

Unemployment Insurance and Unemployment Dynamics in Europe

Konstantinos Tatsiramos* and Jan C. van Ours†

First draft – October 14, 2011

Abstract

UI provides unemployed workers with benefits in order to smooth consumption but also creates disincentives for employed workers to retain their jobs and unemployed workers to find new jobs. With the emergence of the Great Recession attention focused on the insurance part of UI, but UI disincentives are still a major issue of policy concern. In this paper, we discuss results from recent empirical studies that relate UI design features to unemployment dynamics in European countries. Furthermore, we discuss the potential to strengthen financial incentives to increase the outflow from unemployment to work. We conclude that UI systems have disincentive effects which may be reduced through a clever design. Accompanying financial incentives may reinforce these design features.

Keywords: Unemployment insurance, unemployment dynamics

JEL-codes: J64, J65, J68

*University of Leicester and IZA; tatsiramos@iza.org

†Department of Economics, CentER, Tilburg University, The Netherlands; Department of Economics, University of Melbourne, Parkville, Australia; CEPR, CESifo and IZA; vanours@gmail.com.

1 Introduction

Unemployment Insurance (UI) provides unemployed workers with benefits in order to smooth consumption. However, at the same time UI induces moral hazard. With the provision of UI an unemployed worker may search less intensively for a new job than he/she would otherwise do if no benefit was provided. The tension between insurance and incentives is at the heart of UI design. Numerous studies have analyzed various aspects of the functioning of the unemployment insurance system. Their findings show that thanks to its economy-wide risk-pooling, unemployment insurance enables a high degree of consumption smoothing (Gruber, 1997; Browning and Crossley, 2001), performs well under idiosyncratic, sectoral, and regional shocks, and acts as an automatic macroeconomic stabilizer. But studies also find that unemployment insurance creates reemployment disincentives and contributes to higher equilibrium unemployment. However, the magnitude of disincentive effects is not a firmly established parameter, and the literature is inconclusive and rather thin on important aspects.

In the past decades the focus of policy makers and research was on (dis)incentives and the need to introduce changes in UI design to reduce unemployment. In recent years, since the emergence of the Great Recession caused a worldwide exogenous increase of unemployment more attention is given to the insurance part of the UI systems. According to the OECD (2011) the Great Recession served as a tough “stress test” to the social safety-nets in OECD countries. Many OECD countries took crisis-related measures to reinforce the insurance part mainly by expanding benefit coverage to previously ineligible groups of workers. The OECD (2011) concludes that overall benefit generosity has hardly increased so the expanding of the coverage was not at the expense of a reduction in incentives to find a job.

In this paper, we provide an overview of empirical studies on the UI design features in European countries which influence the inflow into and outflow from unemployment such as eligibility criteria and level and duration of unemployment.¹ These UI design features may be reinforced by

¹For a comprehensive review of the theoretical and empirical literature on the labor

introducing several additional incentive mechanisms such as monitoring and benefit sanctions, and workfare (see also Fredriksson and Holmlund, 2006a and 2006b). Our paper is set-up as follows. In section 2 we provide a cross-country overview of the main characteristics of UI systems and of labor market performance. In section 3 we discuss available empirical evidence on unemployment dynamics, dealing separately with unemployment inflow, unemployment outflow and post-unemployment outcomes. Section 4 discusses studies on financial incentives that may alleviate moral hazard problems related to UI benefits. Section 5 concludes.

2 UI systems and labor market performance

2.1 UI systems

The structure of UI systems across European countries has similarities but also differs in a number of dimensions. One of the similarities between the various systems is related to the eligibility conditions. These conditions include the requirement to be involuntary unemployed, being registered in the employment office and actively seeking for employment. Another similarity is the existence of a qualifying period for eligibility. The requirement is a minimum number of weeks, months or days of employment during a specified period before entering unemployment. As shown in Table 1, the exact requirements vary a lot across countries. Whereas in Sweden the requirement to become eligible to unemployment benefits is a period of contributions to the UI system of 6 months in the last year and in Germany it is 12 months in 3 years, in the Netherlands it is 52 weeks in 4 or 5 years.

– Table 1 about here –

For the eligible unemployed a waiting period of few days exists in a number of countries. A waiting period exists in Estonia, Finland, France, Greece, Ireland, Italy, Norway, Sweden, Switzerland and the UK and varies from 3 to 8 days.

market effects of UI design see Tatsiramos and Van Ours (2011).

In Poland and the UK benefits are based on a flat rate, but in the other European countries benefits are determined by the previous earnings of the unemployed, where the earnings base differs by country. In addition, most countries also impose a ceiling on the benefit amount. It is only Denmark, Italy and Portugal who do not determine a maximum monthly amount of benefits that can be received by an individual. The payment rate is a percentage of the previous earnings varying from 50 per cent in Greece to 90 per cent in Denmark.

Some countries have UI benefits of which the level is declining over the duration of unemployment. Such declining benefits are present in Belgium, the Czech Republic, Estonia, Hungary, Italy, the Netherlands, Poland, Slovenia, Spain, Sweden and Switzerland. Also the maximum benefit duration varies a lot between countries from 6 months in the Slovak Republic and the UK to 48 months in Denmark and even an unlimited benefit duration in Belgium. Finally, in some countries maximum benefit durations are dependent on insurance period and/or age, while in other countries such dependence is not present.

In relative terms UI benefits are not very generous with short benefit durations and low replacement rates in Austria, Czech Republic, Estonia, Germany, Greece, Ireland, Italy, Slovak Republic and the UK. Benefits are generous with relatively long durations and high replacement rates in Denmark, France, Netherlands, Portugal, Spain and Sweden.

2.2 Labor market performance

Table 2 presents differences in labor market position for prime age – aged 25 to 54 – and older – age 55 to 64 – individuals distinguished by gender. In 2010 unemployment rates for prime age men ranged from a low 3.0% in Luxembourg to a high 18.1% in Spain. For prime age women the ranges in unemployment rates are similar, from a low 2.6% in Norway to 19.2% in Spain. For prime age men the range in employment rates is limited from a low 75.4% in Estonia to a high 92.4% in Switzerland. For prime age women the range of the employment rates is substantially larger, from 58.7 in Italy

to 82.2% in Norway.

– Table 2 about here –

Unemployment rates are very much the same for older and prime age individuals. The fact that unemployment rates among older workers are rather low does not necessarily mean that the UI system has no influence. Usually older employed workers have a low probability to lose their job so the fact that they have an average unemployment rate may point to unemployment duration being above average.

Among older men and women employment rates are substantially lower than among prime age individuals. The employment rate among older males in Hungary is at the low end with 39.6% and in Iceland it is at the high end of the distribution with 83.9%. Among older females employment rates are even lower with Poland being the lowest with 24.2% and Iceland being the highest with 77.0%.

Table 2 also presents cross-country information on the percentages of long-term unemployment in overall unemployment, that is the share of unemployed with an unemployment duration of more than 1 year. Whereas the cross-country variation in unemployment rates was rather limited, the variation in the share of long-term unemployed is substantial. Norway has the shortest unemployment durations with only 11% of male unemployment and 8% of female unemployment lasting longer than one year. At the top end of the unemployment durations is the Slovak Republic with a long-term unemployment share for males of 58% and for females of 61%.

– Figures 1 and 2 about here –

The labor market position of employed and unemployed workers may be influenced by the structure of the UI systems. Figure 1 shows the cross-country relationship between the UI payment rate as well as the maximum UI benefit duration and the unemployment rate. The top graph shows that there is a negative cross-country relationship between the payment rate and the unemployment rate. The bottom graph shows that there is a

negative relationship between the maximum benefit duration and the unemployment rate. Figure 2 shows the cross-country relationships between payment rate, maximum benefit duration and the share of long-term unemployed. Again, these cross-country relationships are negative. Apparently at the cross-country level there is no direct relationship between UI design features and the unemployment rate. Other institutional differences such as expenditures on active labor market policies, union density and employment protection legislation are important too.

3 Empirical evidence on UI and unemployment dynamics

The empirical literature on how UI affects the exit rate from unemployment is very large. A review of the early literature is given by Atkinson and Micklewright (1991). The early literature focused mostly on the effect of the level of benefits using cross-sectional variation at the individual level. *Benefit levels* are generally found to have significant effects in U.S. and U.K. studies, while most continental European studies find insignificant or weak effects. In most US studies the elasticity of unemployment duration with respect to benefit level is in the range 0.3 to 0.9 (Holmlund, 1998). The disincentive effect of benefit level on the exit rate from unemployment depends also on the spell duration, with higher effects for short-term unemployed (Nickell, 1979).

– Table 3 about here –

More recently, a number of European studies have exploited policy driven changes in benefit levels. In some countries benefit levels were reduced (e.g. Sweden and Norway), while in others benefit levels were increased (e.g. Austria). An overview of these studies is presented in the top part of Table 3. The evidence from the evaluation of these reforms suggests that a reduction of the replacement rate increased re-employment probabilities, while an increase in benefit levels increased the duration of unemployment

as individuals with access to more generous unemployment benefits tend to leave unemployment less rapidly during the covered period.

Carling et al. (2001) find that a reduction of the replacement rate from 80 % to 75 % in Sweden in 1995 increased the re-employment probabilities by about 10%, with a benefit elasticity of 1. Roed and Zhang (2003) for Norway estimated elasticities of around 0.95 for males and 0.35 for females. Uusitalo and Verho (2010) analyzing Finnish data find a benefit elasticity of 0.8.

– Box 1 about here –

The recent literature has also exploited reforms on the potential benefit duration. Lalive, et al. (2006) investigate policy changes in the replacement rate *and* the maximum *benefit duration* in Austria in 1989. This study is presented in more detail in Box 1. A common finding of most studies is a sharp increase in the exit rate close to benefit expiration. Unemployed workers react to an increase in benefit duration by changing the amount of search effort they exert in finding a job, which lowers their exit rate from unemployment at the time before the change and moves the spike of the job finding rates to the new date of benefit expiration. The magnitude of the effect of an extension of the maximum benefit duration on the actual duration of unemployment differs. Lalive and Zweimüller (2004), Lalive et al. (2006) and Lalive (2008) all using Austrian data on an age-specific extension of maximum benefit durations find similar magnitudes. However, Van Ours and Vodopivec (2006) analyzing age-specific reductions in maximum benefit durations in Slovenia find a substantially bigger effect; a reduction of the duration of unemployment benefits with 1 week reduces actual unemployment duration with 1.6 to 4.4 days. This study is presented in more detail in Box 2.

An important dimension in the optimal design of UI is to understand if any of the two main components of the benefit system – benefit level and benefit duration – matter more by affecting differently the behavior of unemployed workers. The existing evidence suggests that both types of

increase in the generosity of the UI system lead to longer unemployment duration. Consistent with the theory, most of the effect of the increase in benefit levels takes place early in the unemployment spell, while in the case of the extension of benefit duration most of the effect arises around the dates when benefits expired. In addition, older workers react more on the benefit duration extension than prime-age workers.

The empirical evidence on the inflow into unemployment is rather limited. Studies using Austrian data find that both the level and the maximum duration of benefits have a significant positive effect on the inflow into unemployment (Winter-Ebmer, 2003 and Lalive and Zweimüller, 2004).

– Box 2 about here –

Unlike the evidence for the effect of UI and in particular of benefit duration on the outflow rate, the evidence on the effect on post-unemployment outcomes is mixed. We discuss the main empirical findings focusing on wages and employment duration and present a summary overview in the bottom part of Table 3. The main conclusion regarding the effect of UI on wages suggests a weak positive effect. There is, however, variation in the evidence with some studies finding no effect while others finding positive effects. Recent evidence suggests that extending benefit duration has a small positive effect on wages on average, but there is substantial heterogeneity as the effect is stronger at the bottom of the pre-unemployment wage distribution and is concentrated at short unemployment durations (Centeno and Novo, 2007).

– Box 3 about here –

The evidence on the effect of the UI system on employment duration is rather mixed. Jobs which are accepted while being insured last longer; this effect is larger in countries with relatively generous benefit systems (Tatsiramos, 2009 – see for details Box 3). In addition, evidence from Germany suggests that those unemployed who obtain jobs close to and after the time when benefits are exhausted are significantly more likely to exit subsequent

employment and receive lower wages (Caliendo et al., 2009). This finding provides evidence that the increasing exit rate from unemployment induced by the declining profile of benefits might be associated with lower quality of jobs.

Other studies, however, concluded that an increase of benefit entitlement length reduces job-finding rates but does not have any effect on subsequent job match quality, measured in wage growth and job duration (Van Ours and Vodopivec, 2008). These studies consider the average effect of benefit extensions on post-unemployment outcomes but not the potential heterogeneous effects by the length of unemployment duration. Fitzenberger and Wilke (2010) also find that for Germany a change in maximum benefit duration has no effect on post-unemployment wages.

4 Strengthening financial incentives

Complementary to UI design features that aim to bring unemployed back to work quickly active labor market policies (ALMP) are used. These often turn out to be not very successful. On the basis of a meta-analysis of ALMP evaluation studies in Europe Kluge (2010) concludes that traditional training programs appear to have at most a modest effect on transitions from unemployment to work while direct employment programs in the public sector are rarely effective and frequently detrimental for the employment prospects of participants. Simple non-expensive programs with clear incentives for unemployed workers seem to work best. Financial incentives supporting UI design characteristics may reduce moral hazard.

Abbring et al. (2005) analyze benefit sanctions in the Netherlands finding that that reemployment rates are significantly and substantially raised by imposition of a benefit sanction. Van den Berg et al. (2004) find for welfare (benefits) recipients in Rotterdam that when a benefit sanction is imposed their job finding rate more than doubles and the effect is long lasting. From an analysis of Swiss data on benefit sanctions Lalive et al. (2005) conclude that by imposing a benefit sanction the job finding rate to go up with 45% causing the unemployment duration to decrease with roughly three

weeks from 33 to 30 weeks. Jensen et al. (2003) find a small effect of the sanctions that are part of Danish youth unemployment program. However, also using Danish data Svarer (2011) finds that the unemployment exit rate increases by more than 50% following enforcement of a sanction. Bockmann et al. (2009) investigate the effectiveness of benefit sanctions applied to welfare recipients in Germany. They find that a benefit sanction increases the probability of the welfare system within eight months after the benefit cut by about 70% points. So, from previous studies it is clear that benefit sanctions speed up job finding, *i.e.* they have a positive “treatment” effect – regardless of the size of the penalty or the duration of the punishment. However, the positive effect on exit rates from the benefits scheme seem to come at a cost in terms of a reduced quality of post-unemployment jobs; see Arni et al. (2009) and Van den Berg and Vikström (2009).

The literature on reemployment bonuses is predominantly from the U.S.² An exception is Van der Klaauw and Van Ours (2011) who study the effects of a reemployment bonus program used for welfare recipients in the municipality of Rotterdam. They find that this program did not affect the outflow from welfare. All in all, reemployment bonuses do not seem to have an important effect on the job finding rates of unemployed workers.

5 Conclusions

UI provides unemployed workers with benefits in order to smooth consumption but also creates disincentives for employed workers to retain their jobs and unemployed workers to find new jobs. The design of UI needs to consider the trade-off between insurance and incentives. The benefit structure determines the replacement rate and the duration of benefit receipt, which shape the incentives to search for a job and, therefore, the unemployment

²The U.S. studies are all based on field experiments in the 1980s. Woodbury and Spiegelman (1987) analyze reemployment bonus experiments conducted in Illinois, Anderson (1992) studies a New Jersey reemployment bonus experiment, Decker and O’Leary (1995) analyze experiments conducted in Pennsylvania and Washington. Meyer (1995) presents an overview of the outcomes from these experiments concluding that they have small positive effects on the job finding rate although the costs of the experiments are roughly similar to the reduction in benefit payments caused by the reemployment bonuses.

outflow. Recent empirical studies on elements of UI have contributed to the understanding of relevant UI design features. They allow us to better understand the interplay between various components of the UI system and the trade-off between insurance and incentives. This is achieved by exploiting research designs such as exogenous reforms or discontinuities, which allow comparisons of treated and control groups that help in identifying causal effects of policy parameters.

From a limited number of studies it appears that both the level and the maximum duration of benefits have a positive effect on the inflow into unemployment. The majority of empirical studies focus on the effect of the benefit system on unemployment outflow. These studies find that a fixed benefit duration creates incentives to find a job as the exit rate increases close to benefit exhaustion. This provides empirical support to the idea that optimal UI should have a declining sequence of benefits, which a two-tiered system represents. Moreover, the effect of changes in the duration of benefits leads to stronger effects compared to changes in the level of benefits, which means that benefit duration is a more effective tool to influence incentives. One concern is that the quality of post-unemployment jobs is affected too. The higher exit rate from unemployment might be associated with jobs of lower quality and with higher probability of re-entering unemployment.

Nevertheless, we are still a long way off from a situation in which policy makers can use insights from empirical studies to choose the optimal UI as if choosing from a menu. Clearly, there is no “silver bullet”, no role model or “one size fits all” optimal UI system. Overall, most countries have introduced in their systems the main features and structure of an optimal UI system aiming to induce work incentives (eligibility and entitlement conditions, maximum level and duration of benefits). Although there are country differences in the combination of design features of the UI system, they still lead to similar results in terms of labor market performance. Whether a UI system is generous not only depends on the level and maximum duration of the UI benefits but also on the duration of unemployment. If the actual duration of unemployment is short it is not very important if the maximum

duration is short too. If the maximum duration of unemployment is long but the actual duration is even longer benefits are not very generous. A further complication is that both durations are not independent. A long maximum duration may cause a long actual duration of unemployment.

Another important aspect of UI systems is that they are constantly changing, which shows that it is difficult to implement the optimal design. To some extent these changes have to do with changes in the economy and changing political preferences. They are also a matter of trial and error, which results from limited understanding of the individual behavioral responses to the introduction of new policies. The effectiveness of new features of a system and new policies depends on the way individuals react to these changes. It is only after evaluating these policies that we can learn about their effectiveness, although in many cases it is still not clear why some policies work and some other do not.

Now, in the aftermath of the Great Recession the focus of politician is on the insurance component of UI systems rather than on the incentives part. Nevertheless, even in economic hard times the way UI systems affect incentives of unemployed workers should not be ignored. In addition to design features of UI systems additional financial incentives may be introduced to stimulate workers to find a job more quickly.

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Table 1: Differences in UI benefit rules across European countries

	Contributions conditions	Waiting period (days)	Payment Rate (%)	Earnings Base	Declining Profile	Maximum duration (months, weeks, days)	PBD depends on: Insurance period	Age
Austria	28 weeks in 1 year	0	55	Net earnings		20 to 52 weeks	x	x
Belgium	28 weeks in 1 year	0	55	Last month earnings	x	No limit		
Czech R.	12 months in 3 years	0	50	Last 3 months avg.	x	6 to 12 months		x
Denmark	52 weeks in 3 years	0	90	Last 12 weeks avg.		48 months		
Estonia	1 year in 3 years	7	50	Last 12 months avg.	x	180 to 360 days	x	
Finland	43 weeks in 28 months	7	55	Daily wage-basic benefit		500 days		
France	4 months in 28 months	8	57-75	Last 12 months avg.		36 months	x	x
Germany	12 months in 2 years	0	60-67	Net earnings		6 to 24 months	x	x
Greece	125 days in 14 months	6	50	Monthly Min. Wage		5 to 12 months	x	x
Hungary	1 year in 4 years	0	60	Last year avg.	x	270 days		
Iceland	10 weeks in 12 months	0	70	Last 6 months avg.		3 years		
Ireland	260 days in 1 year	3	49	Reference Earnings		12 months	x	
Italy	52 weeks in 2 years	7	60	Last 3 months daily avg.	x	6 to 12 months	x	x
Luxembourg	26 weeks in 12 months	0	80	Average earnings		1 to 2 years		x
Netherlands	52 weeks in 4 of 5 years	0	75	Last 12 months avg.	x	38 months	x	
Norway	Last 12 months	3	0.24	Annual Income per day		52 to 104 weeks	x	
Poland	12 months in 18 months	0	Flat	573,60 Zlotys	x	6 to 18 months		
Portugal	365 days in 2 years	0	65	Last year avg.		24 to 72 months	x	x
Slovak Republic	3 years in 4 years	0	50	Last 3 years avg.		6 months		
Slovenia	12 months in 18 months	0	70	Last 12 months avg.	x	3 to 12 months	x	
Spain	360 days in 6 years	0	70	Last 6 months avg.	x	120 to 720 days	x	
Sweden	6 months in 1 year	5	80	Previous Income	x	300 to 450 days		
Switzerland	12 months in 2 years	5	80	Insured earnings	x	260 to 520 days	x	x
United Kingdom	Last 2 years	3	Flat	65.45 ppw		26 weeks		

Note: The contributions conditions refer to contributions to the UI system. Some countries also have employment conditions that differ from the contributions conditions. Payment rate in percentage of earnings base; Sources: OECD and “Social Security Programs Throughout the World” (2010), U.S. Social Security Administration.

Table 2: Unemployment rates and employment rates prime age (25-54) and older individuals (55-64); long term unemployment; European countries 2010

	Men				Women				Long term	
	Unemployment rate (%)		Employment rate (%)		Unemployment rate (%)		Employment rate (%)		Unemployment (%)	
	25-54	55-64	25-54	55-64	25-54	55-64	25-54	55-64	Men	Women
Austria	4.2	2.5	88.7	51.6	3.8	1.6	79.7	39.7	28	22
Belgium	7.2	4.2	85.5	45.6	7.5	5.2	74.4	29.2	50	48
Czech Republic	5.2	6.5	90.5	58.4	8.0	6.5	73.4	35.5	43	43
Denmark	7.1	6.8	85.9	62.7	5.9	4.6	80.6	52.5	21	17
Estonia	17.6	19.0	75.4	52.2	12.9	14.1	73.9	54.9	48	41
Finland	7.4	7.3	83.9	55.6	6.3	5.8	79.1	56.9	27	19
France	7.1	6.9	87.1	42.1	8.5	6.4	76.7	37.5	42	39
Germany	7.1	8.1	86.5	65.0	6.2	7.3	76.3	50.5	48	46
Greece	9.4	6.2	85.3	56.5	15.5	6.5	61.1	28.9	39	50
Hungary	10.6	8.2	77.9	39.6	10.1	7.3	67.1	30.1	51	50
Iceland	7.0	5.1	86.9	83.9	5.6	3.5	80.6	77.0	23	19
Ireland	15.9	10.5	75.6	58.4	8.5	5.0	66.0	43.0	54	38
Italy	6.6	3.9	83.5	47.7	8.9	3.0	58.7	26.2	47	50
Luxembourg	3.0	2.4	92.0	47.7	5.0	2.2	72.6	31.3	32	26
Netherlands	3.6	4.1	90.0	64.8	3.6	3.7	79.3	43.3	28	27
Norway	3.5	1.8	87.1	72.2	2.6	0.9	82.2	65.0	11	8
Poland	7.9	7.5	82.6	45.2	8.7	6.5	71.7	24.2	25	26
Portugal	9.3	10.0	83.9	55.6	12.2	7.6	74.6	43.5	52	53
Slovak Republic	12.4	9.6	81.4	54.1	13.3	11.0	70.1	28.8	58	61
Slovenia	7.1	4.2	85.2	45.5	6.8	3.6	82.1	24.5	45	41
Spain	18.1	14.3	75.7	54.7	19.2	13.8	63.2	33.2	45	41
Sweden	6.0	6.2	88.0	74.3	6.3	4.4	82.0	66.8	18	15
Switzerland	3.4	3.7	92.4	77.9	4.7	3.5	79.4	58.8	28	40
United Kingdom	6.7	6.3	85.3	64.9	5.4	3.0	74.4	48.9	37	26

Employment rate = employment as a share of the population; Unemployment rate = unemployment as a share of the labor force (= employment + unemployment); Long-term unemployment as percentage of total unemployment.

Source: OECD Employment Outlook, 2011

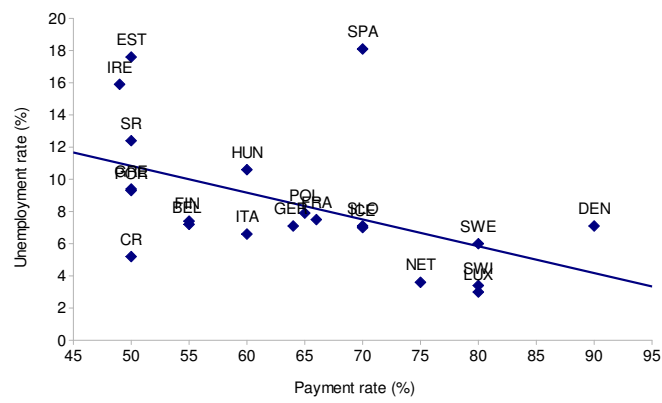
Table 3: Overview of recent empirical studies on the effects of UI design on duration of unemployment and the quality of post-unemployment jobs

a. Unemployment outflow				
	Country	Period	Measure of effect	
Carling et al., 2001	Sweden	1994-1996	Benefit elasticity: 1	
Roed and Zhang, 2003	Norway	1990s	Benefit elasticity: 0.95 (M) - 0.35 (F)	
Lalive and Zweimüller, 2004	Austria	1984-1998	1 week PBD ↑, 0.7 day U ↑	
Van Ours van Vodopivec, 2006	Slovenia	1997-1999	1 week PBD ↓, 1.6-4.4 days U ↓	
Lalive et al., 2006	Austria	1987-1991	1 week PBD ↑, 0.4-0.7 days U ↑	
			Benefit elasticity 0.3	
Lalive, 2008	Austria	1986-1995	1 week PBD ↑, 0.6 (M) - 2.2 (F) days U ↑	
Uusitalo and Verho, 2010	Finland	2002-2004	Benefit elasticity: 0.8	
b. Post-unemployment outcomes				
	Country	Period	Effect on earnings	Effect on job stability
Card et al., 2007	Austria	1981-2001	No	No
Centeno and Novo, 2007	Portugal	1998-2004	Yes	-
Van Ours and Vodopivec, 2008	Slovenia	1997-1999	No	No
Caliendo et al., 2009	Germany	2001-2007	Yes (M), No(F)	Yes (M), Yes (F)
Tatsiramos, 2009	Various	1994-2001	-	Yes
Fitzenberger and Wilke, 2010	Germany	1975-2001	No	-

Note: Benefit elasticity = percentage increase in unemployment duration in response to a one percentage-point increase in benefit replacement rate; absolute values.

Figure 1: Cross-country relationship in Europe between UI payment rates, maximum benefit duration and the unemployment rate of prime age males in 2010

a. UI payment rate



b. Maximum benefit duration

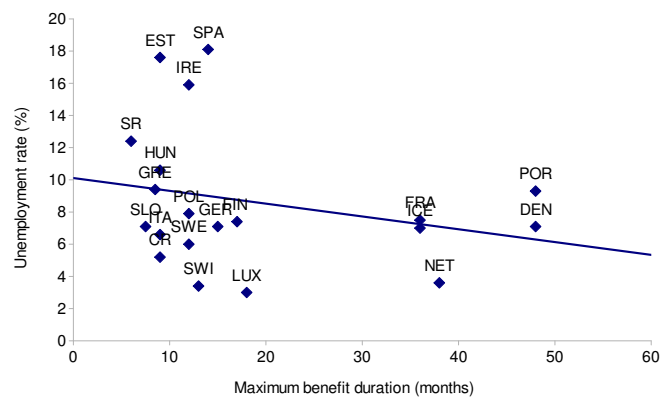
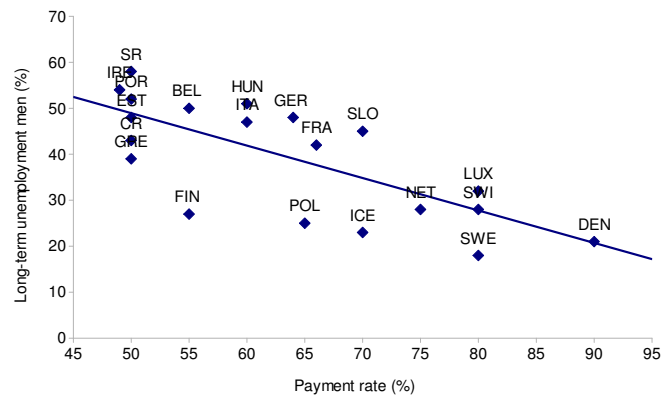
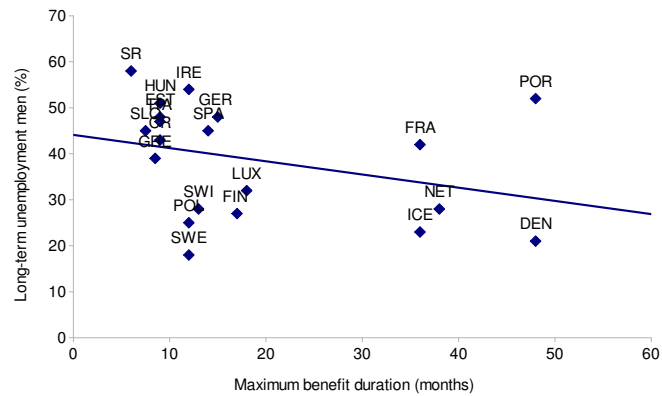


Figure 2: Cross-country relationship in Europe between UI payment rates, maximum benefit duration and long-term unemployment of men in 2010

a. UI payment rate



b. Maximum benefit duration



Box 1 – Unemployment duration and the level and maximum duration of benefits

In 1989 Austria reformed its unemployment benefit systems in a way that affected various unemployed workers differently. As shown in the table below, unemployment benefits (and hence the replacement rate) were increased for workers earning below a certain threshold, whereas the replacement rate remained unchanged for workers above this threshold. The increase in the maximum duration of benefits depended on age and experience: for workers below age 40 and/or workers with little previous work experience, the duration remained unchanged; for workers with long previous work experience, the duration increased.

Monthly income	Age < 40		Age ≥ 40	
	Work experience		Work experience	
	Low	High	Low	High
Low	RR↑	RR↑	RR↑	PBD+RR↑
High	Control	Control	Control	PBD↑

Lalive et al. (2006) used this policy change to derive lessons about the effects on unemployment duration of changes of UB systems along these different dimensions. The table below summarizes their main results by comparing the expected duration of unemployment for groups involved by the various regulatory changes (the treatment group) and groups not involved (the control group). As shown, both the increase in replacement rates and the extension of benefit duration significantly increase the duration of unemployment, and that the effect is stronger when maximum duration is increased rather than the replacement rate or when replacement rates and benefit durations are simultaneously increased. In particular, extending the benefit duration increases expected unemployment duration by 1.1 weeks. In contrast, increasing the replacement rate by 6 percentage points tends to prolong unemployment duration by 0.9 weeks. Finally, individuals eligible for a combined increase of the maximum duration of UBs and an increase in replacement rates are unemployed for 3.3 weeks longer.

Effects on unemployment duration (weeks)				
	Before	After	Δ	$\Delta\Delta$
PBD	16.3	18.7	2.4	1.1
RR	17.8	20.0	2.2	0.9
PBD & RR	19.0	23.5	4.6	3.3
Control group	15.2	16.5	1.3	

Box 2 – Maximum duration of benefits, unemployment duration and the quality of post-unemployment jobs

Faced with increasing unemployment, Slovenia in October 1998 drastically reduced the potential UI benefit duration (PBD) roughly by half for most groups of recipients. Before reform, for example, workers with 15 to 20 years of experience were eligible for up to 18 months of benefits. After the change this group of workers was eligible for up to 9 months of benefits. Van Ours and Vodopivec (2006, 2008) analyze the effects of shortening the PBD, both on the duration of unemployment as well as on the quality of post-unemployment jobs. They identify a significant increase in the job-finding rate at various durations of unemployment spells in addition to a clear spike in the job-finding rate in the month unemployment benefits expires. Whereas the duration of unemployment reduced substantially for most groups of recipients whose benefit entitlement period was shortened, it stayed virtually unchanged for recipients whose entitlement period did not change. This suggests that the job-finding rate improved mainly because of more intense job search efforts by unemployed workers. In a follow-up study van Ours and Vodopivec (2008) find that the faster job finding did not occur at the cost of quality of post-unemployment jobs. As shown in the table below workers found jobs faster without accepting lower-quality jobs in terms of job stability and lower wages.

	Experience (years)	PBD (months)		Duration (months)				Wage (%)	Job loss (%)
		Before	After	Before	After	Δ	$\Delta\Delta$	$\Delta\Delta$	$\Delta\Delta$
1	1 – 2.5	3	3	3.8	3.5	-0.3			
2	2.5 – 5	6	3	4.2	3.7	-0.5	-0.2	-2.3	1.3
3	5 – 10	9	6	5.8	4.2	-1.6	-1.3	0.0	3.6
4	10 – 15	12	6	7.0	4.9	-2.1	-1.8	0.1	-1.2
5	15 – 20	18	9	9.2	5.6	-3.6	-3.3	0.5	3.3
Av.				6.0	4.5	-1.5	-1.2	-0.4	1.7

Together, these findings imply that longer PBDs contributed to longer durations of unemployment spells of benefit recipients without improving the quality of post-unemployment jobs. These findings thus imply that additional job search had a zero marginal productivity or that recipients behaved opportunistically and did not spend additional time on job search at all, perhaps in collusion with their prospective employers.

Box 3 – Post-unemployment effects; a multi-country study

Tatsiramos (2009) provides evidence on the effect of unemployment insurance on unemployment and subsequent employment duration in Europe using individual data from the European Community Household Panel. The table below shows that the percentage of recipients who are still unemployed after 12 months is higher in comparison to non-recipients. For instance, 23% of recipients in France are still unemployed after 12 months compared to 12% for non-recipients. The survival rate after 12 months for recipients vs. non-recipients for Germany is 35% vs. 37%, for Greece 23% vs. 15%, for Spain 27% vs. 14%, and for the UK 26% vs. 14%. Overall, in countries with more generous benefits systems (Denmark, France, Germany, Spain) the relative exit rate from unemployment is lower compared to their counterparts in countries with less generous systems (Greece, Italy). The second panel of the table depicts the survival rate for employment spells stratified by benefit receipt during the previous unemployment spell. After 12 months in employment, the percentage of those who survived is higher for previously unemployed recipients in Denmark, France, and Germany and Spain.

Benefit recipient	Survival after 12 months (%)			
	Unemployment spells		Employment spells	
	Yes	No	Yes	No
Denmark	34.4	19.1	75.1	47.0
France	23.4	11.8	82.5	48.4
Germany	34.7	17.0	81.1	48.7
Greece	23.2	15.2	45.6	39.2
Ireland	15.1	16.6	72.5	71.1
Italy	31.1	20.0	69.4	59.2
Spain	26.6	14.3	70.5	56.3
UK	26.1	14.1	91.6	55.4

Country-specific estimates based on a multivariate discrete-time duration model, which takes into account dynamic selection issues and the endogeneity of benefit receipt, suggest that although receiving benefits has an adverse effect in the sense of increasing unemployment duration, there is also a positive effect associated with the increased duration of subsequent employment. This beneficial effect of unemployment insurance on employment stability is pronounced in countries with relatively generous benefit systems, and for recipients who have remained unemployed for at least six months. These findings are in line with theories that suggest a matching effect of unemployment insurance.