Background Paper

MOWAT CENTRE

EI

TASK FORCE

THE INCOME SOURCES FOR LONG-TERM WORKERS WHO EXHAUST EMPLOYMENT INSURANCE BENEFITS

ROSS FINNIE, DAVID GRAY, IAN IRVINE, YAN ZHANG

MOWAT

School of Public Policy & Governance
UNIVERSITY OF TORONTO

APPLIED PUBLIC POLICY RESEARCH
INFORMED BY ONTARIO'S REALITY

About the Mowat Centre

The Mowat Centre for Policy Innovation is an independent, non-partisan public policy research centre located at the School of Public Policy and Governance at the University of Toronto.

The Mowat Centre undertakes collaborative applied policy research and engages in public dialogue on Canada's most important national issues, and proposes innovative, research-driven public policy recommendations, informed by Ontario's reality.

We believe a prosperous, equitable and dynamic Canada requires strong provinces, including a strong Ontario, and strong cities.

Visit us at www.mowatcentre.ca

The Income Sources for Long-Term Workers Who Exhaust Employment Insurance Benefits
By Ross Finnie, David Gray, Ian Irvine, Yan Zhang

ISBN 978-1-927350-14-0

A digital copy of this report is available at the Mowat EI Task Force website at www.mowateitaskforce.ca. To order printed copies of this publication for a fee, please contact us by email at info@mowatcentre.ca.

This paper was prepared by Ross Finnie, David Gray, Ian Irvine, and Yan Zhang. It is one in a series of papers commissioned by the Mowat Centre Employment Insurance Task Force to serve as sources of input for the Task Force as it develops recommendations for reform of Canada's Employment Insurance system.

Executive Summary

This research has two main goals. The first is to track those individuals who exhausted a spell of regular Employment Insurance (EI) benefits during the 1990s and early into the new millennium in order to investigate the labour market outcomes in their post-EI periods. We focus particularly on individuals who experienced an extended work period prior to receiving EI benefits. The second objective is to examine whether there have been shifts in these patterns following the numerous reforms to EI and Social Assistance (SA) that took place in the 1990s.

A prime motivation for the paper springs from the state of the EI and SA regimes at the end of the first decade of the new millennium. The EI regime presently covers a smaller percentage of unemployed individuals than at any time in the Program's recent history. Furthermore, currently SA entry involves more stringent qualification conditions, and leaves individuals who depend upon it far below the poverty line. There may thus exist a chasm in Canada's social safety network, in that many individuals who would be deemed to be in need of, and worthy of, income support may not have access to it. These concerns were central to the Mowat Centre EI Task Force as well as the report by the Expert Panel on Older Workers (2008).

With a view to establishing the facts of how individuals exhausting an EI benefits spell generate income in subsequent years, we use a database that merges the Longitudinal Administrative Database (LAD)—a tax-based file containing several million observations per year, and the EI-LINK file. The EI spell exhaustions are observed from 1994 to 2002, and the LAD data containing post-exhaustion information are exploited until 2007.

The paper has a number of novel aspects. First, while the interactions between EI and other social insurance programs such as SA, Workers' Compensation (WC) and Canada and Quebec Pension Plans (CQPP) have been examined before, this is the first time that a national database has been used. Second, our data cover a relatively recent time period.

Third, we consider transitions from EI receipt to several states and sources of income receipt, as opposed to SA receipt alone.

The principal conclusions are:

- Despite more exigent EI qualification conditions and entitlement provisions, there is no evidence of an increased degree of subsequent recourse to SA: the numbers and percentage of those exhausting EI spells and subsequently going onto the SA rolls has declined. Empirically the incidence of that transition is not particularly high—in the range of four to five per cent of all EI exhaustees in the years following the end of the EI spell for recent cohorts. Furthermore, just two per cent of EI spell exhaustees depend solely on SA within a year or two of the spell completion date.

- There appears to be a decline in the proportion of those EI exhaustees moving onto government pension programs (CQPP) and disability pension programs (CQPPD) toward the end of our period of study. This transition decision is no doubt complex, and clearly depends upon the age structure of EI spell exhaustees. Yet the recent decline in this transition in our data is consistent with the economy-wide trend in Canada observed in this millennium for individuals to prolong their attachment to the labour market.

- Frequent/repeat use of EI after the event of exhaustion, even among these selected samples of individuals who formerly did not have histories of frequent use of EI income, is one of the strongest patterns to emerge from the data. Subsequent EI claims are observed not just in the immediate period following an exhausted spell, but for several more years at a comparable incidence rate. There is no obvious tendency for this pattern of repeat use to decline during our estimating interval. While the number of individuals qualifying for EI support in general has dropped dramatically, the percentage of EI spell exhaustees who rely on this form of income support in subsequent periods is strikingly stable.

- A sizable percentage of individuals generate earnings within a year of exhausting their EI spell. This trend has been strongly positive over time. Between eighty and ninety per cent of individuals in the 2002 cohort of EI exhaustees generated earnings in the subsequent years, albeit many in conjunction with other forms of social insurance income.

- Moving to WC from EI is a relatively uncommon event, and the percentage of EI exhaustees doing so remained consistent at a level below one per cent over the 1990s.

The Income Sources for Long-Term Workers Who Exhaust Employment Insurance Benefits

Ross Finnie, David Gray, Ian Irvine, Yan Zhang

1 Introduction

This research is focused on the income sources of individuals in Canada who exhaust a spell of regular Employment Insurance (EI) benefits. It has two main goals, the first of which is to investigate the labour market outcomes and income sources of these 'exhaustees' during their post-EI claim periods: Social Assistance (SA) or some other income support program, such as Canada/Quebec Pension Plan (CQPP), Canada/Quebec Pension Plan Disability (CQPPD) or Workers' Compensation (WC); a return to the labour market; a return to EI receipt; some combination of work and EI; or some other outcome. We track them in both the short and longer term. The short term corresponds roughly to the first year after the spell exhaustion, and the longer term, which we truncate at five years, could encompass multiple transitions across these various states. Consideration of such a longer time horizon is important not just for movements onto SA rolls, but also for individuals who might, for example, search for a job for a year and then decide to withdraw from the labour market.

The second main goal is to examine whether there has been any detectable change in these patterns over time: not only did EI become more difficult to access post 1994, but SA too has become increasingly less accessible as a result of major changes implemented in Alberta (1993), Ontario (1995) and British Columbia (2002), and a series of less dramatic changes in the operation of the programs in most provinces during the 1990s. Furthermore, labour market conditions have varied dramatically during this time frame.

To accomplish these goals, we follow a large sample of individuals who exhaust a spell of regular EI benefits over the period 1994-2002 in order to track their income-source patterns in the following years. The sample is drawn from a linked file based on the Longitudinal Administrative Database (LAD), derived from individual tax records, and EI administrative data. This merged database allows us to identify individuals who exhaust their regular benefits in a given year (as indicated on the EI file) and then track their income sources in the years following that benefit termination through the LAD. The favourable attributes of the LAD-EI database for carrying out this analysis are discussed in more detail below. In addition to identifying spell exhaustees, the EI file enables us to cross-verify the EI information contained in the LAD.

A prime motivation for the paper is that EI presently benefits a smaller percentage of unemployed individuals than at any time in the Program's recent history. Furthermore, SA entry involves stringent conditions, and leaves individuals who depend upon it far below the poverty line. There may thus exist a chasm in Canada's social safety network, in that many individuals who need social support may not be receiving it. These concerns were central to the Mowat Centre EI Task Force, and also to the report from the Expert Panel on Older Workers (2008).

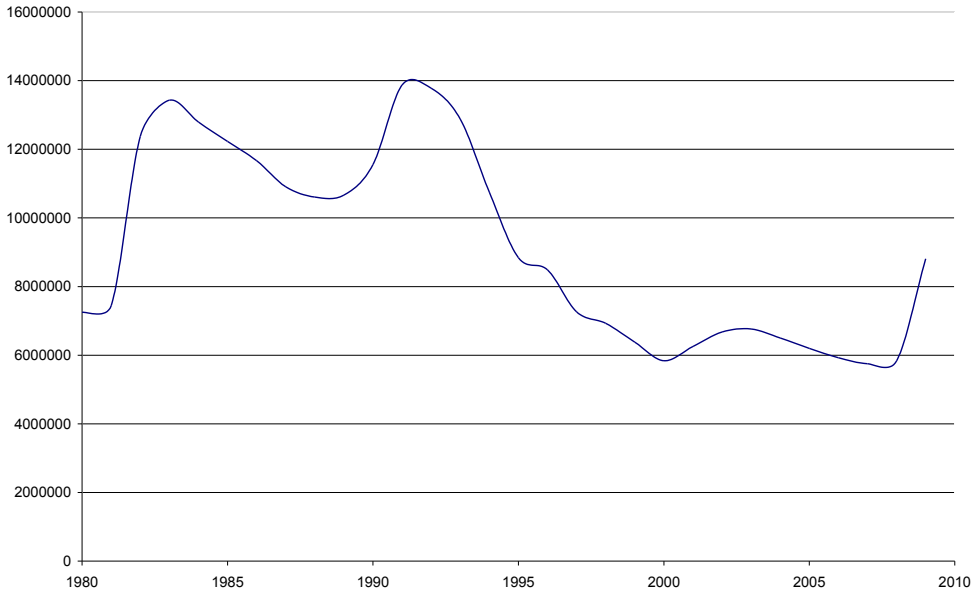
The paper is developed as follows. Section two initially presents some trend statistics for social insurance and social support programs in Canada; this is followed by a statement of concerns that surround the EI regime at the present time, a review of legislative changes, and a brief overview of some relevant literature. In section three we describe the database and sampling methods employed in the empirical section. Section four contains the main results, and section five offers some conclusions.

2 Background: Trends, Concerns, Program Reform, Existing Literature

2.1 Employment Insurance and Social Insurance Usage Trends

The number of individuals claiming regular EI benefits has varied enormously in recent decades. In 1993, when the unemployment rate reached 12 per cent nationally (1993), 1.15 million individuals claimed regular benefits monthly under the program. Since 2000, in contrast, this number has been in the neighbourhood of a half a million—prior to the recession that began in 2008. Figure 1 portrays the longer-term behaviour in annual frequency of the number of regular-benefit recipients.

Figure 1 Annual Regular EI Beneficiaries, 1980 - 2009



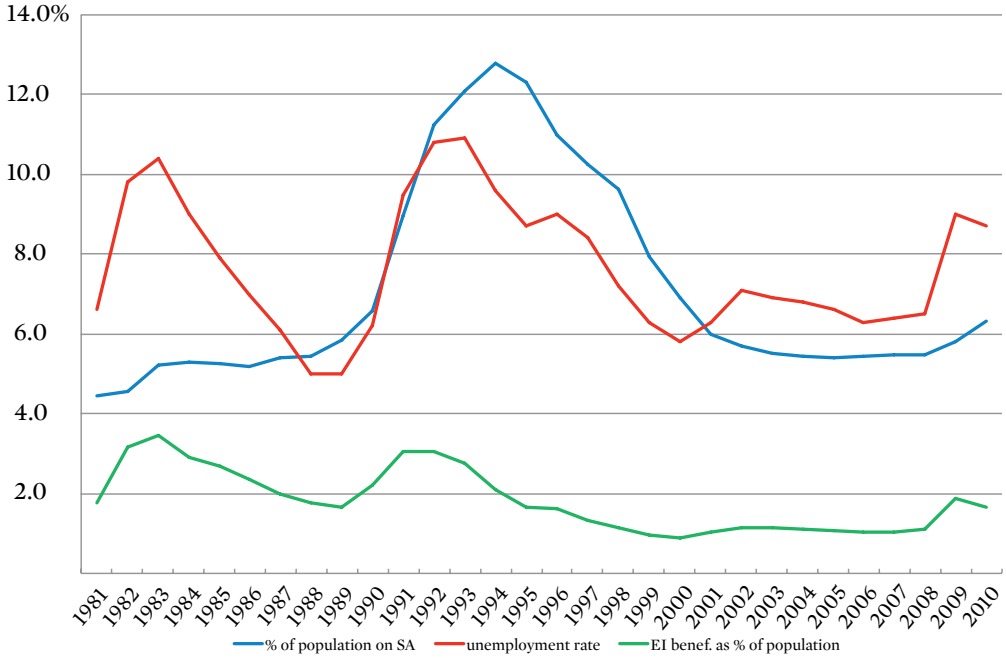
Source: CANSIM Table 276-0001

The decline since the early 1990s is attributable first to a substantial decline in the national unemployment rate. Second, several work-incentive-based reforms to EI were introduced in the 1990s that made benefits more difficult to collect and generally reduced the length of benefit-entitlement periods. Third, several active labour market policies and programs were introduced in 1996, under the title Employment Benefit Support Measures (EBSM), which were designed to facilitate job mobility, as opposed to providing passive income support.

At the onset of the 2008 recession, the number of beneficiaries climbed rapidly. However, while unemployment as of the start of 2011 continued to hover above eight per cent nationally, the number of EI beneficiaries appeared to be declining. A partial explanation of that development is that a few waves of EI claimants had exhausted their benefit entitlements. November 2010 data indicated a decline in claimant numbers in the neighbourhood of twelve per cent relative to November 2009.

The number of SA beneficiaries peaked in 1994 at 3.1 million individuals and subsequently declined to about 1.7 million by 2004.[1] As a percentage of a growing population, the rate has declined by even more than these two figures indicate. The recovery from the 1990s recession also marked the first time in recent history that the number of SA beneficiaries actually declined in a significant way. Courchene (1994) emphasized that, prior to this episode, recessions had increased the number of SA recipients, but they remained remarkably resilient in the face of subsequent recoveries. This ratchet effect was broken, however, during the 1990s recovery. SA rates declined from the mid-1990s for similar reasons that EI declined—an improving aggregate economy, a tightening of access to benefits in combination with a reduction in benefits, and the work-incentive effects of the National Child Tax program.[2] These phenomena are revealed in Figure 2, which portrays the intertemporal patterns of SA and EI activity levels, and the unemployment rate for Ontario until 2010. Those provinces for which recent data are available indicate a similar pattern (Stapleton, 2011).[3]

Figure 2 Annual Regular EI Beneficiaries, 1980 - 2009



Source: Stapleton, 2011

Retirement patterns have also undergone significant recent changes. Male participation rates in the 55-64 year age group had been declining since the mid 1970s, but this trend went into reverse in the late 1990s. Moreover, the Canadian patterns are mirrored in the US, the UK and several other European economies (Schirle, 2008). How this phenomenon translates into changes in the flow of EI spell exhaustees to the CQPP regimes may emerge from our analysis.

We also examine the possibility that EI spell exhaustees may use WC to a greater or lesser degree. This issue of substitutability between WC and EI is addressed by Fortin and Lanoie (1999). The long term trend in Canada is for safer working environments (e.g. Workplace Safety and Insurance Board, 2009). We also consider the possibility that older EI claimants might substitute the disability provision of the Canada Pension Plan (CPPD) as a form of 'non-employment' insurance—in effect a substitute for long-term EI benefits, which is addressed in Finnie and Gray (2009). More generally, where the funding responsibility for potentially competing social safety network programs lies partially with the federal government (e.g. EI, CPPD) and partially with the provincial government (e.g. SA and WC), strategic uploading and downloading of clients is always possible if one level of government wishes to shift the cost to another level.[4]

The foregoing discussion indicates that there has been no detectable growth in the levels of dependence on the regimes of SA, CQPP or WC; in fact, the opposite is true. However, it reveals little regarding the use of these programs by EI spell exhaustees.

2.2 EI Concerns in the New Millennium

Concerns about the structure and functioning of our employment and social insurance programs, particularly in the context of the current economic recession, have been expressed in numerous forums—most recently as part of the Mowat Centre EI Task Force:

1. Considerable holes characterize our knowledge in Canada regarding SA use in general, and in particular what happens to individuals whose EI payments are terminated without the claimant having found employment. Economy-wide data on SA appear to be available only up to 2006 at the time of writing, although some provinces do have more recent data.

2. SA has become more difficult to access, and now supports single individuals predominantly—single parent recipients have declined dramatically as a percentage of all recipients.

3. Where EI exhaustees do succeed in accessing SA, the dollar support levels are low, and in addition SA may stigmatize the recipients.

4. While EI insures against job loss, the coverage from another unemployment-related risk, namely long-term, persistent wage loss, does not exist.

5. Retraining programs have limited success in seeing EI exhaustees find their way back to a job that pays a wage in the neighbourhood of their previous employment wage.

6. The role of EI upon the event of the loss of employment, however, may also be undergoing change in view of globalization/outsourcing and an increasing degree of self employment. The modern economy is characterized by an increased share of the labour force working in the service sector and a greater proportion of workers employed in non-standard arrangements, such as intermittent work and self-employment. This evolution of the structure of employment and the dynamics of the job market raises questions about the appropriate values of parameters in the program—the replacement ratio, the entry requirements, the length of the benefit durations, and the benefit calculation period (for the inclusion of the qualifying weeks of employment). Moreover, in this new economy what is the appropriate balance between active and passive policies?

7. The 1990s changes in EI regulations, which we describe below, combined with the dramatic decline in the number of claimants, raises the possibility that some individuals who might have qualified for EI benefits under the pre-reform rules but not during the post-reform period may have found other ways to obtain public forms of income support. If claiming SA has become more difficult, it remains possible that individuals could still access SA with a lag (having run down their assets to the permissible level). Alternatively, individuals might take retirement earlier, make a claim under the disability provisions of the CQPP, or claim benefits from WC programs. In effect there are substitution possibilities among various social insurance and social support programs.

8. The appropriate division of government responsibilities in funding these various programs forms a tension between federal and provincial governments, and at the same time can give rise to moral hazard problems in program design and execution. For example, changes in the unemployment rate that result in greater numbers exhausting their EI benefits obviously promotes financial as well as humanitarian concerns at the provincial level. Consequently, any increased degree of understanding of the interactions between EI and these other social insurance and assistance programs should be of benefit to provincial governments as well as the federal authority that governs EI.[5]

2.3 EI Reform in the 1990s

Since 1990, with the exception of the maternity and family supplement developments, virtually all additional reforms have made benefits more difficult to obtain.[6] Among the more important of the reforms adopted in the early 1990s were: (i) raising the quantity of insurable work required to be eligible for benefits in 1990 and again in 1994; (ii) substantially reducing the maximum number of benefit weeks in high unemployment regions in 1994; (iii) making workers who quit their jobs without good cause ineligible for benefits in 1993; (iv) reducing the replacement rate from 60 per cent to 57 per cent to 55 per cent in 1993 and 1994; (v) reducing the maximum weeks of benefit entitlement in 1994.[7]

Further changes of a more mixed nature followed in the mid- and late-1990s. We list those that are most pertinent to our study: (i) There was a change from a weeks-of-work basis to an

hours-of-work basis as an EI qualification mechanism in January 1997, which especially affected part-time workers, multiple-job holders, and seasonal workers; (ii) the minimum hours of work required to qualify for benefits for new entrants and re-entrants into the labour market was increased in 1997; (iii) a 'divisor' rule, which in essence required an additional two weeks of work in order to secure full benefits was introduced in 1996; (iv) the 'clawback' rules, which were designed to reduce/reclaim the benefits going to those with higher 'end-of-year' incomes went through several modifications; (v) there was a significant erosion in the real value of the maximum insurable earnings and a steady reduction in the contribution rates by both employers and employees from 1994/95 onwards. The EI Act of 1996 raised the degree of generosity for some groups of workers with specific employment patterns (notably seasonal workers working long weeks during the season), while having the opposite impact on others (notably full-year workers working short hours).

Employment Benefit Support Measures accompanied these developments in 1996. While these particular active labour market policy interventions were not new, the EI Act of 1996 set out a new administrative framework for them which culminated gradually in the adoption of Labour Market Development Agreements (LMDAs) with almost all provinces.

> The components were: Employment Assistance Services (EAS) through counselling, job search assistance, job placement and labour market information; Skills Development (SD) mainly in accredited training; Targeted Wage Subsidy (TWS) for employers who hired the unemployed; Targeted Earnings Supplements (TES) to supplement the earnings of the unemployed who accepted an otherwise low-wage job; Self-Employment Assistance (SEA) to assist in starting a business; and Job Creation Partnership (JCP) to assist clients in obtaining work experience. The intent of the EBSMs was to provide active adjustment assistance to encourage structural adjustment to new job opportunities rather than simply providing passive income support (as in conventional EI) that discouraged such moves. (Gunderson, 2011)

From a fiscal balance viewpoint, one outcome of these myriad changes was that, even with contribution-rate reductions, the monetary value of combined contributions came to exceed the payments made to the unemployed as early as 1993/94—a time when Canada was still in a recession. Such excess revenues are perceived by employer groups as an employment tax, though such a perspective assumes that worker contributions are not significantly shifted back onto wages—an assumption based on an elastic supply of labour that is shared by few economists. Dahlby (1994) has also suggested that EI excess contributions may be an efficient, though regressive, way of generating tax revenue, since they act as a lump sum tax for those earning beyond the maximum insurable earnings threshold.

3 Literature Review on the Interface between EI and SA

The interaction between Canada's EI and SA programmes has been studied by numerous researchers, in particular, Fortin et al. (1999), Barrett et al. (1996), Grey (2002), HRDC (2001) and Finnie et al. (2004a, b). This literature presents quite different images of the interplay between these two significant income support programs. These differences appear to be largely attributable to the different periods of time the studies cover, as well as to other differences in terms of the groups focussed upon, methodological approaches, and so on.

In terms of the first point, Grey et al. (2002) uses data from 1987 to 1997, at the end of which time the economy had resumed growth for a couple of years, whereas the Fortin et al. and the Barrett et al. studies incorporate data only up to the early 1990s—a period dominated by the severe recession and subsequent growth in UI claimants and SA caseloads.[8] Finnie et al. (2004a) present trends on SA entry, exit and participation from 1992 through 2000, and find a radically different picture of welfare levels, welfare composition and welfare trends at the end of the period relative to the early 1990s.

Fortin et al. argue that a reduction in the generosity of EI benefits or a tightening of access conditions to them makes it less likely that those on SA at a given time will exit because the package of income support programs (EI and SA) on which such individuals may need to rely in the future becomes less certain and loses value. Thus the attraction of leaving SA for the labour market with its own uncertainties diminishes. In addition, the likelihood of re-entry onto SA should increase in this model for the reason that EI becomes less supportive and more difficult to access. Empirically, using a sample of single parents and including controls for demographic variables and economic conditions, they find support for both parts of these theoretical propositions based on data from 1979 to 1993.

Barrett et al. (1996) focus upon the question of whether there existed a significant clientele that relied upon both EI and SA, and arrive at an affirmative answer. Their data also span the late 1980s through the early 1990s, in their case for the provinces of British Columbia and New Brunswick. Grey et al. (2002) arrive at a very different conclusion, finding that very few EI claimants who exhausted their claims went onto SA benefits shortly thereafter, and argue that the substantial lag in entering SA for those who did so was likely attributable to the fact that many individuals who exhaust EI possess assets, or are partnered with an individual who has an income stream, and therefore do not qualify for SA support at that point in time. Grey et al. (2002) also emphasize that once a person is on the SA rolls, he or she realises that obtaining this form of income support can be time-consuming and uncertain, and additionally so for auxiliary benefits such as a housing rental supplement or child supplements. Therefore, when attempting an exit from SA, individuals will weigh these costs against the likely benefits from holding a job. Furthermore, if EI benefits diminish, then the attraction of leaving SA diminishes correspondingly.

HRDC (2001) examines the EI-SA interface by investigating if there was a change in the pattern of SA receipt on the part of those who exhausted EI claims (as well as those who were unemployed but did not receive EI) from 1995 to 1997, thus covering the period which saw the enactment of some of the major reforms in EI described above. The study found no such change: Fewer job losers exhausted their subsequent EI claims, and the SA take-up rate declined after the EI reform of 1996 for EI claimants, regardless of whether or not they exhausted their entitlement.

The present study differs from earlier work in several ways. First, it employs a national-level database as opposed to selected provinces. Second, we use more recent data spanning the interval 1994 to 2008. Third, we examine the pattern of transitions from EI to WC and CQPP as well as to SA. Fourth, we follow individuals for a longer period of time than has been done to this point.

4 The Data

4.1 The LAD and the EI Link File

The LAD is a 20 per cent representative sample of Canadian tax filers, constructed from Canada Revenue Agency records, which follows individuals over time and matches them into family units on an annual basis. It thus provides individual-level and family-level informa–tion on incomes, taxes, and basic demographic characteristics in a longitudinal framework. Individuals are selected randomly into the LAD according to their social insurance numbers (SINs), and are followed over time by the same identifier. The LAD's coverage of the adult population is very broad, since the rate of tax filing in Canada is high. Middle-income and upper-income Canadians are legally required to file, while lower-income individuals have strong incentives to file in order to recover income tax and other payroll tax deductions made throughout the year, to receive various tax credits, and to apply for the National Child Benefit. Overall, the full set of annual files from which the LAD is constructed is estimated to cover 95-97 per cent of the adult population over these years, thus comparing very favourably with other databases (Finnie and Sweetman, 2003). In terms of longitudinal tracking, there is very little attrition due to the administrative practice of linking individuals' records over time by means of their SIN.

The large number of observations in the LAD (approximately 6 million per year in recent periods) further allows us to identify sufficient numbers of EI exhaustees in order to conduct a robust and detailed analysis of these persons' subsequent income profiles. Finally, the income information on the LAD is detailed and deemed to be superior to what individuals provide in surveys.

While the LAD file is well-suited to the purposes of this study, it has some shortcomings. One is that it does not include some relevant individual-level attributes, such as education level. A second drawback is that it lacks more specific labour market information beyond the annual amount of earned income. For example, the LAD does not identify individuals who are unemployed unless they receive EI, nor does it contain any information on working time or job separations.

The EI administrative file—the "Link File" with which the LAD has been merged for this project—includes variables indicating the type of EI benefits a person received, and whether the person exhausted a spell of EI benefits. We are thus able to identify individuals who exhausted a spell of EI benefits in a particular year, and then follow them in subsequent years using the income information available in the LAD, since these include SA, CQPP, CQPPD, and WC benefits.

4.2 The Samples

Since the focus of this study is on individuals who have a strong attachment to the labour market, we selected individuals who had no EI or SA benefits for two years preceding their EI claim. We also selected only individuals who filed a tax return for 3 consecutive years, excluding residents of the Territories and multiple jurisdictions, and non residents. The sample was also restricted to those between 21 and 64 years of age in the reference year—we stopped following them beyond the age of 65. Individuals were not selected if they were self-employed,

farmers, or fishers, or received WC, Old Age Security, Federal supplements or CQPP in the preceding two years. We also excluded individuals whose reported earnings were below a threshold which deemed them to be just loosely attached to the labour force.

While the principal reason for limiting our sample in the above manner is to focus upon individuals who have a strong attachment to the labour market, the additional restrictions are necessitated by the fact that we do not know the order in which multiple sources of income in a given year might be received. For example, consider an individual who receives SA, then finds a job, becomes unemployed and finally receives EI. Consider another individual who might start the year with a job, become unemployed, receive EI and finally go onto SA. The LAD data do not enable us to distinguish between these two cases, but we are interested only in cases where EI receipt precedes SA receipt. Such uncertainty regarding the sequencing of income thus necessitates the restrictions that we impose on income source in the base year and the year prior to the base year—a claim initiated in that year (T-1) could continue to the base year (T0). We also excluded full-time students.

We next cross-checked to verify that these individuals, who are identified from the EI Link database, did indeed have EI benefits reported on their LAD file. This was true in approximately 95 per cent of all cases, and individuals with inconsistent EI records were then excluded. Our samples are also limited to those spells consisting of 'regular' benefits—thus excluding, for example, those with maternity/paternity/adoption benefits. Finally, we selected all those individuals who exhausted a spell of EI benefits that commenced in a given year—T0, which becomes the reference year. Note that we do not pinpoint the exact timing of the exhaustion, which could occur in either year T0 or in the subsequent year, which we call T1. All individuals finally selected are then followed in the next five years (T1, T2, T3, T4, T5) to examine the transition of their income composition.

This set of restrictions left us with a sample of 90,845 individuals for the complete period, which includes all 9 cohorts (labelled by a reference year) pooled together. These cohorts run from 1994 until 2002, and are identified by the year in which members commenced their EI benefits spell that was subsequently exhausted.[9] Some of these individuals disappeared from the data set subsequent to their observed EI exhaustion because they missed filing a tax form, or were otherwise censored because they no longer met our sample selection criteria based on age or student status. If this occurred, the record was censored at that point, even if the person re-appeared in the data or again met the selection criteria in a subsequent period, due to the uncertainty of their dynamics in the interlude. The number of such individuals is, however, relatively low, as will be seen in table 1 below.

5 Empirical Results

5.1 Incidence of Income Receipt from a Particular Source

The first post-exhaustion outcome that we investigate is the event of receiving income from a particular source. The data cover the entire period 1994-2002, for men and women together of all ages, living in all regions, subject to the sampling conditions described above. Our descrip-

tive statistic is an incidence rate that is estimated as the proportion of the sample receiving income in a given year from: (i) SA on an individual level; (ii) SA at the family level—which includes 'individuals'; (iii) EI, which represents a new spell by construction; (iv) WC; (v) labour market earnings[10]; and (vi) CQPP, including their respective disability regimes CQCPPD. The categories SA_I and SA_F denote individual and family based receipt of SA. An individual will always be a member of a family if he/she is the named recipient; but he/she may not be the named recipient and still be a member of a family where SA is received: SA is universally treated in 'caseloads' where there is more than one member in a household.

The first set of our results is presented in Table 1. In the top panel, all of the cohorts, which are defined by the year in which they commenced an EI spell that was ultimately exhausted, are pooled together.[11] The values in the first column (T0) give the number of individuals receiving benefits from the sources described and who commenced an EI spell in that reference year that ended in exhaustion (in either T0 or the next year). The relative shares appear in the next column. By sample construction, their incidence rate for EI receipt in year T0 is 100 per cent. Most of these individuals (86.2 per cent) had earnings in year T0, though whether these earnings accrued before, after or during the EI spell we cannot tell, given the annual frequency of the data. The alternative program sources of income can, in contrast, be fairly safely assumed to have come after the exhaustion of the observed EI spell. This is not just because of the nature of the income (e.g. WC would make earnings less likely for individuals who needed earnings to qualify for EI). We have imposed the condition that the individual received no income from any of these social insurance sources in period T-1, which ensures that any such income observed in year T0 could not be the continuation of such income. That said, we could still envisage some rare cases where these other income sources could be received prior to rather than after an exhausted EI spell in T0.

Table 1 Distribution of Income State in Years Since the Start of EI Exhaustion, Pure Incidence

Cohort	Income State	T0		T1		T2		T3		T4		T5	
		#	%	#	%	#	%	#	%	#	%	#	%
All	SA_1	1760	1.9	4940	5.8	4160	5.1	3410	4.3	3085	4	2800	3.7
	SA_F	2840	3.1	6270	7.4	5510	6.8	4725	5.9	4310	5.5	3995	5.3
	EI	90840	100	66950	78.6	14025	17.3	14220	17.9	13320	17.1	12105	16.1
	WC	1360	1.5	725	0.8	1200	1.5	1405	1.8	1445	1.9	1465	1.9
	Earnings	78310	86.2	52095	61.2	57635	70.9	57775	72.6	57005	73.4	55775	74
	CQPP	2870	3.2	7175	8.4	8605	10.6	9590	12.1	10370	13.3	10370	13.8
	Total Uncensored	90840	100	85170	93.8	79515	93.4	76810	94.5	75050	94.3	72850	93.8
	Non-Filer			4965	5.5	5055	5.9	4010	4.9	4100	5.2	4480	5.8
	Not Eligible (Student, Age, etc.)			705	0.8	605	0.7	455	0.6	405	0.5	365	0.5
	Total Censored			5670	6.2	5655	6.6	4470	5.5	4505	5.7	4845	6.2
1994	SA_1	325	3.6	835	9.9	715	9	585	7.6	495	6.6	420	5.8
	SA_F	495	5.5	1020	12.1	910	11.6	765	10	660	8.9	575	8
	EI	8915	100	7710	91.5	1195	15.1	1205	15.7	1170	15.7	1035	14.3
	WC	150	1.7	65	0.8	105	1.3	120	1.6	120	1.6	120	1.6
	Earnings	7335	82.2	4410	52.4	5140	65.1	5185	67.6	5230	70.1	5170	71.3
	CQPP	260	2.9	765	9.1	935	11.8	1000	13	1010	13.6	985	13.6
	Total Uncensored	8915	100	8420	94.4	7760	92.2	7410	93.9	7185	93.7	6985	93.8
	Non-Filer			440	4.9	610	7.2	450	5.7	445	5.8	420	5.6
	Not Eligible (Student, Age, etc.)			60	0.6	50	0.6	30	0.4	40	0.5	45	0.6
	Total Censored			500	5.6	660	7.8	480	6.1	485	6.3	465	6.2
1995	SA_I	250	2.6	725	7.9	620	7.1	465	5.5	395	4.7	340	4.2
	SA_F	420	4.2	880	9.6	795	9.1	625	7.4	535	6.4	470	5.9
	EI	9860	100	7575	82.4	1325	15.2	1485	17.6	1370	16.5	1195	14.9
	WC	175	1.8	75	0.8	125	1.4	155	1.8	140	1.7	180	2.2
	Earnings	8390	85.1	5210	56.6	5985	68.9	6045	71.6	6045	72.7	5940	74
	CQPP	320	3.3	835	9.1	985	11.3	1090	12.9	1155	13.9	1120	14

Table 1 cont.

	Total Uncensored	9860	100	9200	93.3	8505	92.4	8145	93.7	7995	94.6	7750	93.1
	Non-Filer			570	5.8	635	6.9	495	5.7	410	4.8	520	6.3
	Not Eligible (Student, Age, etc.)			95	0.9	60	0.7	50	0.6	45	0.5	50	0.6
	Total Censored			660	6.7	695	7.6	545	6.3	455	5.4	570	6.9
1996	**SA_I**	200	2	670	7	565	6.3	415	4.7	375	4.3	325	3.8
	SA_F	335	3.3	835	8.8	720	8	585	6.6	510	5.9	470	5.6
	EI	10195	100	7620	79.8	1555	17.2	1465	16.6	1320	15.3	1360	16.1
	WC	135	1.3	70	0.7	150	1.7	160	1.8	180	2.1	170	2
	Earnings	8535	83.7	5705	59.8	6335	70.3	6365	72.3	6330	73.3	6240	73.9
	CQPP	355	3.5	860	9	990	11	1085	12.3	1190	13.8	1190	14.1
	Total Uncensored	10195	100	9540	93.6	8830	92.6	8495	94.2	8305	94.3	8130	94.2
	Non-Filer			585	5.8	640	6.7	475	5.3	460	5.2	470	5.4
	Not Eligible (Student, Age, etc.)			65	0.7	70	0.7	45	0.5	40	0.4	35	0.4
	Total Censored			655	6.4	710	7.4	520	5.8	500	5.7	505	5.8
1997	**SA_I**	160	1.6	505	5.2	410	4.5	330	3.7	305	3.5	265	3.1
	SA_F	270	2.6	645	6.7	545	5.9	455	5	435	4.9	395	4.7
	EI	10240	100	7960	82.7	1480	16.2	1290	14.4	1375	15.6	1275	15.1
	WC	160	1.6	80	0.8	115	1.3	165	1.8	140	1.6	125	1.5
	Earnings	8690	84.9	5150	53.5	5890	64.4	6025	67.1	5920	67.1	5710	67.5
	CQPP	405	4	975	10.1	1130	12.4	1305	14.5	1450	16.4	1485	17.6
	Total Uncensored	10240	100	9625	94	8975	93.3	8660	94.6	8510	94.8	8210	93.1
	Non-Filer			535	5.2	580	6	435	4.8	430	4.8	575	6.5
	Not Eligible (Student, Age, etc.)			80	0.8	70	0.7	55	0.6	35	0.4	35	0.4
	Total Censored			615	6	650	6.7	490	5.4	465	5.2	610	6.9

Table 1 cont.

1998	**SA_I**	160	1.6	460	5	370	4.2	325	3.7	305	3.6	290	3.6
	SA_F	265	2.7	595	6.4	485	5.5	465	5.3	435	5.1	415	5.1
	EI	9820	100	7155	77.3	1375	15.5	1600	18.3	1425	16.8	1300	16
	WC	165	1.7	70	0.8	130	1.4	170	2	170	2	165	2
	Earnings	8180	83.3	5570	60.2	6115	69.2	6160	70.6	5965	70.4	5740	70.5
	CQPP	350	3.6	815	8.8	1010	11.4	1125	12.9	1250	14.8	1270	15.6
	Total Uncensored	9820	100	9250	94.2	8665	93.7	8415	95.2	8245	94.5	7910	93.4
	Non-Filer			495	5.1	520	5.6	365	4.1	445	5.1	505	6
	Not Eligible (Student, Age, etc.)			70	0.7	65	0.7	55	0.6	40	0.4	55	0.6
	Total Censored			570	5.8	585	6.3	420	4.8	485	5.5	560	6.6
1999	**SA_I**	155	1.7	405	4.7	355	4.3	320	3.9	290	3.6	285	3.6
	SA_F	250	2.7	520	6	500	6	450	5.5	410	5.1	395	5.1
	EI	9250	100	6500	75	1620	19.3	1615	19.9	1500	18.9	1340	17.3
	WC	130	1.4	85	1	140	1.7	160	2	170	2.1	195	2.5
	Earnings	8125	87.9	5665	65.4	6090	72.6	5955	73.1	5820	73.1	5690	73.4
	CQPP	290	3.1	710	8.2	870	10.4	995	12.2	1100	13.8	1105	14.2
	Total Uncensored	9250	100	8665	93.7	8155	94.1	7900	94.2	7685	94.3	7500	94.2
	Non-Filer			525	5.7	450	5.2	445	5.3	420	5.2	430	5.4
	Not Eligible (Student, Age, etc.)			60	0.6	60	0.7	40	0.5	40	0.5	30	0.4
	Total Censored			585	6.3	505	5.9	485	5.8	460	5.7	460	5.8
2000	**SA_I**	145	1.6	380	4.6	320	4	295	3.7	290	3.8	275	3.7
	SA_F	240	2.7	515	6.2	450	5.6	420	5.3	405	5.3	395	5.3
	EI	8900	100	6140	73.3	1515	18.9	1565	19.8	1495	19.5	1325	17.7
	WC	135	1.5	75	0.9	120	1.5	155	2	150	1.9	145	1.9
	Earnings	7890	88.7	5540	66.1	5850	73	5805	73.7	5705	74.5	5585	74.9
	CQPP	285	3.2	665	7.9	815	10.2	915	11.6	1005	13.1	990	13.3

TABLE 1 CONT.

	Total Uncensored	8900	100	8375	94.1	7855	93.8	7595	94.7	7420	94.2	7190	93.9
	Non-Filer			450	5	470	5.6	380	4.7	415	5.3	430	5.6
	Not Eligible (Student, Age, etc.)			75	0.8	50	0.6	40	0.5	40	0.5	35	0.5
	Total Censored			525	5.9	520	6.2	420	5.3	455	5.8	465	6.1
2001	**SA_I**	185	1.6	480	4.4	415	4	335	3.3	305	3.1	295	3.1
	SA_F	310	2.7	635	5.8	545	5.3	470	4.6	450	4.5	425	4.4
	EI	11580	100	8040	74.2	2035	19.6	2050	20.1	1835	18.5	1660	17.2
	WC	175	1.5	105	1	170	1.6	165	1.6	200	2	205	2.1
	Earnings	10520	90.9	7335	67.7	7940	76.3	7865	77.1	7740	77.8	7630	78.9
	CQPP	310	2.7	755	7	910	8.8	1025	10	1085	10.9	1095	11.3
	Total Uncensored	11580	100	10835	93.6	10165	93.8	9855	94.7	9620	94.4	9320	93.7
	Non-Filer			650	5.6	585	5.4	475	4.6	530	5.2	560	5.6
	Not Eligible (Student, Age, etc.)			95	0.8	85	0.8	70	0.7	45	0.5	65	0.7
	Total Censored			740	6.4	675	6.2	545	5.3	575	5.6	625	6.3
2002	**SA_I**	175	1.5	480	4.2	395	3.6	340	3.2	325	3.1	305	3
	SA_F	260	2.1	625	5.6	560	5.1	495	4.6	470	4.5	455	4.5
	EI	12085	100	8250	73.3	1935	17.7	1945	18.2	1820	17.5	1620	15.9
	WC	140	1.2	100	0.9	155	1.4	160	1.5	170	1.6	165	1.6
	Earnings	10640	88.1	7515	66.8	8290	76.1	8370	78.1	8255	79.1	8070	79
	CQPP	295	2.4	800	7.1	960	8.8	1055	9.9	1115	10.7	1130	11
	Total Uncensored	12085	100	11260	93.2	10600	94.2	10340	94.9	10085	94.1	9850	94.4
	Non-Filer			715	5.9	565	5	490	4.5	545	5.1	570	5.5
	Not Eligible (Student, Age, etc.)			110	0.9	95	0.8	65	0.6	85	0.8	15	0.1
	Total Censored			825	6.8	660	5.8	555	5.1	630	5.9	585	5.6

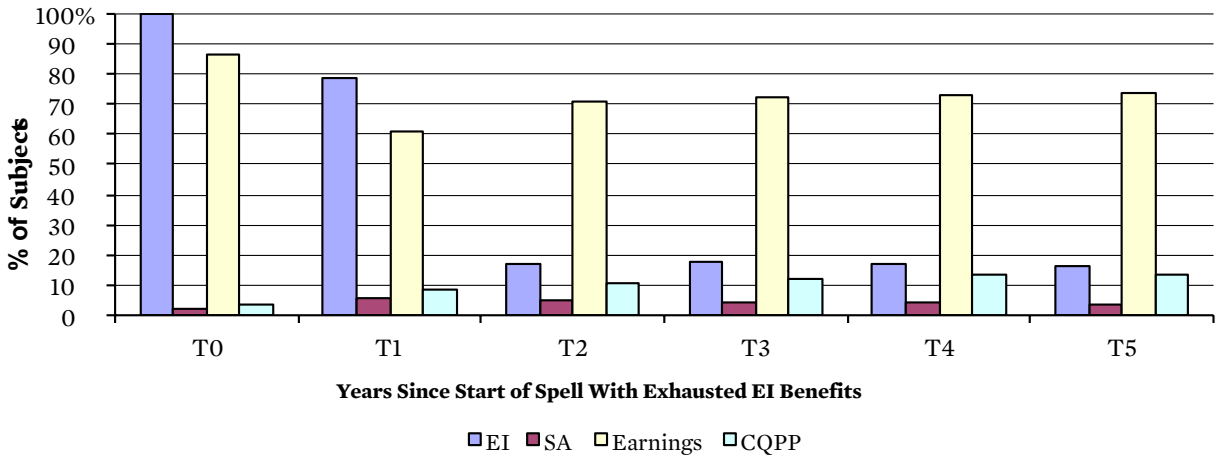
Individuals are followed for a five-year period following year T0 (labelled T1...T5). Since individuals may obtain income from more than a single source, these categories are obviously not mutually exclusive (and thus the proportions do not sum to unity). As noted above, T0 denotes the period in which the EI spell begins. This spell may end in either period T0 or in T1; the data do not permit us to distinguish. Hence the first year in which individuals definitively have no EI income from the reference spell is T2. This explains why there is a large decline between periods T1 and T2 in the incidence of receipt of EI income. This fact also explains why our presentation of the results concentrates on the receipt of these various income sources in periods T2 to T5 rather than from T0 or T1 to T5. While the absolute number of individuals tracked is given in the first column for each year (T0 through T5), we refer only to the percentages in the second column.

The first block in Table 1 presents the average incidence rates for all cohorts pooled together. Care should obviously be exercised in drawing inferences for policy purposes, because the observations span almost a decade. The incidence rate for receiving EI benefits in years T2 through T5 varies within a narrow band bounded by 16.1 per cent and 17.3 per cent. This set of results indicates a pattern of repeat use among EI spell exhaustees, and that the incidence of EI use does not vary a great deal as time elapses after the point of exhaustion.[12] This result was unexpected because we deleted from our sample individuals who received EI benefits in either year T-1 or T-2. During that pre-exhaustion interval, these particular subjects were not frequent users of EI.

The receipt of SA is rare relative to EI receipt. On an individual basis, the incidence rate varies between 3.7 per cent in T5 and 5.1 per cent in T2; on a family basis between 5.3 per cent and 7.4 per cent for the same time periods. The percentage drawing WC benefits varies little over the four years after year T1. Labour market earnings are reported by fewer than three quarters of the exhaustees in periods T2 to T5 (70.9 per cent to 74 per cent). This seems to be a fairly low number and suggests that some EI exhaustees are either having a difficult time finding subsequent employment, or alternatively are withdrawing from the labour market. The latter outcome could be associated with long-term unemployment. At this point, we cannot distinguish between these possibilities, as the table 1 data contain 'unconditional', univariate cross-tabulated data. The gradual, monotonic increase in the percentage claiming CQPP that we observe with the passage of time since exhaustion is to be expected, as more individuals attain the minimum age at which they become eligible for such benefits. At the same time, the 10.6 per cent number in period T2 is substantially above what one would expect given the age distribution of the population. A possible interpretation is that a disproportionately large percentage of the EI spell exhaustees in the >60 years age bracket are making a retirement decision. This is clearly a question that warrants more detailed investigation.

The figures presented in the first block in Table 1 are plotted in Figure 3. All of the cohorts are pooled together. One of the conclusions that we draw is that these incidence rates are remarkably stable over the period spanning years T2 through T5.

Figure 4 Incidence of Receipt of Income From Various Sources Over Time



Turning now to the individual cohorts (below the first block in Table 1), there are substantial changes in the transition probabilities between the early and mid 1990s and the first years of the new millennium. In contrast to what one might have anticipated, the incidence of EI receipt in years T3 and T4 was lower for the early cohorts and higher for the cohorts of exhaustees between 1999 and 2001. The higher rate of EI use in the later years may reflect the weak labour market following the slowdown of 2001/02. Even though the unemployment rate rose to a considerably lower plateau post-2001 compared to the 1991-1995 recession, the incidence of EI use is higher in the later phase. Note that this pattern is not inconsistent with the aggregate unemployment trends at this time; rather it could reflect the presence of a significant number of repeat users. Because the repeat use of EI is associated with seasonal and part-year workers, its incidence is fairly impervious to the business cycle.

The incidence rate for SA receipt displays a marked pattern, whether the individual or the family is used as the accounting unit. The 1994 cohort sees transitions to SA_I that vary between 9.0 per cent and 5.8 per cent between years T2 and T5. These numbers decline to between 4.2 per cent and 3.6 per cent for the 1998 cohort and decline further by 2002 to between 3.6 per cent and 3.0 per cent. Transitions to SA_F follow identical patterns for the cohorts over time. These figures illustrate clearly that the more stringent EI program that prevailed at the turn of the millennium did not result in an overflow of individuals and households onto the nation's 'welfare rolls'. These empirical patterns are fully consistent with the data on aggregate SA activity that was mentioned above. In figure 2 it can be seen that in Ontario SA dependency in 2010 is not much more than one half of the rate in 1994.

The apparent lack of substitution from the EI regime to the SA regime may be attributable at least in part to parallel developments in Canada's network of provincial SA programs. In addition to increased barriers to access described earlier, the real value of SA benefits fell during this period (National Council of Welfare, 2003), and the National Child Benefit program, which de facto separated a child support payment from the adult support payment, likely had a favourable impact on labour-force participation. A second caveat is that in this paper, we are looking only at transitions to SA from EI (regular benefits), and it is conceivable that individu-

als are going directly onto SA without passing through a spell of EI. However, Finnie et al. (2004b) provide evidence which suggests otherwise.

The third pattern to emerge from the cohort-specific analysis is that the pattern of retirements on the part of EI spell exhaustees evolved over the period. The percentage resorting to CQPP declines between the mid 1990s cohorts and the new millennium cohorts. The switch from a higher incidence rate of CQPP receipt to a lower incidence rate seems to occur in the late 1990s. The lower values observed in the later cohorts are consistent with what we know about aggregate retirement rates in the economy—more individuals are choosing to postpone the decision to retire.

Figure 4 displays averages of the values reported in Table 1 across the post-exhaustion years of T2 through T5. These averages are calculated in order to display trends (if any) across the cohorts from 1994 to 2002. Some of the patterns mentioned in the paragraph above are visible. For instance, the proportion of each cohort that is active in the labour market rises slightly during the boom year of 2000, followed by a relatively high value in 2001. The corresponding proportions for the receipt of EI show a similar pattern. The proportion of each cohort that receives SA benefits declines monotonically from 1994 until 1997, and tends to a low level of approximately 3 to 4 per cent thereafter.

The number of individuals in receipt of WC is never great, while those on CQPP rise in a steady fashion, as would be expected as the individuals in our samples age with the length of their respective post-EI periods. Nevertheless, these data show no obvious substitution toward the Canada and Quebec Pension plans as an alternative to the EI program for those who exhaust EI spells over the period in question, just as there has been no apparent switch to SA. These findings are consistent with those reported in Finnie and Gray (2009) for older displaced workers (who may or may not have exhausted their EI benefits).

5.2 Typology Analysis of receipt of income

For this portion of our statistical analysis, the outcome of interest is not the event of receipt of income from a particular source, but rather the profile of the income sources for individuals within our sample. To this end we calculate the shares of individuals relying heavily on income from specific sources, or a configuration of sources, in the time periods following an EI spell's exhaustion. Individuals can fall into more than one of these categories. In particular, individuals who obtain SA in a subsequent year may simultaneously generate labour market earnings or obtain income from other sources such as EI. We develop a typology of categories, whereby the groups are defined with a view to understanding in particular what other major sources of income are generated by SA recipients, and on what alternative income sources do exhaustees tend to rely? By construction of a typology, these 'types' are both mutually exclusive and exhaustive, and the shares must sum to unity. These types are defined as the follows: (i) SA receipt only; (ii) SA plus earnings, with SI receipt possible; (iii) SA plus SI receipt without earnings; (iv) SI plus earnings with no SA receipt; and (v) earnings only.[13] Note that the definition of these groups does not preclude the receipt of income from any number of other sources, such as investment income, but typically these amounts are small, and the sources named in the label are the critical ones. There are two broader categories at a higher level; the first three

Table 2 Distribution of Income State in Years Since the Start of EI Exhaustion, Typology Incidence

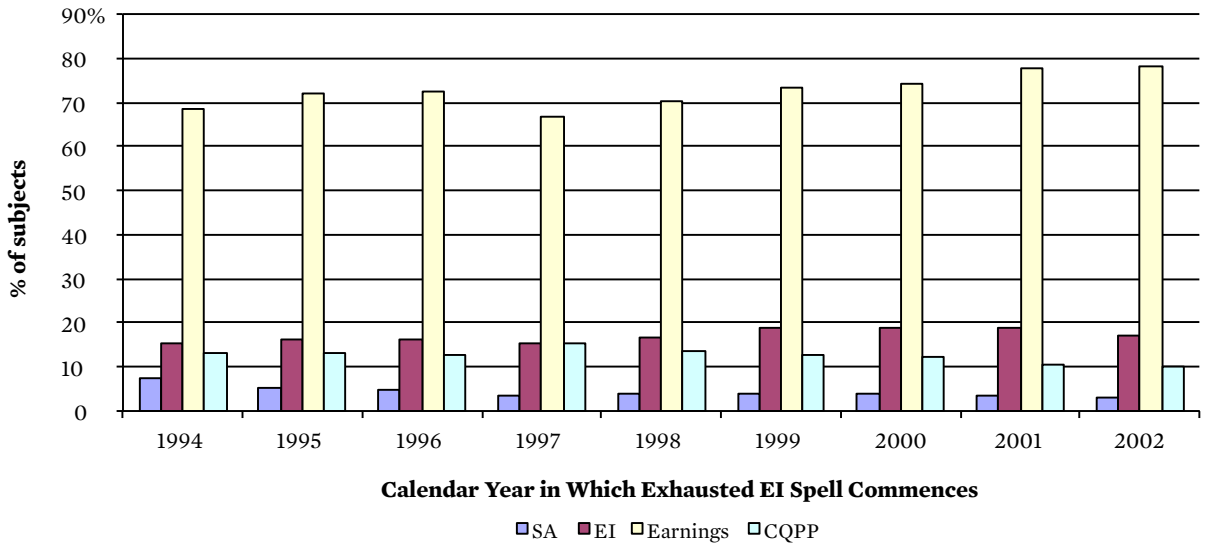
Cohort	Income State	T0		T1		T2		T3		T4		T5	
		#	%	#	%	#	%	#	%	#	%	#	%
All	SA only			515	0.6	2085	2.6	1770	2.2	1575	2	1535	2
	SA+Earnings, SI possible	2285	2.5	3145	3.7	2900	3.6	2370	3	2075	2.7	1810	2.4
	SA+SI, no Earnings	555	0.6	2615	3.1	525	0.6	585	0.7	655	0.8	650	0.9
	SI+Earnings, No SA	88005	96.9	63655	74.7	21465	26.4	22765	28.6	22630	29.1	21570	28.6
	Earnings only			10740	12.6	40095	49.3	40160	50.5	40260	51.8	40185	53.3
	Residual			4510	5.3	14215	17.5	11905	15	10495	13.5	9660	12.8
1994	SA only			45	0.5	430	5.4	335	4.4	275	3.7	255	3.5
	SA+Earnings, SI possible	420	4.7	410	4.9	415	5.3	350	4.6	295	4	250	3.4
	SA+SI, no Earnings	75	0.8	560	6.7	65	0.8	80	1.1	90	1.2	70	1
	SI+Earnings, No SA	8425	94.5	6840	81.2	1975	25	2070	27	2040	27.4	1900	26.2
	Earnings only			310	3.7	3495	44.3	3580	46.7	3705	49.7	3765	51.9
	Residual			250	3	1510	19.1	1255	16.3	1045	14	1010	13.9
1995	SA only			75	0.8	320	3.7	235	2.8	210	2.5	175	2.2
	SA+Earnings, SI possible	340	2.6	395	4.3	410	4.7	310	3.7	245	3	220	2.7
	SA+SI, no Earnings	80	0.7	415	4.5	65	0.8	75	0.9	75	0.9	75	0.9
	SI+Earnings, No SA	9445	96.7	7020	76.3	2165	24.9	2460	29.1	2405	28.9	2245	28
	Earnings only			865	9.4	4200	48.3	4135	48.9	4290	51.6	4300	53.6
	Residual			435	4.7	1530	17.6	1230	14.6	1090	13.1	1010	12.6
1996	SA only			65	0.7	265	2.9	225	2.5	180	2.1	175	2.1
	SA+Earnings, SI possible	270	2.6	430	4.5	385	4.3	300	3.4	260	3	215	2.5
	SA+SI, no Earnings	70	0.7	340	3.6	65	0.7	60	0.7	70	0.8	85	1
	SI+Earnings, No SA	9860	96.7	7120	74.6	2390	26.5	2445	27.8	2420	28	2420	28.7
	Earnings only			1125	11.8	4370	48.5	4490	51	4535	52.6	4515	53.4
	Residual			460	4.8	1535	17	1280	14.6	1170	13.5	1035	12.3
1997	SA only			45	0.5	190	2.1	160	1.8	145	1.6	140	1.7
	SA+Earnings, SI possible	205	2	315	3.3	295	3.2	220	2.5	220	2.5	170	2
	SA+SI, no Earnings	65	0.6	285	3	60	0.7	70	0.8	70	0.8	80	1
	SI+Earnings, No SA	9970	97.4	7635	79.3	2490	27.2	2510	28	2700	30.6	2655	31.4
	Earnings only			890	9.2	4050	44.3	4325	48.2	4160	47.1	4065	48.1
	Residual			455	4.7	2065	22.6	1690	18.8	1530	17.4	1345	15.9

Table 2 cont.

1998	**SA only**			55	0.6	190	2.1	180	2.1	165	1.9	160	2
	SA+Earnings, SI possible	210	2.1	325	3.5	245	2.8	230	2.6	205	2.4	185	2.3
	SA+SI, no Earnings	55	0.6	215	2.3	50	0.5	55	0.6	65	0.8	70	0.9
	SI+Earnings, No SA	9555	97.3	6910	74.7	2290	25.9	2595	29.8	2585	30.5	2475	30.4
	Earnings only			1140	12.3	4380	49.5	4230	48.4	4185	49.4	4075	50
	Residual			605	6.6	1685	19.1	1440	16.5	1265	15	1180	14.5
1999	**SA only**			40	0.5	160	1.9	145	1.8	150	1.9	140	1.8
	SA+Earnings, SI possible	195	2.1	275	3.2	280	3.3	235	2.9	170	2.2	175	2.3
	SA+SI, no Earnings	50	0.6	205	2.3	60	0.7	75	0.9	85	1.1	75	1
	SI+Earnings, No SA	9000	97.3	6320	72.9	2350	28	2480	30.4	2480	31.2	2350	30.3
	Earnings only			1290	14.9	4150	49.5	4015	49.3	4010	50.4	4015	51.8
	Residual			535	6.2	1385	16.5	1200	14.7	1060	13.3	995	12.8
2000	**SA only**			60	0.7	160	2	160	2	140	1.8	145	1.9
	SA+Earnings, SI possible	190	2.1	265	3.2	240	3	205	2.6	205	2.7	185	2.5
	SA+SI, no Earnings	50	0.6	190	2.3	50	0.6	55	0.7	60	0.8	65	0.9
	SI+Earnings, No SA	8660	97.3	5970	71.3	2210	27.6	2385	30.3	2380	31.1	2195	29.5
	Earnings only			1395	16.7	4040	50.4	3940	50	3885	50.8	3930	52.7
	Residual			495	5.9	1320	16.4	1130	14.4	985	12.9	930	12.5
2001	**SA only**			50	0.4	185	1.8	165	1.6	150	1.5	160	1.7
	SA+Earnings, SI possible	265	2.3	380	3.5	305	3	245	2.4	230	2.3	205	2.1
	SA+SI, no Earnings	45	0.4	205	1.9	55	0.5	60	0.6	70	0.7	55	0.6
	SI+Earnings, No SA	11270	97.3	7810	72.1	2815	27.1	2930	28.7	2805	28.2	2680	27.7
	Earnings only			1755	16.2	5495	52.8	5460	53.6	5515	55.4	5530	57.2
	Residual			640	5.9	1545	14.9	1335	13.1	1175	11.8	1035	10.7
2002	**SA only**			80	0.7	185	1.7	165	1.5	160	1.5	185	1.8
	SA+Earnings, SI possible	195	1.6	345	3.1	320	3	280	2.6	240	2.3	205	2
	SA+SI, no Earnings	60	0.5	200	1.8	50	0.5	55	0.5	70	0.7	70	0.7
	SI+Earnings, No SA	11825	97.9	8035	71.4	2780	25.5	2885	26.9	2820	27	2645	25.9
	Earnings only			1965	17.5	5920	54.3	5985	55.9	5965	57.2	5990	58.7
	Residual			630	5.6	1640	15	1350	12.6	1180	11.3	1120	11

groups all involve SA receipt, while the second, fourth, and fifth all involve earnings. Since income sources are many, we have included a 'residual' grouping to account for those individuals who do not fall into one of the five defined groups.[14]

Figure 5 Incidence of Receipt of Income From a Given Source in Years T2-T5 (averaged) by Cohort

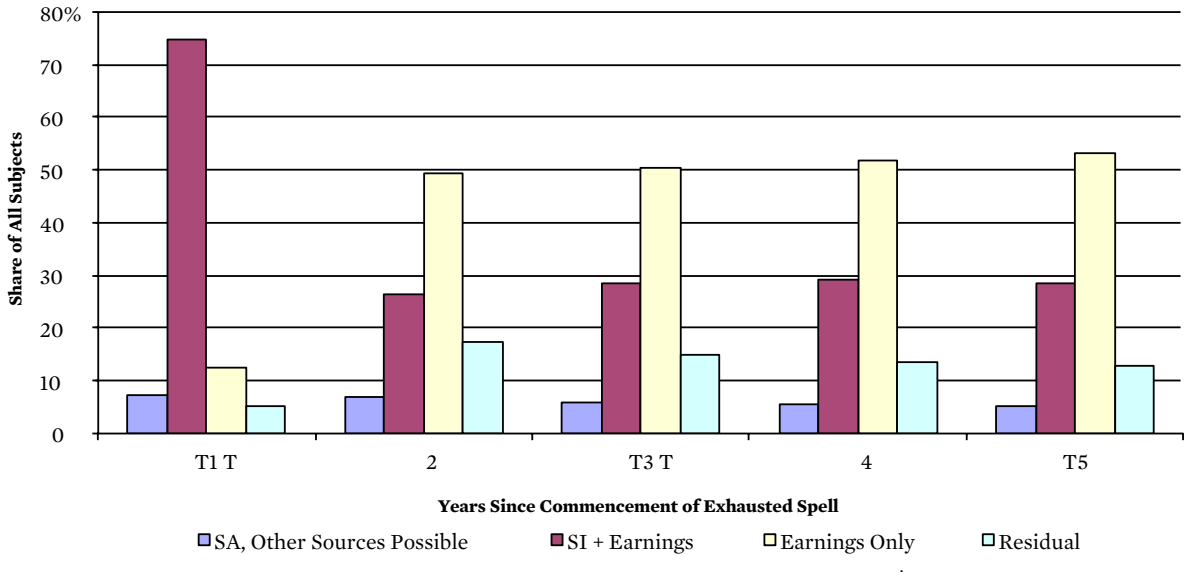


Note: Calendar year denotes year in which EI spell with exhausted benefits commenced.

The first block of data in table 2 defines income sources for all cohorts pooled together. It is clear that the per cent of spell exhaustees that depends only upon SA is small—slightly greater than 2 per cent for years T2 through T5 (row 1). Rows two and three indicate that the percentage of SA recipients that reports receipt of other sources of income coupled with SA, whether in the form of earnings or social insurance, is considerably greater. The percentage of spell exhaustees generating earnings, either alone or in conjunction with SA and SI is indicated in rows 2, 4 and 5. These entries indicate that in excess of 80 per cent of individuals fall into these three categories that involve earnings. While these numbers indicate a reasonable degree of success in re-integration into the labour market on the one hand, they also indicate a very high degree of continued recourse to the EI regime, as indicated by row 4. More than one quarter of exhaustees depend upon SI, which includes both EI and CQPP, in years T2 to T5. The corollary to the foregoing is that just about one half of spell exhaustees depend upon earnings alone in periods T2 to T5—see row 5. As mentioned above, it is important to bear in mind here that the spell exhaustees in our samples are not habitual users of EI by the selection criteria of our sample.

The figures discussed just above are plotted in Figure 5. It is apparent that these shares are pretty stable between years T2 and T5. Approximately half of the sample relies solely on earnings, and this share edges up only slightly over elapsed time since exhaustion. The share of those who rely partially or fully on SA benefits declines gently from 7.4 per cent in year T1 to 5.3 per cent in year T5. The share of the residual category is 17.5 per cent in year T2, and it declines slightly over time.

Figure 6 Principal Sources of Income Over Time



Notes: The four types sum to 100 %. SI stands for social insurance, and includes EI, C/QPP, CPPD, WC, but no SA. The SA receipt category includes three types: SA receipt only, SA plus earnings with SI receipt possible, and SA plus SI, no earnings. The values are averaged ovefr the cohorts from 1995 to 2002.

There is some degree of variation in these typology shares across the cohorts of our sample, which are listed below the first panel of Table 2. The first row of each cohort-specific block of information indicates that SA alone constituted a significant group early in the sample period (i.e. for the 1994 and 1995 cohorts) and a substantially smaller group by the end of the period. For the 1994 cohort, this group accounted for 5.4 per cent of the sample in T2 and 3.5 per cent in T5. These percentages declined quickly rather than slowly as the decade progressed, to the point where the 1996 cohort experienced values of 2.9 per cent and 2.1 per cent for the corresponding points in time. The further declines for later cohorts were gradual and small by comparison.

Complementary to this downward trend for SA receipt, the shares for those receiving earnings rise correspondingly in moving from earlier to later cohorts. Taking again the sum of rows 2, 4 and 5, approximately three quarters of the 1994 cohort generated earnings (with or without other income sources) by T2, and that figure rose to above 80 per cent by T5. These earnings groups accounted for an ever larger percentage of our sample in later cohorts, to the point that more than 80 per cent of the 2002 cohort generated earnings in T2 (irrespective of receipt from other sources), and almost 90 per cent generated earnings by T5. At the same time, it is to be noted that while the 'earnings alone' category increased by about five percentage points, the group that received earnings plus SI continued to account for at least one quarter of the cohort in a period that saw a tightening of EI access criteria.

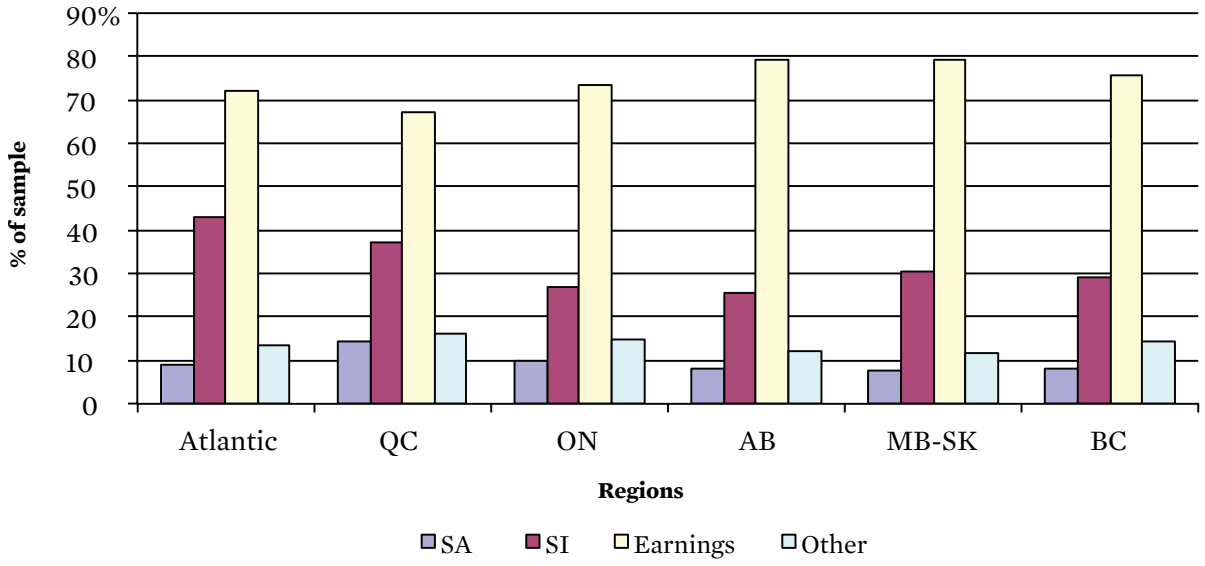
The figures contained in Table 2 pertaining to the specific cohorts are plotted in Figure 6. The share for those receiving earnings seems to rise slightly at times of favourable labour market conditions. The share of the group receiving social insurance income combined with earnings (but not SA receipt) rises slightly and progressively from 1994 to 2000, and then falls. The group that relies solely on SA benefits accounts for less than 2 per cent of the sample in most calendar years.

6 Analysis Broken Down by Region

The analysis presented to this point reflects the average behaviour of individuals from all regions of Canada. To determine if there exist regional differences in outcomes, we present a limited amount of the foregoing nationally-aggregated information in figures 7 and 8.[15] Figure 7 contains information on the incidence of receipt of a given source of income, and figure 8 contains figures on income typology. We have aggregated the provinces of Canada into six regions: the Atlantic Provinces, Quebec, Ontario, Manitoba and Saskatchewan, Alberta, and British Columbia. To keep the analysis tractable while exploring regional differences, we aggregate along the dimension of elapsed time since the start of the reference spell (averaging values for the statistics in question from T2 to T5). Due in part to the generation of small data cells (which causes privacy considerations), we pool all of the cohorts between the years 1994 and 2002 together. The latter aggregation is equivalent to considering the 'all cohorts' outcomes presented in tables 1 and 2. We are aware that both of these aggregations can potentially camouflage differing trends across years and cohorts, but they still permit us to expose time-invariant substantial differences between regions.

Consider first figure 7. On the earnings front, there are marked differences between East and West. The Prairies, Alberta and British Columbia see a higher proportion of individuals returning to work than do the Atlantic Provinces, Quebec and even Ontario—whose manufacturing sector was hit hard in the recession of the early 1990s. Quebec and Ontario spell exhaustees relied more heavily on SA than did the western provinces. This was not the case for the Atlantic Provinces, where SI played a larger supporting role than anywhere else in the economy. This graphic does not indicate if the SI comes in the form of EI, WC or CQPP, but it is likely that EI accounts for much of that proportion.

Figure 7 Average Incidence of Receipt of Income From a Given Source by Region of Canada

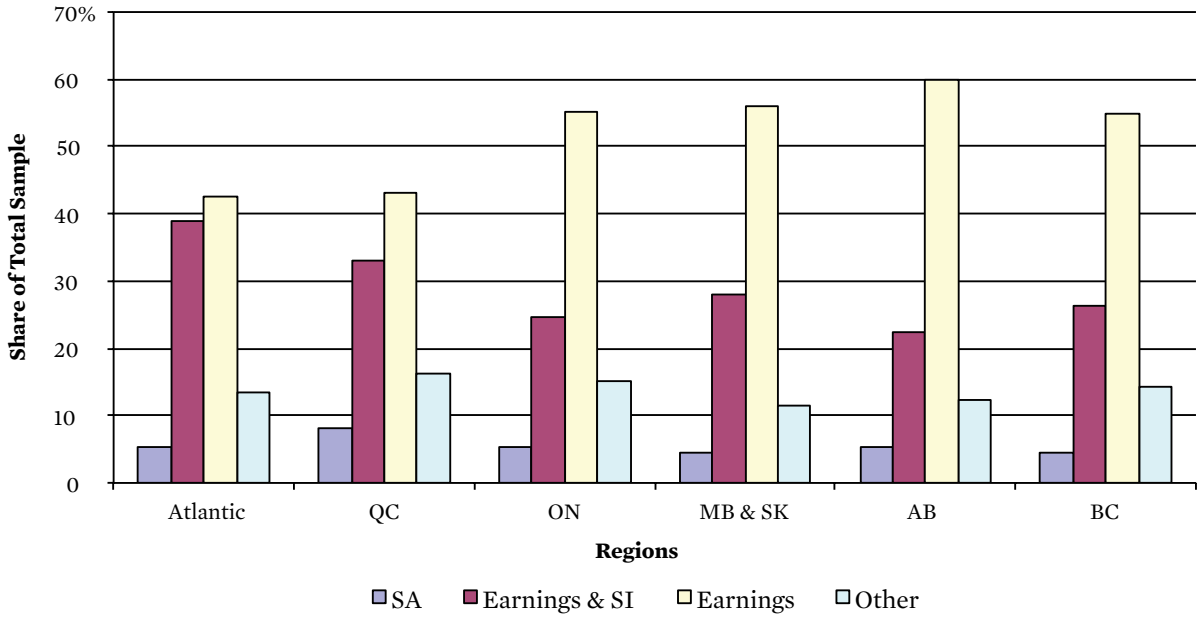


Notes: the percentages do sum to 100 because many of the subjects receive income from multiple sources. The SA category includes those who receive it as individuals as well as at the family level. The social insurance category (SI) includes receipt of EI and/or WC and/or CQPP benefits.

Turning now to the typology analysis listed in figure 8: in contrast to the percentages in figure 7, these categories are mutually exclusive, and therefore the values add to one hundred. Again the western regions experience a higher proportion of individuals who rely on earnings than is the case in the eastern regions, though the dividing line has shifted east of Ontario. The share of individuals relying on some form of SI is particularly high in the Atlantic region and Quebec, though the reason is slightly different: in the Atlantic Provinces, the higher value for the SI type is primarily due to a higher reliance upon EI than is the case in Quebec. In turn, both of these regions experience higher frequencies of CQPP receipt than the other four regions.

In summary, marked differences characterize the regions, and these differences are consistent with what we know about regional patterns in labour market behaviours in general. What distinguishes our findings is that they pertain to individuals who exhaust a spell of EI benefits. Nonetheless we are reluctant to draw inferences for policy purposes from these results. In particular, the higher incidence of eventual transitions to CQPP in specific regions possibly reflects the age characteristics of the underlying populations. This question may be worth pursuing in a future analysis.

Figure 8 Typology Analysis of Income Source by Region of Canada



Notes: the shares sum to 100. The SA type includes those who received SA either as their sole source of income or in conjunction with other sources of income. The earnings & SI type includes those who received earnings in conjunction with some form of social insurance—excluding SA but including EI. The earnings type includes those who received earnings as their only source of income. The other type is the residual category.

7 Conclusion

Our first objective for this paper is to study individuals' labour market outcomes after the exhaustion of a spell of regular EI benefits: their earnings, subsequent use of SA or one of Canada's other SI programs, and their continued use of EI. The second was to see if a shift oc-

curred in these patterns between the 1994 and 2002 cohorts of spell exhaustees. The mid 1990s witnessed major changes in the EI system and the functioning of the labour market, a concurrent tightening of access to, and generosity of, SA, and the introduction of the work-focussed National Child Benefit program. Our use of the combined LAD-EI Link data base has allowed us to be among the first researchers to address these questions on a national basis and for such an extended period of time.

It is important that the results be interpreted both in the light of the changing economic circumstances and various policy changes of the time, and also in terms of the samples of individuals we have studied—those with a relatively strong historical attachment to the labour market. The methodological scope of this work remains primarily descriptive rather than causal. The rule changes to EI, SA and the NCB would have had their own effects on transitions from EI to other income sources. It should also be emphasized that transitions are analysed for those observed to exhaust a spell of regular EI benefits only, and the characteristics of this particular population of workers also likely changed over our estimation interval, especially as a result of the changes in EI that have affected entry into the program. All of our results are based on unconditional data—they are unadjusted incidence rates or shares of specified types of subjects. We have not estimated any behavioural or econometric models or explicitly taken into account the other factors that may have changed and affected the relevant dynamics. Nevertheless, by laying out these raw transition rates in a detailed fashion, the paper provides a basis for further work of a more analytical nature.

Our principal findings are as follows:

- Despite more exigent EI eligibility conditions since the mid 1990s, there is no evidence of an increased degree of subsequent dependence on SA. On the contrary, the numbers and percentage of those exhausting EI spells and subsequently going onto SA has declined. These transition probabilities are not particularly high—in the range of four to five per cent of all EI exhaustees in the years following the exhaustion of the EI spell. Furthermore, just two per cent of EI spell exhaustees depend on SA alone within two years of the commencement of the exhausted spell.

- There appears to be a noticeable fall in the proportion of individuals moving onto government pension programs (CQPP) toward the end of our period of study. This transition decision is no doubt complex, and clearly depends upon the age structure of EI spell exhaustees. Yet the recent decline in this particular transition in our data is consistent with the economy-wide trend observed in Canada in this millennium for individuals to prolong their attachment to the labour market.

- Extended/repeat use of EI—even among these samples of individuals who have not a history of EI income—is one of the strongest patterns to emerge from the data. Filing subsequent claims continues not just in the immediate period following the exhaustion of the reference spell, but for several more years at a comparable incidence rate. There has been no obvious tendency for this pattern of repeat use to decline during the period examined. While the number of individuals qualifying for EI support in general has dropped dramatically, the percentage of EI spell completers that rely on this form of income support in subsequent periods is striking and stable.

- A sizable percentage of individuals receive earnings within a year of completing their EI spell. This empirical pattern has been reinforced over our time interval. Between eighty and ninety per cent of individuals in the 2002 cohort generated earnings in the years following a spell completion, albeit many in conjunction with other forms of social insurance-source income.

These results point to a variety of possible further investigations. One would include modelling these incidence rates taking individual characteristics (age, place of residence, area size of residence, etc.) and current economic conditions (e.g., the unemployment rate) into account. Another area ripe for extension would be to attempt to incorporate into such a model the EI policy parameters (the entry requirements and the maximum length of the benefit period) that may affect these transitions. A third would be to incorporate policy changes in other programs (especially SA) into the analysis in like manner. And finally, a more complex model would include a mechanism for entry onto EI benefits to begin with, since this process determines the individuals who are (potentially) subsequently observed to exhaust EI benefits—the event that is the keystone for this study.

ENDNOTES

1. Social Assistance statistics are presented in official statistics both in caseload and individual units. A case may contain several individuals.
2. See Finnie et al. (2004a, b) regarding changes in the SA system, trends in SA participation, entry, exit, and re-entry rates, and an analysis of the factors underlying SA participation.
3. We are grateful to John Stapleton for providing us with this chart.
4. In the Canadian context, this issue is taken up in Gray (2003). It is also possible that a tightening of SA rules impacts the receipt of EI as a result of inducing a greater attachment to the labour force by marginal workers who might subsequently claim EI benefits. While we recognize that the interaction between EI and SA is a two-way street, we explore only the EI to SA route in this research.
5. It is also possible that a tightening of SA rules impacts the receipt of EI as a result of inducing a greater attachment to the labour force by marginal workers who might subsequently claim EI benefits. While we recognize that the interaction between EI and SA is a two-way street, we explore only the EI to SA route in this research.
6. As a caveat, Gray (2006) shows that a majority of the pilot projects that have been implemented within the regime since 1996 constituted an enrichment of benefits targeted primarily at seasonal workers.
7. A detailed description of the evolution of EI up to 1997 is given in Lin (1998) and Gray (2004).
8. UI claims began their descent in 1993, but SA caseloads began their decline only a year or two later, depending upon the province in question (see for example any of the annual reports on 'Welfare Incomes' from the National Council of Welfare).
9. We began with the population of individuals aged 21-64 years in the cohort reference year and who have also filled in the preceding two years (about 2.7 million individuals). After excluding those individuals with non-trivial self-employment income during any of the three years in that window, approximately 2.5 million individuals remain. After excluding those individuals with low labour market incomes over that same window (and two other minor exclusions), about 1.6 million individuals remain. After excluding those with any positive social insurance income (of any type except EI) over that same window, 1.1 million individuals remain. After four more rounds of exclusion, including those who received special EI benefits, the precise sample size is 355,185 individuals. The final step is to select those who exhausted an EI spell that commenced in the reference year (N=90,845). Note that an individual selected early in the period could appear again as a new observation - but only if s/he had no EI or SA income for a minimum of two years, then filed another EI claim, and then exhausted it.
10. Earnings include wages and salaries, net professional income, net self-employment, net joint partnership income (which could be negative), etc.
11. The event of exhaustion implies that the claimant has received all of the benefit weeks to which he/she was initially entitled. It does not include claimants who have reached the 52-week window (from the point of benefit period commencement) after which no more benefits can be received for that particular claim.
12. We note that because we have not counted the number of EI spells that each individual experienced over the period of years T2 through T5, we cannot identify any particular subject as a repeat user. The definition of a repeat user is typically an individual who has filed 3 or more claims during a five-year window. While we do discern a high incidence of EI use in each year during this interval, we do not determine the extent to which these figures reflect the same individuals claiming in consecutive years. It is therefore not certain that there is a pervasive pattern of repeat EI use by the same individuals. If many of those whom we observe receiving EI benefits in year T2 are also those whom we observe for the same event in years T3 or T4, that constitutes repeat use. If, on the other hand, the intersection of those groups is small, then there is only evidence of a fairly high recourse to EI use among our sample.
13. SI receipt means social insurance, which includes receipt of either EI, and/or WC, and/or CQPP benefits.
14. This residual group includes subjects with very heterogeneous income levels as well as configurations of income sources. These individuals are either not in the labour force or are on very long-term unemployment. In years T2 through T5, the mean value for their total incomes (including all taxable sources) was $7,600, while the median was only $1,925. The distribution of this variable for this type is thus very left-skewed, with a heavy concentration of individuals with very low incomes (the threshold for the lowest quartile is $315 annually), and very disperse, with a standard deviation of $15,875.

15. All of the figures that appear in this bar graph are drawn from tables that we have prepared, but there is a separate table for each region. Due to space constraints, we do not include them in this draft. They are available from the author.

REFERENCES AND WORKS CITED

Barrett, Garry, Denise Doiron, David Green and Craig Riddell. 1996. "The Interaction of Unemployment Insurance and Social Assistance." Ottawa: Human Resources Development Canada.

Boadway, Robin, and Denis Garon. 2011. "The Design of Employment Insurance in a Federation." Mowat Centre EI Task Force. Toronto: Mowat Centre for Policy Innovation.

Bolduc, Denis, Bernard Fortin, France Labrecque and Paul Lanoie. 2002. "Workers' Compensation, Moral Hazard and the Composition of Workplace Injuries." *Journal of Human Resources*, 37.3: 623-52.

Courchene, Tom. 1994. "Social Policy in the Millennium." Toronto: C. D. Howe Institute.

Dahlby, Bev. 1994. "The Distortionary Effect of Rising Taxes." In Deficit Reduction: What Pain; What Gain? Policy Study 23, edited by William B.P. Robson and William M. Scarth. Toronto: C.D. Howe Institute.

Expert Panel on Older Workers. 2008. "Supporting and Engaging Older Workers in the New Economy." Ottawa: Human Resources and Skills Development Canada.

Finnie, Ross and David Gray. 2009 "Displacement of older workers: re-employment, hastened retirement, disability, or other destinations?" Canadian Labour Market and Skills Research Network working paper No. 15.

Finnie, Ross and David Gray. 2011. "Labour-Force Participation of Older Displaced Workers in Canada: Should I Stay or Should I Go?" IRPP Study No. 15. Montreal: Institute for Research on Public Policy.

Finnie, Ross, Ian Irvine and Roger Sceviour. 2004a. "Social Assistance Use in Canada in the 1990s: Incidence, Entry and Exit." *Canadian Journal of Regional Science*, 27.2: 179-208.

Finnie, Ross, Ian Irvine and Roger Sceviour.2004b. "Welfare Dynamics in Canada: The Role of Individual Attributes and Economic Policy Variables." Analytical Studies Branch Research Paper Series No. 231. Ottawa: Statistics Canada.

Finnie, Ross, and Arthur Sweetman, 2003. "Poverty Dynamics: Empirical Evidence for Canada." *Canadian Journal of Economics* 36.2: 291-325

Fortin, Bernard, Guy Lacroix and Jean Francois Thibault. 1999. "The Interaction of UI and Welfare, and the Dynamics of Welfare Participation of Single Parents." *Canadian Public Policy – Analyse de Politiques*, 25. supplement 1: 115-32.

Fortin, Bernard and Paul Lanoie (1999) "Is Workers' Compensation a Substitute for Unemployment Insurance?" *Journal of Risk and Uncertainty* 18.2: 165-88

Grey, Alex. 2002. "Employment Insurance and Social Assistance: Evidence on Program Interaction," Applied Research Branch Working Paper SP-575-01-02E. Ottawa: Human Resources Development Canada.

Gray, David. 2003 "National Versus Regional Financing and Management of Unemployment and Related Benefits: The Case of Canada." OECD Social, Employment, and Migration Working Paper No. 14. Paris: OECD.

Gray, David. 2004. "Employment Insurance: What Reform Delivered?" C. D. Howe Institute Backgrounder. Toronto: C. D. Howe Institute.

Gray, David. 2006. "Has EI Reform Unravelled? Canada's EI regime in the 2000s." C. D. Howe Institute Backgrounder. Toronto: C. D. Howe Institute.

Gunderson, Morley. 2011. "Employment Insurance in the New World of Work." Mowat Centre EI Task Force. Toronto: Mowat Centre for Policy Innovation.

Human Resources Development Canada. 2001. "Did the Social Assistance Take-up Rate Change after EI Reform for Job Separators?" Ottawa: HRDC.

Human Resources Development Canada. 2002.

Jones, Steven. 2011. "The Effectiveness of Training for Displaced Workers with Long Prior Job Tenure." Mowat Centre EI Task Force. Toronto: Mowat Centre for Policy Innovation.

Lin, Zhengxi. 1998. "Employment Insurance in Canada: Recent Trends and Policy Changes." *Canadian Tax Journal*, vol. 46.1: 58-76.

Mendelson, Michael, and Kenneth Battle. 2011. "Fixing the Hole in EI: Temporary Income Assistance for the Unemployed." Mowat Centre EI Task Force. Toronto: Mowat Centre for Policy Innovation.

National Council of Welfare. 2004. "Welfare Incomes 2003." Ottawa: National Council of Welfare.

Riddell, Craig. 2011. "Unemployment Compensation and Adjustment Assistance for Displaced Workers: Policy Options for Canada." Mowat Centre EI Task Force. Toronto: Mowat Centre for Policy Innovation.

Schirle, Tammy. 2008. "Why Have the Labour Force Participation Rates of Older Men Increased Since the Mid-1990s?" *Journal of Labor Economics*. 26.4: 549-94.

Stapleton, John. 2011. "Trading Places: Single Adults Replace Lone Parents as the New Face of Social Assistance in Canada." Mowat Centre EI Task Force. Toronto: Mowat Centre for Policy Innovation.
Statistics Canada. 2010. "Low Income Cut Offs for 2008 and Low Income Measures for 2007." Income Research Paper Series. Ottawa: Statistics Canada.

Workplace Safety and Insurance Board of Ontario. 2009. *Annual Report*. Toronto: Workplace Safety and Insurance Board of Ontario. Accessed from http://www.wsib.on.ca/files/Content/staticfiles2009AnnualReport/2250A_wsibAR2009_ENG.pdf. Schmid,

About the Authors

Ross Finnie is Associate Professor at the University of Ottawa Graduate School of Public Policy and International Affairs.

David Gray is Professor at the University of Ottawa Department of Economics.

Ian Irvine is Professor at the Concordia University Department of Economics.

Yan Zhang is Economist/Statistician in Small Area and Administrative Data at Statistics Canada.

About the EI Task Force

The Mowat Centre has convened a research-driven Employment Insurance Task Force to examine Canada's support system for the unemployed. The Task Force will develop an Ontario proposal for modernizing the EI system—conscious of the national context—that works for individuals and businesses.

www.mowateitaskforce.ca

525 University Avenue, Suite 820 Toronto, ON M5G 2L3 T 416.978.7858 F 416.978.7203 E info@mowatcentre.ca