

- RRSP participation rates were highest for people aged 45 to 54, also the age group with the highest incomes. When comparisons were made within the same income brackets, persons aged 45 to 54 had the highest participation rate only at incomes below $30,000. At higher incomes, 25 to 34 year-olds had the highest participation rate.

- People with an employer-sponsored pension plan had a higher RRSP participation rate—and higher incomes—than people without such a plan. However, comparing within the same income brackets, those with pensions had higher participation rates only at incomes below $30,000. At higher incomes, people without pension plans were the more likely contributors.

Liberal arts degrees and the labour market

- Wage rates for applied programs graduates were about 6% higher than for humanities and social sciences graduates for both men and women. However, this wage advantage declined with age and actually reversed for those 45 and older.

- From January 1993 to December 1997, the humanities and social sciences group averaged over one week more of unemployment than the applied programs graduates did. The difference was almost entirely due to higher unemployment among humanities and social sciences men.

- The average number of job transitions during the five-year period was comparable, with the humanities and social sciences group recording slightly higher overall transition rates for both sexes.

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Who contributes to RRSPs? A re-examination

Boris Palameta

REGISTERED RETIREMENT SAVINGS PLANS (RRSPs) are one of the most important financial assets of Canadians[1] (Statistics Canada, 2001a). Previous studies have established that RRSP participation rates are heavily influenced by income, but other potentially important factors—such as sex, age, and membership in an employer-sponsored pension plan—have not been investigated thoroughly. For example, although men on average participate at higher rates than women, they also typically have higher incomes. Hence, they may be more likely than women to contribute to an RRSP simply because they have a greater capacity to do so. Indeed, at equal income levels, women are more likely to contribute (Statistics Canada, 1999).

It is useful to distinguish between capacity to contribute and incentive to contribute—one does not necessarily imply the other. For instance, members of an employer-sponsored pension plan—identified by the presence of a pension adjustment (PA) on their tax forms—are about twice as likely as those with no pension coverage to contribute to an RRSP (Akyeampong, 1999; Statistics Canada, 1999). Although having an employer-sponsored pension plan is associated with high income, and therefore a high capacity to contribute, it is not clear that this would encourage RRSP contributions. In fact, having a PA may actually discourage contributions for two reasons: a pension guarantees retirement savings, even in the absence of an RRSP; and, a PA decreases the amount of tax-deductible income that can be used to purchase an RRSP (RRSP room). People with no pension coverage might in fact participate at higher rates than those with PAs, were their capacities to contribute the same.

RRSP participation rates also increase with age, up to age 54 (Akyeampong, 2000; Statistics Canada, 1999). However, income also increases with age. This begs the question: do older people participate at higher rates simply because they have a greater capacity to do so, or because they have a greater incentive?

This paper uses 1999 tax data (the most recent year that was available) to investigate the effects of sex, pension coverage and age on RRSP participation (see *Data source and definitions*). Comparisons between men and women, between those with and without PAs, and between different age groups are made at various income levels. The analysis is restricted to taxfilers aged 25 to 64 that had RRSP room in 1999.[2] The amounts contributed are not examined.

Women participate at higher rates than men

In 1999, some 44.8% of men aged 25 to 64 with RRSP room made an RRSP normal contribution, compared with 37.6% of women.[3] However, men also had higher incomes—only 25.7% had annual incomes below $20,000, compared with 47.2% of women; 42.5% had annual incomes of $40,000 or more, compared with only 19.5% of women.

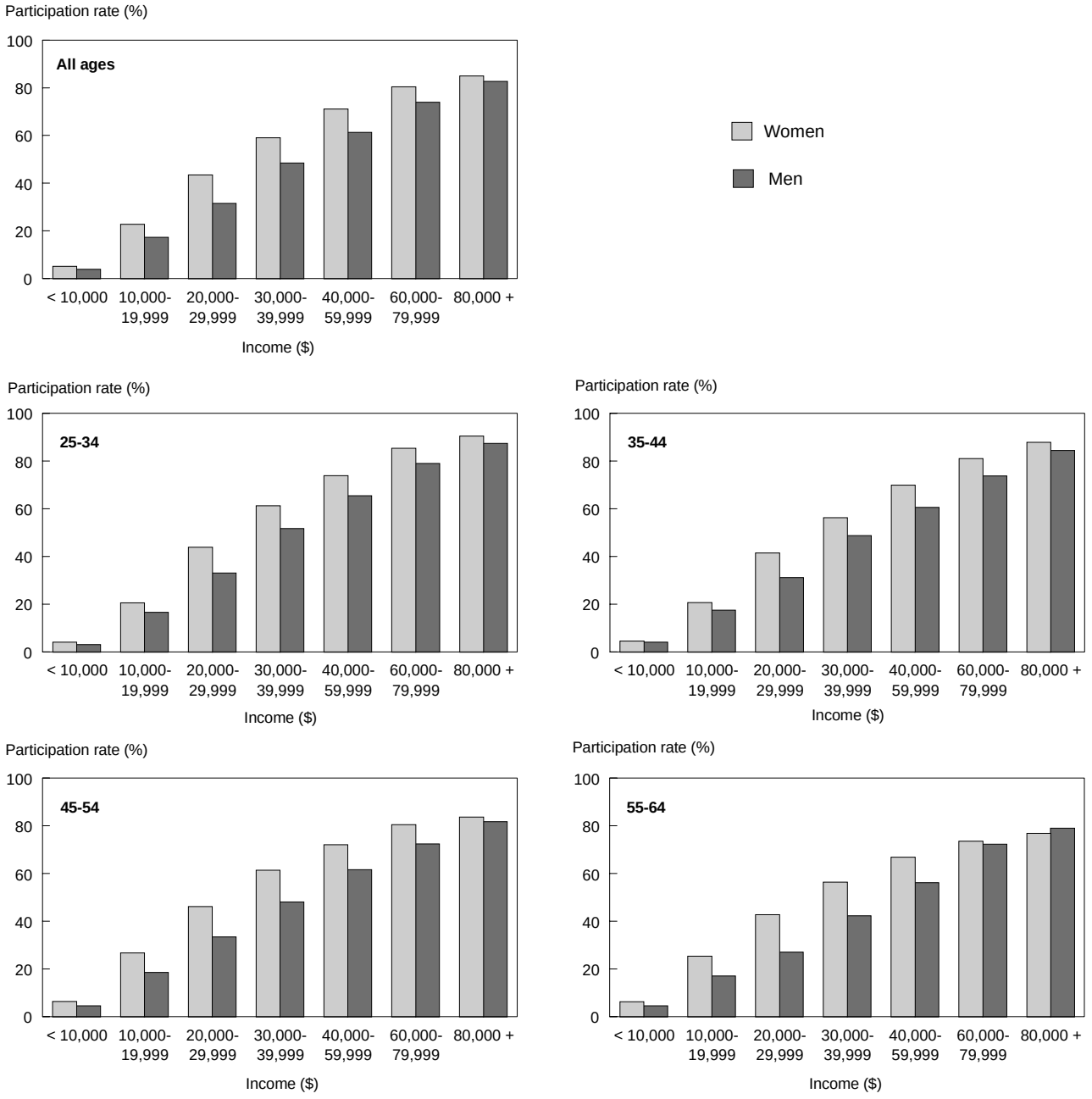
Men have a greater capacity to contribute than women do, but the playing field can be levelled by comparing men's and women's participation rates within the same income bracket. Women's participation rates were in fact higher in every income bracket (Chart A). And the pattern held when either age or PA status was factored in.[4]

For all age groups, women's participation rates exceeded men's in every income bracket, except 55 to 64 year-olds with incomes of $80,000 or more.

Women with PAs participated at higher rates than men with PAs in every income bracket (Chart B). Women without PAs also participated at higher rates than men without PAs, except those with incomes of $80,000 or more.

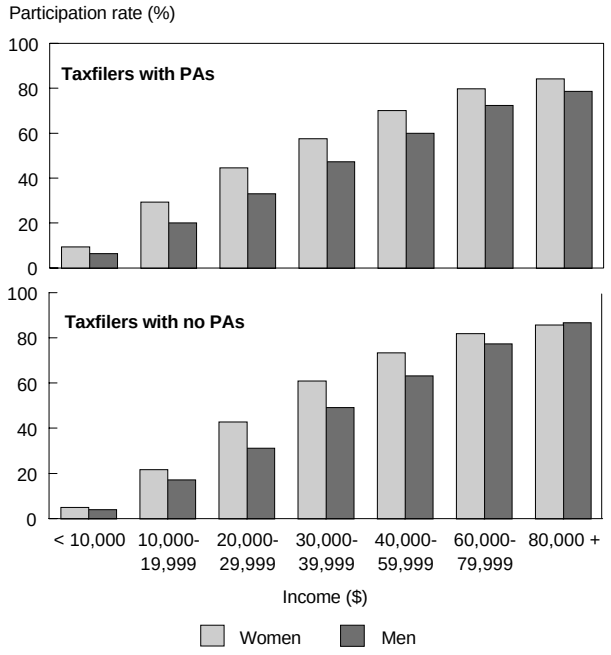
Boris Palameta is with the Labour and Household Surveys Analysis Division. He can be reached at (613) 951-2124 or boris.palameta@statcan.ca.

Chart A: Women participated in RRSPs at higher rates than men, in all income brackets.



Source: PA/RRSP file, 1999

Chart B: With PAs or not, women participated in RRSPs at higher rates than men.



Source: PA/RRSP file, 1999

Participation rates do not always increase with age

RRSP participation and income were both highest for people aged 45 to 54 (Table). Again, it is no surprise that the highest participation rate occurred at the age when people have the highest capacity to contribute.

Table: RRSP participation and income, by age, 1999

	RRSP participation	Income	
		< $20,000	$40,000 +
		%	
25 to 34	37.6	41.5	21.8
35 to 44	42.1	33.9	33.8
45 to 54	46.3	31.6	38.8
55 to 64	37.5	39.8	29.2

Source: PA/RRSP file

When capacity to contribute was held constant by comparing age groups within the same income brackets, a somewhat different result emerged. Persons 45 to 54 had the highest participation rate at incomes less than $30,000. However, at incomes of $30,000 or more, 25 to 34 year-olds had the highest participation rate (Chart C).

A similar pattern emerged when age groups were split by sex or PA status. Men and women 25 to 34 participated at higher rates than their older counterparts in high income brackets.

Among people with PAs, the highest participation rate was found among 55 to 64 year-olds in low income brackets, and 25 to 34 year-olds in high income brackets. For those without PAs, 45 to 54 year-olds had the highest participation rate in low income brackets. In the two highest income brackets, 25 to 34 and 35 to 44 year-olds were virtually tied for highest participation rate.

Having a PA is associated with a higher participation rate only at low incomes

People with a PA had a higher RRSP participation rate than people without a PA—58.2% compared with 33.1%. However, the majority (57.3%) of people with a PA had annual incomes of $40,000 or more, while the majority (50.3%) of those with no PA had incomes less than $20,000.

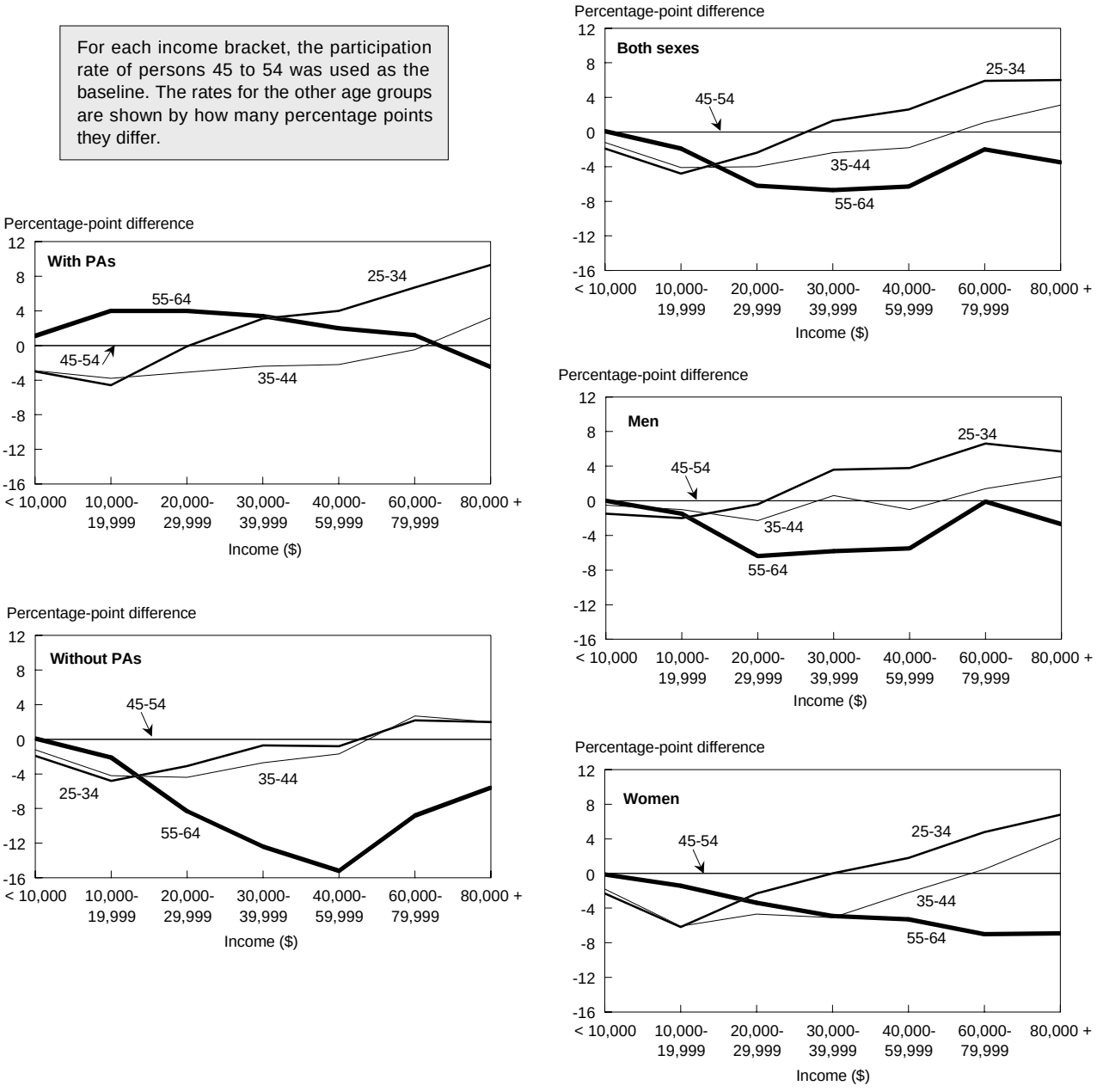
If people with no PA had the same capacity to contribute as people with a PA, would their participation rates still be lower? In fact, people with PAs had higher participation rates only at incomes below $30,000—at higher incomes, those without PAs were the more likely contributors (Chart D). This result held for both men and women and for most age groups (Chart E). An exception occurred for those 55 to 64, where having a PA was associated with greater likelihood of contribution in all income brackets except the highest.

Summary

This paper shows that in order to more meaningfully assess how factors such as sex, age, and pension coverage influence RRSP participation rates, one must control for the effects of income. Overall, men participate at higher rates than women, older people participate at higher rates than young people, and people with PAs participate at higher rates than people

Chart C: At high incomes, younger persons had higher participation rates.

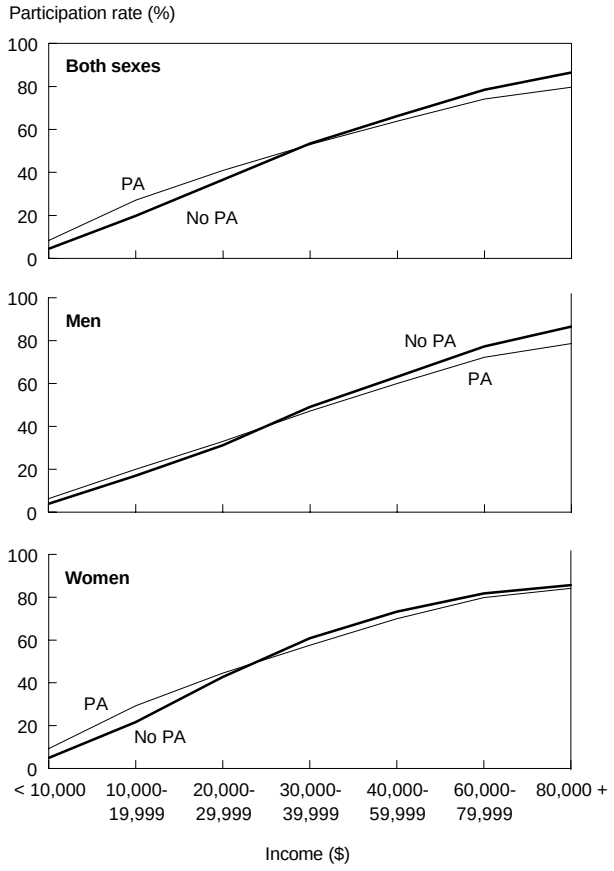
For each income bracket, the participation rate of persons 45 to 54 was used as the baseline. The rates for the other age groups are shown by how many percentage points they differ.



Source: PA/RRSP file, 1999

without PAs. However, these results are largely attributable to income differences among the groups being compared. When comparisons were made at equal income levels, women, young people, and people without PAs had the higher participation rates in most cases. Further investigation is needed to shed light on exactly why these groups may have greater incentive to participate in RRSPs.

Chart D: At incomes above $30,000, people without PAs had higher participation rates.



Source: PA/RRSP file, 1999

Data source and definitions

This analysis complements the findings released in *Retirement Savings Through RPPs and RRSPs, 1999* (Statistics Canada, 2001b). The data originate from the PA/RRSP file, a longitudinal file on the retirement savings behaviour of each taxfiler since 1991. The analysis is limited to 1999 and uses a 2% sample of all taxfilers. Although some of the differences shown in this article are quite small, they are confirmed by the full file.

Income: total income as reported on line 150 of the T1 income tax form. It includes income from all sources, less losses from rental property and self-employment.

Earned income: the portion of total income that is used to determine RRSP room. It includes employment and self-employment income, business and rental income, and disability payments (less employment expenses such as union dues, and business and rental losses).

Pension adjustment (PA): For taxfilers whose employers provide a company pension plan, a PA is calculated according to a formula prescribed by the Canada Customs and Revenue Agency. The PA varies according to the amount contributed to the pension plan by the employer and the employee. The PA must be deducted from RRSP room. The PA deduction allows people without an employer-sponsored pension plan to make higher RRSP contributions than people with the same income whose employer provides a pension plan. For a small number of high-earning employees, the PA is high enough to wipe out their RRSP room entirely—these individuals are excluded from the study.

RRSP normal contribution: a contribution made within the limit set by the taxfiler's current RRSP room. In rare cases, such as some retiring allowance rollovers, taxfilers are permitted to make contributions that exceed their current RRSP room. Such contributions are excluded from this analysis.

RRSP participation rate: the percentage of taxfilers with RRSP room who make an RRSP normal contribution.

RRSP room: the maximum RRSP contribution that can be deducted from income (for income tax purposes). RRSP room increases with earned income. The maximum allowable annual new room is either a dollar amount or 18% of earned income, whichever is lower. In 1999, the dollar amount was $13,500. For those with an employer-sponsored pension plan, new room is reduced by the amount of the pension adjustment. Since 1991, any unused room can be carried over for use in subsequent years.

Notes

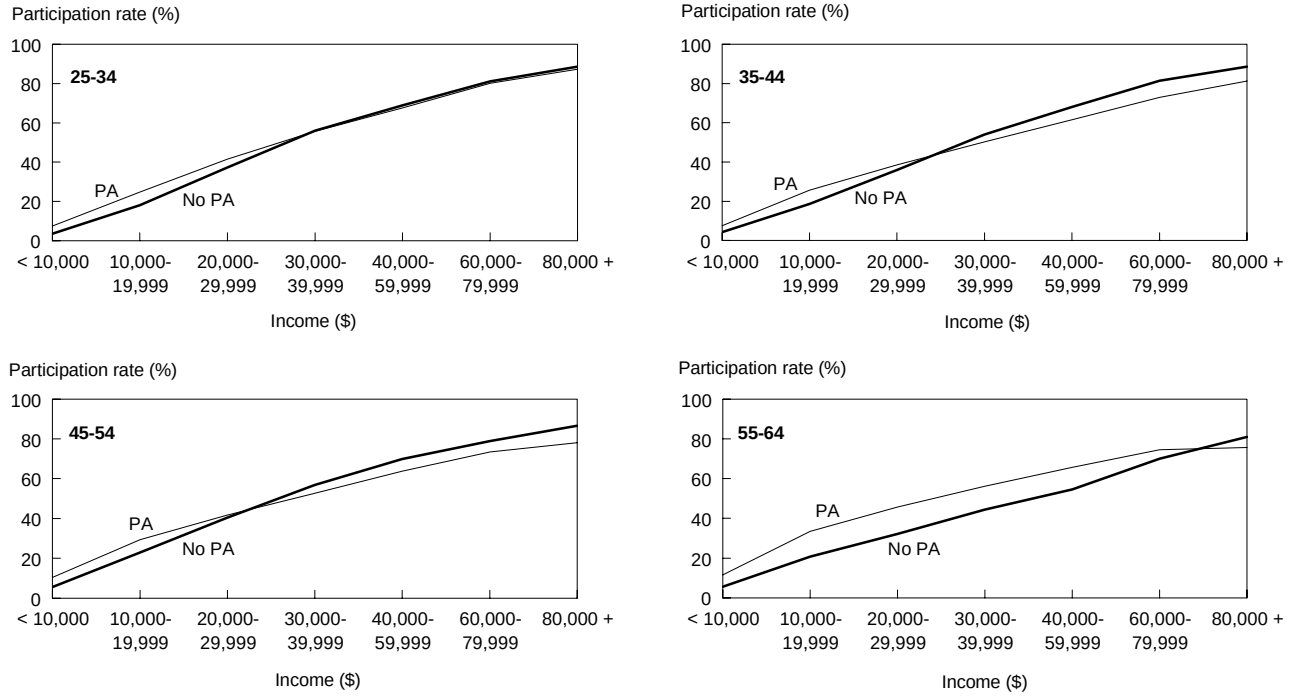
1 RRSPs constitute 40% of total *financial* assets of Canadians, outstripping other savings instruments such as deposits in financial institutions, non-registered mutual funds, stocks, and bonds. The value of employer-sponsored pension plans was *not* included in the calculation of assets.

2 People under 25 were excluded because many of them have not yet completed a transition into the labour force, while many people 65 and over have already retired.

3 In some cases, these may be spousal RRSPs, where contributions are claimed as a deduction by one spouse but are credited to the other spouse's RRSP. The PA/RRSP file does not identify these situations.

4 Comparisons that split men and women according to income, age, *and* PA status are not shown, because in many cases aggregates were too small to ensure accurate results. For example, among persons 55 to 64 in the 2% sample, only 86 women and 36 men had PAs and incomes less than $10,000.

Chart E: Except among 55 to 64 year-olds, those without PAs had higher participation rates at incomes of $30,000 or more.



Source: PA/RRSP file, 1999

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Appendix: RRSP participation rates, 1999

Income	All ages			25 - 34			35 - 44			45 - 54			55 - 64		
	Both sexes	Women	Men	Both sexes	Women	Men	Both sexes	Women	Men	Both sexes	Women	Men	Both sexes	Women	Men
								%							
All taxfilers															
< $10,000	4.7	5.1	3.9	3.7	4.0	3.0	4.4	4.5	4.0	5.6	6.3	4.5	5.7	6.2	4.5
$10,000 - 19,999	20.6	22.7	17.3	18.8	20.5	16.5	19.5	20.6	17.5	23.6	26.7	18.5	21.7	25.3	17.0
$20,000 - 29,999	37.9	43.4	31.5	38.4	43.8	33.0	36.8	41.4	31.1	40.8	46.1	33.4	34.6	42.7	27.0
$30,000 - 39,999	53.3	59.0	48.4	56.0	61.3	51.7	52.3	56.2	48.7	54.7	61.3	48.1	48.0	56.4	42.3
$40,000 - 59,999	64.8	71.1	61.3	68.3	73.9	65.4	63.9	69.9	60.6	65.7	72.1	61.6	59.4	66.8	56.1
$60,000 - 79,999	75.6	80.4	73.9	80.5	85.3	79.0	75.7	81.0	73.8	74.6	80.5	72.4	72.6	73.5	72.3
$80,000 +	83.1	85.0	82.7	88.1	90.5	87.4	85.2	87.8	84.5	82.1	83.7	81.7	78.6	76.8	79.0
With a PA															
< $10,000	8.4	9.3	6.3	7.4			7.5			10.4			11.5		
$10,000 - 19,999	27.1	29.3	20.0	24.8			25.6			29.4			33.4		
$20,000 - 29,999	41.0	44.5	33.0	41.6			38.6			41.7			45.7		
$30,000 - 39,999	53.0	57.5	47.2	55.8	*	*	50.3	*	*	52.7	*	*	56.1	*	*
$40,000 - 59,999	63.9	70.0	60.0	67.7			61.5			63.7			65.7		
$60,000 - 79,999	74.2	79.8	72.3	80.1			72.9			73.4			74.6		
$80,000 +	79.6	84.1	78.6	87.4			81.3			78.1			75.6		
Without a PA															
< $10,000	4.6	4.9	3.9	3.6			4.3			5.5			5.6		
$10,000 - 19,999	19.8	21.7	17.1	18.1			18.7			22.9			20.8		
$20,000 - 29,999	36.7	42.8	31.2	37.3			36.0			40.4			32.1		
$30,000 - 39,999	53.5	60.8	49.1	56.1	*	*	54.1	*	*	56.8	*	*	44.4	*	*
$40,000 - 59,999	66.2	73.3	63.1	69.0			68.1			69.8			54.6		
$60,000 - 79,999	78.4	81.8	77.3	81.0			81.5			78.8			70.0		
$80,000 +	86.4	85.7	86.6	88.6			88.6			86.6			81.0		

Source: PA/RRSP file
Note: The overall RRSP participation rate in 1999 was 41.3%.
** See note 4.*

Liberal arts degrees and the labour market

Philip Giles and Torben Drewes

THE PERCEPTION OF TECHNOLOGY as a principal driver in economic change and widely publicized reports of skill shortages in the information technology sector have focused attention on the ability of the postsecondary sector to produce graduates in advanced technology fields. Within this context, a debate has emerged about the labour market value of the traditional liberal arts and science programming that has been a mainstay of universities.

In one view, future economic growth is jeopardized by the failure of Canadian universities to supply sufficient numbers of technically skilled graduates. Typically, the argument is not that university enrolment is too low but, rather, that the program balance is incorrect. In 1998, approximately 39% of university degrees granted were in social sciences while only 7% were in engineering and applied sciences. Twice as many degrees were granted in the humanities (12%) as in mathematics and physical sciences (6%).

In the alternative view, postsecondary education should not be judged solely on its ability to prepare students for the labour market—but even if it is, graduates in humanities and social sciences possess the problem-solving, interpersonal, communications, and learning skills that employers claim are needed in the emerging economy.

Because universities are a primary source of highly skilled labour, graduating almost 150,000 people annually, the match between their enrolment patterns and the needs of the labour market is important—not only for the economy, but also for the graduates. With $12.1 billion spent in 1997-1998 in the university system, a mismatch between labour market requirements and enrolment patterns may result in a significant efficiency loss. By the same token, a similar loss may occur if universities respond to the increasing use of program-specific funding incentives by provinces and alter a program mix that is already well-matched to labour market needs.

Surprisingly little empirical evidence is available on the relative labour market performance of university graduates from different programs. One study, which compared unemployment rates and annual incomes of university graduates in the humanities and social sciences to those of their counterparts in more applied streams, found the labour market performance of the graduates to be roughly similar (Allen, 1998). This result was confirmed by another study, which found that in 1992, two years after graduation, the unemployment rate for bachelor's graduates in humanities and social sciences was the same as the rate for engineering graduates and four percentage points lower than for applied sciences graduates (Lavoie and Finnie, 1999). Their mean annual earnings exceeded the earnings of pure and applied science graduates. An examination of rates of return by field of study found considerable variation within each field, as well as between the six fields used (Appleby et al). These variations make generalizations difficult, but median rates of return appear to be lowest for arts and humanities and highest for health-related fields of study. Rates for administration and social sciences appear quite similar to those for chemistry, physical and natural sciences, but both fall below architecture and engineering.

This article used the Survey of Labour and Income Dynamics (SLID) to look at the labour market experiences of graduates of bachelor's level programs. SLID offers rich detail on the labour market experiences of individuals from the beginning of 1993, and its longitudinal design is ideally suited for tracking changes over time (see *Data source and definitions*). Some undergraduate programs are vocational in nature, with a close association between skills taught and skill sets required in identifiable occupations, and prepare students for immediate entry into these occupations upon

Philip Giles is with the Income Statistics Division. He can be reached at (613) 951-2891 or giles@statcan.ca. Torben Drewes is at Trent University. He can be reached at (705) 748-1011 (ext 1545) or tdrewes@trentu.ca.

Data source and definitions

The **Survey of Labour and Income Dynamics**, a longitudinal household survey, began in January 1993. Every three years, approximately 15,000 households enter the survey. Over a six-year period, each household completes two detailed questionnaires annually, one on labour market activity and another on income. The data used in this article are for five years, 1993 to 1997.

The study was limited to bachelor's level graduates who had obtained their degree by January 1, 1993. Of the 1,446 individuals, 59% were from humanities and social sciences and the rest were from more applied programs. The two groups are similar in a number of important labour market variables, including age and years of work experience (measured in full-year, full-time equivalents). They differ sharply, however, in their proportions of men and women, which has to be taken into account in making labour market comparisons.

Information was collected on all jobs held during any year, to a maximum of three jobs in 1993, and six in each of the following years. In cases where jobs overlapped, a main job was identified based on hours worked. In order to focus on job transitions, the analysis was restricted to main jobs for each of the 60 months. This yielded 1,174 jobs for the liberal arts and sciences group and 856 jobs for the applied programs group.

Field of study for undergraduate degree uses Statistic Canada's standard classification. Humanities and social sciences comprises studies in education, recreation and counselling services; fine and applied arts; humanities and related fields; and social science and related fields. The applied programs group includes commerce, management and business administration; agriculture and biological sciences and technology; engineering and applied sciences; engineering and applied science technologies and trades; health professions, science and technology; and mathematics and physical sciences.

Reasons for job separation

Personal: Own illness or disability (work or non-work related), caring for own children or elder relatives, other personal or family responsibilities, school, retirement.

Job-related: Found new job, poor pay, not enough or too many hours, poor physical conditions, sexual harassment, personnel conflict, work too stressful, to concentrate on other job.

Involuntary: Company moved or went out of business, seasonal nature of job, layoff/business non-seasonal slowdown, labour dispute, dismissal by employer, temporary job/contract ended.

Other: Other, don't know.

graduation. Humanities and social sciences, on the other hand, focus more on the development of generic skills such as communications and analytical reasoning than on occupational preparation. Such skills, however, may permit a greater degree of mobility between labour market sectors. One would then expect to see differences in occupational mobility, wage growth, and human capital acquisition between the two groups of graduates, particularly for more recent labour market entrants.

Several dimensions of labour market experience were examined. Graduates at the bachelor's level in the more vocationally oriented educational fields enjoyed an hourly wage premium over their humanities and social sciences counterparts. For women in the former group, however, this premium may be offset by longer and more frequent periods of unemployment. And the skills of the humanities and social sciences group appeared to allow a greater ability to move across industries and occupations.

Characteristics of graduates and their jobs

Almost one-quarter of the jobs held by graduates in humanities and social sciences were in educational services, more than double the concentration in trade, the next largest industry of employment (Table 1). The single largest concentration of jobs held by graduates in applied programs was in professional, scientific and technical services, but the concentration was much lower (17% versus 23%). For this group, three other industries stood out: public administration, health care and social assistance, and finance, insurance, real estate and leasing.[1]

By occupation, 30% of jobs held by the humanities and social sciences group were classified as social science, education, government service and religion. In fact, 19% of humanities and social sciences graduates were teachers and professors. Once occupations in business, finance and administration are included, over 50% of the jobs held by the humanities and social sciences group were accounted for. The applied programs group shows a broadly similar representation

Table 1: Personal and job characteristics

	Humanities	Applied programs
Personal characteristics		
Sample size	847	599
Mean age at January 1, 1993	37.3	38.4
Mean years of full-year, full-time equivalent work experience	12.2	12.7
Proportion of women (%)	56.8	40.5
Job characteristics		
Number of jobs in sample	1,174	856
Industry	%	
Educational services	23.4	6.8
Public administration	9.6	12.2
Trade	10.4	9.4
Professional, scientific and technical services	9.2	16.6
Health care and social assistance	7.0	11.6
Information, culture and recreation	7.7	--
Finance, insurance, real estate and leasing	10.1	11.6
Manufacturing	--	10.7
Other	22.6	21.2
Occupation		
Management	14.3	17.8
Business, finance and administrative	23.6	19.9
Natural and applied sciences and related	--	25.2
Health	--	11.8
Social science, education, government and religion	30.1	--
Art, culture, recreation and sport	7.8	--
Sales and service	14.8	10.8
Other	9.5	14.5

Source: Survey of Labour and Income Dynamics, 1993-1997

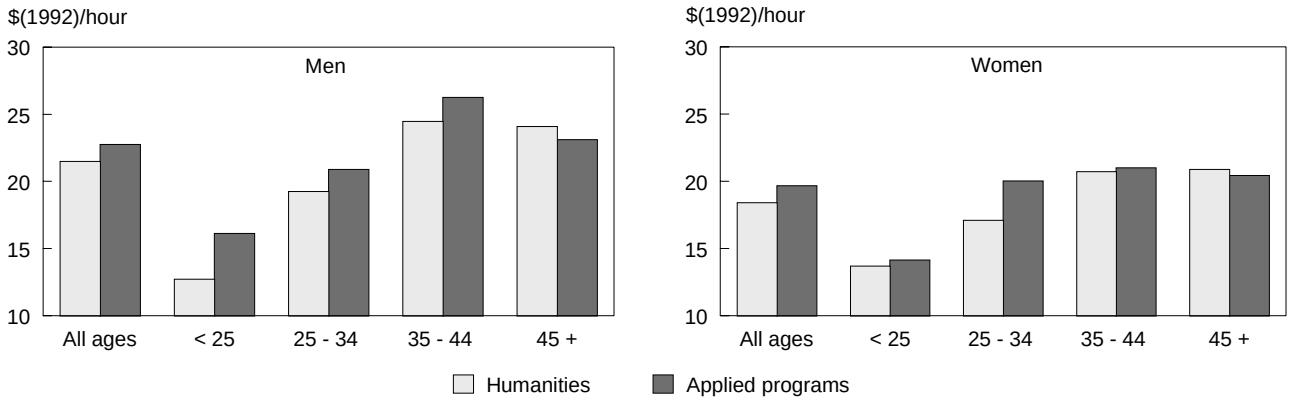
in management and in business, finance, and administrative occupations. The difference in occupational distributions between humanities and social sciences and applied programs graduates is due primarily to educational and government service, natural and applied science, and health occupations.

How do wage rates compare?

While both groups received substantial average hourly wages, wage rates for applied programs graduates were about 6% higher for both men and women (Chart A).[2] Since the sample was restricted to individuals whose highest educational attainment was at the bachelor's level, the wage difference cannot be attributed to medical professionals in the applied programs group. However, a simple comparison of means may be misleading. With significant variation in wages across individuals, many humanities and social sciences graduates earned a wage rate higher than the mean in the applied programs group.

The wage advantage enjoyed by the applied programs graduates declined with age and actually reversed for those 45 and older, a pattern also found by Allen (1998) in his analysis of annual earnings. This is consistent with the hypothesis that skills acquired in humanities and social sciences programs allow a relatively greater accumulation of human capital after formal schooling. It may also be that, with a less direct connection between humanities and social sciences programs and occupational skill needs, graduates of these programs took longer to find their career path.

Chart A: The wage advantage for applied programs graduates reversed for persons 45 and older.



Source: Survey of Labour and Income Dynamics, 1993-1997

To provide an overall sense of wage differentials, the natural logarithm of available hourly wage observations was regressed against a categorical variable set to 1 for humanities and social sciences graduates and to 0 for others. Controls for sex, years of full-year full-time experience, job tenure, marital status, and province of residence were added (Table 2). The resulting coefficients can be interpreted as the proportional effect of a unit change in the explanatory variable. Thus, each year of experience increased the hourly wage by an average of 0.87% (equation 1). Humanities and social sciences wage rates were lower than applied programs rates by an average of 9.5% once controls for sex, experience, tenure, marital status and province were used. To obtain an estimate of the male/female wage gap within each group, separate wage regressions were run for each educational category with a dummy variable (0 = male, 1 = female). The male/female wage gap was larger in the applied programs group, where women's hourly wage rates averaged almost 16% less than men's (equation 3), compared with 7.5% in the humanities and social sciences group (equation 2).

Table 2: Wage equation estimates

Dependent variable: *ln(wage)*	Equation 1 All programs	Equation 2 Liberal arts	Equation 3 Applied programs
Constant	2.84 (0.030)	2.70 (0.040)	2.96 (0.044)
Humanities	-0.095 (0.012)		
Sex	-0.115 (0.012)	-0.075 (0.015)	-0.156 (0.018)
Experience	0.0087 (0.001)	0.007 (0.001)	0.010 (0.001)
Job tenure	0.0008 (0.0001)	0.001 (0.0001)	0.0007 (0.0001)
R^2	0.17	0.16	0.16

Source: Survey of Labour and Income Dynamics, 1993-1997
Note: Estimates for provincial dummy variables not reported. (Standard errors in parentheses).

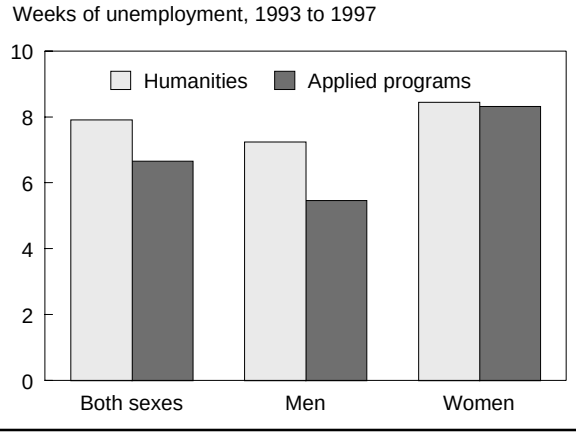
How do unemployment experiences compare?

Although the wage rates of older humanities and social sciences graduates matched or exceeded those of their applied programs counterparts, the return on their education was likely lower. How then can the continued popularity of the former programs be reconciled with models of rational economic decision-making? One answer may be to invoke the portfolio choice paradigm of financial investment, which postulates that a lower expected return on investment is willingly accepted for reduced risk. If the generic skills acquired in humanities and social sciences programs carry a wider currency in the labour market, they may permit a greater degree of mobility between employers and between occupations or industries, lessening unemployment risk. Depending on personal attitudes towards risk, an individual may well regard a lower return as a price to be willingly paid to avoid the risk of investing in occupation-specific skills that could be rendered obsolete by future trade or technology shocks.

To examine this issue, the unemployment experiences of the two groups were compared. Doing so also addresses more directly the 'employability' debate over the relevance of an education in the humanities and social sciences.

SLID provides a number of different perspectives on unemployment, including total weeks of unemployment during the survey period. Over the 260 weeks from January 1993 to December 1997, the humanities and social sciences group averaged over one week more of unemployment than the applied programs graduates did (Chart B). The difference was almost entirely due to higher unemployment among humanities and social sciences men.

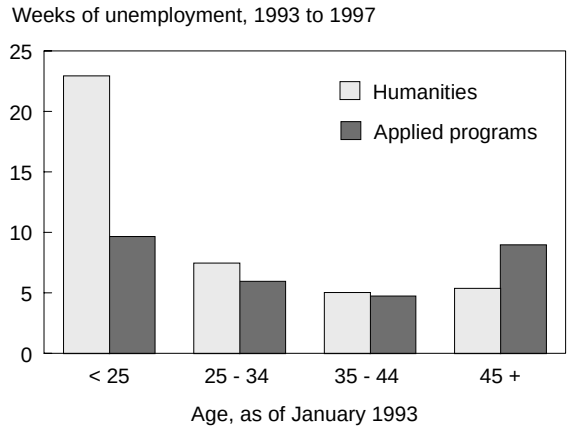
Chart B: Men from the humanities tended to be unemployed longer than their applied programs counterparts.



Source: Survey of Labour and Income Dynamics

The unemployment difference was particularly striking among young workers (Chart C). Graduates of humanities and social sciences programs appeared to have a more difficult transition into the labour market than their applied programs counterparts. Generally speaking, humanities and social sciences programs do not offer a direct connection to a well-identified occupation so graduates may spend more time experimenting with jobs—and facing the consequent periods of unemployment in between. Once they were established in the labour market, however, their unemployment experience compared favourably. Indeed, after age 45 humanities and social sciences graduates faced fewer average weeks of unemployment than did members of the applied programs group, a pattern that reinforces the suggestion of labour market advantages to humanities and social sciences programs in the longer term.

Chart C: Young humanities graduates were unemployed far longer.



Source: Survey of Labour and Income Dynamics

Were the weeks of unemployment generated by recurring short spells or by infrequent long spells?[3] The number of periods of unemployment per person was identical for women, but considerably higher for humanities and social sciences men than for applied programs men (Table 3). The difference in the percentage of men affected by unemployment was not as dramatic, indicating a higher incidence of multiple instances of unemployment among humanities and social sciences men. The mean duration of a spell was almost a week longer for humanities and social sciences men. This, together with a higher incidence, was consistent with their greater number of weeks of unemployment (7.2 weeks, compared with 5.5 weeks).

For women, however, the story was quite different. Applied programs women faced substantially longer spells of unemployment than did humanities and social sciences women or applied programs men. Humanities and social sciences women, on the other hand, had shorter spells than the men in their education group. The higher rates of unemployment among humanities and social sciences women compared with their male counterparts were attributable to a greater incidence of unemployment, whereas the same phenomenon among applied programs women and men was attributable to both a higher incidence and a longer duration.

The relative ability of humanities and social sciences graduates to avoid unemployment or to find work once unemployed presents a somewhat mixed message. Women in the two groups became unemployed at the same rate, but humanities and social sciences women exited significantly more quickly. Male humanities and social sciences graduates experienced unemployment more frequently and took longer to

Table 3: Incidence and duration of unemployment

	Humanities		Applied programs	
	Men	Women	Men	Women
Incidence				
Spells per person	0.42	0.57	0.34	0.57
		%		
Proportion affected	22.1	32.4	20.1	29.8
0 spells	77.9	67.6	79.9	70.2
1 spell	11.3	18.6	11.2	18.4
2 spells	5.8	7.8	5.9	6.8
3 or more spells	5.0	6.0	2.9	4.6
		weeks		
Duration				
Mean	16.3	15.3	15.4	21.9
		%		
Less than...				
8 weeks	39.8	47.1	51.3	46.2
16 weeks	69.4	68.6	70.9	63.1
26 weeks	85.0	80.9	84.1	71.0
52 weeks	95.6	93.0	94.4	87.4

Source: Survey of Labour and Income Dynamics, 1993-1997

find employment than applied programs men, although the difference in mean lengths was less than one week (16.3 versus 15.4).

Job mobility differs

If the human capital acquired by humanities graduates is more general, then they should have a greater ability to move between sectors of employment. Moreover, with a greater transferability of skills they should also be more willing to change sectors since attendant wage losses (if any) would be smaller. High rates of mobility could be regarded as either negative (job instability) or positive (opportunity for mobility). Looking at 'voluntary' job movements involving a change in occupation captures transitions that are more likely to test the transferability of skills, since a change in industry need not imply a change in the type of work done. (Transitions refer to any movement from one main job to another, with or without an intervening spell of unemployment. For an individual returning to a job after a period of employment in another, only one transition is recorded.)

The average number of job transitions during the five-year period was comparable, with the humanities and social sciences group recording slightly higher overall transition rates for both sexes (Table 4). The higher rate among young humanities and social sciences men indicates a difficult labour market transition, perhaps caused by the lack of a clear and direct link between their educational program and eventual vocation. By the middle age category (25 to 34), the transition probability for humanities and social sciences individuals was dramatically lower and below that for the applied programs group. However, this trend was reversed for the oldest of the age categories.

The higher proportion of job separations among both groups of women—the result of child care and other family responsibilities—accords with expectation. The job separations of women were also less likely to be job-related quits—a category that includes separations initiated by the employee (although these may not be entirely voluntary, involving as they do factors such as sexual harassment, poor working conditions or undesirable hours of work). Job transitions among humanities and social sciences men were less likely to be job-related and more likely to be involuntary than among applied programs men. Humanities and social sciences women also showed a greater likelihood of separations being involuntary, but, unlike thir male counterparts, the proportion of job-related transitions was also higher. The high proportion of transitions taking place without a reported reason makes it difficult to draw firm conclusions about the relative ability of individuals in the two groups to choose to move between jobs.

Table 4: Job mobility

	Humanities		Applied programs	
	Men	Women	Men	Women
Number of job transitions per person				
All ages	**0.76**	**0.68**	**0.70**	**0.65**
Under 25	2.24	1.16	1.15	1.33
25 to 34	0.84	0.79	0.98	0.85
35 and over	0.57	0.46	0.45	0.31
			%	
Reason for job ending				
Personal reasons	4.2	10.3	4.1	8.0
Job-related quits	25.4	18.3	30.8	12.5
Involuntary	22.9	23.1	17.3	11.9
Other	13.2	11.1	7.6	19.5
Not reported	34.3	37.2	40.2	48.1
Change in...				
Industry	64.6	61.9	55.6	52.6
Occupation	64.6	60.5	55.4	51.6

Source: Survey of Labour and Income Dynamics, 1993-1997

The proportion of job changes taking place across industry or occupational sectors is more accurately measured and, for both sexes, humanities and social sciences individuals had significantly higher incidences of sector changes. This may reflect an enhanced ability on their part to transfer human capital across those sectors. The rates of change appear extraordinarily high, but these percentages apply only to job transitions, not to the entire sample of individuals. In fact, the majority of both groups remained in the same industry and occupation during the five years.

Conclusion

Graduates of university programs in the humanities and social sciences acquire skills that are different than those obtained in more vocationally oriented programs—as is evident from the different industries and occupations in which they find jobs. And, as a group, humanities and social sciences graduates receive lower wage rates. Furthermore, male graduates of these programs experience higher unemployment.

These aggregate comparisons, however, mask important, long-term dimensions of labour market experiences that may be attributable to the nature of the skill sets these graduates have obtained. The wage disadvantage, for example, was caused by very significant wage differences among young workers of both sexes. By the age of 45, wage rates among humanities and social sciences graduates were above those of their applied programs counterparts. Similarly, higher relative unemployment was attributable to very drastic differences among young workers since older humanities and social sciences workers faced fewer weeks of unemployment.

The picture that emerges is one in which individuals graduating from programs in the humanities and social sciences had considerably more difficulty with the school-to-work transition, as might be expected given the lack of a clear connection between their programs of study and occupations. But once that transition was made, the generic nature of the skills they acquired appeared to stand them in good stead—because these skills have a greater longevity and are complementary to continued, lifelong learning in the face of labour market changes. The shorter unemployment durations for humanities and social sciences women and the higher occupational and industrial mobility among both sexes in this group reinforces the interpretation that their skills were more portable, thus providing them with broader re-employment opportunities.

What is the appropriate balance between investments in general or in technical or vocational skills? While income levels or unemployment rates from cross-sectional data can provide some insights, a more complete understanding of the labour market returns to these different skill sets requires observations of individual career dynamics of the sort afforded by SLID. While the data are extremely complex and the analysis in this report permits only tentative conclusions, the initial findings suggest considerable promise for future, more structured approaches.

Notes

1 These relative concentrations are sensitive to the classification used to distinguish the humanities and social sciences group. For example, their relative under-representation in the public administration and finance sectors is at least partly because commerce, management and business administration was included in the applied programs group.

2 The survey design complicates wage rate comparisons since rates may be available for different jobs for an individual and/or at different times for the same job. SLID records hourly wage rates (either reported directly by respondents or imputed using income and hours of work information) at the beginning of each calendar year for jobs in progress at that time. End-of-year rates are also available for jobs in progress at the end of the year. Finally, the last wage rate received in any job ending during the calendar year is reported. A job begun during the year does not trigger a wage observation, so the starting wage is not explicitly recorded. However, SLID indicates whether or not wages change during the year, so that starting wages are implicitly available for those jobs for which wages do not change before December 31.

3 The weekly labour force status attached to each personal record in SLID can be used to determine the incidence and duration of periods of unemployment. Spells beginning before January 1993 or continuing past December 1997 are truncated, so average spell duration will be underestimated. Given the five-year span, this underestimation will likely be small and biases in comparisons across educational categories smaller still. Of 657 spells, 71 overlapped the beginning or the end of the survey period. Dropping these because their true length is unknown would introduce new biases, since longer spells are more likely to be dropped (longer spells are more likely to be observed at the beginning and the end of the period).

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