

UI

Employment Patterns and Unemployment Insurance

by **L. N. Christofides**
and **C. J. McKenna**



Human Resources
Development Canada

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ressources humaines Canada

UI Impacts
on Worker
Behaviour

Canada



*Employment Patterns and
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University of Guelph

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I.H. Midgley
Director General
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Abstract

There is now, vast literature on the issue of unemployment and this problem remains the central issue in Macroeconomics. Indeed the high levels of European and Canadian unemployment not only render the subject more urgent from a policy point of view, but they have led to sub-literatures which attempt to explain the divergence between experience in these areas and in the US, where much lower unemployment rates prevail.

At the same time, many macro and labour economists find it useful to think about unemployment as but one possible labour market state, the others being employment and non-participation. Studies of these various states and the gross flows among them have been very illuminating. In contrast to unemployment, however, employment has received relatively less attention. This occurs despite the natural complementarity between employment and unemployment.

In Canada, as elsewhere, the literature on jobs and job duration is relatively modest.¹ The newly available data from the 1986-87 and 1988-90 LMAS make it possible to improve our understanding of labour market dynamics by exploring the employment state for a very large number of individuals in two adjacent periods. While this material aids the current review of the UI scheme in Canada indirectly by exploring a state that is complementary to that of unemployment, it also provides more direct benefits by making it possible to consider the effects of the UI scheme on job duration and hence turnover.

1 For a review see Christofides and McKenna (1993a).



Introduction

The present study explores the patterns of job duration across the provinces and over the time span covered by the LMAS surveys. It examines the type of job spells captured by the surveys, the duration of new jobs as well as that of the resulting stock of jobs and the association of duration with a variety of personal and job characteristics. The present study also explores possible connections between job duration and the regulatory framework in the context of which labour market outcomes emerge. Of particular interest is the possibility that the Variable Entrance Requirement (VER) in the unemployment insurance (UI) system conditions the length of employment spells. A final topic examined in the present study is the nature and possible evolution over time of non-standard employment.

The LMAS surveys indicate that 70 percent of the job-holders in the first and 57 percent of those in the second sample hold only one job. The distribution of completed jobs is much more concentrated at the short end in the second survey and the average duration of jobs completed in 1988 is 95 weeks as opposed to 100 weeks in 1986. The stock of jobs extant at the end of 1990 has a mean job expectancy of 727 weeks, as opposed to 753 weeks at the end of 1987. Though most jobs generated are short, job expectancy is high and most employment over time is accounted for by individuals in long jobs.

The personal characteristic which is most noticeably associated with duration is age. The fact that a higher proportion of jobs held by the young are completed rather than censored suggests that the distribution of ultimate job durations is generally shorter for younger than older workers. Thus the young are likely to be a high turnover group. This is consistent with labour market theories in which better matches occur after some trial and error. Other important personal characteristics are education and sex.

Turning to job characteristics, firm size, unionization and coverage by a collective bargaining agreement are seen to coincide with longer job duration.

Of particular interest to this study is the possible interaction between parameters of the Unemployment Insurance scheme and job duration. It is conceivable that some work attachments are just long enough to qualify for UI benefits, the separation being initiated by either employers (a layoff) or employees (a quit). That is, a moral hazard problem may exist. Until recently, no statistical work existed which supported the often-heard claim that a significant number of job attachments are just long enough to qualify the worker for UI benefits. The econometric techniques chosen to examine this issue, as well as deal with the large number of jobs that are interrupted prior to completion on the last survey date, are those of survival analysis.

In the most completely specified Accelerated Failure Time model which uses the entire sample of 58,268 observations extracted from the 1986-87 LMAS survey and numerous covariates, the results indicate that job durations at the VER are shorter than they would otherwise have been by about 80 percent. For example,

Of particular interest to this study is the possible interaction between parameters of the Unemployment Insurance scheme and job duration.

separations at ten weeks of employment once the VER has been met would, other things equal, have occurred eight weeks later. In the 1988-90 LMAS sample of 65,580 observations, this effect is, at about 30 percent, more muted. This smaller effect may be due to the fact that during most of 1990 a higher VER came into effect in many high unemployment areas. Green and Riddell (1993) report that work attachments, which had to equal or exceed the new VER for workers to qualify for UI benefits, may not have been sufficiently fine-tuned and, in many cases, job durations increased beyond the new 14-week VER. Since our definition of VER satisfaction is very stringent and it holds only when the VER is just met, we may be underestimating moral hazard effects particularly during the 1988-90 period. A somewhat different approach (the Cox Proportional Hazard model) which, for software reasons, is based on smaller samples and fewer covariates, estimates the effect of satisfying the VER on the hazard of leaving employment. In the 1986-87 period, the conditional probability of leaving employment nearly doubles when the VER is satisfied. This result is consistent with findings in Christofides and McKenna (1992, 1993a). In the 1988-90 period the effect is in the 50-60 percent range. These responses produce spikes in the job duration frequencies at and just after the VER. It is conceivable that pre-existing differences in job durations across provinces may be modified by these responses. It is also possible that a relatively short VER may encourage at least some short-run labour supply, thereby stimulating both employment and turnover. The effects identified in this study are consistent with a variety of theoretical constructs but it is not our aim to discriminate among these. The reported quantitative effects of the VER are generally consistent with those in Green and Riddell (1993) who report that the unintended increase, during 1990, in the VER for high unemployment areas from 10 to 14 weeks extended many job attachments to over 14 and perhaps as much as 20 weeks.

While the estimated effect of the VER on job duration is substantial, it may be argued that it is limited to a negligible number of individuals: job durations at the VER may be interrupted rather than completed, as required by the moral hazard argument in the previous paragraph, and/or they may be held by students who do not qualify for benefits. However, the data show that 90 percent of job durations in the VER range are completed spells and hence relevant to the moral hazard hypothesis under study. Some of the jobs in the VER range are indeed held by individuals who are students, but these jobs account for only 25 percent, or so, of the sample. Individuals in the sample of jobs with duration in the VER range are much more likely to have drawn UI benefits than those in the overall sample.

The study also uses the information available in the LMAS surveys to examine whether any light can be shed on the question of whether separations at the VER are employer-initiated (layoffs) or employee-initiated (quits). The reasons recorded for final separations can in fact be grouped into layoffs and quits and these are about equally important. However, if the definition of layoffs is augmented to include seasonal separations then layoffs become the dominant category. This information suggests, therefore, that both sides of the market respond to the VER. Once the VER has been met, some employees quit anticipating that, per-

haps with a small penalty, they may still qualify for UI benefits; as well, some employers manage their labour pool so that layoffs can occur at or after the VER.

A further issue is whether employers merely time layoffs to advantage their workforce (and presumably themselves through lower wages) or whether they effectively place workers on UI for a period of time not exceeding entitlement and re-hire them later. To explore this issue further, the labour market experience of individuals in jobs with duration ending in the VER range was examined. Looking across the two LMAS surveys, about one third of these individuals were still without work by the end of the relevant survey. Those that did return to work often did so with considerable lag and in some cases at times which coincided with the exhaustion of UI benefits. The overwhelming majority of individuals that returned to work within the LMAS sample periods had a new employer. This finding is consistent with results reported in Green and Riddell (1993). Thus, final separations offer no reason to believe that employers lay off and re-hire employees following the receipt of UI benefits. Data on the relation between the number of jobs and employers indicate that jobs with duration in the VER range do not entail proportionately fewer employers; this evidence, too, suggests that employers are not likely to permanently lay off workers who draw UI benefits in the interim and are eventually rehired.

In summary, there is considerable evidence that agents do respond to the VER setting. Employees initiate a number of quits and employers initiate an even larger number of layoffs at the point that the VER is met. However, recall appears to be limited to intra-job spells. The number of job separations that may arise because of moral hazard may not be as large as the total number of jobs in the VER range (5-6 percent of the sample) because some of these are followed by immediate re-employment and/or are held by students. On the other hand, the definition of moral hazard in this study is rather stringent in that separations may occur a few weeks after the VER is minimally met; this does produce additional weeks of benefits. It should be noted that, for the period under study, quitting did not necessarily lead to a loss of benefits.

From a policy point of view, it seems clear that lengthening the VER will prolong employment durations, may discourage marginal labour force attachments and may reduce turnover. As well, the recent tightening of the rules dealing with quits will reduce the moral hazard problem on the employee side. However, the majority of jobs ending at the VER are layoffs or seasonal separations rather than quits. This suggests that experience-rating employer premia is worth considering.

The final section in the study examines the incidence and changing prevalence through time of non-standard employment. The LMAS data make it possible to identify several job characteristics which relate to non-standard employment, e.g. whether the job is full-time or part-time, whether part-time employees would have preferred full-time employment, whether employees are rationed in terms of the number of hours they wish to work, whether the job offered a pension plan and whether it was unionised or covered by a collective agreement. There is, in general, no convincing evidence that non-standard employment so defined became more prevalent during the five years covered by the LMAS. If anything,

the reverse is true. The provincial breakdown of this information is consistent with conventional wisdom on the state of the provincial labour markets. The industrial breakdown suggests that jobs in Mining, Transportation, Communications and Utilities are more likely and jobs in Agriculture, Forestry and Fishing less likely to have desirable attributes. It is worth noting, however, that this study has abstracted from the issue of self-employment.

It is also possible to consider the prevalence of concurrent employment, defined as an overlap of at least one week, in the two LMAS samples. During 1986-87, 12.4 percent of the individuals in the sample held one concurrent job and this figure increased to 18 percent in the 1988-90 period. However, job concurrence is a characteristic of provinces which are relatively better off and is more prevalent in Ontario than in the Maritime provinces, for instance. Part-time jobs are much more likely than full-time jobs to be held concurrently. Breakdowns by gender and full-time status suggest that women, who are more likely to hold part-time jobs, are also more likely to hold concurrent jobs than men.

The data indicate a very clear seasonal pattern to the incidence of concurrent jobs. Such jobs are generally more prevalent in the summer months. In the case of women, there is a tendency for this seasonal high to continue until the end of the Christmas period.

Organization of this Report

Section one of this report describes how we used the LMAS data to set up our working samples, and presents descriptive statistics on the variables in the samples. Section two focuses on job duration. It attempts to describe the job-generating process by examining the characteristics of the distribution of completed jobs. It also considers the duration attributes of the implied stock of jobs and the relevance of personal and job characteristics.

Section three examines the possibility that job duration, as 'job' is defined in this study, may be related to parameters of the UI system, particularly the Variable Entrance Requirement (VER). This section:

- examines preliminary evidence on this relationship;
- contains an econometric study of the determinants of job duration, including the possible role of the VER;
- examines the characteristics of jobs with durations in the range of the VER in each province and contrasts them to those in the overall sample; and
- considers the relation between jobs and employers.

Section four considers the prevalence of, and changes in, non-standard employment over the LMAS periods. Section five contains brief concluding comments on the salient features of this study. Appendix A describes the construction of the Variable Entrance Requirement (VER) variables, while Appendices B to E contain accompanying tables.

1. Sample Construction



Source of Data

The study is based primarily on two independent, longitudinal Labour Market Adjustment Surveys (LMAS). The first survey covers the years 1986 and 1987, while the second one covers 1988, 1989 and 1990. Both surveys consist of stratified samples of civilian, non-institutionalised individuals. They exclude full-time members of the Canadian Armed Forces.

The two longitudinal files provide continuous histories of employment and non-employment in the relevant time periods. The first longitudinal file contains 89,947 records, collected in two linked surveys, on the labour market experience of 63,432 individuals in 1986 and 1987. The second longitudinal file contains 97,081 records, collected in three linked surveys, on the labour market activities of 55,434 individuals in 1988, 1989 and 1990.

Since information was recorded on job starts prior to the beginning of the two surveys, there should be no left-censoring—that is, jobs were not artificially cut off at the start of the surveys. However, there is right-censoring—job durations if the jobs continued past the last survey dates, a few weeks after the end of 1987 and 1990. The two LMAS's tracked up to five jobs per year for each individual in the sample, or up to ten jobs in the first survey and fifteen jobs in the second survey. These surveys recorded a number of job and personal characteristics, as well as temporary work interruptions, spells of non-employment between jobs and participation in a number of government programs. The material provided by the two LMAS's was supplemented with information on regional UI entrance requirements and unemployment rates, made available to us by Human Resources Development Canada and Statistics Canada.²

In using the LMAS data, we focused primarily on information related to jobs. Accordingly, we imposed a number of constraints and consistency checks on the data. To begin with, we edited the LMAS files and retained only the records for paid workers. We excluded all records for self-employed people³ and for those running businesses, as well as records for those with no jobs. We also omitted records for which information was not available on a consistent basis across the various survey years; we excluded residents of the Yukon and Northwest Territories, and individuals in unknown locations. Finally, we excluded records that failed to meet our consistency checks.⁴

We imposed analogous restrictions on the data of the second survey.⁵ In essence, our restrictions required jobs to lie within the period implied by the LMAS vari-

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2 We are grateful to Ging Wong and Anne Routhier of Human Resources and Development Canada (HRDC) and Stephan Roller of Statistics Canada for this information.

3 On this matter see Lin (1993).

4 In the case of the first survey, these consistency checks were described in detail in Christofides and McKenna (1993b).

5 It should be noted that these procedures avoid an important problem with the second LMAS Survey. Apparently, a large number of continuing jobs were coded as beginning in the first week of 1990, resulting in an artificial spike in duration at 66 weeks.

able Type,⁶ to have a consistent set of start-dates in different years of the survey⁷ and to have a positive duration, defined as stop-week minus start week.

Completed jobs are associated with a reason for the separation. Under our restrictions, the absence of a reason coincides with right-censoring except for one record, which was also omitted. Although we focused on the unweighted results in this report, our results appear to have been insensitive to the use of the weights supplied by the LMAS's.

Sample Features

As shown in Tables B.1 and B.2 the sample from the first LMAS comprised 39,796 individuals who held a total of 58,268 jobs, while the second sample comprised 35,979 individuals who held a total of 65,580 jobs. The maximum number of jobs held by any one individual was 9 in the first survey and 13 in the longer second survey; a smaller proportion of individuals held only one job in the second survey, compared to the first—56.5 percent compared to 69.8 percent.

Tables B.3 and B.4 indicate the provincial breakdown of the data in the two samples. It should be noted that because the samples included people who moved, these individuals appeared in more than one province. In both samples, Newfoundland had the lowest proportion of individuals with only one job, while Saskatchewan had the highest proportion of single-job holders; however, the difference between the two provinces was narrower in the second sample.

Figures 2 and 3 describe the various kinds of jobs in the two samples. In the first sample, the numbers of completed and censored jobs were roughly equal, 28,419 and 29,849 respectively. The longer second sample naturally had more completed jobs than censored jobs, 41,524 compared to 24,056. It also had a richer assortment of job types. We identified a small decrease in the mean duration of like jobs across the two samples. For instance, jobs that existed at the start of each survey and that finished sometime during the first year of the surveys had respective mean durations of 230 and 214 weeks.⁸ These jobs are identified as Type D in Figure 2 and Type G in Figure 3. We return to this issue in the next section.

6 For instance, Type 5 jobs must lie within 1989. See Figure 2.

7 This requirement eliminates Type 2 Jobs in the second survey.

8 As discussed in the next section and in Christofides and McKenna (1993b), under certain conditions these figures measure the mean duration of new jobs.

Figure 1
Types of Captured Spells: Frequency; Mean Duration^a (1986-87 Sample)

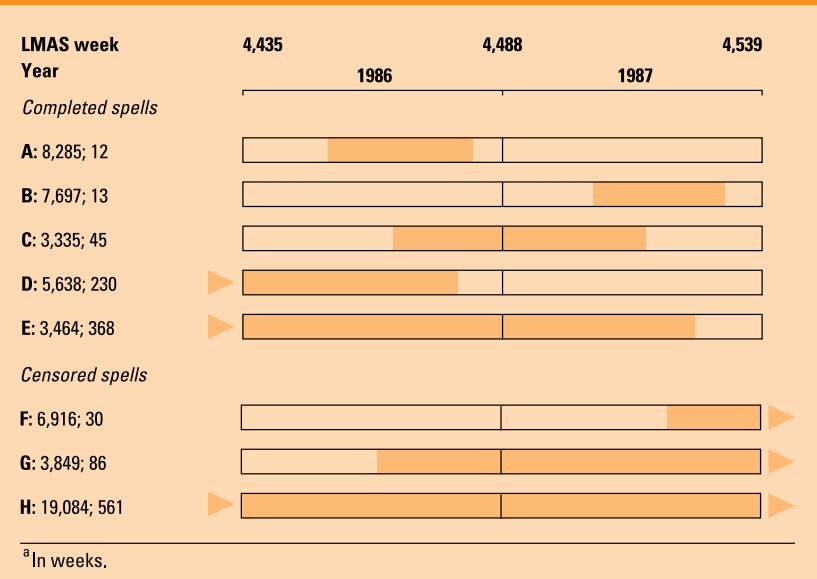
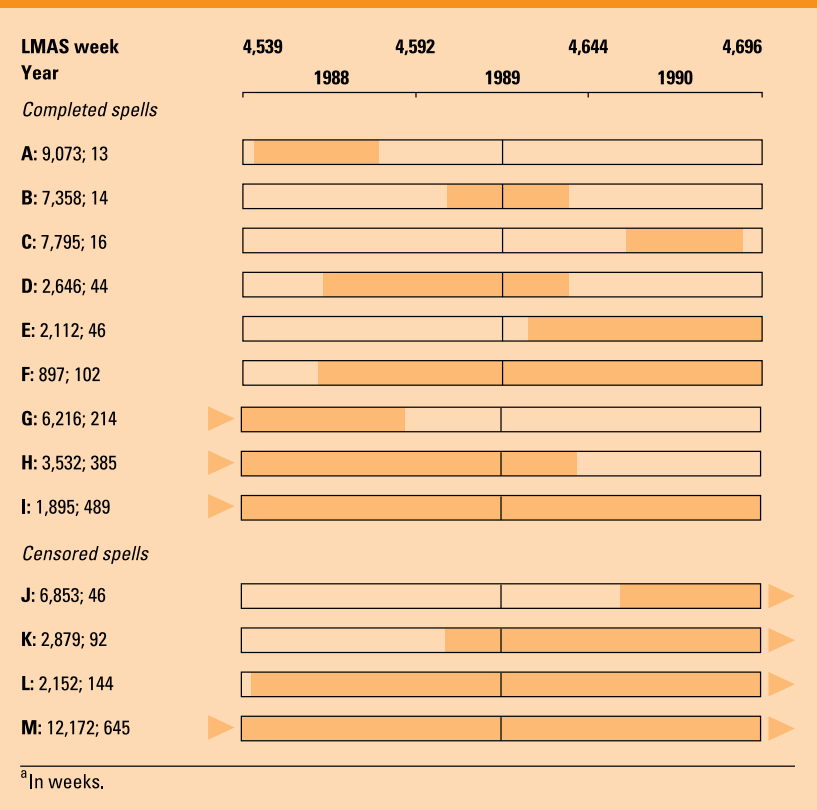


Figure 2
Types of Captured Spells: Frequency; Mean Duration^a (1988-90 Sample)





Of jobs completed in the first year of each survey, the average duration was 100 weeks in the first sample and 95 weeks in the second sample.

2. Patterns of Job Duration

In this study, we used the duration attributes of captured job spells to comment on the duration distribution of new jobs and on job expectancy in the Canadian labour market. We also explored the relationship of job duration to individual and job characteristics.

Job Duration

In a steady state, the job-generating process is characterized by the distribution of completed job spells. This distribution, which describes the frequency with which jobs of different durations are generated and completed, is extremely skewed because most jobs are of short duration. Graphs of this distribution are presented in the next section.

It should be noted that the second (1988-1990) sample had a higher proportion of short-term jobs than did the first (1986-87) sample. In the second sample, over 85 percent of the completed jobs lasted from 0 to 52 weeks, while in the first sample, approximately 43 percent of the completed jobs fell into that time frame.⁹ This dramatic difference in the concentration of job durations was not as clearly reflected in the relevant means. As shown in Tables C.1 and C.2 (Appendix C), the mean duration of completed jobs was 103 weeks in both samples. Of jobs completed in the first year of each survey, the average duration was 100 weeks in the first sample and 95 weeks in the second sample. The distribution of completed and censored jobs should be kept in mind when examining the information for each sample as a whole in row 1 of the two tables. The mean for the overall sample was lower in the second period because of a higher proportion of completed jobs in that sample. Completed jobs had lower mean durations than did censored jobs.

The job-generating process in the steady state implies a duration structure for the stock of jobs. In the stock distribution, long jobs are more prevalent because, once generated, they last longer than short jobs. Various measures have been proposed for characterizing the duration of the stock of jobs. Tables C.1 and C.2 (Appendix C) also speak to this issue. As shown in the last row of those two tables, jobs that were still in existence at the end of the first survey date were expected to last 753 weeks, while jobs that were still in existence at the end of the second survey were expected to last 727 weeks.¹⁰ This measure shows that the job-generating process in the second period was likely to lead to a stock of shorter jobs, despite the facts that the sample population was slightly older in 1990 and that the mean duration of jobs tended to *increase* as the age of the job holder increased.

⁹ This very marked difference, which occurs despite the slightly older sample in the third year of the second LMAS survey, is probably related to the different stages in the business cycle captured by the data in the two samples. Further research is currently under way on this issue.

¹⁰ On average, a censored job will have half the expected duration on completion. Therefore, the measure in the last row of Tables C.1 and C.2 multiplies the duration of censored spells by 2 to get an estimate of job expectancy. The row above that averages the duration of jobs completed over the sample period and the expected duration of censored jobs. See Christofides and McKenna (1993b) for further details.

Another measure continues to use the information contained in the censored jobs, but also included information from jobs completed over a certain period. This measure was sensitive to the precise period used, as indicated clearly in the second-to-last row of Tables C.1 and C.2. Using this measurement, the estimated job duration was 436 weeks in the first, shorter sample; in the second sample, which included a higher proportion of completed jobs, the estimated job duration was 332 weeks. This second method resulted in lower estimates of job expectancy than did the first one. These measures emphasize that, despite the turnover in the labour market and the fact that most newly generated jobs were short, job expectancy was high and most employed individuals were in long-lasting jobs.

Tables C.3 and C.4 explore the relation between personal characteristics and job duration. By implication, these tables consider how the long employment spells referred to in the previous paragraph came about.

Of the personal characteristics, age had the most obvious influence on job duration. Tables C.3 and C.4 both indicate a dramatic increase in the mean duration of jobs as the age of the job-holder increased. In the case of censored spells, age had an effect because censoring became less binding for higher age groups. Also, the distribution of completed jobs was higher among older individuals.

If the underlying distribution of potential or ultimate duration was common to all age groups, then censoring should be more prevalent among the young. However, as shown in Tables C.3 and C.4, the reverse was true. Thus the job-generating process appears to have produced shorter jobs for the young. A full examination of this issue lies beyond the scope of this paper, but is of considerable policy interest.

Education was associated in a U-shaped manner with average duration. Men's jobs had somewhat longer mean durations than did women's jobs.

Tables C.5 and C.6 examine the interaction between some job characteristics and job duration. They reveal that the average duration of jobs was higher in larger firms that are unionized or that had a collective agreement. However, the direction of causation, if any, is not clear.

Education was associated in a U-shaped manner with average duration. Men's jobs had somewhat longer mean durations than did women's jobs.



3. *Duration and the Variable Entrance Requirement*

There has been extensive informal discussion on the possibility that the VER is associated with moral hazard, whereby insured individuals work just long enough to qualify for UI benefits.

There has been extensive informal discussion on the possibility that the VER is associated with moral hazard, whereby insured individuals work just long enough to qualify for UI benefits. Only recently, however, have there been any formal statistical analyses of this issue.

An econometric investigation of this possible phenomenon can be found in two studies by Christofides and McKenna (1992 and 1993a), which used the 1986-87 LMAS to investigate the possible association between the VER and job duration. Studies by Baker and Rae (1993) and by Green and Riddell (1993) concentrated on the 'natural experiment' of 1990, during which the VER was unintentionally set at a uniform level of 14 weeks for most the year.

Unemployment Insurance and the VER

During most of the period under study, the VER for an individual depended on the unemployment rate in the UI Region of the individual's residence.¹¹ The LMAS's did not reveal the individual's region of residence, so we aggregated the regional VER information up to the provincial level to explain job duration in some of our specifications. For other specifications, as discussed in the Appendix, we supplemented the LMAS information with the regional VER settings, using data supplied by Statistics Canada.

Preliminary Evidence on Job Duration and the VER

Figures 3 and 4 indicate the broad provincial averages in job duration and their relation, if any, with the provincial VER settings. Mean provincial durations are described in Tables D.1 and D.2. We constructed the variables for the provincial VERs from the information in the Appendix: the 1988-90 average assigned a 2/3 weight to the provincial means of the 1988-89 period and a 1/3 weight to the flat VER of 14 weeks that prevailed during most of 1990.¹² The relationships plotted in Figures 3 and 4 are consistent with a cross-sectional relationship between job duration and the VER.

Job duration was highest in the provinces with the highest average VERs, namely Ontario and Manitoba, and lowest in Newfoundland and Prince Edward Island, where low VERs prevailed. However, differences of a few weeks in the provincial VERs cannot possibly account for the massive differences in the mean provincial durations reported in Tables D.1 and D.2. Moreover, the general state of provincial labour markets affected both the administrative values of the VER and job duration generally. Our econometric procedures below attempted to

¹¹ For most of the period under study,

The VER was:

14 weeks
13 weeks
12 weeks
11 weeks
10 weeks

In regions where the unemployment rate was:

less than or equal to 6 percent
more than 6 percent, but less than or equal to 7 percent
more than 7 percent, but less than or equal to 8 percent
more than 8 percent, but less than or equal to 9 percent
more than 9 percent

¹² In the interest of clarity, the provincial average VERs have been scaled by 10.

Figure 3
Provincial Duration and VER (1986-87)

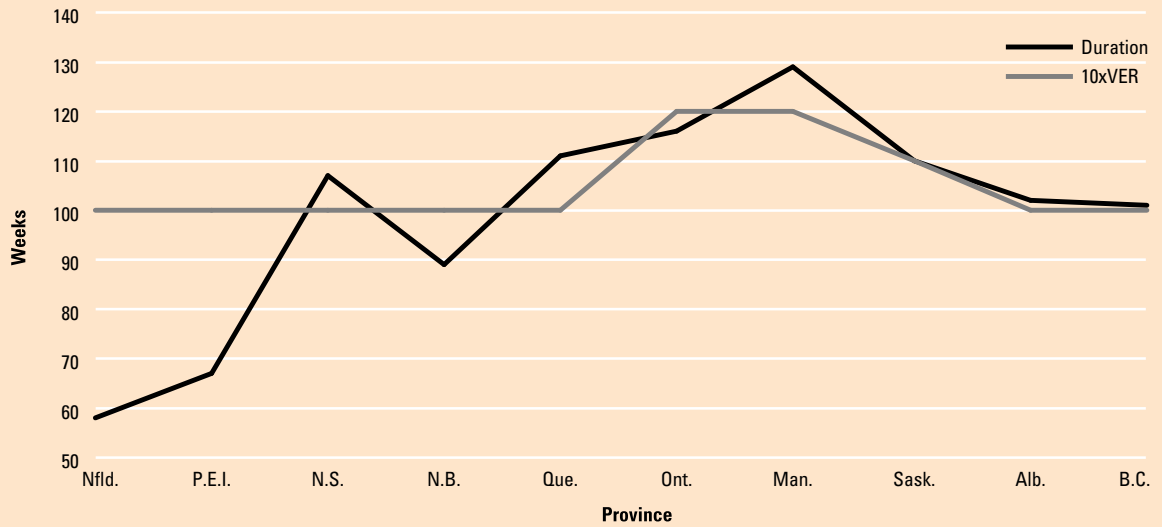
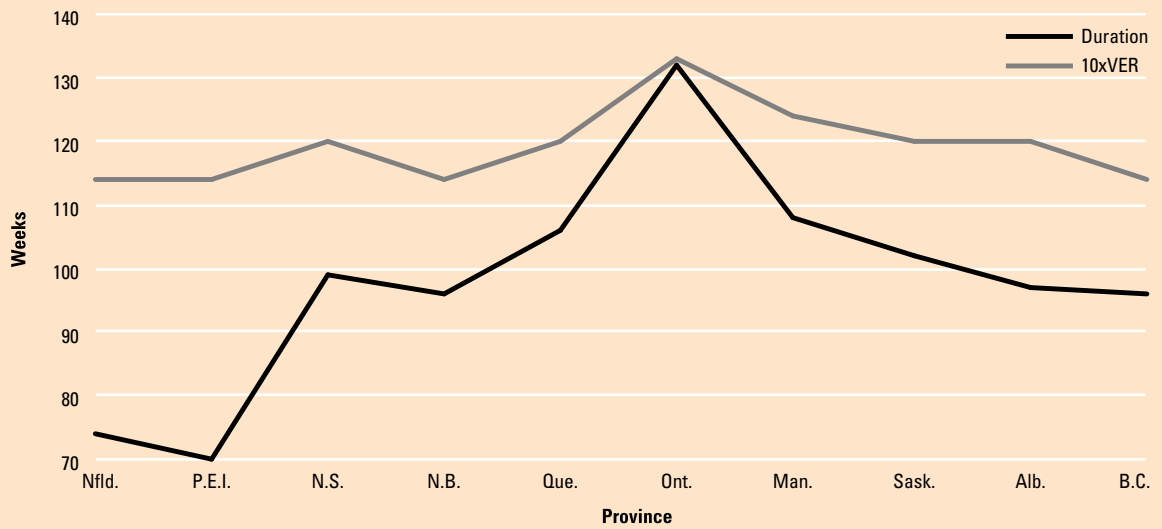


Figure 4
Provincial Duration and VER (1988-90)



Job duration was highest in the provinces with the highest average VERs, namely Ontario and Manitoba, and lowest in Newfoundland and Prince Edward Island, where low VERs prevailed.

untangle these interactions by including the VER in duration equations that were conditional upon the individual's province of residence.

Further preliminary evidence on the relation between duration and the VER is contained in a number of density functions that show the proportions of the various job durations. These densities contain noteworthy spikes at various points, such as at the VER and at the end of one month of employment. These are discussed below.

Sample one: 1986-87

Figure D.1 gives the observed density function for completed jobs in 1986-87. As noted earlier, this was very skewed because most of the jobs were of short duration. The mode of the distribution was 10 weeks. Since that was the most prevalent VER, the spike at that point is consistent with the possibility of moral hazard, suggesting that insured individuals worked just long enough to qualify for UI benefits.

The densities for Newfoundland and Ontario, shown in Figures D.2 and D.3 were also of interest. The mode for Newfoundland was, at 10 weeks, equal to the provincial VER. For Ontario, the mode was 14 weeks and there were substantial spikes at 12 and 10 weeks, all of which are within the range of the provincial VER of 10-14 weeks. The densities for other provinces were consistent with this general finding.

Sample two: 1988-90

The densities in the second sample were consistent with the densities in the first sample, but particular interest centres on the unintended setting of the VER at 14 weeks for most of 1990. One would expect the density for that year to have had a mode of 14 weeks rather than the 10-week one observed in the first sample. Figures D.4, D.5, and D.6 contain the densities for employment spells finishing in 1988, 1989 and 1990 respectively. In the first two years, there was a clear mode at 10 weeks. The mode for 1990, however, was 14 weeks.

Econometric Analysis

The discussion above hints at possible connections between job duration and a number of variables, including personal and job characteristics and parameters of the UI system. In this section, we present a more in-depth, econometric analysis of the relation between the variables and job duration.

Since considerable portions of our two samples were censored, we used survival analysis techniques for our analysis. In Christofides and McKenna (1992, 1993a), we reported that the hazard function – that is, the function indicating the probability of a job separation given that the job has survived to a certain point – is complicated enough to warrant the use of a very flexible specification. One parametric specification, in the context of the Accelerated Failure Time (AFT) Model, was the Generalized Gamma distribution, described in the box below.

**Accelerated Failure Time Model
Generalized Gamma Distribution**

If T indicates the length of a job at the time it ends, whether it was completed or censored, the AFT model assumes that covariates affect T by multiplying and, therefore, accelerating or decelerating (depending on parameter values) an event time T_o , which is drawn from a known distribution. Thus,

$$T = \exp(X' \beta) T_o^\sigma \quad (1)$$

where X' is a row vector of explanatory variables associated with T , β is the unknown column vector of population parameters, and the random variable T_o is scaled by the constant σ . In natural logarithms,

$$\ln T = X' \beta + \sigma \ln T_o \quad (2)$$

where T_o is specified as a Gamma variable with parameter m , which implies that T has the Generalized Gamma distribution. This choice can accommodate the U-shaped hazard function reported in our earlier work. In addition, it nests a number of alternative assumptions about the distribution of T . In this specification, the coefficient β_i measures the proportionate effect on the time to failure T of a change in an explanatory variable X_i .

...job durations were longer for male heads of households who were at least 45 years of age, married, had larger families and had high school education.

Tables D.3 and D.4 present the results we obtained for the two separate samples when we used the specification described above. The equations in these two tables contain a very large number of job and individual characteristics, including the province in which the individual resided. This latter variable controlled for differences in provincial attributes, including the state of the labour market, which affected duration and might otherwise have clouded the interpretation of the VER variables included in our equations. The regional unemployment rate itself would have been another useful variable, but Statistics Canada would not release the individuals' UI regions.

Effect of VER

As explained in detail in Appendix A, we considered a number of VER specifications. We report on two of these specifications in detail below. The first one, presented in the first two columns of Tables D.3 and D.4 uses a dummy variable DREGVER, which equals unity when job duration was *equal to* the VER in the UI region in which the individual resided, and equals zero otherwise. The second approach, presented in the last two columns of these tables, entailed a dummy variable DVERA, which equals unity when job duration was *within the range of* the VER prevailing in the individual's province of residence, and equals zero otherwise. These dummy variables provided stringent tests of the moral hazard hypothesis because they took into consideration the possibility that individuals might work past the minimum VER to extend the duration of eventual benefits.

A higher wage rate was associated with longer job durations.

The results in these two tables were broadly similar: job durations were longer for male heads of households who were at least 45 years of age, married, had larger families and had high school education. Job durations were shorter for those who were currently attending school or participating in government training programs, and for those who were receiving worker's compensation, welfare, a pension¹³ or UI income.

Our analysis of the results also indicated that job durations were longer among white-collar workers, farmers, full-time employees, union members, and among those who worked in manufacturing, large firms, or in jobs that offered pension plans. The positive and significant coefficient on the Spell Number variable – that is, the number of jobs an individual held in a period – indicates that the total duration of employment was generally longer for individuals who had more than one employment spell in the period. This was likely to be a sample-conditioned effect.

The Hours Rationing variable has a significant negative coefficient, which indicates that dissatisfaction with the available amount of work shortened job duration. A higher wage rate was associated with longer job durations.¹⁴ The provincial dummy variables, which controlled for unemployment and other labour market characteristics, indicated significant differences between particular provinces and Ontario.

The variables of particular interest to this study have the anticipated negative signs and are significant at the 1 percent level. This suggests that meeting the VER reduced the time to failure quite noticeably. Durations that were either equal to the regional VER (*DREGVER=1*), or within the provincial range (*DVERA=1*), were shorter than they would otherwise have been by 75 percent and 82 percent respectively during the 1986-87 period. During the second sample period, these effects were somewhat muted, at 32 percent and 26 percent respectively, but they were still statistically significant at the 1 percent level.

In Tables D.5 to D.8, we report the results of an extensive sensitivity analysis and consider other features of the VER. The variables *DREGVER* and *DVERAR* equal one when job durations for repeaters equal the appropriate settings indicated in Appendix A. The main conclusion from this sensitivity analysis is that the behaviour of the variables *DREGVER* and *DVERA* was relatively unaffected by changes in specification. Indeed, the estimated coefficients were essentially the same as those reported in the paragraph above.

Three other points merit discussion, however. First, the coefficients of the repeater variables were negative and significant when the variables were entered in isolation, but they became positive and occasionally significant when the repeater variables were entered along with the *DREGVER* and *DVERA* variables. This is probably because the regular and repeater variables were substantially collinear.

¹³ Note, however, that the coefficient for the pension income variable in the second sample is not significantly different from zero.

¹⁴ The variables *Beg 1986 to 1990* in Tables D.3 and D.4 equal unity when jobs begin in these years and are zero otherwise. Their negative signs reflect what Figures 1 and 2 clearly show, namely that, because of the sample design, these will be shorter jobs.

Second, the variable DN , relating to new entrants into the labour force, had a positive coefficient that was often significant. Although this result was somewhat unexpected, the interaction between age and education inherent in the definition of DN , rather than the twenty-week duration, probably drove this result. When a twenty-week dummy variable was also entered in our equations, it was not significant; however, the DN variable continued to be significant whenever it was originally.

Finally, there is some evidence that the maternity variable DM had a significantly negative coefficient for the second period. The implied proportionate effect was around 0.17.

These results can be checked for robustness – that is, their ability to withstand changes in specifications – and given a different interpretation if they were considered in the context of the hazard of leaving employment, by using the Cox Proportional Hazards Model (PH) described below.

Cox Proportional Hazards Model (PH)

The hazard $\theta(X,t)$ is specified as:

$$\theta(X,t) = \exp(X' \gamma) \theta(0) \quad (3)$$

where X' is a row vector of covariates, γ is a conformable vector of coefficients and $\theta(0)$ is the baseline hazard.

Cox's (1972, 1975) partial likelihood approach is used to maximize the log-likelihood and, because of the structure of equation (3), the baseline hazard drops out of the estimation problem. The coefficient γ_i measures the proportionate effect of a change in the i th covariate in X on the hazard. In the context of $DREGVER$ and $DVERA$, it measures the increase in the hazard of leaving employment once the VER has been reached ($DREGVER = 1$) and when duration lies in the relevant provincial range ($DVERA = 1$).

To implement this model, the software capabilities made it necessary to work with sub-samples drawn randomly from the two periods and with substantially trimmed lists of covariates. The new samples have 3,000 observations, representing about 5 percent of each of the original sets. Descriptive statistics on the covariates in the full and reduced samples appear in Table D.9 for 1986-87 and in Table D.10 for 1988-90. These statistics indicate that at least the first moments of these variables are very similar.

Tables D.11 to D.16 have the same structure as the analogous tables for the AFT model. The results obtained for this specification were substantially the same as

...older, married heads of households with children, white-collar workers, and individuals in full-time, unionized jobs with pension plans were less likely to leave employment. Individuals working in agriculture, forestry, fishing and contracting were more likely to leave employment and hence to have had shorter jobs than the base group.

those in the AFT model once the sign adjustment was made.¹⁵ Specifically, Tables D.11 and D.12 show that older, married heads of households with children, white-collar workers, and individuals in full-time, unionized jobs with pension plans were less likely to leave employment. Individuals working in agriculture, forestry, fishing and contracting were more likely to leave employment and hence to have had shorter jobs than the base group. Finally, the Spell and Rationing variables also have the expected signs and were statistically significant.

As with the AFT model, the results of the PH approach indicate that the hazard of individuals quitting their jobs was significantly higher when job durations were equal to the VER ($DREGVER = 1$), or lay in the range of the provincial VER ($DVERA = 1$). In the 1986-87 period, the hazard of job departure nearly doubled for jobs of those durations. While the hazard was muted somewhat in the 1988-90 period, it was still 50-63 percent higher for jobs of those durations. This effect was relatively unaffected by the specification changes reported in Tables D.13 to D.16.

Using the PH approach, the repeater variable always had the expected sign and was occasionally significant at the 10 percent level. The maternity variable DM continued to be significant in the second period and had a very large coefficient. These results continued to hold in separate provincial equations, which were based on the entire sample in each province and controlled for the state of provincial labour markets. We have not reported the proportionate effects of these variables on the provincial hazards because they were very similar to those for the overall sample.

These results, which show compelling evidence of a moral hazard effect, are comparable to and complement results obtained by Baker and Rae (1993) and by Green and Riddell (1993). For instance, in the latter study, which subjected a smaller, carefully constructed sample of otherwise identical individuals to a 10-week VER in 1989 and a 14-week VER in 1990, the hazard function showed spikes at 10 weeks in 1989. It then shifted to the right during 1990, with a spike at 14 weeks and higher hazards in the 14-20 week interval.¹⁶

Further Evidence on the Link Between the VER and Job Duration

We now examine a host of hypotheses relating to the moral hazard problem that were difficult to analyze in the context of the econometric models examined above. We focused on job durations that were in the range of the provincial VER ($DVERA = 1$), because they gave us a slightly broader view of the moral hazard problem under study. We reached similar conclusions, however, when we used alternative definitions of moral hazard such as those described in Appendix A. For brevity, we have referred to the sample defined by $DVERA = 1$ as the VERA sample.

¹⁵ Recall that the AFT specification involves time to failure while the PH specification deals with the probability of leaving employment given survival to some point. A covariate that increases the hazard also shortens time to failure.

¹⁶ See note No. 15.

It was useful to begin with some basic checks on the kinds of jobs in the VERA sample. In the first period, there were 2,696 observations in the VERA sample, representing 4.6 percent of the total sample in that period. In the second period, there were 4,053 observations in the VERA sample, representing 6.2 percent of the total sample for 1988-1990. Tables D.17 and D.18 show the distribution of the overall and VERA samples by LMAS job types. As might be expected, VERA jobs tended not to be continuing jobs, but instead, were concentrated in job types 1 and 3 in sample 1, and 1, 5 and 7 in sample 2.

Tables D.19 and D.20 summarize some of the characteristics of the VERA samples. As required by the moral hazard hypothesis, the vast majority of these jobs were completed rather than censored. As the last column in the tables indicates, approximately 90 percent of the VERA samples were completed jobs.

The gender balance in the overall and VERA samples was comparable. However, there were interesting differences across industries. The largest divergence between the overall and VERA samples was for contractors, who constituted 11.9 percent of the VERA sample for 1986-87 and 11.5 percent of the VERA sample for 1988-90, but only 7.1 percent and 8.2 percent of the overall samples for those years. A similar phenomenon held in agriculture, forestry and trapping, but on a smaller scale. Individuals in these industries were more likely to have jobs of duration in the neighbourhood of the relevant VER. A tendency in the opposite direction existed in the remaining industries.

More surprising were comparisons along provincial lines. The Maritime provinces were under-represented in the VERA samples in both periods, Quebec was over-represented in the VERA sample of the second survey and Ontario was over-represented in the VERA samples of both surveys.¹⁷ This occurred despite the fact that mean duration was much higher in Quebec and Ontario than in the Maritimes; this may be because UI claims in the Maritimes tend to be of longer duration, so some would likely not have re-appeared in the VERA sample. The proportion of full-time jobs in the two samples was very similar.

For a further check on the moral hazard hypothesis, we examined whether individuals in the VERA sample were more likely than those in the overall sample to have drawn UI benefits. A comparison of columns 3 and 9 in Tables D.21 and D.22 indicates that this was the case in all provinces, but especially so in Newfoundland, New Brunswick, Quebec, Manitoba and Alberta. These divergences are not as marked in Table D.22.

Another finding of interest in these two tables is that UI use was generally higher in a third sub-sample consisting of durations between ten and fourteen weeks. In Newfoundland, for example, 52.6 percent of the overall sample of job durations were associated with UI receipt. However, 65.3 percent of job durations in the VERA sample and 73.5 percent of the sample of job durations between ten and fourteen weeks were associated with UI benefits. This may suggest that even the *DVERA* variable, which was broader than *DREGVER*, may not be broad enough.

¹⁷ These comparisons are relative to the proportions in the overall sample.

A number of individuals who held jobs that were longer than the maximum of the provincial VER range also received UI benefits,¹⁸ probably because additional weeks of work may have led to additional weeks of benefits. Thus the variables DVERA and especially *DREGVER* test rather stringent forms of the moral hazard hypothesis.

Tables D.23 and D.24 examine the pattern of individuals and jobs in the overall and VERA samples. The first two columns of these tables, which repeat information from Tables B.1 and B.2, indicate that a large majority of individuals held only one job in the overall sample. In contrast, only 17.9 percent of job-holders held only one job in the first VERA sample, and only 11 percent did so in the second VERA sample. Clearly, therefore, the individuals in the VERA sample held many more jobs than did individuals in the overall sample. It is difficult to discern from these tables, however, whether individuals in the VERA sample repeatedly received UI benefits or simply belonged to a group that tended to hold more jobs. In part, this is because the length of UI benefits, combined with the short sample periods, did not allow us to capture that many sequential jobs held by individuals in the VERA sample.¹⁹

A further issue of interest is whether the econometric results discussed in the previous section captured the behaviour of students who did not qualify for UI benefits, rather than evidence of moral hazard. Of job durations that were less than or equal to fourteen weeks, Tables D.25 and D.26 report what proportion of those jobs were held by students in each year of the two periods under study. The LMAS definition of a student, as described in footnote 'c' of the two tables, was not sufficiently discriminating. We prefer an alternative definition that required individuals to have been studying for at least eight months. Results based on this definition are presented in the first two rows of these tables. Although the proportion of jobs held by students is noteworthy, it was never more than one third.²⁰

Tables D.27 and D.28 address the same issue more directly, using the VERA sample. Again, the proportion of completed student jobs, although noteworthy, was at most 37.7 percent in 1986, and as low as 20.9 percent in 1990.

Tables D.29 and D.30 present details of job duration by week and age group. The question at issue is whether the increased frequencies at and around the VER were confined to the young. The tables indicate that this was not the case. Frequency jumps occurred at ten and fourteen weeks for all age groups. We conclude, therefore, that the econometric results described in the previous section cannot be dismissed as behaviour by individuals who were young and perhaps students, and who did not, in any case, draw UI benefits.

18 Recall that in Newfoundland, for example, the VER range is degenerate at ten weeks. Thus, jobs at 12 weeks, for example, would not be included in the VERA sample but would be included in the 10-14 week one.

19 See the right hand portion of Tables D.23 and D.24.

20 Indeed in 1990 it is about 17 percent. Note that in the second LMAS survey all jobs of this length are completed ones. The reason is that the last survey date is fourteen weeks beyond the end of 1990 and, as in 1986-87, no jobs start beyond the end of the year.

Employers, Employees and Unemployment Insurance

Popular writings have presumed that it is the employee rather than the employer who initiates job separations for the purpose of drawing UI benefits.²¹ The two LMAS's reported in detail the reasons for separations in the case of completed spells. These reasons can be grouped into broader economic categories. If we presume that the distinction between quits and layoffs is meaningful, we can use the information from the LMAS's to shed some light on this issue.

Tables D.31 and D.32 report the reasons for separation by detailed and broad categories. Because the menu of reasons in the two surveys was somewhat different,²² it was difficult to make comparisons over time. Looking at each survey in isolation, it is clear that layoffs were very important; indeed, if we treat separations in the 'Seasonal' category as layoffs, the combined class would dominate the 'Quits' category.

As shown in Tables D.33 and D.34, the number of job terminations associated with quits and layoffs jumped at the ten- and fourteen-week points. It is intriguing that separations for seasonal reasons also jumped at precisely ten and fourteen weeks. This suggests that more than climatic factors were at play. At this level, therefore, it would appear that both sides of the labour market were involved in separations. Based on past experience, there was a high probability that these separations led to UI claims.

Tables D.35 and D.36 report both broad and detailed reasons for separation for various sub-samples. One immediate conclusion, which is consistent with our earlier discussion, is that jobs in the VERA sample were not primarily ones held by students; less than 25 percent of separations in the VERA samples of either survey involved a return to school.²³

The relative importance of quits and layoffs was not clearly dependent on the relation between duration and the VER range. In the 1986-87 sample, quits declined and layoffs rose as duration lay below, in and above the VER range. In the 1988-90 sample, quits generally rose while layoffs clearly fell. Looking specifically at the VERA sample, layoffs were more important than quits during 1986-87, while the opposite was true during 1988-90; however, treating seasonal separations as layoffs would lead to the conclusion that layoffs were more important in both periods.²⁴

Tables D.37 and D.38 examine the gender dimension. In both periods, there were more quits for females than males, and more layoffs for males than females. Separations for seasonal reasons involved more males than females; in this regard, they looked more like layoffs than quits.

...the number of job terminations associated with quits and layoffs jumped at the ten- and fourteen-week points. ... it would appear that both sides of the labour market were involved in separations.

21 See Christofides and McKenna (1993b) for a review of some of the academic literature.

22 In the first LMAS, the residual category "Other" was much more substantial than was the case in the second survey.

23 Note, however, that "Going to School" is a much more important reason for separation in the VERA sample than elsewhere.

24 The right-most column of Table D.36 indicates rather sizable quits and separations to take up a "New Job". Given the pro-cyclical behaviour of quits, this may be because the later period is more favourably placed in the business cycle.

...there were more quits for females than males, and more layoffs for males than females. Separations for seasonal reasons involved more males than females; in this regard, they looked more like layoffs than quits.

Tables D.39 and D.40 explore some of the experiences of individuals in the VERA sample following a job separation, to establish whether such separations were followed by unemployment and the possible receipt of UI benefits. Where individuals found new employment, we sought to determine whether this involved the same or a new employer. Re-employment with the same employer might suggest at least some degree of collusion. If so, it was a strong form of collusion; employers may agree to fire an individual after the VER has been met even though they do not intend to re-employ this individual.

To carry out this analysis, we examined the employer vectors for each individual in detail, and recorded the individual's experience subsequent to a separation from a job with duration in the range of the provincial VER. This process involved some judgement calls, but it produced very useful information. Tables D.39 and D.40 record by province the four main categories of subsequent experience:

- those who held a concurrent job at the point of separation;
- those who did not find employment by the last survey date;
- those who found a new job with the same employer, following a period of unemployment; and,
- those who found a new job with a different employer, following a period of unemployment.

One conclusion is that, across Canada, job separations in the second period were much more likely to be followed by employment compared to job separations in the first period. This is consistent our with earlier discussion. In the second period, 25 percent of the terminations were not followed by employment by the end of the sample, compared to 37 percent in the first period.²⁵ Within each period, the probability of employment following separation at the VER was lower in the Maritime provinces.

Very few terminations were followed by a return to the same employer. In the first period, only 2.4 percent of separations in the sample ended with re-employment with the same employer; even fewer, 2.1 percent, did so in the second period.

Beginning in Tables D.41 and D.42, we explore the likely duration of non-employment for those who did ultimately find a job with a new employer. These tables, which contain data for Canada as a whole, indicate that a substantial proportion of those individuals found work fairly early. Fifty percent of the group that was not employed immediately²⁶ obtained work by week 13 in the first period and by week 20 in the second period.²⁷ However, many in the group did not find work until much later; a noteworthy number obtained employment close to the time their UI benefits would have been exhausted, as indicated by the spikes at 42 weeks in both samples.²⁸

²⁵ These figures imply non-employment for fairly lengthy periods of time.

²⁶ See note 'a' in Tables D.39 and D.40.

²⁷ The fact that it takes longer for the 50 percent mark to be achieved in the second, generally more prosperous, period is likely due to the fact that this period is longer.

²⁸ In a high unemployment area, once the 10-week VER is met, workers are entitled to ten weeks of benefits and thirty-two weeks of "regionally extended benefits".

The findings for Canada as a whole were consistent with the provincial information in Tables D.43 and D.44. Spikes at 42 weeks were particularly pronounced in Newfoundland and Prince Edward Island.

Tables D.45 and D.46 examine further the speed of re-employment, including immediate employment and return to the same employer.

Until now, we have examined the reasons for final separations between employers and employees. The LMAS surveys also reported interruptions of employment within a job and the reasons for these interruptions. Tables D.47 and D.48 report the overall number of interruptions by LMAS job type. Where jobs continued across more than one year, these tables also report the number of interruptions in each year. In general, very few jobs contained any interruptions at all. Those that did seldom involved more than one break in employment.

Tables D.49 and D.50 indicate the reasons for all of these intra-job interruptions in each year of the two study periods. In general, only a negligible number of these interruptions involved individuals who quit their jobs.²⁹ A substantial proportion involved individuals who were laid off and then re-hired. Earlier results indicated that few final separations led to eventual re-hire by the same employer. Conceivably, employers and employees using the UI system may have appeared in the data under intra-job interruptions, but we could not be certain that this is what actually occurred.

To investigate this possibility further, we examined the relationship between jobs and employers. If jobs in the VERA sample generally involved fewer employers compared to the overall sample, that might be viewed as indirect evidence that employers had used the UI system. To carry out this analysis, we returned to the original LMAS samples because we needed the employer vectors, which record the overall employer picture for each individual. Thus, Tables D.51 to D.58 refer to the data on the unprocessed public-use LMAS tapes.³⁰

A comparison of Tables D.51 to D.54 indicates that there were proportionately greater numbers of employers in the VERA samples for the two LMAS surveys. This was because VERA jobs were shorter than those in the overall sample, resulting in proportionately more jobs and employers. Once we standardized for the number of jobs held, there was very little evidence that employers used the UI system in this particular sense. The numbers on the main diagonal were generally bigger, while those above them were smaller in the VERA samples compared to the overall samples.

Tables D.55 to D.58 consider the gender and full-time status of the sample. Once we adjusted the totals to allow for the fact that fewer women had jobs, gender did not seem to matter. Males and females had proportionately similar numbers of

Very few terminations were followed by a return to the same employer.

²⁹ A possible exception is 1987, when 10.3 percent of first interruptions were quits.

³⁰ Note the anomalous entries below the main diagonal in Tables D.52 and D.54 and footnote 'a' in these tables. These tables are the only ones in this study which are based on the unprocessed LMAS sample, referred to at the head of each table as "entire LMAS." The anomalous entries are due to coding practices in the LMAS tables.

employers.³¹ As might be expected, Tables D.57 and D.58 show that full-time jobs involved a lot fewer employers than did part-time positions.

In summary, although more jobs terminated in layoffs than quits, we found very little other evidence that employers used the UI system, unless they did so by temporarily laying off individuals within jobs.

³¹ Thus, during 1986-87, 69.3 percent of males have one employer, 19.7 percent have two and 6.8 percent of males have three. The figures for females are 69.5 percent, 20.3 percent and 6.8 percent respectively. During 1988-90, these figures are 55.9 percent, 22.3 percent and 11.1 percent for males and 55.3 percent, 23.8 percent and 11.7 percent for females.



4. *Non-Standard Employment*

A number of studies³² have focused on what has come to be known as non-standard employment—that is, part-time jobs that may not qualify for UI benefits,³³ jobs that may be held concurrently with other employment, and/or poorly paid, non-unionized jobs that have no benefits attached. There is a sense that an increasing number of individuals may be employed in such jobs, and our investigation of job duration would be incomplete without considering them.

Although the LMAS surveys did not focus on non-standard employment as such, we were able to extract some pertinent information on this issue. We constructed the following tables from the processed samples used in all but the last section. Therefore, they include all the consistency checks discussed in Section 1 and exclude self-employment.

Non-Standard Employment in the LMAS

Tables E.1 and E.2 consider a number of job attributes that relate to non-standard employment. The relevant information is presented by job type. We began by examining secular changes. To that end, we focused on jobs completed in each of the five years from 1986-90. These are shown in columns 4 and 5 in Table E.1 and columns 7-9 in Table E.2. We also examined the characteristics of jobs that existed within each of the five years. These are shown in columns 1-3 in Table E.1 and columns 1-6 in Table E.2.

We found no trend decrease in the number of weeks worked per month, nor other measures of the length of actual employment. In the second period, however, the gap generally grew between the extra number of hours of work that employees wanted and those that were offered by employers.

The proportion of full-time jobs was generally higher in the second survey compared to the first. The proportion of part-timers who wanted full-time employment was implausibly variable in the 1986-87 survey and spanned comparable proportions in the 1988-90 survey. The proportion of unionized jobs appears to have increased over time, as did the proportion of jobs covered by a collective agreement.

Another indicator of the ‘quality’ of a job was whether it carried a pension plan. We know from earlier results that this indicator was a very important determinant of job duration. The two tables indicate that, if anything, there was a trend increase in the proportion of jobs that have a pension plan: 24.7 percent of jobs completed in 1986 had pension plans, compared to 45.4 percent of jobs completed in 1990. A final indicator of job quality was the wage rate, which rose from \$10.21 for jobs finishing in 1987 to \$12.55 per hour for jobs finishing in 1990. In real terms, this represents an annual compound growth rate of 2.9 percent over

A number of studies have focused on what has come to be known as non-standard employment – that is, part-time jobs that may not qualify for UI benefits, jobs that may be held concurrently with other employment, and/or poorly paid, non-unionized jobs that have no benefits attached.

32 See Economic Council of Canada (1990) and Picot, Myles and Wannell (1990).

33 Individuals who work for less than fifteen hours per week are not covered by the UI program. Note, however, that in the LMAS, jobs are treated as part-time if they entail less than 30 hours per week.

Jobs in the Maritime provinces involved more effort and lower wages compared to jobs in other parts of the country.

this period.³⁴ Thus, the evidence in these tables does not support the suggestion that job quality declined.

Tables E.1 and E.2 also compare completed and censored jobs. As might be expected, the measures in the two tables indicate that longer-lasting jobs tended to be of higher quality.³⁵

Tables E.3 and E.4 consider the job quality measures in the LMAS's for each province. For ease of presentation, we only recorded responses that were pertinent to the last year of each survey. Thus the responses pertain only to a portion of the total provincial jobs recorded in Tables B.3 and B.4. In general, the tables confirm expectations about 'have' and 'have-not' provinces. Jobs in the Maritime provinces involved more effort³⁶ and lower wages compared to jobs in other parts of the country. They were also less likely to have pension plans and more likely to have a higher proportion of part-time workers who wanted full-time work. However, there was an element of surprise as well: the proportion of full-time jobs was highest in the Maritimes. For example, 84.9 percent of jobs in Newfoundland were full-time in 1986-87.

Tables E.5 and E.6 provide a breakdown of the same information by industry. They clearly show substantial differences in job quality across industries. The higher-quality jobs were in mining, transportation, communications and utilities, while the lower-quality jobs were in agriculture, forestry and fishing.

Tables E.7 and E.8 explore gender differences in jobs. Men's unadjusted wages were 25.4 percent higher than women's during 1986-87, and 25 percent higher during 1988-90. It is not clear whether the slightly lower differential during the second period was one of the long-term trends discussed in Christofides and Swidinsky (1994). Other measures of job quality, which were consistent with our findings related to wages, completed the picture. Women were:

- less likely to hold full-time jobs,
- more likely to want full-time employment if they did not already have it,
- more likely to have rationed hours,
- more likely to be in non-unionized jobs, and
- less likely to have pension plans.

The remaining tables deal with concurrent employment—that is, jobs that overlapped for at least one week. These tables were generated from the employment vectors in the LMAS data.

34 This amount exceeds the real wage growth rate one would expect from contract data on real base-wage-rate growth.

35 Compare, for instance, censored jobs that start before 1988 with 1988 jobs, i.e. the last and first columns in Table E.2.

36 See rows 1-3 in Tables E.3 and E.4. Note, however, that the average number of total weeks worked over the sample period (row 10 in the two Tables), a figure which includes non-employment, is much lower in the Maritimes than elsewhere. It is likely that the data for this as well as the Total Hours variable (row 11) in the 1988-90 LMAS is not reliable: The figures reported appear to be too low and they are inconsistent with their annual counterparts.

Tables E.9 and E.10, which show the incidence of concurrent employment for Canada and the provinces, reveal that during 1986-87, 86.8 percent of the individuals in our sample held no concurrent jobs, 12.4 percent held one such job, and a negligible 0.7 percent held more than one concurrent job. The figures for 1988-90 were 80.8 percent, 17.9 percent and 1.3 percent. The slightly higher number of individuals in the second period who held more than one concurrent job was the first evidence of an increase in non-standard employment that we came across. The provincial data indicate that concurrent jobs were more common in provinces that were relatively better off: Ontario and Manitoba had the highest incidence of concurrent jobs, while the Maritime provinces had the lowest incidence.

Tables E.11 and E.12, which describe the incidence of concurrent jobs by gender and full-time status, show that women were somewhat more likely to hold concurrent jobs; part-time jobs were much more likely to be held concurrently than were full-time ones.

Tables E.13 and E.14 show that jobs were not held concurrently for very long. Of the total number of individuals in the sample, 6 percent in 1986-87 and 8.2 percent in 1988-90 held jobs concurrently for only one week, 1 percent and 1.6 percent held such jobs for two weeks, and smaller proportions held concurrent jobs for longer periods. However, a noteworthy number of individuals, 0.3 percent in 1986-87 and 0.2 percent in 1988-90 held concurrent jobs for the duration of the survey periods.

To determine the seasonal patterns of concurrent jobs, we averaged the relevant information for each calendar week across the years of the two samples. Figures 5 and 6 which present the percentage of individuals in the sample who held concurrent jobs by calendar week, show very clear evidence of seasonality in the summer months, particularly in the second survey.

Figures 7 and 8 show that the seasonal pattern was similar for men and women. However, there is evidence that the summer peak for women continued until the end of the year. This probably was because sales and service jobs, held primarily by women, become available during the Christmas season.

Figures 9 and 10, which show the breakdowns for full- and part-time jobs, clearly support our earlier comment that concurrent employment was much more likely to involve part-time jobs. Full-time jobs appear to have been influenced very little by the seasons, whereas the graphs for part-time jobs display the familiar seasonal patterns.

The higher-quality jobs were in mining, transportation, communications and utilities, while the lower-quality jobs were in agriculture, forestry and fishing.

Figure 5
Individual in Concurrent Jobs (1986-87)

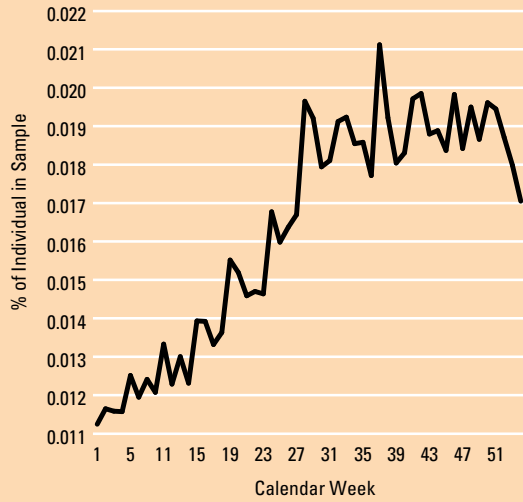


Figure 6
Individual in Concurrent Jobs (1988-90)

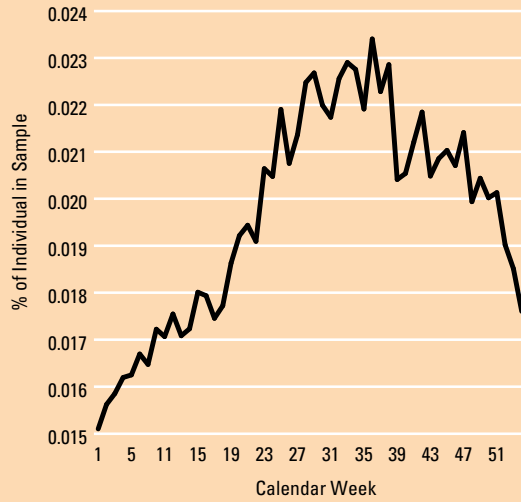


Figure 7
Individual in Concurrent Jobs by Gender (1986-87)

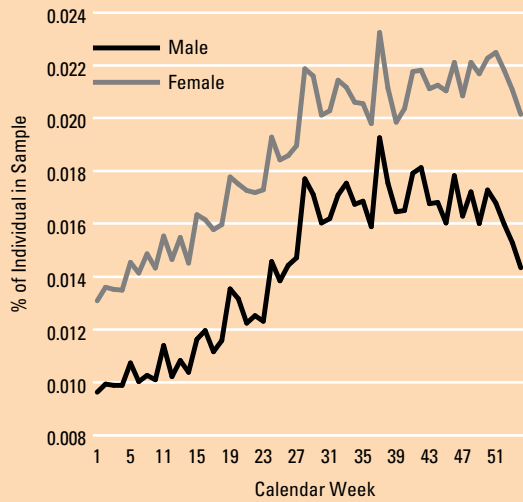


Figure 8
Individual in Concurrent Jobs by Gender (1988-90)

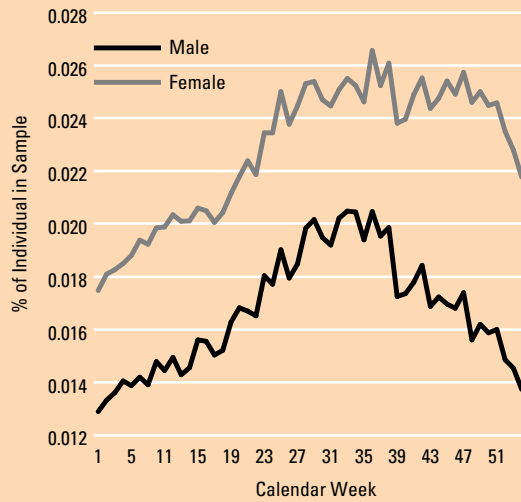


Figure 9
Individual in Concurrent Jobs by Status (1986-87)

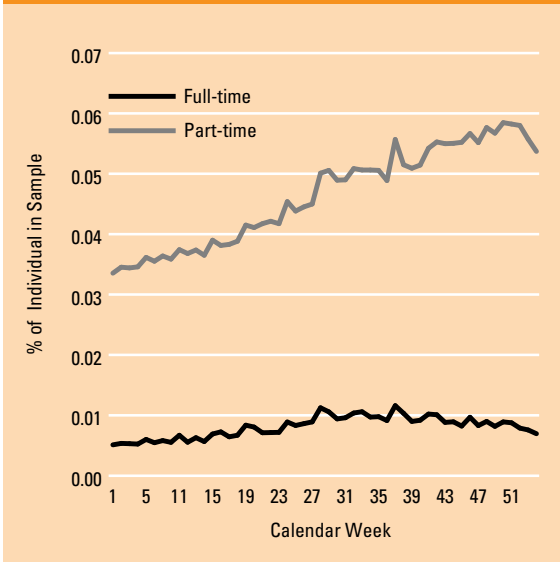
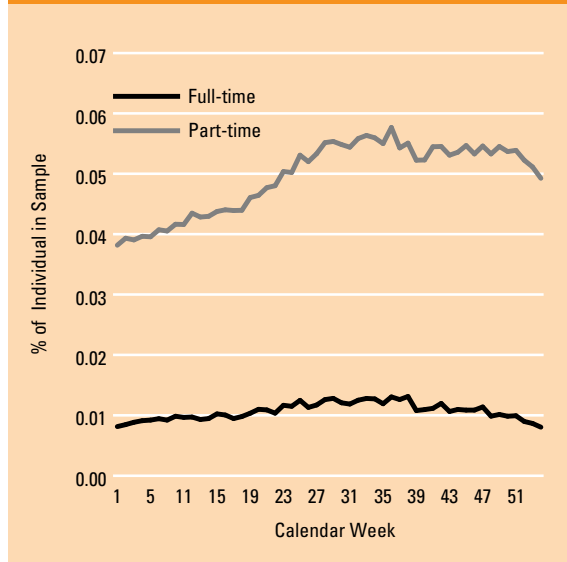


Figure 10
Individual in Concurrent Jobs by Status (1988-90)





5. Conclusion

There is some evidence of growth in the prevalence of concurrent jobs, but beyond this finding, there was little evidence of growth in non-standard employment during the periods under study.

Much of the evidence from this study is consistent with the moral hazard hypothesis that job duration is affected by the VER. Provincial job duration frequencies had spikes at the relevant VERs. Survival analysis suggests that job durations were shaped by the VER. Jobs that finished at the VER also had characteristics that were consistent with the moral hazard hypothesis.

There is some evidence of growth in the prevalence of concurrent jobs, but beyond this finding, there was little evidence of growth in non-standard employment during the periods under study.

Appendix A: The Construction of the VER Variables



VER Variables During 1986-1987

We outline here the operational definitions of the relevant UI provisions which applied during the 1986-87 period.

Variable entrance requirement (VER)

The VER in 1986-87 specified that, depending on the unemployment rate in the claimant's region of residence, the individual must work between 10 to 14 weeks in insured employment in order to qualify for UI benefits. The LMAS data identify the province but not the UI region of individuals. Administrative information on the regional VERs and unemployment rates was made available by Employment and Immigration Canada and was, therefore, averaged up to the provincial level. The provincial average VERs (1986; 1987) are: Newfoundland (10; 10), Prince Edward Island (10; 10), Nova Scotia (10; 10), New Brunswick (10; 10), Quebec (10; 10), Ontario (12; 12), Manitoba (12; 12), Saskatchewan (11; 11), Alberta (10; 10) and British Columbia (10; 10). In order to capture the possible effects of the VER on job spells, a dummy variable *DVER* is specified which equals 1 when a job lasts for the duration of the provincial mean VER and equals zero otherwise.

An alternative dummy variable *DVERA* equals 1 when a job duration lies within the provincial range of VERs and equals zero otherwise. These provincial ranges (1986; 1987) are: Newfoundland (10; 10), Prince Edward Island (10; 10), Nova Scotia (10-11; 10-12), New Brunswick (10; 10), Quebec (10-12; 10-12), Ontario (10-14; 10-14), Manitoba (10-14; 11-14), Saskatchewan (10-13; 10-13), Alberta (10-11; 10-11) and British Columbia (10; 10). There are 1220 and 2696 observations (or 2.1 percent and 4.6 percent of the sample) respectively for which *DVER* and *DVERA* equal 1.

A third variable *DREGVER* uses administrative information on the VER prevailing in the UI region of the individual. This information, which does not violate any confidentiality criteria, was appended by Statistics Canada to the public use LMAS tape. The dummy variable *DREGVER* equals one when job duration equals the VER in the individual's UI region and equals zero otherwise. There are 1247 observations (or 2.1 percent of the sample) for which *DREGVER*=1.

Repeaters

These are individuals who received UI benefits during the past 52 weeks. In order to qualify for a further spell of UI benefits, they must normally work up to 6 weeks more than the 10-14 week VER to establish eligibility. The six-week provision does not apply in any area where the regional unemployment rate exceeds 11.5 percent.

To operationalize the repeater provision in the context of the LMAS data, the VER dummy variables are employed. The dummy variable *DVERR* equals 1 when an individual drew UI benefit in the relevant year and job duration was equal (1986; 1987) to: Newfoundland* (10; 10), Prince Edward Island* (10; 10),

Nova Scotia* (10; 10), New Brunswick* (10; 10), Quebec (10*; 16), Ontario (18; 18), Manitoba (18; 18), Saskatchewan (17; 17), Alberta (16; 16) and British Columbia* (10; 10). The symbol * indicates a province with an unemployment rate above 11.5 percent; as it turns out, provincial unemployment rates were either above or below 11.5 percent in both years in all provinces but Quebec. *DVERR* equals zero otherwise.

An alternative definition of a dummy variable for repeaters uses the *DVERA* concept: given UI receipt as above, *DVERAR* equals one when job duration lies between, or equals, as appropriate (1986; 1987): Newfoundland* (10; 10), Prince Edward Island* (10; 10); Nova Scotia* (10-11; 10-12), New Brunswick* (10;10), Quebec (10-12*, 16-18), Ontario (16-10; 16-20), Manitoba (16-20; 17-20), Saskatchewan (16-19; 16-19), Alberta (16-17; 16-17) and British Columbia* (10;10). *DVERAR* equals zero otherwise. There are 447 and 787 observations (or 0.8 percent and 1.4 percent of the sample) respectively for which *DVERR* and *DVERAR* equal one.

As the actual UI region of the individual is not released by Statistics Canada, the repeater provisions for the third, UI region-based variable must be proxied using a provincial basis. *DREGVERR* equals one when an individual drew UI benefit in the relevant year and job duration was equal to (i) the VER in the region if the provincial unemployment rate exceeded 11.5 percent or (ii) the VER plus six if the provincial unemployment rate was less than or equal to 11.5 percent. *DREGVERR* equals zero otherwise. There are 441 observations (or 0.8 percent of the sample) for which *DREGVERR*=1 .

New entrants

UI regulations define a new entrant as someone who had fewer than 14 weeks of insurable employment or benefits during the 52 weeks prior to the qualifying period. These individuals must have at least 20 weeks of insurable employment during the qualifying period in order to establish eligibility.

In order to identify these individuals using LMAS data, a combination of age and education information is used. In general, individuals with more education enter the labour force at a later age than those with less education. The dummy variable for new entrants, *DN*, equals one for jobs of 20 weeks whose holders satisfy any of the following conditions: 16 years old and no or elementary education only; 17-19 years old and some or completed high school; and 20-24 years old with post-secondary or university education. *DN* equals zero otherwise. There are 160 observations (0.3 percent of the sample) for which *DN* equals one.

Maternity benefits

Until 1984, maternity benefits were available to women with at least 20 weeks of insurable employment during the qualifying period. Effective January 1, 1984, a parent could claim UI benefits for adopting a child. Either parent could receive up to 15 weeks of benefits if his/her presence was required in the home and both had at least 20 weeks of insurable employment in the qualifying period.

To implement these provisions and assuming that women are more likely to take advantage of them, a dummy variable *DM* was set up which equals one for jobs

of 20 weeks duration which were held by married females aged 17-44, *DM* equals zero otherwise. There are 173 observations (or 0.3 percent) of the sample for which *DM* equals one.

VER Variables During 1988-1990

The UI provisions that held during the period 1988-1990 and their exact implementation in the context of the 1988-1990 LMAS are described below.

Variable Entrance Requirement (VER)

Between January 1, 1988 and January 6, 1990, the VER ranged between 10 and 14 weeks of insurable employment depending on the regional unemployment rate. As the 1988-1989-1990 LMAS does not release the individual's UI region, it was necessary to work with UI information that was averaged up to the provincial level; regional unemployment rates and VER data were made available by EIC. The provincial average VER's (1988;1989) were: Newfoundland (10;10), Prince Edward Island (10;10), Nova Scotia (11;11), New Brunswick (10;10), Quebec (11;11), Ontario (13;13), Manitoba (11;12), Saskatchewan (11;11), Alberta (11;11), and British Columbia (10;10).

The failure of Senate to pass Bill C-21 expeditiously resulted, during the period January 7, 1990 to November 18, 1990, in a flat VER of 14 weeks regardless of the regional unemployment rate. Beyond November 18, 1990, the VER depended on the regional unemployment rate; it ranged between 10 and 20 weeks as the regional unemployment rate varied between 15 percent or higher and 6 percent or lower. For example, the VER in a region with an unemployment rate between 14-15 percent was 11 weeks, while that for a region with an unemployment rate of 6-7 percent was 19 weeks. The provincial means were Newfoundland (12) Prince Edward Island (11), Nova Scotia (14), New Brunswick (14), Quebec (15), Ontario (17), Manitoba (16), Saskatchewan (17), Alberta (17) and British Columbia (15).

In order to capture the possible influence of the VER on job spells, the dummy variable *DVER* is set equal to 1 when a job duration equals the provincial average VER and equal to zero otherwise.

An alternative definition sets the dummy variable *DVERA* equal to 1 when a job duration is contained in the range of the regional VERs in a province and equal to zero otherwise. The provincial VER ranges (1988;1989) are: Newfoundland (10;10) Prince Edward Island (10;10), Nova Scotia (10-12;10-14), New Brunswick (10;10) Quebec (10-14;10-14), Ontario (10-14;10-14), Manitoba (10-14;10-13), Saskatchewan (10-14;10-13), Alberta (10-12;10-13) and British Columbia (10-11;10-13). During the period January 7, 1990 to November 18, 1990, the provincial ranges collapse to 14 weeks everywhere so that *DVER=DVERA*. After November 18, 1990, they are: Newfoundland (10-15), Prince Edward Island (10-12), Nova Scotia (10-18), New Brunswick (10-16), Quebec (10-19), Ontario (15-20), Manitoba (10-20), Saskatchewan (11-20), Alberta (16-18) and British Columbia (12-18). There are 1396 and 4053 observations (or 2.1 percent and 6.2 percent of the sample) respectively for which *DVER* and *DVERA* equal 1.

A third dummy variable uses administrative information on the VER prevailing in the UI (check) region of the individual. This information, which does not compromise confidentiality, was appended by Statistics Canada to the public use LMAS tape. Between January 1, 1988 and January 6, 1990, the dummy variable *DREGVER* equals one when duration equals the regional VER and equals zero otherwise. During the period January 7, 1990 to November 18, 1990, *DREGVER* equals one when duration equals 14 weeks and equals zero otherwise. As the UI region of the individual was not made available, provincial information after November 18, 1990 is used to construct *DREGVER*. Thus, beyond November 18, 1990, *DREGVER* equals one when duration equals 12 weeks in Newfoundland, 11 weeks in Prince Edward Island, 14 weeks in Nova Scotia and New Brunswick, 15 weeks in Quebec and British Columbia, 17 weeks in Ontario, Saskatchewan and Alberta and 16 weeks in Manitoba; it equals zero otherwise. There are 1643 observations (or 2.5 percent of the sample) for which *DREGVER* equals one.

Repeaters

These are individuals who received UI benefits during the past 52 weeks. The treatment of repeaters varies substantially over the period 1988-1990.

During 1988-1989, repeaters had to normally work up to 6 weeks more than the 10-14 week VER in order to establish eligibility. This 6-week provision did not apply where the regional unemployment rate exceeded 11.5 percent. To operationalize this repeater provision in the context of the LMAS data, the VER dummy variables are used. The variable *DVERR* equals 1 when an individual drew UI benefits in the relevant year *and* job duration was equal (1988;1989) to: Newfoundland* (10;10), Prince Edward Island* (10;10), Nova Scotia (17;17), New Brunswick* (10;10), Quebec (17;17), Ontario (19;19), Manitoba (17;18), Saskatchewan (17;17), Alberta (17;17) and British Columbia* (10;10). The symbol * indicates a province with an unemployment rate above 11.5 percent; as it turns out, provincial rates were either above or below 11.5 percent in both years. The variable *DVERR* equals zero otherwise. An alternative definition of a dummy variable for repeaters uses the *DVERA* construction: given UI receipt as above, *DVERAR* equals 1 when job duration lies within (1988;1989) the provincial ranges: Newfoundland* (10;10), Prince Edward Island* (10;10), Nova Scotia (16-18;16-20), New Brunswick* (10;10), Quebec (16-20;16-20), Ontario (16-20;16-20), Manitoba (16-20;16-19), Saskatchewan (16-20;16-19), Alberta (16-18;16-19) and British Columbia* (10-11;10-13). *DVERAR* equals zero otherwise.

During the period January 7, 1990 to November 18, 1990 special repeater provisions were not invoked if the regional unemployment rate exceeded 11.5 percent. However, where this rate was less than or equal to 11.5 percent the VER ranged between 14-20 weeks, depending on the benefits already received by the individual. As this information is not available on LMAS, repeaters were assumed to be bound by a 17-week VER. Thus, during these months *DVERR* equals *DVERAR* and is: Newfoundland* (14), Prince Edward Island* (14), Nova Scotia (17), New Brunswick* (14), Quebec (17), Ontario (17), Manitoba (17), Saskatchewan (17), Alberta (17) and British Columbia (17). After November 18, 1990 the repeater

provisions do not apply at all and $DVER=DVERR$. There are 434 and 1060 observations (or 0.7 percent and 1.6 percent of the sample) respectively for which $DVERR$ and $DVERAR$ equal 1.

Between January 1, 1988 and January 6, 1990, $DREGVERR$, the repeater version of $DREGVER$, equals one whenever UI benefits were drawn in the relevant year and job duration equals either (i) the regional VER (if, as in Newfoundland, Prince Edward Island, New Brunswick and British Columbia, the provincial unemployment exceeds 11.5 percent), or (ii) the regional VER **plus** six weeks if, as in the remaining provinces, the unemployment rate is less than or equal to 11.5 percent. In the period January 7, 1990 and November 18, 1990 $DREGVERR$ equals one whenever UI benefits were drawn in the relevant year and duration is either 14 weeks (Newfoundland, Prince Edward Island and New Brunswick) or 17 weeks (all remaining provinces). After November 18, 1990, no repeater provisions exist and $DREGVERR$ is defined as $DREGVER$. There are 505 observations (or 0.8 percent of the sample) for which $DREGVERR$ equals one.

New Entrants

UI regulations define a new entrant as someone who had fewer than 14 weeks of insurable employment or benefits during the 52 weeks prior to the qualifying period. These individuals must have at least 20 weeks of insurable employment during the qualifying period in order to establish eligibility.

In order to identify these individuals using LMAS data, a combination of age and education information was used. In general, individuals with more education enter the labour force at a later age than those with less education. The dummy variable for new entrants, DN , equals one for jobs of 20 weeks whose holders satisfy any of the following conditions: 16 years old and no or elementary education only; 17-19 years old and some or completed high school; and 20-24 years old with post-secondary or university education. DN equals zero otherwise. There are 132 observations (0.2 percent of the sample) for which DN equals one.

Maternity benefits

Until 1984, maternity benefits were available to women with at least 20 weeks of insurable employment during the qualifying period. Effective January 1, 1984, a parent could claim UI benefits for adopting a child. Either parent could receive up to 15 weeks of benefits if his/her presence was required in the home and both had at least 20 weeks of insurable employment in the qualifying period.

To implement these provisions and assuming that women are more likely to take advantage of them, a dummy variable DM was set up which equals one for jobs of 20 weeks duration which were held by married females aged 17-44, DM equals zero otherwise. There are 138 observations (or 0.2 percent) of the sample for which DM equals one.



Appendix B: Sample Construction

Table B.1
Individuals and Jobs (1986-87 Sample)

Number of Jobs Held	Number of Individuals	Percent	Cumulative Number of Individuals	Individuals x Number of Jobs	Cumulative Number
1	27,779	69.8	27,779	27,779	27,779
2	7,798	19.6	35,577	15,596	43,375
3	2,720	6.8	38,297	8,160	51,535
4	981	2.5	39,278	3,924	55,459
5	358	0.9	39,636	1,790	57,249
6	116	0.3	39,752	696	57,945
7	34	0.1	39,786	238	58,183
8	5	0.0	39,791	40	58,223
9	5	0.0	39,796	45	58,268

Table B.2
Individuals and Jobs (1988-90 Sample)

Number of Jobs Held	Number of Individuals	Percent	Cumulative Number of Individuals	Individuals x Number of Jobs	Cumulative Number
1	20,320	56.5	20,320	20,320	20,320
2	8,185	22.7	28,505	16,370	36,690
3	4,005	11.1	32,510	12,015	48,705
4	1,865	5.2	34,375	7,460	56,165
5	834	2.3	35,209	4,170	60,335
6	425	1.2	35,634	2,550	62,885
7	183	0.5	35,817	1,281	64,166
8	91	0.3	35,908	728	64,894
9	42	0.1	35,950	378	65,272
10	15	0.0	35,965	150	65,422
11	11	0.0	35,976	121	65,543
12	2	0.0	35,978	24	65,567
13	1	0.0	35,979	13	65,580

**Table B.3
Individuals in Jobs by Province (1986-87 Sample)**

Number of jobs		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
1	#	1,626	880	2,034	2,154	4,391	5,959	2,004	2,646	3,909	2,638	27,779
	%	67.0	69.6	73.2	69.9	73.1	69.1	71.0	73.8	68.2	69.5	69.8
2	#	552	249	491	616	1,104	1,676	533	616	1,167	736	7,798
	%	22.7	19.7	17.7	20.0	18.4	19.4	18.9	17.2	20.3	19.4	19.6
3	#	173	99	175	209	338	605	191	209	401	275	2,720
	%	7.1	7.8	6.3	6.8	5.6	7.0	6.8	5.8	7.0	7.2	6.8
4	#	54	21	53	73	117	240	62	75	158	95	981
	%	2.2	1.7	1.9	2.4	1.9	2.8	2.2	2.1	2.8	2.5	2.5
5	#	17	10	16	19	40	101	24	24	64	31	358
	%	0.7	0.8	0.6	0.6	0.7	1.2	0.9	0.7	1.1	0.8	0.9
6	#	3	4	5	7	10	29	5	13	25	13	116
	%	0.1	0.3	0.2	0.2	0.2	0.3	0.2	0.4	0.4	0.3	0.3
7	#		1	2	2	2	8	2	1	9	6	34
	%		0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.2	0.2	0.1
8	#				1		2			1	1	5
	%				0.1		0.0			0.0	0.0	0.0
9	#	1				1	2				1	5
	%	0.0				0.0	0.0				0.0	0.0
Individuals ^a	#	2,426	1,264	2,776	3,081	6,003	8,622	2,821	3,584	5,734	3,796	39,796
Jobs ^b	#	3,577	1,840	3,877	4,464	8,364	12,855	4,055	5,010	8,619	5,607	58,268
Province	%	6.1	3.1	6.6	7.7	14.4	22.1	7.0	8.6	14.8	9.6	100.0

a The summation of individuals across provinces equals 40,107, a number greater than 39,796, because some individuals held jobs in more than one province.

b Equals individuals times jobs.

**Table B.4
Individuals in Jobs by Province (1988-90 Sample)**

Number of jobs		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
1	#	1,336	549	1,489	1,597	3,337	4,203	1,421	1,963	2,487	2,029	20,320
	%	50.0	53.7	58.6	52.6	60.1	58.1	58.3	62.6	56.1	54.7	56.5
2	#	724	234	585	743	1,183	1,645	536	618	1,167	858	8,185
	%	27.1	22.9	23.0	24.5	21.3	22.8	22.0	19.7	23.0	23.1	22.7
3	#	376	138	249	369	584	764	235	317	523	419	4,005
	%	14.1	13.5	9.8	12.2	10.5	10.6	9.6	10.1	10.3	11.3	11.1
4	#	140	61	107	190	231	356	120	128	287	197	1,865
	%	5.2	6.0	4.2	6.3	4.2	4.9	4.9	4.1	5.7	5.3	5.2
5	#	61	23	64	70	101	140	67	54	119	107	834
	%	2.3	2.2	2.5	2.3	1.8	1.9	2.7	1.7	2.3	2.9	2.3
6	#	17	5	25	35	65	79	35	31	69	44	425
	%	0.6	0.5	1.0	1.2	1.2	1.1	1.4	1.0	1.4	1.2	1.2
7	#	11	6	12	16	22	24	16	11	25	31	183
	%	0.4	0.6	0.5	0.5	0.4	0.3	0.7	0.4	0.5	0.8	0.5
8	#	6	3	4	9	17	8	4	8	15	13	91
	%	0.2	0.3	0.2	0.3	0.3	0.1	0.2	0.3	0.3	0.4	0.3
9	#	1	3	2	2	5	6	2	3	11	4	42
	%	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
10	#				2	2	2	1	2	3	3	15
	%				0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.0
11	#			2	1	1	2	1		4		11
	%			0.1	0.1	0.0	0.0	0.0		0.1		0.0
12	#									1	1	2
	%									0.0	0.0	0.0
13	#										1	1
	%										0.0	0.0
Individuals ^a	#	2,672	1,022	2,539	3,034	5,548	7,229	2,438	3,135	5,071	3,707	35,979
Jobs ^b	#	5,013	1,913	4,460	5,743	9,640	12,711	4,406	5,306	9,387	7,001	65,580
Province	%	7.6	2.9	6.8	8.8	14.7	19.4	6.7	8.1	14.3	10.7	100.0

a The summation of individuals across provinces equals 36,395, a number greater than 35,979, because some individuals held jobs in more than one province.

b Equals individuals times jobs.

Appendix C: Patterns of Job Duration



Table C.1
Duration of Captured Spells by Type in Weeks (1986-87 Sample)^a

	Frequency	Mean	Standard Deviation	Minimum	Maximum
<i>All spells</i>	58,268	243	365	1	2,770
<i>Completed spells:</i>					
Completed in 1986 or 1987	28,419	103	243	1	2,643
Completed in 1986	13,923	100	246	1	2,643
Completed in 1987	14,496	105	240	1	2,411
<i>Censored spells:</i>	29,849	376	409	3	2,770
<i>Job expectancy estimates:</i>					
Average of completed spells and					
2 x censored spells	58,268	436	-	-	-
2 x censored spells	29,849	753	-	-	-

a Duration extends to the survey date, which frequently occurs after the end of the calendar year.

Table C.2
Duration of Captured Spells by Type in Weeks (1988-90 Sample)^a

	Frequency	Mean	Standard Deviation	Minimum	Maximum
<i>All spells</i>	65,580	198	333	1	2,372
<i>Completed spells:</i>					
Completed in 1988, 89 or 90	41,524	103	237	1	2,372
Completed in 1988	15,289	95	222	1	2,261
Completed in 1989	13,536	117	254	1	2,298
Completed in 1990	12,699	97	236	1	2,372
<i>Censored Spells</i>	24,056	363	404	14	2,281
<i>Job expectancy estimates:</i>					
Average of completed spells and					
2 x censored spells	65,580	332	-	-	-
2 x censored spells	24,056	727	-	-	-

a Duration extends to the survey date, which frequently occurs after the end of the calendar year.

**Table C.3
Job Durations and Employee Characteristics (1986-87 Sample)**

	All Spells			Completed Spells			Censored Spells		
	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation
<i>Age Group</i>									
16	1,750	35	42	1,225	24	32	525	62	51
17-19	6,720	38	50	4,978	29	41	1,742	66	63
20-24	10,740	75	99	6,749	49	78	3,991	120	113
25-34	16,941	187	217	7,748	92	149	9,193	268	231
35-44	11,784	340	364	4,111	125	225	7,683	455	372
45-54	6,519	506	515	1,989	194	361	4,530	643	513
55-64	3,478	673	642	1,431	485	638	2,047	804	612
65-69	326	643	640	188	610	624	138	688	661
<i>Education</i>									
None or elementary	5,335	325	491	2,926	139	345	2,409	552	524
High school	31,058	223	353	15,947	93	227	15,111	360	407
Some post-secondary	7,294	175	299	4,107	77	187	3,187	302	362
PS Certificate	8,148	260	338	3,325	119	237	4,823	357	362
University	6,433	327	379	2,114	152	272	4,319	413	395
<i>Sex</i>									
Male	31,316	278	407	15,248	111	275	16,115	435	447
Female	26,952	202	303	13,171	93	198	13,824	306	346
Total	58,268	243	365	28,419	103	243	29,849	376	409

Table C.4
Job Durations and Employee Characteristics (1988-90 Sample)

	All Spells			Completed Spells			Censored Spells		
	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation
<i>Age Group</i>									
16	2,599	32	39	2,122	23	29	477	70	51
17-19	9,088	36	47	7,638	29	40	1,450	77	60
20-24	11,203	66	90	8,434	46	71	2,769	125	113
25-34	18,584	159	211	11,210	94	154	7,374	259	245
35-44	13,426	294	366	6,672	138	246	6,754	447	398
45-54	7,094	431	513	3,318	215	389	3,776	621	532
55-64	3,246	536	596	1,884	432	592	1,362	680	570
65-69	340	454	548	246	435	573	94	505	477
<i>Education</i>									
0-8 years	4,435	222	409	3,284	135	334	1,151	469	493
Some Secondary	14,781	166	328	10,652	86	228	4,129	371	440
Graduated from high school	15,855	193	318	9,986	100	216	5,869	353	390
Some Post-Secondary	9,801	134	260	6,884	71	176	2,917	283	351
PS/certificate/diploma	0,076 1	222	322	5,532	118	231	4,544	349	368
University degree	7,346	292	379	3,534	163	290	3,812	412	412
Trades certificate/diploma	3,286	246	372	1,652	118	262	1,634	376	419
<i>Sex</i>									
Male	34,549	224	373	22,078	111	266	12,471	425	444
Female	31,031	169	280	19,446	94	200	11,585	297	343
Total	65,580	332	604	41,524	103	237	24,056	363	404

Table C.5
Job Durations and Job Characteristics (1986-87 Sample)

	All Spells			Completed Spells			Censored Spells		
	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation
<i>Firm size</i>									
<19 employees	18,726	137	254	11,560	66	155	7,166	252	328
20-99 employees	9,294	214	320	4,609	92	203	4,685	334	366
100-499 employees	6,581	302	388	2,561	125	256	4,020	414	415
500+ employees	15,191	372	444	5,315	184	367	9,876	473	449
Don't know	8,476	231	362	4,374	99	249	4,102	372	409
<i>Union member</i>									
Yes	14,848	443	449	4,240	239	415	10,608	524	436
No	43,420	175	302	24,179	79	188	19,241	295	368
<i>Collective agreement</i>									
Missing	13,662	443	453	3,991	238	419	9,671	527	440
Yes	3,021	286	403	1,287	110	275	1,734	417	432
No	41,585	174	299	23,141	79	185	18,444	294	364
Total	58,268	243	365	28,419	103	242	29,849	376	409

Table C.6
Job Durations and Job Characteristics (1988-90 Sample)

	All Spells			Completed Spells			Censored Spells		
	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation	Number	Mean	Standard Deviation
<i>Firm size</i>									
<19 employees	21,054	113	224	15,587	65	154	5,467	251	316
20-99 employees	10,487	164	287	6,819	87	204	3,668	306	354
100-499 employees	6,787	248	365	3,786	131	268	3,001	397	413
500+ employees	17,308	317	419	8,690	179	339	8,618	455	445
Don't know	9,944	175	318	6,642	92	224	3,302	343	403
<i>Union member</i>									
Yes	16,528	368	438	7,493	213	373	9,035	497	445
No	49,052	141	267	34,031	78	186	15,021	283	353
<i>Collective agreement</i>									
Missing	16,528	368	438	7,493	213	373	9,035	497	445
Yes	2,841	202	351	1,775	110	274	1,066	356	407
No	46,211	137	260	32,256	77	180	13,955	277	348
Total	65,580	332	604	41,524	103	237	24,056	363	404

Appendix D: Duration and the Variable Entrance Requirement



Table D.1
Job Duration by Province: Completed Jobs (1986-87 Sample)

	Number of Jobs	Mean Duration	Standard Deviation	Maximum Duration ^a
Newfoundland	2,329	58	190	2,411
Prince Edward Island	999	67	179	2,114
Nova Scotia	1,899	107	260	2,309
New Brunswick	2,353	89	232	2,391
Quebec	3,807	111	259	2,375
Ontario	5,842	116	257	2,245
Manitoba	1,844	129	291	2,643
Saskatchewan	2,238	110	252	2,206
Alberta	4,282	102	222	2,519
British Columbia	2,826	101	226	2,138
Total: Completed Jobs	28,419	103	243	2,643

a The minimum duration is one week in all provinces.

Table D.2
Job Duration by Province: Completed Jobs (1988-90 Sample)

	Number of Jobs	Mean Duration	Standard Deviation	Maximum Duration ^a
Newfoundland	3,799	74	217	2,167
Prince Edward Island	1,339	70	179	2,298
Nova Scotia	2,832	99	235	2,281
New Brunswick	3,989	96	246	2,261
Quebec	5,965	106	255	2,372
Ontario	7,556	132	276	2,289
Manitoba	2,652	108	241	2,132
Saskatchewan	3,060	102	219	2,015
Alberta	5,803	97	199	2,180
British Columbia	4,529	96	216	2,151
Total: Completed Jobs	41,524	103	237	2,372

a The minimum duration is one week in all provinces.

Table D.3
The Accelerated Failure Time model: Generalized Gamma Distribution (1986-87 Sample)

		DV = DREGVER		DV=DVERA	
		coeff.	s.e.	coeff.	s.e.
<i>Personal characteristics</i>					
Age	16	-0.899 ^a	0.050	-0.879 ^a	0.050
	17-19	-0.998 ^a	0.037	-0.984 ^a	0.037
	20-24	-0.820 ^a	0.031	-0.816 ^a	0.031
	25-34	-0.602 ^a	0.026	-0.603 ^a	0.026
	35-44	-0.332 ^a	0.028	-0.333 ^a	0.028
	45-54 ^d	--	--	--	--
	55-64	-0.024	0.036	-0.023	0.036
	65-69	0.113	0.094	0.120	0.093
	Sex	Male	0.071 ^a	0.017	0.067 ^a
	Female ^d	--	--	--	--
Mar. status	Married	0.106 ^a	0.031	0.107 ^a	0.031
	Single	0.039	0.035	0.036	0.034
	Other ^d	--	--	--	--
Fam. size	1	-0.080 ^a	0.028	-0.073 ^a	0.028
	2	-0.055 ^a	0.019	-0.052 ^a	0.019
	3	-0.008	0.018	-0.007	0.017
	4 ^d	--	--	--	--
Head	Yes	0.063 ^a	0.019	0.060 ^a	0.019
	No ^d	--	--	--	--
Education	None or elem.	-0.147 ^a	0.025	-0.146 ^a	0.024
	High schoold	--	--	--	--
	Some post-sec.	-0.142 ^a	0.021	-0.142 ^a	0.021
	Post sec. dip.	-0.039	0.022	-0.037	0.021
	University	-0.161 ^a	0.026	-0.161	0.026
Sch. att.	Yes	-0.396 ^a	0.022	-0.385 ^a	0.022
	No ^d	--	--	--	--
WCB	Yes	-0.293 ^a	0.043	-0.282 ^a	0.043
	No ^d	--	--	--	--
Welfare	Yes	-0.482 ^a	0.031	-0.472 ^a	0.031
	No	--	--	--	--
Pension income	Yes	-0.450 ^a	0.046	-0.455 ^a	0.046
	No ^d	--	--	--	--
UI income	Yes	-0.875 ^a	0.017	-0.870 ^a	0.017
	No ^d	--	--	--	--
Progr. part	Yes	-0.141 ^a	0.033	-0.129 ^a	0.033
	No ^d	--	--	--	--
<i>Job characteristics</i>					
SIC ^e	1-3	-0.423 ^a	0.035	-0.418 ^a	0.034
	4-8	-0.230 ^a	0.050	-0.215 ^a	0.049
	9-28 ^d	--	--	--	--
	29-30	-0.614 ^a	0.030	-0.599 ^a	0.030
	31-34	-0.005	0.034	-0.001	0.033
	35+	-0.094 ^a	0.023	-0.089 ^a	0.023

Table D.3
Continued

		DV = DREGVER		DV=DVERA	
		coeff.	s.e.	coeff.	s.e.
Occupation	White collar	0.291 ^a	0.02	0.288 ^a	0.02
	Farming	0.960 ^a	0.149	0.944 ^a	0.148
	Blue collar ^d	--	--	--	--
Province	Newfoundland	-0.174 ^a	0.03	-0.244 ^a	0.03
	Prince Edward Island	0.110 ^a	0.039	0.043	0.039
	Nova Scotia	0.095 ^a	0.03	0.056 ^c	0.029
	New Brunswick	-0.002	0.028	-0.065 ^b	0.027
	Quebec	0.075 ^a	0.023	0.041 ^c	0.023
	Ontario ^d	--	--	--	--
	Manitoba	-0.011	0.029	-0.019	0.029
	Saskatchewan	0.079 ^a	0.027	0.056 ^b	0.027
	Alberta	-0.110 ^a	0.023	-0.157 ^a	0.022
Firm size	British Columbia	-0.132 ^a	0.026	-0.190 ^a	0.026
	< 19 pers	-0.175 ^a	0.02	-0.172 ^a	0.02
	20-99	-0.109 ^a	0.022	-0.107 ^a	0.022
	100-499	-0.065	0.025	-0.064 ^b	0.025
	500+ ^d	--	--	--	--
	Don't know	-0.220 ^a	0.023	-0.217 ^a	0.023
Union	Yes	0.347 ^a	0.02	0.342 ^a	0.02
	No or n/a ^d	--	--	--	--
Full-time	Yes	0.224 ^a	0.019	0.226 ^a	0.018
	No or n/a ^d	--	--	--	--
Pension fund	Yes	0.765 ^a	0.021	0.755 ^a	0.021
	No or n/a ^d	--	--	--	--
Spell number		1.114 ^a	0.039	1.095 ^a	0.039
Hours rationing		-0.004 ^a	0	-0.004 ^a	0
Hourly wage		0.2E-3 ^a	0.000002	0.2E-3 ^a	0.00002
<i>Unemployment insurance variable</i>					
DV	Yes	-0.751 ^a	0.04	-0.815 ^a	0.028
	No ^d	--	--	--	--
<i>Other variables</i>					
Intercept		0.046	0.08	0.132	0.075
Beg 1986	Yes	-2.297 ^a	0.018	-2.253 ^a	0.018
	No ^d	--	--	--	--
Beg 1987	Yes	-2.267 ^a	0.019	-2.222 ^a	0.019
	No ^d	--	--	--	--
Scale parameter (σ)		1.322 ^a	0.008	1.304 ^a	0.008
Shape parameter		0.139 ^a	0.018	1.207 ^a	0.018
Log likelihood		-64329.17		109.26	

a Significantly different from zero, at the 1% level, based on a χ^2 test.

b Significantly different from zero, at the 5% level, based on a χ^2 test.

c Significantly different from zero, at the 10% level, based on a χ^2 test.

d Indicates the omitted class.

e The SIC groupings are: 1-3, agriculture, forestry, fishing and trapping; 4-8, mining; 9-28 includes food, tobacco, rubber, textiles, knitting, clothing, wood, furniture, paper and printing, metals, machinery, transportation equipment, electrical products, non-metallic minerals, petroleum and coal, chemicals and miscellaneous manufacturing; 29-30, contractors; 31-34, transportation and storage, communications, electric power, gas and water utilities; 35+, includes trade, finance, insurance, education, health, services and administration.

Table D.4
The Accelerated Failure Time Model: Generalized Gamma Distribution (1988-90 Sample)

		DV = DREGVER		DV=DVERA	
		coeff.	s.e.	coeff.	s.e.
<i>Personal characteristics</i>					
Age	16	-0.505 ^a	0.030	-0.508 ^a	0.030
	17-19	-0.489 ^a	0.023	-0.493 ^a	0.023
	20-24	-0.352 ^a	0.020	-0.355 ^a	0.020
	25-34	-0.258 ^a	0.017	-0.261 ^a	0.017
	35-44	-0.165 ^a	0.018	-0.167 ^a	0.018
	45-54 ^d	--	--	--	--
	55-64	0.115 ^a	0.026	0.115 ^a	0.026
	65-69	0.64		0.288 ^a	0.63
Sex	Male	0.020 ^a	0.011	0.067 ^a	0.017
	Female ^d	--	--	--	--
Marital Status	Married	0.020	0.021	0.020 ^c	0.011
	Single	0.019	0.023	0.021	0.021
	Other ^d	--	--	--	--
Fam. size	1	-0.051 ^a	0.019	-0.052 ^a	0.019
	2	-0.020	0.013	-0.020	0.013
	3	-0.020 ^c	0.011	-0.020 ^b	0.011
	4 ^d	--	--	--	--
Head	Yes	0.011	0.013	0.011	0.013
	No ^d	--	--	--	--
Education	None or elem.	-0.037 ^b	0.020	-0.038 ^b	0.019
	Some secondary	-0.039 ^a	0.013	-0.037 ^a	0.013
	High school grad. ^d	--	--	--	--
	Some post-sec.	-0.062 ^a	0.014	-0.062 ^a	0.014
	Post sec. cert./dip.	-0.028 ^b	0.015	-0.027 ^c	0.015
	University	-0.136 ^a	0.018	-0.136 ^a	0.018
Sch. att.	Trades cert./dip.	-0.100 ^a	0.023	-0.096 ^a	0.023
	Yes	-0.278 ^a	0.014	-0.272 ^a	0.014
WCB	No ^d	--	--	--	--
	Yes	-0.185 ^a	0.027	-0.186 ^a	0.027
Pension income	No ^d	--	--	--	--
	Yes	0.017	0.028	0.021	0.027
UI income	No ^d	--	--	--	--
	Yes	-0.430 ^a	0.010	-0.429 ^a	0.010
Progr. part	No ^d	--	--	--	--
	Yes	-0.066 ^b	0.031	-0.070 ^b	0.031
<i>Job characteristics</i>					
SIC ^e	1-3	-0.158 ^a	0.022	-0.157 ^a	0.022
	4-8	-0.034	0.034	-0.035	0.034
	9-28 ^d	--	--	--	--
	29-30	-0.324 ^a	0.019	-0.321 ^a	0.019
	31-34	0.009	0.022	0.010	0.022
	35+	0.002	0.015	0.003	0.015

Table D.4
Continued

		DV = DREGVER		DV=DVERA	
		coeff.	s.e.	coeff.	s.e.
Occupation	White collar	0.176 ^a	0.013	0.174 ^a	0.013
	Farming	0.423 ^a	0.093	0.421 ^a	0.093
	Blue collar ^d	--	--	--	--
Province	Newfoundland	-0.142 ^a	0.019	-0.161 ^a	0.019
	Prince Edward Island	-0.050 ^c	0.027	-0.073 ^a	0.027
	Nova Scotia	-0.003	0.020	-0.009	0.020
	New Brunswick	-0.059 ^a	0.018	-0.078 ^a	0.018
	Quebec	-0.048 ^a	0.015	-0.047 ^a	0.015
	Ontariod	--	--	--	--
	Manitoba	-0.091 ^a	0.020	-0.092 ^a	0.020
	Saskatchewan	-0.014	0.019	-0.016	0.019
	Alberta	-0.076 ^a	0.015	-0.083 ^a	0.015
Firm size	British Columbia	-0.102 ^a	0.017	-0.113 ^a	0.017
	< 19 pers	-0.027 ^b	0.013	-0.027 ^b	0.013
	20-99	-0.037 ^b	0.015	-0.036 ^b	0.015
	100-499	-0.047 ^a	0.017	-0.048 ^a	0.017
	500+ ^d	--	--	--	--
Union	Don't know	-0.074 ^a	0.015	-0.073 ^a	0.015
	Yes	0.177 ^a	0.013	0.178 ^a	0.013
Full-time	No or n/a ^d	--	--	--	--
	Yes	0.154 ^a	0.011	0.154 ^a	0.011
Pension fund	No or n/a ^d	--	--	--	--
	Yes	0.432 ^a	0.013	0.431 ^a	0.013
Spell number		1.260 ^a	0.007	1.250 ^a	0.007
Hours rationing		-0.001 ^a	0.000	-0.001 ^a	0.000
Hourly wage		0.1E-3 ^a	0.1E-4	0.1E-3 ^a	0.1E-4
<i>Unemployment insurance variable</i>					
DV	Yes	-0.323 ^a	0.025	0.258 ^a	0.017
	No ^d	--	--	--	--
<i>Other variables</i>					
Intercept		-1.160 ^a	0.050	-1.049 ^a	0.047
Beg 1988	Yes	-1.842 ^a	0.013	-1.834 ^a	0.013
	No ^d	--	--	--	--
Beg 1989	Yes	-1.541 ^a	0.014	-0.832 ^a	0.014
	No ^d	--	--	--	--
Beg 1990	Yes	-0.829 ^a	0.014	-1.535 ^a	0.014
	No	--	--	--	--
Scale parameter (σ)		0.948 ^a	0.004	0.942 ^a	0.004
Shape parameter		0.342 ^a	0.013	0.364 ^a	0.013
Log likelihood		-69,838.69		-69,809.25	

a Significantly different from zero, at the 1% level, based on a χ^2 test.

b Significantly different from zero, at the 5% level, based on a χ^2 test.

c Significantly different from zero, at the 10% level, based on a χ^2 test.

d Indicates the omitted class.

e The SIC groupings are: 1-3, agriculture, forestry, fishing and trapping; 4-8, mining; 9-28 includes food, tobacco, rubber, textiles, knitting, clothing, wood, furniture, paper and printing, metals, machinery, transportation equipment, electrical products, non-metallic minerals, petroleum and coal, chemicals and miscellaneous manufacturing; 29-30, contractors; 31-34, transportation and storage, communications, electric power, gas and water utilities; 35+, includes trade, finance, insurance, education, health, services and administration.

Table D.5
UI Entrance Requirements (DREGVER) in the Accelerated Life-Time Model^d (1986-87 Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DREGVER	-0.751 ^a (-0.04)	-0.803 ^a (-0.04)	-0.747 ^a (-0.04)	-0.750 ^a (-0.04)				-0.799 ^a (-0.04)
DREGVERR		0.191 ^a (-0.07)			-0.402 ^a (-0.07)			0.190 ^b (-0.08)
DN			0.502 ^a (-0.13)			0.553 ^a (-0.13)		0.501 ^a (-0.13)
DM				0.065 (-0.12)			0.107 (-0.13)	-0.004 (-0.13)
Log lik	-64,329	-64,326	-64,321	-64,329	-64,479	-64,487	-64,497	-64,318

- a Significantly different from zero, at the 1% level, based on a χ^2 test.
b Significantly different from zero, at the 5% level, based on a χ^2 test.
c Significantly different from zero, at the 10% level, based on a χ^2 test.
d Standard errors in parentheses.

Table D.6
UI Entrance Requirements (DREGVER) in the Accelerated Life-Time Model^d (1988-90 Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DREGVER	-0.323 ^a (-0.04)	-0.337 ^a (-0.027)	-0.323 ^a (-0.025)	-0.324 ^a (-0.025)				-0.337 ^a (-0.027)
DREGVERR		0.068 (-0.051)			-0.172 ^a (-0.047)			0.067 (-0.051)
DN			0.03 (-0.085)			0.050 ^a (-0.085)		0.059 (-0.086)
DM				-0.162 ^c (-0.084)			-0.145 ^c (-0.085)	-0.171 ^b (-0.085)
Log lik	-69,839	-69,838	-69,839	-65,580	-69,915	-69,922	-69,920	-69,836

- a Significantly different from zero, at the 1% level, based on a χ^2 test.
b Significantly different from zero, at the 5% level, based on a χ^2 test.
c Significantly different from zero, at the 10% level, based on a χ^2 test.
d Standard errors in parentheses.

Table D.7
UI Entrance Requirements (DVERA) in the Accelerated Life-Time Model^d (1986-87 Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DVERA	-0.815 ^a (-0.03)	-0.828 ^a (-0.03)	-0.812 ^a (-0.03)	-0.815 ^a (-0.03)				-0.825 ^a (-0.03)
DVERAR		0.096 ^c (-0.05)			-0.228 ^a (-0.05)			0.095 ^c (-0.05)
DN			0.429 ^a (-0.13)			0.553 ^a (-0.13)		0.435 ^a (-0.13)
DM				0.013 (-0.12)			0.107 (-0.13)	-0.053 (-0.12)
Log lik	-64,109	-64,108	-64,103	-64,109	-64,488	-64,487	-64,497	-64,102

- a Significantly different from zero, at the 1% level, based on a χ^2 test.
b Significantly different from zero, at the 5% level, based on a χ^2 test.
c Significantly different from zero, at the 10% level, based on a χ^2 test.
d Standard errors in parentheses.

Table D.8
UI Entrance Requirements (DVERA) in the Accelerated Life-Time Model^d (1988-90 Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DVERA	-0.258 ^a (0.02)	-0.258 ^a (0.02)	-0.258 ^a (0.02)	-0.259 ^a (0.02)				-0.258 ^a (0.02)
DVERAR		-0.009 (0.05)			-0.172 ^a (0.05)			-0.010 (0.05)
DN			-0.026 (0.08)			0.050 (0.09)		0.056 (0.09)
DM				0.171 ^b (0.08)			0.145 ^c (0.084)	-0.180 ^b (0.08)
Log lik	-69,809	-69,809	-69,809	-69,807	-69,915	-69,922	-69,920	-69,807

- a Significantly different from zero, at the 1% level, based on a χ^2 test.
b Significantly different from zero, at the 5% level, based on a χ^2 test.
c Significantly different from zero, at the 10% level, based on a χ^2 test.
d Standard errors in parentheses.

Table D.9
Comparative Descriptive Statistics (1986-87 Sample)

		Sample=58,268		Random sub-sample=3,000	
<i>Categorical variables</i>					
Age	16-24		Percent		Percent
	25-44		33.0		33.4
			49.3		50.0
Sex	Male		53.7		53.9
Married	Yes		58.5		57.0
Children	Yes		66.5		67.5
Head of Family	Yes		49.4		50.2
SIC	1-3 (agriculture, forestry, fishing)		4.6		4.5
	4-8 (mines etc.)		2.4		2.3
	29-30 (contractors)		7.1		7.9
SOC	White collar		66.5		65.6
	Farming		0.2		0.2
Firm size	< 99 Employees		48.1		49.4
Union	Yes		25.4		26.3
Full-time	Yes		77.0		77.1
Pension Fund	Yes		31.5		31.0
1986 job start	Yes		26.5		28.8
1987 job start	Yes		25.1		24.7
DVER			2.1		2.1
DVERA			4.6		4.9
DREGVER			2.1		2.2
DVERR			0.8		0.7
DVERAR			1.4		1.4
DREGVERR			0.8		0.9
DN			0.3		0.2
DM			0.3		0.1
<i>Continuous variables</i>					
		Mean	Standard Deviation	Mean	Standard Deviation
Spell Number		1.04	(0.22)	1.04	(0.22)
Hours Rationing		3.74	(15.16)	3.96	(16.13)
Wage Rate		9.50	(6.20)	9.64	(7.62)

Table D.10
Comparative Descriptive Statistics (1988-90 Sample)

		Sample=58,268		Random sub-sample=3,000	
<i>Categorical variables</i>			Percent		Percent
Age	16-24		34.9		35.6
	25-44		48.8		49.3
Sex	Male		52.7		52.5
Married	Yes		58.6		57.9
Children	Yes		68.9		69.9
Head of Family	Yes		48.2		46.8
SIC	1-3 (Agriculture forestry, fishing)		5.1		4.8
	4-8 (mines etc.)		2.1		1.9
	29-30 (contractors)		8.2		8.6
SOC	White collar		65.4		65.1
	Farming		0.2		0.1
Firm size	< 99 Employees		48.1		49.1
Union	Yes		25.2		24.1
Full-time	Yes		74.3		73.8
Pension Fund	Yes		29.8		29.6
1988 job start	Yes		22.5		23.2
1989 job start	Yes		18.8		19.3
1990 job start	Yes		22.3		22.5
DVER			2.1		2.0
DVERA			6.2		5.6
DREGVER			2.5		2.3
DVERR			0.7		0.6
DVERAR			1.6		1.7
DREGVERR			0.8		0.7
DN			0.2		0.3
DM			0.2		0.2
<i>Continuous variables</i>		Mean	Standard Deviation	Mean	Standard Deviation
Spell Number		1.741	(0.90)	1.72	(0.89)
Hours Rationing		6.366	(19.21)	6.17	(18.9)
Wage Rate		10.70	(6.48)	10.48	(6.31)

Table D.11
Cox Proportional Hazard Estimates (1986-87 Sample)

		DV = DREGVER		DV=DVERA	
		coeff.	s.e.	coeff.	s.e.
Age	16-24	0.915 ^a	0.114	0.879 ^a	0.114
	25-44	0.582 ^a	0.099	0.581 ^a	0.099
Sex	Male	-0.026	0.067	-0.013	0.067
Married	Yes	-0.068	0.065	-0.069	0.065
Children	Yes	-0.142 ^b	0.062	-0.143 ^b	0.062
Head of Family	Yes	-0.096	0.065	-0.113 ^c	0.065
SIC	1-3 (agriculture, forestry, fishing)	0.427 ^a	0.114	0.418 ^a	0.115
	4-8 (mines etc.)	-0.199	0.229	-0.226	0.229
	29-30 (contractors)	0.453 ^a	0.091	0.429 ^a	0.092
SOC	White collar	-0.265 ^a	0.071	-0.256 ^a	0.071
	Farming	-0.463	0.588	-0.423	0.588
Firm size	< 99 Employees	0.044	0.058	0.035	0.058
Union member	Yes	-0.282 ^a	0.083	-0.289 ^a	0.083
Full-time	Yes	-0.118 ^c	0.071	-0.114	0.071
Pension fund	Yes	-0.816 ^a	0.090	-0.816 ^a	0.090
Spell number		-1.011 ^a	0.184	-0.988 ^a	0.183
Hours rationing		0.003 ^b	0.002	0.003 ^b	0.002
DV		0.963 ^a	0.136	0.891	0.101
Job start: 1986		2.227 ^a	0.096	2.217 ^a	0.096
Job start: 1987		2.125 ^a	0.106	2.114 ^a	0.107
Log likelihood		-10,009		-9,995	
Restr. (slopes) loglik		-10,987		-10,987	
Chi squared (20)		1,956.2		1,983	
Significance level		0.000		0.000	
Nobs		3,000		3,000	
Exits		1,465		1,465	
Censored		1,535		1,535	
Distinct exit times		299		299	

a Significantly different from zero at the 1% level, based on a t test.

b Significantly different from zero at the 5% level, based on a t test.

c Significantly different from zero at the 10% level, based on a t test.

Table D.12
Cox Proportional Hazard Estimates (1988-90 Samples)

		DV = DREGVER		DV=DVERA	
		coeff.	s.e.	coeff.	s.e.
Age	16-24	0.095		0.612 ^a	0.10
	25-44	0.255 ^a	0.082	0.247 ^a	0.08
Sex	Male	-0.147 ^a	0.056	-0.148 ^a	0.06
Married	Yes	-0.087	0.057	-0.082	0.06
Children	Yes	0.017	0.055	0.022	0.05
Head of Family	Yes	0.070	0.055	0.070	0.05
SIC	1-3 (agriculture, forestry, fishing)	0.232 ^b	0.103	0.234 ^b	0.10
	4-8 (mines etc.)	-0.008	0.187	-0.011	0.19
	29-30 (contractors)	0.407 ^a	0.084	0.420 ^a	0.08
SOC	White collar	-0.192 ^a	0.061	-0.189 ^a	0.06
	Farming	-0.829	0.514	-0.819	0.05
Firm size	< 99 Employees	0.006	0.051	0.012	0.05
Union member	Yes	-0.313 ^a	0.074	-0.322	0.07
Full-time	Yes	-0.179 ^a	0.056	-0.168 ^a	0.06
Pension fund	Yes	-0.526 ^a	0.075	-0.520 ^a	0.07
Spell number		-1.555 ^a	0.043	-1.547 ^a	0.04
Hours rationing		0.000	0.001	0.000	0.00
DV		0.625 ^a	0.129	0.500 ^a	0.09
Job start: 1988		2.234 ^a	0.091	2.219 ^a	0.09
Job start: 1989		1.862 ^a	0.092	1.849 ^a	0.09
Job start: 1990		0.893 ^a	0.094	0.889 ^a	0.09
Log likelihood		-12,542		-12,539	
Restr. (slopes) loglik		-14,261		-14,261	
Chi squared (21)		3,438.2		3,445	
Significance level		0.000		0.000	
Nobs		3,000		3,000	
Exits		1,934		1,934	
Censored		1,066		1,066	
Distinct exit times		350		350	

- a Significantly different from zero at the 1% level, based on a t test.
b Significantly different from zero at the 5% level, based on a t test.
c Significantly different from zero at the 10% level, based on a t test.

Table D.13
UI Entrance Requirements (REGVER) in Cox Proportional Hazards Model^d (1986-87 Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DREGVER	0.962 ^a (0.14)	0.945 ^a (0.16)	0.963 ^a (0.14)	0.964 ^a (0.14)				0.946 ^a (0.16)
DREGVERR		0.059 (0.25)			0.756 ^a (0.22)			0.058 ^c (0.25)
DN			0.015 (0.45)			-0.032 (0.45)		0.008 (0.45)
DM				0.359 (0.58)			0.319 (0.58)	0.359 (0.58)
Log lik	-10,009	-10,009	-10,009	-10,008	-10,024	-10,028	-10,028	-10,008

- a Significantly different from zero, at the 1% level, based on a t test.
b Significantly different from zero, at the 5% level, based on a t test.
c Significantly different from zero, at the 10% level, based on a t test.
d Standard errors in parentheses.

Table D.14
UI Entrance Requirements (REGVER) in Cox Proportional Hazards Model^d (1988-90 Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DREGVER	0.625 ^a (0.13)	0.593 ^a (0.14)	0.624 (0.13)	0.626 ^a (0.14)				0.592 ^a (0.14)
DREGVERR		0.176 (0.24)			0.508 ^b (0.23)			0.180 (0.24)
DN			-0.055 (0.34)			-0.092 (0.33)		-0.139 (0.34)
DM				0.982 ^b (0.41)			0.973 (0.41)	1.013 ^b (0.42)
Log lik	-12,542	-12,542	-12,542	-12,540	-12,550	-12,552	-12,550	-12,540

- a Significantly different from zero, at the 1% level, based on a t test.
b Significantly different from zero, at the 5% level, based on a t test.
c Significantly different from zero, at the 10% level, based on a t test.
d Standard errors in parentheses.

Table D.15
UI Entrance Requirements (VERA) in Cox Proportional Hazards Model^d (1986-87 Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DVERA	0.891 ^a (0.10)	0.846 ^a (0.10)	0.891 ^a (0.10)	0.892 ^a (0.10)				0.848 ^a (0.10)
DVERAR		0.327 ^c (0.18)			0.691 ^a (0.17)			0.327 ^c (0.18)
DN			0.089 (0.45)			-0.032 (0.45)		0.045 (0.45)
DM				0.398 (0.58)			0.319 (0.58)	0.406 (0.58)
Log lik	-9,995	-9,994	-9,995	-9,995	-10,022	-10,028	-10,028	-9,994

- a Significantly different from zero, at the 1% level, based on a t test.
b Significantly different from zero, at the 5% level, based on a t test.
c Significantly different from zero, at the 10% level, based on a t test.
d Standard errors in parentheses.

Table D.16
UI Entrance Requirements (VERA) in Cox Proportional Hazards Model^d (1988-90 Sample)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
DVERA	0.500 ^a (0.09)	0.475 ^a (0.09)	0.500 ^a (0.09)	0.503 ^a (0.09)				0.478 ^a (0.09)
DVERAR		0.266 ^c (0.16)			0.396 (0.15)			0.262 ^c (0.16)
DN			-0.064 (0.34)			0.092 (0.33)		-0.153 (0.34)
DM				1.015 ^b (0.41)			0.973 ^b (0.41)	1.037 ^b (0.42)
Log lik	-12,539	-12,537	-12,539	-12,536	-12,549	-12,552	-12,550	-12,535

- a Significantly different from zero, at the 1% level, based on a t test.
b Significantly different from zero, at the 5% level, based on a t test.
c Significantly different from zero, at the 10% level, based on a t test.
d Standard errors in parentheses.

Table D.17
Jobs by VERA Status and Type (1986-87 Sample)

Job type ^a		Duration not in VERA	Duration in VERA	Total
1. Job held in 1986	Number	12,725	1,198	13,923
	Row Percent	91.4	8.6	100.0
	Column Percent	22.9	44.4	23.9
2. Job held in 1986 and 1987	Number	29,648	84	29,732
	Row Percent	99.7	0.3	100.0
	Column Percent	53.3	3.1	51
3. Job held in 1987	Number	13,199	1,414	14,613
	Row Percent	90.3	9.7	100.0
	Column Percent	23.8	52.5	25.1
Total	Number	55,572	2,696	58,268
	Row Percent	95.4	4.6	100.0
	Column Percent	100.0	100.0	100.0

a These are the LMAS categories in the variable TYPE.

Table D.18
Jobs by VERA Status and Type (1988-90 Sample)

Job type ^a		Duration not in VERA	Duration in VERA	Total
1: Job held in 1988 only	Number	13,666	1,623	15,289
	Row Percent	89.4	10.6	100.0
	Column Percent	22.2	40.1	23.3
3: Job held in 1988 and 1989	Number	6104	74	6,178
	Row Percent	98.8	1.2	100.0
	Column Percent	9.9	1.8	9.4
4: Job held in 1988, 1989, 1990	Number	17,116	0	17,116
	Row Percent	100	0	100.0
	Column Percent	27.8	0	26.1
5: Job held in 1989 only	Number	6,072	1,286	7,358
	Row Percent	82.5	17.5	100.0
	Column Percent	9.9	31.7	11.2
6: Job held in 1989 and 1990	Number	4,961	30	4,991
	Row Percent	99.4	0.6	100.0
	Column Percent	8.1	0.7	7.6
7: Job held in 1990 only	Number	13,608	1,040	14,648
	Row Percent	92.9	7.1	100.0
	Column Percent	22.1	25.7	22.4
Total		61,527	4,053	65,580
Row Percent		93.8	6.2	100.0

a These are the LMAS categories in the variable TYPE. Type 2 jobs are not included in the sample as they violate some sample consistency checks.

Table D.19
Attributes of Spells in VERA (1986-87 Sample)

		Sample size	VERA frequency	Sample Percent	VERA Percent
By Type	Completed	28,419	2,390	48.8	88.6
	Censored	29,849	306	51.2	11.4
By Gender	Male	31,316	1,425	53.7	52.9
	Female	26,952	1,271	46.3	47.1
By Industry ^a	1-3	2,691	180	4.6	6.7
	4-8	1,391	44	2.4	1.6
	9-28	7,970	321	13.7	11.9
	29-30	4,140	320	7.1	11.9
	31-34	3,953	102	6.8	3.8
	35+	38,123	1,729	65.4	64.1
By Status	Full-time	44,850	2,086	77.0	77.4
	Part-time	13,418	610	23.0	22.6
By Province	Newfoundland	3,577	170	6.1	6.3
	Prince Edward Island	1,840	88	3.2	3.3
	Nova Scotia	3,877	185	6.6	6.9
	New Brunswick	4,464	130	7.7	4.8
	Quebec	8,364	356	14.3	13.2
	Ontario	12,855	922	22.1	34.2
	Manitoba	4,055	225	7.0	8.3
	Saskatchewan	5,010	227	8.6	8.4
	Alberta	8,619	282	14.8	10.5
British Columbia	5,607	111	9.6	4.1	
Total		58,268	2,696	100.0	100.0

a The SIC groupings are: 1-3, agriculture, forestry, fishing and trapping; 4-8, mining; 9-28 includes food, tobacco, rubber, textiles, knitting, clothing, wood, furniture, paper and printing, metals, machinery, transportation equipment, electrical products, non-metallic minerals, petroleum and coal, chemicals and miscellaneous manufacturing; 29-30, contractors; 31-34, transportation and storage, communications, electric power, gas and water utilities; 35+, includes trade, finance, insurance, education, health, services and administration.

Table D.20
Attributes of Spells in VERA (1988-90 Sample)

		Sample size	VERA frequency	Sample Percent	VERA Percent
By Type	Completed	41,524	3,764	63.3	92.9
	Censored	24,056	289	36.7	7.1
By Gender	Male	34,549	2,156	52.7	53.2
	Female	31,031	1,897	47.3	46.8
By Industry ^a	1-3	3,314	276	5.1	6.8
	4-8	1,408	50	2.1	1.2
	9-28	9,029	459	13.8	11.3
	29-30	5,366	468	8.2	11.5
	31-34	4,231	188	6.5	4.6
By Status	35+	42,232	2,612	64.4	64.4
	Full-time	48,729	3,002	74.3	74.1
	Part-time	16,851	1,051	25.7	25.9
By Province	Newfoundland	5,013	278	7.6	6.8
	Prince Edward Island	1,913	88	2.9	2.2
	Nova Scotia	4,460	294	6.8	7.2
	New Brunswick	5,743	255	8.8	6.3
	Quebec	9,640	765	14.7	18.9
	Ontario	12,711	931	19.4	23.0
	Manitoba	4,406	267	6.7	6.6
	Saskatchewan	5,306	366	8.1	9.0
Total	Alberta	9,387	469	14.3	11.6
	British Columbia	7,001	340	10.7	8.4
Total		65,580	4,053	100.0	100.0

a The industry groupings are: 1-3, agriculture, forestry, fishing and trapping; 4-8, mining; 9-28 includes food, tobacco, rubber, textiles, knitting, clothing, wood, furniture, paper and printing, metals, machinery, transportation equipment, electrical products, non-metallic minerals, petroleum and coal, chemicals and miscellaneous manufacturing; 29-30, contractors; 31-34, transportation and storage, communications, electric power, gas and water utilities; 35+, includes trade, finance, insurance, education, health, services and administration.

Table D.21
UI use^a by Province: Subsamples (1986-87 Sample)

	Duration in VERA			10 ≤ duration ≤ 14			Overall sample		
	Provincial Distribution	UI use		Provincial Distribution	UI use		Provincial Distribution	UI use	
		Number	Percent		Percent	Number		Percent	Percent
Newfoundland	170	6.3	65.3	566	12.1	73.5	3,577	6.1	52.6
Prince Edward Island	88	3.3	40.9	258	5.5	50.8	1,840	3.2	37.5
Nova Scotia	185	6.9	34.6	305	6.5	38.7	3,877	6.6	32.1
New Brunswick	130	4.8	53.8	453	9.7	52.5	4,464	7.7	37.4
Quebec	356	13.2	37.9	583	12.4	39.5	8,364	14.3	29.8
Ontario	922	34.2	22.5	922	19.7	22.5	12,855	22.1	18.5
Manitoba	225	8.3	30.2	270	5.8	28.5	4,055	7	20.6
Saskatchewan	227	8.4	26.4	298	6.4	26.8	5,010	8.6	21.4
Alberta	282	10.5	34.4	630	13.5	31.4	8,619	14.8	25
British Columbia	111	4.1	24.3	398	8.5	32.2	5,607	9.6	27.6
Canada	2696	100.0	32.5	4,683	100.0	38.9	58,268	100.0	27.4

a Based on LMAS information on UI use and on LMAS job type.

Table D.22
UI Use^a by Province: Subsamples (1988-90 Sample)

	Duration in VERA			10 ≤ duration ≤ 14			Overall sample		
	Provincial Distribution	UI use		Provincial Distribution	UI use		Provincial Distribution	UI use	
		Number	Percent		Percent	Number		Percent	Percent
Newfoundland	278	6.8	63.3	747	12.5	64.8	5,013	7.6	54.1
Prince Edward Island	88	2.2	51.1	252	4.2	57.9	1,913	2.9	45.7
Nova Scotia	294	7.2	39.1	372	6.2	42.2	4,460	6.8	35.9
New Brunswick	255	6.3	45.9	663	11.1	50.1	5,743	8.8	40.5
Quebec	765	18.9	39.2	828	13.9	39.0	9,640	14.7	34.3
Ontario	931	23.0	19.9	1,012	17.0	19.6	12,711	19.4	16.5
Manitoba	267	6.6	27.0	313	5.3	29.1	4,406	6.7	22.1
Saskatchewan	366	9.0	27.3	401	6.7	26.9	5,306	8.1	22.1
Alberta	469	11.6	25.6	751	12.6	25.2	9,387	14.3	21.7
British Columbia	340	8.4	32.1	627	10.5	32.4	7,001	10.7	28.3
Canada	4,053	100.0	33.0	5,966	100.0	37.4	65,580	100.0	29.1

a Based on LMAS information on UI use and on LMAS job type.

Table D.23
Individuals and Jobs: Total and VERA Samples (1986-87)

Number of jobs	Total Sample		VERA Sample		Individuals with at Least One Job in VERA					
					Number of VERA Jobs					
					1	2	3	4	5	
					Number of Individuals					
1	27,779	69.8	432	17.9	432					
2	7,798	19.6	839	34.8	775	64				
3	2,720	6.8	591	24.5	523	65	3			
4	981	2.5	331	13.7	262	61	8			
5	358	0.9	150	6.2	110	37	3			
6	116	0.3	48	2	35	11	2			
7	34	0.1	18	0.7	11	5	1			1
8	5	0	2	0.1	1	1				
9	5	0	2	0.1	1	1				
Total Individuals	39,796	100.0	2,413	100.0	2,150	245	17	0		1
Total Jobs	58,268		2,696		2,150	490	51			5

Table D.24
Individuals and Jobs: Total and VERA Samples (1988-90)

Number of jobs	Total Sample		VERA Sample		Individuals with at Least One Job in VERA					
					Number of VERA Jobs					
					1	2	3	4	5	
					Number of Individuals					
1	20,320	56.5	376	11	376					
2	8,185	22.7	730	21.4	701	29				
3	4,005	11.1	918	26.9	800	108	10			
4	1,865	5.2	648	19	505	129	14			
5	834	2.3	347	10.2	254	73	20			
6	425	1.2	200	5.9	136	52	9	3		
7	183	0.5	99	2.9	55	30	11	1		2
8	91	0.3	48	1.4	25	18	3			2
9	42	0.2	25	0.7	9	9	4	2		1
10	15	0.0	10	0.3	4	3	2			1
11	11	0.0	7	0.3	4	2	1			
12	2	0.0	1	0.0	1					
13	1	0.0	1	0.0	1					
Total Individuals	35,979	100.0	3,410	100.0	2,871	453	74	6		6
Total Jobs	65,580		4,053		2,871	906	222	24		30

Table D.25
Short^a Jobs Held by Students (1986-87 Sample)

Held by:	All Spells		Completed Spells	
	Number	Percent	Number	Percent
<i>Student: most of the time^b</i>				
1986	3,472	28.5	3,276	29.0
1987	2,453	20.1	2,357	20.9
<i>Student: at any time^c</i>				
1986	4,795	39.4	4,510	40.0
1987	3,982	32.7	3,751	33.3

a Jobs of duration ≤ 14 weeks. There are 12,183 such jobs in the overall sample of which 11,282 are completed. The percent columns represent the reported frequencies as a percentage of the relevant total.

b Individuals who spent eight, or more, months of the year in school, college or university.

c Individuals who attended school, college or university as a full-time student at any time during the year (LMAS Q98ST86, Q98ST87).

Table D.26
Short^a Jobs Held by Students (1988-90 Sample)

Held by:	All Spells		Completed Spells	
	Number	Percent	Number	Percent
<i>Student: most of the time^b</i>				
1988	4,774	30.3	4,773	30.3
1989	3,744	23.7	3,743	23.7
1990	2,691	17.1	2,691	17.1
<i>Student: at any time^c</i>				
1988	6,454	40.9	6,453	40.9
1989	5,784	36.7	5,783	36.7
1990	4,597	29.1	4,595	29.1

a Jobs of duration ≤ 14 weeks.

b Individuals who spent eight, or more, months of the year in school, college or university.

c Individuals who attended school, college or university as a full-time student at any time during the year (LMAS questions Q151ST88, Q152ST89, Q152ST90).

Table D.27
Job Durations Within^a VERA and Student Status (1986-87 Sample)

Held by:	All Spells		Completed Spells	
	Number	Percent	Number	Percent
<i>Student: most of the time^b</i>				
1986	981	36.4	902	37.7
1987	716	26.6	670	28.0
<i>Student: at any time^c</i>				
1986	1,251	46.4	1,144	47.9
1987	1,068	39.6	982	41.1

a There were 2,696 such jobs, of which 2,390 were completed. The percent columns represent the reported frequencies as a percentage of the relevant total.

b Individuals who spent eight or more months of the year in school, college or university.

c Individuals who attended school, college or university as a full-time student at any time during the year (LMAS Q98ST86, Q98ST87).

Table D.28
Short^a Jobs Held by Students (1988-90 Sample)

Held by:	All Spells		Completed Spells	
	Number	Percent	Number	Percent
<i>Student: most of the time^b</i>				
1988	1,442	35.6	1,383	36.7
1989	1,149	28.4	1,108	29.4
1990	801	19.8	785	20.9
<i>Student: at any time^c</i>				
1988	1,899	46.9	1,820	48.4
1989	1,717	42.4	1,646	43.7
1990	1,348	33.3	1,292	34.3

a There were 4,053 such jobs, of which 2,390 were completed. The percent columns represent the reported frequencies as a percentage of the relevant total.

b Individuals who spent eight or more months of the year in school, college or university.

c Individuals who attended school, college or university as a full-time student at any time during the year (LMAS questions Q151ST88, Q152ST89, Q152ST90).

Table D.29
Job Durations 1-26 Weeks by Age Group^a (1986-87 Sample)

Duration	Age group								Total
	16	17-19	20-24	25-34	35-44	45-54	55-64	65-69	
1	37	75	74	114	91	43	33	5	472
2	47	137	120	193	109	39	26	0	671
3	56	214	215	256	131	68	42	4	986
4	42	155	138	166	88	36	27	2	654
5	74	268	264	255	136	72	28	1	1,098
6	59	163	182	184	93	35	26	2	744
7	70	243	172	173	108	36	24	1	827
8	52	217	176	161	87	47	20	2	762
9	70	271	236	195	101	41	25	3	942
10	143	356	294	241	137	63	35	2	1,271
11	30	168	147	153	83	32	21	0	634
12	43	180	205	194	88	42	18	1	771
13	26	114	166	118	57	23	11	0	515
14	31	208	266	245	113	48	25	1	937
15	16	82	146	98	49	29	10	0	430
16	25	121	174	120	80	37	14	0	1,571
17	12	78	139	104	45	24	15	0	417
18	21	107	189	130	60	28	13	0	548
19	14	80	150	111	49	18	14	4	440
20	8	65	89	108	45	24	10	0	349
21	13	62	89	109	49	17	7	3	349
22	9	56	95	120	64	26	11	2	383
23	10	62	90	117	60	25	13	4	381
24	10	22	71	75	33	12	12	0	235
25	4	41	91	90	47	28	12	0	313
26	11	30	72	61	29	14	6	0	223

a Completed jobs.

Table D.30
Job Durations 1-26 Weeks by Age Group^a (1988-90 Sample)

Duration	Age group								Total
	16	17-19	20-24	25-34	35-44	45-54	55-64	65-69	
1	38	109	89	135	121	49	39	12	592
2	62	190	162	217	146	71	46	8	902
3	92	294	253	316	193	89	57	8	1,302
4	76	210	180	226	120	62	24	5	903
5	111	427	349	365	197	108	46	8	1,611
6	100	271	195	244	143	71	33	4	1,061
7	94	265	208	250	170	75	29	3	1,094
8	121	264	205	201	131	46	28	3	999
9	136	368	260	279	158	91	48	7	1,347
10	198	543	381	333	208	78	34	2	1,777
11	49	211	207	185	109	44	22	1	828
12	84	279	241	271	116	69	25	6	1,091
13	31	167	163	191	101	46	15	2	716
14	103	390	413	360	165	81	36	6	1,554
15	34	152	154	154	74	34	19	0	621
16	39	228	256	206	125	59	19	0	932
17	22	136	172	151	87	38	12	1	619
18	57	299	335	293	147	72	34	2	1,239
19	36	134	196	173	114	41	17	2	713
20	25	108	135	154	86	46	15	1	570
21	30	93	122	159	109	47	15	1	576
22	28	107	148	192	100	58	18	1	652
23	38	145	179	248	147	72	24	2	855
24	28	59	77	132	77	35	10	1	419
25	22	102	124	175	101	53	19	2	598
26	13	54	81	100	63	38	8	1	358

a Completed jobs.

Table D.31
Reasons for Job Separation of 28,419 Completed Spells (1986-87 Sample)

	Number	Percent	Mean	Standard Deviation
<i>Detailed reason</i>				
A: Illness or disability	760	2.7	216	376
B: Personal or family responsibilities	936	3.3	133	196
C: Going to school	2,867	10.1	35	73
D: Seasonal nature of job	3,330	11.7	35	108
E: End of temporary non-seasonal job	3,895	13.7	28	80
F: Non-seasonal economic or business conditions	1,979	7.0	89	191
G: Strike or lockout	57	0.2	138	254
H: Unpaid vacation	75	0.3	77	170
I: Found a new job	3,479	12.2	115	192
J: Hours or work conditions	1,901	6.7	84	158
K: On-call arrangement	560	2.0	48	119
L: Low pay	931	3.3	82	164
M: Dismissal by the employer	1,145	4.0	73	163
N: Changed residence	902	3.2	118	173
O: Company moved or going out of business	794	2.8	193	321
P: Retired	616	2.2	972	672
Q: No opportunity for advancement	434	1.5	139	165
R: Concerned with job security or layoff	724	2.5	83	173
S: Other	3,034	10.7	130	240
<i>General reason</i>				
1: Quit (I, J, L, N, Q, R)	8,371	29.5	103	177
2: Layoff (E, F, M, O)	7,813	27.5	67	171
3: Seasonal (D)	3,330	11.7	35	108
4: Other (A, B, C, G, H, K, P, S)	8,905	31.3	160	350

Table D.32
Reasons for Job Separation of 41,524 Completed Spells (1988-90 Sample)

	Number	Percent	Mean	Standard Deviation
<i>Detailed reason</i>				
A: Own illness or disability	1,034	2.5	177	327
B: Personal or family responsibilities	1,371	3.3	108	177
C: Going to school	4,567	10.9	35	75
D: Found a new job	7,229	17.4	126	215
E: Working conditions	2,554	6.1	86	171
F: Low pay	1,067	2.6	77	162
G: Move to a new residence	1,363	3.3	254	462
H: Retirement	1,293	3.1	376	558
I: No opportunity for advancement	603	1.5	130	208
J: Worried about job security/reduction in hours	485	1.2	91	176
K: Other, left job	2,014	4.8	103	209
L: Company moving or going out of business	1,364	3.3	175	308
M: Seasonal nature of job	6,022	14.5	47	153
N: Permanent layoff	6,427	15.5	58	150
O: Labour dispute	105	0.3	86	196
P: Dismissal by employer	1,190	2.9	80	195
Q: Other, job ended	1,617	3.9	102	235
Z: Unknown	1,219	2.9	194	336
<i>General reason</i>				
1: Quit (D, E, F, G, I, J, K)	15,315	36.9	124	240
2: Layoff (L, N, P, Q)	10,598	25.5	82	200
3: Seasonal (M)	6,022	14.5	45	153
4: Other (A, B, C, H, O, Z)	9,589	23.1	128	298

Table D.33
Job Durations 1-26 Weeks by Broad Reason for Termination (1986-87 Sample)

Duration	Reason								
	Layoff		Quit		Seasonal		Other		Total
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
1	224	3.6	87	1.8	46	1.5	113	2.0	470
2	288	4.7	155	3.2	85	2.8	143	2.5	671
3	399	6.5	209	4.3	146	4.8	232	4.1	986
4	238	3.9	155	3.2	110	3.6	151	2.7	654
5	415	6.7	268	5.5	157	5.2	258	4.6	1,098
6	272	4.4	153	3.1	121	4.0	198	3.5	744
7	272	4.4	174	3.6	139	4.6	242	4.3	827
8	238	3.9	149	3.1	139	4.6	236	4.2	762
9	272	4.4	175	3.6	143	4.7	352	6.2	942
10	358	5.8	256	5.2	194	6.4	463	8.2	1,271
11	193	3.1	134	2.7	108	3.6	199	3.5	634
12	220	3.6	182	3.7	105	3.5	264	4.7	771
13	150	2.4	110	2.3	68	2.3	187	3.3	515
14	260	4.2	240	4.9	125	4.1	312	5.5	937
15	141	2.3	76	1.6	63	2.1	150	2.7	430
16	179	2.9	125	2.6	105	3.5	162	2.9	571
17	119	1.9	81	1.7	67	2.2	150	2.7	417
18	149	2.4	140	2.9	89	2.9	170	3.0	548
19	126	2.0	89	1.8	70	2.3	155	2.7	440
20	116	1.9	86	1.8	65	2.2	82	1.5	349
21	113	1.8	82	1.7	59	2.0	95	1.7	349
22	132	2.1	109	2.2	61	2.0	81	1.4	383
23	110	1.8	82	1.7	89	2.9	100	1.8	381
24	72	1.2	65	1.3	39	1.3	59	1.0	235
25	99	1.6	81	1.7	79	2.6	54	1.0	313
26	67	1.1	67	1.4	43	1.4	46	0.8	223

Table D.34
Job Durations 1-26 Weeks by Broad Reason for Termination (1988-90 Sample)

Duration	Reason								Total Number
	Layoff		Quit		Seasonal		Other		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
1	278	4.4	151	2.3	94	2.2	69	1.3	592
2	338	5.3	256	3.8	176	4.0	132	2.4	902
3	456	7.2	402	6.0	258	5.9	186	3.5	1,302
4	285	4.5	261	4.2	180	4.1	157	2.9	903
5	512	8.0	526	7.9	249	5.7	324	6.0	1,611
6	349	5.5	322	4.8	196	4.5	194	3.6	1,061
7	342	5.4	353	5.3	196	4.5	203	3.8	1,094
8	264	4.1	269	4.0	194	4.4	272	5.0	999
9	325	5.1	372	5.6	258	5.9	392	7.3	1,347
10	428	6.7	446	6.7	317	7.3	586	10.9	1,777
11	218	3.4	223	3.3	164	3.8	223	4.1	828
12	286	4.5	303	4.5	189	4.3	313	5.8	1,091
13	213	3.3	197	3.0	127	2.9	179	3.3	716
14	352	5.5	408	6.1	274	6.3	513	9.5	1,554
15	135	2.1	159	2.4	131	3.0	172	3.2	621
16	210	3.3	241	3.6	164	3.8	267	5.0	932
17	138	2.2	145	2.2	91	2.1	159	2.9	619
18	261	4.1	341	5.1	191	4.4	378	7.0	1,239
19	134	2.1	174	2.6	106	2.4	131	2.4	713
20	148	2.3	168	2.5	117	2.7	95	1.8	570
21	123	1.9	144	2.2	108	2.5	79	1.5	576
22	157	2.5	188	2.8	134	3.1	109	2.0	652
23	133	2.1	219	3.3	172	3.9	97	1.8	855
24	91	1.4	128	1.9	101	2.3	42	0.8	419
25	118	1.9	143	2.1	125	2.9	83	1.5	598
26	85	1.3	117	1.8	56	1.3	44	0.8	358

Table D.35
Reasons for Job Separation: Duration Relative to VERA^a (1986-87 Sample); 28,419 Completed Spells

	DUR < VERA		DUR in VERA		DUR > VERA	
	Number	Percent	Number	Percent	Number	Percent
<i>Broad reasons</i>						
Quit (I,J,L,N,Q,R)	6,243	33.2	592	24.8	1,536	21.4
Layoff (E,F,M,O)	4,574	24.2	613	25.6	2,626	36.5
Seasonal (D)	1,933	10.3	303	12.7	1,094	15.2
Other (A,B,C,G,H,K,P,S)	6,084	32.3	882	36.9	1,939	26.9
Total	18,834	100.0	2,390	100.0	7,195	100.0
<i>Detailed reasons</i>						
New job (I)	2,703	14.4	208	8.7	568	7.9
Seasonal (D)	1,933	10.3	303	12.7	1,094	15.2
End of job (E)	1,802	9.6	359	15.0	1,734	24.1
Going to school (C)	1,540	8.2	545	22.8	782	10.9
Econ conds (F)	1,405	7.5	136	5.7	438	6.1
Hours of work conds (J)	1,255	6.7	181	7.6	465	6.5

a These breakdowns are not sensitive to choice of VER variable.

Table D.36
Reasons for Job Separation: Duration Relative to VERA^a (1988-90 Sample); 41,524 Completed Spells

	DUR < VERA		DUR in VERA		DUR > VERA	
	Number	Percent	Number	Percent	Number	Percent
<i>Broad reasons</i>						
Quit (D,E,F,G,I,J,K)	3,168	29.0	1,040	27.6	11,107	41.4
Layoff (L,N,P,Q)	3,446	31.6	938	24.9	6,214	23.2
Seasonal (M)	2,010	18.4	618	16.4	3,394	12.6
Other (A,B,C,H,O,Z)	2,297	21.0	1,168	31.0	6,124	22.8
Total	10,921	100.0	3,764	100.0	26,839	100.0
<i>Detailed reasons</i>						
New job (D)	1,346	12.3	428	11.4	5,455	20.3
Seasonal (M)	2,010	18.4	618	16.4	3,394	12.6
Layoff (N)	2,327	21.3	596	15.8	3,504	13.1
Going to school (C)	1,301	11.9	873	23.2	2,393	8.9
Working conds (E)	682	6.2	193	5.1	1,679	6.3
Other, left job (K)	531	4.9	166	4.4	1,317	4.9

a These breakdowns are not sensitive to choice of VER variable.

Table D.37
Job Completions at the VER by Reason for Separation and Gender (1986-87 Sample)

		DV = DREGVER			DV = DVERA		
		Men		Women	Men		Women
Quit	Number	118		123	282		310
	Percent	18.5		23.9	22		28
Layoff	Number	200		147	349		264
	Percent	31.3		28.5	27.2		23.9
Seasonal	Number	109		58	184		119
	Percent	17.0		11.3	14.3		10.8
Other	Number	212		187	469		413
	Percent	33.2		36.3	36.5		37.3
Total	Number	639		515	1,284		1,106
	Percent	100.0		100.0	100.0		100.0
Grand total			1,154			2,390	

Table D.38
Job Completions at the VER by Reason for Separation and Gender (1988-90 Sample)

		DV = DREGVER			DV = DVERA		
		Men		Women	Men		Women
Quit	Number	191		200	505		535
	Percent	22.8		26.1	25.1		30.5
Layoff	Number	231		172	539		399
	Percent	27.5		22.5	26.9		22.7
Seasonal	Number	164		117	372		246
	Percent	19.5		15.3	18.5		14.0
Other	Number	253		276	593		575
	Percent	30.2		36.1	29.5		32.8
Total	Number	839		765	2,009		1,755
	Percent	100.0		100.0	100.0		100.0
Grand Total			1,604			3,764	

Table D.39
Subsequent Experience of Individuals with Jobs Finishing in VERA (1986-87 Sample)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
Concurrent Job	12 7.1	12 13.6	14 7.6	8 6.2	33 9.3	137 14.9	40 17.8	32 14.1	35 12.4	17 15.3	340 12.6
No Employment	76 44.7	40 45.5	85 45.9	61 46.9	143 40.2	305 33.1	74 32.9	78 34.3	100 35.5	37 33.3	999 37.1
New Employer	77 45.3	33 37.5	83 44.9	59 45.4	171 48.0	458 49.7	104 46.2	113 49.8	138 48.9	55 49.6	1,291 47.9
Same Employer	5 2.9	3 3.4	3 1.6	2 1.5	9 2.5	21 2.3	7 3.1	4 1.8	9 3.2	2 1.8	65 2.4
Other						1 0.0					1 0.0
Total	170 100.0	88 100.0	185 100.0	130 100.0	356 100.0	921 100.0	225 100.0	227 100.0	282 100.0	111 100.0	2,696 100.0

Table D.40
Subsequent Experience of Individuals with Jobs Finishing in VERA (1988-90 Sample)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
Concurrent Job	19 6.8	12 13.6	49 16.7	34 13.3	91 11.9	158 17	50 18.7	75 20.5	75 16	51 15	614 15.2
No Employment	104 37.4	23 26.1	70 23.8	71 27.9	196 25.6	201 21.6	64 24	97 26.5	99 21.1	78 22.9	1,003 24.7
New Employer	144 51.8	51 58	168 57.1	139 54.5	458 59.9	556 59.7	150 56.2	191 52.2	284 60.6	208 61.2	2,349 58
Same Employer	10 3.6	2 2.3	7 2.4	11 4.3	20 2.6	16 1.7	3 1.1	3 0.8	11 2.3	3 0.9	86 2.1
Other	1 0.4										1 0
Total	278 100.0	88 100.0	294 100.0	255 100.0	765 100.0	931 100.0	267 100.0	366 100.0	469 100.0	340 100.0	4,053 100.0

Table D.41
Weeks to Job^a with New Employer: Canada (1986-87 Sample)

Week	Number	Percent	Cumulative Number	Cumulative Percent
1	71	8.0	71	8.0
2	57	6.4	128	14.4
3	64	7.2	192	21.7
4	51	5.8	243	27.4
5	25	2.8	268	30.2
6	25	2.8	293	33.1
7	28	3.2	321	36.1
8	34	3.8	355	40.1
9	11	1.2	366	41.3
10	25	2.8	391	44.1
11	19	2.1	410	46.3
12	17	1.9	427	48.2
13	20	2.3	447	50.5
14	14	1.6	461	52.0
15	14	1.6	475	53.6
16	17	1.9	492	55.5
17	14	1.6	506	57.1
18	0	0.0	506	57.1
19	17	1.9	523	59.0
20	9	1.0	532	60.0
21	7	0.8	539	60.8
22	7	0.8	546	61.6
23	9	1.0	555	62.6
24	6	0.7	561	63.3
25	12	1.4	573	64.7
26	4	0.5	577	65.1
27	12	1.4	589	66.5
28	7	0.8	596	67.3
29	6	0.7	602	67.9
30	3	0.3	605	68.3
31	10	1.1	615	69.4
32	7	0.8	622	70.2
33	8	0.9	630	71.1
34	18	2.0	648	73.1
35	7	0.8	655	73.9
36	14	1.6	669	75.5
37	8	0.9	677	76.4
38	18	2.0	695	78.4
39	12	1.4	707	79.8
40	17	1.9	724	81.7
41	17	1.9	741	83.6
42	43	4.9	784	88.5
43	14	1.6	798	90.1
44	10	1.1	808	91.2
45	5	0.6	819	92.4
51	2	0.2	842	95.0
52	12	1.4	854	96.4
53	1	0.1	855	96.5
85	1	0.1	886	100.0

a There are 405 observations where jobs with new employers began immediately. The total of 886 and 405 amounts to 1,291, the figure reported in row 3 of Table E.39.

Table D.42
Weeks to Job^a with New Employer: Canada (1988-90 Sample)

Week	Frequency	Percent	Cumulative frequency	Cumulative Percent
1	144	8.1	144	8.1
2	73	4.1	217	12.2
3	80	4.5	297	16.7
4	63	3.5	360	20.2
5	43	2.4	403	22.7
6	42	2.4	445	25.0
7	34	1.9	479	26.9
8	82	4.6	561	31.6
9	20	1.1	581	32.7
10	40	2.2	621	34.9
11	16	0.9	637	35.8
12	51	2.9	688	38.7
13	27	1.5	715	40.2
14	29	1.6	744	41.8
15	18	1.0	762	42.9
16	23	1.3	785	44.2
17	59	3.3	844	47.5
18	12	0.7	856	48.1
19	24	1.3	880	49.5
20	20	1.1	900	50.6
21	27	1.5	927	52.1
22	14	0.8	941	52.9
23	15	0.8	956	53.8
24	13	0.7	969	54.5
25	32	1.8	1,001	56.3
26	17	1.0	1,018	57.3
27	13	0.7	1,031	58.0
28	18	1.0	1,049	59.0
29	9	0.5	1,058	59.5
30	15	0.8	1,073	60.3
31	17	1.0	1,090	61.3
32	12	0.7	1,102	62.0
33	10	0.6	1,112	62.5
34	44	2.5	1,156	65.0
35	18	1.0	1,174	66.0
36	38	2.1	1,212	68.2
37	21	1.2	1,233	69.3
38	67	3.8	1,300	73.1
39	30	1.7	1,330	74.8
40	38	2.1	1,368	76.9
41	27	1.5	1,395	78.5
42	77	4.3	1,472	82.8
43	38	2.1	1,510	84.9
44	16	0.9	1,526	85.8
45	14	0.8	1,540	86.6
51	11	0.6	1,618	91.0
52	5	0.3	1,623	91.3
53	4	0.2	1,627	91.5
113b	1	0.1	1,778	100.0

a There are 571 observations where jobs with new employers began immediately. The total of 1,778 and 571 amounts to 2,349, the figure reported in row 3 of Table E.40

b There are no especially interesting patterns in the frequencies beyond 53 weeks.

Table D.43
Weeks to Job with New Employer: Provinces (1986-87 Sample)

Week	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
1	1.4	13.0	5.5	6.5	6.5	10.3	9.1	9.6	7.6	5.0	8.0
2		4.3	3.6	4.3	13.8	5.3	7.6	7.2	6.3	7.5	6.4
3	2.9	13.0	7.3	2.2	7.3	9.6	7.6	4.8	5.1	7.5	7.2
4	8.7		7.3	8.7	6.5	5.3	6.1	4.8	5.1	2.5	5.8
5	1.4	8.7	1.8	6.5	2.4	2.3		2.4	5.1	5.0	2.8
6				6.5		4.3	1.5	4.8	2.5	5.0	2.8
7				2.2	4.9	3.6	1.5	3.6	6.3	2.5	3.2
8	4.3		7.3	4.3	2.4	4.0	3.0	6.0	2.5	2.5	3.8
9	1.4			2.2		1.7	1.5	1.2	2.5		1.2
10				2.2	4.1	2.6	6.1	3.6	1.3	7.5	2.8
11	2.9		3.6		3.3	2.3		1.2	1.3	5.0	2.1
12	1.4	8.7	1.8	2.2	0.8	2.0	4.5		2.5		1.9
13	1.4		1.8	4.3	0.8	2.3	3.0	2.4	1.3	7.5	2.3
14			5.5		1.6	1.0	3.0	1.2	2.5	2.5	1.6
15	4.3		1.8	2.2	3.3	0.7	1.5	1.2	1.3		1.6
16	4.3		1.8		2.4	1.7	3.0		2.5	2.5	1.9
17	1.4				3.3	1.7		2.4	2.5		1.6
18											0.0
19	1.4		1.8		1.6	3.0	1.5	1.2	1.3	2.5	1.9
20		4.3		2.2		0.3	1.5	2.4	2.5	2.5	1.0
21				2.2	0.8	1.3		1.2			0.8
22			5.5			0.7		1.2	1.3		0.8
23			3.6			1.0		1.2	1.3	5.0	1.0
24					0.8		1.5	2.4	2.5		0.7
25			1.8		0.8	2.0		2.4	2.5		1.4
26				2.2		0.3		1.2	1.3		0.5
27	5.8			2.2		1.0	1.5	1.2	2.5		1.4
28	1.4			2.2	0.8	1.0			1.3		0.8
29	1.4			2.2		1.0				2.5	0.7
30	1.4						1.5		1.3		0.3
31		4.3	1.8		0.8	1.0		3.6	1.3		1.1
32	1.4					0.3		4.8		2.5	0.8
33			1.8	6.5	0.8	0.3	1.5	1.2			0.9
34	4.3	4.3	3.6	2.2	1.6	1.7	1.5	1.2	2.5		2.0
35	1.4		3.6			1.3					0.8
36	4.3		1.8		0.8	1.7	4.5		1.3		1.6
37			1.8	2.2	0.8	1.3			1.3		0.9
38	4.3	4.3	3.6	4.3	0.8	2.0	3.0			2.5	2.0
39			1.8	2.2	2.4	1.3	1.5	2.4			1.4
40	1.4	4.3	3.6		2.4	2.0	3.0	1.2	1.3		1.9
41	1.4				6.5	2.0		1.2	1.3		1.9
42	7.2	21.7	5.5	4.3	2.4	4.0	4.5	4.8	3.8	7.5	4.9
43	2.9	4.3	1.8	2.2		1.7		2.4	1.3		1.6
44	2.9		3.6		0.8	1.0	1.5				1.1
45					0.8	0.7	3.0				0.6
51							1.5		1.3		0.2
52	5.8			2.2	0.8	0.7	1.5	2.4	1.3		1.4
53						0.3					0.1
85	1.4										0.1

Table D.44
Weeks to Job with New Employer by Province (1988-90 Sample)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
1	5.5	7.5	10.1	5.2	8.1	5.5	9.8	7.4	12.9	10.7	8.1
2	1.6	5.0	4.3	2.6	5.6	5.0	5.4	0.7	3.0	4.7	4.1
3	1.6	2.5	1.4	2.6	4.2	5.2	6.3	6.7	7.5	3.4	4.5
4	2.3	5.0	4.3	4.3	2.2	3.7	8.0	2.2	4.5	2.0	3.5
5	1.6	2.5	1.4		3.6	1.7	2.7	4.4	2.5	2.7	2.4
6	0.8		4.3	0.9	1.1	3.5	0.9	2.2	3.5	3.4	2.4
7	1.6	2.5	1.4	1.7	1.7	1.7	0.9	2.2	1.0	5.4	1.9
8	3.1	2.5	6.5	2.6	3.1	6.2	4.5	3.0	6.0	5.4	4.6
9	0.8		1.4		1.4	2.0			1.5	0.7	1.1
10	0.8		5.1	2.6	2.0	1.7	1.8	3.0	3.0	2.0	2.2
11		2.5	1.4		1.4	1.0	0.9	0.7	0.5	0.7	0.9
12	2.3		2.9	0.9	2.8	2.5	5.4	2.2	2.0	6.7	2.9
13	1.6		0.7		2.0	1.5	2.7	3.0	2.0		1.5
14	0.8	2.5	3.6	0.9	0.6	1.0	3.6	2.2	2.5	2.0	1.6
15		2.5	0.7		0.8	1.2	0.9	1.5	2.5		1.0
16	1.6	2.5	2.2	0.9	0.6	1.2		2.2		4.0	1.3
17	1.6	7.5	2.9	3.4	3.1	5.2	3.6	1.5	2.0	2.7	3.3
18			0.7	0.9	1.4	0.5	0.9	0.7	0.5		0.7
19			1.4	0.9	2.2	1.5	0.9	1.5	1.0	1.3	1.3
20	1.6		0.7	1.7	1.1	0.7	0.9	2.2	1.5	0.7	1.1
21	1.6		1.4	1.7	1.4	1.2	3.6	0.7	2.5	0.7	1.5
22	0.8		0.7		0.6	0.5	2.7	0.7	1.0	1.3	0.8
23	1.6				1.1	0.5	0.9	0.7	2.5		0.8
24	2.3		2.2		0.3	1.0		0.7	0.5		0.7
25	2.3	7.5	1.4	2.6	2.2	0.7		0.7	3.0	2.0	1.8
26	1.6		0.7		0.3	1.5	1.8	0.7	0.5	2.0	1.0
27	1.6		1.4		0.8	1.0	0.9		0.5		0.7
28	0.8		0.7	4.3	0.6	0.5		0.7	2.0	1.3	1.0
29	0.8		0.7	0.9	0.6	0.2	1.8	0.7			0.5
30				2.6	1.1	0.7		0.7	2.0		0.8
31			0.7	1.7	1.1		2.7	0.7	0.5	3.4	1.0
32			0.7	0.9	0.6	0.7	0.9	1.5	0.5	0.7	0.7
33	0.8			0.9	0.8	0.2	0.9	0.7	1.0		0.6
34	2.3		0.7	0.9	2.8	3.2	1.8	2.2	1.0	6.0	2.5
35	2.3		2.2	0.9	0.6	1.0		3.0	0.5		1.0
36	0.8		1.4	1.7	2.5	3.2	1.8	3.7	0.5	2.0	2.1
37	2.3		1.4	0.9	1.4	1.0	0.9	0.7	1.0	1.3	1.2
38	3.9	7.5	3.6	5.2	3.6	4.5		3.7	2.5	4.7	3.8
39	3.1	2.5	0.7	0.9	2.0	1.7	0.9	0.7	1.5	2.7	1.7
40	2.3	2.5	1.4	4.3	2.8	2.0	3.6	1.5	1.0	0.7	2.1
41	1.6	2.5	0.7	1.7	1.1	1.7	1.8	1.5	1.0	2.7	1.5
42	7.8	12.5	2.9	7.8	3.4	5.5	4.5	2.2	2.0	2.0	4.3
43	6.3	10.0	1.4	1.7	2.5	1.7	0.9	1.5	1.0	0.7	2.1
44	0.8			6.0	1.1	0.5		1.5			0.9
45	0.8	2.5		0.9	0.8	1.0	0.9	2.2			0.8
51	0.8			0.9			1.8	1.5	1.5	1.3	0.6
52			0.7	2.6		0.2					0.3
53			0.7		0.3				1.0		0.2
113					0.3						0.1

Table D.45
Re-Employment with New or Same Employer for Jobs Ending in VERA (1986-87 Sample)

		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
Immediate	Number	8	10	30	14	50	171	43	31	66	17	440
	Percent	9.8	27.8	34.9	23.0	27.8	35.7	38.7	26.5	44.9	29.8	32.4
Week 1	Number	1	3	3	3	8	31	6	8	7	2	72
	Percent	1.2	8.3	3.5	4.9	4.4	6.5	5.4	6.8	4.8	3.5	5.3
Week 2	Number	0	1	2	2	17	16	5	6	5	3	57
	Percent	0	2.8	2.3	3.3	9.4	3.3	4.5	5.1	3.4	5.3	4.2
Week 3	Number	2	3	4	1	9	30	5	4	4	3	65
	Percent	2.4	8.3	4.7	1.6	5.0	6.3	4.5	3.4	2.7	5.3	4.8
Week 4	Number	6	0	4	4	9	16	4	4	4	1	52
	Percent	7.3		4.7	6.6	5.0	3.3	3.6	3.4	2.7	1.8	3.8
Sum of Percent		20.7	47.2	50.1	39.4	51.6	55.1	56.7	45.2	58.5	45.7	50.5
Employed ^a		82	36	86	61	180	479	111	117	147	57	1,356

a This is the sum of rows 3 and 4 in Table E.39

Table D.46
Re-Employment with New or Same Employer for Jobs Ending in VERA (1988-90 Sample)

		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
Immediate	Number	17	11	30	24	101	155	39	56	87	59	579
	Percent	4.5	20.8	17.1	16.0	21.1	27.1	25.5	28.9	29.5	28.0	23.8
Week 1	Number	8	3	14	8	29	22	11	10	26	16	147
	Percent	5.2	5.7	8.0	5.3	6.1	3.8	7.2	5.2	8.8	7.6	6.0
Week 2	Number	2	2	6	3	20	22	6	1	7	7	76
	Percent	1.3	3.8	3.4	2.0	4.2	3.8	3.9	0.5	2.4	3.3	3.1
Week 3	Number	2	1	2	3	15	21	7	9	15	5	80
	Percent	1.3	1.9	1.1	2.0	3.1	3.7	4.6	4.6	5.1	2.4	3.3
Week 4	Number	4	2	7	6	8	16	9	3	9	3	67
	Percent	2.6	3.8	4.0	4.0	1.7	2.8	5.9	1.5	3.1	1.4	2.8
Sum of Percent		14.9	36.0	33.6	29.3	36.2	41.2	47.1	40.7	48.9	42.7	39.0
Employed ^a		154	53	175	150	478	572	153	194	295	211	2,435

a This is the sum of rows 3 and 4 in Table E.40

Table D.47
Intra-Job Interruptions by Job Type (1986-87 Sample)

Interruptions	Type 1		Type 2				Type 3	
	1986		1986		1987		1987	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0	13,920	100.0	29,549	99.4	28,125	94.6	14,056	96.2
1			168	0.6	1,455	4.9	511	3.5
2			9		124	0.4	37	0.3
3			2		28	0.1	9	0.1
4	3	0.0	4					
Total	13,923	100.0	29,732	100.0	29,732	100.0	14,613	100.0

Note: Type 1 are jobs beginning prior to or in 1986 and finishing in 1986 (job types A and D).
 Type 2 are jobs beginning prior to 1987 and continuing into 1987 (jobs types C,E,G, and H).
 Type 3 are jobs beginning in 1987 (job types B and F).
 In the case of jobs continuing across years (type 2), interruptions for each of the relevant years are reported.

Table D.48
Intra-job interruptions: by Job Type (1988-90 Sample)

Interruptions	Type 1		Type 3				Type 4				Type 5		Type 6				Type 7			
	1988a		1988		1989		1988		1989		1990		1989		1989		1990		1990	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
0	14,757	96.5	6,114	99.0	6,004	97.2	17,031	99.5	16,976	99.2	15,924	93.0	7,126	96.8	4,960	99.4	4,566	91.5	13,815	94.3
1	473	3.1	59	1.0	163	2.6	85	0.5	137	0.8	1,068	6.2	208	2.8	31	0.6	366	7.3	701	4.8
2	51	0.3	4	0.1	8	0.1			3	0.0	90	0.5	19	0.3			47	0.9	99	0.7
3	5	0.0			3	0.0					27	0.2	5	0.1			10	0.2	16	0.1
4	1	0.0								6	0.0						1	0.0	11	0.1
5	2	0.0	1	0.0						1	0.0						1	0.0	6	0.0
Total	15,289		6,178		6,178		17,116		17,116		17,116		7,358		4,991		4,991		14,648	

Note: Type 1 are jobs beginning prior to or in 1988 and finishing in 1988 (A and G in Figure 2).
 Type 3 are jobs beginning prior to or in 1988 and finishing in 1989 (D and H in Figure 2).
 Type 4 are jobs beginning in, or prior to, 1988 and continuing into 1990 (F,I,L and M in Figure 2).
 Type 5 are 1989 jobs only (B in Figure 2).
 Type 6 are jobs beginning in 1989 and continuing into 1990 (E and K in Figure 2).
 Type 7 are 1990 jobs only (C and J in Figure 2).
 In the case of jobs continuing across years, interruptions for each of the relevant years are reported.

Table D.49
Completed Spells with Intra- and Inter-Job Reasons for Separation: by Year (1986-87 Sample)

		1986 (Job Types A and D) ^a				1987 (Job Types B, C and E) ^{a,b}			
		Spell 1	Spell 2	Spell 3	Fin. sep.	Spell 1	Spell 2	Spell 3	Fin. sep.
Quit (I,J,L,N,Q,R) ^c	Number	7	0	0	3,783	220	13	2	4,588
	Percent	3.8	0.0	0.0	27.2	10.3	6.6	5.4	31.6
Layoff (E,F,M,O) ^c	Number	36	3	4	3,788	388	48	10	4,025
	Percent	19.7	20.0	66.7	27.2	17.8	24.2	27.0	27.8
Seasonal (D) ^c	Number	31	2	0	1,858	233	20	2	1,472
	Percent	16.9	13.3	0.0	13.3	10.8	10.1	5.4	10.2
Other (A,B,C,G,H,K P,S) ^c	Number	109	10	5	4,494	1,323	117	23	4,411
	Percent	59.6	66.7	33.3	32.3	61.1	59.1	62.2	30.4
Total	Number	183	15	6	13,923	2,164	198	37	14,496
	Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a See Figure 1

b Data refer to the 1987 portion of the continuing job types C and E.

c In the 1986-87 LMAS the reasons for intra- and inter-job separations are the same and as indicated above.

Table D.50
Completed Spells with Intra- and Inter-Job Reasons for Separation: by year (1988-90 sample)

		1988 (job types A,G) ^a					1989 (job types B,D,H) ^{a,b}					1990 (job types C,E,F,I) ^{a,c}				
		Spell 1	Spell 2	Spell 3	Spell 4	Fin. sep.	Spell 1	Spell 2	Spell 3	Spell 4	Fin. sep.	Spell 1	Spell 2	Spell 3	Spell 4	Fin. sep.
Quit ^d	Number	20	4			5,930	21				5,286	22	3			4,099
	Percent	3.8	6.8			38.8	5.2				39.1	5.2	7.0			32.3
Layoff ^d	Number	101	14	4	1	4,032	87	14	3		3,122	100	15			3,444
	Percent	19.0	23.7	50.0	33.3	26.4	21.4	40.0	37.5		23.1	23.8	34.9			27.1
Seasonal ^d	Number	99	8			2,293	71	4	3		1,642	100	11	4		2,087
	Percent	18.6	13.6			15.0	17.5	11.4	37.5		12.1	23.8	25.6	66.7		16.4
Other ^d	Number	312	33	4	2	3,034	227	17	2		3,486	199	14	2		3,069
	Percent	58.6	55.9	50.0	66.7	19.8	55.9	48.6	25.0		25.8	47.2	32.5	33.3		24.2
Total	Number	532	59	8	3	15,289	406	35	8		13,536	421	43	6		12,699
		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0	100.0	100.0	100.0		100.0

a See Figure 2.

b Data refer to the 1989 portion of the continuing job types D and H.

c Data refer to the 1990 portion of the continuing job types E, F, and I.

d In contrast to the 1986-87 LMAS, this survey includes different lists of reasons for intra- and inter-job separations. The reasons for inter-job separations are as in Table D.49, viz Quits=D,E,F,G,I,J,K, Layoff=L,N,P,Q, Seasonal=M and Other=A,B,C,H,O,Z. These categories for intra-job separations are Quits=L (found a new job), Layoff=G (temporary layoffs due to non-seasonal conditions), Seasonal=F and Other=A,B,C,D,E,O,I,J,K,M,N. Responses appropriate to the year are recorded.

**Table D.51
Employers^a and Jobs (Entire 1986-87 LMAS)**

Employers		Jobs											Total	
		0	1	2	3	4	5	6	7	8	9	10		
0	Number	12,820	0	0	0	0	0	0	0	0	0	0	0	12,820
	Percent	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.2
1	Number		33,735	1,311	69	9	2	0	0	0	0	0	0	35,126
	Percent		100.0	12.1	1.8	0.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0	55.4
2	Number			9,490	570	45	12	0	2	0	0	0	0	10,119
	Percent			87.9	15.3	3.0	2.2	0.0	3.1	0.0	0.0	0.0	0.0	16.0
3	Number				3,097	317	17	12	0	0	0	0	0	3,443
	Percent				82.9	20.9	3.2	5.9	0.0	0.0	0.0	0.0	0.0	5.4
4	Number					1,146	127	15	1	0	0	0	0	1,289
	Percent					75.5	23.6	7.4	1.6	0.0	0.0	0.0	0.0	2.0
5	Number						379	53	9	0	0	0	0	441
	Percent						70.6	26.3	14.0	0.0	0.0	0.0	0.0	0.7
6	Number							122	14	0	1	0	0	137
	Percent							60.4	21.9	0.0	14.2	0.0	0.0	0.2
7	Number								38	4	2	0	0	44
	Percent								59.4	33.3	28.6	0.0	0.0	0.1
8	Number									8	2	0	0	10
	Percent									66.7	28.6	0.0	0.0	0.0
9	Number										2	0	0	2
	Percent										28.6	0.0	0.0	0.0
10	Number											1	0	1
	Percent											100.0	0.0	0.0
Total	Number	12,820	33,735	10,801	3,736	1,517	537	202	64	12	7	1	0	63,432
Row	Percent	20.2	53.2	17.0	5.9	2.4	0.9	0.3	0.1	0.0	0.0	0.0	0.0	100.0

a Based on distinct counts in the employer vectors

Table D.52
Individuals by Employers^a and Jobs (Entire 1988-90 LMAS)

Employers		Jobs													Total	
		0	1	2	3	4	5	6	7	8	9	10	11	12		13
0	Number	9,581	0	0	0	0	0	0	0	0	0	0	0	0	0	9,581
	Percent	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.3
1	Number		24,173	1,258	68	2	1	0	0	0	0	0	0	0	0	25,502
	Percent		99.9	11.3	1.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.0
2	Number		27	9,596	840	81	9	2	0	0	0	0	0	0	0	10,555
	Percent		0.1	86.1	15.3	3.0	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.0
3	Number		3	280	4,369	505	66	6	3	0	0	0	0	0	0	5,232
	Percent		0.0	2.5	79.5	18.9	5.4	1.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	9.5
4	Number			5	215	1,959	305	59	11	5	1	0	0	0	0	2,560
	Percent			0.1	3.9	73.4	25.0	10.0	3.9	3.9	1.2	0.0	0.0	0.0	0.0	4.6
5	Number			1	2	121	793	179	30	9	5	0	0	0	0	1,140
	Percent			0.0	0.1	4.5	65.1	30.2	10.7	7.1	6.3	0.0	0.0	0.0	0.0	2.1
6	Number					1	44	323	77	19	7	1	0	0	0	472
	Percent					0.1	3.6	54.5	27.4	15.0	8.7	3.7	0.0	0.0	0.0	0.9
7	Number							24	156	35	16	1	0	1	0	233
	Percent							4.0	55.5	27.6	20.0	3.7	0	20.0	0	0.4
8	Number								4	52	20	4	0	0	0	80
	Percent								1.4	40.9	25.0	14.8	0.0	0.0	0.0	0.1
9	Number									6	31	10	4	1	0	52
	Percent									4.7	38.8	37.0	26.7	20.0	0.0	0.1
10	Number										1	11	5	2	0	19
	Percent										0.8	40.8	33.3	40.0	0.0	0.0
11	Number												6	1	1	8
	Percent												40.0	20.0	100.0	0.0
Total	Number	9,581	24,203	11,140	5,494	2,669	1,218	593	281	127	80	27	15	5	1	55,434
Row	Percent	17.3	43.7	20.1	9.9	4.8	2.2	1.1	0.5	0.2	0.1	0.1	0.0	0.0	0.0	100.0

a Based on distinct counts in the employer vectors. Unlike the 1986-87 LMAS in this instance non-zero entries below the main diagonal appear because the data code some continuing jobs as involving separate employers.

Table D.53
Individuals by Employers^a and Jobs when Duration is in VERA (Entire 1986-87 LMAS)

Employers		Jobs									Total
		1	2	3	4	5	6	7	8	9	
1	Number	238	63	10	2	1	0	0	0	0	314
	Percent	100.0	7.8	1.6	0.5	0.5	0.0	0.0	0.0	0.0	13.0
2	Number		743	60	7	7	0	1	0	0	818
	Percent		92.2	9.6	1.6	3.5	0.0	4.4	0.0	0.0	33.9
3	Number			555	82	7	7	0	0	0	651
	Percent			88.8	18.9	3.6	8.7	0.0	0.0	0.0	27.0
4	Number				342	48	2	0	0	0	392
	Percent				79.0	24.4	2.5	0.0	0.0	0.0	16.2
5	Number					134	21	3	0	0	158
	Percent					68.0	26.3	13.0	0.0	0.0	6.6
6	Number						50	4	0	0	54
	Percent						62.5	17.4	0.0	0.0	2.2
7	Number							15	1	1	17
	Percent							65.2	14.3	25.0	0.7
8	Number								6	1	7
	Percent								85.7	25.0	0.3
9	Number									2	2
	Percent									50.0	0.1
Total	Number	238	806	625	433	197	80	23	7	4	2,413
Row	Percent	9.9	33.4	25.9	17.9	8.2	3.3	0.9	0.3	0.2	100.0

a Based on distinct counts in the employer vectors.

Table D.54
Individuals by Employers^a and Jobs when Duration is in VERA (Entire 1988-90 LMAS)

Employers		Jobs													Total	
		1	2	3	4	5	6	7	8	9	10	11	12	13		
1	Number	127	45	9	1	0	0	0	0	0	0	0	0	0	0	182
	Percent	99.2	7.4	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3
2	Number	1	560	147	21	3	0	0	0	0	0	0	0	0	0	732
	Percent	0.8	91.9	15.4	2.9	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.5
3	Number		2	776	143	23	3	1	0	0	0	0	0	0	0	948
	Percent		0.3	81.2	19.8	4.9	1.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.8
4	Number		1	24	533	108	28	5	1	1	0	0	0	0	0	701
	Percent		0.2	2.5	73.7	22.9	11.4	3.6	1.5	2.4	0.0	0.0	0.0	0.0	0.0	20.5
5	Number		1		25	320	75	13	4	1	0	0	0	0	0	439
	Percent		0.2		3.5	67.8	30.5	9.4	6.0	2.4	0.0	0.0	0.0	0.0	0.0	12.9
6	Number					18	130	38	9	5	0	0	0	0	0	200
	Percent					3.8	52.8	27.3	13.4	11.9	0.0	0.0	0.0	0.0	0.0	5.9
7	Number						10	79	16	8	0	0	0	0	0	113
	Percent						4.1	56.8	23.9	19.0	0.0	0.0	0.0	0.0	0.0	3.3
8	Number							3	33	12	2	0	0	0	0	50
	Percent							2.2	49.2	28.6	12.5	0.0	0.0	0.0	0.0	1.5
9	Number								4	15	5	3	0	0	0	27
	Percent								6.0	35.7	31.2	33.3	0.0	0.0	0.0	0.8
10	Number										9	1	1	0	0	11
	Percent										56.3	11.1	50.0	0.0	0.0	0.3
11	Number											5	1	1	0	7
	Percent											55.6	50.0	100.0	0.0	0.2
Total	Number	128	609	956	723	472	246	139	67	42	16	9	2	1	0	3,410
Row	Percent	3.7	17.9	28.0	21.2	13.8	7.2	4.1	2.0	1.2	0.5	0.3	0.1	0.0	0.0	100.0

a Based on distinct counts in the employer vectors. Unlike the 1986-87 LMAS, in this instance non-zero entries below the main diagonal appear because the data code some continuing jobs as involving separate employers.

Table D.55
Individuals by Employers^a and Employee Sex (Entire 1986-87 LMAS)

Employers		Men	Women	Total
0	Number	3,319	9,501	12,820
	Percent	10.7	29.2	20.2
1	Number	19,121	16,005	35,126
	Percent	61.9	49.2	55.4
2	Number	5,447	4,672	10,119
	Percent	17.6	14.4	16.0
3	Number	1,883	1,560	3,443
	Percent	6.1	4.8	5.4
4	Number	758	531	1,289
	Percent	2.5	1.6	2.0
5	Number	255	186	441
	Percent	0.8	0.6	0.7
6	Number	95	42	137
	Percent	0.3	0.1	0.2
7	Number	29	15	44
	Percent	0.1	0.1	0.1
8	Number	7	3	10
	Percent	0.0	0.0	0.0
9	Number	2	0	2
	Percent	0.0	0.0	0.0
10	Number	0	1	1
	Percent	0.0	0.0	0.0
Total	Number	30,916	32,516	63,432
Row	Percent	48.7	51.3	100.0

a Based on the number of distinct employers in the employment vectors.

Table D.56
Individuals by Employers^a and Employee Sex (Entire 1988-90 LMAS)

Employers		Men	Women	Total
0	Number	2,615	6,966	9,581
	Percent	4.7	12.6	17.3
1	Number	13,670	11,832	25,502
	Percent	24.7	21.3	46.0
2	Number	5,455	5,100	10,555
	Percent	9.8	9.2	19.0
3	Number	2,725	2,507	5,232
	Percent	4.9	4.5	9.4
4	Number	1,403	1,157	2,560
	Percent	2.5	2.1	4.6
5	Number	631	509	1,140
	Percent	1.1	0.9	2.1
6	Number	296	176	472
	Percent	0.5	0.3	0.9
7	Number	146	87	233
	Percent	0.3	0.2	0.4
8	Number	59	21	80
	Percent	0.1	0.0	0.1
9	Number	35	17	52
	Percent	0.1	0.0	0.1
10	Number	16	3	19
	Percent	0.0	0.0	0.0
11	Number	5	3	8
	Percent	0.0	0.0	0.0
Total	Number	27,056	28,378	55,434
Row	Percent	48.8	51.2	100.0

a Based on the number of distinct employers in the employment vectors.

Table D.57
Individuals by Employers^a and Full-Time Status (Entire 1986-87 LMAS)^b

Employers		Full-time	Part-time	Other	Total
1	Number	24,367	4,886	5,611	34,864
	Percent	71.5	54.8	78.3	69.5
2	Number	6,118	2,598	1,267	9,983
	Percent	17.9	29.1	17.7	20.0
3	Number	2,279	928	218	3,425
	Percent	6.7	10.4	3.0	6.8
4	Number	895	343	45	1,283
	Percent	2.6	3.8	0.6	2.6
5	Number	284	133	24	441
	Percent	0.8	1.5	0.3	0.9
6	Number	104	29	4	137
	Percent	0.3	0.3	0.1	0.3
7	Number	38	5	1	44
	Percent	0.1	0.1	0.0	0.1
8	Number	8	2	0	10
	Percent	0.0	0.0	0.0	0.0
9	Number	2	0	0	2
	Percent	0.0	0.0	0.0	0.0
10	Number	0	1	0	1
	Percent	0.0	0.0	0.0	0.0
Total	Number	34,095	8,925	7,170	50,190
Row	Percent	67.9	17.8	14.3	100.0
Missing					13,242
Grand total					63,432

a Based on distinct employers in employment vectors.

b In the 1986-87 LMAS responses are coded as 1=full-time, 2=part-time, and 0=not applicable. No response indicates that the individual was not working.

Table D.58
Individuals by Employers^a and Full-Time Status (Entire 1988-90 LMAS)^b

Employers		Full-time	Part-time	Total
1	Number	17,477	3,412	20,889
	Percent	57.1	41.4	53.8
2	Number	6,598	2,425	9,023
	Percent	21.6	29.4	23.2
3	Number	3,412	1,267	4,679
	Percent	11.1	15.4	12.0
4	Number	1,744	624	2,368
	Percent	5.7	7.6	6.1
5	Number	773	303	1,076
	Percent	2.5	3.7	2.8
6	Number	327	117	444
	Percent	1.1	1.4	1.1
7	Number	171	53	224
	Percent	0.6	0.6	0.6
8	Number	54	24	78
	Percent	0.2	0.3	0.2
9	Number	38	14	52
	Percent	0.1	0.2	0.1
10	Number	14	4	18
	Percent	0.0	0.0	0.1
11	Number	7	1	8
	Percent	0.0	0.0	0.0
Total	Number	30,615	8,244	38,859
Row	Percent	78.8	21.2	100.0
Missing				16,575
Grand total				55,434

a Based on distinct employers in employment vectors.

b In the 1988-90 LMAS responses are coded as 1=full-time, 2=part-time, with no response indicating self-employment or no job.

Figure D.1
Density of Completed Jobs: 1986-87

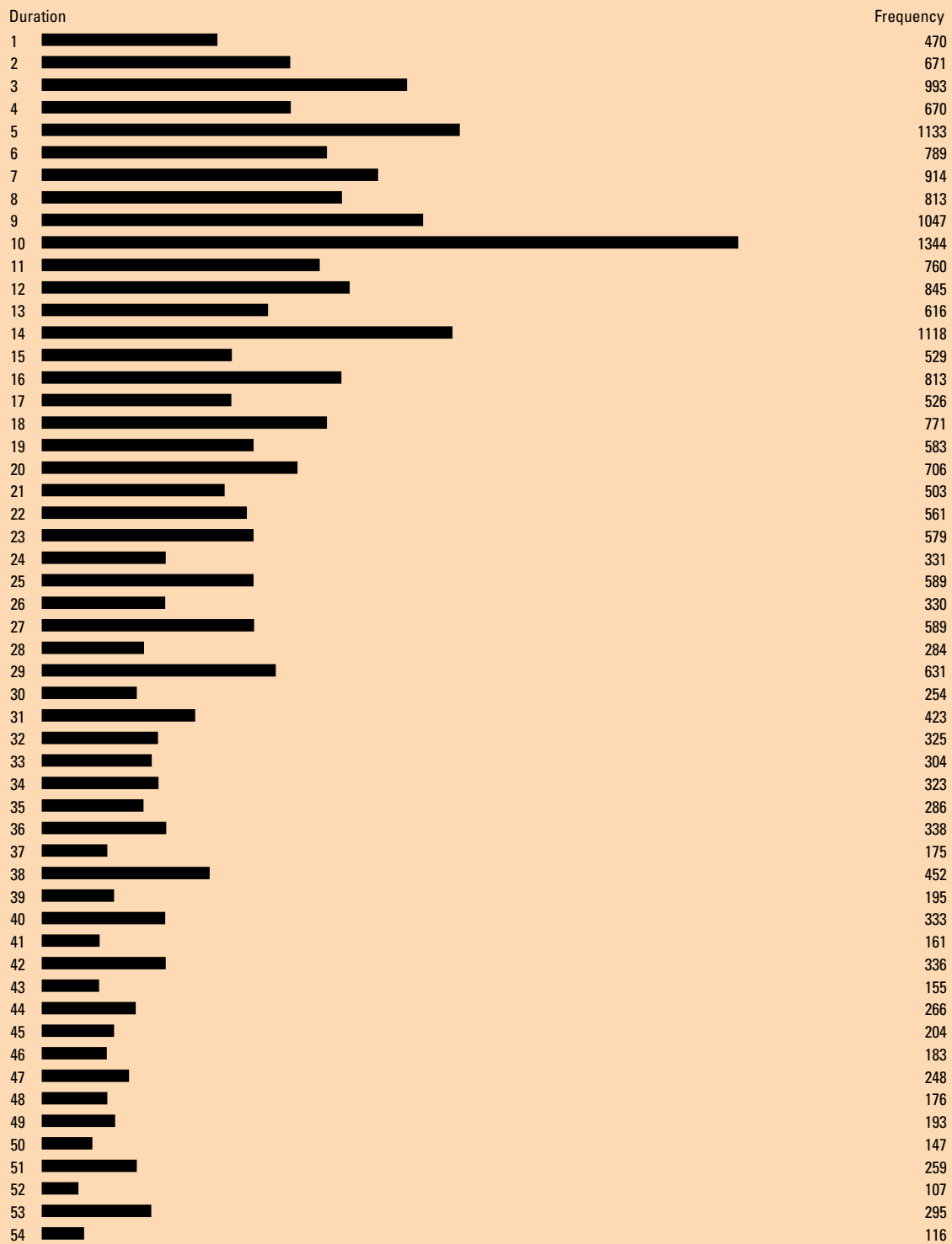


Figure D.2
Density of Completed Jobs: Newfoundland 1986-87

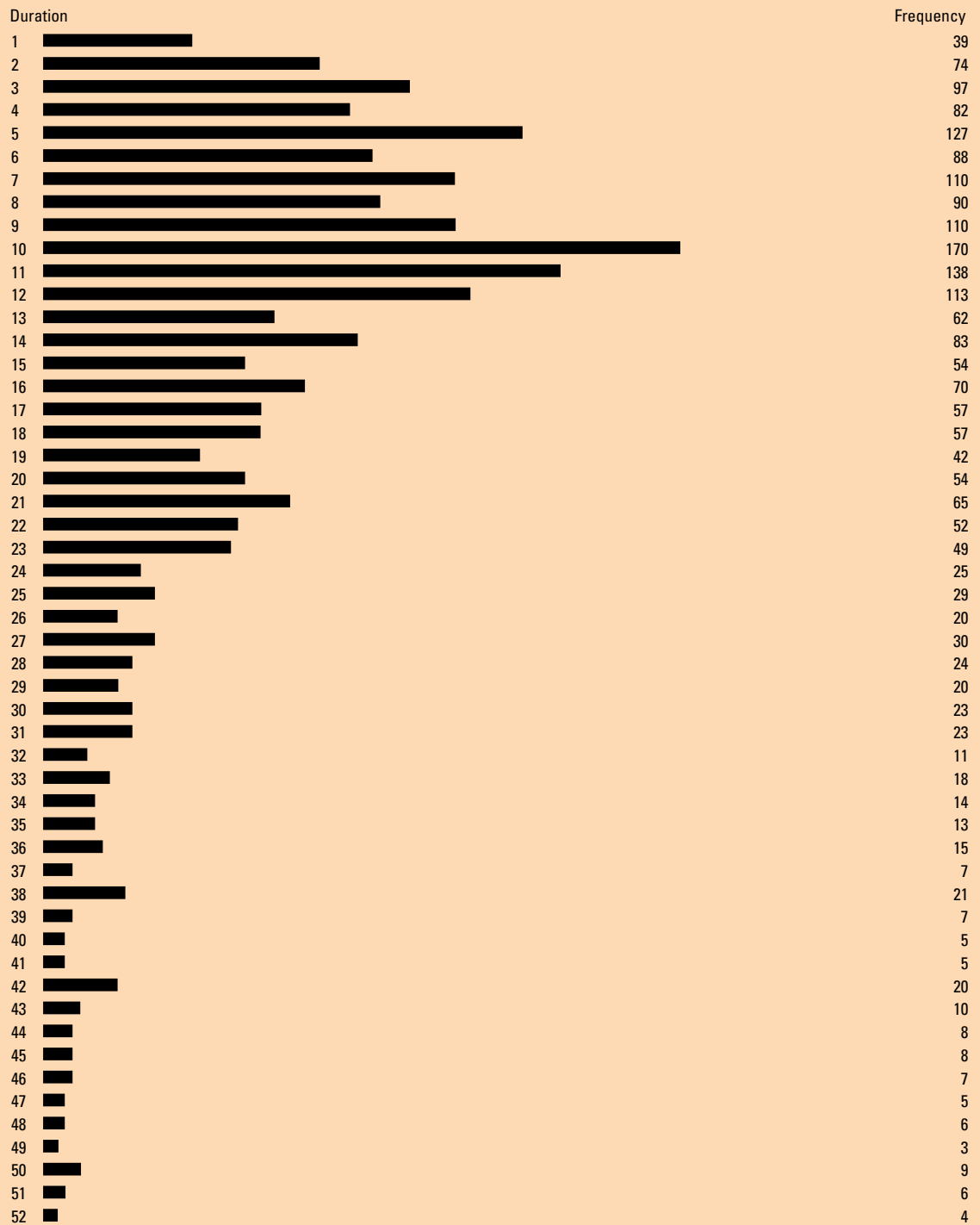


Figure D.3
Density of Completed Jobs: Ontario 1986-87

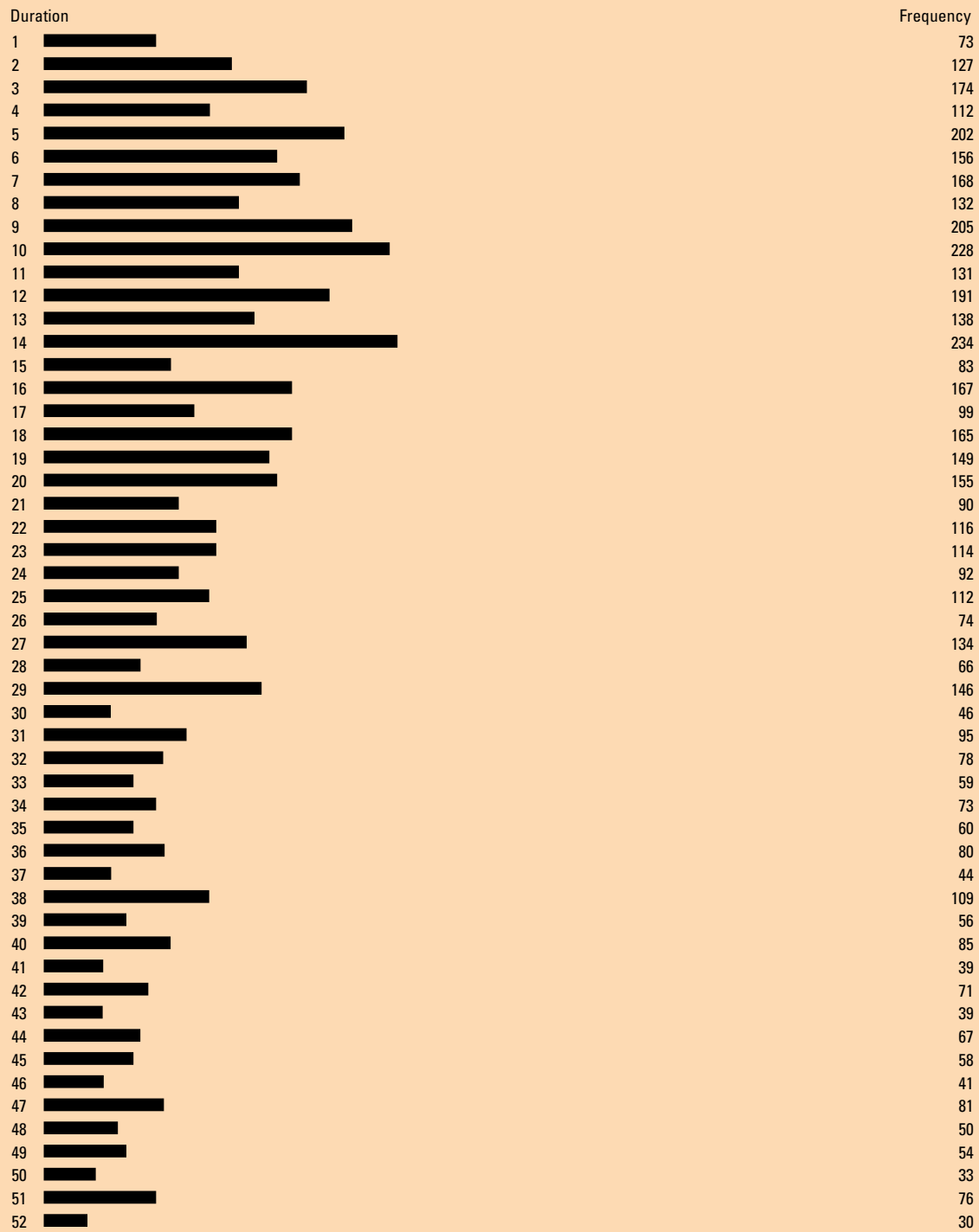


Figure D.4
Density of Completed Jobs: 1988

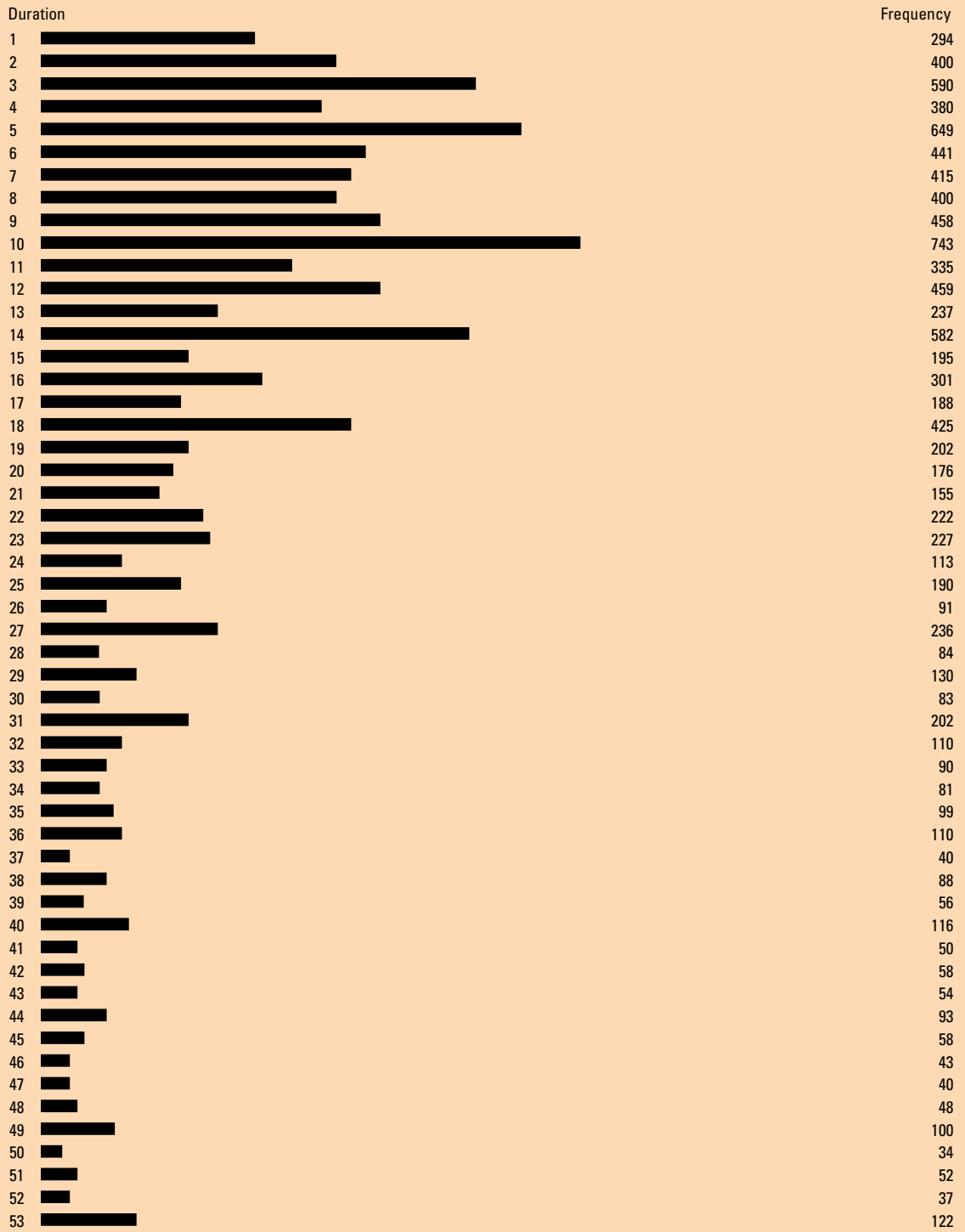


Figure D.5
Density of Completed Jobs: 1989

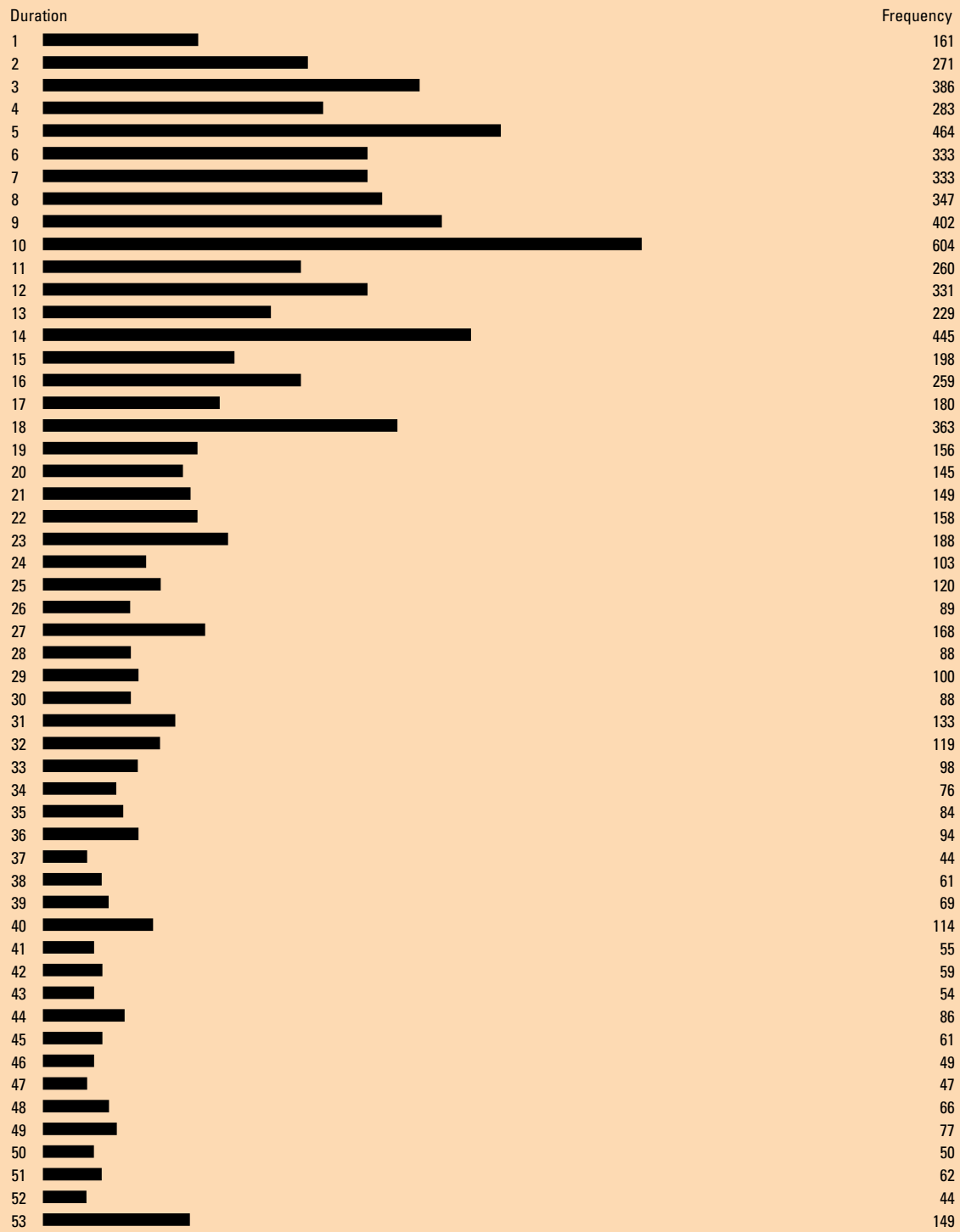
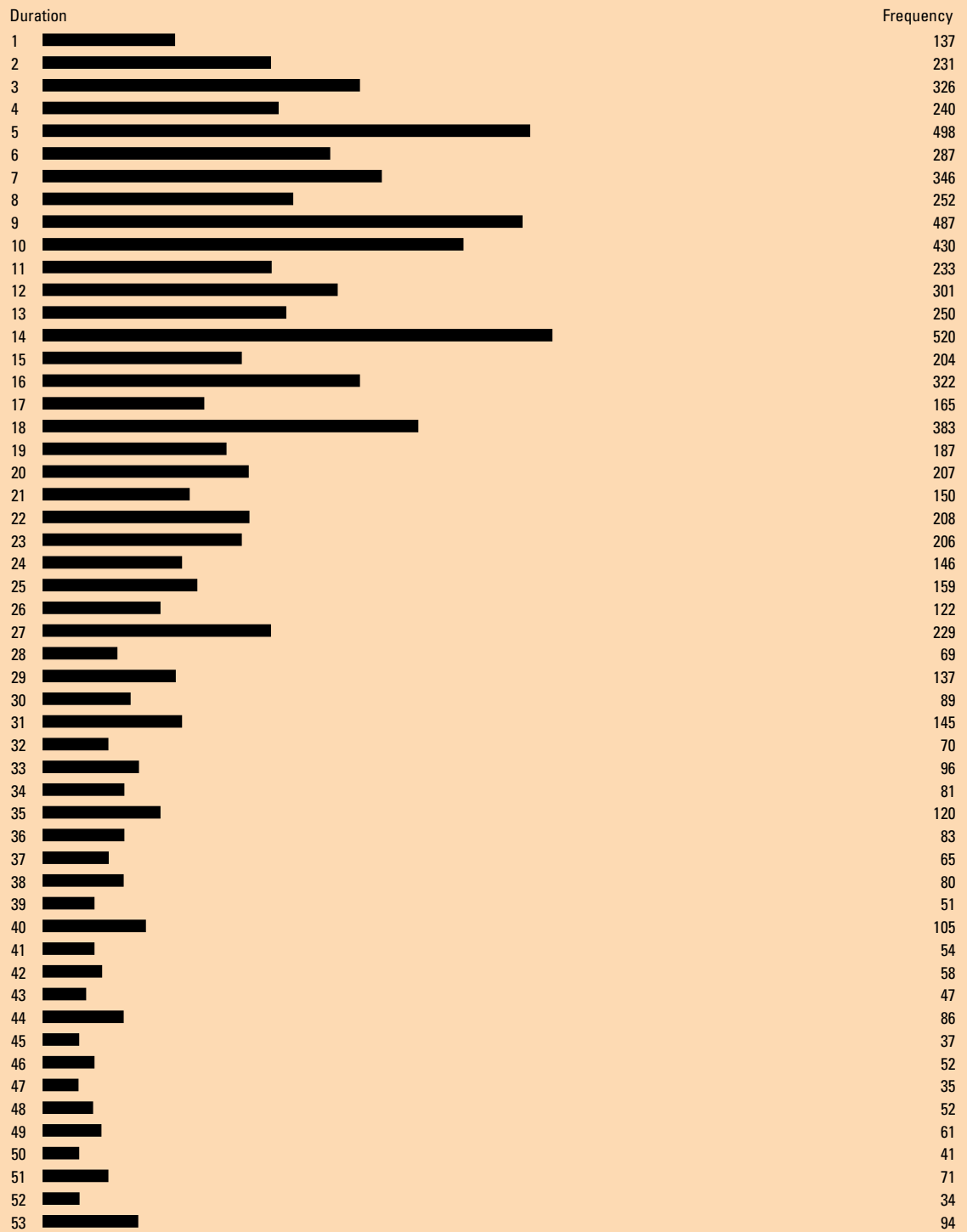


Figure D.6
Density of Completed Jobs: 1990





Appendix E: Non-Standard Employment

Table E.1
Job Attributes by Spell Type (1986-87 Sample)

	Completed spells					Censored spells		
	1986 Job	1987 Job	1986-1987 ^c	End in 1986	End in 1987 ^c	Start in 1987	Start in 1986 ^c	Start before 1986 ^c
Weeks p/m	3.7	3.7	3.9	3.9	3.9	3.9	3.9	4
Days p/w	4.8	4.8	4.4	4.6	4.6	4.5	4.5	4.8
Hours p/d	7.9	8	7.4	7.6	7.7	7.5	7.6	7.9
Ex hs wanted p/m ^a	6.8	4.8	5.3	4	2.8	4	3.1	1.1
Full timeb	72.9	73.4	64.5	74.9	76.9	70.4	73.4	87.5
PT want FT ^b	33.2	12.9	9.7	25.7	6.5	9.4	7.7	5.5
Unionb	11.9	11.4	12.6	18.8	24.9	18.5	24.7	44.1
Collective agreement ^b	5.3	5.4	3.5	4.8	4.7	6	6	8.6
Pension planb	8.1	7.9	12.4	24.7	35.7	24.4	30.8	61.8
Wage: \$ p/h	7.09	7.61	7.43	8.57	10.21	9	9.6	12.86
Number of jobs	8,285	7,697	3,335	13,923	14,496	6,916	3,849	19,084

a Nearly 90% of respondents indicate that these hours were not offered by the employer.

b Indicates percentage of jobs that meet this condition.

c Second-year responses (1987) are recorded.

Table E.2
Job Attributes by Spell Type (1988-90 Sample)

Job	Completed spells							Censored spells					
	1988 Job	1989 Job	1990 Job	1988-89 ^c	1989-90 ^c	1988-90 ^d	End in 1988	End in 1989 ^c	End in 1990 ^d	Start in 1990 ^d	Start in 1989 ^c	Start in 1988	Start before 1988 ^c
Weeks p/m	3.6	3.7	3.7	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4
Days p/w	4.7	4.7	4.8	4.4	4.3	4.4	4.5	4.6	4.6	4.4	4.5	4.6	4.8
Hours p/d	7.9	8	8	7.4	7.4	7.6	7.6	7.6	7.8	7.5	7.6	7.7	7.9
Ex hs wanted p/m ^a	9.1	8	7.8	7.9	9.2	6.8	6.7	4.3	4.2	7.3	5.5	4.9	2.4
Full timeb	67.9	71.7	74.8	64.3	64.7	68.3	71.7	77.9	81.5	69.6	73.9	76.6	86.1
PT want FT ^b	16.9	18.1	19.7	15.8	18.6	14.8	16.1	12.9	14.3	16.3	14	14.9	9.4
Unionb	14.1	13.1	15.1	15.6	17.1	21.9	23.4	29.2	32.3	24.1	27.9	32.4	48.3
Collective agr'mnt ^b	4.6	5.4	5.7	4.8	4.8	5.6	5.1	5.3	6.6	5.7	7.2	6.9	8.3
Pension plan ^b	9.5	9.5	11.1	15.8	16.5	25.2	26.3	41.2	45.4	29.8	37.6	45.4	66.5
Wage: \$ p/h	7.98	8.57	9.22	8.68	9.3	9.8	9.71	11.3	12.55	11.16	12	11.93	14.95
Number of jobs	9,073	7,358	7,795	2,646	2,112	897	6,216	3,532	1,895	6,853	2,879	2,152	12,172

a Approximately 80% of respondents indicate that these hours were not offered by the employer.

b Indicates percentage of jobs that meet this condition.

c Second-year responses (1989) are recorded.

d Third-year responses (1990) are recorded.

Table E.3
Job Attributes by Province (1986-87 Sample)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Weeks p/m ^c	3.8	3.9	3.9	3.9	3.9	3.9	3.9	3.8	3.9	3.8
Days p/w ^c	4.9	4.8	4.7	4.7	4.7	4.7	4.6	4.6	4.7	4.6
Hours p/d ^c	8.2	7.9	7.9	7.9	7.7	7.7	7.6	7.6	7.8	7.8
Ex hrs wanted p/m ^{a,c}	2.6	1.4	2.6	2.3	1.9	1.7	2.1	2.5	2	3.3
Full time ^{b,c}	84.9	82.2	79.4	80	80.9	79	75.5	74	78.3	74.6
PT want FT ^{b,c}	10.7	7	8.9	9	6.7	6.5	6.3	8	8	11.6
Union ^{b,c}	31.1	23.1	24.7	27.8	37	28	29.5	30	22.3	31.3
Collective agreement ^{b,c}	4.2	6.9	5.1	7.8	10.6	6	7.5	5.3	4.6	6.2
Pension plan ^{b,c}	31.5	32.1	36.1	36.7	39.9	39.4	40.6	40.5	38.1	37.2
Tot. wks 86-87	59.6	74.6	76.7	74.1	80.4	85.3	85.6	84.5	83.2	80.5
Tot. hrs 86-87	2,327	2,751	2,867	2,727	2,868	3,096	3,037	2,970	3,065	2,890
Wage: \$ p/h ^c	8.84	8.85	9.34	9.45	11.04	10.9	9.94	10.17	11.01	11.2
Number of jobs	3,577	1,840	3,877	4,464	8,364	12,855	4,055	5,010	8,619	5,607

a Nearly 90% of respondents indicate that these hours were not offered by the employer.

b Indicates percentage of jobs that meet this condition.

c Second-year responses (1987) are recorded.

Table E.4
Job Attributes by Province (1988-90 Sample)

	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Weeks p/m ^c	3.8	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.9	3.9
Days p/w ^c	4.9	4.8	4.7	4.7	4.6	4.6	4.5	4.5	4.6	4.6
Hours p/d ^c	8	8	7.9	7.9	7.6	7.7	7.7	7.6	8	7.8
Ex hrs wanted p/m ^{a,c}	8.5	2.8	6.4	6.2	5.6	4.2	6.5	4.9	4.3	6.1
Full-time ^{b,c}	81.8	83.7	77.6	79.7	78.9	77.6	72.9	72	76.8	75.1
PT want FT ^{b,c}	28.9	14.1	23.5	20.5	17.4	11.4	14.5	11.1	10.4	17.2
Union ^{b,c}	30.7	27.1	26.6	26.6	38	30.7	30.4	33	26.6	33.2
Collective agreement ^{b,c}	5.5	6.7	4.3	6.3	11.4	6.1	7	5.1	5.5	5.3
Pension plan ^{b,c}	32.4	31.6	39.8	35.1	42.1	43.4	40.8	41.7	38.5	36.1
Tot. wks 88-90	42.3	52.3	59.1	51.3	63.7	66.7	64.7	69	61.3	57.7
Tot. hrs 88-90	1,570	1,917	2,197	1,861	2,239	2,377	2,227	2,343	2,211	2,050
Wage: \$ p/h ^c	10.05	9.74	10.78	10.69	12.54	13.14	11.38	11.53	12.64	13.09
Number of jobs	5,013	1,913	4,460	5,743	9,640	12,711	4,406	5,306	9,387	7,001

a Approximately 80% of respondents indicate that these hours were not offered by the employer.

b Indicates percentage of jobs that meet this condition.

c Third-year responses (1990) are recorded.

Table E.5
Job Attributes by SIC Group^d (1986-87 Sample)

	SIC 1-3	SIC 4-8	SIC 9-28	SIC 29-30	SIC 31-34	SIC 35+
Weeks p/m ^c	3.7	3.9	3.9	3.8	3.9	3.9
Days p/w ^c	5.2	5.1	4.9	5	4.9	4.5
Hours p/d ^c	8.6	8.8	8.2	8.5	8.2	7.5
Ex hrs wanted p/m ^{a,c}	1.2	0.8	1.2	1.8	1.5	2.6
Full-time ^{b,c}	80	95.4	92.5	88.7	88.7	72.8
PT want FT ^{b,c,e}	8.7	11.5	6.9	8.3	7.2	8.1
Union ^{b,c}	8.5	29.9	35.5	25.4	50.5	26.6
Collective agreement ^{b,c}	2.9	4.7	7.4	3.4	11.1	6.5
Pension plan ^{b,c}	9.3	61.4	45.8	21	62	36.2
Tot. wks 86-87	64.4	88.6	82.6	68.2	88.1	81.3
Tot. hrs 86 87	2,585.4	3,748	3,210.7	2,663.8	3,522.9	2,821.4
Wage: \$ p/h ^c	8.45	15.2	11.38	10.99	13.02	9.85
Number of jobs	2,691	1,391	7,970	4,140	3,953	38,123

a Nearly 90% of respondents indicate that these hours were not offered by the employer.

b Indicates percentage of jobs that meet this condition.

c Second-year responses (1987) are recorded.

d The SIC groupings are: 1-3, agriculture, forestry, fishing and trapping; 4-8, mining; 9-28 includes food, tobacco, rubber, textiles, knitting, clothing, wood, furniture, paper and printing, metals, machinery, transportation equipment, electrical products, non-metallic minerals, petroleum and coal, chemicals and miscellaneous manufacturing; 29-30, contractors; 31-34, transportation and storage, communications, electric power, gas and water utilities; 35+, includes trade, finance, insurance, education, health, services and administration.

e The data suggest much higher figures for 1986; for instance, in SIC 35+ it is 23.1%.

Table E.6
Job Attributes by SIC Group^d (1988-90 Sample)

	SIC 1-3	SIC 4-8	SIC 9-28	SIC 29-30	SIC 31-34	SIC 35+
Weeks p/m ^c	3.8	3.8	3.9	3.8	3.9	3.9
Days p/w ^c	5.1	5	4.9	5	4.9	4.5
Hours p/d ^c	8.6	9.2	8.3	8.6	8.2	7.4
Ex hrs wanted p/m ^{a,c}	3.8	4	4.5	5.6	4.9	5.8
Full-time ^{b,c}	79.8	95.6	91.1	88.9	86.7	71.1
PT want FT ^{b,c}	8.4	23.1	24.9	21.8	17.6	14.7
Union ^{b,c}	12.6	37.5	36.7	30.2	50	28.5
Collective agreement ^{b,c}	2.1	7.5	7.2	3.9	10.7	6.6
Pension plan ^{b,c}	12.1	62.4	48	28.1	58.5	37.3
Tot. wks 88-90	35.7	76.9	67.7	33.9	77.5	61.9
Tot. hrs 88-90	1,404	3,272	2,660	1,367	3,009	2,079
Wage: \$ p/h ^c	9.47	17.6	13	13.1	14.46	11.4
Number of jobs	3,314	1,408	9,029	5,366	4,231	42,232

a Approximately 80% of respondents indicate that these hours were not offered by the employer.

b Indicates percentage of jobs that meet this condition.

c Third-year responses (1990) are recorded.

d The SIC groupings are: 1-3, agriculture, forestry, fishing and trapping; 4-8, mining; 9-28 includes food, tobacco, rubber, textiles, knitting, clothing, wood, furniture, paper and printing, metals, machinery, transportation equipment, electrical products, non-metallic minerals, petroleum and coal, chemicals and miscellaneous manufacturing; 29-30, contractors; 31-34, transportation and storage, communications, electric power, gas and water utilities; 35+, includes trade, finance, insurance, education, health, services and administration.

Table E.7
Job Attributes by Gender (1986-87 Sample)

	Men	Women
Weeks p/m ^c	3.9	3.9
Days p/w ^c	4.9	4.5
Hours p/d ^c	8.2	7.3
Extra hrs wanted p/m ^{a,c}	1.4	3
Full time ^{b,c}	87.4	68.4
PT want FT ^{b,c}	7	9.1
Union ^c	31.6	25.7
Collective Agreement ^{b,c}	6.7	6.2
Pension plan ^{b,c}	43.5	31.9
Wage rate \$ p/h ^c	11.84	8.83
Tot. wks 86-87	82.1	78.5
Tot. hrs 86-87	3,234	2,560
Number of jobs	31,316	26,952

a Nearly 90% of respondents indicate that these hours were not offered by the employer.

b Indicates percentage of jobs that meet this condition.

c Second-year responses (1987) are recorded.

Table E.8
Job Attributes by Gender (1988-90 Sample)

	Men	Women
Weeks p/m ^c	3.9	3.8
Days p/w ^c	4.9	4.4
Hours p/d ^c	8.3	7.2
Extra hrs wanted p/m ^{a,c}	4.5	6.5
Full time ^{b,c}	87.5	66
PT want FT ^{b,c}	16.1	15.2
Union ^c	34.1	27.5
Collective Agreement ^{b,c}	6.6	6.4
Pension plan ^{b,c}	45.4	32.8
Wage rate \$ p/h ^c	13.7	10.28
Tot. wks 88-90	61.2	59.5
Tot. hrs 88-90	2,411	1,865
Number of jobs	34,549	31,031

a Approximately 80% of respondents indicate that these hours were not offered by the employer.

b Indicates percentage of jobs that meet this condition.

c Third-year responses (1990) are recorded.

Table E.9
Individuals in Concurrent^a Jobs by Province (1986-87 Sample)

		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
0	Number	2,209	1,102	2,447	2,717	5,399	7,258	2,359	3,066	4,784	3,209	34,550
	Percent	92.2	88.2	89.1	89.0	90.2	84.3	84.4	86.7	84.6	85.2	86.8
1	Number	182	143	279	325	570	1266	406	447	814	519	4951
	Percent	7.6	11.4	10.2	10.6	9.5	14.7	14.5	12.6	14.4	13.8	12.4
2	Number	5	5	18	10	19	77	28	24	59	35	280
	Percent	0.2	0.4	0.7	0.3	0.3	0.9	1.0	0.7	1.0	0.9	0.7
3	Number			2			3	1		2	3	11
	Percent			0.1			0.0	0.0		0.0	0.1	0.0
4	Number						1	1	1		1	4
	Percent						0.0	0.0	0.0		0.0	0.0
Total ^b		2,396	1,250	2,746	3,052	5,988	8,605	2,795	3,538	5,659	3,767	39,796

a That is two, or more, jobs which overlap by at least one week.

b The provincial totals are affected by the pattern of individuals holding concurrent jobs across provinces. For this reason they are not the same as the provincial breakdown of Table B.3.

Table E.10
Individuals in Concurrent^a Jobs by Province (1988-90 Sample)

		Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
0	Number	2,342	841	2,063	2,459	4,685	5,703	1,872	2,443	3,815	2,864	29,087
	Percent	89.1	83.4	82.4	82.2	84.8	79.4	77.5	79.5	76.3	78.3	80.8
1	Number	279	159	421	507	784	1387	499	564	1108	733	6441
	Percent	10.6	15.8	16.8	17.0	14.2	19.3	20.7	18.4	22.2	20.0	17.9
2	Number	7	8	19	25	51	89	39	61	73	55	427
	Percent	0.3	0.8	0.8	0.8	0.9	1.2	1.6	2.0	1.5	1.5	1.2
3	Number	1		2		2	1	2	4	5	5	22
	Percent	0.0		0.1		0.0	0.0	0.1	0.1	0.1	0.1	0.1
4	Number							2				2
	Percent							0.1				0.0
Total ^b		2,629	1,008	2,505	2,991	5,522	7,180	2,414	3,072	5,001	3,657	35,979

a That is, two, or more, jobs which overlap for at least one week.

b The provincial totals are affected by the pattern of individuals holding concurrent jobs across provinces. For this reason they are not the same as the provincial breakdown of Table B.4.

Table E.11
Individuals in Concurrent^a Jobs by Gender and Job Status (1986-87 Sample)

Jobs		Men	Women	Full-time	Part-time	Total
0	Number	18,507	16,043	27,865	6,685	34,550
	Percent	87.2	86.4	89.3	77.7	86.8
1	Number	2,596	2,355	3,209	1,742	4,951
	Percent	12.2	12.7	10.3	20.2	12.4
2	Number	125	155	112	168	280
	Percent	0.6	0.8	0.4	2.0	0.7
3	Number	4	7	4	7	11
	Percent	0.0	0.0	0.0	0.1	0.0
4	Number	1	3	1	3	4
	Percent	0.0	0.0	0.0	0.0	0.0
Sub-total		21,233	18,563	31,191	8,605	39,796

a That is two, or more, jobs which overlap by at least one week.

Table E.12
Individuals in Concurrent^a Jobs by Gender and Job Status (1988-90 Sample)

Jobs		Men	Women	Full-time	Part-time	Total
0	Number	15,175	13,912	23,125	5,962	29,087
	Percent	81.3	80.3	83.7	71.3	80.8
1	Number	3,305	3,136	4,290	2,151	6,441
	Percent	17.7	18.1	15.5	25.7	17.9
2	Number	173	254	195	232	427
	Percent	0.9	1.5	0.7	2.8	1.2
3	Number	9	13	8	14	22
	Percent	0.0	0.1	0.0	0.2	0.1
4	Number	1	1	1	1	2
	Percent	0.0	0.0	0.0	0.0	0.0
Sub-total		18,663	17,316	27,619	8,360	35,979

a That is, two, or more, jobs which overlap for at least one week.

Table E.13
Weeks of Concurrent Job-Holding for 39,796 Individuals (1986-87 Sample)

Weeks of Concurrent Job Holding	Frequency	Percent
0	34,550	86.8
1	2,393	6.0
2	408	1.0
3	193	0.5
4	102	0.3
5	140	0.4
6	77	0.2
7	87	0.2
8	71	0.2
9	85	0.2
10	106	0.3
20	39	0.1
30	17	0.0
40	33	0.1
50	5	0.0
60	2	0.0
70	9	0.0
80	0	0.0
90	1	0.0
100	3	0.0
105	125	0.3
Total individuals	39,796	100.0

Table E.14
Weeks of Concurrent Job-Holding for 35,979 Individuals (1988-90 Sample)

Weeks of Concurrent Job Holding	Frequency	Percent
0	29087	80.8
1	2935	8.2
2	562	1.6
3	207	0.6
4	131	0.4
5	159	0.4
6	120	0.3
7	112	0.3
8	94	0.3
9	102	0.3
10	133	0.4
20	52	0.1
30	32	0.1
40	26	0.1
50	11	0.0
60	9	0.0
70	6	0.0
80	7	0.0
90	7	0.0
100	3	0.0
110	3	0.0
120	3	0.0
130	2	0.0
140	5	0.0
150	1	0.0
158	82	0.2
Total Individuals	35,979	100.0



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