Revista
Desarrollo y Sociedad

71 | 7
Primer semestre 2013
PP. 7-42, ISSN 0120-3584

Unemployment Insurance Design and Its Effects: Evidence for Uruguay[1]

El diseño del seguro de desempleo y sus efectos: evidencia para Uruguay

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DOI: 10.13043/DYS.71.1

Abstract

Using unemployment insurance records and social security labor histories, we provide evidence of the impacts of recent changes in the unemployment insurance system of Uruguay. We estimate the effects on unemployment duration and post unemployment wages. Two main changes are considered: the modification in the scheme of payments —from a lump sum during six months to a decreasing system of payments during the same period— and extension in the duration of the benefit up to one year for workers 50 or older. We consider different impact evaluation techniques (propensity score, difference in

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1 This article was prepared for the Latin-American Research Network sponsored by the Inter-American Development Bank, as part of the project "Protecting Workers against Unemployment in Latin America and the Caribbean". We acknowledge useful comments and suggestions from Robert LaLonde, Carmen Pagés-Serra, Verónica Alaimo, Jacqueline Mazza and Marisa Bucheli, as well as helpful comments received from other researchers participating in the project. We thank two anonymous referees for helpful comments. Finally, we are grateful to Banco de Previsión Social for providing the data for this study, and to Gabriel Lagomarsino for his help in the administrative process to get the data. Any errors are our own.

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Este artículo fue recibido el 25 de abril de 2012; revisado el 6 de diciembre de 2012 y, finalmente, aceptado el 15 de marzo de 2013.

differences and regression discontinuity), and find that the change in the payment scheme has implied a small reduction in unemployment duration, with no effects in terms of subsequent earnings. The possibility of extension of the unemployment insurance for older workers has led to an extension in unemployment duration and it has not helped to subsidize better job matches in the form of better paying jobs.

Key words: Unemployment insurance, impact evaluation.

JEL classification: J64, J65, J68.

Resumen

En este artículo se analizan los impactos de los cambios recientes en el seguro de desempleo de Uruguay. Combinando información de las historias laborales de la seguridad social y de los registros administrativos del programa de seguro de desempleo, se estiman los efectos de las recientes modificaciones sobre la duración del desempleo y los salarios de reingreso al mercado laboral. Los cambios analizados consisten en la variación del esquema de pagos, que pasó de una transferencia de sumas fijas a un régimen de pagos decrecientes en el tiempo, y la extensión de la duración potencial del seguro de desempleo para los trabajadores de cincuenta años y más. Se utilizan distintas metodologías (*propensity score*, diferencias en diferencias y regresión discontinua) y se encuentra que el cambio en el esquema de pagos implicó una reducción en la duración del desempleo, aunque de pequeña magnitud, sin modificaciones en los ingresos al reingresar al mercado de trabajo. Para los trabajadores de mayor edad, la duración del seguro se ha extendido como consecuencia del cambio introducido y no ha estado acompañado de mejores salarios para quienes reingresaron al mercado laboral.

Palabras clave: seguro de desempleo, evaluación de impacto.

Clasificación JEL: J64, J65, J68.

Introduction

The design of the unemployment insurance program may have important consequences on labor market outcomes. In particular, it can affect both

unemployment duration and the quality of subsequent job matches. On the unemployment duration side, job search models show that higher benefits and longer benefit duration may lead to longer unemployment spells (Hopenhayn and Nicolini, 1997; Meyer, 1990; Moffit, 1985; Mortensen, 1977), as beneficiaries of the UI have higher reservation wages and make less effort in the search process. Theory then clearly predicts a positive relation between UI and unemployment duration, and the empirical evidence confirms this relationship. The well known empirical result about the spike in the exit rate from unemployment next to the expiration date has been interpreted as an illustration of the disincentive effects of the UI system. A different vision is provided by Chetty (2008), who argues that most of the increase in unemployment duration caused by UI is due to a liquidity effect -which is welfare enhancing- instead of distortions in the marginal incentives to search. Among the more important empirical contributions related to measuring the effects of potential benefit duration on unemployment duration are Katz and Meyer (1990), Hunt (1995), Card and Levine (2000), Van Ours and Vodopivec (2006).

On the effects of UI on subsequent employment outcomes, two channels can be identified. If UI benefits increase reservation wages, one would expect UI beneficiaries to earn higher wages after they are reemployed. Also, unemployment may operate as a subsidy, allowing the unemployed people to wait until they receive an offer more suitable for their skills. This outcome favors post-unemployment job stability, improving the efficiency of the matching process (Marimon and Zilibotti, 1999). In those ways, UI can contribute to better job matches (higher salaries, more stability). The effects of UI on post unemployment wage outcomes have been addressed by Addison and Blackburn (2000), who report modest evidence in support of UI increasing post unemployment wages of recipients when compared to non recipients in the US.[3] Belzil (2001) also finds a weak positive effect of UI on subsequent job duration for Canada. More recent empirical evidence is provided by Tatsiramos (2009) for European countries, suggesting that even if receiving UI benefits has a direct negative effect in terms of reducing the duration of unemployment spell, it also has a positive effect on subsequent employment stability.

3 The pioneering research in this topic is Ehrenberg and Oaxaca (1976), who find a positive relation between the UI replacement ratio and post unemployment wages, and Classen (1977), who reports no evidence of an increase in benefits leading to the acceptance of more lucrative job offers.

Van Ours and Vodopidec (2008) find, for the Slovenian case, that reducing the potential duration of unemployment benefits has no detectable effect on post employment wages or job stability.

Empirical evidence is scant for developing countries, especially in the case of subsequent employment outcomes, and it is almost missing for Latin American countries. On the one hand, the experience of the region with these programs is very limited (see Mazza, 2000), and on the other hand, for those countries who do have UI programs, the restriction is the available microdata sets. Recent evidence is provided for Argentina by Rozada et al. (2011), who find that unemployment duration increases when unemployment insurance transfers are higher or provided for a longer period.

In this paper, we provide new evidence on the effects of the UI on unemployment duration and subsequent employment wage in a developing country. Recent changes in the legislation of the UI system in Uruguay allow us to undertake this impact evaluation study. We assess the impacts of two main changes: the modification of the scheme of payments, from a lump sum during six months to a scheme of decreasing payments during the same period, and the possibility of extension of the UI benefit up to one year for workers 50 or older.

Using unemployment insurance records and social security labor histories and based on different evaluation strategies, we try to disentangle the effect of each of these changes. For the first modification, the impact evaluation strategy is based on propensity score and difference-in-differences estimators, for the second change, effects are estimated using regression discontinuity design.

The article is organized as follows: first we present the Uruguayan unemployment insurance program (section I). We then discuss our empirical strategy and describe our data (section II). Later, we discuss the effects of the change on the scheme of benefits on unemployment duration and reemployment wages (section III). We then analyse the impact of the extension in the duration of UI for workers aged 50 or more (section IV) and finally present some concluding remarks (section V).

I. The Uruguayan Unemployment Insurance

A. Overview of the System and Recent Changes

The origins of the present Uruguayan unemployment insurance date back to 1958, when a very similar program was created. It was modified later on in 1962 and in 1982. This last version of the UI system operated until 2009, when the program went through important modifications (law 18399). The program depends on the Ministry of Labor, and is under the administration of the social security main institution, Banco de Previsión Social (BPS).

There are three possible reasons or causes for entering the program: job loss (being fired or permanently laid off), job suspension (total suspension of activities for a period, temporary lay-off) and job reduction (when days of work or hours of work suffer from a reduction of at least 25%). The modality of job suspension allows firms to lay off workers when facing demand fluctuations, and recall them back when UI benefits are exhausted.[4]

Originally, the program was mandatory for private and rural workers, excluding domestic workers and workers from the financial system. Rural workers were included as beneficiaries since 2001. To have this subsidy, workers should have worked at least six months in the previous year, and they should have been involuntarily unemployed. Unemployment insurance lasts for six months or the equivalent to 72 days of labor for day laborers. Until February 2009, the subsidy was 50% of the average wage of the last six months, or a monthly subsidy equivalent to 12 working days. That amount could never be less than half the minimum wage. In the case of job reduction, the amount of the benefit is the difference between 50% of their average wage during the previous six months, and the salary they continue to get from their employees.

Married workers or workers responsible for other people receive an additional 20%. The worker cannot re-enter the insurance program until a year has passed since the last time he received the benefit. Although the worker may receive the benefit for a maximum of six months, the Executive Power can extend this period, in a rather discretional way. This extension is supposed not to surpass

4 This modality has led to the use of the program as a subsidy for firms whose activity presented important seasonal features (see Amarante and Bucheli, 2008).

18 months, although this has been violated in some occasions. The general rule is that if the worker does not return to his job after six months, he has been *the facto* fired and has the right to get severance payment.

UI beneficiaries loose the benefit if they get another job, reject a job offer or get a pension. The first requirement implies that workers receiving the unemployment insurance could not have a job that implies a contribution to the social security system, although if they are working in the informal sector this may not be detected. The system does not include the monitoring of unemployed workers or the application of punitive sanctions. UI beneficiaries may voluntary apply to receive training, financed by the Fondo de Reconversión Laboral (FRL).

Important modifications to the unemployment insurance program were introduced with the approval of law 15.180, implemented in February 2009. The coverage did not change: the unemployment insurance is mandatory for all private (formal) workers. The most relevant has to do with the amount of the benefits for those permanently laid off: instead of receiving an equal sum every month during at most six months, the new system establishes a decreasing scheme for benefits. This implies an average benefit of 66% of his previous salary in the first month (instead of 50% as before). This modification is aimed at fostering job search among beneficiaries. The maximum benefit is kept equal on average, but adapted to the new decreasing scheme.

Another important change refers to workers aged 50 or more, who can now keep the subsidy for six additional months. During this last additional six months, they receive the same amount of benefit than during the sixth month (40%). This change tries to address the difficulties that this group of workers finds when trying to re-enter the labor market. They represent approximately 15% of total beneficiaries.

These two main changes, detailed in Table 1, are the ones evaluated in this article.

Other modifications, not addressed in this article, include the reduction in unemployment duration from six to four months for those beneficiaries under the regime of suspension (temporary job loss). Workers under this regime were

not considered in this evaluation. The new regulations also attempt to coordinate UI with active labor market policies, and theoretically beneficiaries may lose their UI benefits if they do not participate in training courses offered by the Ministry of Labor. Another change is the introduction of compatibility between the unemployment insurance and holding other economic activity. Also, in the new regime, a worker can interrupt the benefits for a short time, in case he gets a temporary job, and then return to the insurance system. Finally, before February 2009 the benefit could only be claimed within 30 days after the last day of work, in the actual regime there are no restrictions.

Table 1. Main Changes of Unemployment Insurance System in Uruguay

	Old Regime	New Regime (February 2009)
Benefit amount	Lump sum: • 50% of the average wage of the last six months or subsidy equivalent to 12 days of labor for day laborers (job loss or suspension) • difference between 50% of their average wage during the previous six months, and the salary they continue to get from their employees (job reduction) • Minimum: half BPC / Maximum: 8 BPC	Job loss: decreasing scheme (as % of average wage of last 6 months): 1st month: 66%, 2nd month: 57%, 3rd month: 50%, 4th month: 45%, 5th month: 42%, 6th month: 40%. For day laborers: equivalent to 16 days of labor in the 1st month, 14 in the 2nd, 12 in the 3rd, 11 in the 4th, 10 in the 5th and 9 in the 6th. Job suspension or job reduction: similar to the old system • Minimum: 1 BPC/ Maximum: similar to the old system (adjusted to the new decreasing scheme in the case of job loss)
Benefit duration	-6 months • 72 days of labor (day laborers)	• 6 months in the modality of job loss or job reduction (or 72 days of labor) • 4 months in the modality of suspension (or 48 labor days) • can be extended to one year for workers older than 50 • can be extended to 8 months for job loss in cases of economic recession

Note: BPC means Base de Prestaciones Contributivas. In December 2010, a BPC was equivalent to 2061 $ (103 USD), and represented 46% of the National Minumum Wage.

Source: Authors' elaboration based on decree-law 15180 and law 18399.

B. Basic Statistics

Before considering some basic statistics about the UI program, it is worth presenting some information about the Uruguayan labor market, and in particular the informal sector.

The role of unemployment insurance programs has special features in developing countries, as the size of the informal sector may exert a relevant influence. Whereas in the traditional moral hazard problem employment status is observable and workers cannot lie to the authorities, in economies with large informal sectors workers can join the informal sector and receive unemployment benefits. This means that the presence of a large informal sector may undermine the utility of unemployment insurance programs by providing undesired incentives to increase informal sector employment while receiving the insurance. Studies about the consequences of UI benefits in dual labor markets are not abundant, exceptions including Alvarez-Parra and Sánchez (2009), Vodopivec (2009) and Bardey and Jaramillo (2011).[5]

In Uruguay, the informal sector, defined as workers who do not contribute to the social security sector, comprises 32% of total workers in 2009. The first comparable figure corresponds to 2001, and in that year the informal sector represented 36% of total employment. If only private workers are considered (they represent 57% of total employment in 2009), non contributors were 30% in 2001 and 24% in 2009. During the last decade, contributions to social security decreased between 2001 and 2004, but have been increasing during the last years, mainly driven by private workers (see Table A1). This configures a situation where private formal workers —those who may apply for the insurance— represent around 44% of total workers in 2009. Moreover, according to household survey information, almost 25% of unemployed in 2005 had lost their previous job within the prior six months, but that job was informal (Amarante and Bucheli, 2008).

These structural characteristics of Uruguayan labor market explain the low coverage of the UI program. Around 48% of those unemployed in 2009 were not supposed to be covered by the insurance, because they were looking for their first job or re-entering the labor market after a long absence.

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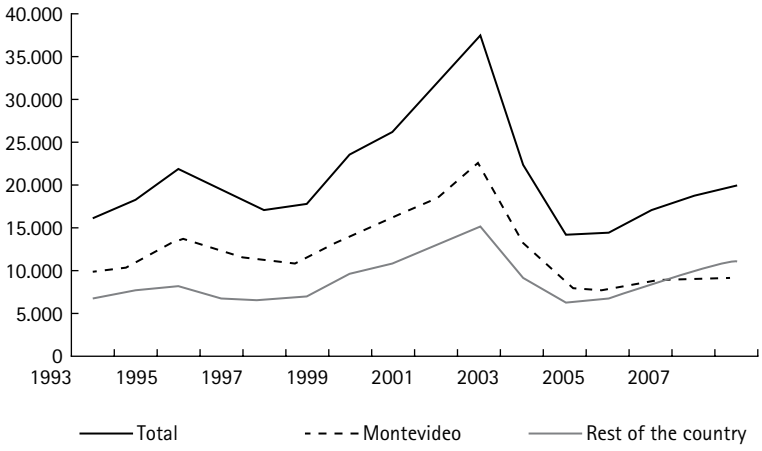
5 Alvarez-Parra and Sánchez (2009) find that payment profile must be relatively flat to avoid participation and keep search effort high, and there must be no payments for long run unemployed. Bardey and Jaramillo (2011) conclude that one shot UI programs would not necessarily have negative consequences on labor market in developing countries, as they may not reduce the effort made by unemployed to secure a new job in the formal sector during the same period. Vodopedic (2009) discusses how to adjust UI designs for developing countries. Suggested adaptations include self-insurance financing, complemented by solidarity funding, simpler eligibility conditions and even weaker monitoring.

According to administrative records, the number of beneficiaries of the UI program has shown some oscillations until 1999 and a sharp increase during the economic crises. Average beneficiaries in 2002 more than doubled those of 1998 (37302 versus 17652) (Graph 1).

Graph 1. Beneficiaries of the Unemployment Insurance. 1993-2009



Source: Based on Banco de Previsión Social (2010).

Data from BPS allows analyzing the profile of UI beneficiaries. Most of them are men (70% in 2008). At the beginning of the period beneficiaries from Montevideo represented more than 55% of total beneficiaries, but by 2009 they were just 44%. Beneficiaries are concentrated in central ages (around 50% are between 30 and 49 years old). During the last years, efforts were made, in terms of more requirements, to dissuade firms from using the suspension modality, whose importance has decreased. Whereas in 2000 almost 60% of beneficiaries corresponded to this modality, in 2008 the figure was around 33%. Finally, most of the beneficiaries have family dependents (Table 2).

The program is small in terms of the resources involved. It represents around 2% of total BPS expenditures, and less than 1% of GDP. Its financial importance increased in 2002, during the economic crises (Table 3).

The program's coverage can be analyzed based on data from the household survey. In this survey, unemployed are asked if they receive the unemployment insurance. As shown in Table A2, data from the household survey very much

Table 2. Characteristics of Unemployment Insurance Beneficiaries

	1992	1995	2000	2005	2008	2009
Men	66.9	69.8	68.3	65.1	70.1	70.0
Women	33.1	30.2	31.7	34.9	29.9	30.0
Montevideo	55.3	63.1	59.6	51.2	43.5	43.8
Rest of the country	44.7	36.9	40.4	48.8	56.5	56.2
Younger than 20	3.0	3.4	2.1	2.1	2.4	2.1
20-29	33.0	31.7	33.6	26.6	29.5	32.6
30-39	26.1	27.4	22.1	29.9	25.0	29.6
40-49	20.5	19.9	17.4	21.1	19.6	19.6
50-59	12.2	12.7	12.7	12.0	12.4	13.0
60 and more	2.6	2.8	2.5	2.8	3.0	3.1
Job loss	43.4	41.6	43.0	60.0	65.5	62.1
Suspension	55.2	57.9	56.9	31.3	25.6	33.3
Job reduction	1.4	0.5	0.1	8.8	8.5	4.6
With family	67.7	62.9	64.1	65.7	63.1	63.4
Without family	32.3	37.1	35.9	34.3	36.9	36.6

Source: Authors' calculations based on BPS statistical yearbook.

Table 3. Amount of UI Benefits. 1993-2009

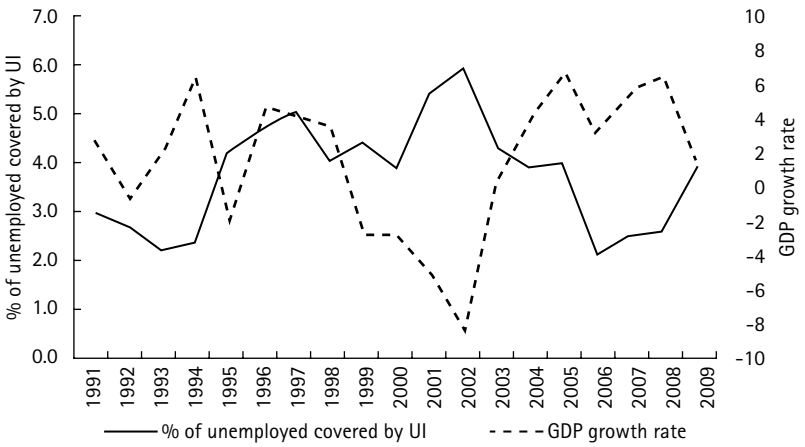
	Total Benefit Payments (Constant Terms, Index Base Year = 1993)	Benefit Payments/ BPS Expenditure	Benefit Payments/GDP
1993	100.0	2.2%	0.2%
1995	128.9	2.6%	0.2%
2000	169.6	3.0%	0.2%
2005	67.3	1.5%	0.1%
2008	105.8	2.4%	0.3%

Source: Authors' calculations based on BPS statistical yearbook.

resembles that from administrative records, which in turn include all unemployed in Uruguay. The percentage of unemployed receiving the benefit has been between 2.4 and 6.2% during the last two decades. The higher coverage of 6.2% of unemployed corresponds to the worst moment of the economic crisis in Uruguay (2002) (Graph 2).[6]

6 Those workers who receive the unemployment insurance under the modality of suspension are considered as employed by the household survey, and so are not included in these figures.

Graph 2. UI Coverage and Economic Growth



Source: Authors' calculations based on household surveys and data from Banco Central del Uruguay.

II. Empirical Strategy and Data Description

Our impact evaluation of the unemployment insurance program is based on two data sets: administrative records from the unemployment insurance program and a sample of longitudinal data on social security records. The main outcomes analyzed in this paper are mean duration of unemployment and wage at reemployment, the latter being an indicator of the quality of job matching.

Three different evaluation strategies are used: propensity score, difference in difference and regression discontinuity design (see table 4). In the propensity score and difference in difference strategy, the wage outcome reflects the change between wage before the unemployment event and wage at reemployment. In the regression discontinuity design, wages at reemployment of control and treatment groups are compared.

The unemployment data cover the universe of all unemployed workers who entered the program 15 months before and 15 months after the modification of the program (February 2009). These data come from the administrative records of BPS, and include information on sex, date of birth and sector of activity, as well as the exact amount of money they received and the months they were in the program. For these workers that entered the unemployment

insurance, we also have all their labor history until April 2010, so we can know if they returned to work once the UI expired, and in case they returned to employment, their wage at reemployment. One of our strategies to analyze the effects of the change in the scheme benefits is to compare similar workers before and after the modifications were implemented, comparing them by means of propensity score matching. A sub-sample of this data set, including workers aged 46 to 53 at the moment of unemployment, allows evaluating the impact of the extension of duration for older workers, using regression discontinuity design.

As a second strategy to evaluate the impact of the change in the scheme of benefits, data on social security records were used to construct a control group of workers who lost their formal job but were not covered by the UI. This control group was compared to treated workers (those who entered the UI program), before and after the change in the design, using difference in difference estimates. The following table describes the evaluation strategy used to analyze each change, detailing the treatment and control groups in each case.

Table 4. Impact Evaluation Strategy

Reform of UI Evaluated	Evaluation Strategy	Definition of Treatment and Control Groups	Data Bases Used in the Analysis
1. Change in scheme of payments	1. 1 Propensity Score Matching (PSM)	T: unemployment beneficiaries after the change C: unemployment beneficiaries before the change	Both treatment and control groups come from the administrative records of the UI program
	1.2 Differences in differences (DD)	T: unemployment beneficiaries before and after the change C. Out of the labor force, without insurance	Treatment group comes from the administrative records of the UI program. Control group comes from labor histories (social security data)
2. Increase in maximum duration for 50 & older UI recipients	2.1 Regression Discontinuity (RD)	T: 50-53 after the change C: 46-49 after the change	Both treatment and control groups come from the administrative records of the UI program

Source: Authors' elaboration.

One drawback of our data for both the PSM and DD strategies is that we are not considering the same length of time after being out of the labor force for all workers. In fact, for those workers who entered the UI program 15 months

before the change, we have information for the 30 subsequent months, whereas for those workers who entered the UI program 10 months after the reform, we have information only on the 5 subsequent months. In other words, the probability that a worker gets a formal job is higher for those workers who entered the UI before the change, because we have a longer spell of time. Furthermore, the potential duration of a spell of unemployment is related to an individual's treatment status.

To avoid this problem and make both groups as comparable as possible, we recoded unemployment duration for the first group of workers, allowing the same window of time for them as that for the post reform group. For example, if a worker became unemployed one month before the reform, and he gets a formal job after 15 months, we consider he didn't get a formal job in the period (this universe is considered as sample 1).

As a second strategy to limit problems derived from the observation of incomplete spells, we constructed another subsample, extracted from this one, which only considers workers with complete unemployment duration observed (sample 2). All estimations were undertaken for both samples.

III. The Effects of the Change in the Scheme of Benefits

To analyze the effects of the change in the scheme of benefits for permanently laid off workers, we used a cohort design and propensity score matching using individuals who entered the unemployment in the modality of job loss before and after the change in the scheme of UI payments.

As a second strategy we used difference in difference estimator, comparing UI beneficiaries before and after the change, with a control group of workers, who lost their formal jobs, but did not enter the UI program.[7] The following equation was estimated:

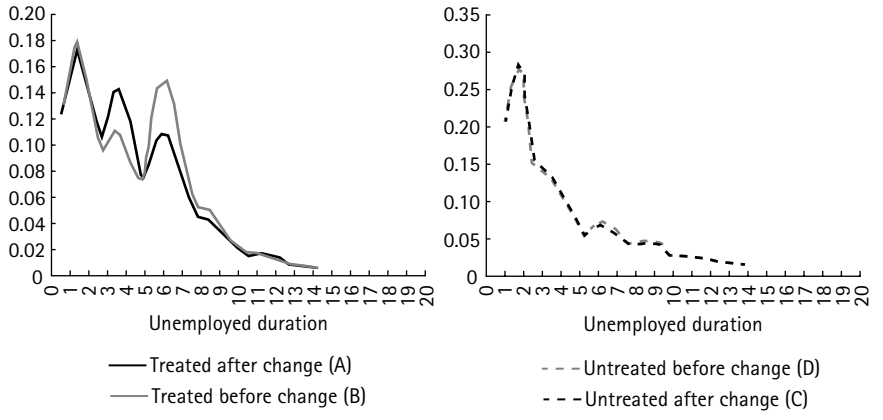
$$Y_{it} = \alpha + \beta T_{i1} t + \rho T_{i1} + \eta t + \varphi X_i + \varepsilon_{it} \quad (1)$$

7 This group is comprised by those unemployed who do not fulfill the tenure requirement (having worked at least six months in the previous year), were voluntary unemployed, or have already received the benefit during the previous twelve months.

Where T_1 = 1reflects the presence of the new UI program at t = 1, whereas T_1 = 0 denotes lack of treatment at time t = 1, and t is a time variable, being one after the moment of the modification of the unemployment program. The β coefficient corresponding to the interaction between the treatment and the time variables gives the average DD effect of the program. The vector X_i includes controls for age and sex, and controls for the month of the year were also included in the specification.

Density functions of unemployment duration for treated individuals (laid off workers under UI) before and after the change in the scheme of benefits (groups B and A respectively) show some changes, as the mode detected in the six months before the change vanishes after the change (Graph 3). The control sample of workers who did not enter the UI program, which were used for DD estimation (groups C and D, after and before the change respectively), present very similar density functions.

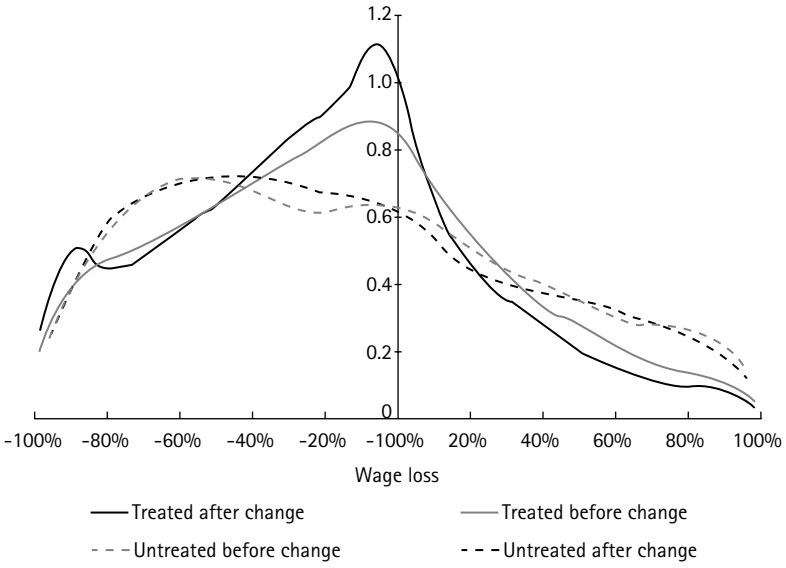
Graph 3. Density Function of Unemployment Duration



Source: Authors' calculation using a sample from administrative records from BPS.

Density functions of changes in earnings differ between treated individuals before and after the change in the UI regime (Graph 4). Treated individuals after the modification of the UI present a clearer mode around zero, but considerably less mass for higher order changes. Density functions for untreated individuals before and after the change are similar.

Graph 4. Density Function of Earnings Change



Source: Authors' calculation using a sample from administrative records from BPS.

The simple comparison of unemployment duration means for treated and control groups indicates that unemployment duration was shorter for the former, for the two samples considered (Table 5).

Propensity score matching between UI beneficiaries before and after the change in the scheme of benefits indicates that the average treatment effect on unemployment duration is negative, indicating that this change caused a reduction in unemployment duration. The matching was done considering age, age squared, sex and the interaction between sex and age.[8]

These results could indicate that the reform produced a significant but very small reduction in the unemployment duration. To the extent that the dependent variable is measured in months, a coefficient of 0.06 represents a reduction of two days, a very small magnitude.[9]

8 Note that the density functions of de propensity score are almost perfectly overlapped (Graph A.1).

9 This reduction in unemployment duration has taken place simultaneously with the decrease in the size of the informal sector reported in section I. Unfortunately, our empirical strategy does not allow us to rigorously connect both facts.

Table 5. Mean Unemployment Duration and Average Treatment Effect On the Treated (ATT) of Reduction in UI On Unemployment Duration (PSM Estimates)

	Sample 1 (all)	Sample 2 (restricted)
Average Duration		
Control group	4.45	4.48
Treatment group	4.40	4.40
Unadjusted difference	-0.05	-0.08
Average Treatment Effect On Treated (ATT)		
Nearest neighbor matching	-0.06	-0.078
	(0.02) ***	(0.029) ***
Stratification matching	-0.073	-0.078
	(0.029) ***	(0.028) ***
Nº of treated observations	49,961	23,567
Nº of control observations	35,683	16,356

Note: Dependent variable: unemployment duration, in months. Standard errors in parenthesis. *** significant at 1%.

Source: Authors' calculations using administrative records from BPS.

Results on average earnings' change depend on the sample considered. On average, job loss is associated with a reduction of 20 percentage points of wages for workers that return to labor activity for both samples. But although average change in earnings is negative for both treatment and control groups, the loss is higher for treatment groups for the restricted sample (workers with complete unemployment duration), whereas the contrary happens for sample 1.

Propensity scores estimations also give different results for the different samples. Under the restricted sample, which we prefer for being more demanding, the change in the scheme of unemployment duration has implied a reduction of average earnings loss (Table 6). The propensity score estimates then indicate that the performance would be slightly better after reform, since the loss would be approximately three points lower. This indicates that the decrease in duration is not associated with a worse job matching in terms of earnings. The reform did not cause the unemployed to take poorer paying jobs because their UI benefits ran out.

Difference-in-differences estimates confirm our previous results in relation with unemployment duration. In this case, treatment are permanent laid off workers covered by UI and the control group are unemployed workers not covered by UI, in both cases before and after the change in the regime (Table 7). Our

variable of interest, the interaction between the treatment and time variable, indicates that the change in UI benefits caused a decrease in unemployment duration of less than one week. The reduction is higher for men (gender = 1) and presents a non linear effect in age. Results also indicate a reduction of wage loss of around 9%. In this case, the reduction is higher for women. Similar results are obtained with the unrestricted sample (see Table A3).

Table 6. Mean Earnings' Change and Average Treatment Effect On the Treated (ATT) of Reduction in UI On Earnings Change. (PSM Estimates)

	Sample 1 (all)	Sample 2 (restricted)
Average wage change		
Treatment group	-0.21	-0.21
Control group	-0.23	-0.17
Unadjusted difference	-0.02	0.04
Nearest neighbor matching	0.028	-0.033
	(0,004) ***	(0.005) ***
Stratification matching	0.028	-0.033
	(0.004) ***	(0.005) ***
Nº of treated observations	25,921	20,934
Nº of control observations	21,557	14,348

Note: Dependent variable: earnings' change, in percentage points. Standard errors in parenthesis.*** significant at 1%.

Source: Authors' calculations using administrative records from BPS.

The key assumption in difference in difference strategy is that the outcome variables would have followed a similar trend in the absence of the treatment (similar trend assumption). This assumption is difficult to verify. A simple graph of the outcome variables before and after the intervention suggests that this assumption is reasonable for both outcomes (see Graphs A1.1 and A1.2). Another way to test for the similar trend assumption is to restrict the data to the pre treatment period, and assume that the unemployment insurance reform was implemented in any time, for example in the beginning of 2008 (see Duflo, 2001). Computing the difference in difference estimator for this change estimator can help to disentangle if the outcome variables differed significantly between treatment and control groups before the change in the system was introduced. Results from such a placebo regression, reported in Table A4, are not significant, suggesting that our difference and difference results are not driven by mistaken identification assumptions.

Table 7. Differences in Differences Estimation. Effects of the Change in UI Benefits On Unemployment Duration and Wage Change. Sample 2 (Restricted)

	Coeffi-cient	Std. Err.	T	P > t	Confidence Interval	
Unemployment Duration						
Treatment	0.782	0.034	23.25	0.000***	0.716	0.848
Time	0.133	0.039	0.34	0.733	-0.063	0.090
Treatment*t	-1.036	0.227	-4.56	0.000***	-1.481	-0.591
Treatment*t*gender	0.228	0.118	1.94	0.052	-0.002	0.459
Treatment*t*age	0.056	0.011	4.91	0.000***	0.034	0.079
Treatment *t*age cuad	-0.001	0.000	-5.24	0.000***	-0.001	0.000
Treatment* t* age*gender	-0.002	0.003	-0.52	0.605	-0.008	0.004
Gender	-0.387	0.030	-12.9	0.000***	-0.445	-0.328
Age	-0.070	0.007	-9.86	0.000***	-0.083	-0.056
Age cuadratic	0.001	0.000	11.84	0.000***	0.001	0.001
Nº of treated obs. Before	16,355					
Nº of treated obs. After	23,568					
Nº of control obs. Before	8,862					
Nº of control obs. After	8,126					
Wage Change						
Treatment	-0.031	0.007	-4.39	0.000***	-0.045	-0.017
Time	-0.027	0.009	-3.06	0.002***	-0.044	-0.010
Treatment*t	0.091	0.047	1.93	0.053	-0.001	0.184
Treatment*t*gender	-0.082	0.023	-3.48	0.000***	-0.128	-0.036
Treatment*t*age	-0.006	0.002	-2.46	0.014	-0.011	-0.001
Treatment *t*age cuad	0.000	0.000	2.35	0.019	0.000	0.000
Treatment* t* age*gender	0.002	0.001	3.98	0.000***	0.001	0.004
Gender	0.022	0.006	3.62	0.000***	0.010	0.034
Age	-0.002	0.002	-1.38	0.166	-0.005	0.001
Age cuadratic	0.000	0.000	1.03	0.305	0.000	0.000
Nº of treated obs. Before	14,348					
Nº of treated obs. After	20,934					
Nº of control obs. Before	5,622					
Nº of control obs. After	5,118					

Note: *** significant at 1%. Estimation included months' fixed effects controls.

Source: Authors' calculations using administrative records from BPS.

IV. The Effects of the Extension of Benefits for Older Workers

In order to identify the causal effect of extending UI benefits for workers aged 50 or more, we compare these workers with those who fall just short of this age of requirement. These two groups are basically similar, and their main difference after the modification in the legislation is that these older workers may stay in the UI program for a year (instead of six months). If there is a discontinuity in the outcome variable after the intervention, it is interpreted as a consequence of the change. A similar strategy was proposed in Lalive (2008), although the increase in duration they analyzed was much more dramatic (3.5 years). As stated in that paper, this strategy could be invalidated if firms manipulate the UI system, offering workers not to lay them off until they are 50 years old. In our case, this may be mitigated by the fact that we are taking the first immediate year after the modification and that this change has not been in the public discussion of unemployment reforms, reducing the probabilities of manipulation.

We use information on individuals entering unemployment 15 months before and 15 months after the change in the UI system, so our data covers from November 2007 to April 2010 (the change was on the 1st February 2009). Regression discontinuity estimations consider as treated group those who entered UI system in February 2009 and after, and where aged 50-53 when becoming unemployed, and control group those aged 46-49 in the same period.

Mean unemployment duration is higher for individuals aged 50 or more when compared to younger ones both before and after the change in the duration of benefits. Nevertheless, after the change the difference in means is bigger (Table 8).

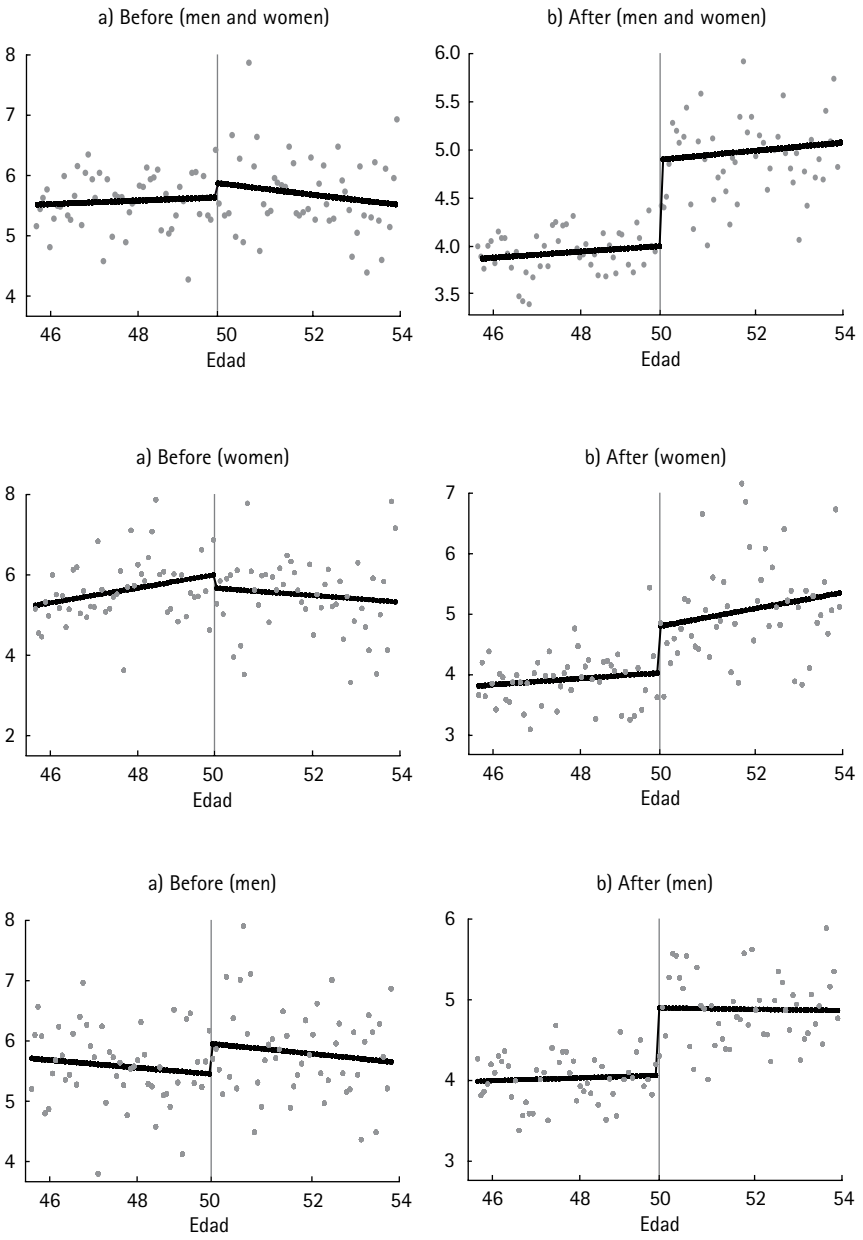
Table 8. Mean Unemployment Duration (in Months)

	Before	After	Total
46-49	5.75	4.01	4.81
50-53	5.86	5.05	5.41
46-53	5.80	4.51	5.09

Source: Authors' calculations using administrative records from BPS.

Average unemployment duration by age at entry into unemployment before and after the change in the UI system is reported in Graph 5. Results are pre-

Graph 5. The Effects of the Extension in UI On Duration: Age Threshold



Source: Authors' elaboration using administrative records from BPS.

sented for all workers and for men and women separately. There seems to be a discontinuity in at age 50, both for men and women, before the change in the policy. When the previous period is considered, differences in unemployment duration at the 50 years threshold do not seem to exist, especially in the case of men.

Following the RD estimation strategy, we run the following linear regression:

$$Y_i = \alpha_0 + \alpha_1 T_i + \alpha_2 (A_i - A_0) + \alpha_3 T_i (A_i - A_0) + \varepsilon_i \quad (2)$$

Where Y_i is the outcome variable (duration of unemployment and wage at employment), T is the treatment variable and A is the assignment (or the forcing) variable, in our case reflecting age, with $A_0 = 50$. We also include quadratic and cubic expressions of $A_i - A_0$. The parameter α_1 measures the average causal effect of the extension on UI benefits on outcome variables. As shown in Table 9, our estimates indicate that average unemployment duration is almost 4 weeks

Table 9. Effect of UI Extension On Unemployment Duration (in Months). 46-53

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI duration						
All	0.881	0.881	0.859	0.883	0.883	0.862
	(0.1347)***	(0.1352)***	(0.1814)***	(0.1348)***	(0.1352)***	(0.1815)***
Nº obs.	8502	8502	8502	8502	8502	8502
Women	0.821	0.829	0.528			
	(0.2444)***	(0.2447)***	(0.3219)			
Nº obs.	2,789	2,789	2,789			
Men	0.91	0.895	1.015			
	(0.1612)***	(0.1617)***	(0.2190)***			
Nº obs.	5,713	5,713	5,713			
Before the Change in UI Duration						
All	0.231	0.234	0.412	0.23	0.233	0.415
	(0.2092)	(0.2097)	(0.2731)	(0.2092)	(0.2097)	(0.2731)
Nº obs.	6,994	6,994	6,994	6,994	6,994	6,994
Women	-0.344	-0.331	0.108			
	(0.3588)	(0.3596)	(0.4547)			
Nº obs.	2,294	2,294	2,294			
Men	0.527	0.522	0.571			
	(0.2573)**	(0.2577)**	(0.3398)*			
Nº obs.	4,700	4,700	4,700			

Note: *** significant at 1%.

Source: Authors' calculations using administrative records from BPS.

longer for those aged 50-53 when compared to those aged 46-49. If the same regression is run with data from the period before the change was introduced, the treatment variable is only weakly significant in some of the specifications for men, indicating that for all workers, the effect can be explained by the change in the policy. The difference is never significant for women. The effect detected for men before the policy change is consistent with the hint of a discontinuity for men before the change (Graph 5). The increase in unemployment duration due to the extension of benefits is mainly explained by women's behavior.

Estimations were also done considering narrower age bins, instead of the group 46-54. In particular, we considered 49-50, 48-51 and 47-52. As Tables 10 to 12 show, results are maintained for these groups. As the age bin is wider, the effects become stronger. The effect is quite robust: the extension in the UI duration for older workers leads to an increase in unemployment duration for older workers.

Table 10. Effect of UI Extension On Unemployment Duration (in Months). 49-50

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI Duration						
All	0.629	0.631	0.582	0.618	0.62	0.564
	(0.2717)**	(0.2719)**	(0.3625)	(0.2715)**	(0.2717)**	(0.3625)
Nº obs.	2,112	2,112	2,112	2,112	2,112	2,112
Women	-0.12	-0.121	-0.163			
	(0.4754)	(0.4743)	(0.6370)			
Nº obs.	690	690	690			
Men	0.976	0.984	0.994			
	(0.3302)***	(0.3297)***	(0.4387)**			
Nº obs.	1,422	1,422	1,422			
Before the Change in UI Duration						
All	-0.0794	-0.0485	-0.113	-0.0769	-0.0459	-0.0794
	(0.3863)	(0.3880)	(0.5227)	(0.3860)	(0.3876)	(0.3863)
Nº obs.	1,752	1,752	1,752	1,752	1,752	1,752
Women	-0.398	-0.442	-0.109			
	(0.6510)	(0.6566)	(0.9058)			
Nº obs.	591	591	591			
Men	0.0627	0.141	-0.0682			
	(0.4762)	(0.4771)	(0.6340)			
Nº obs.	1,161	1,161	1,161			

Note: *** significant at 1%.

Source: Authors' calculations using administrative records from BPS.

Table 11. Effect of UI Extension On Unemployment Duration (in Months). 48-51

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI Duration						
All	0.853	0.845	0.857	0.858	0.849	0.861
	(0.1932)***	(0.1939)***	(0.2575)***	(0.1932)***	(0.1939)***	(0.2575)***
Nº obs.	4,201	4,201	4,201	4,201	4,201	4,201
Women	0.453	0.457	0.374			
	(0.3405)	(0.3400)	(0.4487)			
Nº obs.	3,903	4,083	4,122			
Men	1.042	1.029	1.056			
	(0.2336)***	(0.2347)***	(0.3127)***			
Nº obs.	4,119	427	4,256			
Before the Change in UI duration						
All	0.28	0.284	0.143	0.292	0.296	0.163
	(0.2874)	(0.2882)	(0.3720)	(0.2874)	(0.2883)	(0.3719)
Nº obs.	3,516	3,516	3,516	3,516	3,516	3,516
Women	-0.0264	-0.0197	-0.12			
	(0.4788)	(0.4808)	(0.6350)			
Nº obs.	1,172	1,172	1,172			
Men	0.432	0.432	0.275			
	(0.3574)	(0.3582)	(0.4562)			
Nº obs.	2,344	2,344	2,344			

Note: *** significant at 1%.

Source: Authors' calculations using administrative records from BPS.

The same analysis was done considering earnings at reemployment as outcome variable. The graphical analysis (Graph 6) is less clear than in the case of duration. In any case, it indicates that older workers tend to find worse jobs, in terms of payment, after the reform. The extension in the UI benefit does not help workers to get better jobs by subsidizing job search.

Regression analysis shows that there are no differences in wages at reemployment when treated individuals are compared with untreated ones (Table 13). The effect is positive for the linear and quadratic specification, and negative for the cubic one, but never significant. In all cases, we are only considering workers who reenter the labor market. The treatment coefficient is not significant for men or woman, and when estimations are done considering narrower age bins, results remain the same (Tables A.5 to A.7).

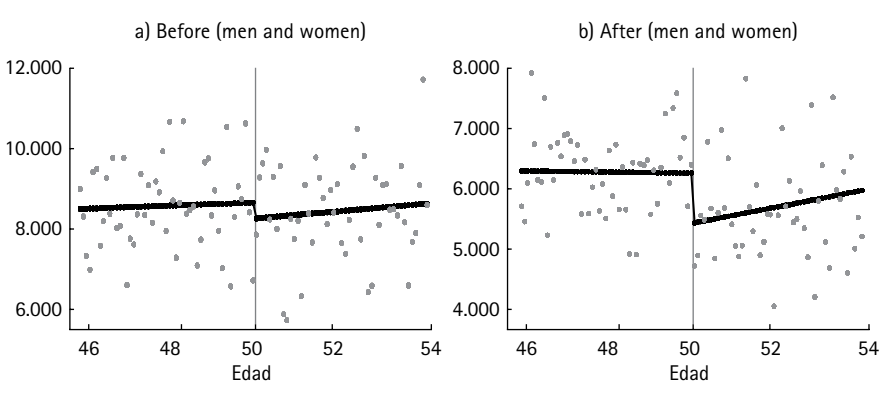
Table 12. Effect of UI Extension On Unemployment Duration (in Months). 47-52

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI Duration						
All	0.783	0.788	0.92	0.786	0.791	0.924
	(0.1559)***	(0.1564)***	(0.2097)***	(0.1560)***	(0.1565)***	(0.2098)***
Nº obs.	6,332	6,332	6,332	6,332	6,332	6,332
Women	0.598	0.608	0.352			
	(0.2795)**	(0.2798)**	(0.3665)			
Nº obs.	2,078	2,078	2,078			
Men	0.873	0.866	1.183			
	(0.1875)***	(0.1882)***	(0.2549)***			
Nº obs.	4,254	4,254	4,254			
Before the Change in UI Duration						
All	0.35	0.352	0.156	0.351	0.353	0.168
	(0.2386)	(0.2388)	(0.3096)	(0.2386)	(0.2388)	(0.3096)
Nº obs.	5,216	5,216	5,216	5,216	5,216	5,216
Women	-0.129	-0.102	-0.21			
	(0.4030)	(0.4039)	(0.5117)			
Nº obs.	1,704	1,704	1,704			
Men	0.602	0.591	0.322			
	(0.2953)**	(0.2953)**	(0.3864)			
Nº obs.	3,512	3,512	3,512			

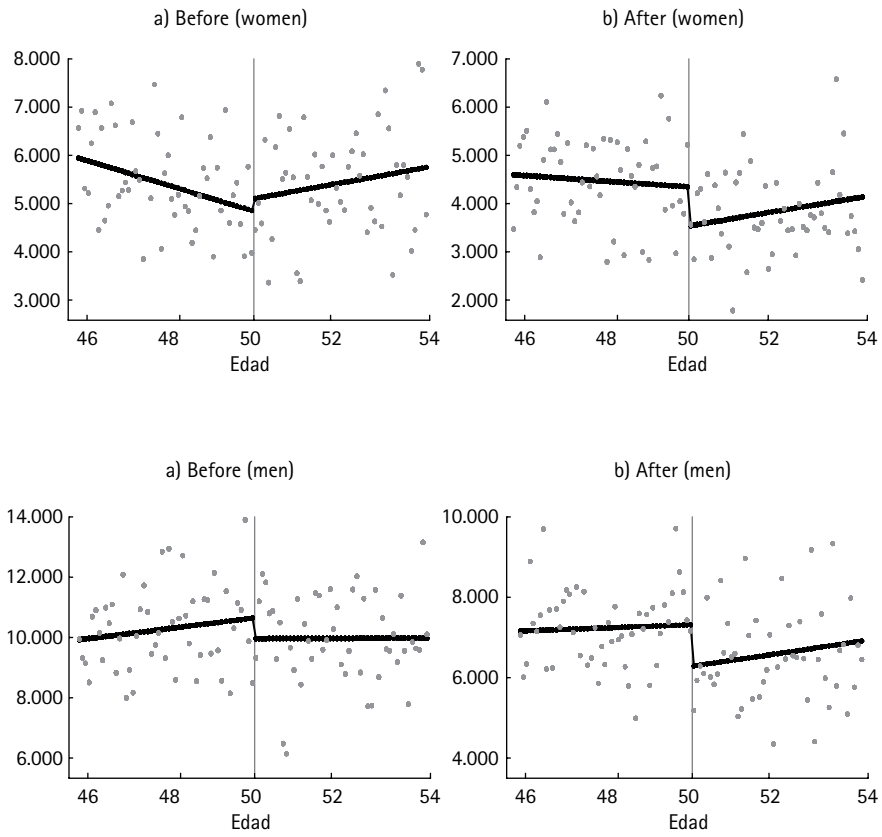
Note: *** significant at 1%.

Source: Authors' calculations using administrative records from BPS.

Graph 6. The Effects of the Extension in UI On Wages: Age Threshold



Graph 6. The Effects of the Extension in UI On Wages: Age Threshold (continued)



Source: Authors' calculations using administrative records from BPS.

Table 13. Effect of UI Extension On Wages At Reemployment ($U dec 2009)

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI Duration						
All	564.8	556	-532.5	393.5	392.5	-555.4
	(554)	(560)	(702)	(531)	(538)	(673)
Nº obs.	4,439	4,439	4,439	4,439	4,439	4,439

Table 13. Effect of UI Extension On Wages At Reemployment ($U dec 2009) (continued)

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI Duration						
Women	-36	-34.32	-908.8			
	(541)	(541)	(703)			
Nº obs.	7,669	7,647	8,029			
Men	594.5	589.3	-424.3			
	(736)	(747)	(932)			
Nº obs	12,856	12,903	13,361			
Before the Change in UI Duration						
All	-99.12	-92.07	-139.3	-27.7	-24.74	-205.9
	(447)	(448)	(613)	(432)	(433)	(592)
Nº obs.	5,822	5,822	5,822	5,822	5,822	5,822
Women	427.1	429.1	-192.2			
	(540)	(542)	(728)			
Nº obs.	6,897	6,850	7,125			
Men	-237.3	-233.2	-218.4			
	(573)	(575)	(781)			
Nº obs.	12,204	12,160	12,152			

Note: *** significant at 1%.

Source: Authors' calculations using administrative records from BPS.

V. Concluding Remarks

Important modifications in the Uruguayan UI program were introduced in 2009. In this article, we presented an impact evaluation of two of them: the change in benefit payments from a lump sum system to a decreasing scheme and the extension of UI duration for workers 50 or older.

The first of these modifications has implied a reduction in unemployment duration. This result holds both for propensity score and difference in difference estimations, but the magnitude of the effect is small. This decrease in duration is not associated with a worse matching in terms of earnings. People tend to take a shorter time to find a new job under a decreasing scheme

of benefits, and this shorter time does not affect the quality of job matching. Although estimated effects are small in magnitude, they indicate that there is a certain margin for improving the design of UI programs in countries with lump sum schemes.

The possibility of extension of UI duration for workers aged 50 or more has implied an extension in unemployment duration for older workers, and it has not helped to subsidize better job matches in the form of better paying jobs. The extension in unemployment benefits we analyzed was considerable (24 weeks more) and had a sizeable negative impact on unemployment duration without implying an improvement in terms of wages in the next job. This result casts doubts about the efficiency of this type of modification.

In all cases, the lack of effect on earnings at reemployment indicates that the UI program in Uruguay acts mainly as a temporary income insurance, and not as a subsidy for more productive job search.

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Annex

Table A1. Workers without Social Security Contributions

Año	Private Workers	All Workers
2001	30%	36%
2002	31%	37%
2003	34%	40%
2004	36%	41%
2005	34%	39%
2006	28%	35%
2007	27%	34%
2008	25%	33%
2009	24%	32%

Source: Authors' calculations based on household surveys.

Table A2. Comparison of Sex and Age Profile of Unemployed Receiving UI. 2007-2009

	Household Survey	Administrative Records (BPS)
Women	34.2%	33.6%
Men	65.8%	66.4%
Age		
< 21	5.4%	4.3%
21 to 30	32.4%	33.4%
31 to 40	25.4%	29.0%
41 to 50	20.3%	19.5%
> 50	16.5%	13.9%

Source: Authors' calculations based on household surveys and administrative records from BPS.

Table A3. Differences in Differences Estimation. Effects of the Change in UI Benefits On Unemployment Duration and Wage Change. Sample 1 (Unrestricted)

	Coefficient	Std. Err.	T	P > t	Confidence Interval	
Unemployment Duration						
Treatment	0.784	0.034	23.38	0.000	0.718	0.850
Time	0.069	0.038	1.79	0.074	-0.007	0.144
Treatment*t	-1.125	0.224	-5.02	0.000	-1.565	-0.686
Treatment*t*gender	0.256	0.116	2.20	0.027	0.028	0.484
Treatment*t*age	0.059	0.011	5.22	0.000	0.037	0.082
Treatment *t*age cuad	-0.001	0.000	-5.57	0.000	-0.001	-0.001
Treatment* t* age*gender	-0.002	0.003	-0.63	0.528	-0.008	0.004
Gender	-0.387	0.030	-13.05	0.000	-0.446	-0.329
Age	-0.070	0.007	-9.95	0.000	-0.083	-0.056
Age cuadratic	0.001	0.000	11.90	0.000	0.001	0.001
Nº of treated obs. Before	16,422					
Nº of treated obs. After	24,267					
Nº of control obs. Before	8,907					
Nº of control obs. After	8,575					
Wage Change						
Treatment	-0.101	0.006	-17.59	0.000	-0.113	-0.090
Time	-0.017	0.008	-2.16	0.031	-0.033	-0.002
Treatment*t	0.104	0.044	2.36	0.018	0.018	0.191
Treatment*t*gender	-0.086	0.023	-3.72	0.000	-0.132	-0.041
Treatment*t*age	-0.003	0.002	-1.31	0.190	-0.008	0.001
Treatment *t*age cuad	0.000	0.000	1.43	0.151	0.000	0.000
Treatment* t* age*gender	0.002	0.001	3.78	0.000	0.001	0.004
Gender	0.024	0.005	4.78	0.000	0.014	0.033
Age	-0.005	0.001	-3.72	0.000	-0.007	-0.002
Age cuadratic	0.000	0.000	3.14	0.002	0.000	0.000
Nº of treated obs. Before	25,920					
Nº of treated obs. After	21,558					
Nº of control obs. Before	8,479					
Nº of control obs. After	5,434					

Source: Authors' calculations using administrative records from BPS.

Table A4. Differences in Differences Estimation. Effects of the Change in UI Benefits On Unemployment Duration and Wage Loss. P Placebo Regressions

	Coef.	Std. Err.	T	P>t	Confidence Interval	
Unemployment Duration						
Treatment	0.88	0.091	9.73	0.000	0.706	1.062
Time	0.02	0.017	0.80	0.490	-0.090	0.100
Treatment*t	-0.07	0.713	-0.09	0.927	-0.146	0.133
Treatment*t*gender	-1.59	0.395	-3.44	0.001	-2.133	-0.058
Treatment*t*age	0.03	0.036	0.95	0.342	-0.036	0.104
Treatment *t*age cuad	0.00	0.000	-1.74	0.083	-0.002	0.000
Treatment* t* age*gender	0.03	0.010	3.05	0.002	0.011	0.051
Gender	-0.25	0.080	-3.07	0.002	-0.403	-0.089
Age	-0.10	0.019	-5.34	0.000	-0.014	-0.064
Age cuadratic	0.00	0.000	6.48	0.000	0.001	0.002
Wage Loss						
Treatment	-2.22	1.692	-1.31	0.190	-5.534	1.098
Time	0.01	0.015	0.82	0.540	-0.120	0.100
Treatment*t	-9.85	1.370	-0.72	0.472	-3.670	1.700
Treatment*t*gender	-1.37	7.452	-0.18	0.854	-1.598	1.324
Treatment*t*age	0.33	0.695	0.47	0.635	-1.033	1.693
Treatment *t*age cuad	0.00	0.009	-0.52	0.603	-0.021	0.012
Treatment* t* age*gender	0.08	0.191	0.44	0.657	-0.290	0.460
Gender	-2.01	1.443	-1.39	0.164	-4.839	0.818
Age	-0.47	0.364	-1.30	0.195	-0.118	0.242
Age cuadratic	0.01	0.005	1.09	0.277	-0.004	0.014

Source: Authors' calculations using administrative records from BPS.

Table A5. Effect of UI Extension On Wages At Reemployment ($U dec 2009). 49-50

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI Duration						
All	-1,812	-1,799	7,492	-1,743	-1,730	-253.1
	(1,059)*	(1,067)*	(1,452)	(1,016)*	(1,024)*	(1,400)
Nº obs.	1,123	1,123	1,123	1,123	1,123	1,123
Women	-858.4	-860.7	-125.7			
	(1,060)	(1,060)	(1,445)			
Nº obs.	8,048	8,102	7,813			
Men	-2,133	-2,107	-302.6			
	(1,412)	(1,427)	(1,961)			
Nº obs	14,075	13,545	12,594			
Before the Change in UI Duration						
All	398.5	388.3	994.7	147.3	147.2	762.4
	(930)	(922)	(1200)	(895)	(886)	(1153)
Nº obs.	1,442	1,442	1,442	1,442	1,442	1,442
Women	-148.3	-77.76	-651.1			
	(1,030)	(1,019)	(1,144)			
Nº obs.	7,179	6,022	6,303			
Men	272.5	213.1	1,239			
	(1,181)	(1,169)	(1,534)			
Nº obs.	12,175	12,637	12,059			

Source: Authors' calculations using administrative records from BPS.

Table A6. Effect of UI Extension On Wages At Reemployment ($U dec 2009). 48-51

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI Duration						
All	-744.6	-719.5	-1,735	-836.1	-819	-1,876
	(742)	(747)	(1,036)*	(711)	(715)	(996)*
Nº obs.	2,175	2,175	2,175	2,175	2,175	2,175
Women	-845.6	-847.7	-815.7			
	(742.7619)	(746.1784)	(985.6998)			
Nº obs.	701	701	701			
Men	-864.3	-835.1	-2,408			
	(987)	(994)	(1,402)*			
Nº obs	1,474	1,474	1,474			
Before the Change in UI Duration						
All	-289.2	-343.2	208.1	-418	-464.3	-8.289
	(661)	(658)	(891)	(638)	(636)	(860)
Nº obs.	2,919	2,919	2,919	2,919	2,919	2,919
Women	10.96	11.06	-180.3			
	(774)	(777)	(993)			
Nº obs.	889	889	889			
Men	-597.2	-682.9	50.24			
	(845)	(839)	(1133)			
Nº obs.	2,030	2,030	2,030			

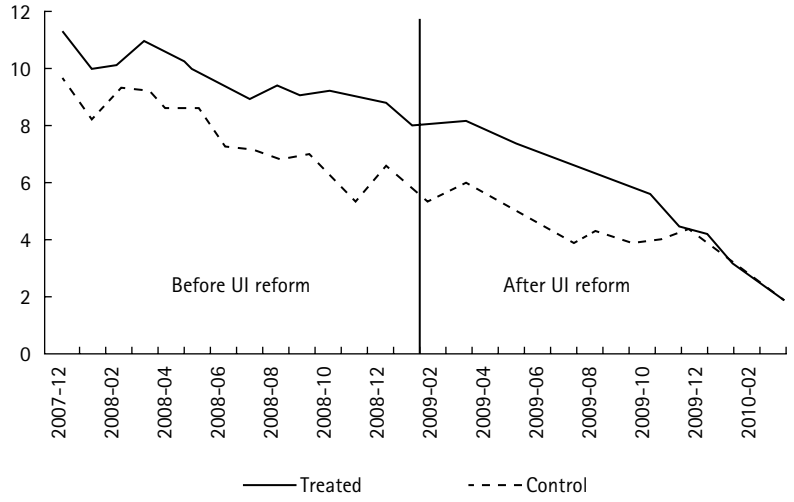
Source: Authors' calculations using administrative records from BPS.

Table A7. Effect of UI Extension On Wages At Reemployment ($U dec 2009). 47-52

	Linear	Quadratic	Cubic	Linear + Sex Control	Quadratic + Sex Control	Cubic + Sex Control
After the Change in UI Duration						
All	109.7	120.8	-1,343	-5.175	0.762	-1,301
	(623)	(632)	(806)*	(597)	(605)	(771)*
Nº obs.	3,302	3,302	3,302	3,302	3,302	3,302
Women	-426.7	-412.1	-1,209			
	(606)	(608)	(800)			
Nº obs.	1,062	1,062	1,062			
Men	177.9	172.4	-1,360			
	(829)	(845)	(1,074)			
Nº obs	2,240	2,240	2,240			
Before the Change in UI Duration						
All	-113.1	-108.8	-166.3	-97.37	-87.89	-402.5
	(519)	(520)	(719)	(502)	(503)	(695)
Nº obs.	4,336	4,336	4,336	4,336	4,336	4,336
Women	208.1	201.9	-209.3			
	(631)	(634)	(840)			
Nº obs.	1,294	1,294	1,294			
Men	-243.8	-224.3	-468.2			
	(663)	(663)	(916)			
Nº obs.	3,042	3,042	3,042			

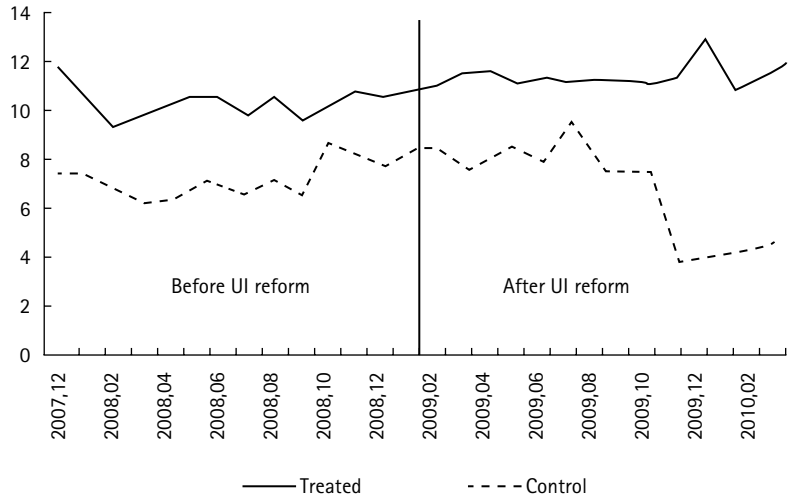
Source: Authors' calculations using administrative records from BPS.

Graph A1.1. Unemployment Duration for Treated and Control Groups Before and After the Change in UI



Source: Based on administrative records from BPS.

Graph A1.2. Wages for Treated and Control Groups Before and After the Change in UI



Source: Based on administrative records from BPS.