ASSESSMENT OF THE CHANGES IN THE PORTUGUESE UNEMPLOYMENT INSURANCE SYSTEM *

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1. INTRODUCTION

The unemployment insurance system is one of the public policies with major influence in the labour market, in the sense that conditions the workers' reservation wage and their search behaviour for a new job.

Within this context, there are several labour economics theories that attempt to explain the existence of a significant relationship between decisions by individuals on job take-up and how generous the unemployment insurance is. The Job Search Model[1] is one of the theoretical models that try to explain individual job decisions through the reservation wage concept, incorporating the fact that unemployment benefits affect the opportunity cost of workers. This theoretical approach shows that the existence of income during the unemployment spell reduces the search intensity for a new job and increases the minimum wage at which individuals are willing to work. This means that unemployment spells are longer for those on benefit.

The aim of the present study is to investigate how changes in the Portuguese unemployment insurance scheme affected the behaviour of the unemployed on benefit, to this end an analysis was undertaken of two legislative reforms to the unemployment compensation system.

The first reform was enacted on 1 July 1999 and made unemployment benefits more generous, both in terms of value and in terms of maximum entitlement period. We intend to assess the effect of this reform on the relationship between longer maximum entitlement periods and the length of insured unemployment spells. The economy and labour market in 1999, were suitable for such an assessment because that period was characterized by strong economic growth and a decreasing unemployment rate. The later reached historical low values, although long-term unemployment was still high when compared with others European countries. This implies that the impact of the legislative change on the duration of insured unemployment was probably not significantly contaminated by changes in the economy.

A more informative approach, according to Lalive, Van Ours and Zweimueller (2004), consists in measuring the joint effect of simultaneous changes in the two main unemployment insurance parameters – replacement rate and maximum entitlement period – and separate this into two effects as if each change was carried out individually. There were, however, problems on two sides: the quality of information meant that this approach was not viable, and there was no change in the replacement rate significant enough to justify in-depth analysis.

The second reform was implemented in 2003 and introduced a set of temporary measures, operating in tandem with existing legislation. This package was known as the Employment and Social Protection

Programme (ESPP). One of the salient features of this programme was the lowering of the legal age giving the right to a retirement pension. It was extremely likely that this would influence the behaviour of insured unemployed with longer contribution periods. To check this relationship we assess possible changes in the pattern of workers aged 45 years old or over entering the unemployment benefit scheme.

The study is organized as follows. Section 2 briefly describes the unemployment insurance system and the 1999 and 2003 legislative changes. In section 3 we characterize the data set used. In section 4 we assess how the 1999 legislative change affected the duration of insured unemployment spells. Section 5 provides an assessment of individual reaction to the possibility of lowering the retirement age. Section 6 sets out the conclusions.

2. A SHORT SUMMARY OF THE UNEMPLOYMENT INSURANCE SYSTEM

In Portugal, the unemployment insurance system is characterised by the payment of a fixed amount during a limited period of time. This is dependent, in the most common form, on the claimant's previous income. These payments have two objectives: to encourage the creation of self employment and to compensate the individuals for the lack of income due to unemployment.

Act 79-A/89 of 13 March 1989 regulated the eligibility to unemployment benefits until 1 July 1999. On this date, a new act came onto the statute books. The 1989 legal framework stated that income support due to unemployment was available to all individuals in involuntary unemployment with capacity and availability to work. The income support was granted through two types of monthly payments, due from the claim date: unemployment benefit (UB) and unemployment social benefit. The entitlement to unemployment payments was for anyone unemployed who fulfilled certain conditions – previous contributions requirement and means test condition. They also had to be registered in their local area employment office.

The UB was geared to individuals with longer and more regular contributions. With this type of unemployment insurance, an unemployed individual could draw a monthly payment equal to 65% of their last income, provided that the individual had paid social security contributions at least during 18 months within the last 2 years before unemployment. The maximum entitlement period depended on age at unemployment and the upper limit was 30 months (table 1).

The unemployment social benefit was conceived to support survival level unemployed individuals. Therefore it was dependent on the income level of all family members. The eligibility to this benefit required a minimum number of contributions to social security of at least 180 days within 1 year before unemployment and a means test condition that the family income per capita could not be higher than 80% of national minimum wage. This type of unemployment insurance was subdivided into initial unemployment social benefit (USB), for all individuals who did not qualify for UB, and unemployment social benefit paid following unemployment benefit (USB-UB), for those whose maximum entitlement period to UB had exhausted. As in the UB case, the maximum entitlement period depended on unemployed age at claim date (table 1), with the detail that USB-UB recipients were granted with half the maximum entitlement periods set for UB or USB recipients. There was not one global replacement rate, for payments, as there was for UB. Here, it was contingent on the number of family members.

In 1999, the 1989 legal framework was changed. The aiming was to follow macroeconomic decisions to achieve lower unemployment rates and to adjust social protection in unemployment to the labour market profile at the time. One of the most significant amendments, set out in Act 119/99 of 14 April 1999 and enacted on 1 July 1999, was the change in the maximum entitlement period, specifically for

Table 1

CHANGE IN THE MAXIMUM ENTITLEMENT PERIODS				
Group	Age Group [a]	Maximum Entitlement Period (Act 79-A/89)	Maximum Entitlement Period (Act 119/99)	Change
1	< 25	10 months	12 months	+ 2 months
2	[25,30[	12 months	12 months	no change
3	[30,35[	15 months	18 months	+ 3 months
4	[35,40[	18 months	18 months	no change
5	[40,45[	21 months	24 months	+ 3 months
6	[45,50[	24 months	30 months + 2 months [b]	+ 6 a 14 months
7	[50,55[	27 months	30 months + 2 months [b]	+ 3 a 11 months
8	≥ 55	30 months	30 months + 2 months [b]	+ 0 a 8 months

Notes: [a] Age at insured unemployment date. Age group built according to the maximum entitlement periods division establish by Act 79-A/89. [b] 2 months for each group of 5 years with contributions within the last 20 years prior to the unemployment.

those in higher age groups. In most age groups the maximum entitlement periods to unemployment insurance increased (table 1). The lower limit of the maximum entitlement period changed from 10 months to 12 months and the upper limit to 30 months. The later could be increased by periods of 2 months for unemployed individuals aged 45 or over at unemployment date. These changes were applied to all three types of benefits, with the proviso that the maximum entitlement period for USB-UB is half of the periods established.

Another significant change for the study that we intend to carry out was the lowering of the entitlement age for a retirement pension. The pensionable age, as in the previous act, was 60 years old for all recipients aged 55 years old or over at unemployment. This implicitly required a period of at least 30 months of benefits. The amendment made by the 1999 Act, was that pensionable age could also be taken as 55 years old for the recipients aged 50 years old or over at unemployment if they had at least 20 years of contributions. This measure was mainly for everyone in long-term unemployment.

It should also be noted that this study did not consider the extensions made in 1996 to the maximum entitlement period for USB recipients aged between 45 and 54 years at claim date.

In 2003, the Government introduced a set of complementary measures to the legal framework of social protection in unemployment. These measures, as outlined above, are the ESPP, Act 84/2003. The change in pensionable age is the only measure whose impact we can assess by comparing it with the situation set out in the previous legislation. According to this programme, the pensionable age is brought forward to 58 for all insured unemployed aged 55 or over at unemployment date, had 30 years of social contributions and had completed a 30 months period of UB or USB.

3. DATA

This study uses information on unemployment insurance recipients from the administrative records of the National Social Security Institute. The data base, built by the *Instituto de Informática e Estatística da Segurança Social (IIESS)*, is organized in periods of six months and includes information on the transfers of unemployment payments carried out between 1998 and 2004. This information is inherent

to the benefit, and includes monthly amount, claim date, number of entitlement days already fulfilled or type of unemployment insurance, and there is also information on some individual characteristics of the recipients, such as age and gender.

The use of administrative data is common practice in empirical studies similar to the one we intend to carry out. There are two major advantages of this data base in comparison with survey data: one is the fact that there is information on all insured unemployed between 1998 and 2004, useful for finding both the flow and the stock of insured unemployed; and the second is that it allows us to overcome problems such as non-response or length bias that can cause skewed results.

For the present analysis it is sufficient the information for each unemployment insurance claim gathered in the first and last semester of observation. We therefore built a parallel data base where each line contains only the relevant information on each unemployment insurance claim. The results, displayed below, were obtained from this new data base, containing information on 1 274 612 claims for unemployment insurance.

In any analysis, the description of some variables through empirical numbers is an important exercise because it allows for early detection of possible structures and patterns in the information. Thus, table 2 presents elementary statistics for two variables – age and number of entitlement days already fulfilled – by gender and by type of unemployment insurance. According to these statistics, the unemployed on benefit are on average 37 years old at claim date and remain, on average, out of work and receiving unemployment insurance over a period slightly longer than one year and two months. By gender, women claim more in unemployment insurance. This reflects the female participation rate increase and the higher difficulties of this group in entering the labour market, specifically in terms of job stability.

The proportion of UB claims in the data base is approximately 66%, though this shows even so the existence of a substantial number of USB claims. The less restrictive access to USB in terms of previous contribution requirements and the possibility of using this type of unemployment insurance repeatedly to face frequent unemployment periods in between jobs of short duration are factors that may explain this result. In turn, due to the fact that UB recipients may extend their benefits for an additional time period, the average insured unemployment duration of the UB recipients is rather longer than the average insured unemployment duration of the USB recipients (table 2).

Chart 1 presents the annual inflow to insured unemployment between 1998 and 2004 and the evolution of the quarterly unemployment rate, using figures from National Statistics Institute (*INE*). Between 1998 and 2000, the number of new claims for unemployment insurance moves downwards in spite of

Table 2

DESCRIPTIVE STATISTICS [a]					**Unemployment Benefit**			**Unemployment Social Benefit**		
Variable	Statistical	Men	Women	Total	Men	Women	Total	Men	Women	Total
Age	Mean	39,24	35,42	37,06	41,17	36,37	38,59	34,39	33,83	34,03
	Standard Deviation	13,24	11,56	12,46	13,02	11,41	12,42	12,51	11,63	11,97
Duration	Mean	444,56	413,43	426,82	493,39	461,16	476,07	322,55	333,32	329,38
	Standard Deviation	357,58	320,82	337,48	380,59	349,84	364,73	254,16	244,99	248,44
	Number of observations	548 219	726 393	1 274 612	391 512	455 189	846 701	156 707	271 204	427 911

Note: (a) Own calculations based on information provided by the *Instituto de Informática e Estatística da Segurança Social (IIESS)*.

the fact that the social protection system in unemployment became more generous in 1999. This falling of the inflow to insured unemployment may be the reflection of improvements in the aggregate labour market conditions that characterized the year of 1999[2]. However, the behaviour of the unemployed in general does not necessarily dovetail with the behaviour of the insured unemployed, as pointed out in Katz and Meyer's (1988) analysis for the USA. Even so, it is clear that the behaviour of the new insured unemployed flow reveals a very close connection to labour market developments during the period 1998-2004 (chart 1).

Chart 1

ANNUAL FLOW OF NEW UNEMPLOYMENT
INSURANCE CLAIMS AND QUARTERLY
UNEMPLOYMENT RATE BETWEEN 1998 AND 2004

Source: Social Security Institute and National Statistics Institute

Flow of new unemployment insurance claims
Unemployment rate
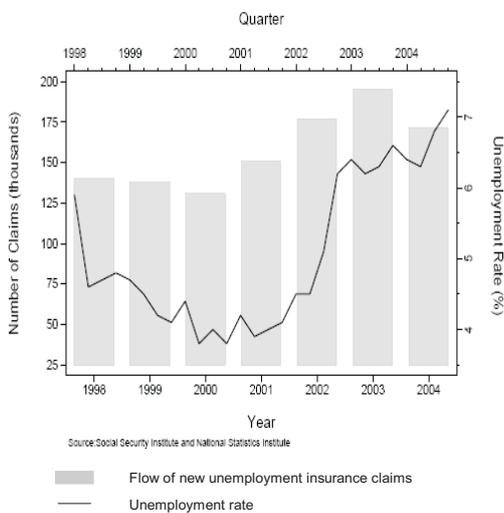
4. ASSESSMENT OF THE IMPACT OF THE 1999 LEGISLATIVE REFORM

The empirical evidence of this section is presented within the context of the 1999 legislative reform and the aim is to assess the effect of longer maximum benefit entitlement periods on the length of insured unemployment spells. For that purpose, in this first part of the empirical work the selected sample contains all the UB or USB claims put in between 1 January 1998 and 31 October 2002, to a total of 702 434.

In this case, the problem approach follows the methodology used by Ours and Vodopivec (2005) in "How changes in benefits entitlement affect the duration of unemployment?". In a first phase therefore we use the Differences-in-Differences method, which consists of comparing the changes in average insured unemployment duration between control groups and treatment groups.

The division of the maximum entitlement periods in terms of age (table 1) allows us to assign the sample recipients to eight distinct age groups. This fact, added to the heterogeneous changes in maximum entitlement periods means that we can establish two control groups[3] and six treatment groups[4]. To

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(2) See Banco de Portugal *Annual Report*.
(3) Age groups for which there was no change in the maximum entitlement period.
(4) Age groups for which there was a change in the maximum entitlement period.

take advantage of the existence of two control groups, group 2 and group 4 (table 1), we established that the first group would be compared to control group 2, due to the closeness between age classes, and the remaining groups would be compared to control group 4. Furthermore, since the legislative reform of the unemployment insurance system only applies to unemployment spells starting after 1 July 1999[5], we have in the selected period a group of individuals that do not benefit from the new conditions, which we will name group "before the change", and a group of individuals for whom the new law is applicable and which we will name group "after the change".

Tables 3 and 4 exhibit average insured unemployment duration by age group for both types of benefits: UB and USB. In column (7) there will be found the change in average duration of insured unemployment spells, showing that average permanence in insured unemployment increases in all treatment groups, with the exception of group 8 and group 3 of UB recipients. The changes in average duration of insured unemployment spells for control groups can be seen as the result of changes in aggregate labour market conditions, because the maximum entitlement periods inherent to those groups remain unchanged after the introduction of a new unemployment insurance system. In the light of this, the change in average insured unemployment duration of individuals eligible for UB aged between 25 and 29 years old suggests a significant improvement in aggregate labour market conditions over the first year of insured unemployment, while the results of control group 4 associated to USB recipients exhibit a small deterioration in aggregate labour market conditions, and this will impact on the other treatment groups. The remaining changes in average insured unemployment duration associated to control groups are not statistically different from zero.

In the last column of both tables the "diff-in-diff" estimate is computed assessing the difference between the values in column (7) for the relevant groups. Working on the assumption that changes in aggregate labour market conditions are similar for all age groups, we can infer that the last change stems from the impact of a more generous unemployment insurance system on the average insured unemployment period of recipients. On the whole, the average duration of insured unemployment spells increases in all age groups. The only statistically significant exception occurs in the behaviour of the duration of insured unemployment spells for individuals aged 55 years old or over. For these recipients, the legislative reform led to a significant reduction in the average duration of the insured unemployment period. This result does not coincide with what might have been expected, in the sense that age tends to restrict reinsertion in the labour market. Nonetheless, it is important to remember that the legislative reform in question, included not only changes to the maximum benefit entitlement periods but also set out the possibility of bring forward retirement age to 58. This last measure affects the group in analysis and may have led the recipients to stop their benefits earlier. We cannot, however, check the truthfulness of this statement because we have no information on what happened to recipients after leaving insured unemployment.

In the set of insured unemployment spells linked to UB the most significant effect of the legislative reform can be seen in two distinct age groups. Recipients aged less than 25 and those aged between 50 and 54 remain, on average, 2 more weeks in insured unemployment than in the previous situation, characterized by less generous benefit entitlement system. In turn, among USB recipients it is the younger individuals aged no more than 34 whose average spell in insured unemployment is significantly longer. In this group the increase in average insured unemployment duration is almost 18 days.

In short, the breakdown of the results by type of unemployment insurance shows different behaviour patterns among UB and USB recipients. The empirical evidence points to the fact that a new unemployment insurance system had a greater effect on the average insured unemployment duration of USB recipients than on the average duration of UB recipients, despite possible seasonal effects asso-

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(5) When Act 119/99 came into force.

Table 3

AVERAGE INSURED UNEMPLOYMENT DURATION FOR UNEMPLOYMENT BENEFIT SPELLS [a], [b]

	Age Group	Type		Before 1 July 1999	After 1 July 1999	Difference (After – Before)	Diff-in-Diff
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Group 1	< 25	Treatment	Average Duration	217,6	220,6	3	13,5
			(Standard Deviation)	(0,78)	(0,53)	(0,94)	(1,37)
Group 2	[25;30[	Control	Average Duration	266,2	255,7	-10,5	-
			(Standard Deviation)	(0,88)	(0,54)	(1,03)	-
Grupo 3	[30;35[	Treatment	Average Duration	332	327,4	-4,6	-2,8
			(Standard Deviation)	(1,2)	(0,74)	(1,41)	(2,35)
Group 4	[35;40[	Control	Average Duration	396,1	394,3	-1,8	-
			(Standard Deviation)	(1,59)	(1)	(1,88)	-
Group 5	[40;45[	Treatment	Average Duration	463,5	466,1	2,6	4,4
			(Standard Deviation)	(2,02)	(1,28)	(2,39)	(3,04)
Group 6	[45;50[	Treatment	Average Duration	547,9	549,7	1,8	3,6
			(Standard Deviation)	(2,46)	(1,59)	(2,93)	(3,48)
Group 7	[50;55[	Treatment	Average Duration	658,4	669,6	11,2	13
			(Standard Deviation)	(2,77)	(1,63)	(3,21)	(3,72)
Group 8	≥ 55	Treatment	Average Duration	804,3	787	-17,3	-15,5
			(Standard Deviation)	(1,62)	(1,1)	(1,96)	(2,72)

Notes: **(a)** Own calculations based on information provided by the *Instituto de Informática e Estatística da Segurança Social (IIESS)*. **(b)** Length counted in days.

Table 4

AVERAGE INSURED UNEMPLOYMENT DURATION FOR UNEMPLOYMENT SOCIAL BENEFIT SPELLS [a], [b]

	Age Group	Type		Before 1 July 1999	After 1 July 1999	Difference (After – Before)	Diff-in-Diff
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Group 1	< 25	Treatment	Average Duration	188,4	205,2	16,8	17,4
			(Standard Deviation)	(0,56)	(0,44)	(0,71)	(1,32)
Group 2	[25;30[	Control	Average Duration	233,5	232,9	-0,6	-
			(Standard Deviation)	(0,91)	(0,62)	(1,11)	-
Grupo 3	[30;35[	Treatment	Average Duration	276,5	299,6	23,1	17,5
			(Standard Deviation)	(1,3)	(0,99)	(1,63)	(2,88)
Group 4	[35;40[	Control	Average Duration	346	351,6	5,6	-
			(Standard Deviation)	(1,96)	(1,35)	(2,38)	-
Group 5	[40;45[	Treatment	Average Duration	384,7	393,8	9,1	3,5
			(Standard Deviation)	(2,66)	(1,77)	(3,2)	(3,99)
Group 8	≥ 55	Treatment	Average Duration	668	630,2	-37,8	-43,4
			(Standard Deviation)	(3,78)	(2,72)	(4,66)	(5,23)

Notes: **(a)** Own calculations based on information provided by the *Instituto de Informática e Estatística da Segurança Social (IIESS)*. **(b)** Length counted sin days.

ciated to USB claims. The UB recipients, after exhausting the entitlement period, could extend their unemployment insurance payments for an additional period. This fact may justify the smaller impact of the 1999 legislative reform on this group, in the sense that the observed results suggest that the additional time for unemployment insurance is incorporated in these individuals' working decisions from the start.

The findings for recipients aged 55 or over show a bigger fall in the average insured unemployment period in USB recipients than in the UB recipients. Assuming that this behaviour results from the possibility of claiming retirement pension earlier, this fact is surprising since the general idea is that unemployed individuals entitled to USB find it more difficult to access retirement pension earlier than those entitled to UB, particularly because they have made fewer and more irregular contributions.

4.1. Duration Analysis

Subsequently, in order to reach a better understanding of the effects of the 1999 legislative reform, we completed the non parametric assessment carried out in the previous section, with an analysis on the durations of insured unemployment spells using an approach based on the Job Search model.

The main variable in the information collected is the length of the period (counted in days) when the recipient received unemployment insurance. This allowed us to estimate the survival function for each of the eight age groups in the period before and after the legislative reform. The survival function (S(t)) of each age group by period, was established by using the Kaplan-Meier estimator[6]. This corrects the fact that there are uncompleted[7] insured unemployment spells. This function indicates the probability of insured unemployment lasting at least t days, and this means that it indicates the probability of recipients' permanence in insured unemployment at each time moment.

Note that it is possible to relate the expected duration of insured unemployment to the survival function (Lancaster (1990)) through the following:

$$E[T] = \int_0^\infty S(y)\,dy$$

this shows that changes in expected insured unemployment duration (tables 3 and 4) are due to differences between survival functions across each period in analysis.

The set of Charts 2 and 3 present the survival curves for each type of unemployment insurance by age group. The fact that insured unemployed after the 1 July 1999 can count on longer maximum entitlement periods explains the progressive divergence between survival curves along the duration distribution. It is clear, however, that this extension does not influence the behaviour of recipients with short insured unemployment spells.

The group of UB recipients aged between 25 and 29 is a group for which the maximum benefit entitlement period did not change. Therefore the differences between the survival functions reflect the changes in the aggregate labour market conditions, which seems likely to have had an impact on group 1. The greater the magnitude of these changes, the greater the distance between survival func-

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(6)   For details on this estimator see Kaplan and Meier (1958).

(7)   An observation is said to be censored when the initial moment and/or the final moment that establishes the record of the duration is unknown, and therefore we can have censure at left and/or at right. An observation is left-censored if the occurrence of the event that establishes the beginning of the duration is unknown and is right-censored if the occurrence of the event that establishes the ending of the duration is at a moment after the selected period. An observation is complete if is not censored. In the present case, the knowledge of the claim date for unemployment payments means that we know the exact moment at which the recipient starts to be under observation and this avoids left censor. However, the observation period ends at 31 December 2004 and this implies right censor, but since the insured unemployment spells considered in the sample must have started at around 1 July 1999, the number of right-censored observations is insignificant (0,006%).

tions. In particular, this is the group that exhibits the widest difference between survival curves of all the control groups. The fact that the survival curve in the period after the legislative change is always below the survival curve in the period before the legislative change implies significant improvements in the labour market conditions for these individuals. These improvements were observed along the whole duration distribution and not only during the first year of insured unemployment, as discussed in the analysis of table 3.
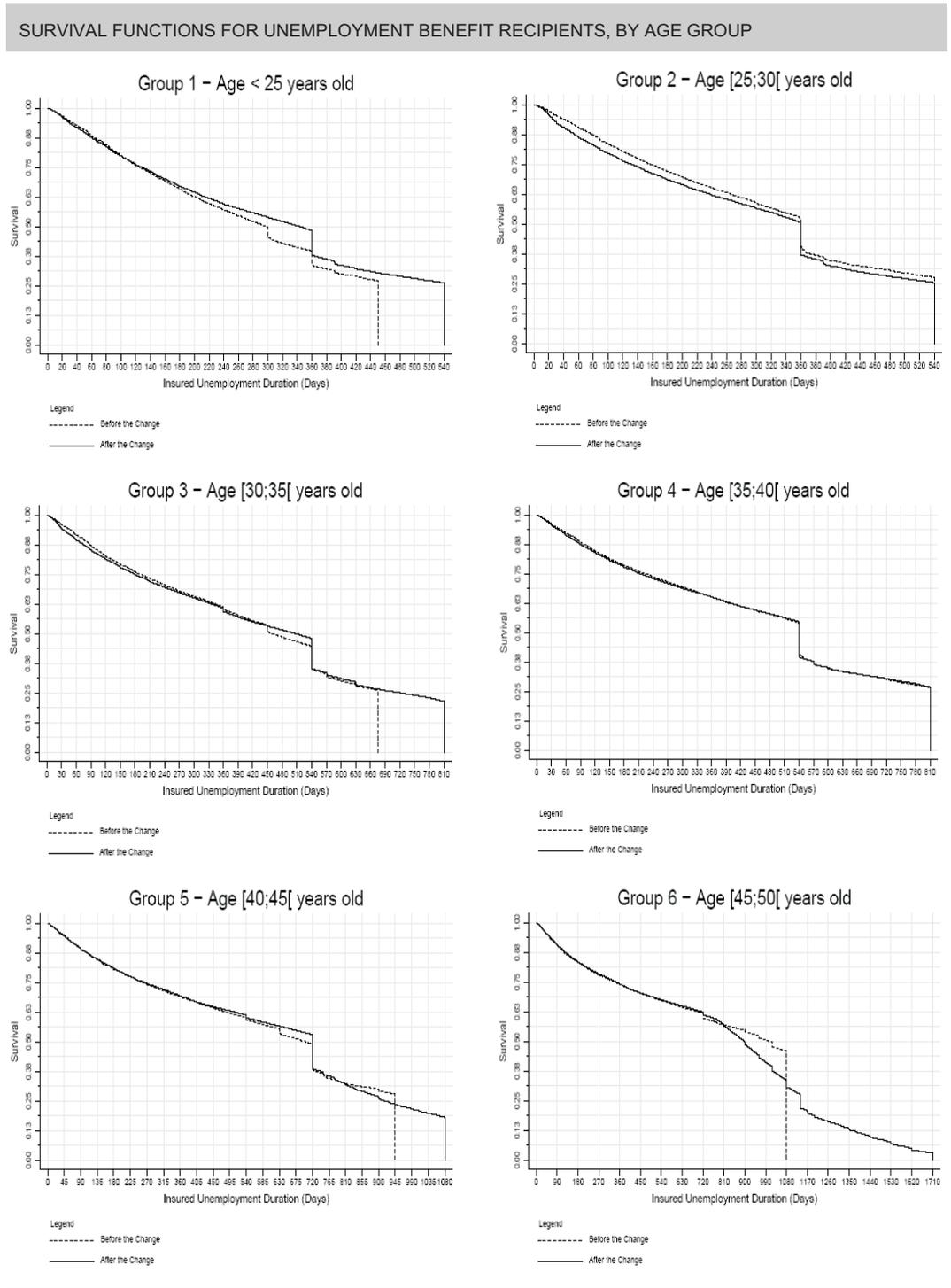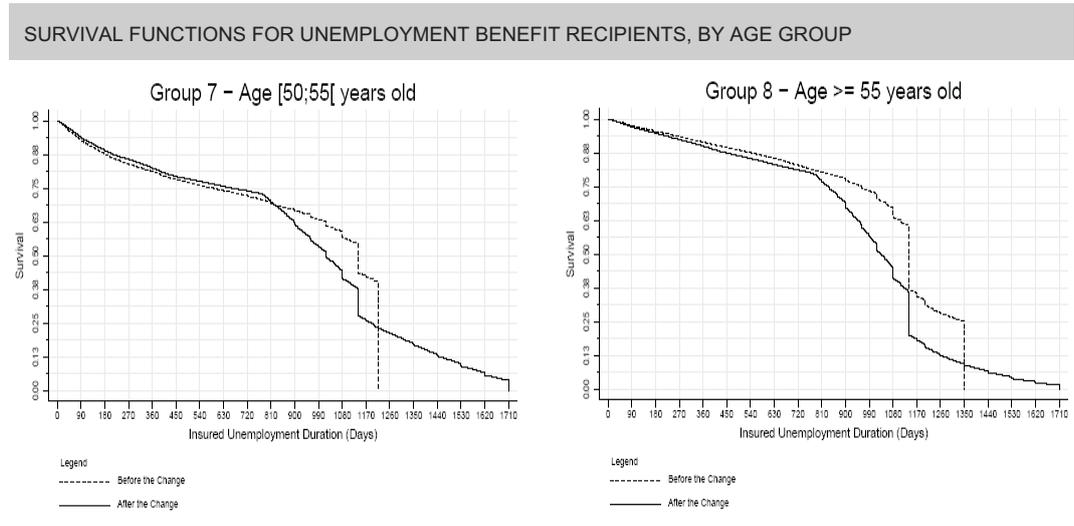
Chart 2

SURVIVAL FUNCTIONS FOR UNEMPLOYMENT BENEFIT RECIPIENTS, BY AGE GROUP

Chart 2 (continued)

SURVIVAL FUNCTIONS FOR UNEMPLOYMENT BENEFIT RECIPIENTS, BY AGE GROUP

Chart 3

SURVIVAL FUNCTIONS FOR UNEMPLOYMENT SOCIAL BENEFIT RECIPIENTS, BY AGE GROUP

Chart 3 (continued)

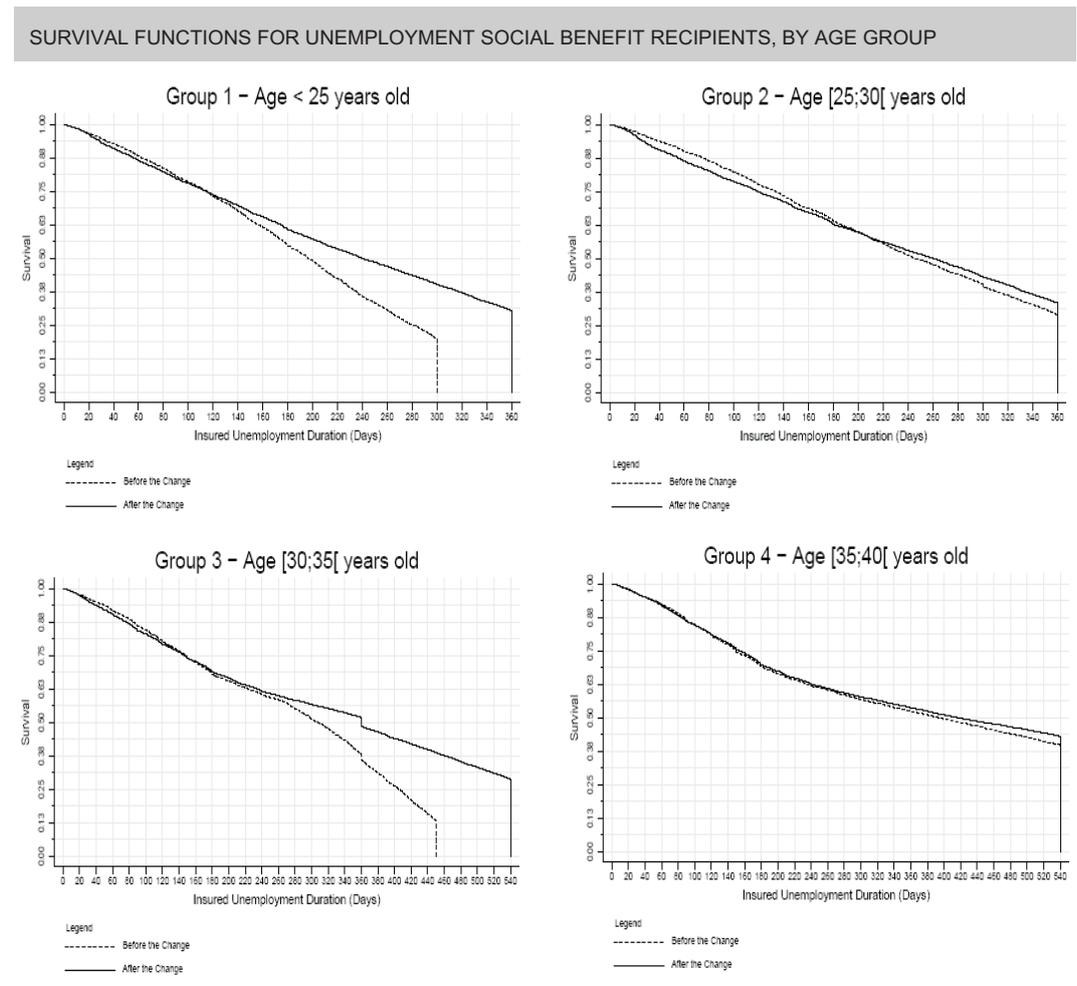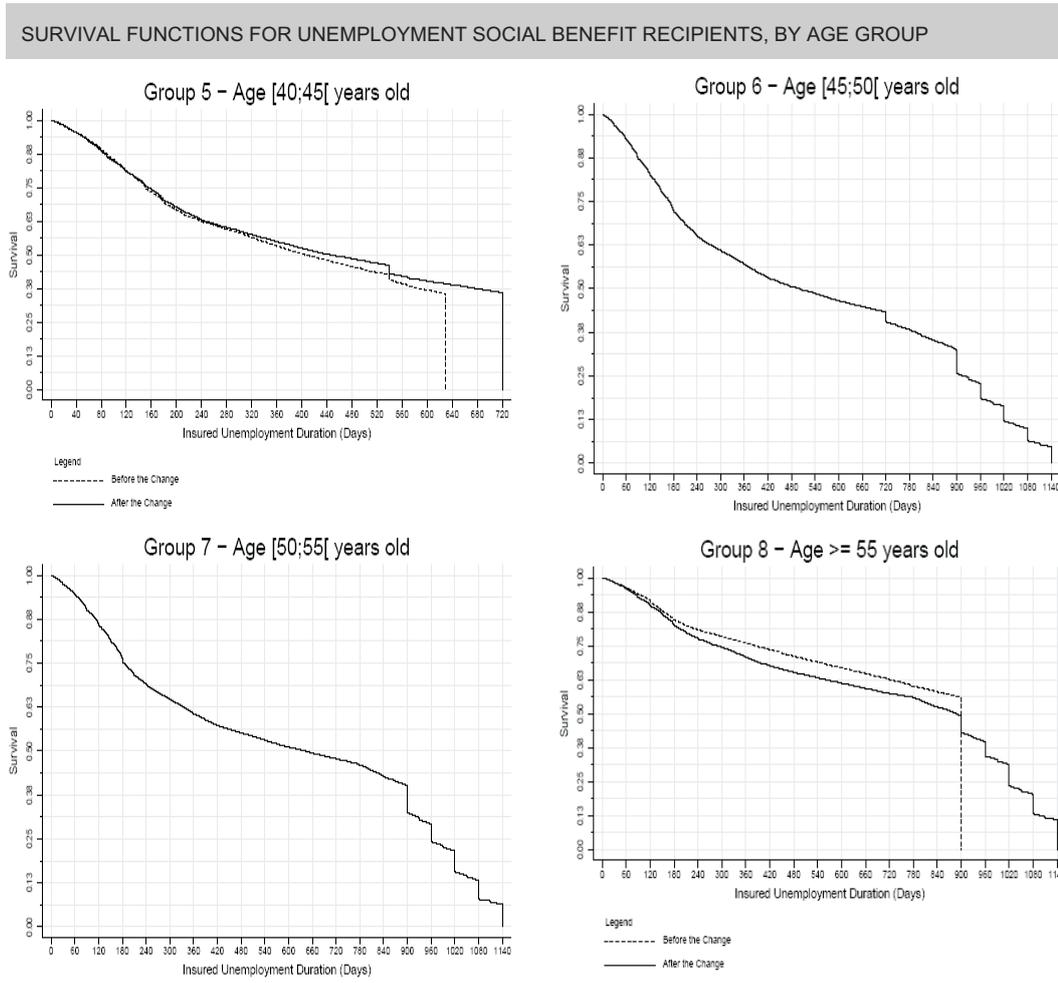SURVIVAL FUNCTIONS FOR UNEMPLOYMENT SOCIAL BENEFIT RECIPIENTS, BY AGE GROUP


As the remaining control groups of UB and USB do not exhibit significant changes in the aggregate labour market conditions, we can assume that the differences between survival functions for most treatment groups will be explained to a great extent by the new unemployment insurance system adopted in 1999.

In the younger age groups we can see that insured unemployed under the new unemployment insurance legal framework move to another situation outside insured unemployment at a significantly lower rate than unemployed individuals in the old system, especially USB recipients. In this last group, we can see a difference of 10 p.p in group 1 and to 16 p.p. in group 3 between the survival probabilities, at two months before benefits cease.

The behaviour of individuals aged 45 or over is clearly different since it moves in the opposite direction. The new social protection system, especially the possibility of taking retirement early, implies a significant increase in the exit rate of these individuals from insured unemployment, mainly for long spell durations.

On the whole, we can see that the individuals eligible to UB were those whose behaviour adjusted less in response to the new insurance system. The long maximum entitlement periods that they could enjoy even before the change, by applying for USB-UB, could well have conditioned their behaviour, making

Chart 4

SURVIVAL FUNCTIONS BEFORE AND AFTER THE 1999 LEGISLATIVE CHANGE
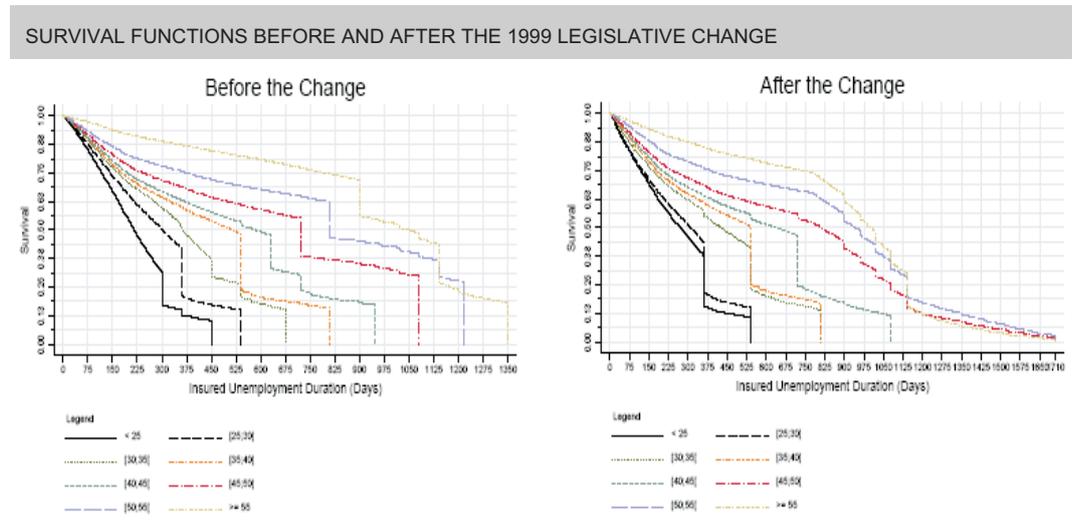
them indifferent to extensions in the maximum benefit entitlement periods which varied between 1 month and 14 months in 1999. Even so, we found that the most part of the individuals who see their benefits extended remain in insured unemployment until they complete the additional time span.

Lastly, it is important to underline the fact that we do not observe any reaction from the individuals, in either type of benefit, at the moment immediately before benefit ceases, since the survival curve slopes are unchanged.

These results should be interpreted with some reservations because the simple comparison of survival functions for the periods before and after the legislative change by age group does not allow for identification of all the effects. This is firstly because we do not control for the different situations of the insured unemployed at labour market and secondly because there are individual characteristics, such as level of schooling, that influence the exit rate from insured unemployment. Furthermore, the results drawn from longer durations have possibly a higher degree of uncertainty because fewer observations are used in survival probability estimates.

The expected relation between the maximum benefit entitlement periods and the survival probability in insured unemployment is displayed in chart 4. The longer the maximum entitlement period, the higher is the individuals' survival probability in insured unemployment for a particular duration. Nevertheless, we cannot ignore the fact that age also has a negative impact on exit from unemployment and worsens the survival probability in unemployment even more. Addison and Portugal (2003), using the *Inquérito ao Emprego* (Labour Force Survey) from the National Statistics Institute, conclude that exit rates from unemployment in Portugal indeed decrease with age.

5. ASSESSMENT OF THE IMPACT OF THE 2003 LEGISLATIVE REFORM

Within the context of the ESPP, we intend to establish if individual working decisions changed with the possibility that those age 55 or over at unemployment date could take retirement at 58. The selected sample is therefore composed of all unemployment insurance spells of individuals aged 45 years old or over started around 1 March 2003, the date at which the ESPP came into force (March 2002 to February 2004).

As in the section 4 analysis, we use the "Difference-in-Difference" method. However in this case, there

is only one control group, embracing all recipients between 45 and 54 years old at claim date, and a single treatment group, embracing the remaining insured unemployed who are the potential beneficiaries of the measure. The unemployment insurance claims put in before 1 March 2003 make up the group termed "before the ESPP" and the claims put in after that date make up the group termed "after the ESPP".

The variable in this section will be the ratio between the insured unemployed flow and the employed population. The number of employees in each month and year was found from the *Inquérito ao Emprego* (Labour Force Survey) carried out by the National Statistics Institute.

The monthly evolution of this ratio from March 2002 to February 2004 is presented in chart 5, where we see that the incidence values for the control group are always lower than the incidence values for the treatment group. The months of January 2003 and January 2004 are characterized by high ratios. However, these are seasonal since they are observed in both groups. The only important difference between the control group and the treatment group occurs at the end of 2002/beginning of 2003. In the over-55 group the relative incidence in January of 2003, even if seasonal, explodes in comparison with the November 2002 value. This behaviour is not observed in the control group and could therefore be interpreted as a reaction to the possibility of taking retirement early, since they will have to be entitled to benefit to take advantage of this measure. From the chart we still see some smaller differences between groups, specifically around the month at which the programme was implemented and in the period that elapses between November 2003 and January 2004. On the whole, the results suggest that there was not a big reaction from the individuals to the fact that pensionable age had gone down.

Lastly, in table 5 we present the results for average incidence of insured unemployment as a percentage of the employed population. In column (6) there is a calculation of the first "difference" in average incidence. The aim is to take out the effects inherent in the group from the possible impact of ESPP as it comes into force. The difference presented in column (7) attempts to eliminate from the impact the effects common to the groups, mainly the changes in labour market conditions. This last column identifies the impact on average incidence stemming from the reduction in the pensionable age to 58.

The group embracing the recipients aged between 45 and 54 is a control group and therefore any os-
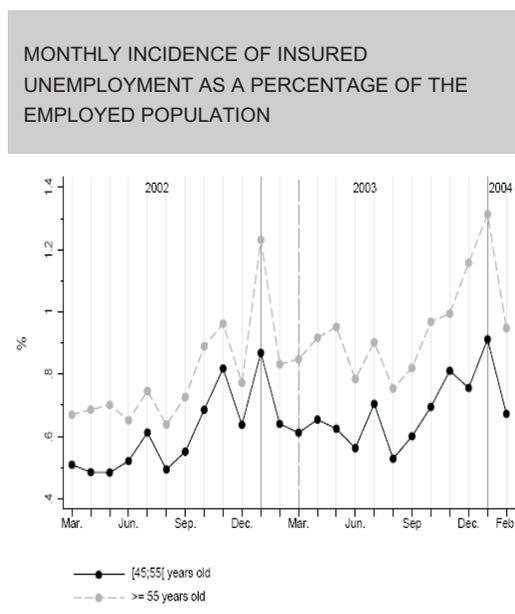
Chart 5

MONTHLY INCIDENCE OF INSURED UNEMPLOYMENT AS A PERCENTAGE OF THE EMPLOYED POPULATION

Table 5

		AVERAGE INCIDENCE OF INSURED UNEMPLOYMENT AS A PERCENTAGE OF THE EMPLOYED POPULATION				
Age Group	Type		Before 1 March 2003	After 1 March 2003	Difference (After – Before)	Diff-in-Diff
(1)	(2)	(3)	(4)	(5)	(6)	(7)
≥ 55	Treatment	Average Incidence (%) (Standard Deviation)	0,79 (0,049)	0,95 (0,046)	0,16 (0,067)	0.09 (0,07)
[45;55[	Control	Average Incidence (%) (Standard Deviation)	0,61 (0,037)	0,68 (0,031)	0,07 (0,049)	- -

Note: (a) Own calculations based on information provided by the *Instituto de Informática e Estatística da Segurança Social (IIESS)* and *Instituto Nacional de Estatística (INE)* , *Inquérito ao Emprego*.

cillation in average incidence is due to changes in the labour market. This group is represented in the last row of table 5 and presents, in both periods, an average incidence lower than the average incidence of the treatment group. The three differences computed suggest an increase in average incidence; however we can see that the changes in labour market conditions and the impact of early retirement on average incidence are not statistically significant. This leads us to conclude that the potential recipients of the measure under analysis did not change their working decisions significantly. There would seem to be two factors justifying this result: over access conditions restrictive and the fact that this measure is already set out in previous legislation.

6. CONCLUSION

The empirical analysis presented through the previous sections investigated how the unemployment insurance system conditioned the job decisions of insured unemployed in Portugal during 1998-2004.

In terms of the 1 July 1999 reform the findings suggest a big negative relationship between the duration of maximum entitlement periods and the probability of leaving insured unemployment found in different age groups. Because we did not observe repeated spells of unemployment during the period under analysis, the empirical evidence is quite clear as to the magnitude of this relationship. It is therefore apparent that unemployment insurance generosity produces undesired effects regarding the move to employment. This fact inevitably leads us to a question mark over the suitability of the current unemployment protection system.

The higher increases due to changes in maximum entitlement periods occurred in the younger age groups with magnitudes varying as a function of the type of benefits. In turn, in the group with longer professional experience, the increase in the maximum entitlement periods did not necessarily result in a decrease in the exit rate from insured unemployment. For these individuals, we observe a single behaviour pattern characterized by a decrease in the duration of the insured unemployment spells, justified partially by the possibility of taking the retirement early. These different situations reflect the fact that there was a differentiated impact of the legislative change on the duration of insured unemployment according to the type of benefit and to the claimant's age.

As for the effect on job decisions stemming from the possibility of taking retirement early, included in ESPP, the results suggest that there is no evidence to show a significant relationship. Fundamentally,

we can conclude that the minimal association is due to the fact that the time span chosen to assess this change was not the ideal, since the previous legal framework on this subject already allowed the possibility of early retirement for the insured unemployed.

The extension of some of these conclusions to the labour market in general is tempting but incorrect. First unemployment in an economy is not only insured unemployment. Second because, as discussed above, the behaviour of insured unemployed is not the same as that of non-insured unemployed. The latter in particular have fewer incentives to remain unemployed because they are not entitled to unemployment insurance and therefore their job search pattern is different from that of insured unemployed. This situation is reflected in the different exit rates from unemployment.

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