The Impact of the Allowable Earnings Provision on EI Dependency

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The Employment Insurance (EI) program, a cornerstone of Canada's social safety net, provides financial assistance to workers who are temporarily unemployed with the objective of helping them rejoin the labour market. Last year, the program paid over $9 billion in benefits and almost 75 per cent of this amount was distributed in the form of regular benefits — benefits other than those paid for maternity, parental, or sickness leave, or paid to fishers and to persons participating in various types of employment and skills development programs.

The EI program contains a number of rules and provisions that establish the amount of support provided to workers who lose their job. The current regime is the result of considerable debate about the rationale and efficacy of alternative approaches that has led to successive reforms of EI rules and provisions over the years. At present, the eligibility and entitlement rules for determining the amount and duration of EI benefits reflect individuals' degree of attachment to the labour market, their earnings, as well as the regional labour market conditions they face. To some extent, EI entitlement also reflects family circumstances since additional benefits are available for EI claimants in low-income families with children. In 1996 the EI reform introduced provisions intended to reduce the benefits paid to those who made frequent recourse to EI, but most of those changes were repealed in 2001. Individuals' past use of the program now only impacts on the amount that higher-income claimants have to repay once their annual income exceeds a certain threshold.

Two specific provisions of the EI program are intended to encourage workers to accept available jobs without adversely affecting their EI entitlement. The "small weeks" provision allows EI claimants to exclude low-earnings weeks of work prior to a claim (i.e. weeks of work with earnings of less than $150) for the purpose of calculating their benefits. The "allowable earnings" provision authorizes individuals to earn up to $50 a week while on an EI claim, or 25 per cent of their EI weekly entitlement, whichever is higher, without seeing their benefits clawed back. Any additional income earned in excess of this threshold is clawed back at a rate of 100 per cent. If earnings while on claim exceed 125 per cent of weekly EI entitlement, claimants receive no EI benefit during that week but the full amount of weekly EI entitlement can be postponed until the end of the entitlement period, thereby extending the duration of the claim.

In this working paper, authors David Gray and Shawn de Raaf provide the first in-depth analysis of the way in which claimants pursue part-time and temporary work

opportunities while maintaining an active EI claim and the relationship between working while on claim and their use of EI. They find that claimants who work while on EI tend to have shorter claim spells, suggesting that claimants who accept part-time work opportunities become less reliant on EI in the short term. However, working part time while on claim also tends to be associated with greater EI dependency over the long term, suggesting that this provision is not necessarily resulting in workers gaining skills and work experience that lead to full-time re-employment. Instead, the incentive to work appears to be encouraging them to pursue further non-standard (i.e. part-time or part-year) work opportunities. Since temporary work not only tops up the income received from current EI benefits, but can also be used to gain further EI eligibility and entitlement, the provision may represent an incentive towards unstable, non-standard work mixed with short, intermittent spells of EI receipt.

These results are important for policy purposes, especially since other income support programs, such as provincial social assistance, incorporate similar earnings exemption provisions. By giving incentive to work mostly to claimants who can find a full week of work, the design of the EI allowable earnings provision may be inadequate, as suggested by HRDC in its latest EI monitoring and assessment report. Alternative design options can be considered in order to improve the efficacy of the allowable earnings provision in helping unemployed individuals make a successful transition back into the workforce and attain greater self-sufficiency in the short and longer term. For example, one way to encourage claimants to work during their claim would be to allow them to defer any weekly EI benefit that is clawed back until after the end of their entitlement period. This option would extend to all claimants who maintain some attachment to the labour market, the provision already available to claimants who earn enough to completely offset their EI benefits. The impact of this alternative design on work and EI use patterns could be evaluated through a pilot project in selected regions or for selected groups of workers.

This paper is part of the Earnings Supplement Project's ongoing research initiatives, which focus on providing empirical and analytical evaluations of key issues essential to formulating policy responses to the needs of workers who face barriers to secure, year-round employment and who must rely on EI benefits. The ESP was originally implemented in 1995 as a demonstration project to test the use of a financial incentive as a way of hastening re-employment. It has now developed into a broader program of research that seeks to provide answers to three main questions: Who are the workers who do not have secure, year-round employment and depend on EI benefits? What barriers to standard employment do they face? What can be done to better address their needs? This study by David Gray and Shawn de Raaf is the first of a series of studies to be published over the next year as part of SRDC's working papers series providing new evidence on work and EI use patterns.

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Abstract

The Employment Insurance (EI) program has long permitted claimants to accept work opportunities while maintaining an active EI claim. Under a set of regulations often called the allowable earnings provision, claimants are required to report any part-time earnings in a week during which they claim benefits. Any earnings that are over 25 per cent of the claimant's weekly benefit rate or $50, whichever is higher, are deducted on a dollar-for-dollar basis from that week's benefit amount. If claimants have high enough earnings such that their entire benefit amount is clawed back, or if they declare that they are working full time in a particular week, then that week of benefit entitlement is retained and may be claimed at a later time within their one-year benefit period.

Until recently, we have known very little about the extent to which EI claimants make use of the allowable earnings provision, or about the relationship between working while on claim and long-term EI dependency. One common assumption is that, by permitting claimants to accept available part-time or temporary work opportunities, social security programs such as EI enable claimants to make faster transitions to full-time and full-year work. In this paper, we utilize a unique dataset that combines survey and administrative data to examine the validity of this view. We find that the majority of EI claimants make use of the allowable earnings provision. We also find that use of the provision is associated with fewer weeks of EI benefit receipt per claim.

However, we do not find that working while on claim leads to a reduction in long-term EI dependency. In fact, claimants who are most likely to pursue work opportunities while maintaining an active claim also tend to be claimants who frequently rely on EI. We therefore infer that while the allowable earnings provision encourages claimants to replace more of their weeks of benefits with weeks of work, working while on claim may not be giving claimants the skills and work experience that lead to full-time, full-year re-employment.

Introduction

The Canadian Unemployment Insurance (UI) program, now called the Employment Insurance (EI) program, has long permitted claimants to earn part-time wages while claiming EI benefits. Many US states have similar provisions for their UI regimes, allowing claimants to work part time and continue to receive at least partial benefits. In both countries, these provisions typically permit labour market earnings up to a certain threshold without any benefit penalty being assessed. In Canada this provision is often labelled the "allowable earnings" provision (called the "earnings disregard rule" in US literature), where all earnings below a certain threshold are not considered in determining the benefit entitlement for that particular week. After that threshold has been reached, however, the weekly EI benefit entitlement is reduced dollar for dollar with labour market earnings until benefits are reduced to zero. Once this occurs, the week of entitlement is suspended, effectively extending the EI claim by one week.

In their recent study of EI claims patterns in Canada, Gray and Sweetman (2001) indicate that working while on EI claim appears quite widespread among claimants, although there is great variation in the extensiveness to which claimants make use of the provision. Similarly, Human Resources Development Canada's recent EI monitoring and assessment reports have found that the majority of claimants tend to work at least once during the course of their claim, and that the amount of work claimants report tends to be related to their past use of the EI program. HRDC's preliminary analysis of the use of this provision indicates that the way in which claimants make use of the provision is sensitive to its design. Human Resources Development Canada (HRDC) goes as far as to suggest that the provision "may be flawed as claimants appear to be hesitant to work while on claim unless they can reduce their benefits to zero and keep that week of entitlement for later use." (HRDC, 2002, p. 23) Sensitivity to the design of the provision appears to increase with frequency of EI use, as frequent claimants tend to be the least likely to accept work if it means that they will receive partial EI benefits.

The pervasiveness of claimants' use of the allowable earnings provision, the relationship of its take-up to past EI history, as well as its questionable efficacy suggest that the allowable earnings provision is a rich topic warranting further research. However, with the notable exceptions of Roy (2001) and McCall (1997), little or no attention has been paid to this facet of the EI system in the current Canadian literature. Furthermore, with the exceptions of McCall (1996) and Kiefer and Neuman (1979), the US literature does not treat this topic. This paper aims to fill the research and policy analysis gap by providing empirical analysis drawn from Canadian administrative data on EI claims histories. The administrative data set includes information on reporting of part-time earnings while on claim, which is a unique feature making it well-suited for researching this topic.

There are three policy-oriented questions that we address in this paper. First, we analyze the extent of use of this provision and the attributes of the EI claimants that resort to it. In order to shed light on the factors that determine the take-up rate of the allowable earnings provision, there is a descriptive and an econometric analysis of the decision to work while

on claim. This information on the likelihood of working while on claim is relevant for determining the scope of application of the allowable earnings provision.

The next two major policy questions concern the impact of the allowable earnings provision on EI receipt. To this end, we estimate a series of econometric models of the impact of working while on claim on EI receipt. Given that the stated objective of this provision is to create incentives for EI recipients to accept part-time work with an eye towards a transition to steady, full-year employment, one important evaluative issue is the impact of working while on claim on the number of weeks of EI receipt. According to HRDC, this provision is considered an active measure that "encourages people to work while on EI, keep some attachment to the workforce, and maximize their opportunity to work full time." (HRDC, 2001, p. 21) Part of the descriptive and econometric analysis is focused on this issue.

In addition to examining the impact of the allowable earnings provision in the short term, we also investigate the impact on EI use over a longer time period. It is possible that this provision creates perverse incentives for EI claimants to accept a series of precarious, short-term, intermittent jobs as opposed to aspiring to more stable and longer-term employment. Such an employment pattern might serve to regain entitlement for subsequent EI claims, thus prolonging a pattern of frequent use of EI. This possibility is examined with the aid of econometric models of the frequency of EI claims. To our knowledge, equations modelling the frequency of EI claims observed over a long interval have never been estimated using Canadian data.

Our results indicate that frequent claimants have a much greater propensity to make use of the allowable earnings provision. As a result of this strong selection effect, we find a positive association between working while on claim and the incidence of EI use. While the empirical analysis does not take full account of the joint determination of the decision to work while on claim and to make a claim for EI benefits, the preliminary evidence suggests that the provision does not appear to reduce long-term dependency of the EI regime. On the other hand, there is some evidence that it does succeed in meeting one of the stated objectives, namely reducing the number of weeks of EI receipt for a given claim.

The Allowable Earnings Provision

Since the early 1970s, program regulations have permitted EI claimants to retain a portion of any part-time earnings received during their 12-month benefit period (except for the two-week waiting period) by not deducting the full amount of their earnings from the amount of EI benefits to be paid for that week. The portion of earnings that is in excess of 25 per cent of the weekly benefit amount is clawed back at a rate of 100 per cent. Therefore, no EI benefit is payable when the earnings for a benefit week are at least 125 per cent of the amount of the weekly benefit. In the case where an individual is entitled to a weekly benefit amount of less than $200, a flat allowable earnings amount of $50 (i.e. 25 per cent of $200) applies, and any earnings over the $50 threshold are deducted dollar for dollar against the EI benefit entitlement.[1] That particular regulation allows claimants with low benefit rates to have slightly higher earnings without penalty. If the work is considered to be full-time (35 or more hours per week), no EI benefit can be received regardless of the amount of earnings.

If claimants do not receive benefits during a particular week due to full-time work or high part-time earnings, they remain entitled to claim their benefits at a later time within the normal one-year benefit period, thereby extending the duration of their EI claims. Therefore, work while on claim does not ultimately result in any loss of benefits for a particular week if the benefits have been suspended for that week and are renewed at a later time. These earnings also count as insurable earnings that can be used to attain entitlement for a subsequent EI claim.

The allowable earnings provision is designed to address a disincentive effect that is common to all social insurance regimes and is tied to the fundamental trade-off between affording adequate income maintenance to recipients and ensuring (for those with employment opportunities) incentives to work. According to standard labour supply theory, it is thought that applying a 100 per cent implicit tax rate on earnings erodes the incentive of a beneficiary of unemployment insurance, social assistance, workers' compensation, or old-age insurance to accept work.[2] By clawing back labour market earnings at a high rate, there is a risk that social insurance regimes reinforce dependency. Similar to a negative income tax scheme, the allowable earnings provision modifies the "all or nothing" incentive structure inherent in many social insurance programs that some work activity may occur over the course of an active EI claim.[3] On the other hand, the complete elimination of any deductions applied to benefits when earnings approach the level of claimants' pre-unemployment earnings would seriously undermine the basis of a

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[1] When the Unemployment Insurance program was overhauled in 1996, the *Employment Insurance Act* contained this provision in subsection 19 under the heading "earnings in periods of unemployment." The flat amount of $50 that applies in cases of low weekly benefits was the only change to the provision.

[2] For a thorough and accessible illustration of how that model is applied to social insurance programs, along with a survey of the empirical literature in Canada, see Chapter 3 of the labour economics textbook of Benjamin, Gunderson, and Riddell (2002). The thorough discussion of the policy issues that draws from the experiences of several countries is in OECD (1997).

[3] Although the negative income tax scheme has seldom been implemented in practice, most labour economics textbooks treat it in their sections on applications of labour supply.

social insurance program, whose purpose is to indemnify claimants for earnings losses. For that reason, unemployment insurance and social assistance programs typically have thresholds for earnings above which the recipient loses any entitlement to benefits.

From a public policy perspective, there are several potential advantages of the allowable earnings provision. First, it could improve the efficiency of the local labour market. Short-term employment relationships entered voluntarily by firms and EI claimants that might otherwise be hindered by disincentive effects can materialize, rendering both parties better off. To the extent that vacant short-term jobs are filled, the allocation of labour becomes more efficient. Second, compared with the counterfactual case of the absence of work while on an EI claim, EI expenditures are reduced anytime the EI claim in progress is shortened, or the amount of EI benefits is reduced during some weeks. Third, the allowable earnings provision has the potential to raise the recipient's total income over the course of the EI claim. None of these conjectures have been treated in the scant literature that exists on this topic.

The potential advantage of the allowable earnings provision that has received the most attention in the literature is that it is thought to strengthen the claimant's incentive to search for part-time work. In the US context, McCall (1996) provides persuasive empirical evidence that the earnings disregard rule increases the probability of accepting part-time employment as opposed to full-time employment, *given that an EI claim is in progress*. A critical issue then arises, namely the potential impact of drawing on the provision on the subsequent employment or the career path of the worker. Ideally, these part-time employment relationships, despite the fact that they are often low paying and unattractive, can serve as a transition to full-time, relatively stable, and perhaps even full-year employment. It might be posited that EI claimants making use of this provision can gain valuable job experience, human capital, and employer contacts, and perhaps avoid skill depreciation, making them more attractive to potential employers in the future.

On the other hand, it is possible that the type of job that is involved when EI claimants make use of the allowable earnings provision gives rise in some instances to a less desirable employment profile. Rather than paving the way to full integration into the mainstream labour market, the working while on claim experience can engender a recurring pattern of seasonal and/or unstable and fragmented work patterns, coupled with subsequent spells of EI use. This scenario is more likely to occur in regions with weak labour markets coupled with high EI entitlement provisions[4] where research has indicated that the parameters of the EI program have been internalized into the employment patterns of the local labour market.[5] Dependency on EI could actually be reinforced by the allowable earnings

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[4]"High entitlement" regions in the context of the EI regime refer to those administrative regions with regional extended benefits and variable entrance requirements. In regions with the highest local unemployment rate (13 per cent and over), the entitlement can be as high as 45 weeks and entry can be attained with a minimum of 420 hours of insurable earnings over a preceding 12-month period. In contrast, in regions with the lowest local unemployment rates (6 per cent or lower), benefit entitlement can range from 14 to 36 weeks, and entry can be attained with a minimum of 700 hours of insurable earnings.

[5]For instance, see Baker and Rea (1996); Green and Riddell (1997); and Green and Sargent (1998). In addition, Green (1994), May and Hollett (1995), Nakamura, Cragg, and Sayers (1994), Nakamura (1995), Nakamura (1996), and Nakamura and Diewert (1997) all argue that in regions with high unemployment rates, Canada's EI regime functions more as a long-term income maintenance program than as a conventional unemployment insurance program.

provision if frequent EI claimants gain only additional income from working a series of short-term jobs instead of job-related skills that could widen their opportunities for obtaining full-year, standard work. The empirical analysis in this paper consists of a preliminary attempt to address this ambiguity regarding the impact of working while on claim on EI use patterns.

Data Sources

The sample for this analysis is drawn from a special Statistics Canada survey created in 1998 called the "Survey on the Repeat Use of Employment Insurance" (SRUEI), which has a purely cross-sectional structure. Its target population is all workers who initiated a claim for regular EI benefits and received at least $1 in benefits sometime over the course of 1996. The sampling framework is based on a flow rather than a stock of EI claimants, and the unit of observation for this study is the individual rather than the event of an EI spell.[6] The sample consists of 30,000 observations stratified by province and by the number of years of EI receipt between 1992 and 1996. The weight variable that is contained in the SRUEI assigns a value to each individual based on that sampling scheme. In our empirical analysis, the weights are applied to all estimation procedures in order to render the estimating sample representative of the population of EI claimants during the year 1996. If survey weights are not applied, frequent claimants — defined as those who received regular EI benefits in at least three years over the 1992 to 1996 period — would be overrepresented in the sample. Of the 30,000 claimants, 75.3 per cent responded and were interviewed, resulting in a final estimating sample of 22,586 respondents.

The SRUEI not only captures demographic characteristics of claimants, but it also includes a number of questions regarding their 1997 labour market experience. Note that the year 1997 follows the year (1996) in which all respondents filed an EI claim. The SRUEI also has information regarding the respondents' attitudes toward various aspects of their employment situation and the EI program. A set of questions also probed claimants regarding their job-search activities in 1997 if they found themselves once again unemployed in that year.

For the purposes of this study, the data from the SRUEI has been combined with respondents' EI administrative records, providing continuous data on their EI program activity over a long interval spanning 1992 to 1998. The source of the administrative data is the Status Vector (STVC) file that is maintained by HRDC. This file contains weekly indicators of whether or not a claim was active, whether or not benefits were paid, the type of benefits received, and whether or not any earnings were reported. While the file indicates the existence of earnings, the amount of earnings is not reported. It also includes annual aggregates of the amount of paid regular and non-regular EI benefits. It is thus possible to observe on a weekly basis all transitions into and out of EI use as well as all weeks during which earnings are declared. Our estimating strategy is to link the latter to EI receipt outcomes.

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[6]For the purpose of assessing dynamic labour market behaviour from longitudinal data, as we do in this paper, the flow-based data has some advantages over stock-based data. As Ridder (1984) explains, there are several complications involved in measuring employment or unemployment spells from stock-based data. First, the inflow rate into the labour market state of interest (i.e. entry into the EI regime in our case) should be constant. If that condition does not hold, then the probability that an individual is sampled depends on the rate at which spells commence during the period preceding the sampling date (i.e. inflow rate dependence). Second, there is the issue of length-biased sampling, which means that as the time that elapses between sampling dates grows longer, there is a diminished probability that shorter spells will be sampled at all. The implication for both of these sampling issues is that the stock-based sample risks being a selected sample and thus loses the quality of representativeness.

Although the prior work by Roy (2001) is also based on the STVC administrative data files, his analysis is based on a sample drawn from a stock sample of EI claimants. His definition of working while on claim is limited to whether or not claimants declared earnings for at least one week over their current claim.[7] In contrast, our analysis includes information on the precise number of weeks of declared earnings. While we reach some of the same conclusions as Roy, the sampling framework and the empirical approach are quite different, complicating direct comparisons of our findings.

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[7]Specifically, Roy draws a random sample of the claimants who had a claim in progress on 15 January 1996, and then tracks their weekly activity in the EI regime backwards to the start of the claim and forwards to the end of the claim.

Preliminary Analysis

Claimants must report all earnings if benefits are claimed for a particular week of unemployment. Any part-time earnings over 25 per cent of an individual's weekly Employment Insurance (EI) benefit will effectively reduce the weekly benefit payable dollar for dollar up to the point where the entire benefit is clawed back (i.e. earnings exceeding 125 per cent of the EI benefit due for that week). A claimant who declares that he or she worked full time is ineligible to receive benefits, regardless of the amount of earnings received. Earnings are reported in the administrative record, as well as the partial benefit (if any) that is paid out. In the case in which the individual elects not to claim benefits by not submitting a report for that particular week, the claim is still active but with suspended benefits as long as further entitlement exists and the claimant receives benefits at a later time. A week of suspended benefits effectively extends the claim by one week as long as the benefits are claimed within the one-year period after the claim is initiated. Because a week of partial benefits is considered a paid week and cannot be postponed, it is often advantageous to postpone the full weekly benefit rather than receive a week of partial EI benefits.

In the course of our research, we have also analyzed the extent to which claimants had postponed benefits by not submitting weekly reports to HRDC — situations for which the claim was considered active, but neither EI benefits nor work was reported. These weeks of suspended benefits can be added to the number of weeks of declared work while on claim to arrive at a rough approximation of the extent of both part- and full-time work while on claim. However, this study is concerned with the extent to which claimants supplemented their EI benefits with declared earnings, thereby making explicit use of this provision. We do not treat the extent to which benefits were suspended due to the claimant not submitting weekly reports, which may be due to the claimant either returning to full-time work or preferring to keep the entitlement for later use. Due to the nature of our dataset, we observe in many cases a high number of weeks of active claim with neither benefits nor declared earnings, suggesting that the claimants initially filed an EI claim but did not collect the benefits because they were re-employed within a very short period of time.

It is worth noting that given these program regulations, EI claimants have an incentive to under-report earnings. We should emphasize that in our data set, we observe the act of declaring earnings only — not working itself — so the act of working while on claim is under-estimated. This problem of reporting earnings with error is a common one in empirical analysis.

We adopt a two-pronged strategy in our descriptive analysis of the use patterns for the allowable earnings provision. First, we examine several aspects of the claim filed in 1996. Due to the sampling scheme for the SRUEI, all individuals in our sample initiated an EI claim in that year. This feature renders it a complete cross-section of the population of regular EI claimants in 1996. Second, we exploit the longitudinal dimension of our data set in order to observe the EI use patterns for the same group over the 1992 to 1996 interval. We can thus analyze their EI claims history, including recourse to the allowable earnings provision, over a longer time — potentially spanning several claims.

The first issue we address is the stage of the EI claim during which earnings are declared. The 1996 claim affords a good opportunity to examine when claimants first work while on claim and the incidence of work at each stage of the claim. We analyze these timing questions using graphical analysis.

The graph in Figure 1 displays the histogram for the distribution of all of the claimants who made use of the allowable earnings provision on at least one occasion during their 1996 claim, which represents 75.6 per cent of all males and 75.3 per cent of all females.[8] The graph illustrates the number of elapsed weeks since the beginning of their claim (rather than calendar weeks) at which time they *first* made use of the allowable earnings provision. (For the purposes of this exercise, the beginning of the claim is considered the first week following the mandatory waiting period.) This diagram can be interpreted as a hazard profile of the conditional probability of exiting the state of receipt of EI benefits without declared earnings to the state of working while on an EI claim. The value on the vertical axis indicates the share of those who declared their first week of earnings (among those who worked at all during their claim) at a given stage of their 1996 claim; these shares sum to 100 per cent. It would appear that the timing of working while on claim is related more to the stage of the EI claim rather than the time of the calendar year. The graph indicates that a strong majority of these EI claimants resorted to the allowable earnings provision at a very early stage of their claim, as over half first reported earnings in the first week following their two-week waiting period.

Figure 1: Timing of the Initiation of Work Relative to the Beginning of the 1996 Claim

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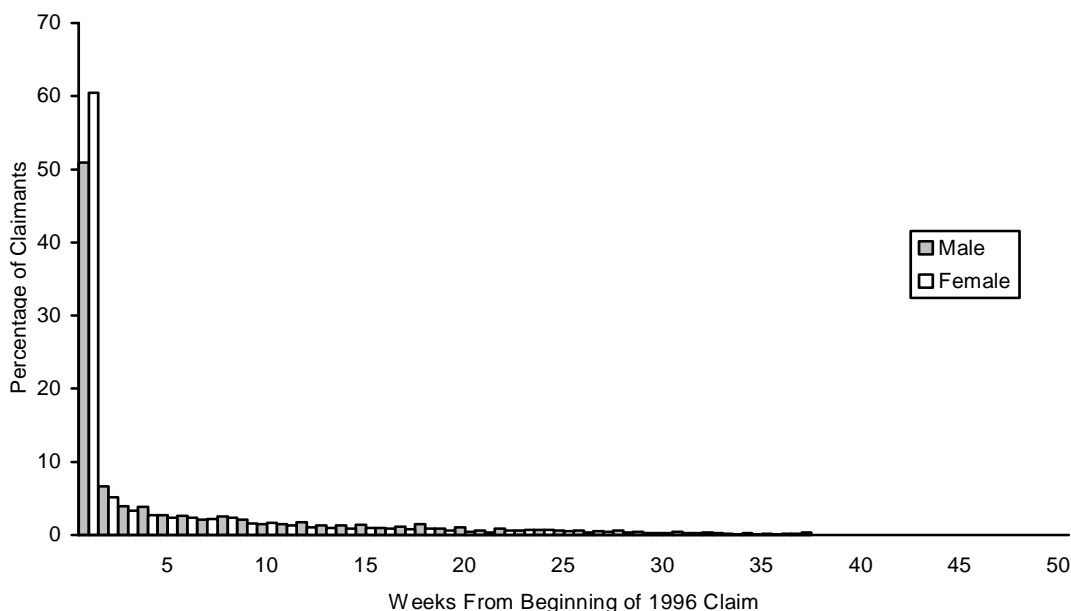
[8]Our estimate of the number of claimants who work while on claim is higher than the figures presented in the most recent HRDC EI monitoring and assessment report (HRDC, 2002). In the report, 57.9 per cent of *all new claims* in the fiscal year 1996/1997 included at least one week with declared earnings. This figure is based on a 1-in-10 sample of all claims established in that year. Our estimate is based on the SRUEI sample and is therefore a representative sample of *all claimants* in 1996. We also only examine the first claim made by SRUEI respondents in 1996.

Figure 2 is a similar graph in that it also displays a histogram for the distribution of all of the claimants who made use of the allowable earnings provision on at least one occasion during their 1996 claim. Unlike Figure 1, however, the figure illustrates the number of weeks *prior to the end* of the claim at which time claimants first made use of the allowable earnings provision. The value on the vertical axis indicates the share of those who declared their first week of earnings (among those who worked at all during their claim) in reference to the end of the claim. Similar to Figure 1, these shares sum to 100 per cent. This figure attempts to identify a significant cluster of claimants who began working near the end of their claim, rather than near the beginning, as is the case in Figure 1. If claimants began working part time to help them make the transition to full-time employment, then we would observe an increasing number of claimants beginning to work during the weeks leading up to the end of their claim. Although we do observe a slight spike in the weeks prior to the end of the claim, there is no counterpart to the large spike that is apparent in reference to the beginning of the claim. Therefore, it appears that the decision to begin working while on claim tends to be related more strongly to the beginning of the claim, rather than the end.

Figure 2: Timing of the Initiation of Work Relative to the End of the 1996 Claim
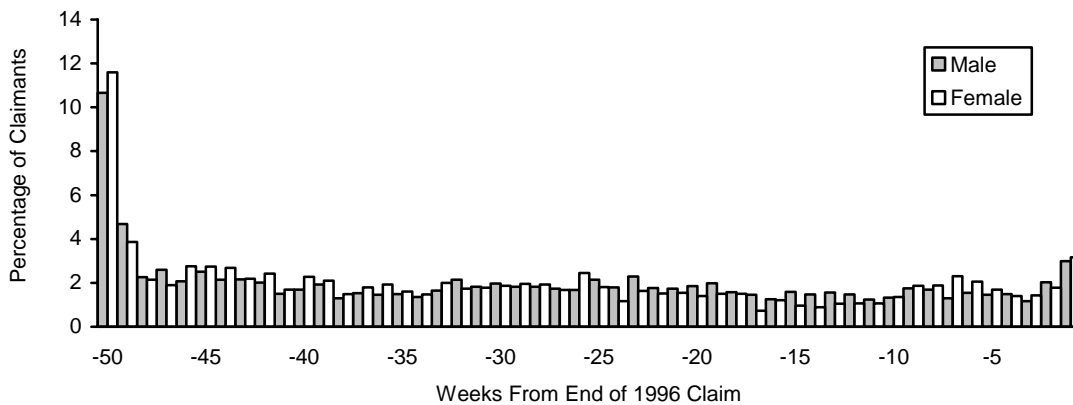
On average, claimants who worked at least one week during the course of their 1996 claim maintained an active EI claim for approximately 33 weeks, of which approximately 10 were weeks with declared earnings. Figure 3 shows the percentage of claimants working over the course of their 1996 claim at any given stage of this claim. This graph shows all of the weeks during which respondents declared earnings during the 1996 EI claim, as opposed to only the first week. The variable on the horizontal axis is the number of weeks that have elapsed since the end of the mandatory two-week waiting period. Again, note that over half of the estimating sample declared earnings in the first week after the end of the waiting period. For the next 22 weeks into the claim, approximately 30 per cent of claimants declared earnings, and this proportion remained remarkably stable. After that stage of the claim, the percentage declined monotonically for both men and women,

reaching a level of approximately 10 per cent at 50 weeks. Those individuals whose claim ended before the 50-week point (at the right side of the figure) are always included in the denominator of the proportion for each week, so the reference group is always those who worked at least once during their 1996 claim. Overall, there appears to have been substantial reporting of part-time earnings during the early and middle stages of the 1996 EI claim.

Figure 3: Percentage of Claimants Working at Any Given Stage of Their 1996 Claim
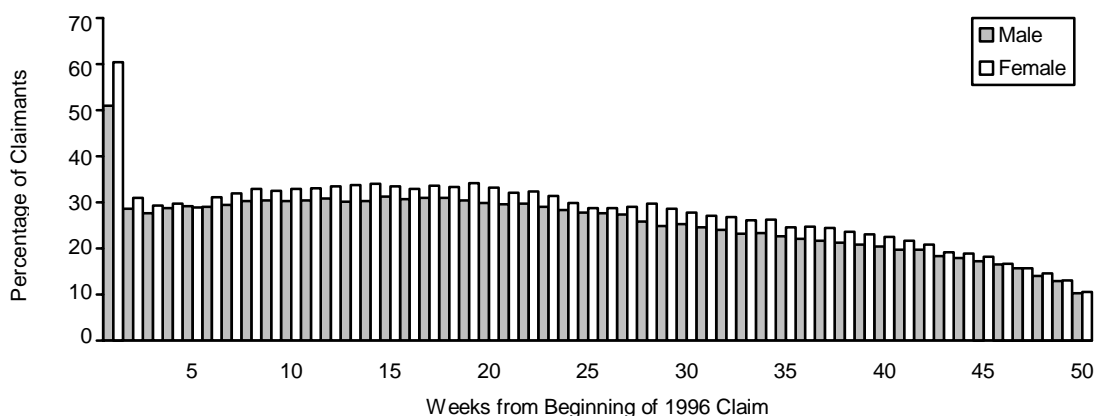
Analyzing the use patterns over a longer time horizon, we find that almost all claimants (88 per cent) declared earnings while on an EI claim at least once during the five-year period up to and including their 1996 claim. Although the use of the allowable earnings provision appears to be widespread, the incidence rate does not appear to be nearly as high once we take account of the length of time that each individual claimant made use of the provision. Table 1 shows that for the 261-week period from 1992 to 1996, on average male claimants declared earnings in nearly 24 per cent of their weeks of active claim status, while on average females have a slightly higher rate — almost 26 per cent. These incidence rates yield an average of approximately 30 weeks of earnings per claimant over the entire period. Of these 30 weeks, however, only 23 per cent were weeks in which earnings supplemented EI receipt; the other 77 per cent of weeks were weeks when earnings were reported but no benefits were received (these numbers not shown).[9] This high percentage of weeks with declared earnings but without payment of EI benefits suggests that, for the most part, individuals who work while on an EI claim choose to work only when they can receive high enough earnings that working is an attractive alternative to being unemployed and receiving EI benefits for a given week.

The percentile distributions listed in Table 1 confirm that the majority of claimants do not utilize the allowable earnings provision very frequently. With a median value of 10 weeks for women and 13 weeks for men compared with average values of approximately

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[9]These numbers are similar to HRDC's findings in the *Employment Insurance 2001 Monitoring and Assessment Report* (HRDC, 2002). According to the report, 68 per cent of all EI weeks worked by 1999/2000 claimants were weeks where benefits were reduced to zero due to work while on claim.

30 weeks for both genders, the distributions are skewed to the right-hand side. A small proportion of claimants use the allowable earnings provision to a great extent, as three quarters of male and female claimants report earnings in fewer than 37.4 and 43.3 per cent of their claim weeks respectively. Most claimants report earnings for only a small fraction of their claim weeks.

Table 1: Summary Statistics of Work While on Claim, 1992–1996

	Men	Women
Proportion of active claim weeks with declared earnings		
Average	23.6	25.8
Standard deviation	22.6	25.4
Percentiles		
25th	4.0	3.6
50th	17.4	17.5
75th	37.4	43.3
100th	96.3	96.3
Number of active claim weeks with declared earnings		
Average	30.5	29.1
Standard deviation	40.5	42.1
Percentiles		
25th	2	2
50th	13	10
75th	44	39
100th	240	237

Table 2 illustrates the relationship between the use of the allowable earnings provision and the use, or incidence, of the EI system. We have categorized the entire sample into three types of users according to their recourse to the allowable earnings provision between 1992 and 1996. First, there are those who never made use of the allowable earnings provision. Among those who did make use of the provision at least once, we divided them into "light" users, who have done so for fewer weeks than the median, and "heavy" users, who have done so for more weeks than the median.[10]

The greatest demarcation in the three groups in terms of their overall EI usage is between those claimants who have not declared earnings at all and the two groups of claimants who have worked at least one week, as there are only small differences between light and heavy users of the allowable earnings provision. Claimants in both groups of users have remained on active EI claims for at least twice as long, received approximately twice as many weeks of EI benefits, filed nearly twice as many claims, and received twice the amount of regular benefits when compared with claimants who have not declared earnings at all.

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[10]The median value is calculated among those claimants who did declare earnings for at least one week over the period 1992–1996. The size of the group of "light" users is therefore equal to the size of the group of "heavy" users.

By comparing the numbers in columns 3 and 4, respectively, to columns 5 and 6, respectively, the differences between the low and the high intensity users of the allowable earnings provision are apparent. The largest difference in EI use between the two groups appears to be the average number of weeks of active claim status. For both men and women, EI claimants who have reported the highest number of weeks of earnings while on claim tend to have remained on claim for a much longer period of time (135 weeks versus 99 weeks for men, and 115 weeks versus 85 weeks for women).

Table 2: EI Statistics by Intensity of Use of the Allowable Earnings Provision, 1992–1996

	No Earnings Reported		Light Users of Allowable Earnings Provision		Heavy Users of Allowable Earnings Provision	
	Men	Women	Men	Women	Men	Women
Proportion of active claim weeks with declared earnings	0	0	9	9	45	50
Weeks of declared earnings	0	0	9.6	7.6	61.0	58.2
Weeks of active claim status	41.4	43.2	98.8	84.8	134.7	115.1
Weeks of receipt of regular benefits	29.6	27.7	62.0	51.0	65.2	58.0
Number of claims	1.86	1.76	3.36	3.14	3.86	3.46
Number of years with new EI claims	1.60	1.45	2.85	2.68	3.24	2.90
Total amount of regular benefits	$ 7,972	$ 5,996	$ 18,382	$ 10,745	$ 20,404	$ 11,027

Those who have declared earnings also tend to have claimed EI frequently over the 1992–1996 period, as the average number of years of EI receipt is almost three or more in all cases.[11] Indeed, among those individuals who had the highest incidence of use of the allowable earnings provision (the heavy users), 61 per cent meet the definition of "frequent" EI claimants. In contrast, claimants with relatively few weeks of declared earnings (the light users) are nearly evenly divided between occasional and frequent claimant status, as is the case on average for our entire estimating sample. Claimants who never declared earnings at all were almost exclusively occasional users of EI, as only 12 per cent of them were frequent claimants. (These numbers are not shown in Table 3.)

The strong association between the incidence of EI use and the incidence of declared earnings is supported by other statistical measures. The Pearson correlation coefficient between the number of weeks of active claim status and the number of weeks of declared earnings is approximately 0.72 for both men and women, indicating a high degree of correlation between the two variables.

Table 3 illustrates the mean number of weeks of declared earnings for all claimants cross-tabulated by sets of demographic characteristics for 1992–1996. Given that claimants who make use of the allowable earnings provision also tend to be those who most heavily rely on the EI program, demographic profiles would be expected to be similar. The first set of

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[11]For our analysis, frequent use is defined as having initiated and received regular EI benefits in three or more years within the 1992–1996 period. This definition of frequent use is consistent with the sampling frame used for the SRUEI and that is used in previous SRDC studies based on that survey. The EI monitoring and assessment reports use a somewhat different definition, with frequent claimants defined as those who have made three or more claims in the five years preceding their current claim.

columns of Table 3 describe the demographic distribution of the entire sample of EI claimants by listing the shares for each set of variables, and thus do not pertain directly to use of the allowable earnings provision.

The statistics presented in columns 3 to 6 of Table 3 show the relationships between demographic and regional attributes and the use of the allowable earnings provision. These empirical patterns are similar to those discerned for the frequency of use of regular EI benefits.[12] For instance, it can be seen from the table that claimants reporting the highest number of weeks with earnings tend to have lower education levels. As well, claimants residing in provinces with the highest intensity of frequent use, namely Atlantic Canada and Quebec, make heaviest use of the allowable earnings provision. Finally, claimants who spend the most time working while on claim tend to be middle-aged, and are more likely to live in rural areas,[13] which is consistent with their tendency towards frequent recourse to the EI program.

Overall, male and female claimants exhibit similar patterns across the demographic characteristics. Differences across educational attainment categories are not as strong for women, however, nor are the differences between age categories. Interestingly, the regional patterns in these incidence statistics for the allowable earnings provision are sharper for female claimants. In the Atlantic provinces, for instance, female claimants worked during a higher average number of claim weeks than male claimants, despite the fact that the incidence of frequent use of EI among women is lower than that of men in all regions of Canada.

The numbers presented in the last two columns of Table 3 take account of workers' exposure to the EI program. The number of weeks of declared earnings is divided by the number of weeks of total active EI claim status in order to control for total exposure to EI. The differences in the demographic characteristics tend to become less pronounced when these ratios rather than the number of weeks are examined. For instance, rural and urban claimants tend to have the same proportion of active claim weeks with declared earnings when controlling for weeks of active claim status. As well, discrepancies cross-tabulated by educational categories appear to be small. It is interesting to note a trend that is unique to female claimants: women who have college or university diplomas report earnings in the highest proportion of active claim weeks when compared with women with lower educational attainment levels.

The above analysis indicated relatively high intensities of use of the provision in provinces that are associated with seasonal employment patterns. Thus far, we have paid little attention to the seasonality of the use of the allowable earnings provision. Table 4 provides a very simple analysis of the seasonality of declared earnings observed over the

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[12]The demographic profile of frequent EI claimants is treated in depth in Schwartz et al. (2001).
[13]Rural status is defined according to the following Census Metropolitan Area/Census Agglomeration (CMA/CA) categories: rural fringe and rural area outside of CMAs/CAs. Urban status is defined as urban core, urban fringe, and urban area outside of CMAs/CAs.

Table 3: Total Estimating Sample and Working While on Claim by Socio-Demographic Characteristics, 1992–1996

	Distribution of All Claimants in Estimating Sample (%)		Number of Active Claim Weeks With Declared Earnings (Average)		Proportion of Active Claim Weeks With Declared Earnings (Average)	
	Men	Women	Men	Women	Men	Women
Education attainment						
Elementary	10.6	6.6	38.9	40.1	0.22	0.26
Some high school	27.5	17.2	37.0	33.1	0.25	0.25
High school	28.4	26.7	30.5	28.4	0.24	0.24
Some college	9.0	10.6	23.8	24.6	0.21	0.23
College	12.9	17.5	25.1	28.3	0.23	0.29
Some university	3.8	6.1	19.7	27.5	0.20	0.27
University	7.9	15.4	18.9	25.7	0.24	0.28
Province						
Newfoundland	4.4	4.3	47.1	46.3	0.27	0.30
Prince Edward Island	1.2	1.3	37.9	39.6	0.24	0.26
Nova Scotia	4.7	4.7	42.1	44.3	0.29	0.32
New Brunswick	5.7	5.3	43.3	51.3	0.26	0.33
Quebec	34.1	32.8	39.2	41.0	0.28	0.31
Ontario	25.8	28.5	17.5	15.6	0.17	0.21
Manitoba	2.8	2.8	13.5	15.0	0.15	0.20
Saskatchewan	2.3	2.2	18.2	13.4	0.17	0.21
Alberta	6.8	6.8	22.1	12.4	0.20	0.21
British Columbia	12.2	11.5	27.7	20.9	0.25	0.22
Age category						
Under 21	1.7	0.7	5.5	5.9	0.14	0.18
21–25	12.7	8.2	13.8	12.8	0.21	0.25
25–30	15.5	13.6	25.2	26.0	0.23	0.28
31–35	15.9	14.1	33.6	27.5	0.25	0.24
36–40	15.0	16.5	33.9	30.4	0.25	0.25
41–45	12.4	15.5	39.6	30.3	0.27	0.26
46–50	9.5	13.6	38.2	35.7	0.25	0.27
51–55	7.1	8.9	37.1	35.1	0.24	0.28
56–60	5.4	5.9	35.5	33.7	0.24	0.25
61–65	4.0	2.4	27.7	34.4	0.19	0.23
Over 65	0.8	0.7	20.7	16.3	0.14	0.12
Urban/Rural						
Rural	34.7	30.8	36.2	34.2	0.24	0.27
Urban	65.3	69.2	27.5	26.8	0.23	0.25

interval of 1992–1996 by giving the average of the total number of weeks worked in each quarter over the five-year period.[14] It indicates that there seems to be only a moderate seasonal variation in the quarterly timing of working while on claim. As might be

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[14]The maximum number of weeks that a claimant can work in a particular quarter over the five-year period is typically 65 weeks.

expected, the highest incidence occurs during the spring and summer, but the activity levels during the winter and fall seasons are not trivial. This seasonal variation is most pronounced among male claimants. For both males and females, the relative stability in the number of weeks of earnings across the quarters suggests that many EI claimants are able to find work over the course of their claim even if they experience an off-season in their employment patterns. This finding is also apparent in Figure 3, which shows a non-trivial amount of declared earnings during *all* active claim weeks; some of these weeks must necessarily occur during the fall or winter months, which are usually off-season. Any seasonality of work while on claim is therefore likely to be more dependent on the inherent seasonality of EI claims, rather than on any independent seasonal variation in the part-time work activity of EI claimants.

Table 4: Number of Active Claim Weeks With Declared Earnings by Quarter, 1992–1996

	First Quarter		Second Quarter		Third Quarter		Fourth Quarter	
	Men	Women	Men	Women	Men	Women	Men	Women
Average number of weeks with earnings	6.4	6.7	8.5	7.3	8.4	7.3	7.2	7.8

From the descriptive analysis presented above, it would appear that the incidence of working while on claim is very widespread, indicating that most claimants are well aware of this allowable earnings provision and avail themselves of it at least occasionally. It would also appear, however, that only a moderate fraction of EI claimants make use of the provision in any significant manner, as the intensity of use is concentrated among a cluster of EI claimants who presumably have very particular employment patterns. Among those who declared earnings for at least one week from 1992 to 1996, the EI use statistics are not sharply different, and their use of the earnings provision appears to be strongly associated with their EI claims history. Since the take-up of this allowable earnings provision is very much entangled with EI usage, we are presented with the challenge of identifying differences in the number of weeks of declared earnings, rather than the likelihood of reporting earnings in a particular week given that the person has an active EI claim.

Decision to Work While on Claim

In this section we estimate a multivariate econometric model of the decision to work while on claim. This model extends the scope of the descriptive analysis presented in Table 3. The essential question is the first one that is raised explicitly in the Introduction: What are the attributes of Employment Insurance (EI) claimants that are associated with the choice of working while on claim?

Drawing from the merged Survey on the Repeat Use of Employment Insurance (SRUEI)-Status Vector (STVC) file, we are able to include worker attributes that are not found in the administrative data. Information on the labour market environment in which the individual participates would be very useful. As suggested by Roy (2001), it is not just the level of overall labour market slackness that matters, but also the *composition* and *structure* of employment in the geographical area. The relative availability of short-term, precarious, intermittent jobs compared to full-year, stable and secure jobs (sometimes labelled "standard employment") is probably an important determinant of the decision to work while on claim. Unfortunately, such information is not contained in the SRUEI, nor in any other labour market survey of which we are aware. Although the SRUEI contains detailed information on up to four jobs held by each individual over the course of the year 1997, these data are not particularly useful because these attributes of the jobs and firms cannot be matched to particular work performed during the course of a claim. In the case of multiple jobs, which is quite likely to apply to individuals working while on claim, there is no way to ascertain whether a job described by the SRUEI data is the same job that corresponds to the work reported in the administrative data. The unstable, precarious, and fragmented nature of the employment patterns for many of the individuals in our sample raises the risk of measurement error for the variables pertaining to jobs held in 1997. For these reasons, we eschew including information on the employment history in this empirical analysis, as the gain in explanatory power from those omitted variables could be outweighed by the biases imparted by including covariates for job attributes in the estimating equation. We do, however, include an indicator for broad occupational status (skilled blue collar, unskilled blue collar, and white collar), as this attribute is likely to be time-invariant for all individuals in the sample.

The underlying endogenous variable is the number of weeks during which earnings are declared while on active EI claim status over a given time interval. Although we observe whether or not this event occurred for every week between 1992 and 1998, we elect to model the number of weeks of declared earnings over the course of the EI claim that was initiated in 1996. Due to the sample selection process, all individuals in our sample have initiated a claim and received regular benefits in 1996 so this measure should be a reasonably representative indicator of working while on claim among 1996 EI claimants. Since approximately one quarter of the total sample has a zero value, there is an inherent non-linear element in this equation. The economic as well as the statistical relationship between the endogenous variable and the covariates is likely different in the range of zero to very low positive values than the relationship in the range of higher values. Our empirical model is thus estimated by techniques designed for limited dependent variable analysis. For both men and women, we estimate a sequence of two equations, the first of

which consists of a discrete choice model of the event of an individual declaring earnings over the course of the 1996 claim. The second equation consists of a linear regression model of the number of weeks over the course of the 1996 claim during which earnings are declared while on active claim status, conditional on that value being positive. The estimating sample for the second equation is thus restricted to those individuals who worked while on claim over this period. We thus avoid imposing a linear parametric form on the non-linear portion of the underlying relationship around the point of zero weeks of declared earnings. This sequential estimating procedure was adopted instead of the single-equation Tobit approach that is sometimes used to estimate limited dependent variable models because the Tobit specification imposes a restriction, namely that the parameters determining the event of working while on claim are identical to those determining the length of time for that activity.[15]

The endogenous variable for the discrete choice models assumes a value of unity if the claimant declared earnings at all over the course of the 1996 claim, and a value of zero otherwise. It is estimated using both the simple logit and the probit specifications; the linear equation is estimated using least squares. All of the equations are estimated employing the survey weights, which adjusts for heteroskedasticity in the case of the linear equation.

The exogenous variables for all equations are grouped into five categories. First, there are the demographic indicators of age, language (French/English), and the existence of a partner in the household. Second, there are the provincial effects and an indicator for the urban versus rural effect. Third, there is a set of binary indicators for educational attainment (the omitted category is high school diploma) and for broad occupational categories (white collar, skilled blue collar, unskilled blue collar, with white collar being the omitted category). Fourth, following Roy (2001), a variable measuring the average weekly EI benefit amount received by the claimant is also included. The prior expectation is that due to income effects tied to labour supply, claimants with relatively low EI benefits (who also have low relative labour market earnings) have the greatest incentive to accept such employment positions.

Fifth, we include an indicator for overall use of EI. Because longer periods of benefit receipt and active EI claim status afford the individual greater opportunity to work while on claim, any measure of EI receipt outcomes is likely to have a strong positive effect. It is also likely to introduce, however, a major element of endogeneity into the estimating equation. In effect, the decision to work while on an EI claim is determined jointly with EI receipt outcomes (such as the frequency of claims or length of claims), and it is problematic to identify empirically the impact of EI use on work while on claim. To address this issue, we include as a measure of the incidence of EI use an indicator for the

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[15]Another possible estimating strategy is the well-known Heckit approach (seminal article is Heckman, 1979) to deal with a selected estimating sample. In our case, the estimating sample for the linear model is selected (rather than totally random) in the sense that those individuals who did not work while on claim are deliberately omitted. The Heckit approach consists of appending an extra term to the linear equation in order to control for the sample selection process, but the creation of this extra variable requires the existence of suitable instrumental variables that must be excluded from the primary linear equation. The challenge of finding a variable that influences the decision to work on claim but does not influence the length of time for that activity poses significant obstacles to implementing a reliable Heckit model.

prior frequency of EI use, namely the number of years over the 1992–1995 period during which the individual initiated an EI claim. Note that this measure is predetermined in relation to the outcome variable. The results for that indicator should thus be interpreted as statistical associations between the frequency of EI use and the number of weeks of declared earnings while on an active EI claim. This should shed some light on take-up patterns oriented around the distinction between frequent and occasional use.

The regression results are presented in Table 5a (males) and Table 5b (females). As is standard practice in empirical labour economics, separate regression models are estimated for men and women given the very different labour supply behaviour that they exhibit. The first specification is a discrete choice model employing the logit specification. The results from the probit specification are not shown, as they are qualitatively very similar. The results from the linear specification are listed on the right side of tables 5a and 5b. Note the low explanatory power of these latter specifications for both genders, as reflected in coefficients of determination (R-squared) of approximately 0.11 for each of the equations.

Table 5a: Determinants of Working While on Claim, 1996 (Men)

Model	Logit Specification		Work While on Claim	
Dependent Variable	Work While on Claim		Number of Weeks With Declared Earnings	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	0.043*	0.019	0.587**	0.109
Age^2	-0.001**	0.000	-0.007**	0.001
Educational attainment				
Elementary	-0.431**	0.103	-1.600**	0.596
Some high school	-0.057	0.080	-1.214**	0.437
High school	-----	-----	-----	-----
Some college	-0.127	0.132	-1.702*	0.760
College	0.003	0.111	-0.108	0.610
Some university	-0.027	0.183	-0.490	1.101
University	-0.083	0.152	0.379	0.909
Province				
Newfoundland	0.320**	0.102	6.058**	0.556
Prince Edward Island	-0.108	0.120	3.968**	0.701
Nova Scotia	0.307**	0.103	6.518**	0.579
New Brunswick	0.130	0.108	4.331**	0.614
Quebec	0.534**	0.148	4.342**	0.822
Ontario	-----	-----	-----	-----
Manitoba	-0.069	0.102	-1.269**	0.488
Saskatchewan	-0.071	0.107	-0.453	0.536
Alberta	0.121	0.101	0.437	0.497
British Columbia	0.327**	0.104	3.262**	0.544

(continued)

Table 5a: Determinants of Working While on Claim, 1996 (Men) (Cont'd)

Model	Logit Specification		Linear Specification	
Dependent Variable	Work While on Claim		Number of Weeks With Declared Earnings	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Language				
French	-0.012	0.156	3.515**	0.903
English	-----	-----	-----	-----
Both	-0.168	0.111	1.547*	0.607
Neither	-0.541	0.290	2.141	2.104
Occupation				
Skilled blue collar	0.302**	0.116	2.319**	0.625
Unskilled blue collar	0.156	0.110	1.013	0.630
White collar	-----	-----	-----	-----
Residence in urban area	0.071	0.065	1.292**	0.356
Partner in 1997	0.293**	0.069	1.051**	0.405
Immigrant	-0.098	0.103	-1.171*	0.576
Average weekly EI benefits	-0.001	0.000	-0.002	0.002
Number of years with new EI claims (1992–1995)	0.081**	0.024	1.205**	0.144
Constant	0.189	0.375	-6.093**	2.056
Sample size	12,923		9,787	
R-squared	-----		0.112	
F-statistic	7.80		41.06	
P-value for F-statistic	0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Table 5b: Determinants of Working While on Claim, 1996 (Women)

Model	Logit Specification		Linear Specification	
Dependent Variable	Work While on Claim		Number of Weeks With Declared Earnings	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	0.111**	0.025	0.550**	0.159
Age^2	-0.001**	0.000	-0.006**	0.002
Educational attainment				
Elementary	-0.238	0.151	-0.897	1.092
Some high school	-0.125	0.113	-1.733*	0.703
High school	-----	-----	-----	-----
Some college	-0.109	0.148	-0.067	0.866
College	0.309*	0.121	2.944**	0.789
Some university	0.213	0.171	2.491*	1.083
University	0.527**	0.151	1.384	0.831

(continued)

Table 5b: Determinants of Working While on Claim, 1996 (Women) (Cont'd)

Model	Logit Specification		Linear Specification	
			Number of Weeks With Declared Earnings	
Dependent Variable	Work While on Claims			
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Province				
Newfoundland	0.096	0.122	6.763**	0.806
Prince Edward Island	0.010	0.142	4.121**	0.900
Nova Scotia	0.054	0.121	6.650**	0.812
New Brunswick	0.013	0.132	5.804**	0.843
Quebec	0.121	0.177	3.291**	1.001
Ontario	-----	-----	-----	-----
Manitoba	0.334*	0.132	-2.760**	0.729
Saskatchewan	-0.188	0.131	-1.573	0.834
Alberta	0.129	0.125	-1.313	0.730
British Columbia	0.042	0.120	1.907*	0.757
Language				
French	0.391*	0.191	3.479**	1.126
English	-----	-----	-----	-----
Both	0.073	0.132	0.368	0.744
Neither	-0.710*	0.301	-6.402**	1.297
Occupation				
Skilled blue collar	-0.028	0.129	-1.828*	0.760
Unskilled blue collar	-0.042	0.107	-0.399	0.668
White collar	-----	-----	-----	-----
Residence in urban area	0.090	0.082	0.987	0.540
Partner in 1997	-0.229*	0.091	0.486	0.531
Immigrant	-0.317**	0.116	-1.849*	0.762
Average weekly EI benefits	-0.003**	0.001	-0.029**	0.003
Number of years with new EI claims (1992–1995)	0.062*	0.026	0.508**	0.175
Constant	-0.564	0.509	2.711	3.184
Sample size	8,750		6,641	
R-squared	-----		0.108	
F-statistic	5.56		26.78	
P-value for F-statistic	0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Turning first to the demographic indicators, in both the discrete choice and the linear specifications, there is a statistically significant and positive effect for age coupled with a negative effect for the square of age for both genders. Given this quadratic form, the effect of age is increasing for younger workers, but eventually turns negative when claimants reach their mid-forties. For the indicators for educational attainment, the reference category is those claimants with high school diplomas. For both men and women, individuals with lower educational attainment levels are estimated to have a *lower*

propensity to work while on claim, while more highly educated women display a higher propensity to work while on claim (the results are not statistically significant for highly educated men).

In the least squares specification, the effect of being francophone is estimated to be positive for both genders, and the estimated impact of having a partner is positive for men and insignificant for women. Immigrants are estimated to have slightly lower propensities to declare earnings while on claim.

Relative to white-collar workers, male skilled blue-collar workers have a higher propensity to work while on claim, while the opposite applies for the linear specification involving women. That finding may be generated in part by the high concentration of women in white-collar positions within the education, public administration, and health care sectors, which tend to offer employment conditions that are conducive to working while on claim. Claimants with relatively low levels of EI receipt are more likely to make use of this provision, but the effect is much stronger for women, which is consistent with the findings of Roy (2001). Claimants in urban areas are estimated to be more likely to work while on claim, although the coefficient is not significant for female claimants.

In the linear specification, the pattern of provincial effects (with Ontario serving as the reference category) is similar across genders: high positive effects for the Atlantic provinces, generally negative or insignificant effects in the Prairie provinces, and middling positive effects for British Columbia and Quebec. Many of the point estimates are insignificant in the discrete choice equations. These provincial indicators are likely capturing a portion of the joint effects of EI program parameters and local unemployment rates, which directly influence the incidence of EI use and thus indirectly influences working while on claim.[16] As suggested above, however, the most relevant explanatory variable for the decision to work on claim is probably not weak labour market conditions per se, as typically measured by a high unemployment rate. Instead, the relative availability of short-term, precarious, interim jobs is likely to play an important role in influencing the decision to work while on claim. To the extent that such jobs are not distributed proportionally across provinces, the provincial estimates are likely capturing part of that effect.

The indicator of prior EI claims activity (the frequency of EI use as measured by the number of years from 1992 to 1995 during which a claim was initiated) has a strong, positive, and statistically significant effect on the weeks of declared earnings for every estimating equation, especially in the case of men. Overall, the results from this regression model suggest that working while on claim is highly correlated with the frequency of EI claims. Among the other covariates, the most robust results appear to be associated with age, province, language, and blue collar/white collar status in the case of women. In

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[16]As explained in Footnote 4, the entry requirements and the maximum entitlement (which are indicative of the generosity of the program) for EI depend on the official unemployment rate in the geographical administrative area in which the individual resides. These program regulations have an important implication for any empirical work involving EI outcomes, such as durations of claims and take-up rates. Any comparison of point estimates across geographical units such as provinces captures a joint effect of local labour market conditions and the EI program parameters. These two influences cannot be disentangled from each other, so an estimated provincial effect cannot be attributed to prevailing labour market conditions or to the generosity of the EI program.

addition, claimants with relatively low benefit levels tend to have more weeks of declared earnings. The primary insight from a policy perspective is that any evaluation of the allowable earnings provision should be focused on frequent claimants, as any significant and economically important influence that it might have on EI claims patterns is likely to pertain mostly to that group.

Long-Term Impact of Working While on Claim on EI Use (1992–1996)

The descriptive evidence presented in the previous section indicated that those Employment Insurance (EI) claimants who worked while on claim have much higher incidence rates for EI use than those who did not. On the other hand, the discrepancies in EI use between those claimants who had heavy recourse to the allowable earnings provision and those who made moderate use of it are not extremely wide. Nevertheless, the cross-tabulations between the number of weeks of declared earnings and the incidence rates for EI use indicate a strong positive association.

The aim of this section is to apply econometric analysis to the question of the impact of working while on claim on the incidence of EI use. The scope of the descriptive analysis presented in Table 2 is extended to a multivariate framework. It focuses on the two major policy evaluation issues — one pertaining to a single claim and one pertaining to a longer time period.

For the impact on a given current claim, there are two primary intended effects, both of which work in the direction of lowering the incidence of EI use. First, there is the "incremental" effect on the length of the EI claim in progress discerned by Roy (2001), of which there are three possible consequences. The first is where the claimant reports part-time earnings, resulting in a reduction of the EI benefit paid for the week in question. Although the EI benefit is reduced in this case, there is no effect on the number of weeks for which the claimant is entitled. In the second case, earnings are high enough so that no benefit is paid at all or the claimant reports a week of full-time work, and the respondent does not claim that benefit week at a later time. A week of work will then displace a week of EI receipt, and the number of weeks of benefit decreases by one. In the third case, earnings are high enough so that no partial benefit is paid or the claimant reports a week of full-time work, and the claimant does claim that benefit week at a later stage in the claim. By postponing the benefit week until later in the benefit period, the net effect on the number of weeks of benefit is nil.

Beyond the direct, incremental effect on the current EI claim, there are potentially second order effects that occur over a longer period of time. As posited by McCall (1996, 1997) and by Roy (2001), the act of working while on claim could raise the probability of re-employment and create a longer episode of employment that would militate toward reducing the overall incidence of EI use in the subsequent year or years.[17]

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[17]McCall's (1996) analysis is based on data for the job durations of displaced workers. Due to the nature of the data, his methodology is very different than the one adopted in this paper. He estimates hazard models of the rate of a displaced, jobless worker finding part-time employment and compares that with the hazard rate of finding full-time employment. The observed spells of joblessness occurred in many states over the period spanning almost a decade. In this labour market environment, there was variation in the disregard level (the threshold over which the labour market earnings of UI recipients are clawed back at a 100 per cent rate), both between US states and within states over time. This variation helps to identify the effect of an increase in the disregard threshold on the re-employment behaviour of UI recipients. Information on the individuals' job-search outcomes is matched with information on the working while on claim regulations prevailing in the state during a particular year. All individuals within that state are thus assigned this attribute, whether or not they worked while on a UI claim. An increase in the disregard is found to *(continued)*

For the impact of working while on claim over a longer time horizon, however, there is an opposing effect that might arise that is quite contrary to the objective of the allowable earnings rule. In the context of "high entitlement" regions (defined in Footnote 4), it is possible that the employment activity associated with the allowable earnings provision serves to help the claimant gain entitlement to a subsequent spell of EI benefits, primarily by prolonging the receipt of entitlement of the original EI claim until the individual can be recalled to his or her seasonal job. In this scenario, the weeks of work while on claim serve to reinforce the cycle of EI dependency among certain types of EI claimants.

In order to analyze this issue within a multivariate framework, we estimate a series of econometric models of EI incidence. The endogenous variables are various measures of EI incidence, and the key exogenous variable is an indicator of working while on claim. The endogeneity issues stemming from the joint determination of the decision to work while on claim and the decision to establish an EI claim that are mentioned above are also present in these models. These equations do not consist of structural form models of these two economic choices, and thus strong inferences regarding causation and behavioural hypotheses cannot be drawn. Below we adopt a strategy of including predetermined regressors as a response to the endogeneity of the indicator for working while on claim. For the purposes of policy evaluation, these equations can shed some preliminary light on the statistical link between EI receipt outcomes and working while on claim.[18]

The first measures of EI incidence that are modeled are the frequency measures observed over the interval of 1992–1996. The claim count refers to the number of claims filed over the period 1992 to 1996, while the year count refers to the number of years over that interval during which the individual initiated a claim for regular EI benefits. These two measures are highly positively correlated, and they have identical values for most individuals in our sample. For a certain number of claimants, however, the claim count is higher than the year count, as two relatively short claims can be initiated over the course of one calendar year, explaining why the mean value for the claim count measure (3.38 for men and 3.1 for women) is greater than the year count measure (2.86 for men and 2.6 for women). These indicators measure the regularity of EI use over a long interval, and are thus indicative of the degree of dependence on the EI regime.

The exogenous variables are grouped into six categories. First, there are the demographic indicators of age, language, and the existence of a partner in the household. We have also included an additional control for immigrant status. Second, there are the provincial

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significantly increase the probability of part-time re-employment (conditioned on being jobless due to displacement) for UI recipients during the first three months of joblessness, and notably to reduce future expected spells of joblessness.

[18]The most conventional method of addressing the joint determination problem is to apply an instrumental variables technique. For these specifications, the endogenous variables are indicators of EI use, while the exogenous variable is an indicator for working while on claim. As a suitable instrument for the working while on claim variable, an indicator that is uncorrelated with EI outcomes is required. As discussed above, indicators for the structure of employment in the local labour market might fulfill this role. The measures of EI receipt are influenced heavily by the overall level of slackness, measured by the official unemployment rate in the geographical area. They are not affected to the same degree by variables such as the relative importance of precarious jobs compared with standard jobs. Such data are unavailable, however, and thus we lack the instrument that might serve to identify the sought-after estimate. Furthermore, as we mention in the Conclusion, an economic case can be made that the potential instrumental variable is also endogenous.

effects and an indicator for the urban versus rural effect. Third, there is a set of binary indicators for educational attainment (the omitted category is a high school diploma) and for broad occupational categories (white collar, skilled blue collar, unskilled blue collar, with white collar being the omitted category).

Fourth, there is a group of four indicators that are designed to capture the individual's ties to a geographical region that are unique to the Survey on the Repeat Use of Employment Insurance (SRUEI) file. The variable for "own home" assumes a value of unity if the claimant owns his or her residence. There is a set of indicators for the length of time that a claimant has resided at his or her current dwelling, namely: fewer than 2 years, 2 to 5 years, and 6 to 10 years. The omitted category is having lived more than ten years at the same residence. The indicator for "lived in region for more than 10 years" assumes a value of unity if the respondent has lived within 150 kilometres of his or her residence for more than 10 years. The variable for "family living in region" assumes a value of unity if the respondent reports the presence of relatives within 150 kilometres from his or her residence. It seems reasonable to expect that the stronger the ties to the region, the lower the geographical mobility, and the higher the frequency of EI use, *ceteris paribus*.

Fifth, there is an indicator that pertains directly to the transmission of information about the EI regime and the availability of jobs, which is an element of the "social capital" approach to modeling patterns of participation in social insurance programs.[19] The variable for "friends/family collected EI" assumes a value of unity if the respondent states that close friends or family collected EI in past five years. This indicator is expected to be positively associated with frequent EI use.

The key variable for policy analysis is the indicator for working while on claim. We include the ratio of the number of weeks of declared earnings to the number of weeks of active claim status between 1992 and 1996. This measure, which was presented in tables 1 and 2, is interpreted as the proportion of total weeks of active claim status during which the individual actually declared earnings.

These regression models of the number of claims and the number of years during which a claim was initiated involve limited dependent variables, as the endogenous variable can assume only integer values. Unlike many limited dependent variable models, however, the values for the endogenous variable does not have a lower bound of zero, as all individuals in our sample claimed EI benefits at least once over the interval 1992–1996. They can thus be

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[19]The "social capital" approach has recently gained currency in applications involving take-up and use patterns for social insurance programs in North America, especially in the context of participation in social assistance programs in the United States. The basic underlying idea is that while participation in social programs is determined by conventional economic factors, such as the program parameters and the labour market opportunities of individuals, it is also influenced by social factors. More specifically, social ties among individuals generate referrals that are influential in shaping employment patterns, and they serve as a conduit for the transmission of information about the availability and the use of EI benefits. The "social network" in this context might consist of groups of workers working in seasonal and/or intermittent jobs in "maximum entitlement" regions. The key socio-economic variables in this context — which pass through the "social network" — are information spillovers regarding EI eligibility, job availability (required for entry into the EI regime), and social mores. As explained in Gray (2001), the data set does not permit the specification and estimation of empirical models of the "social capital" approach, but there are a number of variables that are loosely tied with this approach. A more focused analysis of the role of these variables on EI use patterns is a subject for future research.

estimated as linear specifications in addition to the conventional non-linear specification. Estimation of both forms revealed that the linear specifications are not sensitive to changes to non-linear functional forms. In light of the robustness of our findings, our preferred specifications for the discussion that follows are the linear equations, as they have the attractive features of generality of form or straightforwardness of interpretation. Further results from sensitivity exercises are presented in the Appendix.

The specifications appearing in Table 6a (men) and Table 6b (women) have a linear form. In the first specification, the dependent variable is the number of EI claims and only the control variables are included. In the second specification, the indicator for working while on claim is included. The results for the demographic and geographical indicators are generally consistent with the findings of Schwartz et al.'s (2001) study of the determinants of frequent use of EI benefits. The number of EI claims increases with age, but at a decreasing rate. There is a positive effect for francophones and a negative effect for immigrants among male claimants. Male blue-collar workers have higher claim counts than white-collar workers, while the opposite effect is discerned for women. Men with partners are estimated to have higher claim counts, but among women the effect is insignificant. Workers in urban areas are estimated to have much lower claim counts, and the provincial pattern consists of high relative effects for the Atlantic provinces, but roughly similar effects in all other provinces.

In this series of regressions, we observe that ties to a particular region and place of residence, as well as awareness of the EI program, appear to be associated with greater use of EI over the five-year period. For men, having lived in the region for a long time (over 10 years), owning a home, and being aware of close friends and family having used EI recently are positively related to their usage of the EI program. This is similar to female claimants, although for them, the presence of family living nearby also has a positive and statistically significant relationship with the number of times and the number of years in which they initiate EI claims. Another important factor unique to female claimants is the amount of time they have lived at their current residence. Relative to those who have lived more than 10 years at their current residence, female claimants who have only lived up to 5 years in their current dwelling are less likely to claim EI over the five-year period.

The coefficient for "proportion of active claim weeks with declared earnings" is estimated to be positive and significant, suggesting that working while on claim is associated with a greater frequency of EI use as measured over the fixed interval of 1992–1996, subject to the qualification that this variable is endogenous. In the second specification, the estimated coefficients are 1.127 and 0.879 for men and women, respectively, indicating a somewhat larger response in the case of men. For men, a 22.6 percentage point increase (the standard deviation) in the ratio of the number of weeks of declared earnings to the number of weeks of active claim status is associated with a 0.25 increase in the number of EI claims during 1992 to 1996. For women, a 25.4 percentage point increase (the standard deviation) in the ratio is associated with a 0.22 increase in the number of claims over the five-year period. These estimates can be compared to mean values of 3.38 for male claimants and

3.10 for female claimants. Overall, the quality of fit of these regressions (as indicated by the R-squared values) is fairly high given the cross-sectional nature of the data.[20]

In the third specification, the dependent variable is another indicator for the frequency of EI claims, namely the year count measure. In the fourth specification, the indicator for working while on claim is included. These results are qualitatively identical to those obtained for the claim count measures, as the act of working while on claim is associated with higher year counts. The estimated coefficients of proportion of active claim weeks with declared earnings are 0.866 and 0.696 for men and women, respectively, again indicating a somewhat larger response in the case of men. If the ratio of the number of weeks of declared earnings to the number of weeks of active claim status increases by 24 percentage points, the standard deviation, on average the number of years during which claims were filed increases by 0.219 for men and 0.174 for women. These estimates can be compared with mean values of 2.86 years for male claimants and 2.61 years for female claimants.

In order to test for robustness, the linear empirical models of the frequency of EI use measures — the claim count model measure and the year count measure — are supplemented by the estimation of non-linear specifications of count models surveyed in Maddala (1983). The best-known parametric form is the Poisson model, for which the probability of filing an EI claim during a certain time interval is assumed to follow a Poisson distribution.[21] We also estimate a more flexible but lesser known empirical specification called the negative binomial count model, for which the Poisson model is a special, nested case.[22] Finally, our empirical analysis includes the ordered probit model, which is frequently applied to estimate count models and has different stochastic underpinnings (e.g. a normal distribution) than the Poisson and the negative binomial count models.[23] All of these specifications are estimated taking account of the survey weights.

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[20]As discussed above, we do not include indicators for firm attributes because the matching of firm or job attributes to a given EI spell could well be inaccurate. This omission weakens the explanatory power of the regression equations, as prior research by Green and Riddell (1997), Green and Sargent (1998), and others indicates the great importance of firm behaviour (and hence firm attributes) in shaping EI claims patterns.

[21]Note that the frequency of claims or the frequency of years during which EI receipt is observed is directly related to the probability of filing a claim during a certain time interval.

[22]The Poisson model imposes a restriction such that the mean of the distribution is equal to the variance. There is thus no allowance for separate parameters for the mean and the dispersion about this mean. This restriction is loosened in the negative binomial count model, which includes a separate dispersion parameter. That parameter is of interest in cases when a cluster of observations of claim counts at a value of zero exists. In that instance, a fairly large variance, of which the estimator should take account, can be expected. That is not the case in our application, however, as all individuals have at least one EI claim over the period 1992–1996.

[23]The dependent variable for the ordered probit model is the number of claims observed over this five-year period. The notional dependent variable is a continuum for the number of claims that is divided into bands. Each of these bands, in turn, has a probability assigned to it that is generated by the normal parametric form.

Table 6a: Impact of Working While on Claim and Other Characteristics on the Frequency of EI Use, 1992–1996 (Men)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included		Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	0.220**	0.011	0.207**	0.011	0.157**	0.010	0.148**	0.009
Age^2	-0.002**	0.000	-0.002**	0.000	-0.002**	0.000	-0.002**	0.000
Educational attainment								
Elementary	1.012**	0.107	1.064**	0.103	0.832**	0.093	0.872**	0.090
Some high school	0.795**	0.088	0.826**	0.085	0.640**	0.076	0.663**	0.074
High school	0.564**	0.084	0.584**	0.082	0.427**	0.072	0.442**	0.071
Some college	0.443**	0.101	0.492**	0.101	0.315**	0.086	0.353**	0.086
College	0.311**	0.089	0.331**	0.088	0.192*	0.075	0.207**	0.074
Some university	0.130	0.119	0.182	0.115	0.086	0.099	0.127	0.097
University	------	------	------	------	------	------	------	------
Province								
Newfoundland	0.933**	0.058	0.847**	0.057	0.760**	0.047	0.694**	0.047
Prince Edward Island	1.006**	0.067	0.937**	0.067	0.921**	0.054	0.868**	0.054
Nova Scotia	0.448**	0.057	0.323**	0.057	0.437**	0.047	0.341**	0.047
New Brunswick	0.689**	0.063	0.607**	0.062	0.612**	0.053	0.549**	0.051
Quebec	0.142	0.081	0.063	0.078	0.182**	0.069	0.122	0.066
Ontario	------	------	------	------	------	------	------	------
Manitoba	0.114*	0.056	0.136*	0.056	0.122**	0.045	0.139**	0.045
Saskatchewan	0.214**	0.061	0.212**	0.060	0.235**	0.049	0.233**	0.049
Alberta	0.098	0.053	0.058	0.052	0.109**	0.043	0.078	0.042
British Columbia	0.104*	0.052	0.007	0.052	0.091*	0.041	0.017	0.041

(continued)

Table 6a: Impact of Working While on Claim and Other Characteristics on the Frequency of EI Use, 1992–1996 (Men)(Cont'd)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included		Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Language								
French	0.571**	0.095	0.504**	0.092	0.466**	0.083	0.414**	0.080
English	------	------	------	------	------	------	------	------
Both	0.150*	0.067	0.137*	0.064	0.112	0.058	0.102	0.056
Neither	0.122	0.204	0.148	0.195	0.154	0.166	0.174	0.164
Occupation								
Skilled blue-collar	0.275**	0.069	0.235**	0.067	0.269**	0.058	0.238**	0.057
Unskilled blue-collar	0.273**	0.065	0.241**	0.064	0.233**	0.055	0.208**	0.054
White-collar	------	------	------	------	------	------	------	------
Regional mobility								
0–1 year at current residence	0.051	0.061	0.078	0.060	-0.005	0.053	0.016	0.053
2–5 years at current residence	0.031	0.057	0.064	0.056	-0.004	0.050	0.021	0.049
6–10 years at current residence	0.019	0.065	0.047	0.063	0.002	0.056	0.024	0.055
More than 10 years at current residence	------	------	------	------	------	------	------	------
Own home	0.240**	0.049	0.185**	0.048	0.221**	0.042	0.179**	0.042
Lived in region for more than 10 years	0.272**	0.051	0.258**	0.050	0.189**	0.044	0.177**	0.043
Family living in region	0.025	0.056	0.026	0.055	0.015	0.048	0.016	0.047
Family living in region (no response)	* 0.588	0.265	* 0.539	0.269	* 0.512	0.229	* 0.474	0.230

(continued)

Table 6a: Impact of Working While on Claim and Other Characteristics on the Frequency of EI Use, 1992–1996 (Men)(Cont'd)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included		Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Parameter Estimates	Standard Error	Parameter Estimates	Standard Error	Parameter Estimates	Standard Error	Parameter Estimates	Standard Error
Awareness of EI								
Friends/family collected EI	0.255**	0.045	0.247**	0.044	0.224**	0.039	0.218**	0.039
Friends/family collected EI (no response)	-0.049	0.060	-0.035	0.059	-0.017	0.052	-0.007	0.051
Residence in urban area	-0.330**	0.045	-0.364**	0.045	-0.305**	0.039	-0.331**	0.039
Partner in 1997	0.147**	0.046	0.121**	0.045	0.102*	0.040	0.082*	0.039
Immigrant	-0.305**	0.063	-0.276**	0.063	-0.225**	0.053	-0.202**	0.052
Proportion of active claim weeks with declared earnings (1992–1996)	------	------	1.127**	0.099	------	------	0.866**	0.086
Constant	-2.725**	0.236	-2.650**	0.234	-1.612**	0.205	-1.555**	0.204
Sample size	13,036		13,036		13,036		13,036	
R-squared	0.2598		0.2788		0.2453		0.2612	
F-statistic	141.53		151.72		150.21		154.33	
P-value for F-statistic	0.000		0.000		0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Table 6b: Impact of Working While on Claim and Other Characteristics on the Frequency of EI Use, 1992–1996 (Women)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included		Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	**Number of Claims**		**Number of Claims**		**Number of Years With New EI Claims**		**Number of Years With New EI Claims**	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	0.161 **	0.015	0.158 **	0.015	0.117 **	0.013	0.115 **	0.013
Age^2	-0.002 **	0.000	-0.002 **	0.000	-0.001 **	0.000	-0.001 **	0.000
Educational attainment								
Elementary	0.662 **	0.133	0.706 **	0.132	0.498 **	0.113	0.532 **	0.113
Some high school	0.317 **	0.099	0.365 **	0.098	0.210 *	0.083	0.249 **	0.082
High school	0.285 **	0.083	0.321 **	0.082	0.170 *	0.071	0.198 **	0.070
Some college	0.095	0.096	0.137	0.093	-0.025	0.083	0.008	0.081
College	0.141	0.084	0.136	0.084	0.019	0.071	0.015	0.071
Some university	0.160	0.107	0.172	0.106	0.079	0.091	0.088	0.089
University	------	------	------	------	------	------	------	------
Province								
Newfoundland	0.929 **	0.072	0.853 **	0.072	0.732 **	0.059	0.671 **	0.059
Prince Edward Island	1.263 **	0.082	1.216 **	0.083	1.032 **	0.068	0.995 **	0.068
Nova Scotia	0.725 **	0.072	0.634 **	0.072	0.584 **	0.058	0.512 **	0.058
New Brunswick	0.853 **	0.079	0.765 **	0.079	0.715 **	0.067	0.645 **	0.067
Quebec	0.346 **	0.100	0.297 **	0.098	0.261 **	0.086	0.222 **	0.084
Ontario	------	------	------	------	------	------	------	------
Manitoba	0.123	0.067	0.137 *	0.067	0.136 *	0.055	0.147 **	0.055
Saskatchewan	-0.117	0.070	-0.121	0.071	0.027	0.059	0.024	0.059
Alberta	-0.226 **	0.058	-0.229 **	0.058	-0.200 **	0.046	-0.202 **	0.046
British Columbia	0.081	0.060	0.057	0.060	0.140 **	0.049	0.121 *	0.049

(continued)

Table 6b: Impact of Working While on Claim and Other Characteristics on the Frequency of EI Use, 1992–1996 (Women) (Cont'd)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included		Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Language								
French	0.432**	0.119	0.360**	0.117	0.413**	0.104	0.355**	0.101
English	------	------	------	------	------	------	------	------
Both	0.132	0.079	0.137	0.078	0.121	0.068	0.125	0.067
Neither	-0.029	0.202	0.038	0.202	0.037	0.173	0.090	0.175
Occupation								
Skilled blue-collar	-0.239**	0.079	-0.212**	0.078	-0.227**	0.069	-0.206**	0.068
Unskilled blue-collar	-0.120	0.063	-0.112	0.063	-0.135*	0.054	-0.128*	0.054
White-collar	------	------	------	------	------	------	------	------
Regional mobility								
0–1 year at current residence	-0.436**	0.080	-0.400**	0.079	-0.401**	0.068	-0.372**	0.067
2–5 years at current residence	-0.305**	0.075	-0.279**	0.074	-0.254**	0.064	-0.233**	0.063
6–10 years at current residence	-0.102	0.083	-0.090	0.083	-0.132	0.071	-0.123	0.071
More than 10 years at current residence	------	------	------	------	------	------	------	------
Own home	0.237**	0.062	0.236**	0.061	0.185**	0.052	0.184**	0.051
Lived in region for more than 10 years	0.090	0.058	0.078	0.057	0.131**	0.049	0.122*	0.048
Family living in region	0.157*	0.064	0.160*	0.063	0.139**	0.054	0.142**	0.053
Family living in region (no response)	0.861*	0.355	0.839*	0.338	0.759**	0.287	0.741**	0.273

(continued)

Table 6b: Impact of Working While on Claim and Other Characteristics on the Frequency of EI Use, 1992–1996 (Women) (Cont'd)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included		Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Awareness of EI								
Friends/family collected EI	0.301 **	0.054	0.285 **	0.053	0.279 **	0.046	0.266 **	0.045
Friends/family collected EI (no response)	0.014	0.075	0.001	0.076	0.019	0.062	0.009	0.062
Residence in urban area	-0.166 **	0.059	-0.184 **	0.059	-0.183 **	0.050	-0.197 **	0.050
Partner in 1997	-0.001	0.059	0.011	0.058	0.058	0.050	0.067	0.049
Immigrant	-0.155 *	0.074	-0.119	0.074	-0.114	0.060	-0.086	0.060
Proportion of active claim weeks with declared earnings (1992–1996)	------	------	0.879 **	0.109	------	------	0.696 **	0.090
Constant	-1.210 **	0.322	-1.363 **	0.318	-0.582 *	0.271	-0.703 **	0.267
Sample size	8,841		8,841		8,841		8,841	
R-squared	0.214		0.228		0.211		0.224	
F-statistic	93.15		94.01		103.97		103.59	
P-value for F-statistic	0.000		0.000		0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

The results for the Poisson specifications are presented in Table A.1a for men and Table A.1b for women in the Appendix. The empirical patterns of estimated signs and statistical significance are completely robust to the change from a linear to a non-linear specification. The estimates from the negative binomial count model are qualitatively similar to the least squares estimates. The test for the significance of the dispersion parameter for the distribution of the stochastic process generating the claim count variable cannot reject the null hypothesis, indicating that the Poisson model applies. Since the estimates from the negative binomial count model are quasi-identical quantitatively to the Poisson estimates, they are not presented. Finally, the results from the ordered probit model are also qualitatively similar to the results presented in tables 6a and 6b, and are presented in Table A.2 in the Appendix.

The frequency measures of EI use weight all claims or years of EI receipt equally; there is no adjustment for the length of the EI claim. We now turn our attention to a measure of EI incidence that is generated by both the frequency of recourse to EI benefits and the length of benefit receipt, namely the cumulative number of weeks of EI receipt observed over the interval 1992 to 1996. This benefit-week count measure is the endogenous variable for the next set of regression equations. The exogenous variables are the same as those included in the frequency of EI use equations presented in the previous section. The empirical strategy is to examine the partial estimated effect of the indicator for working while on claim, which again is the ratio of weeks of working while on claim to weeks of active EI claim status. The primary specifications have a linear form and are estimated using the least squares technique, taking account of the survey weights.[24]

The results from the least squares estimation are presented in Table 7a for men and Table 7b for women. In the first specification, the estimates for only the control variables are presented. For most of the covariates, we obtain results that are qualitatively similar to those for the preceding set of equations involving frequency of EI use measures. With a few exceptions, the determinants of the frequency of use, such as age, educational attainment, urban versus rural residence, province, language, immigrant status, the set of regional mobility variables, and broad occupational categories (white-collar, skilled blue-collar, unskilled blue-collar), are the same as the determinants of the intensity of EI receipt, and the pattern of signs is similar.

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[24]Given the limited nature of the dependent variable, however, we have also estimated the model in a non-linear parametric form. In order to examine the robustness of the least squares results to the restriction of a linear parametric form, a Tobit formulation is also estimated. That formulation is typically applied in situations where the observed values for the endogenous variables (the benefit-week count measure in our case) is bounded from below by zero and from above by the highest reported value, and the underlying notional or latent variable (in our case, the cumulative number of benefit weeks) might have a longer range. Because all individuals received some EI benefit in 1996 due to the sampling framework, all respondents should have a positive value for the cumulative number of benefit-weeks received between 1992 and 1996. There are 113 observations, however, that have zero values, which is probably due to reporting anomalies. These observations are treated as left-censored. Because they comprise less than one half of one per cent of total sample, however, they contribute very little to the likelihood function. The results from the Tobit estimation are thus almost quantitatively identical to the least squares estimates.

Table 7a: Impact of Working While on Claim and Other Characteristics on the Number of Weeks of Receipt of EI Benefits, 1992–1996 (Men)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Weeks of Receipt of EI Benefits		Number of Weeks of Receipt of EI Benefits	
	Parameter Estimate	**Standard Error**	**Parameter Estimate**	**Standard Error**
Age	4.682 **	0.263	4.747 **	0.265
Age^2	-0.049 **	0.003	-0.049 **	0.003
Educational attainment				
Elementary	28.004 **	2.442	27.727 **	2.456
Some high school	19.900 **	1.907	19.738 **	1.921
High school	13.884 **	1.827	13.780 **	1.839
Some college	11.367 **	2.224	11.109 **	2.231
College	6.117 **	1.914	6.013 **	1.925
Some university	5.236 *	2.566	4.959	2.586
University	------	------	------	------
Province				
Newfoundland	43.862 **	1.601	44.314 **	1.601
Prince Edward Island	42.048 **	2.028	42.410 **	2.022
Nova Scotia	21.694 **	1.547	22.352 **	1.555
New Brunswick	29.571 **	1.646	30.001 **	1.650
Quebec	6.207 **	1.953	6.617 **	1.970
Ontario	------	------	------	------
Manitoba	2.061	1.312	1.945	1.316
Saskatchewan	3.684 **	1.376	3.694 **	1.378
Alberta	3.154 **	1.180	3.366 **	1.183
British Columbia	0.721	1.188	1.230	1.200
Language				
French	15.049 **	2.332	15.404 **	2.345
English	------	------	------	------
Both	6.182 **	1.581	6.250 **	1.592
Neither	2.720	4.386	2.582	4.437
Occupation				
Skilled blue-collar	6.472 **	1.511	6.684 **	1.524
Unskilled blue-collar	5.979 **	1.429	6.146 **	1.439
White-collar	------	------	------	------
Regional mobility				
0–1 year at current residence	1.421	1.476	1.277	1.478
2–5 years at current residence	0.801	1.412	0.627	1.415

(continued)

Table 7a: Impact of Working While on Claim and Other Characteristics on the Number of Weeks of Receipt of EI Benefits, 1992–1996 (Men) (Cont'd)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Weeks of Receipt of EI Benefits		Number of Weeks of Receipt of EI Benefits	
	Parameter Estimate	**Standard Error**	**Parameter Estimate**	**Standard Error**
Regional mobility				
6–10 years at current residence	0.558	1.547	0.411	1.550
More than 10 years at current residence	------	------	------	------
Own home	0.820	1.181	1.106	1.188
Lived in region for more than 10 years	3.399 **	1.177	3.476 **	1.181
Family living in region	1.134	1.334	1.130	1.340
Family living in region (no response)	9.230	6.973	9.488	6.907
Awareness of EI				
Friends/family collected EI	6.299 **	1.069	6.338 **	1.071
Friends/family collected EI (no response)	0.339	1.431	0.267	1.435
Residence in urban area	-9.714 **	1.114	-9.535 **	1.115
Partner in 1997	0.404	1.100	0.541	1.106
Immigrant	-3.101 *	1.425	-3.252 *	1.429
Proportion of active claim weeks with declared earnings (1992–1996)	------	------	-5.910 **	2.180
Constant	-75.148 **	5.684	-75.542 **	5.696
Sample size	13,036		13,036	
R-squared	0.264		0.264	
F-statistic	157.82		154.55	
P-value for F-statistic	0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Table 7b: Impact of Working While on Claim and Other Characteristics on the Number of Weeks of Receipt of EI Benefits, 1992–1996 (Women)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Weeks of Receipt of EI Benefits		Number of Weeks of Receipt of EI Benefits	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	2.893 **	0.323	2.867 **	0.321
Age^2	-0.028 **	0.004	-0.027 **	0.004
Educational attainment				
Elementary	16.429 **	3.133	16.758 **	3.136
Some high school	9.973 **	2.042	10.344 **	2.037
High school	6.030 **	1.683	6.303 **	1.681
Some college	1.705	1.947	2.026	1.931
College	-0.610	1.606	-0.645	1.599
Some university	1.781	2.176	1.872	2.161
University	------	------	------	------
Province				
Newfoundland	42.730 **	1.868	42.152 **	1.883
Prince Edward Island	53.043 **	2.410	52.685 **	2.417
Nova Scotia	27.882 **	1.786	27.192 **	1.803
New Brunswick	34.332 **	1.958	33.660 **	1.974
Quebec	10.215 **	2.110	9.846 **	2.104
Ontario	------	------	------	------
Manitoba	-2.697 *	1.351	-2.595	1.351
Saskatchewan	-6.169 **	1.437	-6.201 **	1.432
Alberta	-2.617 *	1.202	-2.639 *	1.202
British Columbia	3.541 **	1.278	3.358 **	1.275
Language				
French	11.653 **	2.596	11.099 **	2.582
English	------	------	------	------
Both	4.900 **	1.563	4.938 **	1.554
Neither	4.123	4.970	4.629	4.992
Occupation				
Skilled blue-collar	-0.803	1.617	-0.598	1.620
Unskilled blue-collar	5.113 **	1.283	5.174 **	1.278
White-collar	------	------	------	------
Regional mobility				
0–1 year at current residence	-7.205 **	1.650	-6.935 **	1.643
2–5 years at current residence	-4.354 **	1.566	-4.150 **	1.568
6–10 years at current residence	-2.248	1.705	-2.159	1.703

(continued)

Table 7b: Impact of Working While on Claim and Other Characteristics on the Number of Weeks of Receipt of EI Benefits, 1992–1996 (Women) (Cont'd)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Weeks of Receipt of EI Benefits		Number of Weeks of Receipt of EI Benefits	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Regional mobility				
More than 10 years at current residence	------	------	------	------
Own home	2.029	1.330	2.019	1.328
Lived in region for more than 10 years	0.513	1.271	0.423	1.266
Family living in region	3.299 *	1.348	3.325 *	1.341
Family living in region (no response)	12.003	6.808	11.837	6.775
Awareness of EI				
Friends/family collected EI	6.352 **	1.133	6.226 **	1.130
Friends/family collected EI (no response)	1.358	1.527	1.261	1.529
Residence in urban area	-8.312 **	1.264	-8.451 **	1.262
Partner in 1997	0.130	1.296	0.221	1.294
Immigrant	-2.293	1.486	-2.017	1.483
Proportion of active claim weeks with declared earnings (1992–1996)	------	------	6.679 **	2.127
Constant	-34.708 **	6.818	-35.871 **	6.810
Sample size	8,841		8,841	
R-squared	0.269		0.270	
F-statistic	118.30		114.41	
P-value for F-statistic	0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

In the second specification, an indicator for working while on claim (proportion of active claim weeks with declared earnings) is included, and the results for this key variable are contrary for men and women. For men, working while on claim is estimated to have a significant and *negative* impact on the cumulative number of weeks of EI benefits between 1992 and 1996. A 23 percentage point increase in the proportion of active claim weeks with declared earnings (the standard deviation for men) is associated with a 1.4 week *decrease* in the number of weeks of regular benefits received over the five years. While for men, working during more of their claim time is related to a reduction in the number of weeks they receive benefits, for women, the estimated coefficient indicates a positive (and statistically significant) relationship between working while on claim and their weeks of benefit receipt over the period. For female claimants, a 25 percentage point increase in the

same proportion (the standard deviation for women) is associated with an *increase* of 1.7 weeks with EI benefits in the period from 1992 to 1996.

As mentioned above, the cumulative total week count measure for the intensity of EI use is the product of two distinct EI outcomes: the frequency of EI use coupled with the length of the typical EI claim. According to the set of regression equations presented above, the frequency of EI use is positively associated with working while on claim for both men and women, and the magnitudes are not markedly different across genders. In light of this result, it would appear in the case of men that the negative effect of working while on claim on the cumulative number of weeks of receipt of EI benefits between 1992 and 1996 is the net effect of a positive impact on the frequency of EI use and a strong offsetting negative effect on the typical length of the claim. In other words, it would appear that while working while on claim is associated with a higher claim count, it is also associated with fewer weeks of benefits *for a typical claim*, which would be consistent with the findings of Roy (2001).

Long-Term Impact of Working While on Claim on EI Use (1997–1998)

The regression models presented thus far include an indicator for working while on claim that is concurrent with the measures of Employment Insurance (EI) use. In both the frequency of EI use equations and the equations for cumulative benefit-weeks estimated earlier, the EI use outcomes and the weeks of declared earnings are observed over the interval 1992–1996. As mentioned above, these two events are jointly determined, and hence all of those specifications are affected by endogeneity. One empirical strategy to address this problem is to include measures of prior work while on claim in equations modeling EI use statistics. In this section as well as the next, we replace concurrent measures with predetermined measures.

One pertinent policy question is whether working while on claim can lead to the attainment of more stable and secure employment patterns and hence reduce future dependence on the EI regime. With this perspective in mind, we seek to utilize the seven years worth of longitudinal data on EI claims histories that are available. The measure of EI use that we model is the frequency of EI receipt in the latter years of 1997 and 1998. The covariates are the same demographic, individual, and regional attributes that are used in the two previous sections. The predetermined indicator for working while on claim is the number of active claim weeks with declared earnings during the 1996 claim.

Like the previously estimated count models, the dependent variable is limited and discrete in nature, but the range of values is now changed from 1–5 to 0–2. It assumes a value of zero if no claims at all were initiated in the period 1997–1998; 1 if a claim was initiated in either year; or 2 if a claim was initiated in both years. For men, 41 per cent, and for women, 50 per cent of the sample had no claim during this period; 34 per cent of men and 47 per cent of women had one claim; and 25 per cent of men and 23 per cent of women had two claims. Since there is a large cluster of individuals having the zero value, the endogenous variable is bounded from below, and only non-linear specifications should be estimated.[25] Four different functional specifications are estimated for both men and women. The two types of discrete choice models are the ordered probit and the ordered logit, while the two types of count models are the Poisson regression models and the negative binomial count models.

The results from these estimating equations are presented in Table 8a for men and Table 8b for women. For each table, the ordered probit specification appears in the first set of columns, the ordered logit specification in the second, and the Poisson specification in the third.[26] The results for the control variables tend to be very similar to those generated by the frequency of EI use models that are estimated over the earlier interval of

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[25]Recall that due to the sample selection criteria, all individuals initiated a claim for regular EI benefits in 1996, so the minimum number of claims filed over the period 1992–1996 is one. Because of the existence of many individuals filing zero claims in 1997 and 1998, there is likely to be a greater dispersion element in the latter case, of which the negative binomial count model can take account.

[26]The negative binomial count model proved to be inestimable, as the algorithm for maximizing the likelihood function failed to converge. A possible explanation is that with the huge clusters of zero observations and a narrow range of positive observations (one and two only), the estimator lacked sufficient variation in order to identify the parameters.

1992–1996. For both genders, there is an increasing relationship between the number of active claim weeks with declared earnings over the course of the 1996 claim and the frequency of EI use in the subsequent period of 1997–1998. This finding essentially dovetails with the result of a positive association between the frequency of EI use and working while on claim that was discerned earlier for the interval 1992–1996. It does not appear that the use of the allowable earnings provision during 1996 serves to promote the policy objective of lowering the frequency of EI use in 1997–1998.

Table 8a: Impact of Prior Work While on Claim and Other Characteristics on the Frequency of EI Use, 1997–1998 (Men)

Model	Ordered Probit Specification		Ordered Logit Specification		Poisson Specification	
Dependent Variable	Number of Years With New EI Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	0.056 **	0.009	0.093 **	0.015	0.042 **	0.007
Age^2	-0.001 **	0.000	-0.001 **	0.000	0.000 **	0.000
Educational attainment						
Elementary	0.272 **	0.050	0.454 **	0.084	0.168 **	0.033
Some high school	0.128 **	0.037	0.209 **	0.062	0.088 **	0.027
High school	-----	-----	-----	-----	-----	-----
Some college	-0.058	0.062	-0.092	0.104	-0.055	0.053
College	-0.115 *	0.050	-0.198 *	0.084	-0.099 *	0.043
Some university	-0.301 **	0.081	-0.481 **	0.137	-0.288 **	0.078
University	-0.224 **	0.072	-0.384 **	0.123	-0.218 **	0.070
Province						
Newfoundland	0.675 **	0.050	1.128 **	0.084	0.495 **	0.038
Prince Edward Island	0.753 **	0.062	1.273 **	0.105	0.525 **	0.042
Nova Scotia	0.431 **	0.049	0.725 **	0.081	0.357 **	0.039
New Brunswick	0.528 **	0.051	0.884 **	0.086	0.389 **	0.040
Quebec	0.174 **	0.064	0.298 **	0.108	0.183 **	0.052
Ontario	-----	-----	-----	-----	-----	-----
Manitoba	0.125 *	0.050	0.203 *	0.084	0.127 **	0.045
Saskatchewan	0.240 **	0.052	0.400 **	0.087	0.226 **	0.044
Alberta	-0.043	0.050	-0.073	0.084	-0.062	0.049
British Columbia	0.223 **	0.048	0.369 **	0.082	0.201 **	0.044
Language						
French	0.386 **	0.069	0.637 **	0.116	0.260 **	0.049
English	-----	-----	-----	-----	-----	-----
Both	0.146 **	0.049	0.252 **	0.084	0.106 **	0.038
Neither	0.345 *	0.140	0.547 *	0.237	0.325 **	0.109

(continued)

Table 8a: Impact of Prior Work While on Claim and Other Characteristics on the Frequency of EI Use, 1997–1998 (Men) (Cont'd)

Model	Ordered Probit Specification		Ordered Logit Specification		Poisson Specification	
Dependent Variable	**Number of Years With New EI Claims**		**Number of Years With New EI Claims**		**Number of Years With New EI Claims**	
	Parameter Estimate	**Standard Error**	**Parameter Estimate**	**Standard Error**	**Parameter Estimate**	**Standard Error**
Occupation						
Skilled blue-collar	0.076	0.053	0.138	0.091	0.072	0.048
Unskilled blue-collar	0.188 **	0.052	0.317 **	0.089	0.162 **	0.047
White-collar	-----	-----	-----	-----	-----	-----
Regional mobility						
0–1 year at current residence	-0.085	0.046	-0.146	0.077	-0.061	0.036
2–5 years at current residence	-0.012	0.041	-0.026	0.069	0.009	0.030
6–10 years at current residence	-0.008	0.045	-0.014	0.077	0.001	0.032
More than 10 years at current residence	-----	-----	-----	-----	-----	-----
Own home	0.005	0.037	-0.002	0.062	0.003	0.029
Lived in region for more than 10 years	0.120 **	0.039	0.192 **	0.065	0.108 **	0.033
Family living in region	-0.017	0.043	-0.031	0.072	-0.016	0.035
Family living in region (no response)	0.400	0.249	0.687	0.413	0.303	0.171
Awareness of EI						
Friends/family collected EI	0.188 **	0.033	0.316 **	0.056	0.146 **	0.026
Friends/family collected EI (no response)	0.079	0.043	0.137	0.073	0.070 *	0.034
Residence in urban area	-0.228 **	0.032	-0.381 **	0.053	-0.167 **	0.023
Partner in 1997	0.031	0.036	0.056	0.060	0.023	0.028
Immigrant	-0.099 *	0.048	-0.140	0.081	-0.105 *	0.046
Number of active claim weeks with declared earnings (1996)	0.008 **	0.001	0.014 **	0.002	0.006 **	0.001
Constant					-1.531 **	0.163
Sample size	12,923		12,923		12,923	
F-statistic	44.47		41.21		46.59	
P-value for F-statistic	0.000		0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Table 8b: Impact of Prior Work While on Claim and Other Characteristics on the Frequency of EI Use, 1997–1998 (Women)

Model	Ordered Probit Specification		Ordered Logit Specification		Poisson Specification	
Dependent Variable	**Number of Years With New EI Claims**		**Number of Years With New EI Claims**		**Number of Years With New EI Claims**	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	0.064 **	0.012	0.104 **	0.021	0.058 **	0.012
Age^2	-0.001 **	0.000	-0.001 **	0.000	-0.001 **	0.000
Educational attainment						
Elementary	0.225 **	0.076	0.373 **	0.126	0.145 **	0.054
Some high school	0.019	0.053	0.036	0.088	0.011	0.043
High school	-----	-----	-----	-----	-----	-----
Some college	-0.200 **	0.066	-0.316 **	0.112	-0.200 **	0.065
College	-0.132 *	0.055	-0.213 *	0.093	-0.122 *	0.051
Some university	-0.166 *	0.078	-0.253	0.135	-0.151 *	0.073
University	-0.101	0.065	-0.154	0.110	-0.093	0.058
Province						
Newfoundland	0.501 **	0.060	0.835 **	0.100	0.431 **	0.052
Prince Edward Island	0.830 **	0.073	1.389 **	0.123	0.610 **	0.053
Nova Scotia	0.382 **	0.058	0.632 **	0.098	0.348 **	0.052
New Brunswick	0.457 **	0.064	0.752 **	0.108	0.371 **	0.057
Quebec	0.087	0.081	0.128	0.140	0.131	0.074
Ontario	-----	-----	-----	-----	-----	-----
Manitoba	0.202 **	0.061	0.320 **	0.104	0.207 **	0.057
Saskatchewan	0.024	0.066	0.022	0.113	0.048	0.065
Alberta	-0.219 **	0.061	-0.380 **	0.105	-0.298 **	0.071
British Columbia	0.234 **	0.057	0.381 **	0.097	0.233 **	0.056
Language						
French	0.411 **	0.087	0.697 **	0.147	0.313 **	0.072
English	-----	-----	-----	-----	-----	-----
Both	0.070	0.060	0.123	0.103	0.046	0.053
Neither	0.190	0.157	0.304	0.271	0.209	0.150
Occupation						
Skilled blue collar	-0.243 **	0.060	-0.388 **	0.102	-0.226 **	0.054
Unskilled blue collar	-0.219 **	0.047	-0.347 **	0.080	-0.203 **	0.041
White collar	-----	-----	-----	-----	-----	-----
Regional mobility						
0–1 year at current residence	-0.239 **	0.060	-0.387 **	0.100	-0.196 **	0.056
2–5 years at current residence	-0.190 **	0.053	-0.310 **	0.089	-0.142 **	0.045
6–10 years at current residence	-0.103	0.055	-0.174	0.093	-0.057	0.045

(continued)

Table 8b: Impact of Prior Work While on Claim and Other Characteristics on the Frequency of EI Use, 1997–1998 (Women) (Cont'd)

Model	Ordered Probit Specification		Ordered Logit Specification		Poisson Specification	
Dependent Variable	**Number of Years With New EI Claims**		**Number of Years With New EI Claims**		**Number of Years With New EI Claims**	
	Parameter Estimate	**Standard Error**	**Parameter Estimate**	**Standard Error**	**Parameter Estimate**	**Standard Error**
Regional mobility						
More than 10 years at current residence	-----	-----	-----	-----	-----	-----
Own home	0.074	0.047	0.111	0.080	0.077	0.045
Lived in region for more than 10 years	0.247 **	0.046	0.398 **	0.078	0.263 **	0.047
Family living in region	0.100 *	0.047	0.161 *	0.081	0.093 *	0.045
Family living in region (no response)	0.271	0.278	0.410	0.463	0.304	0.257
Awareness of EI						
Friends/family collected EI	0.166 **	0.041	0.263 **	0.068	0.145 **	0.036
Friends/family collected EI (no response)	0.001	0.053	0.003	0.090	0.000	0.049
Residence in urban area	-0.253 **	0.042	-0.421 **	0.070	-0.210 **	0.035
Partner in 1997	-0.017	0.046	-0.026	0.078	-0.018	0.042
Immigrant	0.047	0.056	0.084	0.096	0.032	0.056
Number of active claim weeks with declared earnings (1996)	0.004 **	0.001	0.007 **	0.002	0.003 **	0.001
Constant					-1.776 **	0.280
Sample size	8,750		8,750		8,750	
F-statistic	32.55		29.50		35.55	
P-value for F-statistic	0.000		0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Short-Term Impact of Working While on Claim on EI Use (1996 Claim)

The regression analysis presented thus far has involved EI claim activity observed over a long period of time — potentially spanning several claims. The last regression model involves the estimated impact of working while on claim on the number of weeks of benefits received during a single claim. Because all individuals in the estimating sample initiated a claim in 1996, we select as our endogenous variable the number of weeks of regular EI benefits that the individual collected over the course of the claim that they filed in 1996.[27] We include two predetermined measures of work while on claim, namely the proportion of active claim weeks with declared earnings observed between 1992 and 1995 and the number of active claim weeks with declared earnings observed over the same period. The estimated coefficient should shed some light on the extent to which working while on claim during the interval 1992–1995 influences the number of weeks of EI receipt for the claim initiated in 1996. The same set of covariates that is included in the preceding models is used in this regression model.

The results for both men and women are listed in tables 9a and 9b, respectively. In the first specification, the indicator for working while on claim is the number of active claim weeks with declared earnings, while in the second, it is the proportion of active claim weeks with declared earnings. The results are not sensitive, however, to these alternative measures of work while on claim, as the estimated coefficient is significant and negative in all equations. The estimated coefficient for the ratio measure (second specification) is -6.89 for both men and women, which implies that a one-standard-deviation increase in the ratio (0.24 out of a range from 0 to 1) translates into a 1.65-week decrease in the number of weeks of regular benefits received over the course of the EI claim initiated in 1996. The estimated coefficient for the number of weeks (first specification) is -0.037 for men and -0.039 for women. While highly statistically significant, these magnitudes are fairly small. For instance, based on these estimated coefficients, an individual who works about 6 weeks per year for a total of 24 weeks over the 1992–1995 period would receive approximately 1 fewer week of benefits during his or her 1996 claim.

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[27]There are some complications involved in the calculation of this variable, which is performed by an algorithm. These are discussed in the Appendix.

Table 9a: Impact of Prior Work While on Claim and Other Characteristics on the Length of the 1996 Claim (Men)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Weeks of Receipt of EI Benefits		Number of Weeks of Receipt of EI Benefits	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	0.189 *	0.091	0.194 *	0.091
Age^2	-0.001	0.001	-0.001	0.001
Educational attainment				
Elementary	0.612	0.530	0.426	0.527
Some high school	0.344	0.380	0.280	0.376
High school	-----	-----	-----	-----
Some college	-0.046	0.636	-0.089	0.639
College	-0.807	0.524	-0.719	0.523
Some university	-0.007	0.886	-0.100	0.888
University	-0.750	0.820	-0.740	0.820
Province				
Newfoundland	8.720 **	0.498	8.651 **	0.496
Prince Edward Island	6.084 **	0.551	6.090 **	0.549
Nova Scotia	4.229 **	0.497	4.379 **	0.494
New Brunswick	4.972 **	0.505	4.963 **	0.504
Quebec	3.283 **	0.719	3.348 **	0.717
Ontario	-----	-----	-----	-----
Manitoba	-1.041 *	0.492	-1.064 *	0.491
Saskatchewan	-0.365	0.488	-0.344	0.486
Alberta	-1.521 **	0.482	-1.425 **	0.481
British Columbia	0.285	0.507	0.509	0.507
Language				
French	-0.268	0.737	-0.189	0.733
English	-----	-----	-----	-----
Both	0.240	0.526	0.210	0.524
Neither	0.672	1.303	0.580	1.288
Occupation				
Skilled blue-collar	-0.176	0.604	-0.187	0.602
Unskilled blue-collar	0.160	0.579	0.232	0.577
White-collar	-----	-----	-----	-----
Regional mobility				
0–1 year at current residence	0.099	0.477	0.102	0.476
2–5 years at current residence	0.093	0.446	0.102	0.444
6–10 years at current residence	0.077	0.476	0.070	0.471
More than 10 years at current residence	-----	-----	-----	-----

(continued)

Table 9a: Impact of Prior Work While on Claim and Other Characteristics on the Length of the 1996 Claim (Men) (Cont'd)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Weeks of Receipt of EI Benefits		Number of Weeks of Receipt of EI Benefits	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Regional mobility				
Own home	-1.279 **	0.391	-1.214 **	0.391
Lived in region for more than 10 years	-0.632	0.425	-0.611	0.424
Family living in region	0.301	0.463	0.342	0.463
Family living in region (no response)	-0.441	1.793	-0.400	1.757
Awareness of EI				
Friends/family collected EI	-0.312	0.345	-0.352	0.344
Friends/family collected EI (no response)	0.257	0.481	0.268	0.478
Residence in urban area	-0.233	0.312	-0.151	0.312
Partner in 1997	-1.501 **	0.376	-1.457 **	0.376
Immigrant	0.255	0.544	0.165	0.543
Number of active claim weeks with declared earnings (1992–1995)	-0.037 **	0.004	-----	-----
Proportion of active claim weeks with declared earnings (1992–1995)	-----	-----	-6.894 **	0.674
Constant	14.387 **	2.006	14.632 **	1.984
Sample size	12,923		12,923	
R-squared	0.074		0.082	
F-statistic	32.97		32.74	
P-value for F-statistic	0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Table 9b: Impact of Prior Work While on Claim and Other Characteristics on the Length of the 1996 Claim (Women)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Weeks of Receipt of EI Benefits		Number of Weeks of Receipt of EI Benefits	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Age	-0.080	0.132	-0.064	0.131
Age^2	0.003	0.002	0.003	0.002
Educational attainment				
Elementary	-2.100 **	0.784	-2.208 **	0.781
Some high school	0.705	0.596	0.598	0.592
High school	-----	-----	-----	-----
Some college	0.580	0.784	0.645	0.787
College	-2.051 **	0.631	-1.924 **	0.626
Some university	0.045	0.887	0.152	0.885
University	-1.569 *	0.706	-1.539 *	0.697
Province				
Newfoundland	7.502 **	0.652	7.463 **	0.649
Prince Edward Island	4.944 **	0.689	4.922 **	0.685
Nova Scotia	4.537 **	0.634	4.669 **	0.632
New Brunswick	2.767 **	0.640	2.765 **	0.640
Quebec	2.808 **	0.838	2.943 **	0.838
Ontario	-----	-----	-----	-----
Manitoba	-2.572 **	0.652	-2.503 **	0.651
Saskatchewan	-2.889 **	0.711	-2.849 **	0.708
Alberta	-1.761 **	0.651	-1.827 **	0.647
British Columbia	-0.510	0.643	-0.436	0.645
Language				
French	-0.693	0.874	-0.547	0.872
English	-----	-----	-----	-----
Both	0.498	0.615	0.461	0.618
Neither	-1.712	1.787	-1.938	1.782
Occupation				
Skilled blue-collar	2.763 **	0.684	2.719 **	0.679
Unskilled blue-collar	3.123 **	0.540	3.070 **	0.537
White-collar	-----	-----	-----	-----
Regional mobility				
0–1 year at current residence	2.069 **	0.665	2.134 **	0.657
2–5 years at current residence	0.948	0.579	0.902	0.572
6–10 years at current residence	0.101	0.613	0.019	0.607
More than 10 years at current residence	-----	-----	-----	-----

(continued)

Table 9b: Impact of Prior Work While on Claim and Other Characteristics on the Length of the 1996 Claim (Women) (Cont'd)

Model	Linear Specification		Linear Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Weeks of Receipt of EI Benefits		Number of Weeks of Receipt of EI Benefits	
	Parameter Estimate	Standard Error	Parameter Estimate	Standard Error
Regional mobility				
Own home	0.399	0.515	0.361	0.513
Lived in region for more than 10 years	-0.713	0.509	-0.799	0.509
Family living in region	-0.514	0.514	-0.534	0.513
Family living in region (no response)	-4.836	3.251	-5.039	3.257
Awareness of EI				
Friends/family collected EI	-0.623	0.435	-0.574	0.433
Friends/family collected EI (no response)	-0.526	0.617	-0.419	0.614
Residence in urban area	-1.015 *	0.457	-0.942 *	0.455
Partner in 1997	0.403	0.499	0.383	0.498
Immigrant	-1.376 *	0.628	-1.468 *	0.631
Number of active claim weeks with declared earnings (1992–1995)	-0.039 **	0.005	-----	-----
Proportion of active claim weeks with declared earnings (1992–1995)	-----	-----	-6.895 **	0.774
Constant	18.109 **	2.855	18.429 **	2.834
Sample size	8,750		8,750	
R-squared	0.088		0.098	
F-statistic	24.06		24.59	
P-value for F-statistic	0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Conclusion

In this paper, we evaluate the use of the allowable earnings provision by claimants of the Canadian Employment Insurance (EI) program with the aim of understanding the extent to which working while on claim relates to EI dependency. Until recently, very little has been known about the way in which claimants pursue part-time and temporary work opportunities while maintaining an active EI claim, and the relationship between working while on claim and their use of EI. Often assumed to be an effective tool for encouraging claimants to become less reliant on EI, the allowable earnings provision may not be performing as originally intended. In fact, Human Resources Development Canada (HRDC) states in its latest EI monitoring and assessment report that the design of the provision may be "flawed" by giving incentive to work only if claimants can find a full week of work. In this paper, we examine whether or not the provision may also be giving some claimants the unintended incentive to prolong their time spent in receipt of EI benefits over both the shorter and longer term.

In our analysis of the claims histories of 1996 claimants, we find that most claimants make use of the allowable earnings provision at some point during their claims. Approximately 88 per cent of our sample of 1996 EI claimants made recourse to it at least once over the 1992–1996 interval, and approximately 75 per cent did so during the course of their 1996 claim. We also find that of those who do work while on claim, most begin reporting earnings right after the start of their claim. Despite the prevalent use of the provision, only a relatively small proportion of claimants declare earnings extensively over many weeks, with the average claimant declaring earnings in approximately one quarter of his or her claim weeks.

Although some occasional claimants make use of the allowable earnings provision, we find that frequent claimants tend to be the most likely to work while on claim. We also discern certain correlations between demographic, regional, occupational, and educational attributes and use patterns of this provision, but other determinants are probably related to the structure of the local labour market. Since individual EI claims histories appear to be good identifiers of claimants who are most likely to draw on the allowable earnings provision, further policy analysis of the use of the allowable earnings provision would best be directed towards frequent EI claimants, as this provision is not likely to have major consequences for the claims behaviour of occasional claimants.

Our results provide some evidence that, particularly in the case of men, the provision is having one of its intended effects, which is to reduce disincentives to accept short-term job opportunities, and thus to reduce the number of weeks of receipt of benefits during a given claim. This finding holds when we examine how working while on claim impacts the number of concurrent weeks of receipt of benefits or the number of weeks of benefits during a future EI claim. In this way, use of the allowable earnings provision appears to be associated with a lower degree of short-term dependency on EI.

Our results regarding the effect of working while on claim over a longer term provide evidence that the allowable earnings provision may be contributing to frequent EI use. To

estimate long-term dependency, we examine the relationship between working while on claim and the frequency of EI claims and number of years of EI receipt. In this case, we find evidence that the provision does not perform as intended, since we observe that claimants who work while on claim exhibit more frequent EI claims over the longer term, whether we estimate how working while on claim impacts the number of concurrent EI spells or future spells of EI receipt. In other words, it does not appear as though this policy measure is aiding frequent claimants in making the transition to full-time, full-year employment. On the other hand, for certain frequent claimants who would face high adjustment costs to change their employment patterns, perhaps due to lower geographical or occupational mobility, working while on claim undoubtedly raises their total incomes. In these cases, the allowable earnings provision serves to reduce the fiscal cost of the EI program while improving the financial circumstances of working claimants and their families.

Further research on this important economic and policy issue would be enhanced by the availability of data on the attributes of the jobs and firms typically involved in the use of the allowable earnings provision. A key yet currently unobservable variable is the structure of employment at the local level, especially the importance of fragmented, short-term, and precarious employment opportunities relative to "standard" employment positions. Information on the conditions of the local labour market at a disaggregated level, such as the share of part-time work, the seasonal pattern of employment, and the length of typically available jobs, would be useful for isolating the factors that contribute to working while on claim from the factors that lead to frequent recourse to the EI program. Nevertheless, future research will still be faced with the challenge of dealing with some degree of endogeneity of the local labour market structure with respect to the use of the allowable earnings provision. This is due to the fact that both the supply and demand side of the labour market adjust their economic behaviour in response to the parameters of the EI program. Therefore, it might be expected that over a lengthy period, firms tailor their hiring and firing practices to the parameters of the allowable earnings provision, altering the type of jobs that they offer to their workers accordingly.

Appendix

Procedure for calculating the length of the 1996 EI claim

The beginning of the EI claim is indicated by a code denoting the two-week waiting period that is mandatory for all EI claims (except work-sharing benefits). Once this point in time is identified, the algorithm counts the number of consecutive active claim weeks. Due to administrative reporting anomalies, the waiting period flag is occasionally missing, and we are thus unable to measure the length of the claim. In addition, there are some individuals who initiated two claims in 1996. In the cases where the earlier claim is a null claim (typically an application is filed but the worker does not claim benefits after the two-week waiting period is over) or a claim for only special EI benefits, it is the later claim that we are interested in. The algorithm hits the indicator for starting that later claim too soon, and fails to measure its length accurately. In total, we omit 206 observations as a result of these two reporting problems.

In a small minority of cases, another reporting problem that affects the calculation of the length of the EI claim filed in 1996 is that the administrative records make it difficult to demarcate the end of the 1996 claim and the beginning of a next claim because there is either (erroneously) no record of the mandatory two-week waiting period or the two claims are contiguous. If these two conditions hold, then the two claims are essentially fused together. In these cases, information is not available to separate the two claims, and it is problematic to fully identify all such individuals, resulting in a slight overestimation of the average value of the length of the 1996 claim.

Ordered probit model of the frequency of EI claims (1992–1996)

The ordered probit model is an alternative specification for the equations modeling the frequency of claims observed over the interval 1992–1996. The regression models presented in the text are estimated using least squares and Poisson specifications, with the dependent variable being the number of EI claims filed over the five-year time period. In the latter procedure, the stochastic process generating these observed claim counts is assumed to follow the Poisson distribution, which contains only one parameter to be estimated, namely the probability of filing an EI claim over a certain interval. For the probit procedure, the discrete values for the claim count measure are aligned in numerical order along a continuum in order to form a continuous latent variable. The stochastic process generating the observed claim counts is assumed to follow the standard normal distribution. Each of the adjacent ranges (or bands) along the continuum is bounded by threshold values corresponding to the possible values of EI claims. These critical values are ancillary parameters that are estimated by the ordered probit procedure. The approach is to estimate the probability of observing a claim count value within each of these bands. Like the conventional probit model and the multinomial probit models, all of the estimated coefficients are identified only up to some factor of proportionality, as the standard error of the regression model is not estimable.

The results for the ordered probit specifications for men and women are presented in Table A.2. Despite the difference in the stochastic processes underlying the Poisson and the ordered probit regression models, the results are qualitatively identical, as the signs and significance patterns of the estimates are the same. The key variable of our analysis, namely the proportion of active claim weeks with declared earnings, has a positive and significant estimated coefficient for both genders.

Table A.1a: Impact of Working While on Claim on the Frequency of EI Use, 1992–1996 (Men)

Model	Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included		Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	**Number of Claims**		**Number of Claims**		**Number of Years With New EI Claims**		**Number of Years With New EI Claims**	
	Incidence Rate Ratio	**Standard Error**	**Incidence Rate Ratio**	**Standard Error**	**Incidence Rate Ratio**	**Standard Error**	**Incidence Rate Ratio**	**Standard Error**
Age	1.071 **	0.004	1.068 **	0.004	1.059 **	0.004	1.056 **	0.004
Age^2	0.999 **	0.000	0.999 **	0.000	0.999 **	0.000	0.999 **	0.000
Educational attainment								
Elementary	1.362 **	0.047	1.380 **	0.046	1.345 **	0.048	1.362 **	0.047
Some high school	1.300 **	0.041	1.309 **	0.040	1.281 **	0.041	1.289 **	0.040
High school	1.226 **	0.038	1.230 **	0.038	1.200 **	0.038	1.204 **	0.037
Some college	1.180 **	0.043	1.196 **	0.043	1.151 **	0.042	1.165 **	0.042
College	1.131 **	0.038	1.137 **	0.037	1.097 **	0.037	1.102 **	0.036
Some university	1.057	0.047	1.073	0.046	1.046	0.046	1.060	0.045
University	------	------	------	------	------	------	------	------
Province								
Newfoundland	1.279 **	0.021	1.248 **	0.020	1.274 **	0.021	1.246 **	0.020
Prince Edward Island	1.309 **	0.024	1.282 **	0.024	1.337 **	0.024	1.313 **	0.023
Nova Scotia	1.142 **	0.019	1.099 **	0.019	1.166 **	0.019	1.126 **	0.018
New Brunswick	1.204 **	0.022	1.176 **	0.021	1.219 **	0.022	1.193 **	0.021
Quebec	1.053 *	0.026	1.028	0.025	1.078 **	0.027	1.055 *	0.025
Ontario	------	------	------	------	------	------	------	------
Manitoba	1.041 *	0.019	1.049 **	0.019	1.052 **	0.018	1.059 **	0.018
Saskatchewan	1.074 **	0.020	1.075 **	0.020	1.096 **	0.019	1.097 **	0.019
Alberta	1.030	0.018	1.017	0.018	1.041 *	0.017	1.029	0.017
British Columbia	1.034 *	0.017	1.004	0.017	1.036 *	0.017	1.008	0.016

(continued)

Table A.1a: Impact of Working While on Claim on the Frequency of EI Use, 1992–1996 (Men) (Cont'd)

Model	Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included		Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error
Language								
French	1.162 **	0.031	1.142 **	0.030	1.154 **	0.032	1.135 **	0.031
English	------	------	------	------	------	------	------	------
Both	1.043 *	0.021	1.039 *	0.020	1.038	0.021	1.034	0.020
Neither	1.058	0.070	1.065	0.068	1.078	0.068	1.085	0.067
Occupation								
Skilled blue-collar	1.094 **	0.025	1.080 **	0.024	1.109 **	0.025	1.096 **	0.025
Unskilled blue-collar	1.093 **	0.024	1.083 **	0.023	1.095 **	0.024	1.086 **	0.024
White-collar	------	------	------	------	------	------	------	------
Regional mobility								
0–1 year at current residence	1.025	0.019	1.034	0.019	1.006	0.019	1.014	0.019
2–5 years at current residence	1.027	0.017	1.037 *	0.017	1.014	0.017	1.023	0.017
6–10 years at current residence	1.015	0.018	1.023	0.018	1.010	0.018	1.017	0.018
More than 10 years at current residence	------	------	------	------	------	------	------	------
Own home	1.071 **	0.016	1.054 **	0.015	1.078 **	0.016	1.063 **	0.016
Lived in region for more than 10 years	1.095 **	0.018	1.089 **	0.017	1.078 **	0.018	1.073 **	0.017
Family living in region	1.007	0.018	1.007	0.017	1.004	0.018	1.005	0.017
Family living in region (no response)	1.209 **	0.088	1.189 *	0.088	1.213 **	0.089	1.194 *	0.089

(continued)

Table A.1a: Impact of Working While on Claim on the Frequency of EI Use, 1992–1996 (Men) (Cont'd)

Model	Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included		Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error
Awareness of EI								
Friends/family collected EI	1.078 **	0.015	1.075 **	0.014	1.082 **	0.015	1.080 **	0.015
Friends/family collected EI (no response)	0.990	0.018	0.995	0.018	0.999	0.019	1.003	0.018
Residence in urban area	0.912 **	0.012	0.903 **	0.011	0.905 **	0.012	0.896 **	0.011
Partner in 1997	1.046 **	0.015	1.038 **	0.014	1.037 *	0.015	1.029 *	0.015
Immigrant	0.902 **	0.020	0.911 **	0.019	0.913 **	0.020	0.921 **	0.019
Proportion of active claim weeks with declared earnings (1992–1996)	------	------	1.373 **	0.037	------	------	1.335 **	0.037
Sample size	13,036		13,036		13,036		13,036	
F-statistic	124.95		132.57		134.45		137.47	
P-value for F-statistic	0.000		0.000		0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Table A.1b: Impact of Working While on Claim on the Frequency of EI Use, 1992–1996 (Women)

Model	Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included		Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error
Age	1.061 **	0.006	1.060 **	0.006	1.052 **	0.006	1.051 **	0.005
Age^2	0.999 **	0.000	0.999 **	0.000	1.000 **	0.000	1.000 **	0.000
Educational attainment								
Elementary	1.203 **	0.047	1.219 **	0.047	1.172 **	0.045	1.187 **	0.046
Some high school	1.108 **	0.036	1.122 **	0.037	1.080 *	0.035	1.094 **	0.035
High school	1.104 **	0.032	1.115 **	0.032	1.071 *	0.031	1.082 **	0.031
Some college	1.031	0.036	1.043	0.035	0.985	0.035	0.995	0.034
College	1.051	0.031	1.047	0.031	1.008	0.030	1.004	0.030
Some university	1.060	0.040	1.062	0.039	1.034	0.038	1.035	0.038
University	------	------	------	------	------	------	------	------
Province								
Newfoundland	1.327 **	0.030	1.293 **	0.029	1.305 **	0.028	1.274 **	0.028
Prince Edward Island	1.434 **	0.034	1.410 **	0.034	1.419 **	0.033	1.396 **	0.033
Nova Scotia	1.258 **	0.028	1.218 **	0.028	1.246 **	0.027	1.209 **	0.027
New Brunswick	1.293 **	0.032	1.254 **	0.031	1.288 **	0.032	1.253 **	0.031
Quebec	1.138 **	0.036	1.117 **	0.035	1.126 **	0.037	1.106 **	0.036
Ontario	------	------	------	------	------	------	------	------
Manitoba	1.046	0.024	1.049 *	0.024	1.060 **	0.024	1.063 **	0.024
Saskatchewan	0.959	0.025	0.957	0.025	1.014	0.025	1.012	0.025
Alberta	0.905 **	0.020	0.903 **	0.020	0.899 **	0.019	0.897 **	0.019
British Columbia	1.027	0.022	1.017	0.022	1.060 **	0.022	1.050 *	0.022

(continued)

Table A.1b: Impact of Working While on Claim on the Frequency of EI Use, 1992–1996 (Women) (Cont'd)

Model	Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included		Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error
Language								
French	1.127 **	0.040	1.103 **	0.039	1.147 **	0.042	1.124 **	0.040
English	------	------	------	------	------	------	------	------
Both	1.038	0.027	1.038	0.026	1.042	0.027	1.042	0.027
Neither	1.014	0.074	1.035	0.075	1.041	0.076	1.061	0.078
Occupation								
Skilled blue-collar	0.922 **	0.024	0.931 **	0.024	0.914 **	0.025	0.922 **	0.025
Unskilled blue-collar	0.957 *	0.020	0.959 *	0.020	0.944 **	0.020	0.947 **	0.020
White-collar	------	------	------	------	------	------	------	------
Regional mobility								
0–1 year at current residence	0.877 **	0.023	0.888 **	0.023	0.866 **	0.023	0.876 **	0.023
2–5 years at current residence	0.928 **	0.021	0.936 **	0.022	0.931 **	0.022	0.938 **	0.022
6–10 years at current residence	0.990	0.024	0.994	0.024	0.974	0.024	0.977	0.024
More than 10 years at current residence	------	------	------	------	------	------	------	------
Own home	1.084 **	0.023	1.084 **	0.023	1.078 **	0.023	1.077 **	0.022
Lived in region for more than 10 years	1.039	0.021	1.034	0.021	1.064 **	0.022	1.059 **	0.021
Family living in region	1.056 *	0.023	1.057 **	0.023	1.058 **	0.023	1.060 **	0.023
Family living in region (no response)	1.350 **	0.145	1.334 **	0.137	1.370 **	0.141	1.356 **	0.133

(continued)

Table A.1b: Impact of Working While on Claim on the Frequency of EI Use, 1992–1996 (Women) (Cont'd)

Model	Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included		Poisson Specification		Poisson Specification With Proportion of Weeks With Declared Earnings Included	
Dependent Variable	Number of Claims		Number of Claims		Number of Years With New EI Claims		Number of Years With New EI Claims	
	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error	Incidence Rate Ratio	Standard Error
Awareness of EI								
Friends/family collected EI	1.103 **	0.019	1.099 **	0.019	1.114 **	0.020	1.110 **	0.019
Friends/family collected EI (no response)	1.006	0.025	1.003	0.025	1.009	0.025	1.006	0.025
Residence in urban area	0.951 **	0.017	0.945 **	0.017	0.936 **	0.017	0.931 **	0.017
Partner in 1997	0.996	0.020	0.999	0.020	1.021	0.021	1.023	0.020
Immigrant	0.949 *	0.025	0.959	0.025	0.955	0.024	0.964	0.025
Proportion of active claim weeks with declared earnings (1992–1996)	------	------	1.307 **	0.043	------	------	1.287 **	0.042
Sample size	8,841		8,841		8,841		8,841	
F-statistic	90.08		90.75		101.38		101.06	
P-value for F-statistic	0.000		0.000		0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The F-statistics and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

Table A.2: Impact of Working While on Claim on the Frequency of EI Claims, 1992–1996

	Men		Women	
Model	**Ordered Probit Specification**		**Ordered Probit Specification**	
Dependent Variable	**Number of Claims**		**Number of Claims**	
	Parameter Estimate	**Standard Error**	**Parameter Estimate**	**Standard Error**
Age	0.138**	0.008	0.113**	0.011
Age^2	-0.001**	0.000	-0.001**	0.000
Educational attainment				
Elementary	0.754**	0.076	0.469**	0.089
Some high school	0.584**	0.066	0.183**	0.069
High school	0.428**	0.065	0.173**	0.060
Some college	0.324**	0.076	0.014	0.069
College	0.221**	0.069	0.053	0.061
Some university	0.112	0.086	0.042	0.077
University	------	------	------	------
Province				
Newfoundland	0.687**	0.046	0.603**	0.055
Prince Edward Island	0.740**	0.054	0.845**	0.062
Nova Scotia	0.321**	0.047	0.463**	0.056
New Brunswick	0.490**	0.049	0.544**	0.059
Quebec	0.082	0.062	0.233**	0.070
Ontario	------	------	------	------
Manitoba	0.093	0.050	0.130*	0.056
Saskatchewan	0.174**	0.051	-0.086	0.061
Alberta	0.004	0.046	-0.179**	0.053
British Columbia	0.079	0.045	0.112*	0.053
Language				
French	0.446**	0.065	0.298**	0.075
English	------	------	------	------
Both	0.123**	0.047	0.051	0.053
Neither	0.228	0.130	0.145	0.150
Occupation				
Skilled blue-collar	0.159**	0.049	-0.145**	0.056
Unskilled blue-collar	0.193**	0.047	-0.098*	0.045
White-collar	------	------	------	------
Regional mobility				
0–1 year at current residence	0.001	0.042	-0.291**	0.054
2–5 years at current residence	0.031	0.038	-0.174**	0.049
6–10 years at current residence	0.041	0.044	-0.079	0.054

(continued)

Table A.2: Impact of Working While on Claim on the Frequency of EI Claims, 1992–1996 (Cont'd)

	Men		Women	
	Ordered Probit Specification		**Ordered Probit Specification**	
Model				
Dependent Variable	**Number of Claims**		**Number of Claims**	
	Parameter Estimate	**Standard Error**	**Parameter Estimate**	**Standard Error**
Regional mobility				
More than 10 years at current residence	------	------	------	------
Own home	0.086 *	0.034	0.127 **	0.041
Lived in region for more than 10 years	0.170 **	0.036	0.138 **	0.041
Family living in region	0.001	0.039	0.134 **	0.045
Family living in region (no response)	0.402 **	0.137	0.471 *	0.236
Awareness of EI				
Friends/family collected EI	0.207 **	0.031	0.212 **	0.036
Friends/family collected EI (no response)	0.011	0.041	0.001	0.051
Residence in urban area	-0.277 **	0.030	-0.174 **	0.039
Partner in 1997	0.079 *	0.032	-0.040	0.039
Immigrant	-0.207 **	0.046	-0.058	0.055
Proportion of active claim weeks with declared earnings (1992–1996)	0.660 **	0.077	0.548 **	0.080
Sample size	13,170		8,955	
Pseudo R-squared	0.080		0.065	
Wald chi-square test	2,930.98		1,923.22	
P-value for F-statistic	0.000		0.000	

Note: One asterisk indicates statistical significance at the five per cent level, two asterisks at the one per cent level. The Wald test and associated p-values test the null hypothesis that all of the coefficients of the relevant model, except the intercept, are equal to zero.

References

Baker, M., & Rea, S. (1998). Employment spells and unemployment insurance eligibility requirements. *Review of Economics and Statistics, 80*(1), 80–94.

Benjamin, D., Gunderson, M., & Riddell, C. (2002). *Labour Market Economics* (5th ed.). Toronto: McGraw-Hill Ryerson.

Gray, D. (2001). The impact of regional ties and workers' attitudes towards job search on EI receipt. In S. Schwartz & A. Aydemir (Eds.), *Essays on the repeat use of unemployment insurance: The earnings supplement project.* Ottawa: Social Research and Demonstration Corporation.

Gray, D., & Sweetman, A. (2001). A typology analysis of the users of Canada's unemployment insurance system: Incidence and seasonality measures. In S. Schwartz & A. Aydemir (Eds.), *Essays on the repeat use of unemployment insurance: The earnings supplement project.* Ottawa: Social Research and Demonstration Corporation.

Gray, D., & de Raaf, S. (2002). *The heterogeneity of employment and unemployment insurance use patterns: The distinction between seasonal and non-seasonal users.* Mimeograph. Ottawa: Social Research and Demonstration Corporation.

Green, C. (1994). What should we do with the UI system? In J. Richards & W. Watson (Eds.), *The social policy challenge, Vol. 2.* Toronto: C.D. Howe Institute.

Green, D., & Riddell, C. (1997). Qualifying for unemployment insurance: An empirical analysis. *Economic Journal, 107*, 17–35.

Green, D., & Sargent, T. (1998). Unemployment insurance and job duration: Seasonal and non-seasonal jobs. *Canadian Economic Journal, 31*, 247–278.

Heckman, J. (1979). Sample selection bias as specification error. *Econometrica, 47,* 153–161.

HRDC. (2001). *Ministry response to the third report of the standing committee on human resource development and the status of persons with disabilities.* Ottawa: Author

HRDC. (2002). *Employment Insurance: 2001 monitoring and assessment report.* Ottawa: Author.

Kiefer, N., & Neuman, G. (1979). *The effects of alternative partial benefits formulas on beneficiary part time behaviour* Unemployment Insurance Occasional Paper 79-6). U.S. Department of Labor, Employment and Training Administration, Washington, DC.

Maddala, G. (1983). *Limited dependent variables and qualitative variables in econometrics.* New York: Cambridge University Press.

May, D., & Hollett, A. (1995). The rock in a hard place: Atlantic Canada and the UI trap. In J. Richards & W. Watson (Eds.), *The social policy challenge, Vol. 9.* Toronto: C.D. Howe Institute.

McCall, B. (1996). Unemployment insurance rules, joblessness, and part time work. *Econometrica, 64*(3), 647–682.

McCall, B. (October 1997). The determinants of full time versus part time re-employment following job displacement. *Journal of Labour Economics*.

Nakamura, A., Cragg, J., & Sayers, K. (1994). The case of disentangling the insurance and income assistance roles of unemployment insurance. *Canadian Business Economic, 3,* 46–53.

Nakamura, A., & Diewert, W. E. (1997). *Unemployment insurance in Canada: Problems and recent reforms.* Mimeograph.

Nakamura, A. (1995). New directions for UI, social welfare, and vocational education and training. *Canadian Journal of Economics, 54,* 731–752.

Nakamura, A. (1996). Employment insurance: A framework for real reform. *C.D. Howe Institute Commentary 85.* Toronto: C.D. Howe Institute.

OECD. (1997). *The OECD job strategy: Making work pay: Taxation, benefits, employment, and unemployment.* Paris: Author.

Ridder, R. I. (1984). The distribution of single spell duration data. In G. Neuman & N. Westergard-Nielsen (Eds.), *Studies in Labour Market Analysis.* Berlin: Springer-Verlag.

Roy, A. (2001). Insurance claimants working while on claim. *The Canadian Journal of Policy Evaluation, 16*(2), 71–85.

Schwartz, S., Bancroft, W., Gyarmati, D., & Nicholson, C. (2001). *The frequent use of unemployment insurance in Canada: The earnings supplement project.* Ottawa: Social Research and Demonstration Corporation.