Part-Time Work and Crowding-Out Implications

of Employment Insurance Pilot Initiatives[1]

Stéphanie Lluis   and   Brian McCall

University of Waterloo   University of Michigan

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Abstract

We apply a difference-in-differences estimation approach to analyze the effect of four Employment Insurance program initiatives that took place between 2004 and 2009 in a subset of Canadian Employment Insurance regions. The pilots increased the generosity of the EI system regarding EI eligibility, benefit amount, benefit duration and the allowable earning criteria. These pilots run in about 50% of the EI regions until August 2008 providing a quasi-experimental setting to analyze the impact of increased generosity of EI on labour market outcomes. We use the Labour Force Survey data to study the aggregate impact of the four pilots on monthly labour force transitions into employment and unemployment as well as job search behaviour.

Keywords: Unemployment Insurance; Labour Force Transitions; Part-time Work; Crowding Out

JEL classification: J62 J65

I - Introduction

Ever since its creation *by the Employment and Social Insurance Act* in 1935, the Canadian Unemployment Insurance program (subsequently renamed *Employment Insurance* or EI in 1996) has been a prominent feature of Canada's social safety net. The EI program's main objective has been to maintain a balance between insuring sufficient income benefits for the unemployed and encouraging workforce attachment.[2] Whether and in what fashion changes to the EI system impact this delicate balance is of upmost importance to both those using the EI system as well as policy makers.

In the last 10 years, and in the midst of the "great recession", the Canadian government (specifically Employment and Social Development Canada or ESDC) has "experimented" with changes to the EI system. The experiments have taken the form of four pilot programs that have affected individuals' experience with unemployment and the EI system. These four pilot programs manipulated the eligibility conditions for EI, the manner in which weekly benefit amounts and maximum benefit durations are determined and the formula that determines whether and how much EI benefits a claimant can receive while working on claim. While each pilot modified a distinct feature of the EI program, overall the changes increased the generosity of the system and modified the balance between providing adequate time to search for a better job while at the same time encouraging a minimum level of labour force attachment. In particular, the changes created sufficient reactions and behavioural responses from claimants to lead ESDC to create an informational FAQ web page on the particular topic of defining "suitable work" and "reasonable job search".[3]

In this paper, our objective is to determine whether, and if so, how the EI changes enacted by the pilots impacted the incidence of working and the type of work found after an unemployment episode as well as the extent to which job search behaviour was affected. We exploit the fact that only a subset of geographical (EI) regions participated in these pilots and the longitudinal nature of the Canadian monthly Labour Force Survey (LFS) data to study the impact of the four pilots on monthly flows into and out of employment. The LFS data also permits an analysis of the impact of the EI changes on overall and part-time and full-time employment rates as well as job search behaviour for a large and representative sample of Canadians.

Understanding whether and how the EI system facilitates individuals' labour market transitions and impact employment is key to policymakers for the evaluation of the system's costs and benefits and whether the rate setting mechanism breaks even.

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[2] See Green and Riddell (1993) for a detailed overview of the Canadian unemployment insurance program prior to the 1996 reform and Lin (1998) for a summary of the history of the changes pre and post 1996 reform.
[3] http://www.esdc.gc.ca/en/ei/available_jobs/reasonable_job_search.page. The first question on the list is: "Are you forcing people to accept low-paying jobs?".

Moreover, having a good measure of the type of job found after an unemployment episode (full-time or part-time, temporary or permanent, etc.) and a quasi-experimental setting for studying EI changes also helps policymakers and researchers better understand the links between successful job search activities and transitions out of unemployment to employment resulting in improved job-match quality.

While some of the pilots are still currently running and others have been interrupted, the common characteristic of the four pilots studied is that between 2004 and 2008, they were implemented in the same subset of regions[4], thereby allowing us to conduct a quasi-experimental assessment of the labour market impacts of these temporary changes by comparing outcomes between the treated and non-treated regions. This setting allows us to better isolate the consequences of policy changes relative to the approach commonly used in the Canadian EI literature so far, which has only been able to compare the before and after outcomes of policies applied universally to all regions across the board, without a control group to differentiate between policy and time-specific effects.

Furthermore, in September 2008, the implementation of one of the pilot initiatives became countrywide. We also exploit this decision which makes the nonpilot regions that were the comparison (untreated) group before 2008 become the treated regions (for the same changes defined in the given pilot) after September 2008 and compare the estimates of the pilot impact on the "pilot" and "nonpilot" regions.

One limitation however is that the pilot and nonpilot regions have not been randomly defined creating observable differences in the treated and comparison groups.[5] We address this issue by including EI regions- and time-specific fixed-effects and an extensive set of controls including individuals' months of unemployment duration as well as month of non-employment, years of tenure, hours worked and occupation in the last job held. We also replicate the analysis over the subset of pilot and nonpilot regions with unemployment rates prior to the implementation of the pilots within a closer range of the 10% cut-off rule for the determination of the pilot regions.

Much of the EI literature has focused on analyzing the impact of weekly benefit amounts and benefit durations on the length of unemployment spells (Ham and Rea, 1987; Krueger and Meyer, 2002).[6] Following the reform associated with the Canadian *Employment Insurance Act* of 1996, different labour market outcomes have been studied in relation to the EI legislative changes.[7] Some studies in particular show that

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[4] The regions are described on Service Canada web site. For example for the best 14 pilot, the description can be found at: http://www.servicecanada.gc.ca/eng/ei/information/best14weeks.shtml.

[5] The pre-2008 pilot regions were chosen according to their unemployment rate prior to the pilots implementation date which makes the pilots regions high-unemployment regions (rate >= 10%).

[6] Earlier studies investigating the impact of UI on re-employment earnings are by Ehrenberg and Oaxaca (1976) and Classen (1977).

[7] A summary of the various studies is presented in Chen (2010).

the legislative changes had a significant impact on work incentives, suggesting important behavioural responses to particular EI changes. (Christofides and McKenna, 1996; Friesen, 2002; Gray, 2006; Chen, 2010). Surprisingly, little work has been conducted regarding the link between the EI system and post-unemployment outcomes in Canada.

To our knowledge, only two papers have investigated the Canadian case, each based on data covering periods before the 1996 EI reform. McCall (1997) uses the Canadian Displaced Workers 1986 Survey to show a significant link between employment insurance benefit receipt and the likelihood of taking a part-time job. In particular, individuals who received unemployment insurance were more likely to become re-employed into part-time jobs with a stronger effect among women. The findings suggest that any analysis of the impact of EI on re-employment behaviour should distinguish between part-time and full-time jobs and analyze separately men and women. Belzil (2001) uses data from a sample of young males who experienced a job separation between 1976 and 1978 to investigate how unemployment duration as well as unemployment benefit duration relates to subsequent job duration (tenure in the new job).

Regarding the question of whether and how unemployment insurance impacts labour market transitions, the few existing studies are based on U.S. data (Rothstein, 2011, Farber and Valletta, 2013, Bradbury 2014, and Kroft, Lange, Notowidigdo and Katz, 2016) or Austrian data (Abbring, van Berg, and van Ours; 2005). The four US studies use monthly CPS data to analyze the effect of the benefit period extension implemented in the U.S. in response to the 2008 recession on unemployment exit rates. All the studies similarly highlight the disincentive effect of the extension in the benefit period on leaving unemployment for employment but provide a partial picture of the impact of the unemployment insurance program on the dynamics of unemployment.[8]

In the present paper, we find that the combined implementation of the four pilots resulted in tempering the adverse employment effects of the extended benefit duration pilot because the other pilot initiatives, aimed at facilitating the take up of low earnings/low hours employment, statistically significantly increased the likelihood of transitions into part-time and temporary work for both unmarried men and women.

We also find that the extended benefit duration pilot increased the likelihood of layoffs in part-time/temporary work but the effect is also tempered by the other three work-promoting pilots. However, the impact of the four pilots on employment rates

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[8] Kroft, Lange, Notowidigdo and Katz (2016) also emphasize the sizeable negative impact of duration dependence in the exit rate from unemployment.

(for both full-time and part-time work) is in fact positive. Results from further investigations suggest the positive impact on employment rates in full-time jobs may come from two channels: 1) the extended weeks pilot promoted more intense job search for full-time jobs, and 2), the three work-promoting pilots which increased the take up of part-time work may also have subsequently lead to the take-up of full-time work.

Our paper offers several new contributions to the Canadian literature on employment insurance. First, we present new results on the impact of EI changes on labour force transitions and job search behaviour based on a difference-in-difference approach. While the treatment was not randomized, our estimates are robust to estimations over a subset of EI regions within a narrow range of unemployment rates. In fact, the magnitude of the impact increases over the subsample of EI regions with similar levels of unemployment rates.[9]

Second, our analysis and results provide a useful and unique summary of the impact of the four pilots to policymakers and ESDC decision makers. Several reports have been (and continue to be) produced by ESDC to monitor the effects of the pilots individually.[10] The analysis in these reports exploits information from the Record of Employment (ROE) and Status Vector (SV) administrative data files on individuals' claims and records of employment over more than a decade. The information permits identification of the behavioural responses of claimants to the particular features of the pilots. While it is ideal for tracking benefits receipt, and pilot eligibility for the unemployed individuals, the administrative claims dataset is limited in the information it provides about re-employment rates, and any qualitative evaluation of post-unemployment outcomes measuring program success in reintegrating displaced workers into the labour force after an unemployment episode.[11] Also, a data linkage of the administrative claims data with the administrative tax data (LAD) does not provide sufficiently detailed information on the type of job held after unemployment because the LAD data does not include information on an individual's occupation or hours worked.[12]

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[9] An interpretation for this particular finding is that excluding the EI regions with extreme values in their unemployment rates eliminates regions which are relatively less responsive to the pilots change. While this is expected in very low unemployment regions as most people are less likely to enter and experience the EI system, it is also possible that the very high unemployment regions (such as for example Labrador or Gaspesie which had unemployment rates above 20% in 2004) be less responsive to the pilots because claimants more heavily rely on non regular benefits such as for example fishing benefits which are not affected by the pilots' changes.

[10] The EI monitoring and assessment reports are available on the ESDC web site. The most recent reports online can be found at https://www.canada.ca/en/employment-social-development/corporate/reports/evaluations.html. Also Lluis and McCall (2008, 2011) analyze the employment effects of the particular pilot related to Working While on Claim during the 2005-2010 time period in two ESDC confidential reports.

[11] Job characteristics information is available in the ROE data but only for returning claimants which implies that the information is available for a particular non representative subset of the population of displaced workers such as repeat EI users or seasonal claimants.

[12] A 2013/14 EI Monitoring and Assessment Report exploits the data linkage with LAD data to analyze how the length of EI benefit entitlement can affect claimants' re-employment income between 2008 and 2012. The study exploits a

Third, the results of our analysis point towards differential impacts of the EI changes for married and unmarried individuals. Further exploiting the spousal information available in the LFS data, we find evidence indicative of the fact that the increased generosity of the EI system implied by the four pilots lead to a reduction in the labour supply of working wives with an unemployed husband. This "crowding-out" effect, a likely unintended consequence of the EI policy changes[13] has been previously noted in the EI literature using US data (Cullen and Gruber, 2000) and Japanese data (Asai, Kambayashi and Yamaguchi, 2016).

The rest of the paper is structured as follows. Section II describes the background information associated with the four pilots. Section III presents the data and variables. Section IV describes the empirical framework and Section V presents the results of the various questions addressed. Section VI summarizes the results and concludes.

II- Summary of the Pilot initiatives

Starting in 2004, four pilot projects related to different aspects of the Employment Insurance (EI) program were established with the goal of further increasing access to and duration of benefits while at the same time, promoting labour force attachment: (i) the Extended Weeks pilot (EW), which increases the EI benefit duration by 5 weeks with the objective to provide EI claimants with additional financial support while they find new employment, (ii) the New Entrant-Reentrant pilot (NERE), which helps individuals who are new to the labour market (or returning after an extended absence) gain access to EI benefits by reducing the hours of work requirement, (iii) the Best 14 Weeks pilot under which EI benefits are calculated based on a claimant's 14 weeks of highest earnings (with the aim of encouraging individuals to accept all available work, including those for which weeks of work are shorter and income is lower than a normal "full-week" job), and (iv), the Working While on Claim pilot (WWOC), which increases the allowable earning's threshold at which individuals can work and still receive EI benefits[14] (i.e. with the aim of providing a greater incentive for individuals to accept all available work while receiving EI benefits). This section summarizes the main EI changes and discusses their potential implications for individuals' labour force transitions.

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sharp discontinuity in benefit entitlement brought about by the Extension of Employment Insurance Regular Benefits for Long-Tenured Workers (EEILTW). The analysis shows that, for the sub-set of EI claimants examined, the additional benefit entitlement did not result in improved re-employment income (ESDC 2013/2014). We thank Lucie Morin, the Evaluation Manager at ESDC for pointing at this particular study as well as the most recent evaluation reports monitoring the latest versions of the running pilots.

[13] The average annual loss in revenues from employee EI contributions due to the decline in weekly hours worked resulting from the pilots is estimated to be $43063 using 2003 pre-pilot information. See section V.c for further explanations.

[14] Employment earnings above the allowable earnings threshold are deducted dollar for dollar from the claimant's weekly benefit.

The Extended Weeks (EW) Pilot

The EW pilots increased the EI benefit duration by 5 weeks to a maximum of 45 weeks. The first pilot was initiated June 6, 2004 and ended June 4, 2006 in 24 economic regions. The EW pilot was subsequently extended until February, 2009 in 21 economic regions, after which the extended benefit feature applied to all EI regions as part of the 2009 Economic Action Plan. The rationale for the EW pilots was based on research showing a segment of the seasonal claimant population experienced gaps in income (referred to as seasonal gappers), during which they do not receive EI benefits or employment income (ESDC 2010). It was later found that seasonal workers are not unique in their difficulties of establishing a regular income stream and that the pilot benefitted the non-seasonal workers too. It was found that claim spells were longer for a significant proportion of claimants (seasonal as well as occasional claimants), and employment spells to qualify for EI were shorter (ESDC 2010).

The NERE pilot

This pilot modifies the NERE provision of the EI system. Since 1997, new entrants and re-entrants have to have had 910 hours of employment to qualify for EI benefits. This requirement is much higher than the maximum requirement across all regions for regular claimants, 700 hours. The rationale for the NERE provision, as it was implemented in 1996, was to ensure that workers, especially young people, develop significant work attachment before collecting Employment Insurance benefits, as well as to ensure workers make a reasonable contribution to the system before collecting benefits, and to strengthen the relationship between work effort and entitlement to benefits (ESDC 2011). Some concern exists, however, that 910 hours may be difficult to obtain in high unemployment regions, particularly in rural and remote parts of the country.

The NERE pilot project, applicable to new entrants and re-entrants reduces the entrance requirement to 840 hours rather than the 910 hours. This pilot began December 11, 2005 in the same 23 EI regions as the WWOC Pilot. The pilot was designed to determine whether giving NEREs access to Employment Insurance regular benefits after 840 hours of work rather than 910 hours would improve their employability and help reduce future reliance on Employment Insurance regular benefits. The main results of the ESDC report on the NERE pilot project indicate that the proportion of NEREs qualifying for regular benefits after having accumulated between 840 and 909 hours increased, while the proportion of NEREs qualifying for regular benefits after accumulating between 910 and 949 insurable hours decreased. The report's main conclusion refers to an increased flexibility for NERE individuals in

adapting their work patterns, and in the way of being more likely to accept work with shorter hours. As a result, the NERE pilot may potentially increase labour force transitions into part-time or temporary work.

The Best 14 Pilot

EI benefits are calculated using earnings in the 26-week period before the establishment of a claim. Benefits are usually calculated using the formula: WBA = (Insured earnings in last 26 weeks/max(insured weeks in last 26 weeks, divisor)) x benefit rate where the divisor depends on the EI region's unemployment rate according to the following Divisor Table.

Divisor Table

Unemployment rate in your region	Minimum divisor
0% to 6%	22
6.1% to 7%	21
7.1% to 8%	20
8.1% to 9%	19
9.1% to 10%	18
10.1% to 11%	17
11.1% to 12%	16
12.1% to 13%	15
13.1% and over	14

During that 26-week period, weeks with relatively lower earnings could reduce the benefits claimants receive.

The objective of the Best 14 is to encourage individuals to accept all available work by excluding weeks of low earnings from the benefit calculation, provided that the number of weeks of earnings exceeds the minimum divisor. It also extends the rate calculation period, from 26 weeks preceding the claim to 52 weeks preceding the claim. According to the Best 14 pilot, only the 14 weeks of highest income is used to

calculate the benefit amount (out of 52 instead of 26 weeks of the Rate Calculation Period).[15]

This pilot began October 30, 2005 in the same 23 EI regions as the WWOC Pilot. The objective is to encourage individuals to accept all available work, including weeks of work that are shorter, "lower-income" than their normal full weeks. Consequently, the rules may help employers facing labour shortages have access to additional workers. Similar to the NERE pilot, this pilot should encourage the take up of part-time low earnings jobs.

The WWOC Pilot

The working while on claim pilot or WWOC pilot changed the allowable earnings formula for EI recipients in 23 EI regions on December 11, 2005.[16] This particular pilot project increased the level of allowable earnings from employment during a claim period from the maximum of $50 or 25% of the benefit amount to the maximum of $75 or 40% of their benefit amount in 23 selected high unemployment regions in Canada. Such a change gives unemployed workers increased incentives to work while on claim. Under the WWOC pilot program income (earnings + WBA) for someone earning $160 would be $400 + $160 = $560 while under the current program income would be $340 + $160 = $500. However, for someone earning $560, total income would be $560 under both the WWC pilot and current earnings formula. Thus the WWOC pilot increases the subsidy to low earnings/part-time work.

In summary, all four pilots modify the generosity of the EI system towards longer benefits duration, easier eligibility criteria and potentially greater amount of benefits received, including in instances when work is taken during a claim. Also the changes affect the two main goals of EI: providing adequate time to search for a job through the EW extended weeks initiative while at the same time promoting work attachment with the take up of part-time, low hours/earnings or temporary employment as supported by the NERE, Best 14 and WWOC initiatives. Because the first objective creates work disincentives while the second one promotes the take up of any type of employment, the overall impact of the four pilots on employment is unclear and constitutes an empirical question.

Indeed, there is already consistent empirical evidence in the EI literature showing that a more generous EI system is associated with increased unemployment duration

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[15] For example, assume an individual has worked consistently over the last year and lives in an area where the unemployment rate is 13.1 per cent, the minimum divisor will be 14. In his or her best 14 weeks of work, he has earned $10,400. The average weekly earnings are calculated as $10,400 ÷ 14 weeks = $742.85 rounded to $743.

[16] The pilot project was later extended to all regions effective December 7, 2008 through December 4, 2010 (and further extended for 8-month until June 25, 2011).

(Katz and Meyer, 1990; Card and Levine, 2000; Lalive, 2008). We therefore expect to find that the EW pilot is associated with a reduction in the likelihood of transitioning into employment. However, the adverse employment effect of the extended weeks initiative may be reduced by the positive work-inducing employment effects of the NERE, Best 14 and WWOC pilots, at least for the take up of part-time employment.

The LFS data is ideal to study this problem as it provides information on the type of employment found after an unemployment episode that is not available in the administrative data on claims or in the tax data. By being able to distinguish whether employment is part-time, full-time or temporary, we are able to see whether the positive employment effects of the NERE, Best 14 and WWOC pilots affected more particularly part-time or temporary employment. Moreover, we are able to uniquely identify the impact of the increased weeks of benefits coming from the EW pilot due to the different timing of its implementation.

In sum, while the EW pilot alone should be associated with a decreased likelihood of transitioning to employment of any type, we expect that the addition of the NERE, Best 14 and WWOC pilots weakens the adverse effects of the EW pilot, at least for part-time employment.

Employers may also take advantage of the fact that the more generous EI system makes temporary layoffs more attractive. We therefore look at the impact of the pilots on transitions out of employment into unemployment. If employers are more likely to rely on temporary layoffs, the EW pilot is likely to increase transitions out of employment into involuntary unemployment.

A limitation of our data however is that we do not have a lot of information on individuals' job history to precisely identify whether they are eligible to the particular pilots.[17] This is not problematic for the EW and BEST 14 pilots as anyone eligible to receive EI benefits is covered. It is mainly problematic for the NERE and WWOC pilots. ESDC monitoring reports suggest a high coverage of the working while on claim pilot in the treated regions.[18] Regarding the NERE population, we plan to perform sub-analyses differentiating the impact of the pilots by various subgroups including age and education.

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[17] In Chen, Lluis and McCall (2016), we use the SLID data exploiting several 6-year panels with monthly information on labour force status and EI eligibility and yearly information on demographic and work characteristics to construct employment and non-employment spells at the individual level. Having past employment history and detailed job information, we can proxy for the WWC and NERE pilots eligibility and identify the specific effect of each initiative on post-unemployment outcomes.

[18] Working while on claim is a common activity. Roughly 51.8 percent of claimants maintain some form of attachment to the labour force while on claim (ESDC 2002). This proportion increased to 55.4% of all EI claimants by 2012 (ESDC 2012). The NERE population is composed of frequent users, recent mothers returning to the labour force after a family related work interruption, youth (18 to 25) and recent immigrants (ESDC 2011). They form about 15% of the population and about 50% of the youth population (based on the Longitudinal Administrative Database). This proportion increases when calculated over the group of job leavers.

It is worth mentioning as well that the changes implemented in the four pilots apply to all claimants receiving regular benefits. This corresponds to the largest group of claims compared to compassionate care, fishing or maternity related claims. We therefore expect to observe a sufficiently large behavioural response associated with these pilots. To summarize, we conduct an analysis of the aggregate impact of the four pilots and assume that all individuals who are eligible to receive EI regular benefits and live in the regions where the pilots got implemented are covered by the four pilots.

Appendix A Exhibit A1 provides the list of EI regions involved in each pilot including the set of 21 pilot regions common to all four pilots until August 2008. Consistent with the implementation of the difference-in-difference research design and our objective to estimate the simultaneous effect of the four pilots as the main treatment, we excluded from our analysis the regions which were subject to 3 or less of the running pilots. Exhibit A1 also indicates the timing at which the pilots were introduced, starting with the first EW pilot in June 2004, then the Best 14 in October 2005 and the WWOC and NERE in December 2005. The EW pilot was extended in June 2006 but applied to the smaller subset of regions 21 regions which we use as the set of pilot regions. In 2008, the WWOC pilot was extended countrywide while the other three pilots continued to apply to a subset of regions, including the 21 previous regions. The countrywide implementation of the WWOC pilot allows us to identify the impact of this particular pilot on the other regions, the nonpilot regions.[19]

The EI economic regions initially chosen for the pilots are high unemployment regions in which the unemployment rate is at least 10%. Appendix A Exhibit A2 illustrates the determination process for the choice of pilot regions based on a 5-week period of observation of the unemployment rate in each economic region between December 2003 and May 2004. Any economic region which experienced a rate of 10% or higher over that 5-week period was included in the set of pilot regions. Further details on our approach to address the confoundedness assumption issue given that the treatment was not randomly assigned to regions are provided in the data and the empirical framework sections.

III - Data and Variables

<u>The Labour Force Survey Data</u>

Given our objective of analyzing aggregate labour force transition rates at the regional level, we exploited the Labour Force Survey (LFS) data and the fact that it

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[19] We use the expression pilot and nonpilot regions to distinguish the EI regions which were chosen for the 2005 pilots implementation from the regions which were not but became the target of the WWOC pilot implementation in 2008.

provides a large and representative sample of about 100,000 individuals every month, with rare occurrences of missing observations. The longitudinal monthly panel aspect of the LFS data is also a crucial element for the analysis of monthly labour force transition rates. Every month, one-sixth of the total sample is replaced with a new group of households. The rotating panel sample design of the LFS includes six rotations and there is potential to link the data on the same household members over six consecutive months.[20] The data is collected at the household level and every individual in the household is uniquely identified and surveyed separately allowing us to study the labour market behaviour of each individual as well as giving us the potential to compare and contrast the behavioural responses of single versus couples and joint labour supply issues.

The monthly panel aspect of the LFS data is increasingly being used by researchers to analyze labour force transitions of the Canadian population (Jones and Riddell, 2006, Campolieti, 2011, Skuterud and Xu, 2012, Brochu, 2013). We are not aware of any studies who have so far exploited the household format of the data for the study of joint labour supply responses of married couples and in particular, the separate information about the labour force status of each individual who live within the same household.[21]

After building the unique person identifier by grouping a combination of geographic, dwelling, household and individual specific variables[22], we constructed the panels by matching the record of the same individual across months following matching criteria discussed in the literature (Madrian and Lefgren, 2000).[23] Our longitudinal dataset pools the different panels over the years 2000-2010.

Sample and Variable Selection

We obtained regional monthly unemployment rates (seasonally adjusted) from Statistics Canada and matched the information starting in July 2000. We dropped monthly observations after February 2009 to exclude impacts related to the introduction of the EDB initiative (Extended Duration of EI Benefits) implemented

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[20] Rotation 1 corresponds to the group of households who entered the survey in the month of January or July, rotation 2 identifies the group of households who entered in February or August, …etc

[21] The data provides information on the labour force status (and all other characteristics) of each member of the household. The information is provided by the reference person for the family (the adult first contacted by the interviewer). As a result, the information on the other members living in the same household (including partner and children or other family members) is based on the reference person's recollection at the time of the interview.

[22] Specific variables from the Master File should include the following: PROV1, PSUEDOUI, FRAME, STRAFRAM, TYPE, CLUST, ROTATION, LISTLINE, MULT, REPLICAT, LINE. We found a few cases of duplicated person identifiers when pooling all the panels together over the years 2000-2010. Because the variables used to create the person identifier are largely geographical in nature, it is possible for the same *address* to be selected for the LFS sample over time. If the same residents live at this address at both time points when the residence is selected for the sample, then it is possible that the same person could be selected in both cases. However, if the residence has changed ownership or is a rental property that has changed tenants, then it is possible for the same unique identifier to be used to identify two different individuals. We decided to exclude the duplicated cases based on the fact that it was only a very small proportion of the sample.

[23] More precisely, we corrected for the presence of false positive matches using information on sex, age and education.

countrywide in response to the financial recession. Our initial period of study therefore starts in July 2000 and ends in February 2009.[24] Regarding population selection, we considered all individuals aged between 19 and 65 years old.

While most demographic variables (age, education, marital status) are available from the year 2000 and on, aboriginal status information is provided only starting in January 2003 and immigration related questions have been asked only since January 2006. As a result, we cannot control for immigration status. Because we control for aboriginal status, we start our sample period in January 2003.

An essential information which is provided in the Master files of the LFS data is the geographical location of individuals within an economic region as defined by the employment insurance program. The LFS economic region indicator variable identifies all 58 employment insurance regions delimited by Employment and Social Development Canada (ESDC). We use this information to identify the group of "pilot" regions affected by the four pilots and the group of "nonpilot" regions not affected by the four pilots prior to September 2008 but affected by the WWOC pilot after August 2008. Information in the regions of Yukon, Northwest Territories and Nunavut is not available in the Master files so these three regions were automatically excluded. This leaves us with a set of 55 EI regions, 21 of which were pilot regions between June 2004 and August 2008 (with all four pilots implemented in these regions).[25]

There are two important limitations related to the use of the household aspect and longitudinal format of the monthly LFS data previously discussed in the literature: response errors due to high reliance on household proxy responses (Lemaitre, 1988) and non-random sample attrition. Regarding sample attrition, the rates are very similar between the pilot and nonpilot regions: around 2% between the first and second month in the sample, going up to 6% between the fourth and fifth month and up to 13% between the fifth and sixth month. While the latter rates may be quite high, a reinsurance is that the rates are very similar between the pilot and nonpilot regions.

Following the strategy used in Skuterud and Su (2012), we compare the distribution of the monthly labour force status across different samples: the main sample of

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[24] In Lluis and McCall (2016), we extend the analysis of the extended weeks initiative on re-employment outcomes to the pre- and post- recession periods when the Extended Duration of Benefits (EDB) initiative was implemented country-wide.

[25] Appendix A Exhibit A1 displays the list of regions highlighting the regions we excluded to obtain a consistent set of "pilot" and "nonpilot" regions regarding the four pilots treatment before and after 2008. We excluded three regions to insure that we are working with a common treatment and a fix set of pilot and nonpilot regions throughout the sample period. The excluded regions are Northern Alberta, Southern Interior British Columbia and Southern Coastal British Columbia which were not part of the EW related pilots at all times before 2005. For the same reason that some of the nonpilot regions did not receive the full treatment of the four pilots after 2008, we excluded Oshawa, Niagara, Windsor and Huron which were not part of the EW pilot after August 2008. We excluded Sudbury because it was a pilot region for the four pilots between 2004 and 2008 but after 2008, the region did not participate anymore in the NERE and BEST 14 pilots.

analysis, the cross-sectional sample of the first interview month (removing attrition) and the cross-sectional sample of first interview month when the respondent is the same respondent across all consecutive months (removing proxy response errors). Appendix A Table A1 shows the distributions. While there is a slight difference across the three samples (of at most a 1 percentage point) reflecting a small bias due to attrition and reporting errors, the percentage point differences are very similar across all three samples between the pilot and nonpilot regions. We conclude from this that while reporting errors and attrition are present, the fact that they are similar between pilot and nonpilot regions implies that this will minimally affect our analysis and results which are based on the comparison and evaluation of the difference in the labour market outcomes of these two groups of regions.

Appendix A Table A2 shows average demographic characteristics calculated separately for the pilot regions and nonpilot regions. Individuals are in the sample for an average duration of 5.4 months. While the average age and gender mix are similar across the two groups of pilot and nonpilot regions, the educational, marital and aboriginal status distributions differ and unsurprisingly, the unemployment rate in the pilot regions is twice as large as the rate in the nonpilot regions.

To fully capture regional differences between the pilot and nonpilot regions other than those coming from the treatment of the four pilots, we add region-specific dummies to all regressions. To take into account the cyclicality of flows into and out of unemployment (Campolieti, 2011), we also add month-specific dummies. To further capture individual heterogeneity within the pilot and nonpilot regions, we include as well a set of control variables measuring variations in individuals' education, marital status and aboriginal status and age dummies. We also controlled for individuals' employment information in the last job prior to transitioning to unemployment by adding dummies for each hours of work and years of job tenure and one-digit occupation dummies for the last occupation held prior to unemployment.

The LFS survey asks individuals who report being unemployment in a given month the number of months they have been unemployed. Given the important negative impact of duration dependence on exit out of unemployment found in the literature (Campolieti, 2011, Kroft, Lange, Notowidigdo and Katz, 2016), we correct for the duration dependence effect by adding dummies for each duration of unemployment.

Because we are interested in the type of employment taken or lost, we generate an extended labour force status variable by complementing the labour force status question with a question asking about the full-time versus part-time status of the current job held to create separate states of full-time and part-time employment. We also further define the state of involuntary or unwanted part-time employment using an additional question about the reason for taking the part-time job and define it as cases when the individual reports taking the part-time job because of "business

conditions" or because he/she "could not find work with 30 or more hours".[26] We also add temporary employment as an additional type of employment outcome using a question indicating whether the job currently held is temporary or permanent.

We also further extend the state of unemployment distinguishing between involuntary and voluntary unemployment. The information comes from a question about the reason for losing the last job. Involuntary unemployment is defined as ending a seasonal, temporary or casual job or losing the job due to business layoffs or the company moving. Voluntary unemployment is defined based on the remaining reasons provided including dismissal, changing residence, dissatisfied with the current job, illness or caring for family member, pregnancy, going back to school, other personal reasons and retirement.

Appendix A Table A3 provides the transition matrix for the different employment and nonemployment states separately by pilot and nonpilot regions to report the differences in unconditional labour force transitions. The shaded rows and columns highlight the month-to-month transitions we focus on in the present analysis.

EI Eligibility

A drawback of the LFS data is that it does not provide information about whether unemployed individuals receive EI benefits or are eligible for it. We follow the EI literature and proxy for EI eligibility using information on the reason for job loss as well as information on years and months between the start and end of the previous job and the number of years since the last job was held. In particular, we consider an unemployed individual in the current month to be potentially eligible to receive EI benefits if he/she lost the job for involuntary reasons[27] and the job was lost within a year since the survey year.

To proxy for the minimum number of insurable hours worked, we use the variables identifying the start and end of the last job held. In order to be eligible to receive benefits in the regions with the maximum number of required insurable hours (which is 700), individuals need to have worked at least 4 months in a full- time job. We use this number of months worked in the last job as our main criteria to approximate EI eligibility. We perform robustness checks using an alternative measure which further exploits information about whether the last job was part-time or full-time. See appendix A for greater details on the approximation of EI eligibility and appendix D for the sensitivity analysis coming from these robustness checks.

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[26] This is based on Statistics Canada definition of involuntary part-time employment.
[27] The reasons correspond to the following subset of possible answers from a question on reasons for job loss: end of seasonal or temporary job, casual job, company moving, company went out of or business conditions.

IV – Estimation Framework

The statistical framework for our empirical analysis is described in the context of a Markov model of transitions between states defined by the extended set of labour force states previously described.[28] In this section, we further explain the calculation of the month-to-month transition probabilities and the difference-in-difference specification setting.

<u>Monthly Transition Probabilities</u>

We assume that transitions follow a semi-Markov process. Let S represent the state space and assume initially that there are the three states: unemployment (U), employment (E) and out of the labour force (OLF). Will denote the duration in the current state by D. Let $pr(S_{t+1} = E \mid S_t = U, D = r)$ represent the conditional probability of being employed in month t+1 conditional on being unemployed in month t and being in that state for a duration of r months. In most of our empirical analysis we will be particularly interested in the probability of transitioning from involuntary unemployment to either part-time or full-time employment.[29] We denote these by $pr(S_{t+1} = E^{PT} \mid S_t = U^{IV}, D = r)$ and $pr(S_{t+1} = E^{FT} \mid S_t = U^{IV}, D = r)$. Finally, in this paper we will also examine the probability of transitioning from employment to involuntary employment which we denote by $pr(S_{t+1} = U^{IV} \mid S_t = E, D = r)$.

Before moving to the specification and estimation framework for identifying the pilots' effects, we plotted the monthly unconditional transition probabilities of transitioning out of involuntary (EI eligible) unemployment into full-time and part-time employment by pilot and nonpilot regions. The figures are presented in Appendix A figure 1 for men and figure 2 for women.

The graphs suggest that the pilots impacted women more strongly than men. A parametric estimation of the differential impact of the pilots for men and women will be useful to confirm the previous graphical conclusions. We also notice clear differential trends in the transitions into part-time employment. Our specifications will therefore include interactions between region- and time-specific dummies.

<u>Identification of the Pilots' Impacts</u>

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[28] Markovian processes are typically used for modelling labour market transitions. See Mortensen (1986) for an initial survey of the literature and Fougère and Kamionka (2008) for a more recent treatment of the statistical procedures used to analyze labour market transitions.

[29] In future work we plan to consider a framework with potential state dependence as part of our next set of investigations and investigate the transitions into employment conditioning on 2 or 3 months of unemployment instead on just the previous month.

Given the different timing of implementation of the EW pilot relative to the other three pilots and the fact that the WWOC pilot was subsequently introduced in the nonpilot regions after September 2008, the basic DID empirical specification is:

$$Y = \beta_0 + \beta_1 P + \beta_2 A_{EW} + \beta_3 A_{All} + \beta_4 A_{WCC}$$

$$+ \boldsymbol{\beta_5} A_{EW} \times P + \boldsymbol{\beta_6} A_{All} \times P + \boldsymbol{\beta_7} A_{WWC} \times (1 - P) + \boldsymbol{\delta' X} + \varepsilon$$

where Y is the outcome of interest, P is an indicator variable that equals one if a respondent resides in an EI region that is affected by the 4 pilots prior to September 2008, A_{EW} is an indicator variable that equals one for survey months starting with June 2004, A_{All} is an indicator variable that equals one for survey months starting with December 2005, A_{WCC} is an indicator variable that equals one for survey months starting with September 2008, and X is a vector of individual characteristics.[30] The type of model that we estimate in this paper, however, is the more flexible specification:

$$Y = \beta_0 + \boldsymbol{\lambda}_{EI} + \boldsymbol{\mu}_t + \boldsymbol{\beta_1} A_{EW} \times P + \boldsymbol{\beta_2} A_{All} \times P + \boldsymbol{\beta_3} A_{WCC} \times (1 - P) + \boldsymbol{\delta' X} + \varepsilon$$

where $\boldsymbol{\lambda}_{EI}$ is a set of EI region fixed effects and $\boldsymbol{\mu}_t$ is a set of month – year fixed effects.

In this latter specification the coefficient $\boldsymbol{\beta_2}$ measures the impact of the EW extended weeks initiative that was implemented in the pilot regions starting in June 2004, $\boldsymbol{\beta_3}$ measures the *additional* impact of the added three initiatives (NERE, Best 14 and WWOC pilots) that were implemented in the pilot regions starting in December 2005 and continued until the end of the sample period, and $\boldsymbol{\beta_3}$ measures the impact of the WWOC pilot that was extended to the nonpilot regions starting in September 2008.[31]

To allow for the possibility of duration dependence in the transition probabilities all our model specifications contain dummies for each of the prior months of unemployment or non-employment duration experienced by individuals. Furthermore, if the individual is currently working, the specification contains dummies for hours worked and months of tenure in the job. Our model specifications also include education, marital status and aboriginal status dummies as well as age dummies to capture nonlinearities in the effect of age on labour market transitions.[32] To check

[30] The BEST 14 pilot started in October 2005. We nevertheless use December 2005 as the main implementation month of the pilots since this is the month when the WWOC and NERE started.

[31] The comparison group in this case is the set of pilot regions which already have had the four pilots including the WWOC pilot since December 2005. However the coefficient $\boldsymbol{\beta_8}$ picks up the impact specific to the WWOC initiative relative to the no pilots situation in the nonpilot regions prior to September 2008.

[32] The observable characteristics of the individuals may not be enough to properly address the potential selection bias and unobservable individual-level variables such as personality traits have been found to influence labour market outcomes. Caliendo, Mahlstedt and Mitnik 2014's working paper exploits a unique dataset that contains a rich set of administrative information of individuals entering unemployment in Germany, as well as several usually not observed characteristics like personality traits, attitudes, expectations, and job search behaviour. They empirically assess how estimators based on the unconfoundedness assumption perform when alternatively including or not these usually not observed variables. Their preliminary results suggest that these variables, which appear as relevant for the

the robustness of our results in some specifications we include region-specific unemployment rates and also interactions between EI region dummies and a time-trend in order to capture differential trends (especially for the part-time transitions.

Dependent Variables and Estimation Methods

In our main analysis of the impact of the four pilots on labour force transition rates, the outcome variable corresponds to the likelihood of transitioning into or out of unemployment or employment using the previously defined monthly labour force transition indicators. In this case, we estimate a linear probability model (LPM) with clustered standard errors correcting for dependent observations within EI regions.[33] The LPM model provides a convenient approach to directly obtain marginal effects and the standard error correction corrects for the presence of heteroscedasticity encountered in LPM models.[34]

Our secondary analysis builds on information related to job search methods. The LFS data contains a series of questions asking about the methods used to search.[35] Because many of the unemployed individual respondents have used more than one job search method, the relevant statistic to use is a count of the number of methods used which provides a measure of job search intensity. A Poisson model is used for the estimation framework.

In addition to measuring job search intensity, we can proxy for search quality by separating search methods by whether they are active or passive. The dependent variable in this case is the proportion of active job search methods defined as initiatives that involved actively contacting employers, previous co-workers and employment offices as opposed to the more passive approach of looking at ads. Given the format of the resulting dependent variable as a proportion, we apply the fractional logit estimation method, a method proposed in Papke and Wooldridge (1996).

Robustness Checks

Regarding the approximation of EI eligibility and isolating the impacts of the pilot initiatives, we estimate separately the pilots' impact on transitions out of involuntary unemployment and out of voluntary unemployment. Behavioural responses to the EI pilots are expected to be present for involuntary unemployed individuals who are EI

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participation probabilities, do not matter for the estimation of effects of the employment insurance programs evaluated.

[33] Because individuals are observed on average over a short number of months, our preliminary analysis ignores for now the possibility of multiple changes in transitions over the 6 months panel duration. We therefore exploit the between individual variations.

[34] We have also run logit estimations of the main results in Tables 1 and 2 with appropriate calculation of the marginal effects associated with the interaction terms. The results (available upon request) are similar.

[35] For example whether the person contacted a previous employer, looked at ads, checked with a public or private employment agency or with friends or relatives etc …

eligible job leavers (and live in the pilot regions) and expected to be smaller and possibly statistically insignificant when considering employment transitions of voluntary quitters who are presumably ineligible to receive EI benefits and therefore should not be responding to the pilots.[36]

The non-randomness in the choice of treated regions limits the possibility to make causal inference regarding the pilots impact on employment and unemployment transitions. Indeed, the estimated effects may be confounded by the fact that the pilot regions are high-unemployment regions. To further address this issue, we replicated the analysis using the sub-sample of pilot and nonpilot regions with unemployment rates within 2.7 percentage points of the 10% cut-off that determined pilot status. The analysis based on the 21 EI regions that satisfy this criteria (9 pilot and 12 nonpilot regions) is presented in appendix B.

We also examined whether the estimated effects of the pilot programs varied by whether the previous job prior to unemployment was a full-time or a part-time job as well as by age and education level. The results are reported in appendix C. The estimation results which replicate the main analysis using a different eligibility measure are presented in appendix D.

V –Results

Our analysis and results description is divided into three main parts. We first analyzed the impact of the EI changes on post-unemployment outcomes through the dynamics of labour force status transitions and through the effect on static monthly employment rates. In a second part, we study possible changes in job search behaviour as a result of the EI changes. In the third and last part, we focus on the sample of married individuals with an unemployed spouse and in particular, the largest sample of employed wives with an unemployed husband to study the differential behaviour of that group relative to the group of unmarried individuals studied in the first part or the group of married individuals with a spouse who is also employed or who is out of the labour force.

V. a - EI Changes and Post-Unemployment Outcomes

1) Did the EI changes Impact Transitions from Unemployment to Employment?

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[36] However, there may be equilibrium spillover effects (Levine 1993) especially in searching for part-time work if there is some aggregate 'congestion'. If EI insured and uninsured are substitutable labour, a more generous EI system and for example the predicted work disincentive of the extended weeks of benefits pilot may increase transitions into employment for the uninsured. We may therefore find statistically significant impacts but of opposite signs for the group of voluntary quitters who are not eligible to receive EI benefits.

Table 1 presents the results of the LPM estimations of the transition rates out of unemployment into employment for all individuals and separately for men and women. The notation UIV for panel A of the table refers to the state of involuntary unemployment with the added restrictions for EI eligibility described in the data section. The notation UV for panel B of the table refers to transitions into employment from the state of voluntary unemployment. The three rows of the Tables correspond to the estimates of β_6, β_7 and β_8, the EW pilot impact, the additional impact of the three work-inducing pilots and the impact of the WWOC pilot in the nonpilot regions. The last row shows the results of an F-test of the equality of the three coefficients to zero in order to further assess the joint statistical significance of the four pilots on labour market transitions.

Table 1 results
For male, we find no statistically significant impact of the pilots on employment transitions. For female however, there is a statistically significant reduction in employment transitions associated with the EW pilot consistent with the work disincentive effect of the extended weeks. Surprisingly, we find an additional negative impact of the other three pilots in contrast to the hypothesized work inducing effect of these three pilots.

Further separating the samples of male and female unemployed individuals by marital status helps disentangle the behavioural responses of individual versus married couples for whom labour force transitions are likely to be very different (Table 1c-1f).

For single male, the EW pilot statistically significantly reduces transitions into both FT and PT employment although the impact is much stronger for FT employment.
For single female, the work disincentive effect of the EW pilot is statistically significant and strong for part-time work only. Also with respect to transitions into PT work, we find this time that the other three pilots have significantly positive impact therefore reducing the adverse employment effect of the EW pilot. This is also the case for the WWOC pilot impact estimated with the nonpilot regions as the treatment group.

For married individuals, we further interacted the pilot effects by the labour force status of the spouse to further investigate differential joint labour supply response to EI changes. The main effects of the pilots are estimated for the group of married individuals with a spouse who is out of the labour force (the base group). The additional effects of the pilots and associated interactions are for married couples with a spouse who is unemployed, and married couples with a spouse who is employed.

From Tables 1e and 1f, we see that for both married men and women with a spouse who is out of the labour force, we continue to find an adverse employment response of the EW pilot. The other three pilots' additional impact is also positive for married men for part-time work. For married women, the additional effect of the other three pilots is negative.

The pilots' effects for married men and women with an unemployed or employed spouse show statistically significant differences relative to married couples with a spouse who is out of the labour force. This result prompted us to perform a separate analysis of the situation of married couples in a different subsection.

Further analysis of the pilots' effects by type of employment (involuntary part-time or temporary employment) shows similar findings as those for the transitions into part-time employment (Table 1g).

Summary of main results from Table 1
Overall, we find statistically significant evidence of the adverse employment impact of the extended weeks of benefits pilot for both single men and women. The impact is stronger for full-time employment among men and stronger for part-time employment among women.

Regarding the other three work inducing pilots (Best 14, NERE and WWOC), the impact is statistically significant on transitions into part-time work for single women, for married men with a spouse who is out of the labour force and for single men regarding involuntary part-time. The magnitude of the estimates suggest that the aggregate impact of the four pilots is to significantly reduce the likelihood of transitioning into full-time employment by about 0.196 percentage points for single men and into part-time employment by about 0.331 percentage point for single women (-0.471 + 0.082 + 0.058)

From Appendix B Tables B1, these results hold and the magnitude of the impact is often stronger over the subsample of EI regions with unemployment rates in the closer range of 7-13%. This implies that we can be confident of the causal impact of the changes driven by the pilots as it is not driven by the difference in unemployment level of the EI regions. We performed additional robustness checks adding the region-specific unemployment rate and interactions of the time and region dummies. The results (available upon request) show very similar estimated coefficients.

The stronger magnitude of the impact of the pilots over the subsample of more homogenous EI regions in terms of unemployment rates suggests that excluding the

EI regions with extreme values in their unemployment rates eliminates regions which are relatively less responsive to the pilots change. While this is expected in very low unemployment regions as most people are less likely to enter and experience the EI system, it is also possible that in the very high unemployment regions (such as for example Labrador or Gaspesie which had unemployment rates above 20% in 2004), most of the claimants rely on non regular benefits such as for example fishing benefits which are not affected by the pilots' changes.

From Appendix C Table C1i-C1m for men, we find that the pilots' impacts on the transition into full-time employment are stronger for male individuals whose last job was part-time, whose age is between 50 and 65 and with low education. From Appendix C Table C1j-C1n for women the pilots' impacts on transitions into part-time employment are stronger for female individuals whose last job was full-time, whose age is between 19 and 24, and who are relatively less educated. This analysis of the differential impact of the pilots by demographics suggest that the EI changes more strongly affected low educated older men and low educated younger women. This may not be surprising as these groups tend to experience less stable employment relationships.

2) Did the EI changes Impact Transitions from Employment to Unemployment?

In this analysis, we test whether the EI changes induced employers to rely more on layoffs given the more generous EI access and coverage. Table 2 summarizes the results. The dependent variable in this analysis corresponds to transitions out of employment (any, part-time or full-time) and into involuntary (Panel A) or voluntary (panel B) unemployment.

Table 2 results
We find no statistically significant results for men. For women, we find that the EW is associated with an increased likelihood of involuntary layoffs of part-time jobs but the other three work-inducing pilots temper the job loss effect. The likelihood of layoffs for temporary and involuntary part-time jobs is also significantly greater for the EW pilot for both men and women. Appendix B Table B2 shows that the results hold for EW but are less stable for the other three work-promoting pilots.

3) Did the EI changes Impact Employment Rates?

A natural extension of the previous analysis which emphasizes the dynamic transitions into and out of employment states, is the study of the static impact of the pilots on the monthly stock of employed individuals. For example given the previous results that the EW pilot reduces the incentives for taking a job (full-time and part-

time) while at the same time increases the likelihood of firm laying off part-time jobs, could this lead to the EW pilot reducing employment rates associated with part-time jobs? What about the net impact on employment in full-time jobs? We also expect the three work-promoting pilots to help sustain employment rates in part-time jobs.

The analysis is summarized in Table 3 in which for Table 3a, the impact of the pilots is estimated in a regression using monthly employment rates in full-time and part-time jobs as the outcome variable separately for men and women.

For both male and female workers, the EW statistically significantly increases employment rates in full-time jobs (by a percentage point increment of 1.3 and 1.1 respectively). On the other hand, while the EW negatively impacts employment rates in part-time jobs (although the estimates are not statistically significant), the three work-promoting pilots (Best 14, NERE and WWC) have a positive and statistically significant impact on employment in part-time jobs for women in the pilot regions increasing the rate by 0.9 percentage point.

Overall these results suggest that the pilots statistically significantly affected both full-time and part-time employment rates with impacts that are substantial in magnitude and in each case, positive in the pilot regions. We do however find a negative impact of the WWOC pilot on full-time employment rates. This may not be surprising given that the pilot promotes the take-up of part-time work.

While the three short-hours work-promoting pilots reduce employment in full-time jobs (statistically significant impact for WWOC), it is possible however that the induced experience accumulated in a part-time job translates into subsequent full-time emplyment. We attempt to identify this potential outcome by exploiting the 6-month panel format of the data.

We identified transitions such that the first month indicates involuntary unemployment (also meeting the EI eligibility criteria) and the last month indicates full-time employment. We then added the additional condition that in some months during the first and last, the individual experienced part-time employment. We therefore study the impact of the pilots on the likelihood of transitioning from part-time to full-time following an episode of unemployment at the start of the 6-month spell of analysis.

The results (presented in Table 3b) suggest a statistically significantly positive impact of the EW and of the WWOC pilot on transitions from part-time to full-time employment for individuals who experienced EI eligible unemployment at the start of the 6-month spell. This implies that the longer-term impact of the WWOC pilot (longer than its impact in the subsequent month) is in fact beneficial to employment

rates in full-time jobs. The results suggest that the take-up of part-time jobs facilitates subsequent transitions into full-time jobs, in the nonpilot regions.

V. b - EI Changes and Job Search

4) Did the EI changes Impact Job Search Outcomes?

Table 4 summarizes the results of our analysis of the possible links between the pilots and job search methods, following the poisson and the glm (for the proportion of active methods used) estimation models.

Table 4 results
For men, the EW pilot statistically significantly increased the number of job search methods as well as the proportion of active methods used. For women, the results are opposite: the EW pilot statistically significantly decreased the number of job search methods used as well as decreased the proportion of active methods used.
There are no significant impact of the other three work-promoting pilots on job search outcomes for both men women.

Appendix B Table B4 shows that these results are robust to estimations over the subsample of EI regions with more similar unemployment rates. Moreover in this case, the other three pilots also statistically significantly increased the number of job search methods for men and the proportion of active search methods used for women.

The difference in the results between men and women is somewhat puzzling. To better understand it, we used a variable in the LFS data which identifies whether job search was directed towards a full-time job or a part-time job and created a binary variable indicating whether the individual searched for part-time work.

The results, shown in Table 4b, indicate this time a similar job search behaviour between single men and women regarding the statistically significantly negative impact of the EW pilot on the likelihood of searching for a part-time job and the positive impact of the other three low-hours-work-inducing pilots on the likelihood of searching for a part-time job. These last results are statistically significant and large when estimated over the sample of regions with unemployment rates within a closer range (in Appendix B Table B4b).

V. c - EI Changes and Joint Labour Supply

Given the differences found in the previous analysis between married and single individuals depending on the labour force status of the spouse, we further investigate the behaviour of employed married women with an unemployed husband who are

likely to be responsive to the pilots' changes. We consider this particular group also because it is a larger sample than the sample of employed married men with an unemployed wife.

5) Did the EI changes Lead to the Crowding-Out of Married Women?

One hypothesis regarding possible effects of the EI changes that we have in mind is the following: do employed married women with unemployed husbands reduce their labour supply when the generosity of the EI system increases? This hypothesis has been tested in the literature using US data in Cullen and Gruber (2000). They find that the generosity of the unemployment system in the US has a statistically significant negative impact on the behaviour of married women with unemployed husbands, a crowding out effect associated with unemployment insurance.

The longitudinal format of the LFS data and the fact that it is a household survey allows us to follow households over time. The data grouped at the household level contains a separate line of information and identifier for every adult aged 15 or older in the household. This means that demographic and labour market information is available for all adults in the household so it is possible to retrieve all spousal information including the labour force status of the spouse. In particular, we use spousal information regarding education, age, labour force status, hours worked and/or unemployment duration as control variables in our analysis of the joint labour supply of couples. We further restricted the sample of couples by whether the spouse is present and the respondent is the same across all months in an attempt to minimize recollection bias and proxy response errors.

In Table 5, we present our initial attempt at capturing this effect. We estimated the impact of the pilots on the labour supply of employed wives at the intensive margin (in terms of actual hours in the main job and total hours worked in all jobs) and extensive margin (transitions out of nonemployment into employment). We compare the results or the analysis based on the sample of wives with unemployed husbands (panel A of Table 5) to those of the wives with employed husbands (panel B of the Table).

The controls in the regression are similar to those in Table 1 and 2 but we have also added as additional controls, spousal information including the education and age of

the spouse, and if employed, a dummy for each hour worked and if unemployed, a dummy for each month of unemployment duration.

Table 5 results

The EW pilot is associated with a statistically significant decline in the number of annual hours worked on the main job by about 4.8 hours and by 4.6 hours in all jobs for wives with an unemployed husband. In panel B, there are no such effect of the pilots for married wives with employed husbands.

The bottom table considers transition rates out of employment and into non-employment reflecting labour supply decisions at the extensive margin. The results from the analysis at the extensive margin are not statistically significant.

Appendix B Table B5 shows that the results for EW hold when the estimation is done over the subsample of regions with similar unemployment rates. Moreover there is evidence of an opposite effect of the other three pilots of about the same magnitude as the EW estimated effect. The crowding out effect of the EW pilot seems to be tempered by the work inducing impact of the other three pilots. At the extensive margin, the EW pilot increases the likelihood of transitioning out of part-time work into inactivity for married women with unemployed husbands.

This crowding-out effect has important implications for policymakers balancing the costs and benefits of the EI system. We estimate the loss in annual revenues from employee EI contributions associated with the decline in weekly hours worked to be between $43063 and $90826 based on the estimate of 4.9 hours/week reduction obtained in Table 5.[37]

These results are indicative of the overlooked (at least in the Canadian literature) but important implications of changes to the EI system on married couples' labour supply decisions. We therefore investigated further the crowding out hypothesis by further exploiting the household and spousal dimension of the LFS data to identify EI eligibility of the unemployed husband. The results, shown in Appendix D Table D5, are very similar to those of Table 5. Given the robustness of the results, we conclude that a crowding out effect is indeed present in the Canadian data.

V. d – Robustness Checks

The first robustness check analysis relates to whether the pilots affect transitions out of unemployment for those supposedly ineligible to receive EI benefits, the voluntary quitters.

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[37] The calculations are based on the following formula for EI annual revenues from employee contributions: R= t*X*w where t is the EI tax rate (in 2003 it was 2.10% applied to annual earnings up to the max of $39,000), X is the sample size of employed wives whose annual earnings are <=$39000 and with an unemployed husband), and w is average annual earnings. With the estimate of 4.6 hours/week lost from Table 5, the estimated loss in annual EI revenues is $43063.6 up to a max of $90826 if w=max insurable earnings of $39000. More conservative estimates using Table D5 estimate of 2.9 hours/week lost, are $25486.6 using average annual earnings and up to $53754.4 if all women earn the max insurable earnings.

In most cases (see Panel B of Tables 1 and 2), there is no statistically significant impact of the pilots on transitions out of or into voluntary unemployment. The notable results however are those related to women in Tables 1b and 1d which show statistically significant impact of the four pilots for transitions from voluntary unemployment into full-time employment and in opposite directions (EW increases the likelihood of transitioning into full-time work) which would be consistent with a spillover effect (as non EI eligible workers benefit from the policy change influencing the EI eligible to remain unemployed).

The main robustness checks already discussed in the previous section relate to estimations performed over the set of regions with unemployment rates with the 7%-13% range which are closer to the 10% cut-off. Overall, the results of all the analyses replicated over this smaller sample of pilot and nonpilot regions hold and the impact of the pilots are often of greater magnitude (see Tables in Appendix B).

Additional robustness checks not already discussed in the previous sections relate to the results using the different measures of EI eligibility shown in Appendix D Table D1 and one can see that the results with the different eligibility approximations are similar.

VI- Conclusions

In this paper, we exploit the monthly panel dimension of the LFS data to analyze the labour force transitions of Canadian men and women over the period 2003-2009 when important EI changes increasing the generosity of the system were implemented in a subset of EI regions. The quasi-experimental design of the EI changes allows us to define a treated and comparison group in order to differentiate between policy and time-specific effects.

We find a strong and robust adverse employment impact of the EW pilot initiative extending weeks of EI benefits on the take-up of both, full-time and part-time employment. While the evidence regarding the work disincentive impact of extending EI benefits has been reported in several studies that have used US and European data (Katz and meyer, 1990; Hunt, 1995; Lalive 2007 and 2008; Tsatsiramos, 2009), the present evidence for Canada over a representative sample of displaced workers is new.

We also find that the EW pilot increased the likelihood of transitioning from part-time and temporary employment into involuntary unemployment suggesting the EW pilot incentivized firms to rely more heavily on layoffs for these jobs. The net impact of the EW initiative on employment is an increase in employment rates in full-time jobs. This is consistent with our job search findings that show that the EW pilot helped unemployed individuals improve their job search methods (more methods used and

more active types of methods) and increased the likelihood that individuals focus their job search on full-time work instead of part-time jobs.

Due to the different timing of the implementation of the EW pilot compared to the other three pilots, we can separately identify the differential impact of the other three pilot initiatives, the NERE, Best 14 and WWOC pilots. We find that these initiatives which are aimed at facilitating the take up of low earnings/low hours employment have a positive and statistically significant effect (although much smaller) on part-time and temporary employment for both single men and women.[38] When combined with the EW initiative, the other three low hours/part-time work inducing pilots statistically significantly reduce the adverse employment effect of the EW pilot on the dynamics of transitions into part-time employment.

The three work-inducing pilot initiatives also increased employment rates in part-time jobs statistically significantly for single women. These results are also consistent with our job search findings in that these three pilots also significantly increased the likelihood of searching for part-time jobs.

In sum, the work-inducing objective of the EI program reflected in the three pilot initiatives (NERE, Best 14 and WWOC) was indeed effective in inducing job search for a part-time job as well as the take up of part-time employment. The magnitude of the positive employment effects as measured by monthly transitions into employment is however small compared to the adverse employment impact of the EW pilot. Nevertheless, for single women, the three pilots increased employment rates in these part-time jobs.

Together the results show that the combined EI changes have significantly and substantially affected the dynamics of individuals' labour force transitions in ways that are consistent with the EI objectives and with job search theory: EI benefits week extension creates adverse employment effects but these effects can be tempered if combined with policy changes which incentivize the take up of low-hours/low-earnings part-time jobs.

The positive impact of the EW pilot on employment rates in full-time jobs although not predictable from theory, is an interesting and encouraging empirical result from a policy perspective. From the additional analysis done in the present paper, we conclude that two mechanisms may be jointly at play: 1) the EW pilot promotes more intense job search for full-time jobs, and 2), the three work-promoting pilots (NERE, Best 14 and WWOC) which induce the take up of part-time work may also subsequently lead to the take-up of full-time work.

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[38] The results also hold for married men with a wife who is out of the labour force and married women with an unemployed husband.

A likely unintended consequence of the EW pilot however is the crowding out of employed wives with an unemployed husband which leads to an estimated reduction in hours worked per week of about 3 to 4 hours.

Several extensions arise from this initial work based on the LFS data over the 2003-2008 time period. In a companion paper, we extend the time period analyzed by further studying the impact of extending weeks of benefits before and after the 2008 recession (combining the EW pilot with the countrywide EDB initiative implemented after February 2008) on re-employment outcomes. In Chen, Lluis and McCall (2017), we focus on the impact of the four pilots on job mobility and job match quality using the LFS and SLID data.

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Table 1
Estimated Effect of the Pilots on Unemployment to Employment Transitions
LFS– January 2003 to February 2009[1]

1a: Male

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$[2]	-0.006	-0.018	0.012	-0.090	0.018	-0.109
	(0.037)	(0.037)	(0.007)	(0.068)	(0.075)	(0.065)
	-0.034	-0.009	-0.025	-0.005	-0.024	0.019
$A_{All} \times P$	(0.027)	(0.030)	(0.019)	(0.041)	(0.042)	(0.014)
$A_{WWC} \times (1\text{-}P)$	-0.013	-0.010	-0.003	-0.027	-0.008	-0.019
	(0.019)	(0.018)	(0.006)	(0.030)	(0.029)	(0.014)
F -Test[3]	0.99	0.34	0.55	0.80	0.22	2.01
p - value	0.40	0.79	0.55	0.79	0.88	0.12

1b: Female

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$	-0.129**	-0.123***	-0.006	0.054	0.121**	-0.067
	(0.058)	(0.026)	(0.055)	(0.064)	(0.053)	(0.075)
$A_{All} \times P$	-0.067**	-0.038	-0.030	-0.072	-0.062***	-0.010
	(0.032)	(0.038)	(0.022)	(0.044)	(0.022)	(0.026)
$A_{WWC} \times (1\text{-}P)$	-0.016	-0.024	0.008	-0.042	-0.007	-0.034
	(0.033)	(0.021)	(0.021)	(0.033)	(0.022)	(0.021)
F –Test[3]	1.45	8.67	1.88	1.90	8.06	1.65
p - value	0.07	0.00	0.15	0.14	0.00	0.19

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

1c: Single Male

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P^2$	-0.233***	-0.196**	-0.037*	0.009	0.210	-0.201**
	(0.082)	(0.080)	(0.020)	(0.085)	(0.134)	(0.094)
$A_{All} \times P$	0.016	-0.009	0.025	0.082	0.047	0.035**
	(0.053)	(0.039)	(0.029)	(0.058)	(0.060)	(0.017)
$A_{WWC} \times (1\text{-}P)$	-0.010	-0.008	-0.002	-0.038	0.001	-0.039*
	(0.030)	(0.029)	(0.016)	(0.039)	(0.036)	(0.020)
F -Test[3]	7.45	3.74	1.25	2.34	5.36	4.21
p - value	0.00	0.02	0.30	0.08	0.00	0.010

1d: Single Female

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$	-0.449**	0.022	-0.471***	0.101	0.256***	-0.155
	(0.194)	(0.174)	(0.160)	(0.104)	(0.071)	(0.146)
$A_{All} \times P$	-0.049	-0.131	0.082*	-0.062	-0.147***	0.085***
	(0.109)	(0.096)	(0.049)	(0.051)	(0.038)	(0.031)
$A_{WWC} \times (1\text{-}P)$	0.001	-0.057	0.058**	-0.066	0.022	-0.088**
	(0.046)	(0.042)	(0.027)	(0.057)	(0.033)	(0.035)
F -Test[3]	5.15	1.36	3.99	2.43	7.34	7.26
p - value	0.00	0.27	0.01	0.08	0.00	0.00

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^*p < .10$, $^{**}p < .05$, $^{***}p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Table 1 (continued)

**Estimated Effect of the Pilots on Unemployment to Employment Transitions
LFS – January 2003 to February 2009[1]**

1e: Married Male

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
Individuals whose Spouse is Out of the Labour Force:						
$A_{EW} \times P$[2]	-0.147**	0.105	-0.252***	-0.543**	-0.467*	-0.075*
	(0.071)	(0.099)	(0.057)	(0.223)	(0.236)	(0.038)
$A_{All} \times P$	-0.134**	-0.167***	0.034*	0.017	-0.020	0.037
	(0.054)	(0.060)	(0.018)	(0.093)	(0.086)	(0.028)
$A_{WWC} \times (1\text{-}P)$	-0.011	-0.035	0.024	0.000	-0.054	0.055
	(0.044)	(0.054)	(0.022)	(0.090)	(0.082)	(0.036)
Individuals whose Spouse is Unemployed:						
$A_{EW} \times P \times SPU$[2]	0.694***	0.262***	0.432***	0.000	0.000	0.000
	(0.150)	(0.076)	(0.141)	(.)	(.)	(.)
$A_{All} \times P \times SPU$	0.017	0.292***	-0.276**	-0.501**	-0.012	-0.488***
	(0.107)	(0.066)	(0.103)	(0.190)	(0.207)	(0.077)
$A_{WWC} \times (1\text{-}P) \times SPU$	-0.049	-0.013	-0.036	-0.058	-0.027	-0.032
	(0.075)	(0.088)	(0.038)	(0.220)	(0.216)	(0.060)
Individuals whose Spouse is Employed:						
$A_{EW} \times P \times SPE$[2]	0.230***	-0.086	0.316***	-0.106	-0.162	0.055
	(0.082)	(0.132)	(0.060)	(0.290)	(0.287)	(0.068)
$A_{All} \times P \times SPE$	0.090	0.195***	-0.105***	-0.116	-0.128	0.013
	(0.055)	(0.048)	(0.024)	(0.101)	(0.088)	(0.036)
$A_{WWC} \times (1\text{-}P) \times SPE$	-0.017	0.034	-0.051	0.039	0.080	-0.041
	(0.057)	(0.058)	(0.031)	(0.101)	(0.108)	(0.048)
F -Test	9.59	2.86	7.58	2.43	1.37	2.93
p - value	0.00	0.00	0.00	0.07	0.26	0.04

[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P \times SPX$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions for individuals whose spouse is unemployed (X=U) or employed (X=E). The $A_{All} \times P \times SPX$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot for individuals whose pouse is unemployed (X=U) or employed (X=E). The $A_{WWC} \times (1\text{-}P) \times SPX$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions for individuals whose spouse is unemployed (X=U) or employed (X=E).

Table 1 (continued)
Estimated Effect of the Pilots on Unemployment to Employment Transitions
LFS – January 2003 to February 2009[1]

1f: Married Female

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$ [2]	-0.645***	-0.748***	0.103	-0.401*	-0.436**	0.035
	(0.139)	(0.123)	(0.080)	(0.233)	(0.199)	(0.104)
$A_{All} \times P$	-0.255***	-0.066	-0.189***	0.109	0.032	0.078
	(0.088)	(0.065)	(0.054)	(0.099)	(0.115)	(0.077)
$A_{WWC} \times (1\text{-}P)$	0.063	0.132	-0.069	-0.111	0.012	-0.124
	(0.107)	(0.082)	(0.072)	(0.109)	(0.105)	(0.114)
Individuals whose Spouse is Unemployed:						
$A_{EW} \times P \times SPU$ [2]	-0.276	0.243	-0.519***	0.000	0.000	0.000
	(0.270)	(0.256)	(0.110)	(.)	(.)	(.)
$A_{All} \times P \times SPU$	0.265*	0.029	0.236***	-0.071	0.193*	-0.264*
	(0.138)	(0.130)	(0.054)	(0.162)	(0.100)	(0.134)
$A_{WWC} \times (1\text{-}P) \times SPU$	-0.133	-0.140	0.007	0.054	0.044	0.011
	(0.177)	(0.151)	(0.090)	(0.160)	(0.128)	(0.166)
Individuals whose Spouse is Employed:						
$A_{EW} \times P \times SPE$ [2]	0.570***	0.544***	0.026	0.664***	0.631***	0.033
	(0.173)	(0.177)	(0.087)	(0.191)	(0.178)	(0.068)
$A_{All} \times P \times SPE$	0.142*	0.039	0.103***	-0.156	-0.040	-0.116
	(0.083)	(0.071)	(0.038)	(0.118)	(0.112)	(0.079)
$A_{WWC} \times (1\text{-}P) \times SPE$	-0.073	-0.137*	0.064	0.120	-0.096	0.217*
	(0.096)	(0.078)	(0.074)	(0.133)	(0.122)	(0.122)
F -Test	13.26	13.95	4.92	1.59	1.59	2.60
p - value	0.00	0.00	0.00	0.20	0.20	0.06

[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^*p < .10$, $^{**}p < .05$, $^{***}p < .01$

[2] The $A_{EW} \times P \times SPX$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions for individuals whose spouse is unemployed (X=U) or employed (X=E). The $A_{All} \times P \times SPX$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot for individuals whose pouse is unemployed (X=U) or employed (X=E). The $A_{WWC} \times (1\text{-}P) \times SPX$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions for individuals whose spouse is unemployed (X=U) or employed (X=E).

1g: Further by Type of Employment

From:	Panel A: Involuntary Unemployment (UIV)				Panel B: Voluntary Unemployment (UV)			
	Male		Female		Male		Female	
	toEuwPT	toEtemp	toEuwPT	toEtemp	toEuwPT	toEtemp	toEuwPT	toEtemp
$A_{EW} \times P^2$	-0.036***	-0.135*	-0.153	-0.542***	-0.239***	-0.169**	-0.012	0.037
	(0.007)	(0.070)	(0.128)	(0.180)	(0.061)	(0.081)	(0.100)	(0.111)
$A_{All} \times P$	0.028*	-0.044	0.030	0.096**	-0.029**	0.003	-0.023	-0.031
	(0.016)	(0.047)	(0.034)	(0.044)	(0.011)	(0.022)	(0.042)	(0.042)
$A_{WWC} \times (1\text{-}P)$	0.016	-0.010	0.056***	0.106*	-0.028	0.004	-0.001	0.015
	(0.010)	(0.018)	(0.020)	(0.061)	(0.017)	(0.026)	(0.013)	(0.028)
F -Test [3]	1.35	3.55	0.44	6.55	5.97	2.84	1.24	0.65
p - value	0.26	0.02	0.72	0.00	0.00	0.05	0.30	0.59

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Table 2
Estimated Effect of the Pilots on Employment to Unemployment Transitions
LFS – January 2003 to February 2009[1]

2a: Male

From:	**Panel A:** Into Involuntary Unemployment			**Panel B:** Into Voluntary Unemployment		
	E	EFT	EPT	E	EFT	EPT
$A_{EW} \times P^2$	0.004	0.004	0.002	-0.002*	-0.001	-0.007*
	(0.003)	(0.003)	(0.016)	(0.001)	(0.001)	(0.004)
$A_{All} \times P$	-0.001	-0.000	-0.005	0.002	0.002	0.001
	(0.001)	(0.001)	(0.005)	(0.001)	(0.001)	(0.002)
$A_{WWC} \times (1\text{-}P)$	0.003	0.003	-0.004	0.000	-0.000	0.003
	(0.002)	(0.002)	(0.004)	(0.001)	(0.001)	(0.003)
F -Test	2.865	3.653	0.088	0.753	1.415	0.137
p - value	0.097	0.062	0.769	0.390	0.240	0.713

2b: Female

From:	**Panel A:** Into Involuntary Unemployment			**Panel B:** Into Voluntary Unemployment		
	E	EFT	EPT	E	EFT	EPT
$A_{EW} \times P^2$	0.003***	-0.002	0.015***	0.001	-0.001	0.004
	(0.001)	(0.001)	(0.003)	(0.001)	(0.002)	(0.006)
$A_{All} \times P$	-0.002	-0.001	-0.005**	0.000	0.001	-0.002
	(0.001)	(0.001)	(0.002)	(0.001)	(0.001)	(0.002)
$A_{WWC} \times (1\text{-}P)$	0.001	0.000	0.003	-0.000	0.000	-0.002
	(0.002)	(0.002)	(0.004)	(0.000)	(0.001)	(0.001)
F -Test	3.169	0.545	3.33	0.098	0.432	0.001
p - value	0.082	0.464	0.03	0.756	0.514	0.972

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^*\,p < .10$, $^{**}\,p < .05$, $^{***}\,p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

2c: Further by Type of Employment

From:	Panel A: Into Involuntary Unemployment (UIV)				Panel B: Into Voluntary Unemployment			
	Male		Female		Male		Female	
	EuwPT	Etemp	EuwPT	Etemp	EuwPT	Etemp	EuwPT	Etemp
$A_{EW} \times P$[2]	0.026**	0.057***	0.017*	0.030***	-0.005	-0.005**	0.001	0.001
	(0.013)	(0.006)	(0.010)	(0.006)	(0.008)	(0.002)	(0.004)	(0.002)
$A_{All} \times P$	0.003	-0.002	0.003	-0.006	0.000	0.002	-0.008*	-0.002
	(0.016)	(0.004)	(0.007)	(0.004)	(0.009)	(0.002)	(0.004)	(0.002)
$A_{WWC} \times (1\text{-}P)$	0.010	0.013*	0.018	0.006	0.004	0.000	-0.013	0.001
	(0.021)	(0.007)	(0.014)	(0.008)	(0.011)	(0.002)	(0.010)	(0.002)
F -Test [3]	4.47	6.69	6.46	8.57	0.75	0.406	0.215	2.913
p - value	0.00	0.00	0.00	0.00	0.52	0.527	0.645	0.095

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^* p < .10,$ $^{**} p < .05,$ $^{***} p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Table 3: Estimated Effect of the Pilots on
Employment Rates and UIV-PT-FT Transitions
LFS – January 2003 to February 2009[1]

Table 3a: Impact on Monthly Regional Employment Rates

Employment Rate	Male			Female		
	E	EFT	EPT	E	EFT	EPT
$A_{EW} \times P$[2]	0.011***	0.013***	-0.002	0.007*	0.011***	-0.004
	(0.004)	(0.005)	(0.003)	(0.003)	(0.004)	(0.004)
$A_{All} \times P$	-0.001	-0.006	0.005	0.003	-0.007	0.009*
	(0.005)	(0.006)	(0.003)	(0.003)	(0.005)	(0.005)
$A_{WWC} \times (1\text{-}P)$	-0.008	-0.011*	0.003	-0.009***	-0.011**	0.002
	(0.005)	(0.006)	(0.003)	(0.003)	(0.005)	(0.004)
F -Test[3]	5.244	4.572	1.330	7.655	5.433	1.382
p - value	0.003	0.007	0.276	0.000	0.003	0.260

Table 3b: Impact on 6-month Transitions out of Involuntary Unemployment into Full-time Employment
(with at least one month of Part-time Employment in between)

	UIVto..toPTto…toFT
$A_{EW} \times P$[2]	0.219**
	(0.100)
$A_{All} \times P$	-0.072
	(0.146)
$A_{WWC} \times (1\text{-}P)$	0.136**
	(0.058)
F –Test[3]	5.244
p - value	0.003

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Table 4a: Number and Type of Search Methods

	Male		Female	
	Number of Job Search Methods	Proportion of Active Search Methods	Number of Job Search Methods	Proportion of Active Search Methods
$A_{EW} \times P^2$	0.131**	0.191***	-0.069***	-0.160**
	(0.056)	(0.060)	(0.025)	(0.064)
$A_{All} \times P$	0.023	-0.003	0.062	-0.001
	(0.020)	(0.030)	(0.046)	(0.041)
$A_{WWC} \times (1\text{-}P)$	0.035	0.051	0.038	0.092***
	(0.027)	(0.039)	(0.042)	(0.027)
F -Test[3]	7.519	33.132	8.861	27.227
p - value	0.057	0.000	0.031	0.000

Table 4b: Likelihood of Searching for a Part-Time Job

	Male		Female	
	Single	Married	Single	Married
$A_{EW} \times P^2$	-0.089***	0.034***	-0.149**	0.044
	(0.026)	(0.008)	(0.065)	(0.040)
$A_{All} \times P$	0.030	-0.029*	0.010	-0.060***
	(0.030)	(0.015)	(0.036)	(0.017)
$A_{WWC} \times (1\text{-}P)$	0.008	0.018	-0.004	-0.034
	(0.017)	(0.014)	(0.028)	(0.022)
F-Test[3]	0.412	8.779	0.115	1.058
p - value	0.524	0.005	0.736	0.309

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^{*} p < .10$, $^{**} p < .05$, $^{***} p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Table 5
Estimated Effect of the Pilot Initiatives on Spousal Labour Supply
LFS Monthly Transitions – January 2003 to February 2009[1]

Intensive Margin

	Panel A Wives with Husband Unemployed		Panel B Wives with Husband Employed	
	Actual Hours Main Job	Actual Hours All Jobs	Actual Hours Main Job	Actual Hours All Jobs
$A_{EW} \times P$[2]	-46.494***	-49.197***	0.630	1.367
	(16.427)	(15.748)	(5.442)	(4.744)
$A_{All} \times P$	8.139	8.821	2.644	5.336**
	(9.501)	(9.162)	(1.850)	(2.252)
$A_{WWC} \times (1\text{-}P)$	-5.293	-11.739	-1.910	-1.301
	(9.283)	(9.136)	(3.624)	(3.814)
F -Test[3]	2.80	3.52	3.82	10.58
p - value	0.05	0.02	0.01	0.00

Extensive Margin

	Panel A Wives with Husband Unemployed		Panel B Wives with Husband Employed	
	EPTtoOLF	EtemptoOLF	EPTtoOLF	EtemptoOLF
$A_{EW} \times P$[2]	-0.104	0.006	0.072	-0.051
	(0.133)	(0.007)	(0.235)	(0.053)
$A_{All} \times P$	0.031	-0.005	-0.024	0.008
	(0.052)	(0.005)	(0.063)	(0.018)
$A_{WWC} \times (1\text{-}P)$	0.017	-0.004	0.056	0.001
	(0.022)	(0.005)	(0.042)	(0.007)
F -Test[3]	0.059	0.016	1.476	0.183
p - value	0.809	0.901	0.231	0.671

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age, aboriginal status, current occupation (one digit) and for years of job tenure, education and age of the spouse. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Appendix A Exhibit A1: List of EI Pilots Regions

	EI Regions[1]	June 04	Oct 05	Dec 05	Dec 05	June 06	Post August 2008 time period			
		Increased Wks of EI Benefits Pilot #6	BEST 14 Pilot #7	Working on Claim Pilot #8	NERE Pilot #9	Extended EI Benefits[2] Pilot #10	BEST 14 Pilot #11, #16	Working on Claim Pilot #12, #17	NERE Pilot #13	Extended EI Benefits[3] Pilot #15
01	St-John's	✓	✓	✓	✓	✓	✓		✓	✓
02	Newfoundland/Labrador	✓	✓	✓	✓	✓	✓		✓	✓
03	PEI	✓	✓	✓	✓	✓	✓		✓	✓
04	Eastern Nova Scotia	✓	✓	✓	✓	✓	✓		✓	✓
05	Western Nova Scotia	✓	✓	✓	✓	✓	✓		✓	✓
08	Madawaska-Charlotte (NB)	✓	✓	✓	✓	✓	✓		✓	✓
09	Restiqouche - Albert (NB)	✓	✓	✓	✓	✓	✓		✓	✓
10	Gaspésie, îles-de-la Madelaine (Qc)	✓	✓	✓	✓	✓	✓	All Regions	✓	✓
12	Trois-Rivières (Qc)	✓	✓	✓	✓	✓	✓		✓	✓
17	Central Québec	✓	✓	✓	✓	✓	✓		✓	✓
18	North Western Québec	✓	✓	✓	✓	✓	✓		✓	✓
19	Bas-St-Laurent – Côte Nord (Qc)	✓	✓	✓	✓	✓	✓		✓	✓
21	Chicoutimi, Jonquière (Qc)	✓	✓	✓	✓	✓	✓		✓	✓
26	Oshawa						✓		✓	
31	Niagara						✓		✓	
32	Windsor						✓		✓	
34	Huron						✓		✓	
36	Sudbury	✓	✓	✓	✓	✓				✓
38	Northern Ontario	✓	✓	✓	✓	✓	✓		✓	✓
41	Northern Manitoba	✓	✓	✓	✓	✓	✓		✓	✓
45	Northern Saskatchewan	✓	✓	✓	✓	✓	✓		✓	✓
48	Northern Alberta	✓	✓	✓	✓		✓		✓	
50	Southern Interior British Columbia	✓								
54	Southern Coastal British Columbia	✓	✓	✓	✓					
55	Northern British Columbia	✓	✓	✓	✓	✓	✓		✓	✓
56	Yukon	✓	✓	✓	✓	✓	✓		✓	✓
57	Northwest Territories	✓	✓	✓	✓	✓	✓		✓	✓
58	Nunavut	✓	✓	✓	✓	✓	✓		✓	✓
	TOTAL NUMBER OF REGIONS	**24**	**23**	**23**	**23**	**21**	**25**	**58**	**25**	

[1] Excluded pilot regions for the analysis over the January 2003 to August 2008 time period are indicated in the light grey shaded area. Excluded nonpilot regions for the pre-post 2008 analysis analysis over the are indicated in the dark grey shaded area

[2] Pilot project #10 (June 2006 to Feb 2009) was replaced in March 2009 by extended duration of EI regular benefits that apply to all regions as part of the Economic Action Plan

[3] Pilot project #15 (September 2010 to September 2012) replaced the extended duration of EI regular benefits that apply to all regions as part of the Economic Action Plan

Appendix A Exhibit A2: Selection of EI Pilot Regions based on 3-month Seasonally Adjusted Unemployment Rate

REVISED C-12 ECONOMIC REGION		2003/04 DEC. 7/ JAN.10	2004 JAN. 11/ FEB. 7	2004 FEB. 8/ MAR. 13	2004 MAR. 14/ APR. 10	2004 APRIL 11/ MAY 8	max urate	>=10%
ST. JOHN'S	01	9.7	9.9	10.3	10.3	9.4	10.3	p
NEWFOUNDLAND - LABRADOR	02	20.7	21.2	21.2	20.6	20.2	21.2	p
ALL OF P.E.I.	03	10.7	10.8	10.8	11.0	11.4	11.4	p
EASTERN NOVA SCOTIA	04	18.4	18.6	17.6	17.3	17.5	18.6	p
WESTERN NOVA SCOTIA	05	10.4	10.2	10.6	10.1	10.1	10.6	p
HALIFAX	06	6.5	6.0	6.0	6.0	6.2	6.5	
FREDERICTION/MONCTON/ST.JOHN	07	7.6	7.4	7.0	6.7	6.6	7.6	
MADAWASKA / CHARLOTTE	08	11.6	11.3	11.7	12.1	12.2	12.2	p
RESTIGOUCHE / ALBERT	09	17.6	17.1	16.9	16.3	16.4	17.6	p
GASPÉSIE / ILES DE LA MADELEINE	10	20.7	21.9	22.1	22.3	21.9	22.3	p
QUÉBEC	11	7.1	7.6	6.6	7.0	6.3	7.6	
TROIS-RIVIÈRES	12	11.0	10.5	9.8	9.7	9.9	11.0	p
QUÉBEC CENTRE-SUD	13	4.3	4.7	5.5	5.6	6.0	6.0	
SHERBROOKE	14	7.7	7.5	7.5	7.5	6.8	7.7	
MONTÉRÉGIE	15	7.8	8.1	7.9	7.4	7.1	8.1	
MONTRÉAL	16	9.4	9.2	9.1	9.0	8.7	9.4	
CENTRAL QUEBEC	17	10.9	10.3	10.5	10.3	10.2	10.9	p
NORD OUEST DU QUÉBEC	18	16.6	17.1	18.6	18.3	18.6	18.6	p
BAS SAINT LAURENT COTE NORD	19	13.4	14.1	14.3	14.3	14.3	14.3	p
HULL	20	5.7	6.2	6.4	6.3	6.2	6.4	
CHICOUTIMI / JONQUIÈRE	21	11.7	11.9	12.0	12.7	12.3	12.7	p
OTTAWA	22	7.3	7.5	7.1	7.0	6.8	7.5	
EASTERN ONTARIO	23	6.9	6.8	6.8	6.8	6.5	6.9	
KINGSTON	24	5.7	5.3	5.6	5.5	5.7	5.7	
CENTRAL ONTARIO	25	6.2	6.4	5.6	5.0	4.5	6.4	
OSHAWA	26	4.9	4.9	5.0	5.0	5.2	5.2	
TORONTO	27	7.6	7.3	7.3	7.2	7.6	7.6	
HAMILTON	28	6.5	5.6	5.3	6.0	6.9	6.9	
ST. CATHARINES	29	7.1	6.8	6.7	7.0	7.6	7.6	
LONDON	30	7.3	7.2	7.0	7.0	6.4	7.3	
NIAGARA	31	6.6	6.1	6.1	6.2	6.3	6.6	
WINDSOR	32	7.0	7.4	7.8	7.5	7.5	7.8	
KITCHENER	33	5.6	5.1	4.8	5.3	5.5	5.6	
HURON	34	8.1	8.2	8.3	7.9	7.6	8.3	
SOUTH CENTRAL ONTARIO	35	4.8	4.5	4.4	4.6	4.6	4.8	
SUDBURY	36	9.8	10.0	9.8	8.6	8.0	10.0	p
THUNDER BAY	37	6.5	7.3	8.2	8.5	7.7	8.5	
NORTHERN ONTARIO	38	12.3	11.9	11.7	11.7	12.1	12.3	p
WINNIPEG	39	5.7	5.6	5.5	5.5	5.3	5.7	
SOUTHERN MANITOBA	40	6.1	5.9	5.7	5.4	5.4	6.1	
NORTHERN MANITOBA	41	27.6	27.5	27.8	27.9	28.1	28.1	p
REGINA	42	5.5	5.5	5.6	5.4	5.3	5.6	
SASKATOON	43	6.3	6.1	6.5	6.7	7.0	7.0	
SOUTHERN SASKATCHEWAN	44	7.6	7.6	7.3	7.3	7.4	7.6	
NORTHERN SASKATCHEWAN	45	13.6	13.7	13.5	13.3	13.4	13.7	p
CALGARY	46	5.5	5.7	5.6	5.7	5.7	5.7	
EDMONTON	47	4.9	4.8	5.0	5.3	5.5	5.5	
NORTHERN ALBERTA	48	10.7	10.6	10.4	10.9	10.7	10.9	p
SOUTHERN ALBERTA	49	6.3	6.1	5.9	5.8	5.9	6.3	
SOUTHERN INTERIOR B.C.	50	10.1	9.3	9.2	9.0	9.3	10.1	
ABBOTSFORD	51	6.7	6.8	6.2	5.9	5.6	6.8	
VANCOUVER	52	7.4	6.5	6.2	6.4	6.9	7.4	
VICTORIA	53	6.5	5.9	6.1	6.2	6.2	6.5	
SOUTHERN COASTAL B.C.	54	12.2	12.3	11.6	12.2	12.6	12.6	p
NORTHERN B.C.	55	13.9	13.3	13.3	13.5	14.1	14.1	p
YUKON	56	25.0	25.0	25.0	25.0	25.0	25.0	p
NORTHWEST TERRITORIES	57	25.0	25.0	25.0	25.0	25.0	25.0	p
NUNAVUT	58	25.0	25.0	25.0	25.0	25.0	25.0	p

Table A1: Main Sample

	Months in Panel	Age	Female	Married	Single	Aboriginal	University	College	High School	Elemen-tary	Unemp. Rate
	January 2003 to May 2004										
Pilot Regions	5.49	37.79	47.10	64.68	27.67	13.48	11.19	38.57	26.65	17.27	13.61
Non Pilot Regions	5.44	36.94	49.07	58.41	33.49	3.39	21.54	31.91	31.11	12.51	6.77
	December 2005 to February 2009										
Pilot Regions	5.56	38.99	48.62	64.04	28.01	4.42	12.35	41.39	26.10	15.54	11.15
Non Pilot Regions	5.48	37.57	49.50	57.42	34.43	2.77	24.71	32.56	29.61	10.79	5.81
	Overall Time period										
Pilot Regions	5.49	38.30	47.75	64.33	27.88	5.28	14.43	46.26	18.58	20.72	12.41
Non Pilot Regions	5.44	37.21	49.25	57.95	33.94	2.97	25.77	39.91	20.75	13.55	6.37

Appendix A: Monthly Labour Force Measurement

Table A2: Individual Monthly Labour Force Status

LFS at t	E		U		OLF	
	P[1]	NonP[2]	P[1]	NonP[2]	P[1]	NonP[2]
Main Sample	82.59	88.82	8.01	4.43	9.40	6.74
Cross-Section (CS)	81.19	87.41	8.23	4.99	10.57	7.61
Cross-Section (CS) of same respondent	83.05	89.13	8.44	5	8.51	5.87

Table A3: Individual Monthly Labour Force Status Transitions
Longitudinal (Main) Sample

LFS at t+1	E FT		E PT		E Temporary		U invol.		U other		OLF	
LFS at t	P[1]	NonP[2]	P[1]	NonP[2]	P[1]	NonP[2]	P[1]	NonP[2]	P[1]	NonP[2]	P[1]	NonP[2]
E FT	**93.39**	**94.16**	2.81	2.82	1.27	1.14	1.21	0.66	0.29	0.34	1.04	0.88
E PT	16.56	17.97	**75.95**	**74.56**	2.69	2.97	1.39	0.94	0.59	0.70	2.81	2.86
E Temp	5.46	7.44	2.01	3.05	**76.94**	**78.81**	6.73	3.14	0.79	1.05	8.06	6.51
U invol.	10.80	15.43	2.60	4.35	18.03	13.89	**54.62**	**54.52**	0.99	1.57	12.96	10.24
U other	9.27	13.68	4.31	5.92	12.99	12.46	3.24	2.84	**53.30**	**47.80**	16.89	417.30
OLF	4.74	6.31	2.41	3.57	9.87	8.90	11.39	4.88	4.60	6.39	**66.98**	**69.95**
Total t	58.73	68.08	9.97	10.81	14.26	10.29	6.21	2.63	1.72	1.65	9.11	6.53

[1] Pilot regions.
[2] Non Pilot regions.

APPENDIX A: EI Eligibility

We estimate the number of insurable hours using months of employment in the last job held. Meeting the criteria of 700 hours of insurable hours worked corresponds to having held a full-time job for at least 4 months. An alternative measure exploits information on whether the last job held was full-time or part-time and the different minimum required insurable hours which depends on the unemployment rate in the region where the individual leaves. We used average actual hours in a part-time and full-time job and calculated an alternative measure of EI eligibility by imposing the additional condition of a minimum of 10 months of work if the last job held was part-time. We also considered the monthly regional unemployment rate as an additional criteria.[1]

In order to validate our measures of EI eligibility, we used information from the publicly available version of the Employment Insurance Coverage Survey data (EICS). This survey is conducted yearly by Statistics Canada with the cooperation of ESDC. EICS data surveys a subsample of the LFS targeted population which corresponds to individuals in four of the LFS rotation panels each year and provides measures of EI coverage, eligibility and benefits received.

Estimates of the degree of coverage of the Canadian population by the EI program from the EICS data are made on the basis of behaviours, events and perceptions reported by respondents in a household telephone survey. In particular, the survey data is used to classify individuals as either "potentially eligible"' by EI or "not potentially eligible", based on information provided by respondents about their claiming and receiving of benefits, their perceived reasons for not receiving benefits or for not claiming, and their recent labour market history.

In the EICS survey, the term "potentially eligible for Employment Insurance" is used to describe unemployed people who, during the reference week, received EI benefits or were in a position to receive them because of their recent insurable employment and subsequent job loss. The category is further divided by whether the sufficient number of insurable hours have been accumulated (potentially eligible – *eligible*) or not (potentially eligible – *not eligible*). In the latter case, individuals are potentially eligible due to the type of job separation incurred (involuntary) but the insurable hours criteria is not met.

Table A4 below provides the yearly eligibility rates according to the EICS data and for comparison, the rates based on our alternative measures of EI eligibility.

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[1] The calculation involves multiplying average actual weekly hours of 16.6 in a part-time job by 4.2 times 10 months. Also in low unemployment regions (more than 13%), the minimum required insurable hours is 420.

(LFS and EICS Data - Authors' Calculations)

Year	2003	2004	2005	2006	2007	2008[1]
All Potentially Eligible (EICS)	57.06	53.49	55.18	52.57	54.32	52.24
Potentially Eligible - Eligible (EICS) [2]	47.95	43.02	46.00	43.49	44.70	42.91
Potentially Eligible – Not Eligible (EICS)[3]	9.11	10.46	9.18	9.08	9.61	9.33
Eligible 1 (LFS)[4]	49.56	48.63	49.53	48.18	48.31	47.99
Eligible 2 (LFS)[5]	51.76	50.03	51.54	49.71	49.76	49.11

Our two measures of EI eligibility 1 and 2 are smaller and more conservative than the overall potential eligibility rates in the EICS dataset (first row of the table). However, neither of our LFS eligibility measures can completely exclude the 9-10% of individuals who are potentially eligible but do not receive EI benefits due to insufficient insurable hours accumulated.

The rest of the analysis will be based on the first measure of eligibility 1 which is able to eliminate a larger proportion of the not eligible individuals than the alternative measure. We also perform replications of the main regressions using the alternative measure (further exploiting FT/PT status of the last job held) to check the extent to which the results are affected.

Given that the calculation of the EICS rates was performed by ourselves, we provide an external validation from eligibility rates coming directly from Statistics Canada's web site in Table A5 below. The yellow line highlights the rates of potential EI eligibility and the values are identical to those we calculated using the EICS data.

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[1] Data for the year 2009 is not available for download on the University of Waterloo ODESI data retrieval web site.

[2] The frequencies correspond to the tabulation of the EICS derived variable "eligible" over the sample of individuals who reported being unemployed during the reference week of the LFS survey

[3] The potentially eligible who turned out to be not eligible are unemployed who have not accumulated sufficient insurable hours

[4] Eligibility based on at least 700 hours of insurable work attained through a minimum of 4 months worked in a FT job.

[5] Eligibility based on the minimum hours of insurable work attained through the corresponding months worked FT or PT (an average of 16.6 hours per week) in the last job in the designated region.

APPENDIX A: EI Eligibility

Table A5: EI Eligibility Rates

Source: Statistics Canada (The Daily) web site

Coverage and eligibility of the unemployed for Employment Insurance benefits					
	2003	2004	2005	2006	2007
	Thousands				
Unemployed[1]	**1,224**	**1,188**	**1,123**	**1,039**	**1,030**
	%				
Contributors	**70.9**	**68.6**	**68.6**	**68.0**	**70.0**
Non-contributors	**29.1**	**31.4**	**31.4**	**32.0**	**30.0**
Potentially eligible	**57.1**	**53.5**	**55.2**	**52.6**	**54.3**
Received or will receive Employment Insurance benefits	44.8	40.9	43.3	40.3	41.0
Did not receive benefits but eligible[2]	3.2	2.2[E]	2.7[E]	3.1[E]	3.7
Did not accumulate enough hours of work to be eligible to receive benefits	9.1	10.5	9.2	9.1	9.6
Not potentially eligible	**42.9**	**46.5**	**44.8**	**47.4**	**45.7**
Left their last job for reasons not deemed valid	13.9	15.1	13.4	15.4	15.7
No insurable employment	5.1	5.7	5.4	5.7	5.2
Has not worked in the previous 12 months	23.9	25.7	26.0	26.3	24.8
Eligible as a proportion of Employment Insurance contributors who had a job separation that meet the program criteria	**84.0**	**80.4**	**83.4**	**82.7**	**82.3**

E	use with caution
1.	Average number of unemployed for the months of March, June, October and December.
2.	Based on number of hours worked.

Retrieved at http://www.statcan.gc.ca/daily-quotidien/080724/t080724b-eng.htm

Figure 1: Transition from Involuntary Unemployment into Full-time Work

Source: Canadian Labour Force Survey
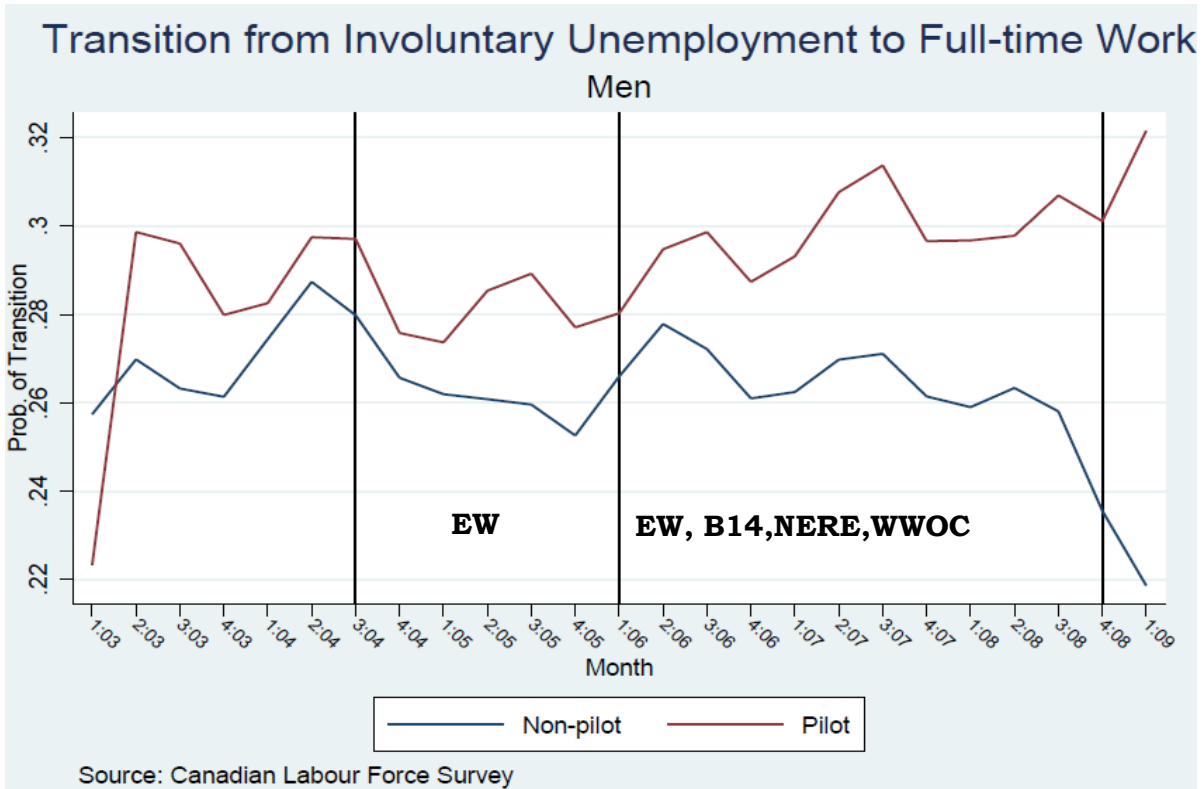
Figure 2: Transition from Involuntary Unemployment into Part-time Work
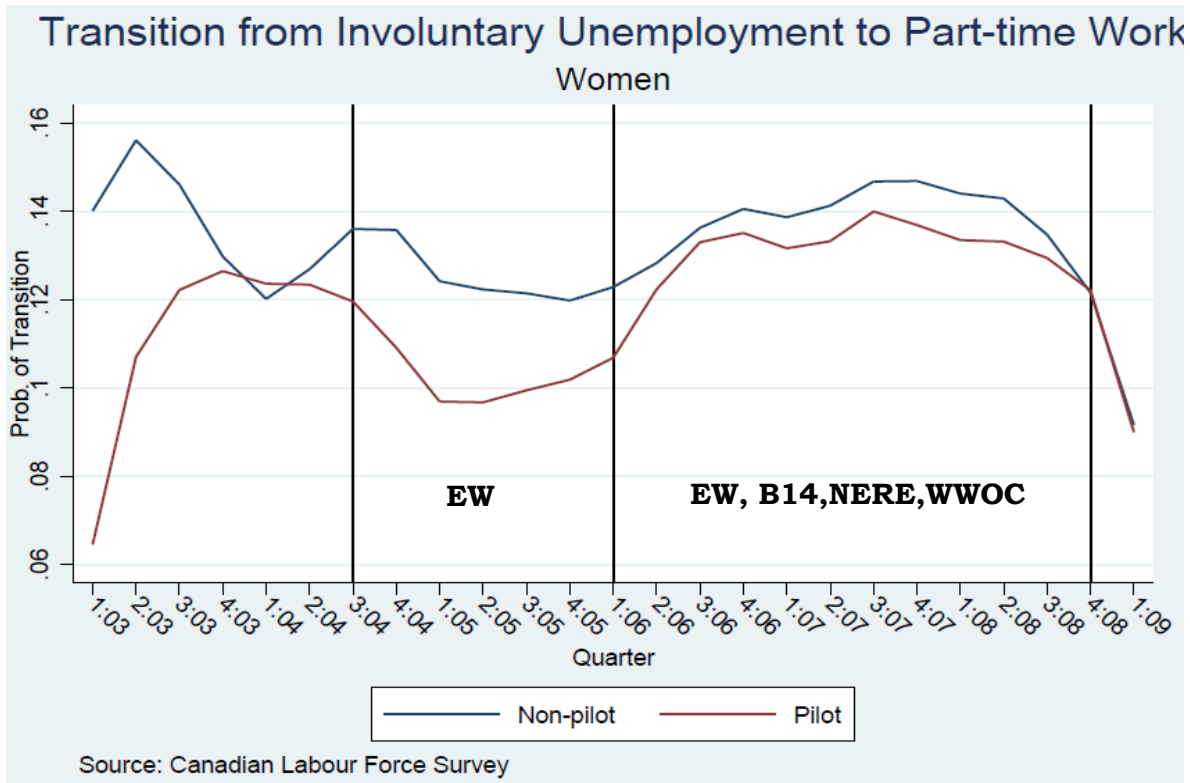
Transition from Involuntary Unemployment to Part-time Work
Men

EW

EW, B14,NERE,WWOC

Prob. of Transition

Month

Non-pilot   Pilot

Source: Canadian Labour Force Survey
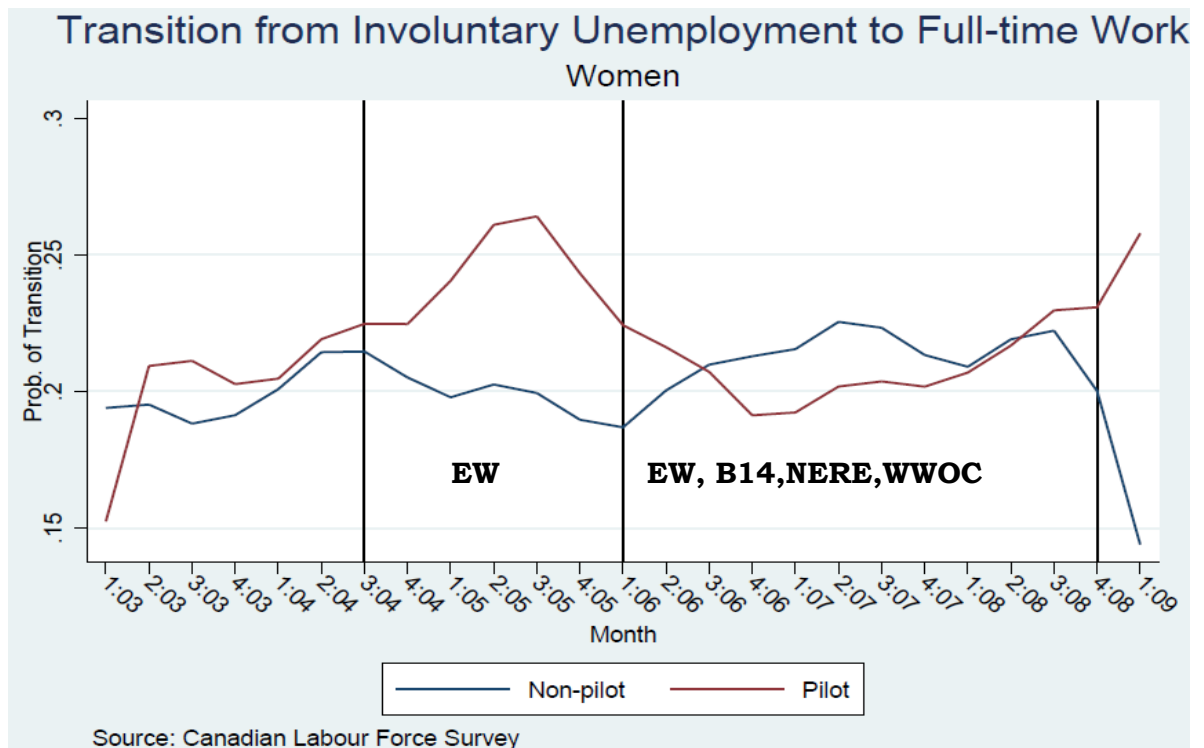
Transition from Involuntary Unemployment to Part-time Work
Women

EW

EW, B14,NERE,WWOC

Prob. of Transition

Quarter

Non-pilot   Pilot

Source: Canadian Labour Force Survey

Table B1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]

B1a: Male

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$ [2]	0.103***	0.099***	0.003	-0.063	-0.037	-0.026
	(0.023)	(0.022)	(0.005)	(0.068)	(0.066)	(0.017)
$A_{All} \times P$	-0.063**	-0.094***	0.031***	0.050*	0.048*	0.002
	(0.022)	(0.024)	(0.008)	(0.029)	(0.024)	(0.012)
$A_{WWC} \times (1\text{-}P)$	-0.010	-0.000	-0.010	0.026	0.032	-0.006
	(0.031)	(0.030)	(0.010)	(0.041)	(0.042)	(0.023)
F-Test[3]	8.83	13.67	7.46	0.90	0.17	0.76
p - value	0.000	0.00	0.00	0.45	0.31	0.52

B1b: Female

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$ [2]	-0.317***	-0.106***	-0.211***	0.190***	0.242***	-0.052**
	(0.043)	(0.024)	(0.035)	(0.054)	(0.041)	(0.022)
$A_{All} \times P$	-0.129***	-0.121***	-0.008	0.037**	-0.013	0.050***
	(0.021)	(0.016)	(0.015)	(0.014)	(0.018)	(0.014)
$A_{WWC} \times (1\text{-}P)$	0.020	-0.004	0.024	-0.022	-0.011	-0.011
	(0.051)	(0.034)	(0.029)	(0.048)	(0.036)	(0.031)
F-Test[3]	87.48	78.20	28.74	15.37	13.60	7.52
p - value	0.00	0.00	0.00	0.00	0.00	0.00

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^* p < .10$, $^{**} p < .05$, $^{***} p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.
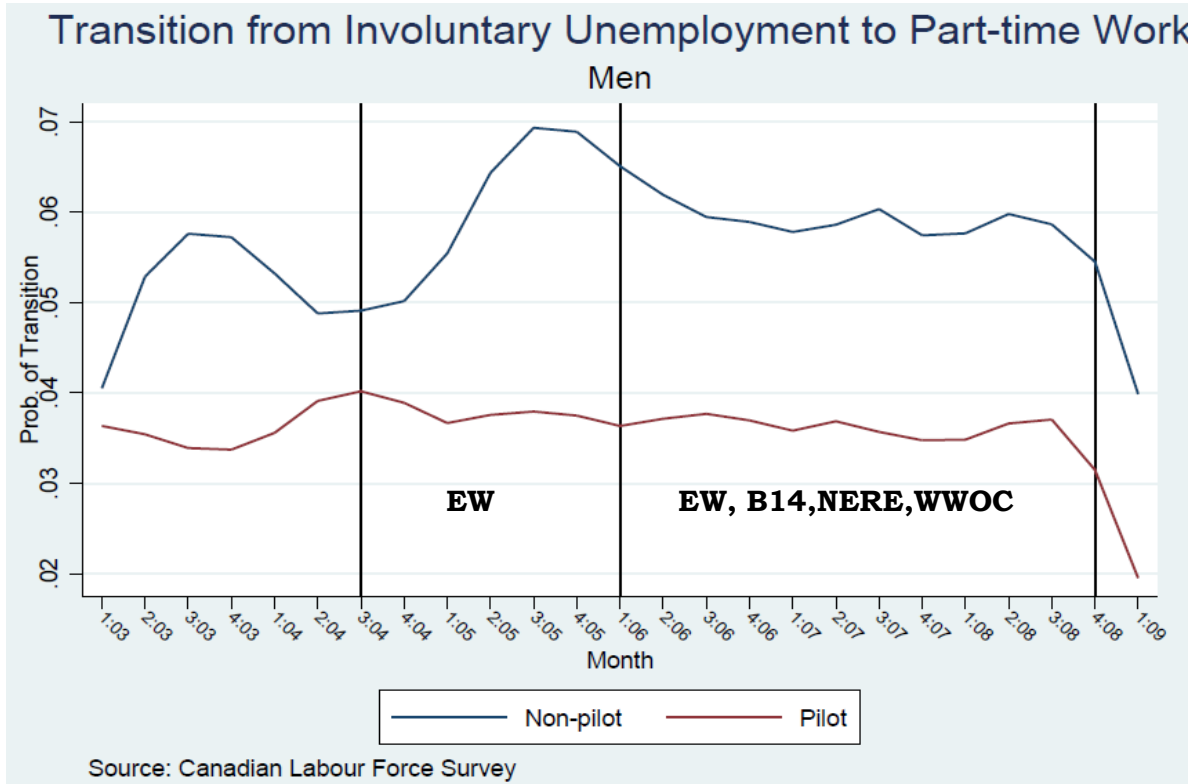
[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Table B1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]
Single Individuals

B1c: Single Male

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$ [2]	-0.502***	-0.411***	-0.091***	-0.051	-0.035	-0.016
	(0.036)	(0.031)	(0.019)	(0.038)	(0.030)	(0.014)
$A_{All} \times P$	0.257***	0.130***	0.127***	0.175***	0.162***	0.013
	(0.044)	(0.031)	(0.035)	(0.042)	(0.039)	(0.019)
$A_{WWC} \times (1\text{-}P)$	-0.012	0.014	-0.027	0.028	0.051	-0.023
	(0.049)	(0.046)	(0.020)	(0.050)	(0.037)	(0.032)
F-Test[3]	66.05	64.82	9.35	9.42	11.36	0.57
p - value	0.000	0.00	0.00	0.00	0.00	0.64

B1d: Single Female

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$ [2]	0.051	0.646***	-0.595***	0.351***	0.168***	0.184***
	(0.139)	(0.073)	(0.122)	(0.055)	(0.038)	(0.062)
$A_{All} \times P$	-0.278***	-0.373***	0.095**	0.035	-0.083**	0.118***
	(0.086)	(0.082)	(0.038)	(0.033)	(0.029)	(0.038)
$A_{WWC} \times (1\text{-}P)$	0.074	0.006	0.068*	-0.026	0.026	-0.052
	(0.095)	(0.081)	(0.039)	(0.067)	(0.055)	(0.053)
F-Test[3]	7.97	59.34	10.08	21.33	10.19	11.53
p - value	0.00	0.00	0.00	0.00	0.00	0.00

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

APPENDIX B: Replication over Regions within 7-13% U Rate

Table B1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]

B1g: Further by Type of Employment

From:	Panel A: Involuntary Unemployment (UIV)				Panel B: Voluntary Unemployment (UV)			
	Male		Female		Male		Female	
	toEuwPT	toEtemp	toEuwPT	toEtemp	toEuwPT	toEtemp	toEuwPT	toEtemp
$A_{EW} \times P$ [2]	-0.052***	-0.119***	-0.143*	-0.531***	0.005	-0.287***	-0.032**	0.200***
	(0.017)	(0.026)	(0.082)	(0.068)	(0.010)	(0.047)	(0.012)	(0.058)
$A_{All} \times P$	0.066***	0.121***	0.013	0.169*	-0.008	0.016	0.052***	-0.002
	(0.011)	(0.021)	(0.032)	(0.092)	(0.008)	(0.026)	(0.016)	(0.021)
$A_{WWC} \times (1\text{-}P)$	-0.000	-0.046*	0.072**	0.222*	-0.047	0.042	0.002	0.026
	(0.010)	(0.026)	(0.031)	(0.120)	(0.030)	(0.036)	(0.021)	(0.041)
F-Test[3]	26.093	34.330	2.952	0.132	2.103	0.698	5.487	0.486
p - value	0.000	0.000	0.101	0.720	0.162	0.413	0.030	0.494

[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

APPENDIX B: Replication over Regions within 7-13% U Rate

Table B2: Effect of the Pilot Initiatives on <u>Unemployment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]

B2a: Male

	Panel A: Into			**Panel B:** Into		
	Involuntary Unemployment			Voluntary Unemployment		
From:	E	EFT	EPT	ET	EFT	EPT
$A_{EW} \times P^2$	0.009***	0.009***	0.012***	-0.002***	-0.001***	-0.011***
	(0.001)	(0.001)	(0.004)	(0.000)	(0.000)	(0.002)
$A_{All} \times P$	0.001	0.001**	-0.004	-0.000**	-0.001***	-0.000
	(0.001)	(0.001)	(0.004)	(0.000)	(0.000)	(0.001)
$A_{WWC} \times (1\text{-}P)$	0.005**	0.005**	0.002	0.002**	0.001	0.010***
	(0.002)	(0.002)	(0.005)	(0.001)	(0.001)	(0.002)
F-Test	175.1	68.71	10.93	100.06	39.76	45.24
p - value	0.00	0.00	0.00	0.00	0.00	0.000

B2b: Female

	Panel A: Into			**Panel B:** Into		
	Involuntary Unemployment			Voluntary Unemployment		
From:	E	EFT	EPT	ET	EFT	EPT
$A_{EW} \times P^2$	0.003***	-0.000	0.010***	-0.002***	0.002***	-0.014***
	(0.001)	(0.001)	(0.001)	(0.000)	(0.000)	(0.001)
$A_{All} \times P$	0.001***	0.001***	0.004***	-0.001***	-0.001	-0.004***
	(0.000)	(0.000)	(0.001)	(0.000)	(0.000)	(0.001)
$A_{WWC} \times (1\text{-}P)$	0.003***	0.001	0.010***	-0.000	0.001	-0.003*
	(0.001)	(0.001)	(0.003)	(0.000)	(0.001)	(0.002)
F-Test	25.27	48.59.	60.18	124.41	57.64	0.783
p - value	0.00	0.00	0.00	0.00	0.00	0.00

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age, aboriginal status, current occupation (one digit) and for years of job tenure. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

Table B2: Effect of the Pilot Initiatives on <u>Unemployment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]

B2c: Further by Type of Employment

From:	Panel A: Into Involuntary Unemployment (UIV)				Panel B: Into Voluntary Unemployment (UV)			
	Male		Female		Male		Female	
	EuwPT	Etemp	EuwPT	Etemp	EuwPT	Etemp	EuwPT	Etemp
$A_{EW} \times P^2$	0.028*	0.043***	0.005	0.018***	-0.015*	-0.003	0.005	0.002
	(0.016)	(0.007)	(0.011)	(0.004)	(0.008)	(0.003)	(0.004)	(0.003)
$A_{All} \times P$	0.002	0.001	0.004	-0.001	0.010	0.003	-0.009*	-0.004
	(0.021)	(0.005)	(0.008)	(0.004)	(0.011)	(0.003)	(0.005)	(0.003)
$A_{WWC} \times (1\text{-}P)$	0.021	0.016	0.017	0.015*	0.011	0.003	-0.009	0.000
	(0.024)	(0.010)	(0.019)	(0.008)	(0.014)	(0.003)	(0.016)	(0.002)
F-Test[3]	0.360	3.231	0.559	9.877	0.002	0.000	0.000	4.793
p - value	0.555	0.087	0.463	0.005	0.969	0.989	1.000	0.041

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age, aboriginal status, current occupation (one digit) and for years of job tenure. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

APPENDIX B: Replication over Regions within 7-13% U Rate

Table B3: Effect of the Pilot Initiatives on Employment rates
LFS Monthly Transitions – January 2003 to February 2009[1]

Table B3a: Impact on Monthly Regional Employment Rates

Employment Rate	Male			Female		
	E	EFT	EPT	E	EFT	EPT
$A_{EW} \times P$[2]	0.009*	0.010*	-0.001	0.010**	0.017***	-0.007
	(0.005)	(0.005)	(0.004)	(0.004)	(0.006)	(0.005)
$A_{All} \times P$	-0.001	0.001	-0.002	0.002	-0.001	0.004
	(0.006)	(0.005)	(0.004)	(0.004)	(0.007)	(0.006)
$A_{WWC} \times (1\text{-}P)$	-0.001	-0.001	0.001	-0.011**	-0.004	-0.007
	(0.006)	(0.008)	(0.004)	(0.004)	(0.007)	(0.005)
F -Test[3]	1.718	1.599	0.434	5.206	5.011	1.504
p - value	0.195	0.221	0.731	0.008	0.009	0.244

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^*p < .10$, $^{**}p < .05$, $^{***}p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Table B4a: Effect of the Pilot Initiatives on Job Search Outcomes
LFS Monthly Transitions – January 2003 to February 2009[1]

	Male		Female	
	Number of Job Search Methods	Proportion of Active Search Methods	Number of Job Search Methods	Proportion of Active Search Methods
$A_{EW} \times P$[2]	0.138***	0.039**	-0.076***	-0.333***
	(0.026)	(0.017)	(0.022)	(0.039)
$A_{All} \times P$	0.066***	0.042	-0.006	0.075***
	(0.011)	(0.028)	(0.012)	(0.014)
$A_{WWC} \times (1\text{-}P)$	0.017	0.068	0.013	0.050
	(0.037)	(0.064)	(0.062)	(0.037)
F-Test[3]	95.874	17.737	11.901	89.339
p - value	0.000	0.000	0.008	0.000

Table B4b: Effect of the Pilot Initiatives on Search for a Part-Time Job
LFS Monthly Transitions – January 2003 to February 2009[1]

	Male		Female	
	Single	Married	Single	Married
$A_{EW} \times P$[2]	-0.158***	0.046***	-0.221***	0.144***
	(0.015)	(0.013)	(0.043)	(0.021)
$A_{All} \times P$	0.085***	-0.040***	0.111***	-0.039*
	(0.018)	(0.006)	(0.032)	(0.022)
$A_{WWC} \times (1\text{-}P)$	0.007	0.043*	-0.034	-0.056*
	(0.021)	(0.021)	(0.045)	(0.031)
F-Test[3]	14.186	13.339	12.334	0.144
p - value	0.001	0.002	0.002	0.709

[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^*p < .10$, $^{**}p < .05$, $^{***}p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

APPENDIX B: Replication over Regions within 7-13% U Rate

Table B5: Effect of the Pilot Initiatives on <u>Spousal Labour Supply</u>

LFS Monthly Transitions – January 2003 to February 2009[1]

Intensive Margin

	Panel A Wives with Husband Unemployed		Panel B Wives with Husband Employed	
	Actual Hours Main Job	Actual Hours All Jobs	Actual Hours Main Job	Actual Hours All Jobs
$A_{EW} \times P$[2]	-29.339***	-34.008***	3.711**	3.174**
	(9.787)	(10.775)	(1.477)	(1.400)
$A_{All} \times P$	32.248**	32.986***	0.468	1.786***
	(11.371)	(10.542)	(0.801)	(0.598)
$A_{WWC} \times (1\text{-}P)$	11.972	6.979	-0.702	0.035
	(10.575)	(10.555)	(3.663)	(3.912)
F-Test[3]	3.77	4.33	2.73	5.92
p - value	0.02	0.02	0.07	0.00

Extensive Margin

	Panel A Wives with Husband Unemployed		Panel B Wives with Husband Employed	
	EPTtoOLF	EtemptoOLF	EPTtoOLF	EtemptoOLF
$A_{EW} \times P$[2]	0.331**	0.641	-0.009**	-0.012
	(0.118)	(0.517)	(0.004)	(0.009)
$A_{All} \times P$	-0.059	0.007	-0.005	-0.045***
	(0.067)	(0.124)	(0.004)	(0.007)
$A_{WWC} \times (1\text{-}P)$	0.050	0.121*	-0.000	0.017
	(0.045)	(0.064)	(0.007)	(0.010)
F-Test[3]	1.62	3.54	15.05	67.24
p - value	0.21	0.03	0.00	0.00

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age, aboriginal status, current occupation (one digit) and for years of job tenure, education and age of the spouse. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.

Table C1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]
By FT/PT Status of Last Job

C1i: Male

		Panel A			Panel B		
	From:	Involuntary Unemployment (UIV)			Voluntary Unemployment (UV)		
		toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$ [2]		0.260	0.360***	-0.100	-0.337***	-0.158	-0.179
		(0.171)	(0.077)	(0.141)	(0.090)	(0.135)	(0.112)
$A_{All} \times P$		-0.119**	-0.125**	0.006	0.089	0.040	0.049
		(0.052)	(0.057)	(0.065)	(0.069)	(0.060)	(0.035)
$A_{WWC} \times (1\text{-}P)$		-0.056	-0.133**	0.077	0.024	-0.017	0.041
		(0.088)	(0.063)	(0.071)	(0.063)	(0.043)	(0.045)
Individuals whose Previous Job was Full-Time:							
$A_{EW} \times P \times \text{FT}$ [2]		-0.277	-0.397***	0.121	0.351***	0.252**	0.099
		(0.183)	(0.088)	(0.149)	(0.076)	(0.099)	(0.076)
$A_{All} \times P \times \text{FT}$		0.096*	0.131**	-0.035	-0.122**	-0.084*	-0.038
		(0.055)	(0.056)	(0.061)	(0.056)	(0.047)	(0.034)
$A_{WWC} \times (1\text{-}P) \times \text{FT}$		0.048	0.134*	-0.086	-0.062	0.007	-0.069
		(0.094)	(0.071)	(0.075)	(0.065)	(0.049)	(0.054)
F_Test		2.737	10.552	0.932	8.002	2.559	1.341
p_value		0.054	0.000	0.433	0.000	0.066	0.273

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^*p < .10,$ $^{**}p < .05,$ $^{***}p < .01$

[2] The $A_{EW} \times P \times \text{FT}$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions for individuals whose previous job was a full-time job. The $A_{All} \times P \times \text{FT}$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot for individuals whose previous job was a full-time job. The $A_{WWC} \times (1\text{-}P) \times \text{FT}$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions for individuals whose previous job was a full-time job.

APPENDIX C: Further by Demographics
Table C1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]
By FT/PT Status of Last Job

C1j: Female

	Panel A			Panel B		
From:	Involuntary Unemployment (UIV)			Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P$ [2]	-0.220	-0.071	-0.149	0.280	0.245***	0.035
	(0.135)	(0.103)	(0.095)	(0.182)	(0.040)	(0.202)
$A_{All} \times P$	-0.059	0.032	-0.091	-0.086	-0.101***	0.015
	(0.055)	(0.043)	(0.071)	(0.068)	(0.034)	(0.048)
$A_{WWC} \times (1\text{-}P)$	0.019	-0.040	0.059	-0.081	-0.033	-0.048
	(0.075)	(0.038)	(0.063)	(0.067)	(0.045)	(0.041)
Individuals whose Previous Job was Full-Time:						
$A_{EW} \times P \times \text{FT}$ [2]	0.122	-0.067	0.189**	-0.398	-0.209***	-0.190
	(0.132)	(0.134)	(0.089)	(0.304)	(0.077)	(0.256)
$A_{All} \times P \times \text{FT}$	-0.009	-0.101**	0.091	0.019	0.060**	-0.040
	(0.084)	(0.039)	(0.079)	(0.048)	(0.028)	(0.044)
$A_{WWC} \times (1\text{-}P) \times \text{FT}$	-0.041	0.014	-0.056	0.068	0.044	0.024
	(0.069)	(0.045)	(0.063)	(0.077)	(0.053)	(0.054)
F_Test	0.504	2.962	5.213	1.053	2.980	1.363
p_value	0.681	0.042	0.003	0.378	0.041	0.266

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P \times \text{FT}$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions for individuals whose previous job was a full-time job. The $A_{All} \times P \times \text{FT}$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot for individuals whose previous job was a full-time job. The $A_{WWC} \times (1\text{-}P) \times \text{FT}$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions for individuals whose previous job was a full-time job.

Table C1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]
By Age Groups

C1k: Male

	From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
		toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P^2$		-0.115	-0.092	-0.023	-0.404***	-0.145***	-0.259*
		(0.125)	(0.089)	(0.040)	(0.131)	(0.030)	(0.143)
$A_{All} \times P$		-0.069	-0.074	0.006	0.099***	0.073**	0.026
		(0.059)	(0.051)	(0.035)	(0.030)	(0.034)	(0.022)
$A_{WWC} \times (1\text{-}P)$		-0.044	-0.029	-0.015	-0.021	0.003	-0.024
		(0.037)	(0.040)	(0.020)	(0.041)	(0.040)	(0.018)
M: Individuals 25≤age<50:							
$A_{EW} \times P \times M^2$		0.223	0.156	0.067	0.615**	0.341***	0.275*
		(0.172)	(0.130)	(0.051)	(0.262)	(0.117)	(0.156)
$A_{All} \times P \times M$		0.008	0.046	-0.038	-0.236**	-0.215***	-0.021
		(0.068)	(0.071)	(0.041)	(0.089)	(0.069)	(0.036)
$A_{WWC} \times (1\text{-}P) \times M$		0.048	0.027	0.022	-0.036	-0.027	-0.009
		(0.049)	(0.049)	(0.024)	(0.045)	(0.041)	(0.027)
O: Individuals 50≤age<65:							
$A_{EW} \times P \times O^2$		-0.253**	-0.225***	-0.028	-0.436***	-0.659***	0.223
		(0.108)	(0.081)	(0.043)	(0.083)	(0.155)	(0.136)
$A_{All} \times P \times O$		0.131**	0.172**	-0.041	-0.169	-0.188	0.020
		(0.061)	(0.072)	(0.052)	(0.141)	(0.140)	(0.028)
$A_{WWC} \times (1\text{-}P) \times O$		0.043	0.034	0.009	0.067	-0.020	0.087**
		(0.054)	(0.054)	(0.026)	(0.061)	(0.061)	(0.036)
F_Test (M)		1.245	1.024	0.894	2.766	4.085	1.879
p_value		0.305	0.391	0.451	0.052	0.012	0.146
F_Test (O)		1.951	2.690	1.702	15.810	38.256	3.322
p_value		0.135	0.057	0.180	0.000	0.000	0.028

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P \times X$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions for individuals in the X age group. The $A_{All} \times P \times X$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot for individuals in the X age group. The $A_{WWC} \times (1\text{-}P) \times X$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions for individuals in the X age group.

Table C1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]
By Age Groups

C1l: Female

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P^2$	-0.593***	0.117	-0.710***	0.251***	0.058	0.193*
	(0.188)	(0.188)	(0.119)	(0.089)	(0.129)	(0.103)
$A_{All} \times P$	0.040	-0.151	0.191***	-0.119	-0.090**	-0.029
	(0.180)	(0.165)	(0.037)	(0.085)	(0.039)	(0.060)
$A_{WWC} \times (1\text{-}P)$	-0.036	-0.153**	0.117**	-0.094	-0.015	-0.079*
	(0.066)	(0.071)	(0.057)	(0.067)	(0.037)	(0.043)
Individuals 25≤age<50:						
$A_{EW} \times P \times M^2$	0.471**	-0.321	0.791***	-0.241***	0.071	-0.312***
	(0.205)	(0.233)	(0.122)	(0.074)	(0.093)	(0.047)
$A_{All} \times P \times M$	-0.091	0.161	-0.253***	0.047	0.026	0.021
	(0.189)	(0.151)	(0.056)	(0.069)	(0.049)	(0.045)
$A_{WWC} \times (1\text{-}P) \times M$	-0.009	0.137*	-0.146*	0.078	-0.003	0.081
	(0.070)	(0.078)	(0.073)	(0.088)	(0.049)	(0.067)
Individuals 50≤age<65:						
$A_{EW} \times P \times O^2$	0.682**	-0.119	0.801***	-0.208*	0.031	-0.239
	(0.319)	(0.260)	(0.114)	(0.109)	(0.136)	(0.143)
$A_{All} \times P \times O$	-0.201	0.047	-0.247***	0.185*	0.099*	0.086
	(0.156)	(0.148)	(0.045)	(0.101)	(0.050)	(0.115)
$A_{WWC} \times (1\text{-}P) \times O$	0.071	0.172**	-0.102	0.259***	0.095	0.165**
	(0.057)	(0.066)	(0.066)	(0.081)	(0.058)	(0.067)
F_Test (M)	9.695	1.560	18.028	4.978	0.356	24.474
p_value	0.000	0.212	0.000	0.004	0.785	0.000
F_Test (O)	2.438	2.182	33.582	4.274	1.510	3.496
p_value	0.077	0.103	0.000	0.010	0.224	0.023

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^{*}\,p < .10,\,^{**}\,p < .05,\,^{***}\,p < .01$

[2] The $A_{EW} \times P \times X$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions for individuals in the X age group. The $A_{All} \times P \times X$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot for individuals in the X age group. The $A_{WWC} \times (1\text{-}P) \times X$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions for individuals in the X age group.

APPENDIX C: Further by Demographics
Table C1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]
By Education Groups

C1m: Male

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P^2$	-0.116**	-0.120**	0.003	-0.277**	-0.006	-0.271**
	(0.052)	(0.055)	(0.015)	(0.137)	(0.195)	(0.134)
$A_{All} \times P$	-0.024	-0.033	0.009	0.072	0.008	0.064**
	(0.035)	(0.038)	(0.015)	(0.064)	(0.049)	(0.025)
$A_{WWC} \times (1\text{-}P)$	-0.066**	-0.070**	0.004	-0.046	0.011	-0.057
	(0.032)	(0.028)	(0.018)	(0.051)	(0.037)	(0.037)
HS: Individuals with High School Degree:						
$A_{EW} \times P \times HS^2$	0.086	0.108	-0.022	0.117	-0.060	0.177
	(0.110)	(0.106)	(0.020)	(0.134)	(0.178)	(0.109)
$A_{All} \times P \times HS$	0.048	0.086*	-0.038*	-0.031	0.007	-0.038
	(0.047)	(0.047)	(0.022)	(0.082)	(0.075)	(0.032)
$A_{WWC} \times (1\text{-}P) \times HS$	0.047	0.072*	-0.025	0.032	0.001	0.032
	(0.037)	(0.042)	(0.031)	(0.062)	(0.051)	(0.042)
O: Individuals with College Degree:						
$A_{EW} \times P \times COL^2$	0.296***	0.246***	0.050	0.536***	0.200	0.337***
	(0.058)	(0.058)	(0.038)	(0.110)	(0.164)	(0.107)
$A_{All} \times P \times COL$	-0.084	-0.016	-0.068	-0.268***	-0.145*	-0.123***
	(0.051)	(0.044)	(0.041)	(0.068)	(0.085)	(0.044)
$A_{WWC} \times (1\text{-}P) \times COL$	0.092**	0.093**	-0.001	0.026	-0.054	0.080*
	(0.041)	(0.040)	(0.022)	(0.077)	(0.059)	(0.046)
F_Test (M)	9.695	1.560	18.028	4.978	0.356	24.474
p_value	0.000	0.212	0.000	0.004	0.785	0.000
F_Test (O)	2.438	2.182	33.582	4.274	1.510	3.496
p_value	0.077	0.103	0.000	0.010	0.224	0.023

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. $^* p < .10$, $^{**} p < .05$, $^{***} p < .01$

[2] The $A_{EW} \times P \times X$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions for individuals in the X education group. The $A_{All} \times P \times X$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot for individuals in the X education group. The $A_{WWC} \times (1\text{-}P) \times X$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions for individuals in the X education group.

Table C1: Effect of the Pilot Initiatives on <u>Employment Transitions</u>
LFS Monthly Transitions – January 2003 to February 2009[1]
By Education Groups

C1n: Female

From:	Panel A Involuntary Unemployment (UIV)			Panel B Voluntary Unemployment (UV)		
	toE	toEFT	toEPT	toE	toEFT	toEPT
$A_{EW} \times P^2$	-0.154**	-0.038	-0.116**	0.119	0.035	0.084
	(0.071)	(0.079)	(0.052)	(0.080)	(0.089)	(0.073)
$A_{All} \times P$	-0.130	-0.105	-0.025	-0.063	-0.088	0.025
	(0.092)	(0.080)	(0.031)	(0.077)	(0.057)	(0.039)
$A_{WWC} \times (1\text{-}P)$	0.008	0.041	-0.033	0.001	-0.004	0.004
	(0.065)	(0.043)	(0.036)	(0.058)	(0.025)	(0.053)
HS: Individuals with High School Degree:						
$A_{EW} \times P \times HS^2$	0.361*	0.264***	0.097	-0.121	0.141	-0.262*
	(0.208)	(0.069)	(0.152)	(0.258)	(0.137)	(0.144)
$A_{All} \times P \times HS$	0.019	0.068	-0.049	-0.020	-0.004	-0.016
	(0.103)	(0.071)	(0.044)	(0.062)	(0.059)	(0.045)
$A_{WWC} \times (1\text{-}P) \times HS$	0.005	-0.018	0.023	-0.120	-0.007	-0.112
	(0.073)	(0.061)	(0.041)	(0.081)	(0.040)	(0.079)
O: Individuals with College Degree:						
$A_{EW} \times P \times COL^2$	-0.168***	-0.357***	0.190**	-0.085	0.056	-0.142
	(0.051)	(0.102)	(0.080)	(0.159)	(0.106)	(0.097)
$A_{All} \times P \times COL$	0.133**	0.100*	0.033	0.009	0.121	-0.113**
	(0.066)	(0.054)	(0.034)	(0.101)	(0.073)	(0.042)
$A_{WWC} \times (1\text{-}P) \times COL$	-0.051	-0.116**	0.066*	-0.009	0.011	-0.020
	(0.067)	(0.051)	(0.037)	(0.071)	(0.053)	(0.077)
F_Test (M)	9.695	1.560	18.028	4.978	0.356	24.474
p_value	0.000	0.212	0.000	0.004	0.785	0.000
F_Test (O)	2.438	2.182	33.582	4.274	1.510	3.496
p_value	0.077	0.103	0.000	0.010	0.224	0.023

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age aboriginal status, full-time status of the previous job, occupation (one digit) of the previous job and months of unemployment duration. Clustered standard errors at the region level in parenthesis. * $p < .10$, ** $p < .05$, *** $p < .01$

[2] The $A_{EW} \times P \times X$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions for individuals in the X education group. The $A_{All} \times P \times X$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot for individuals in the X education group. The $A_{WWC} \times (1\text{-}P) \times X$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions for individuals in the X education group.

APPENDIX D: Replication of the main estimations with different eligibility rates

Table D1a: Single Male Eligibility 1 (based on FT-PT previous job info)

	(1) UIVEItoE1	(2) UIVEItoEFT1	(3) UIVEItoEPT1	(4) UVtoE	(5) UVtoEFT	(6) UVtoEPT
afterEWpilot	-0.215**	-0.183**	-0.033*	0.016	0.213	-0.197**
	(0.085)	(0.082)	(0.019)	(0.090)	(0.136)	(0.091)
afterallApilot	-0.004	-0.026	0.022	0.085	0.050	0.035**
	(0.052)	(0.037)	(0.026)	(0.057)	(0.057)	(0.017)
afterWWOCnonpilot	-0.017	-0.022	0.006	-0.036	-0.000	-0.035*
	(0.036)	(0.032)	(0.018)	(0.039)	(0.037)	(0.019)
F_diff	8.267	4.863	1.157	2.344	5.358	4.211
p_diff	0.000	0.005	0.336	0.085	0.003	0.010

Table D1b: Single Male Eligibility 2 (based on FT-PT & EI region)

	(1) UIVEItoE2	(2) UIVEItoEFT2	(3) UIVEItoEPT2	(4) UVtoE	(5) UVtoEFT	(6) UVtoEPT
afterEWpilot	-0.239***	-0.166***	-0.074**	0.016	0.213	-0.197**
	(0.053)	(0.034)	(0.029)	(0.090)	(0.136)	(0.091)
afterallApilot	0.038	-0.005	0.043***	0.085	0.050	0.035**
	(0.058)	(0.056)	(0.016)	(0.057)	(0.057)	(0.017)
afterWWOCnonpilot	-0.020	-0.026	0.006	-0.036	-0.000	-0.035*
	(0.025)	(0.024)	(0.014)	(0.039)	(0.037)	(0.019)
F_diff	7.616	13.820	3.539	2.344	5.358	4.211
p_diff	0.000	0.000	0.022	0.085	0.003	0.010

Standard errors in parentheses

APPENDIX D: Replication of the main estimations with different eligibility rates

Table D1b: Single Female Eligibility 1 (based on FT-PT previous job info)

	(1) UIVEItoE1	(2) UIVEItoEFT1	(3) UIVEItoEPT1	(4) UVtoE	(5) UVtoEFT	(6) UVtoEPT
afterEWpilot	-0.475**	0.054	-0.529***	0.109	0.243***	-0.134
	(0.214)	(0.196)	(0.173)	(0.105)	(0.068)	(0.146)
afterallApilot	-0.000	-0.142	0.142***	-0.071	-0.143***	0.072**
	(0.124)	(0.120)	(0.048)	(0.052)	(0.036)	(0.032)
afterWWOCnonpilot	-0.014	-0.021	0.007	-0.075	0.026	-0.101***
	(0.060)	(0.050)	(0.040)	(0.051)	(0.032)	(0.031)
F_diff	5.402	0.825	5.433	2.430	7.337	7.258
p_diff	0.003	0.487	0.003	0.077	0.000	0.000

Table D1c: Single Female Eligibility 2 (based on FT-PT & EI region)

	(1) UIVEItoE2	(2) UIVEItoEFT2	(3) UIVEItoEPT2	(4) UVtoE	(5) UVtoEFT	(6) UVtoEPT
afterEWpilot	-0.004	0.195	-0.199	0.109	0.243***	-0.134
	(0.200)	(0.192)	(0.189)	(0.105)	(0.068)	(0.146)
afterallApilot	-0.024	-0.114*	0.089*	-0.071	-0.143***	0.072**
	(0.094)	(0.063)	(0.045)	(0.052)	(0.036)	(0.032)
afterWWOCnonpilot	-0.033	-0.074	0.041	-0.075	0.026	-0.101***
	(0.058)	(0.057)	(0.037)	(0.051)	(0.032)	(0.031)
F_diff	0.127	1.790	6.115	2.430	7.337	7.258
p_diff	0.944	0.162	0.001	0.077	0.000	0.000

APPENDIX D: Replication of the estimation over the sample with information on EI eligibility of the unemployed husband

Table D5
Estimated Effect of the Pilot Initiatives on Spousal Labour Supply
LFS Monthly Transitions – January 2003 to February 2009[1]

Intensive Margin

	Panel A Wives with Husband Unemployed and EI eligible		Panel B Wives with Husband Employed	
	Actual Hours Main Job	Actual Hours All Jobs	Actual Hours Main Job	Actual Hours All Jobs
$A_{EW} \times P$[2]	-31.859**	-28.920**	1.086	2.319
	(12.787)	(13.675)	(5.105)	(4.309)
$A_{All} \times P$	16.235	18.095	0.723	2.732
	(18.870)	(19.189)	(2.771)	(3.054)
$A_{WWC} \times (1\text{-}P)$	-8.545	-13.927*	-2.478	-2.072
	(7.668)	(7.067)	(3.242)	(3.543)
F -Test[3]	2.365	2.465	1.340	4.459
p - value	0.083	0.074	0.273	0.008

Extensive Margin

	Panel A Wives with Husband Unemployed		Panel B Wives with Husband Employed	
	EPTtoOLF	EtemptoOLF	EPTtoOLF	EtemptoOLF
$A_{EW} \times P$[2]	0.133	0.236**	0.004	0.009
	(0.084)	(0.103)	(0.013)	(0.009)
$A_{All} \times P$	0.036	0.049	-0.000	-0.002
	(0.023)	(0.072)	(0.003)	(0.010)
$A_{WWC} \times (1\text{-}P)$	0.028*	0.068***	-0.001	-0.004
	(0.016)	(0.024)	(0.003)	(0.006)
F -Test[3]	2.817	6.301	0.058	0.813
p - value	0.049	0.001	0.981	0.493

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[1] All regressions include monthly and EI region dummies as well as dummies for education, age, aboriginal status, current occupation (one digit) and for years of job tenure, education and age of the spouse. Clustered standard errors at the region level in parenthesis. $^{*}p < .10$, $^{**}p < .05$, $^{***}p < .01$

[2] The $A_{EW} \times P$ interaction dummy indicates the period starting in June 2004 when the EW pilot was implemented in the pilot regions. The $A_{All} \times P$ interaction dummy indicates the period starting in December 2005 when the other pilots' (Best 14, NERE and WWOC) were added to the EW pilot. The $A_{WWC} \times (1\text{-}P)$ interaction dummy indicates the period starting in September 2008 when the WWOC pilot was implemented in all the regions, and therefore in the nonpilot regions.

[3] Test of joint statistical significance of the EW pilot, the All combined pilots and the WWOC pilot effects.