



# Canadian Labour Market and Skills Researcher Network

## Working Paper No. 88

### Unemployment Compensation and Adjustment Assistance for Displaced Workers: Policy Options for Canada

*W. Craig Riddell*  
University of British Columbia

December 2011

CLSRN is funded by the Social Sciences and Humanities Research Council of Canada (SSHRC) under its Strategic Knowledge Clusters Program. Research activities of CLSRN are carried out with support of Human Resources and Skills Development Canada (HRSDC). All opinions are those of the authors and do not reflect the views of HRSDC or the SSHRC.

# Unemployment Compensation and Adjustment Assistance for Displaced Workers: Policy Options for Canada\*

W. Craig Riddell  
Department of Economics  
University of British Columbia

## Abstract

This paper examines the role of EI in providing support to “displaced workers,” those who permanently lose their jobs because of changing circumstances. Adjusting to change benefits Canadians as a whole. However, some workers suffer much more from job loss than do others. Those who have held their jobs for an extended period experience substantial earnings losses, while those who have been employed for brief periods experience small losses. Like other job losers, long-tenure displaced workers experience earnings losses due to reduced income during unemployment following displacement. However, unlike other job losers, many long-tenure displaced workers become re-employed at significantly lower wages. EI does not take into account these consequences of job loss.

Long-tenure displaced workers constitute a small minority of job losers. My analysis indicates that job losers with 5 or more years of job tenure constitute about 5% of unemployment and 15-20% of permanent job losers.

The paper makes several policy recommendations. Some address gaps in research and knowledge, while others recommend enhanced EI benefits for those who suffer greatly from job loss. Since most loss from displacement occurs after re-employment, wage insurance seems the most promising approach for insuring against large losses.

*Keywords:* labour market adjustment, job displacement, unemployment, unemployment insurance, adjustment assistance policies, wage insurance

*JEL Codes:* J60, J63, J64, J65, J68

\* Paper written for the Mowat Centre’s EI Task Force, [www.mowatcentre.ca](http://www.mowatcentre.ca). I thank Jacob Cosman for excellent research assistance, and Keith Banting, Stephen Jones, Bill Scarth, Arthur Sweetman, participants in the Mowat EI workshop, and anonymous referees for helpful comments.

# Executive Summary

This paper examines the role of EI in providing support to “displaced workers,” those who permanently lose their jobs because of changing circumstances. Adjusting to change benefits Canadians as a whole. However, the costs of adjustment are unevenly distributed. Some workers suffer much more from losing their jobs than do others. Those who have held their jobs for an extended period experience substantial earnings losses, while those who have been employed for brief periods experience small losses. Like other job losers, long-tenure displaced workers experience earnings losses due to reduced income during unemployment following displacement. However, unlike other job losers, many long-tenure displaced workers become re-employed at significantly lower wages. EI does not take into account these consequences of job loss.

Long-tenure displaced workers constitute a small minority of job losers. Our analysis indicates that job losers with 5 or more years of job tenure constitute about 5% of unemployment and 15-20% of permanent job losers.

The paper makes several recommendations. To address gaps in research and knowledge, Canada should carry out a regular Displaced Worker Survey.

There is a strong case for enhanced EI benefits for long-tenure displaced workers, who suffer greatly from job loss. These enhanced benefits should exclude seasonal workers, who are already richly rewarded by EI. They should also be designed to minimize adverse effects on the duration and intensity of job search.

The measures provided under EI Part II should focus more on long-tenure displaced workers—especially relatively intensive interventions such as retraining and mobility assistance. Given the mixed evidence on the effectiveness of retraining, greater emphasis should be placed on mobility assistance.

Since most loss from displacement occurs after re-employment, wage insurance seems the most promising approach for insuring against large losses. Canada should consider adopting this policy.

# Unemployment Compensation and Adjustment Assistance for Displaced Workers: Policy Options for Canada

W. Craig Riddell

**T**his paper examines the role of Canada's Employment Insurance (EI) program in providing support and assistance to "displaced workers," those who permanently lose their jobs because of changing economic circumstances. Particular attention is paid to "long-tenure displaced workers," those who worked for their previous employer or in their previous industry or occupation for many years. Two specific roles of EI are examined: (i) income support during the spell of unemployment following job loss (i.e. EI Part 1) and (ii) adjustment assistance for those who may require job search assistance, counseling or retraining, as well as those who may need to relocate to areas with better employment opportunities (i.e. EI Part 2). Although these two roles are relevant in varying degrees for many unemployed job seekers, they may be especially important for displaced workers (DWs). One reason is that DWs (especially long-tenure DWs) may take longer to obtain re-employment than other unemployed individuals. Another reason is that DWs may be more likely to require some form of adjustment assistance.

Since the onset of the 2008-9 recession the federal government has followed the recommendations of the Expert Panel on Older Workers (2008) and has introduced several initiatives that provide enhanced benefits for long-tenure displaced workers. In May 2009 the government announced the Career Transition Assistance program that provides additional support to long-tenure displaced workers. One initiative in this program extends the duration of EI benefits by up to two years for eligible long-tenure displaced workers who participate in longer-term training. Another allows earlier access to EI regular benefits for displaced workers investing in their own training using all or part of their severance package. Subsequently, the government also extended regular EI benefits for long-tenure displaced workers. Both of these new policies were introduced as temporary measures. One of the central questions to be addressed in this paper is whether enhanced benefits for long-tenure DWs should become a permanent feature of the EI program.

The paper is organized as follows. The first section examines the rationale for the public provision of income support during unemployment (EI Part 1) and adjustment assistance (EI Part 2). Section 2 provides evidence on the incidence of permanent job loss and summarizes what we know about earnings losses from displacement. Other consequences of job loss, such as those to the health of the job loser, as well as those for other family members, are also noted. The third section reviews policies that support displaced workers, with particular focus on policies that fall within the purview of the EI program, and what is known about their effectiveness. The

final section assesses new policy initiatives that could facilitate re-employment and/or reduce the adjustment costs incurred by displaced workers and recommends future policy development in Canada.

## **1 The Case for Social Insurance and Labour Adjustment Policies**

Change is an enduring feature of the economy and the labour market. Some firms expand their operations, while others contract or go out of business. New firms enter existing industries, and entirely new industries emerge. The dynamic nature of product markets results in continual flux in labour markets. About one-half of all new employer-employee matches end within the first year, and about one-fifth of all workers have been with their employer for less than one year (Farber, 1999). In countries like Canada and the United States, roughly 10 per cent of all jobs are destroyed each year, and another one in ten existing jobs were created within the previous year (Baldwin et al., 1998; Davis and Haltiwanger, 1999).

Moreover, gross flows between labour force states (employment, unemployment and not-in-the labour force) are huge in comparison with net changes in stocks. For example, from one month to the next the number of unemployed workers changes little but the flows into and out of unemployment are very large, as some workers lose or leave jobs and enter unemployment while some unemployed job seekers find jobs or exit from the labour force. In recent years, structural changes due to technological change, globalization, and the shifting world economic environment have received much attention. But there is nothing new about the importance of changing economic circumstances.

### **Social Insurance**

Because it is continually being bombarded by shocks, the labour market is a risky place. At each point in time, the employed face the risk of having their hours of work or wages reduced, being temporarily laid off, or permanently losing their job. Some of these outcomes impose more hardship than do others, but all imply some loss of income. Labour market risks are especially significant because labour earnings represent the major source of income for most workers and because risks to human capital wealth are very difficult to diversify (in contrast to financial wealth, for which the risk can be reduced by holding a diversified portfolio of assets).

The combination of substantial uncertainty about future employment and income prospects and the quantitative importance of labour market earnings to individual and family well being results in substantial demand for insurance against the risk of unemployment. However, comprehensive private insurance markets that would allow most workers to purchase insurance against the potential loss of income due to unemployment have generally failed to emerge or, if they emerged, to persist. The reasons for this private market failure—adverse selection and moral hazard—are well understood. Adverse selection refers to the tendency for individuals to self-select into voluntary insurance systems only if they are likely to benefit. High risk individuals are more likely to purchase insurance than low risk individuals. Unless sellers can charge

higher prices to higher-risk buyers, there may not exist a price at which selling insurance is profitable, as raising the price simply selects higher-risk customers. Moral hazard refers to the propensity for individuals who are insured against risks to alter their behaviour in a manner that makes the bad outcome more likely, and thus raises the cost of providing insurance. Although adverse selection and moral hazard are present to some extent in all insurance markets, they are especially significant in the case of unemployment insurance.

The absence of comprehensive private insurance markets for the risk of unemployment provides the fundamental rationale for government provision of unemployment insurance (Green and Riddell, 1993). However, public provision does not eliminate the presence of adverse selection and moral hazard. Adverse selection is substantially reduced by mandatory coverage, which prevents those who face low risk of unemployment from opting out. Moral hazard is more problematic. Most public unemployment insurance programs attempt to reduce moral hazard by requiring “active job search” during spells of unemployment, and by monitoring and enforcing the search requirement. Moral hazard is also reduced by various forms of co-insurance—such as Canada’s two-week waiting period and a benefit replacement rate well below 100 per cent of prior wages. These features function like “deductibles” in other insurance markets. On the employer side, experience rating—which is used in most provincial workers’ compensation programs—is another way to provide incentives to reduce the incidence of layoffs. But, experience rating is not a feature of the EI system.

In this paper I begin from the position that EI is, or should be, fundamentally a social insurance program. One important implication of that perspective is that EI benefits should reflect the magnitude of the loss due to unemployment. In insurance markets such as those for automobile and property insurance, this characteristic is both familiar and evident. The insurance payment in the event of totaling one’s car is much larger than that for a “fender bender.” And having one’s house burn down generates a larger insurance settlement than a minor break-in. A central theme of this paper is that this fundamental characteristic of insurance is to a considerable extent absent from Canada’s EI program. Changes are proposed in order to reduce the importance of this flaw in our EI program.

### **Adjustment Assistance Policies**

Change creates new opportunities but destroys old ones. It is, in the words of Schumpeter (1942), a process of “creative destruction.” The economic opportunities available to some individuals are enhanced, while those available to others are reduced. Adjustment to change can be painful for those adversely affected. Adjusting to change typically involves shifting labour and other resources from declining to expanding sectors, which thereby contributes to economic prosperity. There are costs and benefits associated with adjustment but, in general, the net benefits are positive, and often substantial in size. However, although the net benefits of adjusting to change are typically positive, a salient fact is that the costs and benefits are unevenly distributed in the population. Most technological and economic change results in a small number of losers, who each lose a great deal, and a large number of winners, who each enjoy modest benefits. This central feature of economic change makes labour market adjustment one of the most challenging problems that societies face. A variety of policies have been advocated or adopted to help meet this challenge.

Adjustment assistance policies can promote both economic efficiency and the pursuit of equity goals. Because adjustment involves shifting resources from less valued to more highly valued uses, it promotes economic efficiency and therefore higher living standards. Market mechanisms will encourage responding to change, but numerous factors may impede adjustment, resulting in slower responses than are socially optimal (Gunderson, 1986). Well-designed adjustment assistance policies can reduce these obstacles and encourage responses that are closer to the social ideal.

Equity considerations also loom large in adjustment policy because economic change can cause considerable harm to some individuals and families. It is generally viewed as equitable to assist those adversely affected, particularly when the shocks have been unanticipated, when they result in significant declines in income or wealth, and when hedging against the shocks would have been difficult. A general theme resulting from economic analysis is that adjustment assistance should focus on workers rather than on firms or their shareholders (Riddell, 1986).

Possibly the strongest rationale for adjustment assistance policies is that, in their absence, political pressures result in policies—such as subsidies to declining industries, bailouts of firms threatened with bankruptcy, and protectionist measures—that inhibit adjustment and harm society as a whole. The source of these pressures is easily identified. The benefits of adapting to change are widely distributed, whereas the costs are typically concentrated among a small number of employees and firms. Although the total benefits to society of adjusting to economic shocks often exceed the total costs, the individuals adversely affected form an effective lobby group and may exert considerable influence through the political process. Their influence arises in part because they are easy to organize (being concentrated in a specific sector and often a few regions), are threatened with substantial losses, and are willing to devote considerable resources to fighting the source of change. In contrast, those that stand to benefit are typically dispersed, difficult to organize, and not willing to devote significant time and money to fighting for the adjustment, given the modest gains to each individual. For these reasons, the types of policies adopted are often the opposite of those that would be recommended on the basis of social efficiency and equity considerations (Trebilcock, 1986).

## **2 Job Displacement and Its Consequences**

Because this paper deals with job displacement it is useful to be more precise about terminology. I follow standard practice and define “displaced workers” as those who (i) have not been discharged for cause, (ii) have permanently separated from their previous employer, and (iii) had strong prior attachment to the industry of their previous employer. An implication of this definition is that displaced workers are a subset of those who lose or leave their previous employment during a specific period of time. Similarly, they are a subset of those who are unemployed at any point in time, which includes temporary layoffs (many of whom return to their previous employer), job leavers (quits), new entrants and re-entrants. An important implication of the “strong prior attachment” condition is that displaced workers may lose accumulated experience that is specific to the previous employer, industry and/or occupation.

From an international perspective, a great deal is now known about the incidence and consequences of job displacement. For more than 20 years the United States has carried out a regular Displaced Workers Survey (DWS) as a supplement to its Current Population Survey (the U.S. equivalent of Canada's Labour Force Survey). The U.S. DWS has been an important source of information about the extent and consequences of permanent job loss. In addition, administrative data from state Unemployment Insurance systems have been a key source of information used in several influential studies (discussed below). Many European countries also have excellent sources of administrative data that are valuable for analyzing job displacement. Unfortunately, Canada does not carry out a regular DWS, and does not make available to outside researchers the administrative data on the EI program, so the Canadian evidence is much more limited.<sup>1</sup> In Canada some analysis has been carried out with survey data and with administrative tax data.

### **Incidence of Displacement**

In the absence of a regular DWS, researchers at Statistics Canada have used administrative data based on tax records to provide information on the incidence of permanent job loss in Canada (Morrissette et al., 2007; Picot et al., 1998). These data have advantages, but also disadvantages—one being that they do not provide timely information on job displacement. For example, the most recently available study (Morrissette et al., 2007) covers the period 1983-2002, and displacements that occurred between 1983 and 1997.<sup>2</sup> Nonetheless, this study provides valuable (albeit not current) information on displacement in Canada.

In the administrative data, job separations are identified from the Record of Employment, which employers are required to issue when an employee working in EI insurable employment experiences an interruption in earnings. Morrissette et al. find that permanent layoff rates for men range from 6 per cent to 7 per cent in boom years, to 9 per cent in the recession of 1990-92.<sup>3</sup> Comparable rates for females are much lower—3 per cent to 4 per cent in good times and 5 per cent to 6 per cent in downturns. Annual rates of displacement due to mass layoffs or firm closure range from 1.1 per cent to 2.4 per cent for males and 0.6 per cent to 1.1 per cent for female workers. These data indicate that permanent job loss affects a small proportion—about 5 per cent—of employees in any given year. Displacements due to firm closures and mass layoffs represent a much smaller fraction (about 1 per cent) of the workforce. However, because permanent job loss continues through both strong and weak economic conditions, the cumulative magnitude over longer periods is substantial.

In order to provide a more comprehensive and current picture of job displacement in Canada, I compiled data from the monthly Labour Force Survey (LFS) over the period 1976-2010. The LFS data have several advantages: (i) when appropriately weighted, LFS data are representative of the Canadian adult population; (ii) the LFS survey includes a question on job tenure with the current employer; LFS microdata files are released for public use in a timely fashion; and key variables such as unemployment, reasons for job separation, job tenure and province of residence are measured in a consistent manner over time. The key variable used—called “flows into unemployment”—characterizes the unemployed according to their activity immediately prior to looking for work. The principal categories are: temporary layoffs, permanent job losers, job leavers (quits), new entrants and re-entrants. These data thus allow us to examine the propor-

tion of the unemployed that consists of permanent job losers, as well as how that proportion varies by such characteristics as gender, tenure in the previous job and region.

Figure 1 plots permanent job losers as a percentage of total unemployment over the period 1976-2010.<sup>4</sup> Several features stand out. In recent years, only 25-35 per cent of the unemployed became unemployed by permanently losing their job. The majority of the unemployed consist of new entrants and re-entrants (about 40 to 45 per cent). Job leavers constitute around 10 to 12 per cent and temporary layoffs approximately 7 per cent. The relative importance of permanent job losers has also been falling over time—from 35-45 per cent in the 1970s and 1980s to 25-35 per cent more recently. The fraction of permanent job losers in the unemployed pool rises sharply in recessions—such as 1981-82, 1990-92 and 2008-9—and then gradually declines during the subsequent expansion—such as during the latter half of the 1980s, 1990s, and 2000 to 2007.

Figure 2 shows the proportion of unemployed who are permanent job losers by tenure in the pre-displacement job. The largest group consists of those who held their previous job for 12 months or less. In recent years this group constitutes about 15 per cent of total unemployment, though in the previous two decades it represented 20 to 30 per cent of unemployment. Note that these job losers would not be considered “displaced workers” as defined previously given their brief job tenure. The next largest group consists of those with 1 to 5 years of tenure in the previous job. In normal economic times these individuals represent about 8 per cent of unemployment, rising to 10-12 per cent in recessions. The final two groups are those with 5-10 and more than 10 years of previous job tenure. The times series behaviour of these two groups of “long-tenure displaced workers” is similar. Each represents about 2 to 4 per cent of total unemployment, their sum rarely exceeds 6 per cent of unemployment, and their importance relative to total unemployment has grown modestly over the period 1976-2010.

One additional feature of Figures 1 and 2 is noteworthy. Although the importance of permanent job losers relative to total unemployment has fallen over the past 35 years, this decline can be attributed to the reduction in the number of permanent job losers with job tenure of one year or less. The relative importance of permanent job losers who had held their jobs for at least one year has been relatively stable over the past 3 to 4 decades, though it has fluctuated cyclically.

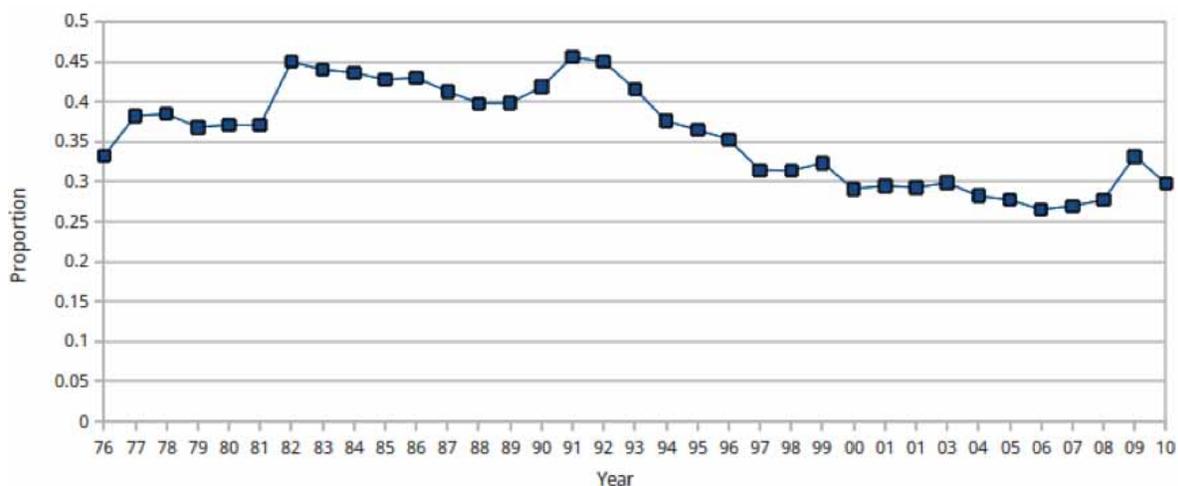
Figures 3 and 4 report the proportion of unemployed who are permanent job losers by gender and region. Male permanent job losers represent a larger fraction of unemployed men than is the case for female job losers, but the gender gap has narrowed over time. In recent years permanent job loss accounts for about 20 to 25 per cent of female unemployment and about 30 to 35 per cent of male unemployment. Throughout the 1976-2010 period, permanent job losers constitute the largest fraction of the unemployed in the Atlantic provinces, followed by Quebec over most of the period. Ontario had the lowest proportion of permanent job losers among its unemployed during the 1980s and 1990s, but has been closer to the middle of the pack in the past decade. The Prairie provinces display behaviour that is almost the mirror image of Ontario, having the lowest proportion of permanent job losers in the 1970s and in the past decade, but being in the middle of the distribution during the 1980s and 1990s.

This examination of LFS data on sources of unemployment yields several noteworthy conclusions. Despite the common perception that most unemployment arises because of layoffs and downsizing that is permanent in nature, “job losers” represent a minority of the unemployed.

In recent years, permanent job losers constitute only about one-quarter to one-third of unemployment. In recessions the relative importance of permanent job losers approaches the upper end of this range, while in periods of strong economic activity it is closer to the lower end. In addition, the majority of permanent job losers had relatively little tenure (one year or less) in their previous job. Thus displaced workers—those who suffered permanent job loss and had substantial prior tenure with their previous employer—represent a small fraction of total unemployment. Even if we define “substantial prior tenure” as more than 12 months, this group constitutes less than 20 per cent of total unemployment.

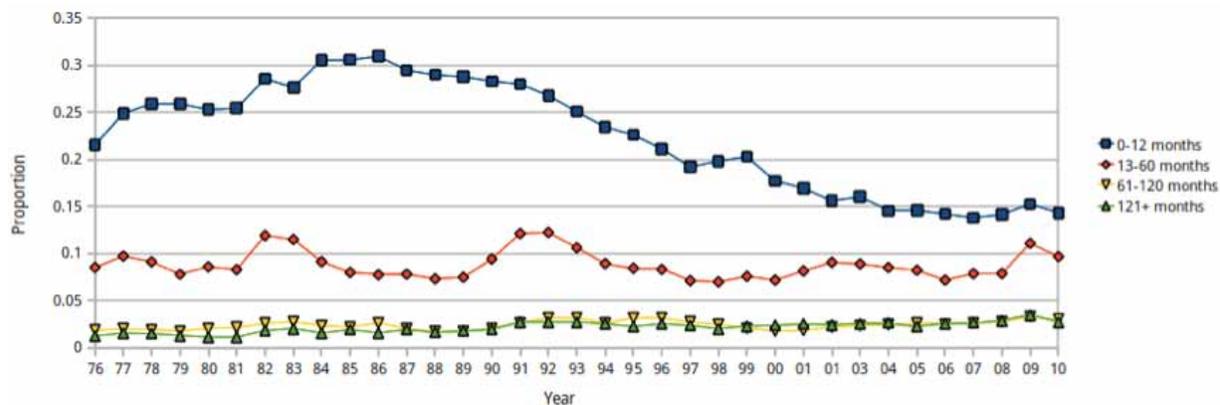
Another noteworthy finding is that, although the relative importance of permanent job loss has declined over the past 3 to 4 decades, the contribution of permanent job loss by those with at least one year of prior tenure has remained stable. Indeed, the relative importance of permanent job losers with 5 or more years of tenure has increased modestly. Finally, it is important to note that permanent job loss by long-tenure displaced workers occurs in good times and bad. Even in periods of buoyant economic growth, long-term employees face the risk that they will be displaced.

**FIGURE 1 Proportion of Unemployed who are Permanent Job Losers**

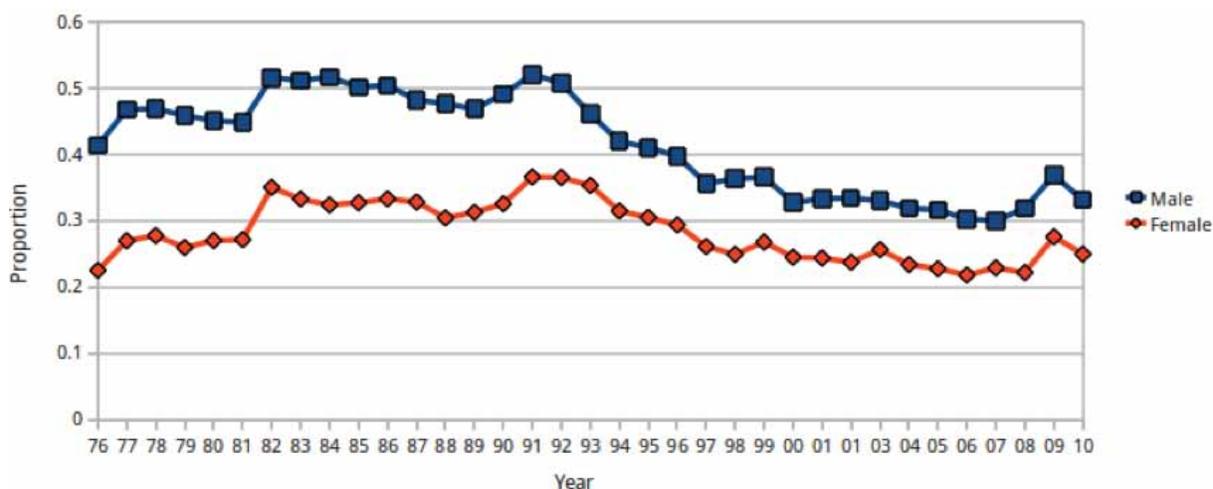


Source: Author’s calculations based on Statistics Canada’s monthly Labour Force Survey public use data, 1976-2010

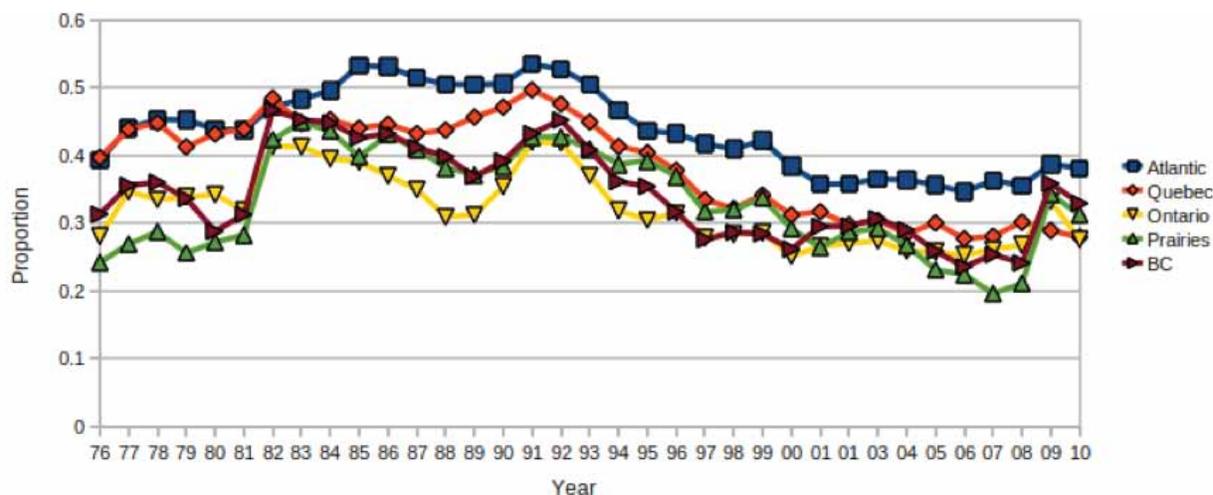
**FIGURE 2 Proportion of Unemployed who are Permanent Job Losers, by Length of Previous Tenure**



Source: Author’s calculations based on Statistics Canada’s monthly Labour Force Survey public use data, 1976-2010

**FIGURE 3 Proportion of Unemployed who are Permanent Job Losers, by Sex**

Source: Author's calculations based on Statistics Canada's monthly Labour Force Survey public use data, 1976-2010

**FIGURE 4 Proportion of Unemployed who are Permanent Job Losers, by Region**

Source: Author's calculations based on Statistics Canada's monthly Labour Force Survey public use data, 1976-2010

### Consequences of Displacement: Earning Loss

The magnitudes of earnings losses due to displacement have been extensively investigated. Key findings include: (i) average earnings losses can be substantial, (ii) losses are greatest for long-tenure employees, and (iii) losses persist for much longer than for other unemployed workers. An influential study by Jacobson et al., (1993) analyzed the consequences of displacement among workers in Pennsylvania. Their study has several key advantages: detailed administrative data linking workers and firms, several years of pre-displacement and post-displacement earnings and, of particular importance, a comparison group of non-displaced workers. Jacobson et al. focus on workers with six or more years of tenure with the previous employer. Rela-

tive to the comparison group of non-displaced workers, earnings losses were very large: 24 per cent of expected earnings even six years after displacement.<sup>5</sup>

Moreover, the time pattern of earnings losses has some striking features. Not surprisingly, average earnings drop precipitously—by about 50 per cent—upon displacement. During the next two to three years, earnings recover to an important extent, prior to levelling off. A salient feature is that average earnings plateau at a level substantially below their pre-displacement level, and even further below the average earnings of the comparison group of non-displaced workers. There is little evidence in their data that earnings of displaced workers will ever return to their pre-displacement level or to the earnings levels experienced by their non-displaced counterparts. They also find that the earnings losses of displaced workers (relative to those who do not become displaced) began about three years prior to separation, suggesting that the events that lead to workers' separations cause their earnings to depart from their normal levels even prior to separation.

Farber (2005) analyzes U.S. data from over 20 years of Displaced Worker Surveys covering the period 1981-2003. These surveys have the important advantage of being based on a representative sample of the adult population. In the most recent period, 35 per cent of displaced workers are not re-employed three years later, while about 13 per cent of full-time job losers are re-employed part-time. Full-time job losers re-employed in full-time jobs earn 17 per cent less than their earnings before displacement. The average earnings loss increases dramatically with prior job tenure.

The more limited Canadian evidence yields results similar to those reported for the United States. Morissette et al. (2007) focus on displaced workers aged 25-49 with at least five years of job tenure (high seniority displaced workers). However, they also present results for the broader group of all displaced workers, irrespective of prior job tenure. Their approach follows that of Jacobson et al. (1993) and compares the earnings patterns of displaced workers to a comparison group of non-displaced workers. In their analysis of the consequences of permanent job loss they focus on job loss due to firm closures and mass layoffs.

Morissette et al. (2007) find substantial and long-lasting earnings losses from such permanent job loss. As in the Jacobson et al. (1993) Pennsylvania study, earnings start to decline before displacement. As expected, there is a sharp decline in earnings at displacement. A particularly noteworthy finding, similar to that observed in the Jacobson et al. study, is the modest subsequent earnings recovery. Five years after displacement, earnings losses among high-seniority displaced workers are 25 to 34 per cent for men and 35 to 37 per cent for women. These are average losses, and include individuals who suffered larger as well as those who experienced smaller losses (perhaps even increases) in earnings. As was the case in the Jacobson et al. (1993) study, the most striking aspects of these earnings losses are their large size and the fact that they persist for a long time.

Another noteworthy finding of the Morissette et al. (2007) study is that earnings losses among the broader group of all displaced workers (i.e. irrespective of previous job tenure) are relatively modest and short-lived (approximately zero, on average, 3 years after displacement). Thus large and persistent earnings losses are characteristic of high seniority displaced workers, a group that constitutes a small minority (about 10 per cent) of the broader group of permanent job losers.

A useful complement to the Morissette et al. (2007) study is a recent study by Schirle (2009). She uses data from the Survey of Labour and Income Dynamics (SLID) covering the period 1993-2004. In this study, displaced workers are defined as those who lost their job due to the company closing, the company moving, or being laid off due to business slowdown. This study focuses on earning losses of displaced older workers, those who lose their job at ages between 50 and 69 years of age. However, comparisons to younger displaced workers are also provided. An important challenge in examining earnings losses among older displaced workers is that many may not become re-employed, but rather may retire from the workforce. For this group, re-employment earnings are not observed. The subset of those who do obtain re-employment may not be representative of the larger group of older displaced workers. Statistical techniques are used to take account of the self-selected nature of the sample of individuals who obtain a new job following displacement.

Schirle finds that, as with younger workers, older workers face large and persistent earnings losses after permanent job loss. Interestingly, once one statistically controls for job tenure, age plays only a modest role in the magnitudes of earnings losses. However, as also found in other studies, job tenure is a strong predictor of the magnitude of the loss in earnings. High seniority older men experience the largest earnings losses after displacement—over \$22,000 in the year after job loss and longer term losses over \$16,000 per year. In contrast, low tenure men experience average earnings losses of around \$10,000 in the first year and longer term losses of \$6,000 to \$6,500. Schirle also finds that some earnings losses begin before displacement occurs, particularly among those workers who are laid off due to the company closing.

Although age and previous job tenure are related, age appears to play an independent role in the likelihood of becoming re-employed, but a more limited role in the magnitudes of earnings losses. In particular, older displaced workers are less likely to become re-employed within the time period covered by the data. For example, recent Canadian data indicate that the proportions of male displaced workers who are re-employed within five years of job loss are 83 per cent for men aged 25-44 but only 64 per cent for men aged 45-59 (Expert Panel on Older Workers, 2008). However, Schirle concludes that, once one statistically controls for tenure, age has only a modest effect on the magnitudes of earnings losses.<sup>6</sup> In her study, earnings losses of younger men aged 25-34 are slightly smaller than those of older men but the differences are not statistically significant. Similarly, there are not large or statistically significant differences between the earnings losses of displaced workers aged 35-49 and those aged 50-69.

Schirle (2009) also finds differences in the consequences of permanent job loss by educational attainment and urban/rural status. The magnitudes of earnings losses of low-educated and high-educated workers are similar—around \$13,000 in the first year—but this drop in earnings represents a larger percentage decline for workers with low education (about 40 per cent) compared to those with high education (about 23 per cent). Similarly, the earnings declines experienced by displaced workers living in urban and rural areas are similar in size, but relative to pre-displacement earnings are larger among workers residing in rural areas (about 40 per cent) compared to those urban areas (about 30 per cent).

These and other studies of displaced workers may understate earnings losses. One reason for possible understatement is that most studies compare earnings prior to displacement to earnings in the new job among those who obtain re-employment within the period covered by the

data. However, not all displaced workers find a new job by the survey date. Those who remain without work at the survey date may do even worse than their counterparts who obtain a new job. In addition, most studies compare post-displacement to pre-displacement earnings. However, as noted in the Jacobson et al. (1993), Morissette et al. (2007) and Schirle (2009) studies, pre-displacement earnings may underestimate “normal earnings.” In particular, the event that leads to displacement shows up in the form of declining earnings up to three years prior to displacement—perhaps because firms threatened with bankruptcy reduce employees’ hours of work in an attempt to survive.

At the same time, earnings losses may be overstated if downsizing firms selectively lay off the least productive employees (Gibbons and Katz 1991). This type of “layoffs and lemons” behaviour does not, however, apply to plant shutdowns, and is unlikely to apply to mass layoffs. Both are important sources of displacement.

What explains the large earnings losses that persist for many years after permanent job loss? The leading explanation involves loss of human capital that is specific to the job, firm, industry or occupation, and thus not transferable to other settings. Evidence supporting this view includes studies by Jacobson et al. (1993), Neal (1995) and Parent (2000) that find that workers who change industries after job loss suffer much greater losses. Additional evidence supporting the specific human capital view is provided by Poletaev and Robinson (2008) using measures of the skill content of jobs. They find that the earnings losses experienced by displaced workers are closely associated with the magnitude of the change in the skill portfolio between the pre-displacement and post-displacement jobs. Job losers who obtain new employment with skill content similar to that in their previous job are less likely to suffer earnings losses, even when doing so involves changing industry or occupation, while those unable to become re-employed in a job with similar skill content are likely to experience large declines in earnings.

Another explanation is the presence of internal labour markets and wage profiles that depend on seniority. For a variety of reasons, employers and employees may prefer wage structures such that workers earn less than their value to the firm early in their career and more than their value to the firm later in their career. This type of behaviour produces a wage profile that increases with tenure with the firm—indeed, one that increases with seniority more rapidly than does worker productivity. Employees with substantial tenure who permanently lose their jobs thus lose this “premium” (wages in excess of productivity) when they re-enter the job market and become re-employed at wages that more closely reflect their productivity. An additional factor is that some displaced workers may have been earning “economic rents” —wages in excess of productivity—and cannot be expected, on average, to be able to find new jobs that also pay wages in excess of worker productivity. For example, Kuhn and Sweetman (1998) find that earnings losses are larger for workers who lose jobs in the union sector and become re-employed in the non-union sector, compared with those who make a transition from the non-union to union sector or who remain in the union sector.

The pattern of earnings losses with prior job tenure accords well with explanations built on loss of employer-specific and/or industry-specific human capital, as well as those based on internal labour markets with seniority-based wage profiles. For example, a subsequent study by Jacobson et al. (2005) analyzes the earnings of displaced workers in Washington State according to three categories of prior job tenure: 6 to 11 quarters, 12 to 23 quarters, and 6 or more

years. Prior to displacement, the high-seniority category (6 or more years) earned approximately double that of the low-seniority category, and about 50 per cent more than the middle-seniority group (12 to 23 quarters). After displacement, the average earnings of the three groups are almost identical. This common earnings pattern persists for four years after job loss, with the result that the group with most prior job tenure has suffered the largest earnings losses, and the group with the least prior job tenure the smallest earnings losses.

### **Other Consequences of Displacement**

Permanent job loss has additional negative consequences, which are only briefly noted here despite their economic and social significance. A recent U.S. study by Sullivan and von Wachter (2009) concludes that displacement leads to a 15 per cent to 20 per cent increase in death rates, equivalent to a reduction in life expectancy of about 1.5 years for someone displaced at age 40. Eliason and Storrie (2009) examine the impact of job loss on overall and cause-specific mortality with Swedish data. They find a substantial rise in mortality among displaced Swedish men (over 40 per cent increase) during the first four years after job loss. For both men and women displacement results in an approximate doubling of mortality due to suicides and alcohol-related deaths. Mental health problems arising from job loss are reported in the study by Hamilton et al. (1997).

There are also adverse consequences for the families of displaced workers. Charles and Stephens (2004) find that the incidence of divorce rises after a spouse's displacement, an effect that is not present for the onset of a disability. Lindo (2010) finds evidence that a husband's displacement reduces the wife's fertility. Parental job loss reduces the likelihood that teen-aged children will pursue post-secondary education (Coelli 2009). Inter-generational impacts appear to be long-lasting: children whose fathers were displaced have, as adults, lower annual earnings (about 9 per cent) and have higher incidence of employment insurance (EI) and social assistance receipt (Oreopoulos et al., 2008).

### **Summary and implications**

In summary, the research on the consequences of displacement yields a number of salient and consistent findings:

- Earnings losses from permanent job loss are very large, especially for long-tenure workers.
- A major part of the earnings loss arises not from post-displacement unemployment, but from re-employment at wages substantially below their pre-displacement levels.
- These substantial losses appear to be long-lasting (perhaps permanent).
- One Canadian study finds that well-educated workers experience earnings losses that are similar in size to those experienced by workers with low education, but smaller as a percentage of previous earnings.

- The same Canadian study also concludes that displaced workers in urban areas experience earnings losses that are similar in size to those experienced by workers living in rural areas, but smaller as a percentage of previous earnings.
- Older displaced workers are less likely to become re-employed than their younger counterparts. However, age appears to play only a minor role in the magnitudes of annual earnings losses, once one statistically controls for worker seniority.
- Losses experienced by displaced workers with substantial job tenure are similar in magnitude and permanence to other catastrophic events, e.g., having one's house burn down (LaLonde, 2007).
- In contrast, non-displaced unemployed workers become re-employed relatively quickly and do not suffer permanent earnings losses.
- The long tenure group that is most likely to experience large earnings losses is relatively small—about 5 per cent of unemployed workers and 15 to 20 per cent of permanent job losers.

These findings have important policy implications. Private insurance markets for losses associated with job displacement do not exist. In addition, publicly provided insurance (Employment Insurance Act, Part I) does not provide adequate insurance against the risk of permanent job loss. In particular, EI does not take into account the fact that earnings losses are much larger for long-tenure displaced workers. EI benefits depend only on employment in the 12 months prior to displacement, so the EI program treats job losers with long tenure and short tenure in an equivalent fashion. Furthermore, EI covers only a portion of the lost income during the unemployment period, whereas a substantial portion of the earnings loss suffered by long-tenure displaced workers is associated with permanently lower earnings in subsequent jobs. In many ways, the current EI program is similar to having automobile insurance that pays the same amount for “fender-benders” as for vehicles that are totalled.

### **3 Policies to Deal with Displacement**

A variety of policies to deal with displacement and its consequences have been proposed or implemented. These are briefly discussed here under two headings: (i) *ex ante* (preventive) policies and (ii) *ex post* (adjustment assistance) policies.

#### **Ex Ante Policies**

Policies that promote education and skill development may, in addition to their well-known benefits in other dimensions, also enhance the adaptability of the workforce to changing circumstances. A variety of evidence from case studies and more broadly based empirical research suggests that education improves the ability of individuals to adjust to changing circumstances (Schultz, 1975). In the context of displacement, education is a strong predictor of the prob-

ability of re-employment after job loss. Displaced workers with more education have higher probabilities of re-employment and are more likely to be re-employed full-time (Farber, 2005). Furthermore, this relationship appears to reflect underlying causal forces rather than simply being a correlation between education and re-employment rates: Riddell and Song (2007, 2011) conclude that education has a causal impact on re-employment. This recent evidence is consistent with the view that investment in skills can enhance adaptability.

Ex ante policies that focus more directly on workforce adjustments include restricting firms' ability to lay off workers or requiring advance notice of layoffs and/or severance pay. Such restrictions arise from both the common law and from employment standards legislation in the federal and provincial jurisdictions (Kuhn, 2000). According to the common law, most labour contracts can be discontinued either by firing workers for cause or providing a reasonable amount of notice. All Canadian jurisdictions have minimum mandatory notice provisions for permanent layoffs in their employment standards laws. Most jurisdictions also require greater notice for mass terminations and plant shutdowns. Jurisdictions with mass layoff provisions also often require the employer to establish and finance a workforce adjustment committee, with employee representation, to develop an adjustment program for displaced workers and to help workers find new job opportunities. Severance pay is also required in some jurisdictions.

A limited amount of empirical evidence is available on the impacts of Canadian employment protection and advance notice provisions. Studies by Jones and Kuhn (1995) and Friesen (1997) conclude that advance warning of mass layoffs and plant shutdowns can have positive benefits. However, the impacts appear to accrue primarily for those who are capable of finding a new job quickly. For these workers, what would, in the absence of advance warning laws, be a short unemployment spell is instead replaced by an even briefer period of unemployment or an immediate job switch. For those who, in the absence of advance warning laws, are expected to have long unemployment durations, the presence of advance notice appears to have little effect (Jones and Kuhn, 1995). The reason appears to be that, except in small amounts, pre-displacement job search is significantly less effective than post-displacement search in obtaining re-employment, a conclusion also reached in several U.S. studies of displaced workers. There is also no Canadian evidence that advance warning reduces the earnings loss associated with lower wages in the post-displacement job compared to the previous job.

## **Ex Post Policies**

Ex post adjustment assistance policies include a variety of interventions designed to help displaced workers cope with the trauma of losing one's job and the associated reduced income and, importantly, to find suitable employment as rapidly as possible. These "active labour market policies" range from brief and inexpensive interventions like job search assistance to more intensive interventions such as retraining or assistance with relocating to regions with greater employment opportunities. There is a substantial body of international evidence on these policies.<sup>7</sup> The best evidence comes from the United States, which has a strong commitment to undertaking rigorous evaluations of labour market programs. In recent years there has been an explosion of new evidence on the impacts of these programs from the UK and continental Europe, reflecting advances in methodology and data quality and a growing commitment to serious evaluation of labour market programs. Unfortunately, credible Canadian evidence on

the impacts of active labour market policies is seriously lacking. Thus this summary of “what works” is based principally on the U.S. and European experiences.

A series of randomized UI experiments carried out in the US during the 1980s and 1990s provides credible evidence on the impacts of job search assistance. Meyer (1995) provides a useful survey of these studies. Job search assistance reduces the duration of unemployment by about 0.5 weeks. The impact is small but the intervention is brief and inexpensive, so has a favourable cost-benefit ratio. More recent evidence comes from evaluations of the UK New Deal for Youth that included mandatory job search assistance plus (if necessary) subsidized employment. Analysis shows positive impacts on re-employment among long term unemployed youth (see, e.g., Blundell et al., 2004).

The literature on the impacts of government-sponsored training is voluminous. Results are also somewhat sobering: training often has little or no impact on earnings. Estimated impacts, even when positive, are generally modest in size. A brief summary of the extensive U.S. evidence would include the following: (i) impacts of training on out-of-school youths are typically zero or negative; (ii) impacts on earnings of adult men are generally zero or positive but small in size; and (iii) impacts for adult women are generally positive and larger than those for adult men. However, in interpreting this evidence it is worth keeping in mind that U.S. training programs are often targeted on highly disadvantaged workers, who face multiple barriers to labour market success.

Training might be expected to be more beneficial for displaced workers who have strong prior labour force attachment, fewer barriers to employment and are often highly motivated. However, displaced workers may face a different set of obstacles. Older displaced workers often have low levels of education and may have literacy and numeracy deficiencies that need to be remedied prior to retraining. There is also the question of whether those who have been employed for many years can acquire new skills in a classroom setting as efficiently as younger individuals whose schooling experience is more recent. Thus it is not clear *a priori* that training will be more effective for displaced workers.

The empirical evidence on training impacts for permanent job losers is not as extensive as that for the disadvantaged, but it is similarly pessimistic about the potential for retraining.<sup>8</sup> Experimental studies, which provide the most credible evidence, suggest that training has little or no impact on the post-displacement earnings of job losers. Non-experimental studies face important econometric challenges relating to selection into training programs by the trainee or by program administrators on the basis of unobserved factors (such as motivation) that may be correlated with the impact of training. Nonetheless, non-experimental analyses can have advantages such as large sample sizes and a wider range of retraining interventions. Careful analysis by Jacobson et al. (2005) provides evidence that community college programs for retraining displaced workers can have positive impacts. This study found that the equivalent of one year of community college coursework raised earnings of male displaced workers by 9 per cent and female displaced workers by 13 per cent. Jacobson, LaLonde, and Sullivan also concluded that the type of training matters: estimated impacts were larger for those taking more quantitative vocational and academic courses.

European programs focus more on speeding the return to work, especially among youths, than on raising earnings once re-employed. The difference in emphasis reflects the fact that European unemployed are typically less disadvantaged but experience longer spells of unemployment. A common finding of recent evaluations is that training results in substantial reductions in the duration of unemployment but has little impact on wages (Card et al., 2009; Kluve, 2007).

My own assessment of the potential for training programs is similar to that articulated by LaLonde (1995) in an earlier review of the U.S. evidence: you get (at best) what you pay for.<sup>9</sup> In thinking about the likely impact of training on earnings, the empirical evidence on the effects of other human capital investments provides useful guidance. In many countries, including Canada, an additional year of formal schooling raises earnings by approximately 8 to 10 per cent. Using these estimates as a benchmark, we could expect a 12-month training program to raise earnings by 8-10 per cent, and a 6-month program to raise earnings by 4-5 per cent. Impacts of this size may be large enough to justify investing in training on a cost-benefit basis.

However, except for very intensive and expensive training programs, these returns are not large enough to restore earnings losses experienced by long-tenure displaced workers. For example, using the estimates obtained by Jacobson, LaLonde and Sullivan for displaced workers in Washington State—which are at the upper end of estimated impacts of retraining—even two years of college level training would not come close to restoring the earnings losses experienced by long-tenure displaced workers.<sup>10</sup>

The final two policies I discuss are specifically directed towards long-tenure displaced workers. As noted previously, an important flaw in the current EI program is that it does not provide benefits that reflect the cost of job loss. Apart from some recent initiatives (discussed below), long-tenure displaced workers, who lose the most from permanent job loss, are not treated any differently than displaced workers who have been employed for brief periods of time. The report of the Expert Panel on Older Workers (2008) recommended enhanced benefits for displaced workers with substantial prior work experience and limited prior EI receipt. Enhanced EI benefits could take the form of higher benefit levels, longer benefit durations, or improved access to funds for training or mobility assistance. These would align benefits more closely with magnitude of loss, thus improving the social insurance dimension of Canada's EI program.

Design of this enhanced benefits feature requires careful assessment to ensure that the social benefits arising from improved insurance are maximized while the social costs resulting from any adverse side effects are minimized. Some lessons can be drawn from the European experience. Many European countries have unemployment insurance (UI) benefits and durations that depend on prior work experience (OECD, 2007). In Austria, for example, those with less than three years of prior work experience (possibly with several employers) are entitled to 20 weeks of benefits, whereas those with three or more years of previous work experience are entitled to 30 weeks of benefits. In addition, employers that permanently lay off workers with three or more years of job tenure with that firm are required to make severance payments that equal approximately two months' salary.

By exploiting these sharp discontinuities at three years of previous work experience and three years of tenure with the employer, Card et al. (2007) provide convincing evidence that these features have small to modest effects on the duration of unemployment following displace-

ment. In particular, entitlement to 30 weeks of benefits reduces the job finding rate by 5 per cent to 9 per cent, compared to workers displaced with less than three years of previous work experience. Similarly, the severance payment associated with reaching the three-year job tenure threshold reduces the job finding rate by 8 per cent to 12 per cent. Interestingly, they also find that longer unemployment spells do not result in improved matches in the subsequent job, using both wages and the duration of the re-employment job as measures of job-match quality. Thus, enhanced EI benefits for long-tenure displaced workers may have adverse side effects, and the social costs of any such effects need to be balanced against the social benefits from improved insurance against the risk of permanent job loss.<sup>11</sup>

Since the onset of the recent economic downturn the federal government has followed the recommendations of the Expert Panel on Older Workers and has introduced several initiatives that provide enhanced benefits for long-tenure displaced workers.<sup>12</sup> In May 2009 the government announced the Career Transition Assistance program that provides additional support to long-tenure displaced workers. One initiative extends the duration of EI benefits for eligible long-tenure displaced workers who participate in longer-term training by up to two years. Another allows earlier access to EI regular benefits for displaced workers investing in their own training using all or part of their severance package. Subsequently, the government extended regular EI benefits for long-tenure displaced workers. Both of these new initiatives are temporary in nature.

Enhanced EI benefits for long-tenure displaced workers should improve the insurance value of the EI program by reducing the income loss during the post-displacement unemployment spell. However, enhanced EI benefits do not help insure against the most significant income loss associated with job loss among long-tenure workers—the lower earnings in the post-displacement job compared to the pre-displacement job. As discussed previously, these reduced earnings continue for many years after permanent job loss, and are particularly pronounced for workers with substantial tenure in their previous job. To address this source of income loss, some U.S. scholars (e.g., Kletzer and Rosen 2006; Kling 2006; LaLonde 2007) have recommended wage (loss) insurance. Such wage-loss insurance would supplement the employment income of the displaced worker in the post-displacement job. An example of wage-loss insurance would be an earnings supplement for up to three years in the post-displacement job, equal to 50 per cent of difference in earnings between pre- and post-displacement jobs. This type of earnings supplement recognizes that, for long-tenure displaced workers, most of the income loss occurs after re-employment rather than during the post-displacement unemployment spell. In contrast, for other unemployed workers, the income loss occurs during the unemployment spell.

Wage insurance is an interesting policy proposal with attractive features. In addition to its key advantage of providing insurance against the risk of income loss due to displacement, wage insurance may also speed up the return to work. It deserves careful assessment. I support the recommendation of the Expert Panel on Older Workers that Canada undertake a rigorous demonstration project (preferably with random assignment to program and control groups) to assess the impacts of wage insurance.<sup>13</sup>

One response to this recommendation might be “been there, done that” —reflecting the fact that Canada did carry out a demonstration project (the Earnings Supplement Project, or ESP)

that tested the impacts of an earning loss insurance program for displaced workers.<sup>14</sup> However, this view is mistaken. The ESP provided useful and policy-relevant information but it did not constitute a test of the impacts of wage loss insurance for dealing with the large losses experienced by a small subset of displaced workers. To understand this point we need to consider how one would design a demonstration project to test the effectiveness of wage insurance as a mechanism for improving the social insurance function of the EI program. Then we need to compare this hypothetical demonstration project to the ESP. When this is done it is apparent that the ESP, although it addressed the policy concerns at the time, did not test the effectiveness of a wage insurance program along the lines recommended by Kletzer and Rosen (2006), Kling (2006), LaLonde (2007) and the Expert Panel on Older Workers (2008).

To test the effectiveness of a wage loss insurance program we would first want to choose the experimental sample to be similar to the likely target group for the policy, in order to be most relevant to the policy that is subsequently implemented. In this case we would choose as an experimental sample those who lose a substantial amount from permanent job loss—i.e. long-tenure displaced workers. As a guide, we would probably draw the experimental sample from those with at least 5 years of previous job tenure, and with average tenure that is considerably longer (e.g. 10-12 years). Those randomly assigned to the treatment group would be offered an earnings supplement such as one based on the difference between the pre-displacement earnings and the post-displacement earnings in the new job. Second, we might require those in the treatment group to obtain a new job within a certain period of time in order to qualify for the earnings supplement, but if we did so this time period would reflect the typical unemployment duration experience of long-tenure displaced workers. Third, the outcome measures on which the treatment and control groups would be compared would be those associated with provision of insurance against adverse events. Thus we would compare the consumption of the treatment and control groups to see if an earnings supplement based on the difference between the pre-displacement earnings and the post-displacement earnings is effective in preventing a major decline in the family's standard of living. Similarly, we would also examine outcomes such as mental and physical health, as well as educational attainment among the children of the displaced worker.

Based on these considerations, it is clear that the ESP was not designed to test wage insurance in the form that the policy is currently advocated—that is, as a form of social insurance for those who suffer the most from permanent job loss. The ESP was designed at a time when the principal policy concern was that of speeding up the return to work of individuals receiving unemployment (EI) benefits. Indeed, the ESP arose as a consequence of UI bonus experiments carried out in several U.S. states that provided rigorous tests of the hypothesis that a financial incentive to find work quickly could both speed up the return to work and reduce the costs to government of operating the UI program.

The ESP extended this idea of testing the effectiveness of a re-employment incentive to displaced workers (as well as to repeat users of EI). For the displaced worker component of ESP, the experimental sample was not confined to long-tenure displaced workers but rather to all permanent job losers. As a consequence, less than one-half of the experimental sample had job tenure in excess of 5 years and only 20 per cent had tenure of ten or more years (Bloom et al., 1997). We now know (although this was perhaps not well known at the time) that displaced workers with short previous tenure typically become re-employed at earnings levels similar to

those in their pre-displacement jobs. These individuals are unlikely to benefit from an earnings supplement based on the difference between their pre-displacement and post-displacement earnings. Thus it is not surprising that the ESP take-up rate was low (around 20 per cent), as many of those in the treatment group would not benefit from the earnings supplement.

Furthermore, to qualify for the earnings supplement, those in the treatment group had to become re-employed within 26 weeks. For long-tenure displaced workers, who typically take longer to become re-employed than other permanent job losers, this time limit is too brief. Thus the parameters of the experiment were established such that that most displaced workers in the treatment group would not benefit from an earnings supplement based on the gap between the pre-displacement and post-displacement earnings, and those that would potentially benefit were given an unrealistically short period of time in which to qualify for the supplement.

Perhaps the most important limitation of the ESP demonstration for assessing current policy interest in wage insurance arises from the fact that the outcome measures examined in the ESP are not the outcomes one would use to assess the social value of wage insurance. ESP was designed to examine whether providing a financial incentive to become re-employed quickly would speed up the return to work. From an insurance perspective this is a minor consideration. There is some policy interest in whether the offer of wage insurance would result in more rapid re-employment among long-tenure displaced workers. But the case for wage loss insurance doesn't depend on this factor. The case for wage insurance lies in its potential for providing insurance against a substantial decline in the standard of living of families in which a member with long employment tenure suffers permanent job loss. If we were assessing the adequacy of house insurance we would examine whether families whose house burned down had to subsequently live in substantially lower quality housing. In the case of permanent job loss we should be interested in assessing whether affected families suffer substantial declines in their standard of living, as well as other adverse effects such as marital difficulties, greater incidence of mental illness and increased mortality.

## **4 Conclusions and Recommendations**

Canada's economy performed reasonably well in the postwar period, achieving high rates of employment growth and advances in living standards (Riddell, 1999). A key contributor to this good performance has been a dynamic labour market that shifts workers into sectors where they are needed and out of declining sectors without lengthy intervening periods of unemployment. As a group, Canadians benefit from this process of adjusting to changing circumstances and opportunities. However, the costs of adjustment are unevenly distributed in the population.

A central finding of empirical research on displacement is that some workers suffer much more from losing their jobs than do others. On average, those who have held their jobs for an extended period of time experience substantial earnings losses, while those who have been employed for relatively brief periods of time experience small losses. Like other job losers, long-tenure displaced workers experience earnings losses due to reduced income during the period of unemployment following displacement. However, unlike other job losers, many long-tenure displaced workers become re-employed at significantly lower wages than they received in

their pre-displacement jobs. Our existing social insurance programs, particularly Employment Insurance, do not take into account these salient features of the consequences of job loss.

A second key finding is that long-tenure displaced workers constitute a small minority of job losers. For example, our analysis of LFS data indicates that job losers with 5 or more years of tenure with their previous employer constitute about 5 per cent of unemployed workers and 15-20 per cent of permanent job losers.

I conclude with some recommendations. They are intended to address both the research and knowledge gaps relating to displacement and its consequences, as well as the policy gaps in addressing this important problem. To address the gaps in research and knowledge, Canada should follow the U.S. and carry out a regular Displaced Worker Survey—for example, one undertaken every other year and covering permanent job loss that occurred during the previous three years. This survey could operate as an occasional supplement to the Labour Force Survey and therefore need not be expensive. The U.S. experience with a regular DWS clearly indicates its value in providing timely information on the incidence of permanent job loss, the duration of unemployment following displacement, and the consequences for individuals and their families of such events. The U.S. survey has also been an important source of data for research on the causes and consequences of permanent job loss. In a country like Canada, with significant exposure to external and internal economic shocks, the case for such a survey seems obvious.

There is also a strong case for enhanced EI benefits for long-tenure displaced workers and, more generally, for altering the parameters of the EI program to recognize that such workers suffer much more from job loss than do other unemployed workers. These changes should become a permanent feature of the EI program, but they should be introduced in a way that their effects can be rigorously evaluated.

I would not restrict the receipt or magnitude of these enhanced benefits to long-tenure displaced workers with little or no previous EI receipt, as was recommended by the Expert Panel on Older Workers. One reason why this condition may be too restrictive is that, as discussed previously, the economic forces that ultimately result in permanent job loss are often evident in the form of spells of unemployment and EI receipt in the period prior to displacement. Thus it might not be unusual for workers who ultimately experience mass layoffs or plant closures to have received EI in the period prior to dismissal. However, these enhanced benefits should be designed in a way to exclude seasonal workers, who are already richly rewarded by the EI program. These enhanced benefits should also be designed to minimize any adverse effects on the duration and intensity of job search.

For similar reasons, the benefits and support measures provided under EI Part II should focus more on long-tenure displaced workers—especially relatively intensive interventions such as retraining and mobility assistance. Thus I support the general nature of recent initiatives in this area, especially longer benefit durations and improved access to training for long-tenure displaced workers. Before adopting these features on a more permanent basis there should be a serious attempt to evaluate the consequences of these recent initiatives. However, until such evaluations are completed there is a good case for extending these new initiatives for a longer period of time. Furthermore, given the evidence on the effectiveness of retraining for displaced workers—which is, at best, mixed—greater emphasis should be placed on mobility assistance

and less on training in EI Part II. In a country as regionally diverse as Canada, it is unfortunate that we respond to so-called “skills shortages” by temporary and permanent immigration rather than devoting resources to promoting internal migration.

Finally, since most loss from displacement occurs after re-employment, wage insurance seems the most promising approach for providing insurance to those who suffer most from economic and technological change. Canada should carefully assess the advantages and disadvantages of such a policy. The best way to do so would be to carry out a rigorous demonstration project, preferably using random assignment. An alternative would be to implement wage insurance as a pilot project with a sunset clause and a requirement for rigorous evaluation prior to renewal.

### **Acknowledgments**

I thank Jacob Cosman for excellent research assistance, and Keith Banting, Stephen Jones, Bill Scarth, Arthur Sweetman, participants in the Mowat EI workshop, and anonymous referees for helpful comments.

# Endnotes

1. Canada did carry out a DWS in 1986 that covered job loss experienced during the period 1981-85. However, this survey has not been repeated.
2. The authors examine post-displacement earnings during 5 years following displacement; thus the study covers displacements that occurred up to 1997, more than a decade ago.
3. Workers are classified as permanently laid off when they do not return to their former employer in the same year or in the following year following the layoff.
4. Data were extracted from the monthly public use LFS files and then aggregated to annual observations. All estimates use the survey weights so are representative of the Canadian adult population.
5. “Expected earnings” refers to the earnings that would have been experienced without displacement. These are estimated using the outcomes experienced by the comparison group of non-displaced workers.
6. Even if the magnitudes of annual earnings losses are independent of age, the present value of future losses will depend on age because younger displaced workers have more years remaining in the workforce.
7. See Card et al. (2009); Heckman et al. (1999); Kluve (2007); and OECD (2006) for surveys of the international evidence.
8. See Jones (2011) for a careful review of the U.S. and Canadian evidence.
9. It is also possible, as argued for example by Eberts (2005) and OECD (2006), that public training programs could be made more effective. Obtaining credible evidence on how to improve government-sponsored training would require a substantial commitment to evaluation research.
10. For example, consider a worker with pre-displacement earnings of \$45,000 who obtains re-employment at \$30,000 (i.e. experiences an earnings loss of 33 per cent). A one-year training program would be expected to increase earnings by at most 10 per cent, i.e. \$3,000 and a two-year program by \$6,000. This would still leave an earnings loss of \$9,000, or about 20 per cent.
11. Although the Austrian evidence may not be directly applicable to Canada, it can be used to provide some guidance on the probable magnitude of adverse side effects. For example, increasing the maximum benefit duration from 20 to 30 weeks (an increase of 50 per cent) is estimated to reduce the job finding rate by about 7 per cent. In an equilibrium search model with a monthly job separation rate of .01 and an initial monthly job finding rate of 0.2, this 50 per cent increase in benefit durations would raise the equilibrium unemployment rate from 4.8 to 5.1 per cent. I thank Bill Scarth for suggesting these back-of-the-envelope calculations.
12. Note, however, that the federal government’s definition of “long-tenure displaced worker” is too broad and would include many job losers that do not experience substantial wage losses.
13. See Jones (2009) for an assessment of the recommendations of the Expert Panel with respect to wage insurance.
14. See Bloom et. al. (1999) for the Final Report on this demonstration project.

# REFERENCES AND WORKS CITED

- Baldwin, J., T. Dunne, and J. Haltiwanger. 1998. "A Comparison of Job Creation and Job Destruction in Canada and the United States." *Review of Economics and Statistics* 80.3: 347–56.
- Bloom, H. et. al. 1997. *Implementing the Earnings Supplement Project: A Test of a Re-employment Incentive*. Ottawa: SRDC.
- Bloom, H. et. al. 1999. *Testing a Re-employment Incentive for Displaced Workers: The earnings Supplement Project*. Ottawa: SRDC.
- Blundell, R., M. Costa Dias, C. Meghir and J. Van Reenan. 2004. "Evaluating the Employment Impact of a Mandatory Job Search Program." *Journal of the European Economic Association* 2. 4: 569-606.
- Card, D., R. Chetty and A. Weber. 2007. "Cash-on-Hand and Competing Models of Intertemporal Behavior: New Evidence from the Labor Market." *Quarterly Journal of Economics* 122.4: 1511–560.
- Card, D., J. Kluve and A. Weber. 2009. "Active Labor Market Policy Evaluation: A Meta-Analysis." IZA DP No. 4002. Bonn: IZA.
- Coelli, M. B. 2009. "Parental Job Loss, Income Shocks and the Education Enrolment of Youth." Department of Economics - Working Paper 1060. Melbourne: University of Melbourne.
- Charles, K.C. and M. Stephens Jr. 2004. "Job Displacement, Disability and Divorce." *Journal of Labor Economics* 22. 2: 489-522.
- Davis, S. J. and J. Haltiwanger. 1999. "Gross Job Flows." In *Handbook of Labor Economics*, edited by O. Ashenfelter and D. Card, 2711–805. Amsterdam: Elsevier.
- Eberts, R. W. 2005. "After the Doors Close: Assisting Laid-Off Workers to Find Jobs." *Economic Perspectives* 29.2: 75–85.
- Eliason, M. and D. Storrie. 2009. "Does Job Loss Shorten Life?" *Journal of Human Resources* 44.2: 277-302.
- Expert Panel on Older Workers. 2008. "Supporting and Engaging Older Workers in the New Economy." Ottawa: Expert Panel on Older Workers. Available at [http://www.hrsdc.gc.ca/eng/publications\\_resources/lmp/eow/2008/older\\_workers\\_2008.pdf](http://www.hrsdc.gc.ca/eng/publications_resources/lmp/eow/2008/older_workers_2008.pdf).
- Farber, H. S. 1999. "Mobility and Stability: The Dynamics of Job Change in Labor Markets." In *Handbook of Labor Economics*, edited by O. Ashenfelter and D. Card, 2439–84. Amsterdam: Elsevier.
- Farber, H. S. 2005. "What Do We Know about Job Loss in the United States? Evidence from the Displaced Workers Survey, 1984–2004." *Economic Perspectives* 29.2: 13–28.
- Friesen, J. 1997. "Mandatory Notice and the Jobless Durations of Displaced Workers." *Industrial and Labor Relations Review* 50.4: 652–66.
- Gibbons, R. and L. F. Katz. 1991. "Layoffs and Lemons." *Journal of Labor Economics* 9.4: 351–80.
- Green, D. A. and W. C. Riddell. 1993. "The Economic Effects of Unemployment Insurance in Canada: An Empirical Analysis of UI Disentitlement." *Journal of Labor Economics* 11.1: S96–S147.

- Gunderson, M. 1986. "Alternative Mechanisms for Dealing with Permanent Layoffs, Dismissals and Plant Closings." In *Adapting to Change: Labour Market Adjustment in Canada*, edited by W. C. Riddell, 111–62. Toronto: Royal Commission on the Economic Union and Development Prospects for Canada and University of Toronto Press.
- Hamilton, V.H., P. Merrigan and E. Dufresne. 1997. "Down and Out: Estimating the Relationship between Mental Health and Unemployment" *Health Economics* 6. 4: 397-406.
- Heckman, J. J., R. J. LaLonde, and J. A. Smith. 1999. "The Economics and Econometrics of Active Labor Market Programs." in *Handbook of Labor Economics*, edited by D. Card and O. Ashenfelter, 1865-2097. Amsterdam: Elsevier.
- Jacobson, L. S., R. J. LaLonde, and D. G. Sullivan. 1993. "Earnings Losses of Displaced Workers." *American Economic Review* 83.4: 685–709.
- Jacobson, L. S., R. J. LaLonde, and D. G. Sullivan. 2005. "Is Retraining Displaced Workers a Good Investment?" *Economic Perspectives* 29.2: 47–66.
- Jones, S.R.G. 2009. "Older Workers in the New Economy: The Role of Wage Insurance and the Rethinking of Employment Insurance" *Canadian Public Policy* 35.4: 499-511.
- Jones, S.R.G. 2011. "The Effectiveness of Training for Displaced Workers with Long Prior Job Tenure" Mowat Centre EI Task Force.
- Jones, S. R. G. and P. Kuhn. 1995. "Mandatory Notice and Unemployment." *Journal of Labor Economics* 13.4: 599–622.
- Kletzer, L. G. and H. F. Rosen. 2006. "Reforming Unemployment Insurance for the Twenty-First Century Workforce." Brookings Institution Hamilton Project Discussion Paper No. 2006–06. Washington, DC: Brookings Institution.
- Kling, J. R. 2006. "Fundamental Restructuring of Unemployment Insurance: Wage-Loss Insurance and Temporary Earnings Replacement Accounts." Brookings Institution Hamilton Project Discussion Paper No. 2006–05. Washington, DC: Brookings Institution.
- Kluve, J. 2007. "The Effectiveness of European ALMP's." In *Active Labor Market Policies in Europe: Performance and Perspectives*, edited by J. Kluve et al., 153-203. Berlin and Heidelberg: Springer.
- Kuhn, P. 2000. "Canada and the OECD Hypothesis: Does Labour Market Inflexibility Explain Canada's High Level of Unemployment?" In *Adapting Public Policy to a Labour Market in Transition*, edited by W. C. Riddell and F. St-Hilaire, 177-210. Montréal: Institute for Research on Public Policy.
- Kuhn, P. and A. Sweetman. 1998. "Wage Loss Following Displacement: The Role of Union Coverage." *Industrial and Labor Relations Review* 51.3: 384–400.
- LaLonde, R. J. 1995. "The Promise of Public Sector-Sponsored Training Programs." *Journal of Economic Perspectives* 9.2: 149–68.
- LaLonde, R. J. 2007. *The Case for Wage Insurance*. Council on Foreign Relations, Council Special Report No. 30. New York: Council on Foreign Relations.
- Lindo, J. M. 2010. "Are Children Really Inferior Goods? Evidence from Displacement-Driven Income Shocks." *Journal of Human Resources* 45.2: 301-327.
- Meyer, B. 1995. "Lessons from the U.S. Unemployment Insurance Experiments." *Journal of Economic Literature* 33.1: 91-131.
- Morissette, R., X. Zhang, and M. Frenette. 2007. "Earnings Losses of Displaced Workers: Canadian Evidence from a Large Administrative Database on Firm Closures and Mass Layoffs." Statistics Canada Analytical Studies Branch Research Paper No. 291. Ottawa: Statistics Canada.

- Neal, D. 1995. "Industry-Specific Human Capital: Evidence from Displaced Workers." *Journal of Labor Economics* 13.4: 653-77.
- Oreopoulos, P., M. Page, and A. Huff Stevens. 2008. "The Intergenerational Effects of Worker Displacement." *Journal of Labor Economics* 26.3: 455-83.
- Organisation for Economic Co-operation and Development (OECD). 2006. "Boosting Jobs and Incomes." *OECD Employment Outlook*. Paris: OECD.
- Organisation for Economic Co-operation and Development (OECD). 2007. *Benefits and Wages 2007*. Paris: OECD.
- Parent, D. 2000. "Industry-specific Capital and the Wage Profile." *Journal of Labor Economics* 18.2: 306-21.
- Picot, G., Z. Lin and W. Pyper. 1998. "Permanent layoffs in Canada: overview and longitudinal analysis." *Canadian Journal of Economics* 31.5: 1154-78.
- Poletaev, M. and C. Robinson. 2008. "Human Capital Specificity: Evidence from the Dictionary of Occupational Titles and Displaced Worker Surveys, 1984-2000." *Journal of Labor Economics* 26.3: 387-420.
- Riddell, W. C. 1986. *Adapting to Change: Labour Market Adjustments in Canada*. Toronto: Royal Commission on the Economic Union and Development Prospects for Canada and University of Toronto Press.
- Riddell, W. C. 1999. "Canadian Labour Market Performance in International Perspective" *Canadian Journal of Economics* 32.5: 1097-134.
- Riddell, W. C. and X. Song. 2007. "The Causal Effects of Education on Adaptability to Employment Shocks: Evidence from the Canadian Labour Market." CLSRN Working Paper No. 8.
- Riddell, W. C. and X. Song. 2011. "The impact of education on unemployment incidence and re-employment success: Evidence from the U.S. labour market" *Labour Economics* 18.4: 453-463.
- Schirle, T. 2009. "Earnings Losses of Displaced Older Workers: Accounting for the Retirement Option" CLSRN Working Paper No 10.
- Schultz, T. 1975. "The Value of the Ability to Deal with Disequilibria." *Journal of Economic Literature* 13.3: 827-46.
- Schumpeter, J. A. 1942. *Capitalism, Socialism, and Democracy*. New York: Harper & Brothers.
- Sullivan, D. and T. von Wachter. 2009. "Job Displacement and Mortality: An Analysis Using Administrative Data." *Quarterly Journal of Economics* 124.3:1265-1306.
- Trebilcock, M. J. 1986. *The Political Economy of Economic Adjustment*. Toronto: Royal Commission on the Economic Union and Development Prospects for Canada and University of Toronto Press.