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Displacement of Older Workers: Re-employment, Hastened Retirement, Disability, or Other Destinations?

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"Displacement of older workers: re-employment, hastened retirement, disability, or other destinations?"[1]

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Abstract:

The central objective of this study is to investigate the income sources and patterns of prime-age and older workers who suffer a layoff from steady employment. We focus on a set of cohorts who are deemed to have a high degree of attachment to the labour force preceding the event of an involuntary separation. Using a unique data base that merges administrative data marking the job separation, we track all of their sources of income over an interval that spans four years prior to the separation to five years after the separation. Our empirical analysis includes an investigation of the frequency that a laid-off individual will receive income ex post from a given source, a typology analysis of the various configurations of income received, and an econometric analysis of the incidence of certain post-layoff income configurations.

We find that in any given year, approximately 2 % of our sample of workers with stable employment histories experience a 'visible' layoff. During the first three post-layoff years, 77 % of the group of laid-off workers (aged 45-64 years old) have non-trivial labour market earnings, and 56-65 % of them depend on the labour market for their primary source of income. This group of workers does experience substantial income losses. During the post-layoff period, approximately 14-19 % of them file a subsequent claim for EI benefits, but few of them depend on the EI regime as the primary source of their income. Very few of these individuals draw on other types of social insurance benefits, such as CPP disability, social assistance, and workers' compensation. The most common destination state for prime-age and older workers who have not yet reached retirement age are early retirement and continued labour market activity, albeit at much lower earnings. It is rare for them to draw on social insurance benefits, and we find little evidence that disability benefits and workers compensation are functioning as disguised unemployment benefits.

Executive Summary

Due to the demographic phenomenon of population aging in Canada, a greater share of displaced workers, will be over 50 years old. The turnover and displacement of older workers is likely to be distinct from patterns exhibited by younger workers. Such workers are less likely to flow in response to variety of shocks which affect the economy, and involuntary job turnover becomes more costly with age. While older displaced workers typically face much more limited job opportunities than their younger counterparts, they also face a wider variety of labour force options than do younger workers, who are normally expected to search for a new job that is comparable to the one that was lost. In contrast, for the former group, there are several alternative destination states that involve some form of labour force withdrawal, including indemnified early retirement, permanent disability, or partial retirement. The issue of hastened retirement among older displaced workers is relevant to achieving greater labour market participation among older workers. Success on this front involves alleviating the adjustment costs that older workers face resulting from displacement – perhaps by improving employment opportunities so that the wage losses are minimized.

The topic of this paper is the post-separation labor market activity profiles of displaced prime-age and older workers. Including both genders in our analysis, we investigate both the incidence of displacement of this group as well as their profiles after the event of displacement. These profiles can involve a number of alternative destinations and sequences of states, including the simultaneous receipt of payments from any income support programs for which they might be eligible. Most of the studies within the sizeable literature on displaced workers, both Canadian and international, tend to deal with post-displacement outcomes occurring within a short-run time frame, such as the wage of the first newly found job and the length of joblessness immediately following the separation. To our knowledge, there is little research pertaining to any country regarding labour market outcomes - other than wage losses - over a long-term time horizon. We seek to fill this void by measuring and analyzing the entry of older laid-off workers into a number of alternative destination states, which can be categorized into several groups, namely i) the receipt of some form of social insurance, ii) early-retirement, iii) self-employment, and iv) re-employment (at potentially lower earnings).

One of the objectives of this paper is to investigate transitions into the receipt of social insurance benefits, such as subsequent EI claims, repeat use of EI, social assistance, and worker's compensation. The type of social insurance that has received the most attention in the US literature is long-term disability insurance. Some authors claim that this regime has evolved from its original function of insuring workers against earnings loss attributable to a disabling medical event to providing long-term income support for the unemployable – a phenomenon that is labelled 'non-employability insurance'. There is empirical evidence from the US that adverse labour market shocks causing layoffs and

reduced labour market opportunities (for lower-skilled workers) have encouraged a growing and unduly high fraction of displaced workers to withdraw from the labour force and seek disability benefits. In the spirit of those studies, we focus part of our attention on the incidence of receipt of the Canadian equivalent to the US disability insurance program, namely the Canadian Pension Plan Disability (CPPD) Regime and its Quebec equivalent, the QPPD.

Much of the empirical analysis that we generate in this paper is descriptive in nature. Our goal is not to test behavioural mechanisms, but rather to develop a typology of post-displacement labour market activity profiles and configurations for sources of income. The empirical approach consists of following cohorts of workers who were laid off in a given year. The outcome variable takes the form of the absolute or relative number of subjects who were laid off in a given year T that are observed in a given destination state in a later year. As this procedure generates a great amount of empirical detail, an important challenge is to distill patterns that appear to be prevalent over a five-year post-displacement interval. After allowing the data to shape our typology of post-displacement profiles, there are also particular patterns for which we search. We are interested in the case of early retirement, how it is financed (i.e. public or private pension benefits), and whether such workers ever return to the labour market. We also estimate econometric models of their relative likelihoods of occurrence that include correlates.

A secondary objective of this paper is to measure the actual risk of displacement for this segment of the labour force and to analyze how it is associated with a variety of covariates. These results will be compared to results that appear in the existing literature that are based on different data sets. As our findings are based on recent data, it is useful to examine the extent to which the incidence of displacement has changed over time. Although our data set does allow for the estimation of the magnitude of earnings losses that are suffered by laid-off workers, this task has been adequately addressed elsewhere by Morissette (2007), and thus we do not deal with it.

We will draw primarily on the Longitudinal Administrative Database (LAD), which consists of a lengthy panel of annual tax-based data. One important advantage of the LAD file is that it contains detailed and accurate information on the sources of income and the levels that are drawn from these sources, including income from social insurance programs and non-labour income such as self-employment income.

To summarize the results, the most common destination states for prime-age and older laid-off workers who have not yet reached retirement age are reliance on private pension benefits and continued labour market activity, albeit at much lower earnings. For the group between 45 and 59 years of age, the most common destination states are a return to the labour market and privately-financed early retirement in that order, and together those states account for

about 80 % of all cases. Among the older workers, reliance on some form of pension income (be it public and/or private) accounts for about 60 % of the cases. It is relatively rare for them (i.e. under 5 % of all cases) to draw heavily on social insurance benefits, and we find little evidence that disability benefits and workers compensation are functioning as disguised unemployment benefits.

I. Introduction

Due to the demographic phenomenon of population aging in Canada, a greater fraction of labour market flows will involve older workers. In a similar vein, a greater share of displaced workers, as well as a greater share of workers who change industry, firm, and/or occupation, will be over 50 years old. As mentioned in an issues discussion paper by Kuhn (2003), the turnover and displacement of older workers is likely to be distinct from patterns exhibited by younger workers. Such workers are likely to be less mobile and '…less likely to flow in response to variety of shocks which affect the economy. Also, it is well-known that involuntary job turnover becomes more costly with age...' (page 9) Some of the contributing factors appear to be the accumulation of firm-specific, industry-specific, or occupation-specific skills, the deterioration of alternative skills as the length of job tenure increases (for reasons that are not really understood), possible discrimination on the part of would-be employers, and the shorter time-horizon that applies to the retraining or relocation decision. Older workers also tend to exhibit relatively low geographic mobility.

While older displaced workers typically face much more limited job opportunities than their younger counterparts, they also face a wider variety of labour force options than do younger workers, who are normally expected to search for a new job that is comparable to the one that was lost. In contrast, for the former group, there are several alternative destination states that involve some form of labour force withdrawal, including indemnified early retirement, permanent disability, or partial retirement. The issue of hastened retirement among older displaced workers is relevant to achieving greater labour market participation among older workers, a policy objective that the

OECD (in their 2003 and 2006 Employment Reports) believes is both possible and highly desirable. Success on this front involves alleviating the adjustment costs that older workers face resulting from displacement – perhaps by improving employment opportunities so that the wage losses are minimized.

The topic of this paper is the post-separation labor market activity profiles of displaced prime-age and older workers. Including both genders in our analysis, we investigate both the incidence of displacement of this group as well as their profiles after the event of displacement. These profiles can involve a number of alternative destinations and sequences of states, including the simultaneous receipt of payments from any income support programs for which they might be eligible. The existing literature does treat the event of layoffs and its determinants for this segment of the labour force. There is another strand of the literature that deals with post-displacement outcomes, which consist primarily of wage losses and the duration of jobless spells. Most of the studies within the sizeable literature on displaced workers, however, both Canadian and international, tend to deal with post-displacement outcomes occurring within a short-run time frame, such as the wage of the first newly found job and the length of joblessness immediately following the separation. There are only a few studies that track the post-displacement income profiles for extended time periods in efforts to measure the longer-term consequences of that event. To our knowledge, there is little research pertaining to any country regarding labour market outcomes - other than wage losses - over a long-term time horizon. We seek to fill this void by measuring and analyzing the entry of older laid-off workers into a number of alternative destination states, which can be categorized into several groups, namely i) the receipt of some form of social insurance, ii)

early-retirement, iii) self-employment, and iv) re-employment (at potentially lower earnings).

One of the objectives of this paper is to investigate transitions into the receipt of social insurance benefits, such as subsequent UI claims (labeled Employment Insurance, or EI, in Canada), repeat use of EI, social assistance, and worker's compensation. The type of social insurance that has received the most attention in the US literature is long-term disability insurance. Autor and Duggan (2006) claim that this regime has evolved from its original function of insuring workers against earnings loss attributable to a disabling medical event to providing long-term income support for the unemployable – a phenomenon that they label 'non-employability insurance'. Those authors demonstrate that the responsiveness of disability insurance applications to adverse labour market shocks rose sharply in the 1980s and 1990s, especially for lower-skilled and/or less educated workers. Based on their own research and related studies, such as Black *et al.* (2002), they conclude that adverse labour market shocks causing layoffs and reduced labour market opportunities (for lower-skilled workers) have encouraged a growing and unduly high fraction of displaced workers to withdraw from the labour force and seek disability benefits.[2] This relevant economic and policy issue is treated in a focused study by the OECD (2003). It has also been examined for some time for the case of the Netherlands (Hassink et al (1997)), and more recently for the case of Norway (Rege et al. (2006)). In the spirit of those studies, we focus part of our attention on the incidence of

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[2] While the burgeoning US literature shows convincing evidence of disability insurance substituting for long-term non-employability benefits, little of it is based on transitions. The observed outcomes are typically not conditioned on a layoff.

receipt of the Canadian equivalent to the US disability insurance program, namely the

Canadian Pension Plan Disability (CPPD) Regime and its Quebec equivalent, the QPPD.

Much of the empirical analysis that we generate in this paper is descriptive in

nature. Our goal is not to test behavioural mechanisms, but rather to develop a typology

of post-displacement labour market activity profiles and configurations for sources of

income. The empirical approach consists of following cohorts of workers who were laid

off in a given year. The outcome variable takes the form of the absolute or relative

number of subjects who were laid off in a given year T that are observed in a given

destination state in a later year. As this procedure generates a great amount of empirical

detail, an important challenge is to distill patterns that appear to be prevalent over a five-

year post-displacement interval. After allowing the data to shape our typology of post-

displacement profiles, there are also particular patterns for which we search in addition to

the CPPD outcome that was mentioned above. We are interested in the case of early

retirement, how it is financed (i.e. public or private pension benefits), and whether such

workers ever return to the labour market. We also estimate econometric models of their

relative likelihoods of occurrence that include correlates.

A secondary objective of this paper is to measure the actual risk of displacement

for this segment of the labour force and to analyze how it is associated with a variety of

covariates. These results will be compared to results that appear in the existing literature

that are based on different data sets. As our findings are based on recent data, it is useful

to examine the extent to which the incidence of displacement has changed over time.

Although our data set does allow for the estimation of the magnitude of earnings losses

that are suffered by laid-off workers, this task has been adequately addressed elsewhere by Morissette (2007), and thus we do not deal with it.

We will draw primarily on the Longitudinal Administrative Database (LAD), which consists of a lengthy panel of annual tax-based data. The seminal article in the literature on displaced workers that uses data of this nature covering workers in the US and is authored by Jacobsen *et al.* (1993), who outline the advantages and disadvantages.[3] One important advantage of the LAD file is that it contains detailed and accurate information on the sources of income and the levels that are drawn from these sources, including income from social insurance programs and non-labour income such as self-employment income. Unlike the retrospective surveys, such as the *Survey of Displaced Workers*, there is no recall bias. Another advantage of the LAD file is that it is very encompassing and is quite representative of the Canadian labour force and of the working-age population. Unlike data bases that are drawn from certain states and provinces, attrition via migration is not much of a problem with the LAD file due to its national scope. A third advantage of the LAD file is that its lengthy interval allows one to observe and follow people over long time periods, facilitating an accurate assessment of pre-displacement earnings as well as the post-displacement labour market activity profile over a long time-horizon. The fourth advantage of the LAD file is its tremendous size.

There are also a number of shortcomings of the LAD file. First, unlike the case of the *Canadian Survey of Displaced Workers* (which is conditioned on experiencing a displacement) and specially designed surveys of labour market activity, such as the *Survey of Labour and Income Dynamics* (SLID), one cannot observe the event of a job

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[3] Note that there is no counterpart data set in the USA that closely resembles the LAD file.

separation. We explain below how we proxy for that information. Second, as is common

with administrative data sets, there is no information pertaining to several variables that

are important for labour market outcomes, such as education and skill level, tenure at the

lost job, the number of jobs held, the length of time worked, or wage rates. A third

disadvantage of the LAD file is that the frequency of the data is annual, and all incomes

are reported on the basis of a calendar year. Given that the separation can occur at any

point in time, this features raises timing issues as far as the reporting of income and the

point of displacement is concerned.

II. Survey of the Literature

The authoritative study on worker displacement in Canada is by Abe *et al.* (2002),

although earlier studies exist, such as Gray and Grenier (1993) and Kuhn and Sweetman

(1998,1999), which are based partially on the now-dated Canadian *Survey of Displaced*

Workers that was generated in 1986. Abe *et al.* (2002) is based on a few waves of the

Canadian Out-of-Employment Panel (COEP) survey from the mid 1990s. While the

COEP file is based on a representative sample of job separators, it does not reflect the

entire labour force. It is thus not suitable for estimating the incidence of displacement,

and there is no control group of non-displaced workers for the purposes of comparing

labour market profiles. The COEP survey questions are posed in two post-displacement

interviews occurring 8-9 months and 14-15 months after the time of displacement. In the

COEP file there is detailed data on the separation itself (including whether or not it was

expected to be permanent and the reason for separation), worker and firm characteristics,

and labour market activity after the displacement, albeit over a relatively short time interval.

These authors estimate re-employment hazards of jobless workers as well as wage losses (or gains) for those who are re-employed. The median duration for joblessness is 5-6 months for displaced men and 7-9 months for displaced women. Approximately 52 % of the displaced men were re-employed after 6 months, while only 42 % of women had found employment after 6 months. The effect of age on the re-employment hazard probability was found to be U-shaped, and they discerned lower re-employment rates for high-tenure workers. For estimating wage losses, the treatment group is displaced workers, while their control group is all workers who experienced a job separation. Neither the pre-displacement wage nor the post-displacement wage is observed very far from the point of displacement, and therefore these wage losses are not measured over a long-term time frame. They find that on average displaced workers under age 45 do not experience major wage losses, and some displaced workers actually gain. In the multi-variate framework, age does have the expected positive effect on wage losses, as does the variable of union status. The estimated coefficient on education is not significant; perhaps this effect is netted out of the equation through the variables of the prior wage and the new wage. They find that wage losses do increase with tenure on the former job. They uncover evidence of 'post-displacement job shopping', by which they mean workers searching for alternative jobs while employed after displacement. They also determine that there are a lot of layoffs that are perceived to be temporary, and often these perceived probabilities of recall are erroneous.

Morissette *et al.* (2007) is the most recent study dealing with displaced workers in Canada. Those authors do not treat the jobless durations, but rather focus on the earnings losses of displaced workers. The data source is the longitudinal worker file (labeled 'LWF') merged by Statistics Canada from three sources: the administrative record of Employment (ROE) file (containing information on the job separation), the T4 and T1 tax files (containing information on earnings), and the Longitudinal Employment Analysis Program (LEAP) file (containing information on the firm). This is one of the few studies whose data allow for the identification of laid-off workers and for a comparison to a control group of workers who have not been laid off, which is also feasible using the LAD file. Within their sample of workers who were displaced through mass layoffs, these authors distinguish between those workers who were laid off as a result of a plant closure and those whose layoff was occasioned by a major cutback. They also distinguish between the cases of layoff victims with long tenure with the former firm and those with tenure of any length. Although their analysis of wage losses of displaced workers does not include many control variables, they do include individual fixed effects for wage levels and wage growth patterns. This specification thus allows for different structures for the patterns of wage losses for the intervention and the control groups. Over an interval of 1988-1997, ten cohorts of workers are followed over a window that starts three years before the point of displacement and ends five years after it.

Morissette *et al.* (2007) find that high seniority workers – defined as those with more than five years at the firm - who are displaced from either mass layoffs or total plant closures suffer earnings losses that are substantial – between 18 and 25 % of their pre-displacement earnings - and persistent, and are thus likely to experience a permanent

drop in income. For their female counterparts, the corresponding estimates vary between 24 % and 35 %. Earnings also tend to taper off a bit before displacement. These earnings losses are broken down according to two age groups - 35 to 49 years and 25 to 34 years – but no workers over 49 years of age at the time of layoff are included in their analysis. Among male high-seniority workers, prime-aged workers lose less than their youthful workers, but this pattern is not found among women.

The methodology adopted by those authors was developed by Jacobson *et al.* (1993). That US study was influential in part because much of the literature on displaced workers that existed at the time did not measure wage losses appropriately. That was one of the first studies that investigated wage outcomes of displaced workers over a time horizon spanning periods long before and long after the point of displacement. Perhaps more importantly, they included in their analysis a comparison group of workers who were not displaced, which essentially amounts to a difference-in-difference approach to estimating wage losses that better accounts for the counterfactual earnings of displaced workers. Their outcome variable is wage losses for high-tenure workers, which are related to indicators for industry, firm size, and local labour market conditions. Their principal findings are that displaced workers actually experience relative wage losses before the final separation occurs, and afterwards make a partial recovery. While the focus of our paper is not on wage losses, our data set has some similarities with their data base, which consists of administrative data from the state of Pennsylvania from 1974-1986. Both their file and the one used in this study contain earnings data over a long interval, but they both share deficiencies that are somewhat inherent in administrative

data, i.e. missing information that often is available in survey data. In particular, for neither data set can one observe the event of an involuntary layoff.

There are a few other studies in the Canadian literature on displaced workers that might have some bearing on our study. Kuhn and Sweetman (1998) show that the loss of union status plays a significantly positive role in determining wage losses of displaced workers, even after controlling for the factors of age and tenure at the former job. Their subsequent paper (Kuhn and Sweetman (1999)) is not focused directly on the earnings losses of displaced workers, but rather on discrepancies in these patterns between unionized and non-unionized displaced workers. While it is well-known that unionized workers suffer greater wage losses than their non-union counterparts, ceteris paribus, these authors find that for workers displaced in both the USA and Canada, the level of post-displacement wages declines with the tenure on the lost job for unionized workers, but not for non-unionized workers. Previous research had suggested that displaced workers might benefit from longer pre-displacement tenure in the form of higher post-displacement wage levels than what would otherwise be the case, not withstanding the occurrence of wage losses. They interpret this result as evidence that rents that union workers received above and beyond their alternative wages increase with their tenure on the pre-displacement job. The data set that we employ in this study does contain information on union status, and we incorporate this into our empirical analysis.

Our tracking the post-displacement labour market activity profiles of workers is obviously conditional on the event of a separation. In this paper we employ two proxies for flagging displacement, and from that information we calculate the incidence of layoff for our estimating sample. These results will be compared to the existing Canadian

evidence on job separations. A number of studies, most notably Picot *et al*. (1998) and

Morissette (2004), deal with the layoff rates in Canada in recent decades. These studies

are based on the Longitudinal Worker File (LWF) that was mentioned above. This file is

representative of the entire labour force, so all workers who are at risk of being laid off

are observed, as well as those who are actually laid off. Because the observations are not

conditioned on a separation, and it contains information on the reason for job separation,

the incidence of layoff is well measured, albeit not perfectly.

Picot *et al*. (1998) provide an overview of permanent layoffs in Canada between

1978 and 1993 using both a descriptive and a multi-variate analysis. They are interested

in cyclical variations, potential time trends, and the association between layoffs and firm

attributes such as industry-level growth and firm size. They find that the probability that

a paid worker lost his/her job through a layoff during the recession of the 1990s was not

higher than recession in the 1980s, with the exception of older workers. The permanent

layoff rate was lower in the early 1990s than in the early 1980s, after the factors of

gender, age, province, firm size, and industry are controlled for. They conclude that

permanent layoffs are not that sensitive to the business cycle; the permanent layoff rate

remains fairly high during recovery periods. Permanent layoffs tend to be associated

with idiosyncratic events occurring at the level of individual companies. Even within an

industry, the most important correlates of permanent layoffs are the quit rate and the

degree of employment volatility at the level of the company as opposed to the aggregate

demand conditions for this industry. Most permanent layoffs emanate from small and

medium-size firms. Fluctuations in the aggregate permanent layoff rate can be attributed

primarily to composition effects among firms within an industry and within the entire labour force.

The study by Picot *et al.* (1998) is updated by Morissette (2004), who examines the evolution of permanent layoffs over the 1983-1999 period for various demographic groups based on the same LWF data base. The principal finding is that there is little evidence that permanent layoff rates rose substantially between the 1980s and the 1990s. He compares permanent layoff rates for two years that represent relative similar points in the business cycle, 1989 and 1999. The permanent layoff rate in 1999 was at least half a percentage point higher than in 1989 in the cases of men aged 55-64 and women aged 35-44. These changes reflect relative increases of 10 % and 16 %, respectively. For all other age-gender groups, there was no sizeable increase in layoff rates between these two years. In large firms in the private sector, permanent layoff rates rose from 1989 to 1999, but were stable for small firms having fewer than 20 employees. Temporary layoff rates did rise by at least half of a percentage point for men older than 35 years, as well as for women aged between 35 and 44 years and women aged 55 and 64 years. He suggests that the chances of displaced workers of finding a new job in the late 1990s have fallen markedly compared to earlier periods. This conjecture is based on a measured decline in hiring rates rather than any tracking of displaced workers following the point of layoff.

The empirical approach and methodology that we employ in this study is borrowed from Finnie and Irvine (2006). That paper is based on the event of exhaustion of UI/EI benefits as opposed to a layoff. In both papers the objective is to examine income sources in subsequent periods. Those authors merge the LAD file with EI/UI administrative data in order to identify whether an EI/UI spell terminated with an

exhaustion of benefits. They are particularly interested in the interface between social

assistance and EI/UI, and the extent to which the lowered generosity of UI/EI benefits

over the 1990s engendered a higher incidence of social assistance. The outcome variable

is receipt of a given source on income in years subsequent to the focal point event,

regardless of transition path into these states. For instance, what proportion of subjects

who exhausted their EI/UI benefits during a given year had a given configuration of

income in a later year?[4] In this paper we apply this approach to an analog. Our *ex post*

time frame is shorter, however, as we follow the subjects for a maximum of five years

versus ten years in Finnie and Irvine (2006).

III. Data Issues and Methodology

III.1 Sample Selection

The population that we seek to analyze consists of experienced workers having a

relatively high degree of labour market attachment, particularly prime-age and older

workers.[5] This group has an employment pattern that is stable and uninterrupted over a

relatively long time period. We label such a pattern - prior to the event of a separation -

as those with a 'clean' employment record. As the LAD file represents an extremely

broad segment of the labour force, there are many subjects whom we want to omit from

the working sample, particularly those with a low degree of labour market attachment.

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[4] Based on a comparison of three cohorts of EI claimants who exhausted their benefits (in 1993,1996, and 2000), they find that these individuals often developed a dependence on EI/UI benefits, despite the fact that they had deleted the ex ante frequent EI/UI users from the data set. In contrast to that common destination state – at least among those who received some form of social insurance ex post, it was not common for exhaustees to transition from EI/UI receipt to social assistance.

[5] For the sake of comparison, Morissette et al. (2007) base much of their analysis on workers having 5 years or more experience with their present employer.

We also want to exclude workers who work in fragmented, seasonal, periodic, and/or part-year jobs, who tend to be frequent users of the UI/EI regime.

The first round of omissions is based on criteria that are commonly applied in the literature on labour market dynamics. As we are not interested in the labour market outcomes of younger workers, we only include person-year observations for which the subject is between the ages of 41 and 64 years for all of the years in the sampling window. We omit all observations for which the subject is a full-time student, which can be readily identified.[6] Because the focus of this project is displaced workers, we omit those subjects who appear to be primarily self-employed by deleting all those observations that involve a non-trivial amount of self-employment income, defined as that exceeding $1,000 expressed in constant 2005 dollars. The observations for non-filers are also deleted.

In order to identify workers with a 'clean' employment record, we have to observe their activity over an extended period of time. To this end, we construct four-year windows of LAD data in order to examine their employment patterns. Although the first year of data availability for the LAD file is 1982, 1992 is the first year for which the LAD file became very representative of the labour force. Before then, for fiscal reasons, low-income individuals often did not have a strong incentive to file a tax return, and thus were not necessarily sampled during every year. With the implementation of the GST tax credit in 1991, however, almost all working-age adults have an incentive to file a tax return, and studies have indicated that the representativeness of the LAD file improved.

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[6] Given the age-related criteria, this case should not cause many observations to be deleted.

Given this seam in the LAD file, we commence the sample selection process in 1992.[7]

We subsequently follow the cohort of all subjects that are observed in the LAD file in 1992 for four consecutive years up to including 1995. Once four years of data have been observed for an individual, that vector representing the first cohort is retained. We repeat this procedure for 1993, for which we will grab some new entrants in addition to all of those subjects from the 1992 cohort that continue on into 1993. This window of observation closes in 1996, and we form another cohort of subjects. These two cohorts share most of their subjects. This procedure is then repeated for each year from 1992 until 1998, which yields a total of 7 cohorts. New entrants to the LAD file in any year can be followed until 2005, which is the last year for which we observe data for any subject. While we continue to follow subjects over the years 1998-2005, no new entrants are added to the working sample after 1998. The last cohort of individuals for our working sample runs from 1998 to 2001 (for the establishment of their employment record). While we could form later cohorts, it is not possible to observe the post-displacement outcomes for adequately long periods in order to justify inclusions.

At this stage of the sample selection process, the working sample consists of four-year vectors of observations for most subjects appearing in the LAD file. For any subject having four or more consecutive years of observations within our interval of 1992-1998, there will be potentially many vectors, some of which will overlap. He/she will be sampled multiple times, but each case involves a different window of observation. It is also possible for an individual to have several spells of employment activity separated by

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[7] There is another reason why we do not deal with data before 1992. The details for that choice are given in tye appendix.

an episode of labour force withdrawal. In such a case, the subject will be sampled more than once, and the windows drawn from the two periods will be disjoint.

The second round of omissions is applied to each four-year vector of observations that we have for a subject. The objective is to select those subjects with 'clean' employment records, who by construction have a stable employment history over the window of observation. To this end we scan the 4 consecutive annual observations that we have for him/her for certain outcomes that lead to deletion. An annual observation is deleted if the earnings fall below a level of $15,000 (2005 dollars), which was chosen because it represents a quasi lower bound on labour income that would be earned by a full-time, full-year worker.[8] We also omit any annual observation if income from any of the following sources is reported: social assistance benefits, employment insurance (EI) benefits, Canada Pension Plan (CPP) benefits (both pension and disability income), or workers' compensation benefits. These steps should cause repeat users of EI to be dropped from the estimating sample.

After the cohorts of individuals with 'clean' four-year employment records have been formed, the next step is to examine whether or not the subject experienced a layoff in the following year. Those cohorts comprise the risk set for that event. The unit of observation thus becomes an individual having four consecutive years of uninterrupted employment, with the observation for the subsequent year T appended. Conditional on the occurrence of a layoff, we then follow the individual and observe their profile over the subsequent five-year interval. It is over that *ex post* window of observation that the post-displacement outcomes are observed and the analysis of their income sources is

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[8] Because the LAD file is based on tax declarations, it contains no information on the length of time that was worked or the duration of employment spells.

carried out. The sample is now restricted to individuals between the ages of 45 to 64.

For the first cohort of individuals, who were observed to have experienced a layoff in

1996, the interval of observation for post-layoff outcomes is 1997-2001. We label the

first year immediately *following* the 'clean' spell of employment T, which becomes the

reference year for recording the event of displacement. The structure for the data set is

summarized in text Table 1.

Text Table 1 – Structure of the cohorts of workers with uninterrupted employment records

Cohort number	Window of observation for 'clean' four-year employment record	Year of potential layoff	Years of post-layoff observations – five-year intervals
1	1992-1995	1996	1997-2001
2	1993-1996	1997	1998-2002
3	1994-1997	1998	1999-2003
4	1995-1998	1999	2000-2004
5	1996-1999	2000	2001-2005
6	1997-2000	2001	2002-2005
7	1998-2001	2002	2003-2005

More details on the construction of the sample are provided in appendix Table 1.

The columns of this table correspond to each calendar year, while each show indicates

the number of remaining observations after each cut is made. For each year, we

commence with over 4 million person-year data points in the full LAD file. We then

retain the approximately 61 % who filed a return. Next we delete all observations for

which the age of the subject falls outside of the 45 to 64 year range.   A few observations

are deleted because either the subject died or left the ten Canadian provinces. The

exclusion of the self-employed observations results in the dropping of 3 to 4 % of the

original sample. The earnings restriction that we apply in order to form the 'clean

employment' record nearly cuts the remaining sample in half.   Approximately one-third

of these workers that meet the earnings criterion are dropped because there was some receipt of social insurance income, and thus the employment record was no ‚longer clean' a few additional observations are dropped because the subject was a student or it turned out that he/she received special EI benefits.   The estimating samples are then selected as a 10 % draw, leaving samples of between 31,000 and 43,000 observations for each year.

III.2 Identification of a Separation

There are two flags that we employ in order to identify the event of displacement, and the post-displacement analysis is carried out separately for each one. Both of them involve a merger with another data set. Our sample selected from the LAD file is linked to a data set produced and maintained by Human Resources and Social Development Canada called the *Status Vector and Record of Employment* file (STVC/ROE), which is utilized to administer the UI/EI program. The last year of data availability for the STVC/ROE file is 2002.   Based on either of these approaches, once we observe the event of layoff, we then subsequently follow the subject for another 5 years, or for as long as the subject meets the sampling criteria pertaining to age, student enrollment status, and non-tax-filer status. If a layoff is not observed during year T according to either flag, the observation is still retained for the purposes of calculating an incidence rate for layoff, but there is no further following of the subject in that instance. If a layoff is observed, we then turn our analysis to all labour market outcomes and income sources that occur in the 5 subsequent years, and the unit of observation becomes the person-year.

Our first flag for the event of a layoff is the observation of the act of collecting income from the Employment Insurance (EI) system, as reported in the LAD file.[9] It is necessary to distinguish between the various types of UI/EI benefits that might be reported in the LAD file. If an individual declares UI/EI benefits on his/her tax return, the income could reflect 'regular' benefits stemming from an unemployment spell experienced after a layoff, or it could reflect 'special' benefits, such as maternity, parental, and sickness benefits that are unrelated to a layoff. In order to verify that the EI income stems from a layoff, we use the merger of the LAD file and the STVC/ROE. The latter component contains all of the information regarding the EI claim, provided that one was filed. An ROE form is a necessary but not sufficient condition for a claim to be filed and for a STVC record to be generated. There is a line in the STVC record that identifies the 'type' of benefit, and thus makes the distinction between 'regular' and 'special' benefits. We identify the subject as displaced if he/she declares EI/UI income during that year, and if cross-verification with the STVC/ROE file indicates that these were 'regular' EI/UI benefits. [10] [11]

We note that the procedure for identifying the event of displacement using the EI receipt flag will capture only a subset – and perhaps even a minority - of all displaced workers. For instance, there are some displaced workers who either suffer no

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[9] This approach for flagging an unemployment spell is similar to the work of Riddell and Song (2007). Based on the Canadian Census data, they define an individual as having experienced unemployment in a previous year if he/she did not work for the full current year and received EI benefits in the previous year.

[10] If the EI benefit period spans two contiguous calendar years, then some EI income will be declared for both years. In this instance, the separation must have occurred in the prior year. This ambiguity does not affect our measurement of a layoff, however, because during the earlier year of this pattern, the subject would not have fulfilled the requirement of a 'clean employment' record. Our sample selection procedure thus ensures that the separation occurs during the same year that we flag the record due to the receipt of EI income. We could certainly observe EI income during the subsequent year.

[11] It is possible for one of these separators to obtain a 'clean record' in subsequent years. He/she might transit to employment after that first EI spell. Once such an individual regains the uninterrupted earnings profile, he/she will be at risk again for a separation. We would thus sample the same subject twice for that event.

unemployment at all, or experience only brief spells of it. They therefore will not file an EI claim, and the layoff will not be observed. Note that the problem of missing very short spells of joblessness also exists in the articles in the literature on displaced workers that are based on retrospective surveys such as both the US *Displaced Worker Survey* and the Canadian *Survey of Displaced Workers.* In order for an individual to be identified as displaced in our sample, the jobless spell following displacement had to last at least three weeks (due to the universal application of a two-week waiting period for EI benefits).[12]

There is also the case of displaced workers who do experience a non-trivial spell of unemployment but who do not qualify for EI benefits. In that case the layoff will not be observed. Most of the displaced workers literature is, however, oriented around workers with a high degree of attachment to the labour force, and most such workers would qualify for EI benefits. This is particularly true for our sample in light of the selection criteria that we apply.[13] Even in the event that a worker is displaced and fails to qualify for EI benefits (so that the separation is not observed), if he/she establishes a stable employment pattern over an extended period, it is possible that we would sample him/her if a later spell of unemployment were to occur. In the case of seasonal workers, who typically do file claims for UI/EI benefits, most of them are excluded from the working sample.

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[12] Most of the displaced workers who meet that criterion and who qualify for EI benefits do have a strong incentive to file a claim. For instance, consider the case of a worker electing to accept a 'buyout' or an early retirement package from his/her employer that qualifies for EI benefits. Both parties in this arrangement have an incentive for a third-party – namely the Federal government – to contribute. This is reportedly a widespread practice in the Canadian automotive industry.

[13] Any laid-off worker in Canada qualifies for UI/EI benefits if they have 20 or more weeks of employment activity over the 52-week period preceding the layoff. In high-unemployment areas, one qualifies with even shorter employment spells. Virtually all individuals that are selected into our risk set easily meet that criterion

Another pertinent case is an individual who is temporarily laid off from his/her position. Unless the jobless spell is quite short, this worker has a strong incentive to file a claim for EI/UI benefits, and given our sampling criteria, is likely to qualify. The sampling criteria should ensure that he/she is not a seasonal worker and/or a frequent user of EI/UI benefits, but rather an individual with a stable employment history for whom a layoff is an infrequent event. In the event that he/she is recalled to the former employer, we will observe employment income in subsequent time periods. As our data set contains no information on the employer, we cannot distinguish between the case of being recalled to the former employer and being hired by a new employer. Temporary layoffs are therefore treated the same as permanent layoffs.

The second flag that we employ for this purpose involves the record of employment (ROE) file, which is the data set that is used by Abe *et al.* (2002) to select their sample of displaced workers. Whenever a separation between a worker and a firm occurs, irrespective of whether it was initiated by the firm or the worker, the employer is legally obligated to submit this form, whose primary purpose is to determine eligibility for EI benefits. There is an indicator for whether the employment spell ended as a result of a dismissal, a labour dispute, a voluntary quit, a maternity/adoption/parental leave, or selected other reasons. There is a code for the category "shortage of work – layoff", which includes both permanent and temporary layoffs, and it is not possible to distinguish between them. We cross-check our sample of workers with 'clean employment' records to the full ROE file via the social insurance number. If a record from the ROE file exists for the individual during year T, that individual is deemed to have experienced a layoff if the code noted above applies. This step should generate a sample of workers that is

representative of the population of all laid-off workers. Some of them, however, will subsequently experience very short unemployment spells, and there is likely to be some degree of misreporting the reason for separation. In summary, using the latter approach for identifying displacement, we obtain a broad group of separators workers who are officially categorized for administrative purposes as 'shortage of work – layoff'. The first approach is narrower; we only observe displacement conditional on experiencing at least a brief spell of unemployment, and then conditional on receiving non-null UI/EI benefits. While that sample fails to sample certain displaced workers, it is perhaps fairly representative of the population that we wish to target: prime age and older workers having stable employment histories that are permanently laid off from their jobs. This is definitely a visible group that is susceptible to eliciting political pressure and attracting media attention.

The relative frequencies for the event of layoff based on the two definitions is summarized in Text Table 2, for which the unit of analysis is the person-year. The proportion of the risk set that was laid-off according to the STVC definition averages 1.92 %, while the corresponding proportion for the ROE definition is slightly higher at 2.33 %. Just over 1 % of the sample collected regular EI benefits but have no record of being laid off. Among those who did collect EI benefits, this constitutes fewer than half of them (0.88 / 1.92 = 46 %).[14] On the other hand, almost 1.5 % of the sample was laid-off according to the ROE record but did not go on to collect EI benefits. Only about 38 % (0.88 / 2.33) of those who were laid off according to the ROE definition went on to

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[14] According to EI program eligibility conditions, one must have an ROE form to establish eligibility. According to consultations with program administrators, it is not uncommon for workers whose separation was classified as due to a quit, an illness or injury, leave of absence, or 'other reason' ultimately to be deemed eligible to receive regular EI benefits. We are thus capturing certain individuals who are jobless, but not explicitly laid off.

collect EI benefits. Since most of them should qualify for them based on our sample selection criteria, many of these individuals probably returned to working fairly quickly.

Text Table 2 – Frequencies for Layoffs According to the Two Criteria

		ROE criterion		
		Layoff	No layoff	Marginal density
STVC layoff	Layoff	0.88	1.04	1.92
	No layoff	1.45	96.6	98.05
	Marginal density	2.33	97.6	100.00

We note that like much of the existing literature on displaced workers, and in particular their post-separation labour market profiles, we take layoffs to be an exogenous event. We do not take account of any selection issues that would reflect unobservable attributes of workers, with presumably the less able ones being selected by firms for layoff.   On the other hand, in the interests of reducing the social and economic costs of mass layoffs, on some occasions workers selected for layoff are those that have the most generous early retirement benefits or severance pay. They could also be those with the most attractive outside opportunities in the form of alternative employment in the labor market. Changes over time in unobserved attributes of our population of prime-age and older laid-off workers would reflect year-specific effects, which would also reflect global labour market conditions. This could conceivably become an issue if the composition of layoff victims changes over the course of the interval. During recessions when there are strong negative shocks to labour demand, it is more likely that relatively productive workers will be selected for layoffs than would otherwise be the case. In light of the lack

of variables that reflect a wide array of possible influences, our conclusions are limited primarily to a descriptive and statistical analysis of post-layoff income profiles as opposed to inferences regarding economic behaviour.

III.3 Empirical Analysis

III.3.i Incidence of separation

The incidence of layoff is calculated as the ratio of the number of individuals for whom we observe a layoff (as determined by either of our two flags) to the number of individuals at risk of a layoff during year T. This variable can be linked empirically with a number of covariates, which are listed in text table 3. All of these characteristics are measured in the year of separation. One interesting question is to compare these rates across age groups. Also of interest is whether the incidence rate has been rising over time, and how it might relate to the business cycle. This exercise is in the spirit of earlier work by Picot *et al.* (1997) and Morissette *et al.* (2007) cited above. Two novel variables that we do include are the regional unemployment rate and the SMA size. There are some variables that play a role in the displaced worker literature that we do not posses, including tenure at the lost position, employment experience, education level, industry of the lost job, and plant size.

Text Table 3 – List of Covariates for the Incidence of Separation Variable

Variable	Categories
Calendar year	1992-2004
Age in years	45-49, 50-54,55-60,60-64
Gender	Binary indicator
Family structure	Single, married no children, married with children, lone parent
Union membership	Binary indicator

SMA size	greater than 500,000, 100,000-499,999, 30,000-99,999, 15,000-29,999, small urban area, rural area
English/French speaker	Binary indicator
Province	10 provinces
Regional unemployment rate	Continuous value for each of 51 regions

III.3.ii States of Labour Market Activity After Layoff

The second principle objective is to analyse the post-separation patterns and profiles of income sources in years after year T. We observe all of the income, and importantly, the numerous potential sources of it, that is declared during that 5-year period commencing in year T + 1, which we define as the year after the separation. We observe the flows of older displaced workers transiting from layoff to the numerous other income states that can be observed in the LAD file.

Our empirical analysis will not be based on the hazard approach for several reasons. First, many of the transitions that occur are frequent, which generate short durations in a given state and complex structures of sequential transitions. The empirical estimation of the underlying stochastic processes can become intractable. Indeed, the vast majority of applications of hazard models that are estimated from transition data are based only on initial transitions. Second, it is extremely common for individuals to receive income from multiple sources within a given calendar year. The annual frequency of the data implies that many of transitions would be missed or measured with error.

Our empirical approach involves an incidence analysis as well as a typology analysis of income profiles and configurations. The outcome variable is the probability

of being in a given income state in year T + j given that one was displaced in year T.

This approach is similar to the one adopted in Finnie and Irvine (2006), who select a sample of workers who have exhausted their EI benefits, and compile tabulations of the numerous destination states over a subsequent 10-year window. They attempt to account for most of the labour market profiles that their risk set exhibits.

The first stage of our empirical analysis is statistical, consisting of proportions of the cohort of laid-off workers that are observed to be exhibit a particular outcome regarding income from a certain source during a given year. This procedure generates a great deal of empirical detail, and many workers experiencing separations tend to exhibit complicated profiles. For any given post-separation year, there are potentially many distinct states resulting from combinations of income received from different sources. At a later stage, we estimate some multi-variate regression models of the probability of being in a certain state (receiving income from a certain source) in year T + j conditional on variables such as the ones listed in text table 3.

The first step is to organize the observations according to 7 cohorts that are identified according to year of separation, as displayed in text Table 1. For each year subsequent to the separation, we examine the sources for the income that they declared, provided that an observation for that year exists. With the exception of the latest two cohorts, we can follow all of them for five years after the point of layoff. Cohorts # 6 and # 7 can be followed for 4 and 3 years, respectively, after the point of layoff until 2005.

There are over a dozen potential sources of income for these subjects during any given year, and in many cases, subjects have several sources of income. If one were to

enumerate all of the possible combinations of income sources, the number of

permutations would be in the thousands. In setting out the various potential states

that an individual might enter, it is therefore neither feasible nor informative to

tabulate the number of cases of each combination of income sources. We therefore do

not attempt to account for all or even most of the potential labour market profiles

exhibited by laid-off older workers. As an alternative approach, we elaborate a

typology of states – more specifically configurations of income - that have labour

market significance and policy relevance.

The first dimension of the descriptive analysis deals with incidences or

frequencies. For the incidence analysis, the motivating question is the following:

What sources of income did the subject receive in any given post-layoff year? Did

he/she have access to EI benefits or have any earnings on the labour market? For

each possible source of income, a binary flag variable is generated. The outcome

variable is the frequency of the risk set that received income from this particular

source, which is subsequently divided by the size of the risk set in order to generate

proportions. Note than since many subjects receive income from several sources,

these categories are not mutually exclusive at all, and the proportions will not sum to

unity. We do attempt, however, to enumerate every source of income that is received

by any subject, so the coverage should be exhaustive. These potential sources are

listed in text table 4.

For each cohort, which is identified by the year of separation, the number of

cases for each of these destination states is compiled for each of the 5 subsequent

calendar years. All of the person-year observations are pooled together regardless of

the year of separation. At a later stage, we include the year of separation as a regressor in a multi-variate framework in order to investigate possible time trends in these profiles. We also stratify the sample according to two age groups – those between 46 and 59 years and those between 60 and 64 years - in order to better account for differences in retirement patterns.

Text Table 4 – Possible sources of income for laid-off workers

1) labour market earnings
2) self-employment income
3) employment insurance
4) social assistance
5) workers' compensation
6) CPP/QPP and/or OAS and/or GIS (public pension income)
7) private pension income
8) CPP – Disability regime
9) other type of income (property income, capital income)
Missing or censored observations
10) zero income
11) non-filer
12) attrition from sample due to age restrictions or FT student status

The second dimension of our descriptive analysis deals with types of income configurations. For the typology analysis, the central thrust is the following: what is the *principal* source of income? How is the subject getting by, if indeed he/she has managed to replace a substantial share of his/her former income? The analysis is restricted to those with total incomes over $5,000, but we address the cases of that excluded group presently. The principal source of income is defined as the source that accounts for 50 % or more of the subject's total income, provided that such a source

exists. The sources of income are listed in text table 4.   For each type of income, we calculate the proportion of the risk set that received it as their primary income source. For any subject-year observation for which there are either one or two sources of income, there must be a principal source. We are particularly interested in discovering how many subjects rely primarily on the labour market versus social insurance versus retirement income.

Those nine categories of income are mutually exclusive but not exhaustive, as there are doubtlessly many cases in which the income sources are diversified such that no single source accounts for more than 50 % of the subject's total income during that year. Out of all the residual observations that do not fit into one of those categories, we develop further types that are defined according to whether the following two combinations of sources account for 50 % or more of the total income: i) earnings plus self-employment income plus any combination of social insurance benefits (EI, SA, WC, CPPD), and ii) public pension plus private pension. Finally, there is a residual category.   The observations are assigned into these categories in the sequence that is listed, noting that the composition of the groups, and especially the catch-all, residual category, is sensitive to that order.

VI. Results

VI.i The Layoff Rate

The layoff rates expressed as a percentage of the risk set are presented for four samples: men and women who were laid off according to the two definitions. Graphs are presented in figure 1 for the STVC flag and figure 2 for the ROE flag. According to the former criterion, the rate for women is slightly higher than it is for men, but the opposite is true for the latter criterion. The calculated values for the two measures are not far apart, however. In figure 1 there appears to be a slight downward trend between 1996 – when 2-2.5 % of the risk set was laid off – and 2000, when between 1.4 to 1.8 % of them were laid off. According to both criteria, there was an uptick for both genders in 2001, which corresponds to a period of slower growth in real GDP. In any given year, the displacement rates for men are higher for the ROE definition, but the opposite is true for women.

These values can be compared to estimates of the permanent layoff rate presented in Morissette (2004). His values for the period of 1996 to 1999 for his male-only sample are 8.3, 8.1, 8.1, and 7.5 % respectively (referring to the proportion of jobs which end in a layoff), which are approximately 4 times higher than our estimates, but his results do exhibit the same time trend. This large discrepancy in the magnitude can be attributed to several factors. First, his sample only includes workers between the ages of 15 and 34, who experience slightly higher layoff rates than do older workers. Second, his figures are based on layoffs as reported in the ROE file. Other research has indicated that well over half of those workers who separate and have an ROE form filed on their behalf do not file an EI claim and collect benefits within a two-month window. In other empirical work based on the *Canadian Out of Employment Panel* (COEP), which is sampled from the ROE file, Gray and McDonald

(2006) found that almost 72 % of the sample comprised of job separators did not subsequently collect EI benefits.[15] Third, and most importantly, his sample of workers at risk for layoff is much more broadly-based than ours. While we consider only those whom we deem as having a high degree of attachment to the labour force, he includes any worker-job for which earnings exceed $ 621 in constant 1999 dollars. His sample includes many workers who are at the periphery of the labour force, exhibiting some form of 'non-standard' employment (including many seasonal workers) or low labour force attachment, and thus more susceptible to being laid off. On the other hand, there is the possibility that our measure captures some temporary layoffs, while his measure excludes them.[16] That factor might work to raise our estimated values, ceteris paribus, but we note that we have excluded most repeat users of EI, and therefore there should not be many workers on seasonal layoff that are included in our measure.

In appendix table 2 we also report the calculations - based on both measures of the layoff rate - that are cross-tabulated according to various worker-related attributes. No clear pattern emerges for family structure. The layoff rate for French speakers is slightly higher according to the STVC measure, but the opposite applies for the ROE measure. The incidence of layoff is higher among non-union workers than it is for union workers, with the exception of men (ROE criterion). As far as the area size of residence factor is concerned, the general pattern is for larger urban areas to exhibit

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[15] That very low filing rate is particularly high because the sample of separators includes voluntary quitters as well as seasonal workers and workers at the periphery of the labour force that we do not include in our risk set. That sample of separators thus represents a different population than our risk set of layoff victims does. Nevertheless, it is likely that a high proportion of all workers who are laid off according to the ROE file do not file a claim for EI benefits – perhaps over 50 %.

[16] Morissette (2004) can identify temporary layoffs because his firm-based earnings data allows for the observation of a worker returning to the term in a subsequent year. The LAD file that we employ, which is based on the individual's declarations of income, does not indicate the employer.

lower layoff rates than the sparsely populated areas. The highest layoff rates are estimated for workers over 55, while the lowest rates are found for the 45-54 year-old age group. According to the ROE measure, the provincial patterns are not remarkable. According to the STVC measure, however, with the exception of the province of BC, the highest layoff rates are found in the five east-most provinces – with only minor differences between them. The lowest rates are estimated in the Prairie provinces. These patterns (by age group and by province) are in accordance to the findings reported by Morissette (2004).

The determinants of incidence of layoff are also analyzed within a discrete choice, multi-variate framework. Note that for approximately 98 % of our person-year observations, the value of the dependent variable is zero. The exogenous variables include binary indicators for family status, age category, province, minority language status, area size of residence, union status, calendar year, and regional unemployment rate.[17]

The primary regression utilizes the logit specification. There are separate equations for each gender and for the two criteria for layoff. The estimates are presented in appendix table 3, while the average marginal effects associated with the covariates are presented in table 1.[18] The econometric evidence partially reinforces the uni-variate findings that were presented in appendix Table 2. With or without children, ceteris paribus married couples exhibit a lower incidence of layoff. With

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[17] The omitted categories for the primary regression equations are single, ages 60-64, Ontario, majority language status, population over 500,000, non-union, and 1996.
[18] For this calculation, all subjects are arranged according to their observed positions in the probability distribution for the fitted values. We then calculate the partial derivative of the average change in the fitted probability (given the observed values for X) with respect to that particular covariate.

regards to the age variable, the lowest incidence rates are discerned for prime-age males. The highest rates are estimated for Quebec (for the STVC measure), Ontario, and BC (for the STVC measure). The empirical pattern that we discern for the area size of residence variable is not quite monotonic, but in general, the thinner the labour market, the higher the layoff rate. Unionized workers are less likely to be laid off (with the exception of men, ROE criterion), ceteris paribus, and layoffs reached their highest rate in 2001 and 2002. There is an increasing relationship between the regional unemployment rate and the layoff rate.

IV.2 Types of Income Receipt after Layoff

The first set of reported results is for the analysis of the incidence of receipt of income from a given source (listed in text table 4 above). The essential question for this part of the analysis is which sources of income did the individual draw from in a given year? If the subject received more than a minimal amount of income from the given source (precisely, an amount exceeding $ 1,000 in constant 2005 dollars) during a given year, the indicator is set to unity for that person-year observation. We calculate proportions of all laid-off individuals who receive income of a certain type and cross-tabulate it with the years following displacement. These calculated values, which are presented in Tables 2 through 5, reflect samples separated by gender, age category (middle-aged versus older workers), and by definition of layoff (STVC versus ROE). This breakdown scheme produces eight sets of figures. In the discussion to follow, the 'ROE sample' refers to those who separated according to the ROE definition, while the 'STVC sample' refers to those who were laid off and filed

an EI claim. Tables 2a and 2b contain the values for the STVC groups between the ages of 45 and 59 (men and women, respectively). Tables 3a and 3b contain the values for the STVC groups between the ages of 60 and 64 (men and women, respectively). Tables 4a and 4b contain the values for the ROE groups between the ages of 45 and 59 (men and women, respectively). Tables 5a and 5b contain the values for the ROE groups between the ages of 60 and 64 (men and women, respectively). The observations are pooled together regardless of the year during which they were laid off.

For each of these tables, each row corresponds to an income source. The figures listed in the first four columns pertain to the pre-displacement years. By construction of the workers at risk for layoff (they have 'clean employment' records during that period), 100 % of the workers received earnings income over the four years preceding layoff, and none of them received social insurance income. Between 4 and 8 % of them received some private pension income during this pre-layoff period, which typically takes of the form of registered retirement savings plan distributions and other annuities. Between 13 to 17 % of the 45-59 year-old group and 21 to 28 % of the over 59 year-old group received capital and/or property income. In year T 84 to 91 % of STVC subjects had earnings in excess of $ 1,000, as did almost 100 % of the ROE subjects. The proportion of the older groups receiving a private pension income jumped from approximately 6 % during the year before layoff (T − 1) to between 26 % and 34 % in year T. Approximately 84 to 88 % of the STVC samples received EI

benefits in excess of $ 1,000 in year T, while the corresponding figures for the ROE

samples are 40 to 50 percentage points lower.[19]

Due to space constraints, the discussion of the results pertains mostly to the

STVC group (Tables 2a, 2b, 3a, 3b). The values listed in the right-most columns show

the post-layoff income sources. For the younger STVC sample (tables 2a and 2b),

during the first three years following layoff, over 68 % of the subjects have non-trivial

labour market earnings, and those figures taper off only slightly 4 and 5 years

afterwards.   The corresponding figures for the older samples (tables 3a and 3b) are

much lower, but they also decline with years since displacement. The rate of earning

self-employment income stabilizes in a range of 4 to 7 %, despite the fact that (by

sample construction) they did not draw income from this source prior to separation.

During the first year after layoff, 55 to 60 % of these subjects draw some EI benefits,

but much of this income probably stems from the initial claim. During years $T + 2$

through $T + 5$, any EI income that we do observe should stem from new claims

following a new bout of unemployment, and the values suggest that 10-20 % of the

individuals (lower for the over-60 women) are drawing income from this source. Note

that by sample construction, they had not drawn EI benefits at all during the four years

preceding layoff. The incidence of drawing on either social assistance or worker's

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[19] Given that receipt of EI income is our flag for identifying whether a layoff occurred in year T, one might wonder why this figure is not close to 100 %. There are two reasons. We do employ the event of receiving EI benefits as our indicator for layoff, but the timing of the layoff is determined by the commencement of the claim according to the STVC-ROE administrative data.   In many instances one might commence a claim late in the year and continue that claim in the subsequent year. It is possible that all of the EI benefits would be reported in the LAD file during the subsequent year, and that is the source that we use for income sources. Second, while we use receipt of any EI income as an identifier for having experienced a layoff, it is registered as an income source only if the amount surpasses $1,000 during the year in question.

compensation benefits remains quite low: 2-3 % for the former and 0.4-1.7 % for the

latter for the 45-59 year-old group, and virtually nil for the 60 and over samples.

A substantial minority of the STVC sample did turn to public and/or private

pension programs. None of them received public pension income *ex ante*, but in year

T + 1, 3-4 % of the 45-59 year-old group and 64 to 72 % of the older group did so.

This proportion trends strongly upwards with the passage of time since layoff. As this

pattern is confounded with the age composition of the sample, we investigate this

question further below in a multi-variate framework. The incidence of receiving

private pension income increases during the year of layoff to 26 % for the 45-59 year-

old group and to 34 % for the older sample, and subsequently trends upwards with the

elapsed time since layoff. There does not appear to be a major change in the incidence

of recourse to capital and property income before and after the layoff year.

It was mentioned above that in certain OECD countries, including the United

States, there is strong evidence that a number of workers with unattractive

employment opportunities are withdrawing from the labour force and turning to long-

term disability insurance benefits as 'long-term unemployability' insurance. Among

our sample of laid-off male workers, however, the incidence of receipt of Canada

Pension Plan Disability benefits is low. Among the group aged 45-59 years, up to 2 %

receive it five years after layoff, and up to 5 % of the over-60 men receive it, but

hardly any older women do. These incidence rates definitely rise with elapsed years

since layoff

The results for the ROE groups are presented in Tables 4 and 5. In comparison

to the STVC group, they tend to exhibit a higher incidence of receiving earnings yet

similar rates of self-employment. As one might expect from the definition of layoff, they exhibit a relatively low incidence of EI receipt in years T and T + 1, but roughly similar rates thereafter. They tend to exhibit lower rates of receipt of pubic pensions, but for the most part, the income incidence patterns are not markedly different between the STVC group and the ROE group.

The patterns by gender are not surprising. For both the ROE group and the STVC group, men have higher incidences of earnings and self-employment activity, as well as higher incidences of EI and CPPD receipt. On the other hand, women exhibit higher rates of incidence for public pension and investment income.

In addition to calculating the proportion of laid off workers who are receiving income from a given source, we also calculate the mean amount that they are receiving from a given source of income, conditional on it exceeding 1,000 constant 2005 dollars. These mean values are presented in Tables 6 through 9, whose structures are identical to the formats in Tables 2 through 5. The four columns on the left indicate the mean values *ex ante*. The labour market earnings are pretty stable and high (relative to the overall labour force) over the years T – 4 to T – 1, averaging between $ 50,000 and $60,000 for men and $33,000 to $36,000 for women. This partially reflects our sampling criteria of older workers who were all attached to the labour market. A minority of them benefited from private pension income before they were laid off (those averages are conditional on non-zero amounts).

The five columns on the right show the amounts that were received in each of the post-layoff years. For the 45-59 year-old group, real earnings dropped by about 30 % based on averages taken over the years T – 4 to T – 1 and taken over the years T + 1

to T + 5 (for both the STVC and the ROE group, conditional on positive values). For

the 60-64 year-old group, that figure jumps to approximately 47 %. Note that this

crude calculation does not take account of counterfactual earnings, i.e. the profile that

this group could have expected to earn in the absence of a layoff. It seems reasonable

to expect that this is a selected sample in that those laid-off workers with the highest

potential earnings would remain in the labour force, while those with the lesser

opportunities (or more attractive pension opportunities) would withdraw. The sub-

group that is self-employed receives on average between $10,000 and $ 20,000 per

year, which would be sufficient to cover about one-third of the average prior earnings

levels.

Turning to the various forms of social insurance, the 15-20 % of those that file

an EI claim in any given post-layoff year receive between $5,000 and $6,000 from that

source (less for women). The amounts involved in social assistance benefits are about

the same. Workers' compensation benefits are far more generous, but (as noted

above) are received by only about 1-2 % of the group of laid-off workers. The benefit

levels for the CPPD regime are very stable, as specified by program regulations.

Almost all of these individuals are receiving the maximum allocation for this benefit –

in the neighborhood of $10,000. Among those older workers who draw these public

pension benefits, the average annual amount ranges from $5,000 to $7,000.

It is clear that reliance on private pensions is a common phenomenon – almost

a third of them do so - despite the fact that they are all younger than the normal

retirement age. Not only does the incidence of drawing on this income source rise

markedly with elapsed time since layoff, but the amounts are in the neighborhood of

$19,000 for men (and $14,000 for women) in the 45-59 year-old group (STVC), and interestingly, are lower for 60 and over group. For the younger ROE sample, the corresponding figures are $24,000 and $16,000. The average amounts of capital and property income received appear to be unaffected by the event of layoff.

The next part of this study consists of a typology analysis of the post-layoff income patterns. The essential question that we address here is the following: what is the primary source of the income that he/she receives? All of the possible configurations are partitioned into 12 different types. The types are constructed to be mutually exclusive and exhaustive, and thus the shares (listed in the text table 5), sum to unity. A subject is assigned a type if he/she obtained more than 50 % of their income from that source.

Text Table 5: Types of Income Patterns

Configurations of income received, defined by 50 % of more of the total received from:
1. earnings
2. EI
3. public pension
4. private pension
5. workers' compensation (WC)
6. CPPD
7. social assistance
8. investment income
9. earnings and/or self-employment
10. earnings and/or self-employment plus any combination of EI, SA, WC, and/or CPPD (mostly EI)
11. any combination of pension income, public and/or private

12. residual category

The results of the typology analysis are presented in tables 10 through 13. They are presented according to the same scheme as tables 2 through 5: separated according to age group, gender, and definition of layoff (for a total of 8 sets of figures). Due to space constraints, the discussion concentrates on those laid off according to the STVC definition. The first four columns show the values during the pre-layoff period. By sample construction, virtually 100 % of them had labour market earnings as the primary source of their income. The five right-most columns list the shares for the five post-layoff years. The residual category (number 12) accounts for between 0 and 4 % of all observations, but in most years, and for most groups, fewer than 1 % of the observations did not fall into the 11 specific classifications. The bottom rows in these tables indicate the number of individuals that are not assigned a type for any of the three following reasons: they have income below the $5,000 threshold, they did not file a return that year, or they aged out of the working sample.[20]

During this period, approximately two-thirds of the 45-59 year olds and but less than one-third of the over-59 group gained most of their income from the labour market. As might be expected, these proportions diminish with the elapsed time since layoff. The values for women are slightly lower than those for their male counterparts.

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[20] The figures that are listed in these rows are relative to the number of subjects that remain in the sample. For instance, the bottom, right-hand figure in Table 10a means that the cumulative number of subjects that that have left the sample is 72.5 % of those who remain in year T + 5.

Turning to the social insurance programs, while a significant minority of workers does file at least one EI claim subsequent to the initial layoff, in any given year less than 2 % of the group becomes dependent on the EI regime as their primary source of income. Virtually none of the subjects who are o0lder than 59 do so. The same claim applies to the other forms of social insurance. Hardly any subject meets our criterion of dependence in regards to SA, WC, or CPPD. Category number 10 is constructed to capture individuals who establish eligibility for and draws benefits from one or more social insurance programs, and thus might also have some earnings. Our findings indicate that few subjects fit that bill after year T + 1. Similarly, only about 1 % of the group of laid-off workers become dependent on the CPPD regime, although the incidence is slightly higher among the older group. The flipside of that pattern is that the incidence of reliance on WC is somewhat higher among the 45-59 year olds compared to their older counterparts. These findings regarding the CPPD regime are not consistent with the literature drawn from the USA that was cited above, but the eligibility conditions for the Canadian program are extremely stringent. The workers in our risk set are far more likely to be dependent on either early retirement financed by the public pension schemes (up to 20 % of the older group of men and up to 28 % of the older women, or financed by private pension schemes (up to 39 % of the older group of men and up to 37 % of the older women). A further 1 to 10 % of the group derives more than half of their post-layoff income from a combination of public and private pension benefits (category no. 11). For obvious reasons the incidence of reliance on pension income rises with the elapsed years since layoff and with the age of the workers.

The results for the ROE groups are presented in Tables 12 and 13. The primary difference between these findings and the ones for their STVC counterparts are the following: the ROE groups have a higher incidence of supporting themselves through earnings, yet a lower incidence of reliance on either public pensions or private pensions. For both the ROE group and the STVC group, the gender patterns are as expected, for the most part. Women are less likely to rely on the labour market or on self-employment income, less likely to rely on private pension income, but more likely to depend on public pensions and investment income.

IV.3 Multivariate Analysis

We extend the scope of the typology analysis presented above by estimating an econometric model of the incidence of reliance on a given source of income, as defined by the subject receiving more than 50 % of his/her income from a particular source or configuration. A multi-variate equation can account for some of the compositional effects that are confounding the uni-variate analysis presented above, in particular the impact of age (which is critical in the determination of retirement behaviour) and perhaps of province. We are particularly interested in the influence of three variables, namely years elapsed since layoff, the calendar year, and regional labour market conditions. The coefficient of the first regressor should be identified through variation of years elapsed since layoff across individuals of the same age. The second regressor is specified as a flexible form of year-specific binary variables.

We employ the multi-nomial logit model with fewer (and hence broader) categories than were used for the statistical analysis above. The unit of analysis is the

person-year. The outcomes for the dependent variable are reliance on i) social

insurance (coded 0 and representing 3.4 % of cases), ii) earnings (coded 1 and

representing 69.6 % of cases), iii) earnings plus self-employment (coded 2 and

representing 2.3 % of cases), iv) public and/or private pension (coded 3 and

representing 13.7 % of cases), and v) the residual group (coded 4 and representing 2.8

% of cases).[21] The exogenous variables are the same ones that were included in the

regression equations the modeled the layoff event, with the exception of a set of binary

variables for the number of elapsed years since layoff (**T2**, **T3**, **T4**, **T5** for years T + 2,

T + 3, T + 4, and T + 5, respectively).

The primary regression results consisting of the estimated coefficients are

available from the authors. The calculations for the more intuitive marginal

probability effects are reported in Tables 14 (14a for men and 14b for women laid off

according to the STVC measure) and 15 (15a for men and 15b for women laid off

according to the ROE measure). The values are interpreted as absolute deviations of

probabilities relative to the base category. Each column corresponds to one of the five

possible outcomes (or types), and these probabilities horizontally sum to zero. These

magnitudes can be compared to the shares for each type that were listed above: 0.034

for column #1, 0.696 for column # 2, 0.023 for column # 3, 0.137 for column # 4, and

0.028 for the last column. The exogenous variables are listed in text table 3, and are

the same as those included in the regressions for the event of layoff. [22]

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[21] 6.5 % of the observations are not included in the regression analysis because they are non-filers,and 1.7 % of cases are excluded because their total incomes fell below $5,000.

[22] In this version, the age variable is included as a set of binary variables for 4 categories: 45-49, 50-54, 55-60, and 60-64. In a soon-to-come version, the age variable will be included as a set of 20 binary variables such that each year of age has its own parameter. That specification will fully control for age effects such

Due to space constraints, the discussion of the results is limited to the group of workers who were laid off according to the STVC criterion. The findings for men and women are reported in Tables 14a and 14b, respectively. Relative to childless single workers, married couples are less likely to rely on social insurance income and more likely to rely on labour market earnings. The impact of the age variable for both genders is essentially as expected; the younger the bracket, the more likely they are to rely on earnings or self-employment income, but the less likely they are to rely on pension income. Whereas the point estimates regarding the social insurance outcome are insignificant among men, women in their 50s are more likely than women in their 60s to rely on social insurance income.

Many of the point estimates for the area-size-of-residence variables are significant for the outcomes of reliance on earnings, self-employment income, and pension income. Relative to the omitted category of regions with more than 500,000 people, being situated in a smaller SMA is associated with a lesser reliance on earnings and self-employment income, and for women a greater reliance on pension income. No patterns are discerned for reliance on social insurance income. The provincial effects are most notable for Quebec and to a lesser extent, Alberta and BC. Relative to Ontario, both men and women in Quebec are much less likely to rely on earnings or self-employment income, and more likely to rely on pension income. For Alberta and BC the opposite pattern applies. The rate of unemployment prevailing in the economic region does not have a statistically significant impact on the earnings outcome or on the retirement outcome, but for both genders the reliance on social

that they are not confounded at all with the impact of the variable for the number of elapsed years since layoff.

insurance income and on unspecified income is estimated to increase with the unemployment rate.

The impact of union representation is very similar for both genders. Relative to their non-union counterparts, unionized workers are less likely to rely on income received from either social insurance programs, pension regimes (either public or private), or self-employment, but more likely to rely on earnings gained from employment. This pattern is suggestive of a higher degree of labour force attachment among unionized workers for reasons that are not apparent.

We do not expect to capture much in the way of cyclical effects from the calendar year covariates, as the period from 1007 to 2005 was characterized by favourable macroeconomic conditions, with the exception of a slowdown in 2002. There are certain time trends that are discerned which are interpreted as deviations from 1997. Women tended to rely less on social insurance income between 1998 and 2001. For both genders there is a more-or-less monotonic trend towards greater reliance on earnings over this period, and for men the same finding applies for self-employment activity. Among men there is a somewhat monotonic trend toward less reliance on pension income, but for women this pattern appears only after 2001.

The rows at the bottom of Tables 14a and 14b contain the point estimates for the regressor of the elapsed years since layoff, which are interpreted as deviation from year $T + 1$ (the year after the layoff). These values are probably partially capturing the effects of age as well as the intended influence. For both genders there is a tendency to rely less on social insurance income during years $T + 2$ through $T + 5$, but

there is very little estimated difference between those years.[23] For both genders,

reliance on earnings is greater two years after layoff, but declines monotonically

thereafter. Some women do turn to self-employment outcome during years T + 2

through T + 5. As one might expect, we discern a steadily increasing tendency to rely

of pension income for both men and women.

V. Conclusions

The central objective of this study is to investigate the income sources and

income-receipt patterns of prime-age and older workers after having suffered a layoff.

We focus on a set of cohorts comprised of both male and female workers who are

deemed to have a high degree of attachment to the labour force and uninterrupted

employment activity for at least a four-year period preceding the event of an involuntary

separation. Using a unique data base that merges EI administrative data marking the

separation with the Longitudinal Administrative Data (LAD) set, we track all of their

sources of income over a five-year interval after the separation. This provides ample

information on the sources of income which are typically absent from the existing

displaced workers literature, such as pension income, social insurance payments,

retirement income, and labour market earnings several years after the event of layoff.

We find that in any given year, approximately 2 % of our samples of workers

experience a layoff that we define according to two criteria. The following groups of

workers are associated with higher probabilities of separation, ceteris paribus: single

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[23] Recall that by sample construction, all of these subjects received EI benefits in year T, and some of them received it in year T + 1. The deviations between the values for years T + 2 through T + 5 and T + 1 are not that meaningful.

workers, lone parents (relative to married couples), non-union workers, workers older

than 55 (relative to those aged 45 to 54 years), workers situated in Ontario and Quebec,

workers situated in thin labour markets (relative to those in larger towns and cities), and

those situated in higher unemployment areas.

Turning to the post-layoff outcomes, during the first five post-layoff years, over

two-thirds of the group of laid-off workers aged 45-59 years old, but only between 30 and

40 % of those subjects over 59 years of age, depend on the labour market for their

primary source of income. Those workers with post-displacement earnings do experience

great losses, however: on the order of 30 % for the middle-aged group and almost 50 %

for the older group. During the post-layoff period, between 1 and 6 % of our various

samples of laid-off workers depend on self-employment income, whereas by sample

construction none of them did during the pre-layoff period. During the post-layoff

period, between 5 and 20 % of our various samples file a claim for EI benefits stemming

from a *subsequent* separation, but few of them depend on the EI regime as the primary

source of their income. Very few of these individuals draw on other types of social

insurance benefits, such as CPP disability, social assistance, and workers' compensation.

This finding is in contrast to results from the US literature, which indicate that many

older workers, including many who are not laid off, are turning to the social security

disability regime as a form of 'non-employability' insurance. On the other hand,

significant shares of our samples of laid-off workers do select the early retirement path.

Despite the fact that, by sample selection, they have not reached the normal retirement

age, between 13 and 21 % of the group aged 45-59 years, and between 32 and 39 % of

those aged 60-64 years, are reliant on private pension income 4-5 years after being laid

off, while approximately 15-28 % of the over-59 years group relies on public pension income.

The multi-variate analysis reveals a number of empirical patterns regarding the principal source of income for the layoff victim. Workers situated in larger SMAs are more likely to rely on earnings and self-employment activity than are their counterparts in more rural areas. Workers situated in Quebec are less likely than their Ontario-based counterparts to rely on earnings or self-employment income, and are more likely to depend on retirement income, while the opposite pattern applies to the two western-most provinces. Higher regional unemployment rates are associated with a higher reliance on social insurance income, but no significant relationship was discerned for the outcomes involving earnings or retirement. Unionized workers are more likely than their non-union counterparts to rely on earnings, and less likely to rely on income received from either pensions or social insurance regimes. Over the interval from 1997 to 2005, we discerned monotonic trends of an increasing degree of reliance on earnings and self-employment, and a decreasing reliance on social insurance income. There is no evidence of a tendency to rely more on social insurance income with the passage of time since layoff, but for the period between 3 to 5 years after layoff, there is a marked decline in reliance on earnings.

To summarize the results, the most common destination states for prime-age and older laid-off workers who have not yet reached retirement age are reliance on private pension benefits and continued labour market activity, albeit at much lower earnings. For the group between 45 and 59 years of age, the most common destination states are a return to the labour market and privately-financed early retirement in that order, and

together those states account for about 80 % of all cases. Among the older workers, reliance on some form of pension income (be it public and/or private) accounts for about 60 % of the cases. It is relatively rare for them (i.e. under 5 % of all cases) to draw heavily on social insurance benefits, and we find little evidence that disability benefits and workers compensation are functioning as disguised unemployment benefits.

The agenda for future research includes an investigation of the robustness of the findings to other criteria for laid-off workers. It would also be worthwhile to extend the analysis by including control groups of workers who are in our risk set for layoff but do not separate in year T. While care must be taken in the selection and the assignment of these control cases, they could provide counterfactuals for the income outcomes of our groups of laid off workers.

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**Table 1: Regression Results: Discrete Choice Model of Layoff
Predicted Probabilities and Deviations from Omitted Category**

Variable	Men	Women	Men	Women
	STVC definition of Layoff		ROE definition of Layoff	
Constant	0.017	0.018	0.024	0.021
Family Status				
Single (omitted category)				
Couple no Kids	-0.00848***	-0.000738	-0.00204***	-0.0000362
	[0.00061]	[0.00072]	[0.00043]	[0.00051]
Couple with Kids	-0.0120***	-0.0116***	-0.00406***	-0.00171***
	[0.00064]	[0.00082]	[0.00044]	[0.00064]
Lone Parent	0.00136	-0.00436***	-0.00196	0.00301**
	[0.0031]	[0.0017]	[0.0017]	[0.0012]
Age Category				
45-49	-0.0178***	-0.0137***	-0.00653***	-0.00403***
	[0.00053]	[0.00078]	[0.00040]	[0.00064]
50-54	-0.0172***	-0.0105***	-0.00698***	-0.00403***
	[0.00052]	[0.00083]	[0.00038]	[0.00063]
55-59	-0.0116***	-0.00181*	-0.00328***	-0.00147**
	[0.00064]	[0.0011]	[0.00045]	[0.00070]
60-64 (omitted category)				

…Table 1, continued

Variable	Men	Women	Men	Women
	STVC definition of Layoff		ROE definition of Layoff	
Area Size of Residence				
500 000+ (omitted category)				
100 000 499 999	0.00421***	0.00360***	0.0101***	0.00382***
	[0.00086]	[0.00097]	[0.00063]	[0.00069]
30 000 - 99 999	0.00490***	0.00775***	0.00671***	0.00358***
	[0.0010]	[0.0013]	[0.00071]	[0.00086]
15 000 - 29 999	0.0113***	0.00740***	0.0131***	0.00802***
	[0.0020]	[0.0022]	[0.0014]	[0.0016]
1 000 - 14 999	0.00814***	0.00607***	0.0126***	0.00407***
	[0.0011]	[0.0013]	[0.00082]	[0.00091]
Less than 1000	0.0114***	0.0128***	0.0150***	0.00735***
	[0.0011]	[0.0013]	[0.00082]	[0.00092]
Province				
NF	-0.0108***	-0.00243	-0.0119***	-0.00788***
	[0.0019]	[0.0029]	[0.00080]	[0.0015]
PE	-0.00819**	-0.0161***	-0.00698***	-0.00847***
	[0.0036]	[0.0035]	[0.0020]	[0.0025]
NS	-0.00157	-0.00256	-0.00934***	-0.00670***
	[0.0016]	[0.0019]	[0.00067]	[0.00098]
NB	-0.00455***	-0.00533***	-0.00783***	-0.00928***
	[0.0016]	[0.0020]	[0.00075]	[0.0010]
PQ	0.00436***	0.0152***	-0.00601***	-0.00485***
	[0.00092]	[0.0012]	[0.00040]	[0.00054]
ON (omitted category)				
MB	-0.00445***	-0.00758***	-0.00555***	-0.00384***
	[0.0015]	[0.0016]	[0.00078]	[0.0010]
SK	-0.00830***	-0.0152***	-0.00602***	-0.00822***
	[0.0016]	[0.0016]	[0.00085]	[0.0010]
AB	-0.00352***	-0.000864	-0.0000549	-0.00532***
	[0.00096]	[0.0011]	[0.00060]	[0.00062]
BC	0.00165*	-0.00154	-0.00182***	-0.00149**
	[0.00090]	[0.00096]	[0.00048]	[0.00065]

…Table 1, continued

Variable	Men	Women	Men	Women
	STVC definition of Layoff		ROE definition of Layoff	
Language				
Majority Lang. (omitted category)				
English in Qc	0.000835	-0.00509***	0.00226**	0.00318**
	[0.0015]	[0.0015]	[0.0011]	[0.0014]
French out. QC.	-0.00546**	-0.00461	-0.00499***	-0.00122
	[0.0027]	[0.0033]	[0.0014]	[0.0022]
Economic				
E.R. Unemploment Rate	0.000888***	0.000754***	0.000977***	0.000360***
	[0.000063]	[0.000083]	[0.000086]	[0.00010]
Union Status				
Non-Union (omitted category)				
Union	-0.0161***	-0.0274***	0.00741***	-0.00476***
	[0.00035]	[0.00027]	[0.00041]	[0.00035]
Year				
1996 (omitted category)				
1997	-0.00341***	0.00383***	0.0000152	0.00270***
	[0.00090]	[0.0011]	[0.00052]	[0.00070]
1998	-0.00202**	-0.00529***	0.00307***	-0.000299
	[0.00091]	[0.00094]	[0.00057]	[0.00067]
1999	-0.00573***	-0.0115***	-0.000373	-0.000426
	[0.00086]	[0.00084]	[0.00054]	[0.00070]
2000	-0.00892***	-0.0141***	0.00303***	0.00124
	[0.00080]	[0.00080]	[0.00062]	[0.00076]
2001	0.00431***	-0.0123***	0.0137***	0.00589***
	[0.0010]	[0.00081]	[0.00079]	[0.00084]
2002	0.00131	-0.0116***	0.00843***	0.00543***
	[0.00097]	[0.00081]	[0.00069]	[0.00080]
Observations	1 427 700	1 128 800	1 427 700	1 128 800

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 2a: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time, All Cohorts Pooled Together (Proportion of the Laid Off Group), Younger Men, STVC Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	91.1	77.6	78.8	77.4	75.2	71.4
2. Self-empl.	0.0	0.0	0.0	0.0	3.2	6.5	7.2	7.1	7.1	7.0
3. EI	0.0	0.0	0.0	0.0	83.4	54.9	20.4	18.0	16.9	15.0
4. SA	0.0	0.0	0.0	0.0	1.1	2.7	2.8	2.5	2.8	3.1
5. WC	0.0	0.0	0.0	0.0	0.8	1.1	1.3	1.5	1.5	1.7
6. Public pension	0.0	0.0	0.0	0.0	0.5	3.0	6.2	9.3	13.6	18.5
7. Private pension	4.7	5.2	5.8	8.5	25.8	27.1	26.8	26.4	28.5	30.9
8. CPPD	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.5	1.9	2.3
9. Investment income	12.9	13.3	14.3	14.5	15.0	15.5	15.7	16.0	15.9	15.8

Table 2b: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time, All Cohorts Pooled Together (Proportion of the Laid Off Group), Younger Women, STVC Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	88.9	68.0	70.9	70.7	66.8	62.9
2. Self-empl.	0.0	0.0	0.0	0.0	1.8	4.2	4.9	5.1	5.2	5.1
3. EI	0.0	0.0	0.0	0.0	85.9	60.5	15.5	14.0	11.9	9.9
4. SA	0.0	0.0	0.0	0.0	0.8	2.1	2.1	2.1	2.2	2.2
5. WC	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.6	0.7	0.7
6. Public pension	0.0	0.0	0.0	0.0	0.8	4.0	7.6	11.7	16.8	22.8
7. Private pension	4.1	4.9	5.1	8.0	25.7	28.0	28.5	27.9	30.4	33.1
8. CPPD	0.0	0.0	0.0	0.0	0.0	0.4	0.8	1.1	1.5	2.0
9. Investment income	15.3	15.7	16.5	16.8	17.6	18.0	18.6	19.1	19.6	19.7

Table 3a: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time, All Cohorts Pooled Together (Proportion of the Laid Off Group), Older Men, STVC Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	88.8	51.4	48.0	46.0	39.8	
2. Self-empl.	0.0	0.0	0.0	0.0	1.6	3.7	3.9	5.0	5.8	
3. EI	0.0	0.0	0.0	0.0	87.8	60.5	15.2	14.0	12.4	
4. SA	0.0	0.0	0.0	0.0	0.1	1.1	2.0	1.9	1.2	
5. WC	0.0	0.0	0.0	0.0	0.8	0.3	0.2	0.3	0.0	
6. Public pension	0.0	0.0	0.0	0.0	28.3	63.7	70.1	73.4	78.2	
7. Private pension	4.0	4.1	4.4	6.3	34.0	46.7	51.1	51.7	56.1	
8. CPPD	0.0	0.0	0.0	0.0	0.3	2.3	3.8	3.6	4.7	
9. Investment income	21.4	21.9	22.9	23.5	24.3	23.9	23.1	22.6	23.5	

Table 3b: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time, All Cohorts Pooled Together (Proportion of the Laid Off Group), Older Women, STVC Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	83.5	37.3	36.1	34.1	28.7	
2. Self-empl.	0.0	0.0	0.0	0.0	0.4	2.4	2.4	2.0	1.6	
3. EI	0.0	0.0	0.0	0.0	87.1	61.5	8.1	7.4	4.7	
4. SA	0.0	0.0	0.0	0.0	0.0	1.5	0.3	0.0	0.0	
5. WC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6. Public pension	0.0	0.0	0.0	0.0	28.8	72.3	79.2	82.2	86.3	
7. Private pension	3.3	3.7	4.6	6.2	34.1	47.8	52.6	53.7	55.5	
8. CPPD	0.0	0.0	0.0	0.0	0.0	0.2	0.9	0.4	0.8	
9. Investment income	26.8	26.4	27.2	28.3	28.3	28.4	28.6	27.3	28.9	

Table 4a: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time, All Cohorts Pooled Together (Proportion of the Laid Off Group), Younger Men, ROE Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	99.5	88.0	86.7	84.9	82.7	79.4
2. Self-empl.	0.0	0.0	0.0	0.0	2.8	5.1	5.8	5.8	6.0	6.2
3. EI	0.0	0.0	0.0	0.0	29.4	32.5	18.4	14.9	14.2	13.3
4. SA	0.0	0.0	0.0	0.0	0.8	1.5	1.7	1.7	1.9	2.0
5. WC	0.0	0.0	0.0	0.0	1.1	1.4	1.4	1.6	1.6	1.7
6. Public pension	0.0	0.0	0.0	0.0	0.3	2.0	4.7	7.5	11.2	15.4
7. Private pension	4.5	4.9	5.6	6.8	21.5	25.2	25.8	27.0	28.4	31.2
8. CPPD	0.0	0.0	0.0	0.0	0.0	0.4	0.7	1.0	1.4	1.9
9. Investment income	12.9	13.5	14.5	15.0	15.3	15.6	15.7	16.1	16.0	16.2

Table 4b: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time, All Cohorts Pooled Together (Proportion of the Laid Off Group), Younger Women, ROE Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	99.2	83.9	83.9	82.5	79.5	76.3
2. Self-empl.	0.0	0.0	0.0	0.0	1.8	3.4	4.0	4.3	4.3	4.6
3. EI	0.0	0.0	0.0	0.0	31.4	36.0	17.6	13.2	11.5	10.7
4. SA	0.0	0.0	0.0	0.0	0.6	1.2	1.4	1.5	1.6	1.7
5. WC	0.0	0.0	0.0	0.0	0.5	0.6	0.6	0.8	0.9	0.9
6. Public pension	0.0	0.0	0.0	0.0	0.7	2.4	5.2	8.0	11.5	16.1
7. Private pension	3.9	4.4	5.2	6.2	16.8	21.0	21.5	22.1	23.0	24.6
8. CPPD	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.9	1.1	1.6
9. Investment income	16.2	17.0	17.5	18.0	18.5	18.9	19.6	20.2	20.8	20.9

Table 5a: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time, All Cohorts Pooled Together (Proportion of the Laid Off Group), Older Men, ROE Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	99.3	69.7	62.0	57.7	52.8	
2. Self-empl.	0.0	0.0	0.0	0.0	2.7	3.6	4.0	4.0	4.1	
3. EI	0.0	0.0	0.0	0.0	40.2	42.3	18.1	13.6	12.8	
4. SA	0.0	0.0	0.0	0.0	0.1	0.6	1.7	1.2	0.0	
5. WC	0.0	0.0	0.0	0.0	1.2	0.6	0.4	0.9	0.5	
6. Public pension	0.0	0.0	0.0	0.0	22.6	49.4	60.3	65.5	71.1	
7. Private pension	4.3	4.5	5.0	6.0	31.9	44.2	49.8	52.9	57.4	
8. CPPD	0.0	0.0	0.0	0.0	0.1	1.6	2.4	2.4	3.1	
9. Investment income	21.5	21.4	22.9	23.7	24.2	24.3	23.7	23.7	24.4	

Table 5b: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time, All Cohorts Pooled Together (Proportion of the Laid Off group), Older Women, Roe Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	99.5	60.0	54.5	48.9	40.2	
2. Self-empl.	0.0	0.0	0.0	0.0	0.2	2.5	2.4	3.2	1.0	
3. EI	0.0	0.0	0.0	0.0	39.1	41.5	14.0	7.8	4.9	
4. SA	0.0	0.0	0.0	0.0	0.0	0.6	0.7	0.0	0.0	
5. WC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
6. Public pension	0.0	0.0	0.0	0.0	22.1	51.5	63.2	69.9	76.9	
7. Private pension	2.2	4.4	4.2	5.9	26.3	38.2	44.4	48.2	50.5	
8. CPPD	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.0	0.9	
9. Investment income	26.5	27.1	27.6	28.9	28.4	28.2	27.4	26.9	29.0	

Table 6a: Receipt of Income by Particular Source After Layoff by Years of Elapsed Time: All Cohorts Pooled Together (Average Amounts Received in Constant 2005 $), Younger Men, STVC Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	56300	57500	58200	54800	34700	37100	40700	42300	42200	41200
2. Self-empl.	-	-	-	-	13300	17500	18300	19100	19300	20300
3. EI	-	-	-	-	7100	7100	6000	5900	6000	6100
4. SA	-	-	-	-	4100	4900	6000	6400	6300	6200
5. WC	-	-	-	-	5200	8300	9400	10200	10600	11100
6. Public pension	-	-	-	-	4000	3500	5100	5600	5700	6000
7. Private pension	7300	7800	8900	10500	17800	18400	19000	19400	19200	19100
8. CPPD	-	-	-	3100	8300	10300	10800	10800	10600	11100
9. Investment income	5800	7500	6600	6700	5800	6100	6200	6300	7100	6700

Table 6b: Receipt of Income by Particular Source After Layoff by Years of Elapsed Time: All Cohorts Pooled Together (Average Amounts Received in Constant 2005 $), Younger Women, STVC Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	36200	36800	37300	35700	20700	21800	25300	26200	26800	27300
2. Self-empl.	-	-	-	-	8500	11500	12400	13800	14400	13700
3. EI	-	-	-	-	6600	6200	4700	4800	4900	5000
4. SA	-	-	-	-	3800	4500	5700	5700	5900	6400
5. WC	-	-	-	-	5200	8700	9200	9100	9600	8100
6. Public pension	-	-	-	-	4200	3700	4800	5000	5300	5500
7. Private pension	5200	5500	6100	7500	12400	14400	14400	14100	14300	14100
8. CPPD	-	-	-	-	7700	9000	9900	10000	9800	9600
9. Investment income	4600	4600	4700	4900	5100	5300	5500	5700	5900	5900

Table 7a: Receipt of Income by Particular Source After Layoff by Years of Elapsed Time: All Cohorts Pooled Together (Average Amounts Received in Constant 2005 $), Older Men, STVC Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	51700	51900	51900	49200	27100	27200	27900	28100	26600	-
2. Self-empl.	-	-	-	-	13000	16700	15500	14600	12800	-
3. EI	-	-	-	-	7900	7500	6200	5500	6100	-
4. SA	-	-	-	-	4300	5200	5800	5400	5200	-
5. WC	-	-	-	-	6200	9800	8700	11900	12400	-
6. Public pension	-	-	-	-	4100	6100	7000	6900	6800	-
7. Private pension	7500	8000	8800	11900	15600	16500	16900	16700	17500	-
8. CPPD	-	-	-	-	5600	10800	11100	10800	10900	-
9. Investment income	5900	5600	5700	5600	6500	5800	6100	6000	6000	-

Table 7b: Receipt of Income by Particular Source After Layoff by Years of Elapsed Time: All Cohorts Pooled Together (Average Amounts Received in Constant 2005 $), Older Women, STVC Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	33700	34100	34000	32600	16300	16200	17600	18100	18200	-
2. Self-empl.	-	-	-	-	5600	9700	11000	9500	14200	-
3. EI	-	-	-	-	7000	5900	3900	4500	4800	-
4. SA	-	-	-	-	4500	3300	4000	4900	5000	-
5. WC	-	-	-	-	5500	42800	6900	11900	8600	-
6. Public pension	-	-	-	-	3800	5200	6200	6200	6300	-
7. Private pension	5900	5200	6100	6400	11100	11400	11900	12500	12900	-
8. CPPD	-	-	-	-	7100	7900	9900	9100	10600	-
9. Investment income	5100	5100	5200	5100	5300	5900	6500	5900	5600	-

Table 8a: Receipt of Income by Particular Source After Layoff by Years of Elapsed Time: All Cohorts Pooled Together (Average Amounts Received in Constant 2005 $), Younger Men, ROE Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	61400	62800	63800	62800	51500	47800	49900	50600	50400	50000
2. Self-empl.	-	-	-	-	14600	21700	21200	21500	21300	20100
3. EI	-	-	-	-	6100	7100	6000	5700	5700	5800
4. SA	-	-	-	-	4300	4800	5700	6300	6400	6200
5. WC	-	-	-	-	6500	7700	9900	10700	11700	11600
6. Public pension	-	-	-	-	8000	3500	5000	5500	5800	6000
7. Private pension	7300	8000	8500	9100	21300	23800	23700	24300	24300	24100
8. CPPD	-	-	-	3100	6300	9300	10500	10800	11000	11000
9. Investment income	5800	6000	5800	6300	6300	6600	7200	7200	7000	6900

Table 8b: Incidence of Receipt of Income by Particular Source After Layoff by Years of Elapsed Time: All Cohorts Pooled Together (Average Amounts Received in Constant 2005 $), Younger Women, ROE Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	38000	38800	39400	38900	31100	29800	31600	32200	32600	32900
2. Self-empl.	-	-	-	-	11300	14000	13900	14700	15000	15400
3. EI	-	-	-	-	5700	6500	5100	4600	4500	4700
4. SA	-	-	-	-	4400	4900	5600	5600	5800	6000
5. WC	-	-	-	-	5100	8500	7800	8900	9600	8100
6. Public pension	-	-	-	-	4100	4000	4800	5100	5300	5500
7. Private pension	5200	5600	6300	6800	16000	17000	16800	16500	16400	15100
8. CPPD	-	-	-	-	6200	9700	9700	10400	10000	10000
9. Investment income	5700	5600	5700	6000	6100	6700	7000	7300	7500	7200

Table 9a: Receipt of Income by Particular Source After Layoff by Years of Elapsed Time: All Cohorts Pooled Together (Average Amounts Received in Constant 2005 $), Older Men, ROE Definition of Layoff

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	56800	57800	57600	55900	40800	35600	36000	35400	32100	-
2. Self-empl.	-	-	-	-	13600	18700	18800	19100	17800	-
3. EI	-	-	-	-	6900	7800	6300	5800	5600	-
4. SA	-	-	-	-	5100	4800	5300	4800	3900	-
5. WC	-	-	-	-	8200	12200	10200	12400	14000	-
6. Public pension	-	-	-	-	4100	6100	6900	7000	6900	-
7. Private pension	7400	7900	8000	10000	19800	21800	22900	23200	23100	-
8. CPPD	-	-	-	-	5300	9500	11200	10500	10600	-
9. Investment income	6400	6300	8100	6000	6400	6300	6900	6600	6400	-

Table 9b: Receipt of Income by Particular Source After Layoff by Years of Elapsed Time: All Cohorts Pooled Together (Average Amounts Received in Constant 2005 $), Older Women, ROE File

Source of income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	35200	35400	35200	34500	24100	23000	23800	23100	23100	-
2. Self-empl.	-	-	-	-	8700	11200	12500	11500	17300	-
3. EI	-	-	-	-	6100	6600	4800	4700	4000	-
4. SA	-	-	-	-	5200	3700	4400	4800	5600	-
5. WC	-	-	-	-	7600	6300	3600	14300	8900	-
6. Public pension	-	-	-	-	3700	5200	6100	6200	6200	-
7. Private pension	4700	4800	6000	5500	14400	15500	15700	16500	15600	-
8. CPPD	-	-	-	-	5700	8700	8800	8900	9800	-
9. Investment income	5300	5400	6300	5600	6100	6100	8000	8700	6100	-

Table 10a: Principal Source of Income After Layoff by Type of Income – Relative Proportions: All Cohorts Pooled Together, Younger Men, STVC Definition of Layoff

1. Earns.	100.0	99.9	100.0	99.6	73.6	65.5	72.0	71.3	68.7	64.6
2. EI						11.2	2.1	1.7	1.7	1.6
3. Public pension						0.8	1.4	2.0	3.2
4. Private pension			0.0	0.3		12.6	14.4	14.2	15.7	17.8
5. WC						0.1	0.2	0.4	0.4	0.5
6. CPPD						0.2	0.7	0.9	1.2	1.4
7. SA						0.5	0.9	1.0	1.1	1.1
8. Investment income	0.0	0.1	0.0	0.1		1.4	1.7	1.8	1.6	1.7
9. Self-empl.						3.8	4.6	4.5	4.4	4.6
10. Self-empl.+Inc sup					17.6	4.0	1.7	1.6	1.6	1.5
11. Pension income					8.0	0.2	0.5	0.8	1.1	1.5
12. Others					0.8	0.6	0.5	0.4	0.5	0.4
Filers with inc. > 5000	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inc. less 5000					0.5	3.3	5.4	4.8	4.5	4.7
Non-filer						2.3	3.9	4.5	28.9	67.8
Censored/Uncensored	100.0	100.0	100.0	100.0	100.5	105.6	109.3	109.2	133.4	172.5

Table 10b: Principal Source of Income After Layoff by Type of Income – Relative Proportions: All Cohorts Pooled Together, Younger Women, STVC Definition of Layoff

1. Earns.	99.9	100.0	99.9	99.6	68.1	56.6	68.5	67.7	63.6	59.8
2. EI						17.5	1.9	1.8	1.7	1.3
3. Public pension						0.2	1.3	2.2	3.6	4.7
4. Private pension				0.2		15.3	18.2	17.4	19.0	21.4
5. WC								0.1	0.1	0.1
6. CPPD						0.2	0.6	0.9	1.1	1.4
7. SA						0.5	1.0	1.0	1.1	1.0
8. Investment income	0.1	0.0	0.1	0.2		2.0	2.6	2.7	2.7	2.9
9. Self-empl.						2.0	3.1	3.3	3.5	3.2
10. Self-empl.+Inc sup					23.4	4.2	1.2	1.2	1.1	1.1
11. Pension income					7.2	0.4	0.8	1.1	1.7	2.2
12. Others					1.3	1.1	0.7	0.6	0.8	0.8
Filers with inc. > 5000	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inc. less 5000			0.0		0.7	7.9	12.1	11.1	11.0	11.0
Non-filer						2.2	4.7	5.3	27.1	53.6
Censored/Uncensored	100.0	100.0	100.0	100.0	100.7	110.0	116.9	116.3	138.2	164.6

Table 11a: Principal Source of Income After Layoff by Type of Income – Relative Proportions: All Cohorts Pooled Together, Older Men, STVC Definition of Layoff

Main income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	62.0	33.2	34.5	33.9	27.7	
2. EI						13.1	0.2			
3. Public pension						8.3	17.9	19.0	20.3	
4. Private pension						20.7	30.6	30.1	39.2	
5. WC										
6. CPPD						0.3	1.7	2.4	2.0	
7. SA										
8. Investment income						2.5	2.4	3.0	0.7	
9. Self-empl.						1.7	1.7	1.8	0.7	
10. Self-empl.+Inc sup					25.6	7.5	3.2	2.4	2.0	
11. Pension income					10.3	8.8	6.3	6.5	6.1	
12. Others					2.1	4.0	1.5	0.9	1.4	
Filers with inc. > 5000	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Inc. less 5000						1.2	3.2	3.0		
Non-filer						0.8	1.9	3.3	27.0	
Age>64						21.1	52.8	112.5	361.5	
Censored/Uncensored	100.0	100.0	100.0	100.0	100.0	123.1	158.0	218.8	488.5	

Table 11b: Principal Source of Income After Layoff by Type of Income – Relative Proportions: all Cohorts Pooled Together, Older Women, STVC Definition of Layoff

Main income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	51.7	23.7	27.5	25.7	21.4	
2. EI						15.8				
3. Public pension						12.7	26.1	27.0	28.6	
4. Private pension						20.6	29.8	32.3	36.6	
5. WC										
6. CPPD							0.7	0.4	0.9	
7. SA										
8. Investment income						4.1	4.7	4.0	1.8	
9. Self-empl.						0.3	0.3			
10. Self-empl.+Inc sup					33.5	6.4	0.3	0.4		
11. Pension income					11.7	12.5	9.8	9.7	9.8	
12. Others					3.1	4.1	0.7	0.4	0.9	
Filers with inc. > 5000	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Inc. less 5000						4.1	7.5	7.5	3.6	
Non-filer						0.8	3.4	3.5	22.3	
Age>64						15.5	46.1	95.1	291.1	
Censored/Uncensored	100.0	100.0	100.0	100.0	100.0	120.4	156.9	206.2	417.0	

Table 12a: Principal Source of Income After Layoff by Type of Income – Relative Proportions: All Cohorts Pooled Together, Younger Men, ROE Definition of Layoff

Main income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	99.9	99.9	99.8	99.7	88.8	75.9	77.2	76.0	73.5	70.3
2. EI						5.9	1.8	1.2	1.1	1.1
3. Public pension							0.3	0.7	1.0	1.6
4. Private pension			0.0	0.2		11.7	13.1	14.2	15.7	17.3
5. WC						0.1	0.3	0.4	0.5	0.5
6. CPPD						0.1	0.4	0.6	0.7	1.1
7. SA						0.1	0.3	0.4	0.5	0.5
8. Investment income	0.1	0.1	0.1	0.1		0.9	1.1	1.3	1.3	1.3
9. Self-empl.						2.6	3.1	3.2	3.3	3.4
10. Self-empl.+Inc sup					4.4	2.2	1.5	1.3	1.3	1.3
11. Pension income					6.3	0.1	0.3	0.6	0.9	1.2
12. Others					0.6	0.3	0.4	0.4	0.4	0.3
Filers with inc. > 5000	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inc. less 5000					0.3	1.8	2.4	2.5	2.4	2.6
Non-filer						1.6	2.6	3.1	27.8	73.4
Censored/Uncensored	100.0	100.0	100.0	100.0	100.3	103.4	104.9	105.7	130.1	176.0

Table 12b: Principal Source of Income After Layoff by Type of Income – Relative Proportions: All Cohorts Pooled Together, Younger Women, ROE Definition of Layoff

Main income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	99.7	99.8	99.7	99.7	88.2	73.7	78.8	78.2	75.6	72.7
2. EI						10.9	2.8	1.5	1.3	1.1
3. Public pension						0.0	0.6	1.2	2.0	3.1
4. Private pension				0.0		9.1	10.5	11.1	11.8	12.5
5. WC							0.0	0.1	0.1	0.1
6. CPPD						0.1	0.4	0.7	0.8	1.1
7. SA						0.1	0.4	0.5	0.5	0.6
8. Investment income	0.3	0.2	0.3	0.3		1.5	2.1	2.3	2.7	2.8
9. Self-empl.						1.6	2.0	2.4	2.6	2.7
10. Self-empl.+Inc sup					6.4	2.3	1.3	0.9	0.8	1.0
11. Pension income					4.3	0.1	0.5	0.7	1.1	1.6
12. Others					1.1	0.6	0.5	0.6	0.7	0.6
Filers with inc. > 5000	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Inc. less 5000					0.7	4.2	6.4	6.6	7.1	7.5
Non-filer						1.4	2.8	3.5	30.5	70.4
Censored/Uncensored	100.0	100.0	100.0	100.0	100.7	105.6	109.1	110.1	137.6	177.9

Table 13a: Principal Source of Income After Layoff by Type of Income – Relative Proportions: All Cohorts Pooled Together, Older Men, ROE Definition of Layoff

Main income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	80.6	48.7	44.9	42.0	36.2	
2. EI						9.9	1.3	0.2		
3. Public pension						4.7	11.3	12.2	15.3	
4. Private pension						20.6	28.9	33.3	37.3	
5. WC										
6. CPPD							0.9	1.0	1.1	
7. SA										
8. Investment income						1.0	1.1	2.5	0.6	
9. Self-empl.						1.0	1.5	1.5		
10. Self-empl.+Inc sup					9.5	5.1	2.7	1.5	2.3	
11. Pension income					8.7	6.1	6.2	5.5	7.3	
12. Others					1.2	2.8	1.3	0.2		
Filers with inc. > 5000	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Inc. less 5000						0.9	2.0	2.0		
Non-filer						0.9	2.5	3.0	32.2	
Age>64						16.1	42.0	94.5	319.8	
Censored/Uncensored	100.0	100.0	100.0	100.0	100.0	117.8	146.5	199.5	452.0	

Table 13b: Principal Source of Income After Layoff by Type of Income – Relative Proportions: All Cohorts Pooled Together, Older Women, ROE Definition of Layoff

Main income	T - 4	T - 3	T - 2	T - 1	T	T + 1	T + 2	T + 3	T + 4	T + 5
1. Earns.	100.0	100.0	100.0	100.0	77.0	45.0	45.0	38.7	34.4	
2. EI						13.6	0.8			
3. Public pension						6.2	15.8	19.4	22.2	
4. Private pension						16.9	24.6	31.4	32.2	
5. WC										
6. CPPD										
7. SA										
8. Investment income						2.1	4.2	1.6	2.2	
9. Self-empl.						0.3	1.2	1.0		
10. Self-empl.+Inc sup					13.2	5.0				
11. Pension income					6.9	7.7	6.9	7.3	8.9	
12. Others					2.9	3.3	1.5	0.5		
Filers with inc. > 5000	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Inc. less 5000						3.0	5.4	6.3	2.2	
Non-filer						0.3	1.5	1.6	27.8	
Age>64						14.8	42.3	96.9	304.4	
Censored/Uncensored	100.0	100.0	100.0	100.0	100.0	118.0	149.2	204.7	434.4	

Table 14a: Regression Results: Multinomial Logit Model of Principal Source of Income: Marginal Probability Effect, Men, STVC Definition of Layoff

	Men				
	STVC Definition of Layoff				
Variable	Transfert	Earns.	Self-empl.	Pension income	Others
Family Status					
Single (omitted category)					
Couple no Kids	-0.0754***	0.0378***	0.00936***	0.0308*	-0.00255
	[0.0080]	[0.0082]	[0.0020]	[0.017]	[0.0070]
Couple with Kids	-0.0257**	0.0818***	0.0150***	-0.0817***	0.0106
	[0.012]	[0.012]	[0.0027]	[0.019]	[0.010]
Lone Parent	0.00625	-0.0203	-0.000854	0.027	-0.0121
	[0.042]	[0.024]	[0.0046]	[0.069]	[0.028]
Age Category					
45-49	0.0125	0.414***	0.0399***	-0.390***	-0.0765***
	[0.022]	[0.049]	[0.0068]	[0.0041]	[0.0053]
50-54	0.0187	0.286***	0.0271***	-0.278***	-0.0533***
	[0.019]	[0.032]	[0.0052]	[0.011]	[0.0064]
55-59	0.0107	0.113***	0.0102***	-0.107***	-0.0267***
	[0.016]	[0.017]	[0.0034]	[0.017]	[0.0072]
60-64 (omitted category)					

Continued…

…Table 14a, continued

	Men				
	STVC Definition of Layoff				
Variable	Transfert	Earns.	Self-empl.	Pension income	Others
Area Size of Residence					
500 000+ (omitted category)					
100 000 499 999	-0.0178	-0.0191***	-0.00469***	0.0513**	-0.00977
	[0.012]	[0.0070]	[0.00096]	[0.021]	[0.0077]
30 000 - 99 999	0.0118	-0.0237***	-0.00630***	0.0471*	-0.0290***
	[0.016]	[0.0082]	[0.0010]	[0.025]	[0.0079]
15 000 - 29 999	-0.00375	-0.00648	-0.00630***	0.0127	0.00387
	[0.023]	[0.013]	[0.0015]	[0.035]	[0.014]
1 000 - 14 999	-0.0108	-0.0131	-0.00640***	0.0388	-0.0085
	[0.015]	[0.0083]	[0.0011]	[0.024]	[0.0088]
Less than 1000	-0.00568	-0.0262***	-0.00371***	0.0282	0.00743
	[0.013]	[0.0065]	[0.0011]	[0.020]	[0.0084]
Province					
NF	-0.0510*	-0.0591***	-0.00381	0.0927	0.0213
	[0.030]	[0.016]	[0.0037]	[0.064]	[0.025]
PE	-0.0942**	-0.0433	0.00751	0.0856	0.0445
	[0.041]	[0.029]	[0.011]	[0.099]	[0.044]
NS	-0.0907***	-0.0599***	-0.00598***	0.158***	-0.00143
	[0.018]	[0.011]	[0.0018]	[0.050]	[0.015]
NB	-0.00597	-0.0309**	-0.00454*	0.0413	0.000125
	[0.025]	[0.013]	[0.0025]	[0.042]	[0.016]
PQ	-0.0137	-0.0566***	-0.00579***	0.0492***	0.0269***
	[0.012]	[0.0047]	[0.00078]	[0.019]	[0.0088]
ON (omitted category)					
MB	-0.00547	-0.0296**	-0.00570***	0.0544	-0.0136
	[0.026]	[0.013]	[0.0019]	[0.042]	[0.015]
SK	0.00155	0.00715	-0.00163	-0.0459	0.0388
	[0.030]	[0.017]	[0.0030]	[0.041]	[0.024]
AB	-0.0308**	0.0420***	-0.00109	-0.0418*	0.0317**
	[0.016]	[0.012]	[0.0016]	[0.023]	[0.014]
BC	0.0123	0.0152*	0.00770***	-0.0578***	0.0226**
	[0.014]	[0.0083]	[0.0019]	[0.017]	[0.011]
Language					
Majority Lang. (omitted category)					
English in Qc	0.034	0.0238*	-0.000839	-0.0766***	0.0196
	[0.021]	[0.014]	[0.0023]	[0.027]	[0.015]
French out. QC.	-0.0259	-0.0299	-0.00229	-0.0241	0.0822**
	[0.035]	[0.020]	[0.0048]	[0.058]	[0.038]

Continued…

…Table 14a, continued

	Men				
	STVC Definition of Layoff				
Variable	Transfert	Earns.	Self-empl.	Pension income	Others
Economic					
E.R. Unemp. Rate	0.00493***	0.0134	-0.00204***	0.00272	0.00197***
	[0.00088]	[0.0090]	[0.00071]	[0.0020]	[0.00064]
Union Status					
Non-Union					
Union	-0.125***	0.272***	-0.00925***	-0.134***	-0.00329
	[0.0061]	[0.018]	[0.00052]	[0.014]	[0.0071]
Year					
1997 (omitted category)					
1998	-0.0079	0.0214**	0.0022	0.0138	-0.0295***
	[0.014]	[0.010]	[0.0019]	[0.022]	[0.0074]
1999	-0.0133	0.0367***	0.00138	-0.00242	-0.0223***
	[0.014]	[0.011]	[0.0020]	[0.022]	[0.0081]
2000	-0.0139	0.0675***	0.00326	-0.0428*	-0.014
	[0.014]	[0.014]	[0.0024]	[0.022]	[0.0093]
2001	-0.00882	0.0913***	0.00481*	-0.0747***	-0.0126
	[0.015]	[0.015]	[0.0025]	[0.021]	[0.0096]
2002	0.000795	0.111***	0.00573**	-0.0962***	-0.0215**
	[0.015]	[0.017]	[0.0026]	[0.021]	[0.0091]
2003	0.0174	0.128***	0.00491*	-0.127***	-0.0224**
	[0.016]	[0.018]	[0.0026]	[0.019]	[0.0092]
2004	0.0348*	0.134***	0.00707**	-0.161***	-0.0147
	[0.020]	[0.020]	[0.0030]	[0.019]	[0.011]
2005	0.0382*	0.148***	0.00833**	-0.187***	-0.00742
	[0.022]	[0.022]	[0.0033]	[0.019]	[0.013]
T2	-0.162***	0.0169***	0.00294***	0.181***	-0.0394***
	[0.0034]	[0.0054]	[0.00084]	[0.017]	[0.0034]
T3	-0.165***	-0.00678	0.00106	0.219***	-0.0481***
	[0.0038]	[0.0058]	[0.00094]	[0.022]	[0.0036]
T4	-0.167***	-0.0380***	-0.00161	0.262***	-0.0556***
	[0.0043]	[0.0060]	[0.00098]	[0.029]	[0.0039]
T5	-0.174***	-0.0654***	-0.00353***	0.309***	-0.0662***
	[0.0046]	[0.0059]	[0.00100]	[0.038]	[0.0039]
Observations					
Pseudo R_squared					

Standard errors in brackets

*** p<0.01, ** p<0.05, * p<0.1

Table 14b: Regression Results: Multinomial Logit Model of Principal Source of Income: Marginal Probability Effect, Women, STVC Definition of Layoff

Variable	Women				
	STVC Definition of Layoff				
	Transfert	Earns.	Self-empl.	Pension income	Others
Family Status					
Single (omitted category)					
Couple no Kids	-0.0413***	-0.0131**	-0.000461	0.0307**	0.0241***
	[0.0078]	[0.0059]	[0.00092]	[0.013]	[0.0088]
Couple with Kids	-0.0297**	0.0175	0.00157	-0.00903	0.0197
	[0.014]	[0.012]	[0.0018]	[0.026]	[0.017]
Lone Parent	0.0907***	0.0223	0.00617	-0.129***	0.00961
	[0.033]	[0.020]	[0.0038]	[0.035]	[0.028]
Age Category					
45-49	0.0298	0.423***	0.0206***	-0.353***	-0.120***
	[0.034]	[0.081]	[0.0061]	[0.0026]	[0.0080]
50-54	0.0556*	0.293***	0.0168***	-0.276***	-0.0894***
	[0.031]	[0.053]	[0.0054]	[0.010]	[0.010]
55-59	0.0536**	0.102***	0.00699*	-0.134***	-0.0284**
	[0.023]	[0.024]	[0.0037]	[0.017]	[0.013]
60-64 (omitted category)					

Continued…

…Table 14b, continued

| | Women | | | | |
| | STVC Definition of Layoff | | | | |
Variable	Transfert	Earns.	Self-empl.	Pension income	Others
Area Size of Residence					
500 000+ (omitted category)					
100 000 499 999	-0.00134	-0.0284***	-0.00211**	0.0626***	-0.0308***
	[0.012]	[0.0077]	[0.0011]	[0.019]	[0.0092]
30 000 - 99 999	0.000467	-0.0467***	-0.00606***	0.0760***	-0.0237**
	[0.014]	[0.0082]	[0.00083]	[0.023]	[0.011]
15 000 - 29 999	0.0191	-0.0377**	-0.00303	0.0686*	-0.0469***
	[0.024]	[0.015]	[0.0019]	[0.038]	[0.017]
1 000 - 14 999	0.00514	-0.0538***	-0.00248**	0.0666***	-0.0155
	[0.014]	[0.0078]	[0.0012]	[0.023]	[0.012]
Less than 1000	0.0125	-0.0626***	-0.00133	0.0611***	-0.00959
	[0.012]	[0.0062]	[0.0011]	[0.019]	[0.011]
Province					
NF	0.0339	-0.0039	-0.00618**	0.0142	-0.038
	[0.040]	[0.030]	[0.0028]	[0.057]	[0.027]
PE	-0.0587	0.12	0.00155	-0.0402	-0.0225
	[0.055]	[0.086]	[0.0077]	[0.096]	[0.056]
NS	0.022	-0.00323	-0.00154	0.0074	-0.0246
	[0.026]	[0.018]	[0.0025]	[0.035]	[0.020]
NB	0.00495	0.00534	-0.00181	0.0294	-0.0378*
	[0.030]	[0.024]	[0.0033]	[0.045]	[0.022]
PQ	-0.0632***	-0.0854***	-0.00535***	0.222***	-0.0681***
	[0.010]	[0.0054]	[0.00069]	[0.028]	[0.0071]
ON (omitted category)					
MB	-0.0317	0.0289	-0.00265	0.0437	-0.0382**
	[0.024]	[0.022]	[0.0024]	[0.040]	[0.019]
SK	0.0057	0.0561**	0.0120**	-0.0866**	0.0128
	[0.030]	[0.026]	[0.0053]	[0.034]	[0.031]
AB	-0.019	0.0479***	0.00560***	-0.0584***	0.0239
	[0.014]	[0.013]	[0.0021]	[0.019]	[0.015]
BC	0.0275**	0.0186**	0.00949***	-0.0799***	0.0243*
	[0.013]	[0.0091]	[0.0021]	[0.014]	[0.013]
Language					
Majority Lang. (omitted category)					
English in Qc	0.0413*	0.0161	-0.000653	-0.145***	0.0888***
	[0.023]	[0.016]	[0.0024]	[0.019]	[0.026]
French out. QC.	-0.00323	-0.0606***	-0.00404	0.111	-0.043
	[0.041]	[0.023]	[0.0035]	[0.078]	[0.027]

Continued…

…Table 14b, continued

Variable	Women				
	STVC Definition of Layoff				
	Transfert	Earns.	Self-empl.	Pension income	Others
Economic					
E.R. Unemp.	0.00408***	0.0014	-0.00108	0.00119	0.00277***
	[0.0011]	[0.011]	[0.00067]	[0.0027]	[0.00089]
Union Status					
Non-Union (omitted category)					
Union	-0.125***	0.279***	-0.00672***	-0.139***	-0.00819
	[0.0069]	[0.025]	[0.00053]	[0.013]	[0.011]
Year					
1997 (omitted category)					
1998	-0.0582***	-0.0302***	-0.00211	0.142***	-0.0516***
	[0.010]	[0.0088]	[0.0013]	[0.025]	[0.0082]
1999	-0.0484***	-0.0124	-0.0019	0.112***	-0.0497***
	[0.011]	[0.011]	[0.0015]	[0.026]	[0.0091]
2000	-0.0345***	0.0234*	-0.00107	0.0423*	-0.0301***
	[0.013]	[0.014]	[0.0018]	[0.025]	[0.011]
2001	-0.0356***	0.0625***	-0.000564	0.00639	-0.0328***
	[0.013]	[0.016]	[0.0018]	[0.024]	[0.012]
2002	-0.0205	0.0870***	-0.000477	-0.0157	-0.0503***
	[0.015]	[0.019]	[0.0019]	[0.025]	[0.011]
2003	0.0143	0.121***	0.000498	-0.0825***	-0.0528***
	[0.017]	[0.022]	[0.0021]	[0.022]	[0.012]
2004	0.0372*	0.132***	0.000985	-0.124***	-0.0464***
	[0.022]	[0.025]	[0.0022]	[0.021]	[0.014]
2005	0.0296	0.157***	0.000744	-0.152***	-0.0355**
	[0.024]	[0.030]	[0.0023]	[0.021]	[0.016]
T2	-0.184***	0.0490***	0.00726***	0.177***	-0.0494***
	[0.0022]	[0.0070]	[0.0011]	[0.015]	[0.0048]
T3	-0.186***	0.00456	0.00647***	0.234***	-0.0594***
	[0.0024]	[0.0071]	[0.0013]	[0.020]	[0.0052]
T4	-0.189***	-0.0418***	0.00486***	0.298***	-0.0711***
	[0.0025]	[0.0068]	[0.0014]	[0.027]	[0.0055]
T5	-0.197***	-0.0808***	0.000855	0.357***	-0.0804***
	[0.0025]	[0.0064]	[0.0013]	[0.036]	[0.0058]
Observations					
Pseudo R_squared					

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 15a: Regression Results: Multinomial Logit Model of Principal Source of Income: Marginal Probability Effect, Men, ROE Definition of Layoff

	Men				
	ROE definition of Layoff				
Variable	Transfert	Earns.	Self-empl.	Pension income	Others
Family Status					
Single (omitted category)					
Couple no Kids	-0.0663***	0,0225	0.00744***	0.0490***	-0.0127**
	[0.0077]	[0.014]	[0.0024]	[0.018]	[0.0058]
Couple with Kids	-0.0440***	0.0681***	0.0102***	-0,0205	-0.0138*
	[0.011]	[0.020]	[0.0030]	[0.020]	[0.0078]
Lone Parent	0,0303	-0,0259	-0,00134	0,0318	-0,0349
	[0.050]	[0.054]	[0.0075]	[0.082]	[0.023]
Age Category					
45-49	-0.0433**	0.401***	0.0394***	-0.330***	-0.0663***
	[0.017]	[0.069]	[0.0075]	[0.0032]	[0.0043]
50-54	-0.0359**	0.285***	0.0332***	-0.235***	-0.0467***
	[0.015]	[0.049]	[0.0067]	[0.011]	[0.0057]
55-59	-0.0268*	0.0952***	0.0149***	-0.0582***	-0.0251***
	[0.014]	[0.027]	[0.0047]	[0.019]	[0.0064]
60-64 (omitted category)					

…Table 15a, continued

	Men				
	ROE definition of Layoff				
Variable	Transfert	Earns.	Self-empl.	Pension income	Others
Area Size of Residence					
500 000+ (omitted category)					
100 000 499 999	-0.0181	-0.0281**	-0.00673***	0.0603***	-0.00741
	[0.012]	[0.013]	[0.0013]	[0.020]	[0.0071]
30 000 - 99 999	0.0146	-0.0391***	-0.00792***	0.0490**	-0.0165**
	[0.015]	[0.015]	[0.0015]	[0.023]	[0.0075]
15 000 - 29 999	-0.0298	0.00794	-0.0018	0.0193	0.0043
	[0.019]	[0.026]	[0.0029]	[0.033]	[0.013]
1 000 - 14 999	-0.0112	-0.0163	-0.00758***	0.0365	-0.00141
	[0.014]	[0.016]	[0.0016]	[0.023]	[0.0088]
Less than 1000	-0.0099	-0.0241*	-0.00365**	0.0313*	0.00631
	[0.012]	[0.013]	[0.0017]	[0.019]	[0.0078]
Province					
NF	-0.0562**	-0.0665*	-0.00052	0.0929	0.0303
	[0.027]	[0.035]	[0.0067]	[0.066]	[0.028]
PE	-0.101***	-0.138***	0.00298	0.213	0.0226
	[0.032]	[0.045]	[0.011]	[0.14]	[0.042]
NS	-0.026	-0.0438*	-0.00679**	0.0369	0.0397**
	[0.021]	[0.025]	[0.0030]	[0.039]	[0.020]
NB	0.0241	-0.0207	-0.00272	-0.0212	0.0205
	[0.026]	[0.029]	[0.0042]	[0.035]	[0.018]
PQ	0.0164	-0.0438***	-0.00642***	-0.0188	0.0526***
	[0.013]	[0.011]	[0.0012]	[0.015]	[0.011]
ON (omitted category)					
MB	-0.00453	-0.0568**	-0.00704***	0.0439	0.0245
	[0.027]	[0.024]	[0.0026]	[0.040]	[0.020]
SK	0.0252	0.00672	-0.000987	-0.0584*	0.0276
	[0.028]	[0.030]	[0.0038]	[0.032]	[0.021]
AB	-0.0425***	0.0899***	-0.00115	-0.0942***	0.0479***
	[0.013]	[0.023]	[0.0022]	[0.018]	[0.013]
BC	0.00193	0.0334**	0.0122***	-0.0884***	0.0408***
	[0.013]	[0.015]	[0.0028]	[0.014]	[0.012]
Language					
Majority Lang. (omitted category)					
English in Qc	0.0261	0.0395	0.00187	-0.0729**	0.00538
	[0.024]	[0.031]	[0.0042]	[0.029]	[0.015]
French out. QC.	-0.0177	-0.0179	-0.00907*	0.000652	0.044
	[0.039]	[0.051]	[0.0052]	[0.066]	[0.035]

Continued…

…Table 15a, continued

Variable	Men				
	ROE definition of Layoff				
	Transfert	Earns.	Self-empl.	Pension income	Others
Economic					
E.R. Unemp.	0.00392***	0.0166	-0.00155***	0.0012	0.00202***
	[0.00061]	[0.011]	[0.00052]	[0.0021]	[0.00054]
Union Status					
Non-Union (omitted category)					
Union	-0.147***	0.334***	-0.0162***	-0.133***	-0.0383***
	[0.0038]	[0.034]	[0.00042]	[0.013]	[0.0046]
Year					
1997 (omitted category)					
1998	-0.0047	-0.00874	-0.00152	0.0439*	-0.0290***
	[0.014]	[0.016]	[0.0022]	[0.023]	[0.0066]
1999	0.000378	0.000489	-0.00513**	0.0191	-0.0148*
	[0.015]	[0.018]	[0.0021]	[0.023]	[0.0080]
2000	-0.0117	0.0177	-0.00510**	0.0173	-0.0182**
	[0.014]	[0.021]	[0.0022]	[0.025]	[0.0079]
2001	-0.0176	0.0381*	-0.00488**	0.00704	-0.0227***
	[0.014]	[0.022]	[0.0022]	[0.025]	[0.0077]
2002	-0.0132	0.0490**	-0.00559***	0.00165	-0.0319***
	[0.015]	[0.023]	[0.0021]	[0.025]	[0.0071]
2003	-0.00735	0.0493**	-0.00680***	-0.007	-0.0281***
	[0.015]	[0.024]	[0.0020]	[0.025]	[0.0075]
2004	-0.012	0.0546**	-0.00457**	-0.00771	-0.0304***
	[0.018]	[0.026]	[0.0023]	[0.027]	[0.0082]
2005	-0.00354	0.0573**	-0.00516**	-0.0198	-0.0288***
	[0.020]	[0.028]	[0.0024]	[0.028]	[0.0091]
T2	-0.113***	0.0142**	0.00578***	0.102***	-0.00896***
	[0.0036]	[0.0071]	[0.0011]	[0.010]	[0.0034]
T3	-0.123***	-0.00987	0.00497***	0.143***	-0.0154***
	[0.0040]	[0.0087]	[0.0014]	[0.015]	[0.0039]
T4	-0.122***	-0.0450***	0.00367**	0.182***	-0.0187***
	[0.0047]	[0.0096]	[0.0017]	[0.020]	[0.0046]
T5	-0.118***	-0.0754***	0.00258	0.218***	-0.0271***
	[0.0057]	[0.010]	[0.0019]	[0.025]	[0.0049]
Observations					
Pseudo R_squared					

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table 15b: Regression Results: Multinomial Logit Model of Principal Source of Income: Marginal Probability Effect, Women, ROE Definition of Layoff

	Women				
	ROE definition of Layoff				
Variable	Transfert	Earns.	Self-empl.	Pension income	Others
Family Status					
Single (omitted category)					
Couple no Kids	-0.00788	-0.0161	-0.0000909	0.00469	0.0194**
	[0.011]	[0.014]	[0.0021]	[0.014]	[0.0093]
Couple with Kids	-0.0227	0.0629**	0.00544	-0.0461*	0.000472
	[0.017]	[0.029]	[0.0038]	[0.024]	[0.014]
Lone Parent	0.0554	0.0284	0.00568	-0.0936***	0.0042
	[0.035]	[0.040]	[0.0064]	[0.030]	[0.023]
Age Category					
45-49	-0.0167	0.359***	0.0147**	-0.269***	-0.0882***
	[0.031]	[0.11]	[0.0075]	[0.0028]	[0.0064]
50-54	0.00921	0.269***	0.00682	-0.224***	-0.0610***
	[0.032]	[0.084]	[0.0061]	[0.0087]	[0.0099]
55-59	0.0275	0.0763*	0.00164	-0.0855***	-0.0199
	[0.027]	[0.044]	[0.0053]	[0.020]	[0.013]
60-64 (omitted category)					

Continued…

…Table 15b, continued

Variable	Women				
	ROE definition of Layoff				
	Transfert	Earns.	Self-empl.	Pension income	Others
Area Size of Residence					
500 000+ (omitted category)					
100 000 499 999	0.0152	-0.0302*	-0.00518**	0.0405**	-0.0203**
	[0.015]	[0.018]	[0.0022]	[0.020]	[0.0089]
30 000 - 99 999	-0.000595	-0.0404*	-0.0125***	0.0669***	-0.0134
	[0.017]	[0.021]	[0.0017]	[0.025]	[0.011]
15 000 - 29 999	0.00824	0.00722	-0.0133***	0.0378	-0.0399**
	[0.034]	[0.049]	[0.0031]	[0.047]	[0.017]
1 000 - 14 999	0.00961	-0.0434**	-0.00518**	0.0321	0.00687
	[0.019]	[0.020]	[0.0026]	[0.023]	[0.014]
Less than 1000	0.00482	-0.0489***	0.002	0.0558***	-0.0137
	[0.015]	[0.017]	[0.0030]	[0.021]	[0.010]
Province					
NF	0.0252	-0.0692	-0.0192***	0.075	-0.0118
	[0.053]	[0.056]	[0.0022]	[0.077]	[0.030]
PE	-0.0727	0.105	0.00963	-0.0431	0.00129
	[0.052]	[0.14]	[0.018]	[0.087]	[0.051]
NS	0.0172	0.0163	-0.00244	-0.03	-0.000961
	[0.031]	[0.044]	[0.0055]	[0.036]	[0.022]
NB	0.0129	0.016	-0.0074	-0.00545	-0.0161
	[0.038]	[0.054]	[0.0048]	[0.044]	[0.023]
PQ	0.0134	-0.0276	-0.00776***	0.0323	-0.0104
	[0.016]	[0.018]	[0.0020]	[0.021]	[0.010]
ON (omitted category)					
MB	-0.0627**	0.0747	-0.00927**	0.0484	-0.0512***
	[0.028]	[0.064]	[0.0042]	[0.052]	[0.016]
SK	-0.0272	0.042	0.0153*	-0.0846***	0.0544*
	[0.029]	[0.045]	[0.0088]	[0.029]	[0.031]
AB	-0.0486***	0.0865***	0.00859*	-0.0759***	0.0295*
	[0.016]	[0.032]	[0.0044]	[0.019]	[0.017]
BC	0.00316	0.0372*	0.0203***	-0.0794***	0.0188
	[0.015]	[0.021]	[0.0046]	[0.014]	[0.013]
Language					
Majority Lang. (omitted category)					
English in Qc	0.0182	0.019	-0.00224	-0.048	0.013
	[0.032]	[0.045]	[0.0055]	[0.033]	[0.022]
French out. QC.	-0.0213	-0.0938*	0.0071	0.138*	-0.0304
	[0.042]	[0.055]	[0.012]	[0.081]	[0.027]

Continued…

…Table 15b, continued

Variable	Women				
	ROE definition of Layoff				
	Transfert	Earns.	Self-empl.	Pension income	Others
Economic					
E.R. Unemp. Rate	0.00303***	-0,00725	-0,000142	0,000932	0,00086
	[0.0010]	[0.016]	[0.00054]	[0.0024]	[0.00095]
Union Status					
Non-Union (omitted category)					
Union	-0.170***	0.332***	-0.0162***	-0.0888***	-0.0573***
	[0.0045]	[0.056]	[0.00079]	[0.017]	[0.0073]
Year					
1997 (omitted category)					
1998	-0.0322**	-0.0358*	-0.00547**	0.0911***	-0,0176
	[0.015]	[0.021]	[0.0027]	[0.029]	[0.011]
1999	-0.0324**	-0,0278	-0.00588**	0.0856***	-0.0196*
	[0.016]	[0.024]	[0.0029]	[0.031]	[0.011]
2000	-0.0514***	-0,0219	-0.00697**	0.103***	-0.0227*
	[0.015]	[0.026]	[0.0028]	[0.034]	[0.012]
2001	-0.0728***	-0,00479	-0.00595**	0.112***	-0.0282**
	[0.013]	[0.028]	[0.0030]	[0.036]	[0.011]
2002	-0.0593***	-0,00154	-0.00850***	0.106***	-0.0369***
	[0.015]	[0.029]	[0.0027]	[0.037]	[0.011]
2003	-0.0525***	-0,00177	-0.0101***	0.108***	-0.0440***
	[0.015]	[0.030]	[0.0024]	[0.037]	[0.010]
2004	-0.0515***	-0,0139	-0.0109***	0.117***	-0.0405***
	[0.018]	[0.030]	[0.0024]	[0.040]	[0.011]
2005	-0.0652***	-0,00657	-0.0122***	0.120***	-0.0357***
	[0.018]	[0.033]	[0.0023]	[0.043]	[0.013]
T2	-0.142***	0.0509***	0.00952***	0.0868***	-0,00543
	[0.0034]	[0.011]	[0.0019]	[0.011]	[0.0052]
T3	-0.160***	0.0329**	0.0170***	0.121***	-0.0112*
	[0.0033]	[0.013]	[0.0028]	[0.015]	[0.0060]
T4	-0.162***	-0,00489	0.0196***	0.149***	-0,00201
	[0.0037]	[0.014]	[0.0036]	[0.019]	[0.0073]
T5	-0.161***	-0.0397***	0.0188***	0.183***	-0,00124
	[0.0043]	[0.015]	[0.0041]	[0.023]	[0.0084]
Observations					
Pseudo R_squared					

Standard errors in brackets
*** p<0.01, ** p<0.05, * p<0.1

Table A1: Sample Exclusions

	1996	1997	1998	1999	2000	2001	2002
Full LAD	4186120	4255015	4319175	4412095	4483410	4594920	4628290
Filed return	2615045	2664310	2681825	2708715	2769995	2774175	2798765
	(62.47)	(62.62)	(62.09)	(61.39)	(61.78)	(60.37)	(60.47)
Age range	1038425	1082915	1121050	1165545	1221775	1259520	1306645
	(24.81)	(25.45)	(25.96)	(26.42)	(27.25)	(27.41)	928.23)
Still Living	1033935	1078590	1116765	1161135	1217245	1254930	1301955
	(24.70)	(25.35)	(25.86)	(26.32)	(27.15)	(27.31)	(28.13)
Residing in Province	1030290	1074800	1112890	1157000	1212680	1250200	1296740
	(24.61)	(25.26)	(25.77)	(26.22)	(27.05)	(27.21)	(28.02)
Exclude Self-Employed	870320	904555	932900	967160	1011575	1042635	1082960
	(20.79)	(21.26)	(21.60)	(21.92)	(22.56)	(22.69)	(23.40)
Earnings>15k	469630	483760	500120	517020	540300	571045	603245
	(11.22)	(11.37)	(11.58)	(11.72)	(12.05)	(12.43)	(13.03)
Exclude receipt of Transfer Income	318485	332280	346465	362900	383465	409510	432170
	(7.61)	(7.81)	(8.02)	(8.23)	(8.55)	(8.91)	(9.34)
Non-Student	316345	330250	344445	360865	381360	407380	430195
	(7.56)	(7.76)	(7.97)	(8.18)	(8.51)	(8.87)	(9.29)
LAD-EI Check For regular EI	314685	328415	342525	359275	379810	405165	427970
	(7.52)	(7.72)	(7.93)	(8.14)	(8.47)	(8.82)	(9.25)

Table A2: Estimated layoff Rates Based on Event of Receipt of EI Benefits (Proportion of Population Between Ages 45 and 64): Cross Tabulated Means

	Men	Women	Men	Women
Variable	STVC definition of Layoff		ROE definition of Layoff	
Raw Rate				
1996	2,0	2,7	2,3	2,0
1997	1,8	2,9	2,2	2,2
1998	1,8	2,3	2,4	1,9
1999	1,6	1,9	2,0	1,9
2000	1,4	1,7	2,3	2,0
2001	2,0	1,8	3,2	2,4
2002	1,9	1,9	2,8	2,4
Family Status				
Single	2,2	2,2	2,7	2,1
Couple No Kids	1,9	2,3	2,6	2,2
Couple with Kids	1,5	1,4	2,2	1,9
Lone parent	2,1	1,7	2,5	2,3
Age				
45-49	1,6	1,8	2,3	2,0
50-54	1,6	2,0	2,3	2,1
55-59	2,1	2,7	2,8	2,3
60-64	2,9	3,0	3,2	2,5
Province				
NF	2,1	2,5	2,6	2,1
PE	2,0	1,6	2,8	1,9
NS	2,1	2,2	2,3	2,0
NB	1,9	2,1	2,5	1,8
PQ	2,1	2,6	2,3	2,0
ON	1,7	2,1	2,7	2,4
MB	1,4	1,5	1,9	1,9
SK	1,4	1,3	2,3	1,7
AB	1,5	1,9	2,3	1,8
BC	1,9	2,0	2,7	2,3

Continued…

…Table A2, continued

Variable	Men	Women	Men	Women
	STVC definition of Layoff		ROE definition of Layoff	
Minority Language				
English in QC	2,3	2,8	2,2	2,2
French out. QC	1,6	1,7	2,3	2,0
Majority Lang.	1,8	2,1	2,5	2,1
Language Canada				
English	1,7	2,0	2,5	2,2
French	2,0	2,6	2,3	1,9
Area Size of Residence				
500 000+	1,7	2,1	2,1	2,0
100 000 - 499 999	1,8	2,0	2,9	2,3
30 000 - 99 999	1,9	2,3	2,7	2,2
15 000 - 29 999	2,2	2,2	3,2	2,5
1 000 - 14 999	2,0	2,2	3,1	2,2
Less than 1000	2,2	2,5	3,2	2,4
Union Status				
non-union	2,2	3,0	2,2	2,4
union	1,4	1,2	2,8	1,9

Table A3: Regression Results: Discrete Choice Model of Layoff Based on Event of Receipt of EI Benefits: Estimated Coefficients

Variable	Men	Women	Men	Women
	STVC definition of Layoff		ROE definition of Layoff	
Constant	-3.563**	-3.364**	-4.023**	-3.777**
	[0.043]	[0.047]	[0.043]	[0.056]
Family Status				
Single (omitted category)				
Couple no Kids	-0.230**	-0,017	-0.087**	-0,001
	[0.019]	[0.017]	[0.019]	[0.020]
Couple with Kids	-0.344**	-0.304**	-0.180**	-0.070**
	[0.021]	[0.025]	[0.021]	[0.027]
Lone Parent	0,033	-0.104*	-0,083	0.112**
	[0.074]	[0.042]	[0.076]	[0.042]
Age Category				
45-49	-0.557**	-0.369**	-0.308**	-0.172**
	[0.022]	[0.025]	[0.022]	[0.029]
50-54	-0.533**	-0.270**	-0.333**	-0.172**
	[0.021]	[0.024]	[0.021]	[0.029]
55-59	-0.329**	-0,042	-0.143**	-0.059*
	[0.021]	[0.025]	[0.021]	[0.029]
60-64 (omitted category)				

…Table A3, continued

Variable	Men	Women	Men	Women
	STVC definition of Layoff		ROE definition of Layoff	
Area Size of Residence				
500 000+ (omitted category)				
100 000 499 999	0.098**	0.079**	0.349**	0.141**
	[0.019]	[0.021]	[0.018]	[0.024]
30 000 - 99 999	0.114**	0.164**	0.243**	0.132**
	[0.023]	[0.025]	[0.023]	[0.030]
15 000 - 29 999	0.246**	0.157**	0.434**	0.276**
	[0.038]	[0.044]	[0.037]	[0.049]
1 000 - 14 999	0.183**	0.130**	0.420**	0.149**
	[0.023]	[0.026]	[0.023]	[0.031]
Less than 1000	0.248**	0.259**	0.483**	0.256**
	[0.022]	[0.024]	[0.021]	[0.028]
Province				
NF	-0.304**	-0,057	-0.656**	-0.367**
	[0.063]	[0.070]	[0.061]	[0.082]
PE	-0.221*	-0.448**	-0.332**	-0.401**
	[0.108]	[0.122]	[0.109]	[0.143]
NS	-0,039	-0,06	-0.474**	-0.304**
	[0.040]	[0.045]	[0.043]	[0.051]
NB	-0.117**	-0.129*	-0.381**	-0.449**
	[0.045]	[0.051]	[0.044]	[0.061]
PQ	0.096**	0.293**	-0.265**	-0.207**
	[0.020]	[0.021]	[0.020]	[0.026]
ON (omitted category)				
MB	-0.115**	-0.188**	-0.256**	-0.163**
	[0.040]	[0.042]	[0.041]	[0.048]
SK	-0.224**	-0.417**	-0.280**	-0.387**
	[0.048]	[0.052]	[0.045]	[0.059]
AB	-0.091**	-0,02	0	-0.235**
	[0.026]	[0.026]	[0.025]	[0.031]
BC	0,04	-0,036	-0.078**	-0.060*
	[0.021]	[0.023]	[0.021]	[0.027]

…Table A3, continued

Variable	Men	Women	Men	Women
	STVC definition of Layoff		ROE definition of Layoff	
Language				
Majority Lang. (omitted category)				
English in Qc	0,02	-0.123**	0.088*	0.118*
	[0.037]	[0.038]	[0.041]	[0.050]
French out. QC.	-0,142	-0,11	-0.226**	-0,049
	[0.075]	[0.082]	[0.072]	[0.091]
Economic				
E.R. Unemploment Rate	0.050**	0.036**	0.040**	0.017**
	[0.004]	[0.004]	[0.004]	[0.005]
Union Status				
Non-Union (omitted category)				
Union	-0.491**	-0.933**	0.266**	-0.206**
	[0.014]	[0.015]	[0.013]	[0.017]
Year				
1996 (omitted category)				
1997	-0.089**	0.085**	0,001	0.102**
	[0.024]	[0.023]	[0.022]	[0.025]
1998	-0.053*	-0.132**	0.123**	-0,012
	[0.025]	[0.025]	[0.022]	[0.027]
1999	-0.161**	-0.316**	-0,016	-0,017
	[0.026]	[0.027]	[0.024]	[0.028]
2000	-0.267**	-0.411**	0.125**	0,049
	[0.027]	[0.028]	[0.024]	[0.029]
2001	0.107**	-0.343**	0.472**	0.214**
	[0.025]	[0.027]	[0.022]	[0.028]
2002	0,033	-0.316**	0.308**	0.197**
	[0.024]	[0.026]	[0.022]	[0.027]
Observations	1 427 700	1 1258 800	1 427 700	1 1258 800
Pseudo R_squared	0,02	0,03	0,01	0

Robust standard errors in brackets
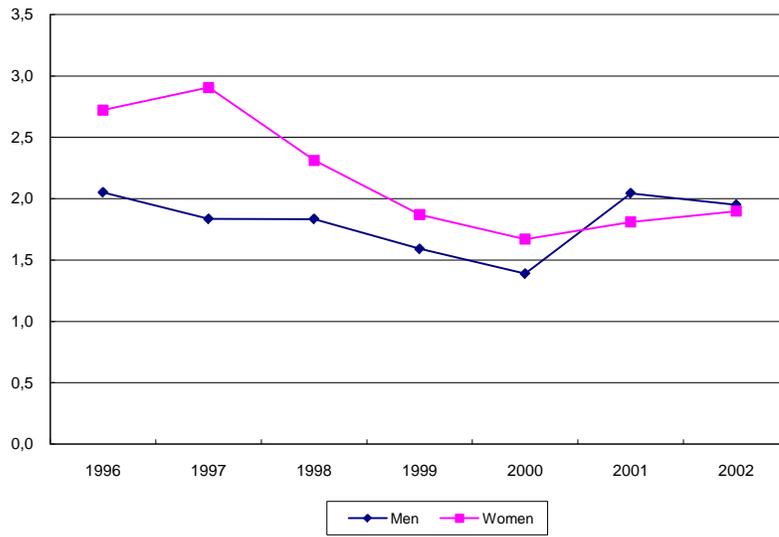
* significant at 5%; ** significant at 1%

Figure 1) SV

Figure 1) Roe