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Arbetsmarknadseffekter av arbetslöshetsförsäkringens utformning*

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Arbetslöshetsförsäkringens arbetsmarknadseffekter

Bilagan innehåller även en längre fördjupad text på engelska i vilken det finns referenser till internationell forskning.

1 Introduktion

Den här rapporten är en översikt av den teoretiska och empiriska litteraturen om arbetslöshetsförsäkringens effekter på arbetsmarknaden. Fokus ligger på försäkringens huvuddrag: ersättningsnivån, längden på ersättningsperioden och kraven för att få ersättning.

Ett stort antal studier har undersökt hur olika typer av arbetslöshetsförsäkringssystem fungerar. Resultaten av dessa studier visar att arbetslöshetsförsäkringen utjämnar konsumtionen hos olika grupper på arbetsmarknaden genom att sprida riskerna över ett stort antal försäkrade. Samtidigt fungerar den väl vid olika typer av ekonomiska störningar och verkar som en automatisk stabilisator eftersom konsumtionen utjämnas över konjunkturcykeln. Men studierna visar också att arbetslöshetsförsäkringen minskar incitamenten för arbetslösa att återgå till arbete och bidrar således till en högre jämviktsarbetslöshet. Ett av de största problemen med arbetslöshetsförsäkringen är att den ger upphov till ”moral hazard”; en arbetssökande kan tänkas söka mindre intensivt efter ett nytt arbete än han eller hon skulle ha gjort om det inte hade funnits någon arbetslöshetsförsäkring. Problemet med moral hazard uppstår på grund av att det är svårt att verifiera sökaktiviteten hos de arbetslösa – det finns ”asymmetrisk information” mellan försäkringsgivaren och den arbetssökande. Vid utformningen av arbetslöshetsförsäkringen måste man därför beakta avvägningen mellan försäkring och incitament.

2 Arbetslöshetsförsäringen och arbetslöshet – Teori

Arbetslösheten i jämvikt beror av inflödet till och utflödet ur arbetslöshet. Den totala effekten av arbetslöshetsförsäringen på arbetslösheten beror av dess relativa effekt på dessa båda flöden.

2.1 Utflödet ur arbetslöshet

Arbetslösa kan påverka sina möjligheter att komma ur arbetslösheten genom att välja hur mycket de ska anstränga sig för att hitta ett arbete och hur hög lön de ska kräva för att acceptera ett jobberbjudande. Gör man arbetslöshetsförsäringen mer generös genom en högre ersättning eller en längre ersättningsperiod medför det två motriktade effekter: För det första uppstår en negativ incitamentseffekt. En mer generös ersättning minskar alternativkostnaden av att vara arbetslös genom att reducera skillnaden i inkomst mellan att arbeta och att inte arbeta. Därmed kan man säga att värdet av att vara arbetslös ökar, vilket leder till att arbetsökande letar efter arbeten mindre intensivt. För det andra uppstår en positiv rättighetseffekt; värdet av att vara sysselsatt blir högre eftersom värdet av att bli arbetslös i framtiden har ökat.

För korttidsarbetslösa dominerar den negativa incitaments-effekten, speciellt vid höjningar av ersättningsnivån. För en given längd på ersättningsperioden är den huvudsakliga teoretiska förväntan att sannolikheten att finna ett jobb ökar med tiden som en arbetssökande får ersättning. Detta är resultatet av att ju närmare den arbetssökande kommer tidpunkten då ersättningen upphör, desto lägre blir värdet av att vara arbetslös. Som ett resultat av detta kommer en sökande som närmare sig ersättningsperiodens slut att anstränga sig mer för att finna ett jobb och vara mer villig att acceptera jobberbjudanden med lägre lön. För arbetslösa nära ersättningsperiodens slut (och de som passerat denna tidpunkt) och de som inte har rätt till ersättning dominerar incitaments-effekten. Därför kommer en höjning av ersättningen att ha en negativ effekt på utflödestakten ur arbetslöshet för korttidsarbetslösa, men ha en positiv effekt på utflödestakten för långtidsarbetslösa och de som inte har rätt till ersättning. Totaleffekten är därför a priori tvetydig. Det är dock troligt att effekten är negativ, eftersom den direkta effekten av ökningen i värdet av att vara arbetslös nu är större än den indirekta effekten av att värdet av att vara

arbetslös i framtiden ökat. En förlängning av ersättningsperioden påverkar de arbetslösas beteende med den största effekten för dem som befinner sig nära slutet av sina ersättningsperioder.

2.2 Inflödet i arbetslöshet

Den ökning av värdet av att vara arbetslös som uppstår om arbetslöshetsförsäkringen görs mer generös kan också öka inflödet in i arbetslöshet. Det finns flera skäl till detta. För det första kan en ökning av värdet av att vara arbetslös skapa incitament för dem som befinner sig utanför arbetskraften att träda in på arbetsmarknaden. För det andra kan mer generösa ersättningar pressa upp lönerna, vilket kan medföra att företag säger upp personal. Effekten på inflödet till arbetslöshet kan dock mildras om arbetslöshetsförsäkringen bidrar till en högre matchningskvalitet och därmed en högre produktivitet. För det tredje kan en mer generös ersättning göra att anställda blir mer benägna att säga upp sig från sina jobb och istället begära arbetslöshetsersättning.

Sammanfattningsvis är det från ett teoretiskt perspektiv troligt att en mer generös arbetslöshetsförsäkring (högre ersättningsnivå och/eller längre ersättningsperiod) leder till en högre jämviktsarbetslöshet genom ett ökat inflöde och ett minskat utflöde ur arbetslöshet.

2.3 Utfallet efter arbetslösheten

Det är tänkbart att arbetslöshetsförsäkringen inte bara påverkar de arbetslösas incitament att söka efter jobb, utan också påverkar dem efter arbetslöshetsperioden. Det finns flera mekanismer och utfall som är relevanta. För det första kommer mer generösa ersättningar att ha en positiv effekt på de löner som de arbetssökande som hittar ett jobb får. Förklaringen är att en högre ersättning gör arbetslösa mer kräsna med vilka löner de är villiga att acceptera. För det andra fungerar högre ersättning som en subvention för arbetssökande då det innebär mer tid att inte bara finna vilket jobb som helst utan finna det rätta jobbet. På en arbetsmarknad med sökfriktioner kommer ersättningen att öka matchningskvaliteten mellan jobb och arbetssökande, eftersom arbetslösa bara accepterar jobb

som passar dem väl. Dessa arbeten blir troligen mer varaktiga och ökar de anställdas produktivitet.

3 Optimal utformning av arbetslöshetsförsäkringen

En arbetslöshetsförsäkring med en fallande ersättningsprofil brukar betraktas som optimal när moral hazard förekommer eftersom den ger de arbetslösa starka incitament att söka efter jobb. De flesta OECD-länder har en arbetslöshetsförsäkring med en fallande ersättningsprofil i form av ett tudelat ersättningsystem där anställda som förlorar sina jobb får arbetslöshetsersättning under en begränsad tid och därefter får andra former av arbetslöshetsunderstöd. En tudelad arbetslöshetsförsäkring utnyttjar den rättighetseffekt som diskuterades ovan genom att ge de arbetslösa som befinner sig nära ersättningsperiodens slut eller som inte har rätt till ersättning incitament att söka aktivt efter jobb.

För att avskräcka sysselsatta från att själva säga upp sig från sina jobb, eller inte anstränga sig på jobbet, bör systemet vara utformat så att konsumtionen faller kraftigt vid starten på arbetslöshetsperioden. Karensdagar, då ingen ersättning betalas ut, kan vara en metod för att avskräcka sysselsatta från att sluta sina jobb. Ett annat sätt är att bara betala ut ersättning till arbetslösa som blivit uppsagda av arbetsgivaren och inte till dem som själva valt att sluta.

Ett annat potentiellt problem är att arbetslösa som väl har hittat ett jobb kan säga upp sig, eller provocera fram en uppsägning, för att därigenom få tillgång till en högre arbetslöshetsersättning. För att förhindra att personer kombinerar arbetslöshet med korta anställningar är det viktigt att man ställer krav på de arbetssökande för att de ska ha rätt till ersättning. En optimalt utformad försäkring bör utformas utifrån de arbetslösas sysselsättningshistorik, så att omfattningen av försäkringen ökar med den tid de har varit sysselsatta.

I de flesta arbetslöshetsförsäkringssystem inkluderar kraven för att få ersättning ett krav på att den försäkrade ska ha varit sysselsatt under en viss tid. När dessa villkor inte uppfylls har den arbetslösa antingen inte rätt till ersättning eller har bara rätt till den ersättning som kvarstår från förra gången personen var arbetslös.

4 Empiriska resultat om arbetslöshetsförsäkringens effekter

Ett antal studier har utnyttjat förändringar i ersättningsnivån i olika europeiska länder för att studera arbetslöshetsförsäkringens effekter på arbetsmarknaden. I några länder har ersättningen sänkts (till exempel i Sverige och Norge), medan den har höjts i andra (till exempel i Österrike). Utvärderingar tyder på att en sänkning av ersättningsgraden ökar sannolikheten att arbetslösa får jobb, medan en höjning ökar arbetslöshetstiden. Arbetslösa som har tillgång till en mer generös ersättning tenderar att lämna arbetslösheten långsammare under den tid de täcks av försäkringen.

Forskningen om effekterna av ersättningsperiodens längd på utflödet från arbetslöshet är omfattande både i USA och i Europa. Ett vanligt resultat i de flesta studier är en stor ökning (en så kallad ”spik”) i utflödet nära den tidpunkt då ersättningsperioden tar slut. Vidare visar sig en förlängning av ersättningsperioden leda till kraftiga negativa incitamenteffekter. Arbetslösa reagerar på förlängningen av ersättningsperioden genom att ändra sin sökaktivitet, vilket minskar utflödestakten ur arbetslöshet precis innan förändringen äger rum och flyttar spiken i sannolikheten att de arbetslösa finner ett jobb till den nya tidpunkt då ersättningsperioden tar slut.

En viktig aspekt när man utformar en optimal arbetslöshetsförsäkring är att veta vilken av de två huvudkomponenterna i ersättningsystemet – ersättningsnivån eller längden på ersättningsperioden – som har störst effekt på de arbetslösas beteende. Den forskning som finns på området tyder på att båda typerna av förändringar av ersättningsystemets generositet leder till längre arbetslöshetstider. Som teorin förutspår, sker den största effekten av en höjd ersättningsnivå tidigt i arbetslöshetsperioden, medan den största effekten av en förlängning av ersättningsperioden sker nära den tidpunkt då ersättningsperioden tar slut.

Den huvudsakliga slutsatsen från den empiriska litteraturen om utflödet från arbetslöshet är att en fast längd på ersättningsperioden ger incitament att hitta ett jobb nära den tidpunkt då ersättningen tar slut. Detta ger empiriskt stöd till den teoretiska analysen av en optimal arbetslöshetsförsäkring med en fallande ersättningsprofil, vilken kan uppnås genom en tudelad försäkring. Ett bekymmer är dock att kvaliteten på de jobb som de arbetslösa får också kan påverkas. En högre utflödestakt från arbetslöshet kan

vara förenad med en lägre kvalitet på jobben och en högre sannolikhet att de som får dessa jobb återfaller i arbetslöshet.

Den huvudsakliga slutsatsen från den empiriska litteraturen om inflödet i arbetslöshet är att flödet från sysselsättning till arbetslöshet ökar betydligt så snart kraven för att få ersättning från arbetslöshetsförsäkringen uppfylls och vid den tidpunkt då de anställda har kvalificerat sig för det högsta möjliga antalet ersättningsdagar. Vidare tyder resultaten på att förändringar i kraven för att få ersättning har en stor effekt på sysselsättningens varaktighet. Arbetsgivarna spelar en viktig roll i justeringen av sysselsättningens längd genom att förändra tidpunkterna för när uppsägningarna sker så att många anställningar som precis uppfyllde de gamla kraven förlängs så att de precis uppfyller de nya kraven för att få ersättning.

5 Den svenska arbetslöshetsförsäkringen

Den svenska arbetslöshetsförsäkringen tillhandahålls av 32 självständiga arbetslöshetskassor, som täcker de verksamhetsområden eller yrken som omfattas av olika fackförbund. Alla arbetslöshetskassor måste godkännas och registreras hos Inspektionen för Arbetslöshetsförsäkringen (IAF), som övervakar arbetslöshetsförsäkringssystemet och är ansvariga för att se till att kassorna följer de lagar och regler som beslutats av Sveriges riksdag.

Arbetslöshetsförsäkringen finansieras av skatteintäkter och medlemsavgifter till arbetslöshetskassorna. Medlemskapet är frivilligt och man måste vara medlem i minst tolv månader för att ha rätt till inkomstrelaterad ersättning. Arbetslösa som inte är medlemmar i en arbetslöshetskassa har rätt till ett grundbelopp, vilket är betydligt lägre än den maximala inkomstrelaterade ersättningen. Grundbeloppet betalas bara ut till dem som är minst 20 år, medan den inkomstrelaterade ersättningen inte har någon åldersgräns. Båda grupperna av arbetslösa har rätt till ersättning om de uppfyller vissa arbets- och sökvillkor. Arbetslösa har bara rätt till ersättning om de under de senaste tolv månaderna innan arbetslösheten har arbetat minst 80 timmar i månaden i minst sex månader eller minst 480 timmar fördelat på sex sammanhängande månaders arbete med minst 50 timmars arbete per månad. Sökravet innebär att man ska vara registrerad vid Arbetsförmedlingen, vara redo att ta ett jobb, aktivt söka efter ett arbete och acceptera lämpliga jobberbjudanden. Arbetslösa som varken uppfyller kraven för inkomstrelaterad

ersättning eller för grundbeloppet kan få försörjningsstöd, vilket är ett behovsprövat stöd som administreras av kommunerna. Kommunerna kan ställa krav på deltagande i olika former av aktiverande åtgärder.

Ersättning betalas ut enbart för arbetsdagar och ersättningsperiodens längd är 300 dagar (420 kalenderdagar). Ersättningen förlängs dock med 150 dagar för personer som har barn under 18 år när de första 300 dagarna förbrukats. Ersättningsperioden inleds med sju karensdagar.

Arbetslösa som inte är medlemmar i en arbetslöshetskassa, men uppfyller övriga krav får ett grundbelopp. Grundbeloppet betalas ut i proportion till hur mycket man arbetat och motsvarar 320 kr per dag för en person som arbetat heltid. Arbetslösa som har rätt till inkomstrelaterad ersättning får ett belopp som är baserat på deras tidigare lön, med en fallande ersättningsprofil. Under de första 200 dagarna får man 80 procent av den tidigare inkomsten. Under de resterande dagarna fram till dag 300 reduceras ersättningen till 70 procent av den tidigare lönen. Den minsta ersättningen för den som arbetat heltid är 320 kr per dag och den högsta ersättningen är 680 kr per dag. Efter att ersättningsperioden på 300 dagar tagit slut får man 65 procent av den tidigare lönen om man träder in i jobb- och utvecklingsgarantin. För de som är under 25 år gäller speciella regler, och de måste också delta i jobbgarantin för ungdomar efter tre månaders arbetslöshet.

Jämfört med utformningen av arbetslöshetsförsäkringen i de flesta andra EU-länder är det svenska systemet väldigt likartat vad gäller kraven för att få ersättning. I fråga om kvalificeringsperioden liknar det svenska systemet det danska, men skiljer sig från andra EU-länder. Skillnaden är relaterad till kravet på medlemskap i en arbetslöshetskassa. Det krävs en minsta period av arbete för att få grundbeloppet och medlemskap i en arbetslöshetskassa i minst ett år för att få inkomstrelaterad ersättning.

Den svenska arbetslöshetsförsäkringen skiljer sig också från de flesta andra EU-länder vad gäller utformningen av ersättningsstrukturen. Den svenska ersättningskvoten har en fallande profil, där ersättningen sänks efter 200 dagar. Även om ersättningskvoten är ganska hög i början av arbetslöshetsperioden (80 procent), är ersättningskvoten mycket lägre för många högavlönande på grund av det låga taket i ersättningen. Vidare så är ersättningsperiodens längd fast och varierar inte mellan olika grupper av arbetslösa.

6 Policyfrågor rörande utformningen av den svenska arbetslöshetsförsäkringen

Sammantaget är den svenska arbetslöshetssituationen relativt god. Arbetslösheten är under genomsnittet i EU och omfattningen av långtidsarbetslösheten är bland de lägsta i Europa. Det finns dock vissa skillnader mellan grupper; arbetslösheten bland äldre är relativt låg men de äldre som blir arbetslösa stannar kvar i arbetslöshet under längre perioder.

Utformningen av den svenska arbetslöshetsförsäkringen har tagit i beaktande alla de incitamentsmekanismer som är kända att påverka utflödet och inflödet i arbetslöshet. Dessa inkluderar en fallande ersättningsprofil, vilken är unik bland EU-länderna, och krav för att få ersättning som en kvalificeringsperiod och karensdagar.

Det finns dock några aspekter som kan förbättra både incitament och försäkring. För det första är den maximala längden på ersättningsperioden i Sverige inte åldersberoende, vilket innebär att alla arbetslösa får ersättning under en lika lång period. Om äldres arbetsmarknadsposition är svag förstärks försäkringsaspekten i avvägningen mellan att ge ett bra försäkringsskydd och att reducera problemen med moral hazard. Därför kan åldersberoende ersättning vara välfärdshöjande. Det är dock viktigt att beakta att längre ersättningsperioder för äldre kan reducera deras incitament att hitta jobb. Därför bör åldersberoende ersättningar kombineras med andra verktyg som ger äldre incitament att söka efter jobb.

För det andra kan incitamenten att söka jobb under arbetslöshetsperioden förstärkas genom att ändra kraven för att ha rätt till ersättning i framtiden. För närvarande är rätten till ersättning kopplad till sysselsättningshistoriken. Sökaktiviteten kan dock tänkas öka om man istället kopplar kvalificeringsperiodens längd till längden på arbetslöshetsperioden. Detta kan ske genom att man explicit kopplar längden på den nuvarande arbetslöshetsperioden till det minsta antalet månader av arbete som krävs för att kvalificera sig för en ny ersättningsperiod i framtiden. Detta innebär att varje ytterligare månad i arbetslöshet medför en kostnad i termer av en längre kvalificeringsperiod för ersättning i framtiden. Denna mekanism kan förstärka incitamenten att söka efter jobb under hela arbetslöshetsperioden och förhindra en situation där arbetslösa bara söker intensivt nära den tidpunkt då ersättningsdagarna tar slut.

En annan fråga är om längden på ersättningsperioden bör variera med konjunkturcykeln, vilket är fallet i USA. Då arbetslöshetsperioderna är längre under en lågkonjunktur kan man argumentera för att även arbetslöshetsförsäkringen bör vara mer generös i en lågkonjunktur. Samtidigt bör man beakta att detta även påverkar incitamenten för personer som får arbetslöshetsersättning. En förlängd ersättningsperiod under lågkonjunkturer kan förstärka problemen med moral hazard, speciellt för låginkomsttagare. Det kan också vara mer befogat att förlänga ersättningsperioden i en lågkonjunktur i länder som USA där övriga sociala trygghetssystem är begränsade. Vi ser inga starka skäl för Sverige att införa en konjunkturberoende arbetslöshetsförsäkring.

Slutligen är ett bekymmer med den nuvarande situationen det fallande medlemsantalet i arbetslöshetskassorna. Över tiden kan detta leda till stigande medlemsavgifter, vilket kan leda till ytterligare nedgångar i antalet medlemmar. Denna nedgång i medlemsantal kan vara väldigt selektiv och leda till problem med snedvriden selektion där endast personer med en relativt hög arbetslöshetsrisk vill bli medlemmar. Detta påverkar arbetslöshetskassornas finansiella stabilitet och kan leda till en nedåtgående spiral i antalet medlemmar i takt med att medlemsavgifterna höjs. Resultatet kan bli att en stor del av de arbetslösa blir underförsäkrade och minska antalet arbetslösa som har rätt till arbetslöshetsersättning.

1 Introduction

This report is on the labor market effects of unemployment insurance (UI) design. We provide an overview of theoretical and empirical evidence on incentives influencing the behavior of employed workers and UI recipients.

We focus on the main characteristics of a UI system: the level and maximum duration of benefits and eligibility and entitlement conditions. We discuss other policies to the extent that they influence UI related incentives. Focusing on the Swedish labor market and UI system, we discuss policy issues related to the structure of the UI system, its interaction with other policies and different measures across groups in the population. We also provide a discussion of a UI system in which the key elements – level and duration of benefits – are varying over the business cycle and issues related to the funding of the UI system.

The set-up of the report is as follows. In section 2, we give an overview of theoretical and empirical studies on incentives related to unemployment insurance. Section 3 discusses interactions between the UI system and other policies such as active labor market policies (ALMP), policies on social assistance (SA) and employment protection legislation (EPL). Section 4 presents some stylized facts of the Swedish labor market in relation to unemployment and a brief description of the Swedish UI system. We also provide a comparison of the Swedish UI system with that of the other EU countries. In section 5 we present relevant policy issues for the design of the Swedish UI system derived from the literature overview in relation to the main characteristics of the current system. The last section offers an overall assessment of the design of the UI in Sweden.

2 Incentives related to Unemployment Insurance

Unemployment insurance provides unemployed workers with benefits in order to smooth consumption. Providing private unemployment insurance is problematic for various reasons. The first problem concerns asymmetric information. The worker has more information about his unemployment risk than the insurer. If an insurance company would establish the insurance premium on the basis of the average unemployment risk, the insurance will not be attractive for workers with a low unemployment risk. For a given insurance premium unemployment insurance is especially attractive for workers with a high unemployment risk. This causes adverse selection of 'bad' risks; the insurance company makes losses or has to increase the insurance premium. However, if unemployment insurance becomes more expensive it is even more unattractive for low risk workers.

The obvious solution to this problem is that insurance companies select workers and do not allow high risks to enter or the company differentiates insurance premiums only offering high premiums to high risk individuals. Both solutions are often unacceptable from a societal point of view. While it mimics market insurance, collective unemployment insurance deviates from actuarial principles by charging premiums that do not reflect individual risks. A further problem related to private provision of unemployment insurance is moral hazard, which is related to asymmetric information about search effort. The unemployed worker may search less intensively for a new job than he would have done if no benefit was provided. Finally, unemployment risks are correlated and difficult to predict. In a recession many workers become unemployed at the same time. If recessions would be predictable they could be accounted for when establishing the UI premiums. However, the unpredictability of correlated events

requires adjustments of UI premiums to avoid UI funds going bankrupt. Only the state has the power to enforce these adjustments. For all these reasons unemployment insurance is usually a mandatory and collective arrangement.

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 for all categories of workers, 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. To stimulate workers to search for a job several incentive mechanisms are introduced. These mechanisms can be grouped under three headings: sequencing of benefits, monitoring and benefit sanctions, and workfare (see also Fredriksson and Holmlund, 2006a and 2006b).

Since there are separate reports on monitoring and benefit sanctions and active labor market policies,¹ we focus on the incentive mechanisms which influence either the outflow from the UI system, such as the level and duration of unemployment benefits, or the inflow into unemployment, such as eligibility criteria. As we mentioned in the introduction, we also discuss in Section 3 the interaction of UI provision with active labor market programs and programs of social assistance.

2.1 Theory

In this section, we provide a review of the theoretical literature on the functioning of the UI system. We make a distinction between unemployment inflow and outflow and their effects on equilibrium unemployment. In addition, we discuss how this analysis relates to the optimal design of the UI system.

¹ See Gautier and van der Klaauw (2010) and Forslund and Vikström (2010).

2.1.1 Unemployment outflow

We start with a discussion of how the benefit level and the duration of benefits affect the re-employment probabilities of unemployed workers.²

Unemployed workers can influence the exit rate from unemployment to work by choosing how much effort to exert in searching for a job and by choosing the minimum wage that they require for accepting a job offer. With a fixed duration of benefits the main theoretical prediction is an increasing job finding rate over the spell of insured unemployment. This is the result of a drop in the value of unemployment the closer the worker is to benefit exhaustion. As a result of this, closer to benefit expiration job seekers exert more search effort and are more willing to accept lower wage job offers.

The change in the behavior of job seekers over the spell of unemployment implies that individuals with different lengths of benefit entitlement behave differently.³ An increase in the *potential benefit duration* entails only a small immediate disincentive effect, that is, at the beginning of the unemployment spell. The largest effect of an increase in benefit duration is expected for unemployment durations close to the benefit expiration period before the change of the system. This is because search intensity at that time will be significantly lower under the new system with longer benefit duration compared to the system without a benefit extension, in which search intensity is at its highest level.

An increase in the *benefit level* will also affect unemployed workers differently depending on their elapsed unemployment duration. Contrary to an extension of the benefit duration, an increase in the replacement rate has its largest effect at the start of the unemployment spell. For a recent unemployed worker, an increase in the benefit level will lower the exit rate from unemployment as a result of a higher value of unemployment. The job seeker will reduce the search effort and will demand a higher wage before accepting a job offer.

For an unemployed worker close to benefit exhaustion, an increase in the benefit level might lead to an increase in the exit rate. This occurs because the immediate gain from the increase in the benefit level is small, while the value of becoming qualified for

² This analysis is based on the job search model developed by Mortensen (1977).

³ Van den Berg (1990) discusses the sources of non-stationarity in job search.

benefits in the future increases. This *entitlement effect* increases the incentive to accept jobs for UI recipients close to benefits exhaustion and for those who are not eligible for unemployment benefits.

Theoretically, the overall effect of an increase in the generosity of benefits on the duration of unemployment is ambiguous. On the one hand, a higher amount of benefits and a longer benefit duration will lower the exit rate from unemployment. On the other hand, for those close to benefit exhaustion more generous benefits will create an incentive to find a job faster. Given that the entitlement effect refers to future benefits its effect is expected to be smaller than the direct effect of more generous benefits. With a small entitlement effect, we expect increases in the benefit level and benefit duration to lead to lower job finding rates and longer unemployment durations.

2.1.2 Unemployment inflow

The benefit system may also affect the inflow into unemployment by changing the participation decisions of inactive individuals, the quitting behavior of workers and the firing decisions of firms. These decisions can change either because of an increase in the generosity of the benefit system or because of a change in the eligibility criteria for receiving unemployment benefits.

Rather than being employed or unemployed, individuals may decide not to participate at all in the labor market. When unemployment benefits are paid only to active job-seekers, that is, inactive people do not receive the benefit, an increase in the generosity of benefits might increase aggregate labor force participation. The intuition is that the entitlement to higher income while seeking jobs induces more people to be engaged in active job search. Thus unemployment benefits may actually increase participation.

Unemployment benefits may also affect unemployment via a higher inflow from employment. This higher inflow can be either because firms are more willing to fire workers or because workers are more willing to quit their jobs. On the firms' side, more generous unemployment benefits exert an upward pressure on wages, which makes newly established jobs become unprofitable more quickly. As a result, a more generous benefit system will lead to an increase in the steady state flow from employment to unemployment (Mortensen and Pissarides, 1999). On the workers side, more

generous benefits might induce individuals to quit more easily raising the inflow into unemployment.

A mechanism to reduce the incentive for workers to quit their job in the presence of unemployment benefits is the imposition of a tax upon entering unemployment. This tax is typically in the form of a waiting period during which workers do not receive benefits. Additionally, the *eligibility criteria* for receiving benefits may be used to control the inflow into unemployment. Specifying a minimum employment period to contribute to the unemployment insurance fund is a way to avoid repeated cycles of short employment followed by receipt of unemployment benefits.

2.1.3 Post-unemployment outcomes

Unemployment insurance may not only create disincentives in job search but may also affect post-unemployment outcomes. There are different potential mechanisms and relevant outcomes. First, more generous benefits will have a positive effect on the re-employment wages. The intuition is that with higher benefits unemployed workers become more demanding in terms of the wages they are willing to accept. Second, more generous benefits act as a search subsidy (Burdett, 1979) because they provide unemployed workers the time to find not just a job but the right job. In a labor market with search frictions, benefits tend to reduce job mismatch since unemployed workers become more selective and accept only highly suitable jobs, which are less likely to dissolve, and increase their productivity (Marimon and Zilibotti, 1999). Finally, more benefits may increase the number of high-quality jobs in the labor market. Moderate UI encourages unemployed workers to apply for high-wage jobs with high unemployment risk and this may induce firms to create more high-quality jobs (Acemoglu and Shimer, 1999).

Unemployment benefits, therefore, might have an effect on job match quality through higher wages and employment stability. We discussed earlier that more generous benefits will increase the inflow into unemployment due to more firing by firms when a productivity shock reduces their profitability. To the extent that UI increases the quality of the matches between workers and firms and thus increases the workers productivity, this might mitigate the effect of UI on the inflow into unemployment.

2.1.4 Equilibrium unemployment

Steady state unemployment depends on the inflow and outflow rates. The overall effect of an increase in the generosity of UI on the unemployment rate depends on its relative effect on the two flows. In this part, we discuss how UI might affect the equilibrium unemployment (Lalive et al., 2011).

Starting with the outflow rate, the discussion in Section 2.1.1 suggests that increasing the generosity of UI has two opposite effects on the exit rate out of unemployment. First, the value of being unemployed increases so there is a disincentive effect that leads an unemployed worker to search less intensively. Second, the value of being employed increases (because the value of being unemployed in the future has increased) which has a positive effect on the exit rate. For the short-term unemployed the disincentive effect dominates, especially with an increase in the benefit level. For unemployed workers near the point of benefit exhaustion (and beyond), and for those not eligible to benefits, the incentive effect dominates. Therefore, an increase in the level of benefits will have a negative effect on the exit rate out of unemployment for the short-term unemployed but it will have a positive effect on the exit rate for the long-term unemployed and for the non-eligible. Therefore, the effect is a priori ambiguous but is more likely to be negative as the direct effect of an increase in the value of unemployment is larger than the indirect effect of an increase in the value of unemployment in the future. An extension of the maximum benefit duration affects the behavior of unemployed workers with the largest effect being expected for unemployment durations close to the benefit expiration date.

The increase in the value of being unemployed through an increase in the generosity of UI may also induce an increase in the inflow into unemployment. There are various reasons why this could be the case. First, an increase in the value of unemployment might create an incentive for those who are inactive to participate in the labor market. Second, more generous benefits push up wages and increase firms' reservation productivity. This means that firms might be more likely to fire workers as a result of more generous benefits. In the case in which UI leads to higher job match quality with increased productivity this might mitigate the effect of UI on the inflow into unemployment. Third, more generous benefits may

induce a worker to quit his/her job more easily and finally, may also increase the take-up of unemployment benefits.

In conclusion, from a theoretical point of view, it is likely that an increase in the generosity of the UI system (benefit level or duration) will increase the equilibrium unemployment rate because of its overall positive effect on the inflow rate and the overall negative effect on the outflow rate.

2.1.5 The optimal design of UI

The optimal design of UI needs to consider the trade-off between consumption smoothing through insurance and incentives to search for work. If the search effort of unemployed workers could be observed and verified then there would be no moral hazard problem and the optimal design would entail full insurance with a constant profile of benefits over the unemployment spell. In the presence of moral hazard the design of the UI system should provide unemployed workers with incentives to exert search effort.

A UI system with a declining sequence of benefits has been considered optimal in the presence of moral hazard because it provides stronger incentives to search (Shavell and Weiss, 1979; Hopenhayn and Nicolini, 1997; Pavoni and Violante, 2007). Most OECD countries have a system with a declining sequence of benefits through a two-tiered UI system, in which workers who lose their jobs are entitled to UI benefits for a limited period after which they receive Unemployment Assistance (UA) benefits. The two-tiered UI system exploits the entitlement effect that was discussed above as it provides the incentive to search more actively for those who are close to benefit exhaustion and for those not entitled to benefits (Fredriksson and Holmlund, 2006a).

Another mechanism to enhance the incentives to exit unemployment is to combine a declining sequence of benefits with a wage tax after reemployment, whereby the tax level depends on the duration of the unemployment spell. An increasing tax profile will encourage job finding by making prolonged search more expensive. In particular, the wage tax could be negative at the beginning of the unemployment spell representing a bonus for exiting unemployment quickly (Hopenhayn and Nicolini, 1997).

There are a number of theoretical considerations that are important regarding the optimal design of UI. When wages are

determined through union-firm bargaining, a decreasing benefit schedule leads to wage pressure because it increases the welfare of the short-term unemployed at the expense of the long-term unemployed. When search effort is a choice of the unemployed worker a declining sequence of benefits is needed to encourage job search but the incentive effect will be weaker due to the wage pressure effect (Cahuc and Lehmann, 2000). When the choice of effort determines not only the job finding probability through search effort but also the probability of remaining employed through the choice of work effort, then the optimal UI system might be non-monotonic. In the beginning of the unemployment spell the system should induce a large drop in consumption in order to discourage shirking. This will affect the unemployment inflow. The time profile of benefits after the initial period should increase initially and then fall throughout the spell (Wang and Williamson, 1996). The initial increase is similar to the re-employment bonus of a negative wage tax of Hopenhayn and Nicolini (1997) at the beginning of the unemployment spell followed by a declining sequence of benefits. Overall, the conclusion from this literature regarding the sequence of benefits suggests that a declining profile provides better incentives than a flat (or increasing) profile.

The literature discussed so far on the optimal design of UI has considered models in which the unemployment agency can affect the consumption patterns of the agents through the sequence of benefits. This rests on the assumption that the agents cannot save and borrow without constraints from the market. Recent research has allowed for borrowing and savings, which means that the employment agency cannot influence the consumption profile of the unemployed worker through a declining benefit profile (e.g. Chetty, 2008; Pavoni, 2007; Shimer and Werning, 2008). The optimal policy in this case is a constant benefit level that insures workers against unemployment risk, while their ability to dissave and borrow allows them to avoid transitory fluctuations in consumption (Shimer and Werning, 2008).

A declining sequence of benefits is needed to encourage job search and increase the unemployment outflow rate. As we discussed above, workers can also affect their work effort and induce quits, which will affect the unemployment inflow. In order to discourage quits and shirking, the system should induce a large drop in consumption at the beginning of the unemployment spell. A waiting period before benefits are paid out is a way to discourage

quits. Another way to discourage quits is by providing benefits only to unemployed workers who were laid off and not to those who voluntarily quit their jobs.

Unemployed workers may look for jobs, and once employed, may quit or induce a layoff quickly in order to upgrade their benefits. To prevent such cycles of unemployment spells with short intermediate employment spells eligibility criteria are important. The optimal policy should condition the benefits paid to unemployed workers on their employment history, such that the coverage increases with the length of previous employment spells (Hopenhayn and Nicolini, 2009).

In most existing UI systems eligibility criteria include a minimum employment period preceding the unemployment spell. When these criteria are not satisfied then the unemployed worker is either not eligible for benefits or may only receive the benefits not used in the previous unemployment spell.

2.2 Empirical evidence

This section reviews the empirical evidence concerning the effects of unemployment insurance on the behavior of unemployed workers. As in the theoretical part, we consider separately the studies which focus on the unemployment inflow and outflow, and we review the evidence on the effect of UI on post-unemployment outcomes.

2.2.1 Unemployment outflow

The empirical literature on how UI affects the exit rate from unemployment is very large. 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.⁴ The disincentive effect of the benefit level on the exit rate from unemployment depends also on the spell duration, with bigger effects for the

⁴ Reviews of the early literature are given by Atkinson and Micklewright, 1991; Pedersen and Westergaard-Nielsen, 1993. 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).

short-term unemployed (Nickell, 1979; Fallick, 1991). 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). The evidence from the evaluation of these reforms suggests that a reduction in 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.⁵

The research on the effect of *benefit duration* on the exit rate from unemployment is extensive both in the US and in Europe. One common finding of most studies is a sharp increase in the exit rate close to benefit expiration.⁶ In addition, an increase in the benefit duration creates significant disincentive effects. 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. Considering the effect of benefits by gender and age the evidence is less extensive with mixed results. Some studies find a larger effect for males while others find that women react more to changes in the benefit system.⁷ With respect to age the evidence suggests that older workers react more to an extension of the maximum benefit duration than prime-age workers (Lalive, Van Ours and Zweimüller, 2006).

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 evi-

⁵ Carling, Holmlund and Vejsiu (2001) for Sweden 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 an elasticity of 1.7. Roed and Zhang (2003) for Norway estimated elasticities of around 0.95 for males and 0.35 for females. Lalive, Van Ours and Zweimüller (2006) investigate policy changes in the replacement rate in Austria in 1989.

⁶ Studies for the US and Canada include: Meyer, 1990; Katz and Meyer, 1990; Card and Levine, 2000; Addison and Portugal, 2004; Ham and Rea, 1987. For Europe: Hunt (1995); Carling, Edin, Harkman and Holmlund (1996); Winter-Ebmer (1998); Lalive and Zweimüller (2004); Roed and Zhang (2003); Van Ours and Vodopivec (2006); Lalive (2008); Lalive, Van Ours and Zweimüller (2006).

⁷ Winter-Ebmer (1998) investigates the effect of an extended benefit period in Austria and finds a disincentive effect only for males, while Roed and Zhang (2003) for Norway find instead that the spike around the time of benefit expiration is larger for females than for males.

dence 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 to the benefit duration extension than prime-age workers.

The main conclusion from the empirical studies on the effect of the benefit system on the unemployment outflow is 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 theoretical analysis of the optimal UI with a declining sequence of benefits, which a two-tiered system represents. Moreover, 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. We discuss this issue in section 2.2.3.

2.2.2 Unemployment inflow

The empirical evidence on the inflow into unemployment is rather limited. We discuss two dimensions. The first is the effect of eligibility rules on entrance into unemployment insurance. The second is how benefit level and benefit duration affect the inflow rates.

Most empirical studies on the unemployment inflow effect of UI focus on the *eligibility rules*. The question is how eligibility for entrance into unemployment insurance affects employment duration, the decision of workers to quit and the decision of firms to fire workers. The main conclusion is that the exit rate from employment to unemployment increases substantially as soon as the workers satisfy the number of weeks worked in order to qualify for UI benefits and at the point at which individuals have qualified for the maximum possible weeks of benefit receipts (e.g. Christofides and McKenna (1995, 1996); Green and Sargent (1998), for Canada). Moreover, the evidence suggests that changes in eligibility rules for UI have a significant impact on employment durations (e.g. Green and Riddell (1997) again for Canada).

Employers play an important role in the adjustment of employment durations by altering the timing of layoffs as many employment spells that just qualified under the old system are extended to just qualify under the new system.

As to the effect of the structure of the benefit system the existing evidence suggests that both the level and the maximum duration of benefits have a significant positive effect on the inflow into unemployment (e.g. Anderson and Meyer, 1997; Winter-Ebmer, 2003; Lalive and Zweimüller, 2004).

2.2.3 Post-unemployment outcomes

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 limited and mixed. We discuss the main empirical findings focusing on wages and employment duration.

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.⁸ More 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, 2009).

The evidence on the effect of the UI system on employment duration is also limited and rather mixed. Evidence from Canada (Belzil, 2001) and the US (Centeno, 2004) suggests that jobs accepted close to benefit termination have a higher dissolution rate while higher benefit levels increase the quality of job matches measured by the duration of the employment spell. A positive effect of benefits on the duration of subsequent employment is also found for Europe. Jobs which are accepted while being insured last longer; this effect is larger in countries with relatively generous benefit systems (Tatsiramos, 2009). In addition, similarly to findings for Canada, evidence from Germany suggests that those

⁸ Ehrenberg and Oaxaca, 1976; Burgess and Kingston, 1976; Hoelen, 1977; Blau and Robins, 1986; Addison and Blackburn (2000) find that more generous UI either in terms of the benefit level or longer entitlement periods increase re-employment wages. Classen (1977) finds no relationship between the level of UI benefits and re-employment wages.

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, Tatsiramos and Uhlenhorff, 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, conclude that an increase of the 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 (Card, Chetty and Weber, 2007; Van Ours and Vodopivec, 2008).

3 Other policies influencing incentives in UI

There are several other policies which might influence incentives in UI. In this section we discuss the way active labor market policies and social assistance influence UI incentives. We also discuss the interaction of UI with employment protection legislation.

3.1 Active labor market policies

Active labor market policies (ALMP) may affect the behavior of UI benefit recipients through their effects on incentives to search for and accept jobs. ALMP may affect the duration of use of UI benefits whereby the effect can go both ways. ALMP may increase the duration of unemployment if participation in a program affects the eligibility for or renewal of unemployment benefits. There is very limited evidence on the interaction between UI and ALMP. Evidence from Sweden shows that UI benefit recipients close to benefit exhaustion are more likely to enter ALMP than unemployed workers without benefit entitlement (Carling et al., 1996). Moreover, further evidence from Sweden shows that participation in programs allows participants to remain significantly longer on unemployment benefits, especially for those entitled individuals entering a program around the time of benefit exhaustion (Sianesi, 2004).

ALMP, however, may decrease the duration of unemployment if workers want to avoid participation in the program. ALMP consist of a variety of programs such as counseling, training and wage subsidies. Some of these programs have a mandatory component which generates a "threat" effect, i.e. benefit recipients want to avoid having to enter the program. Sometimes there is a direct activation program aiming to stimulate workers to find a job more

quickly.⁹ There are several studies that show the existence of threat effects in ALMP. The evidence is either based on the introduction of new programs or on real experiments.

In the UK there are two programs which have been introduced in the recent years. The first is the "Restart" program which consisted of a series of mandatory interviews during which a counselor assessed the recent unemployment history of the worker and offered advice on search behavior, training courses and sometimes initiated direct contact with employers. The evaluation findings of this program suggest that interviews conducted earlier in the unemployment spell significantly decreased the unemployment durations and they also had long-run effects by reducing the male unemployment rate five years later by 6 percentage points (Dolton and O'Neill, 1996; Dolton and O'Neill, 2002). The second British labor market program that was introduced is the "New Deal for the Young Unemployed", which was compulsory and directed to unemployed workers aged between 18 and 24. The program consisted of initial intensive job search assistance followed by various subsidized options including wage subsidies to employers. Evidence from the evaluation of the enhanced job search assistance suggests that the program increased the job finding rate of young men (Blundell et al., 2004). However, the findings are not clear as to whether the "carrot" of job assistance drives this positive effect or the "stick" of the tougher monitoring of job search.

There are a number of experiments conducted in different countries related to various features of ALMP. These include alternative work-search requirements and mandatory participation in a job search workshop imposed on unemployment benefit recipients in Maryland (Klepinger et al., 2002), the assignment of employed workers from Kentucky to reemployment service activities (Black et al., 2003), or the mandatory participation in an activation program in Denmark (Graversen and Van Ours, 2008).¹⁰ In all these experiments the main finding is that the obligation to participate in the program reduced the use of unemployment benefits, stimulated workers to leave unemployment more quickly but did not seem to affect the quality of post-unemployment jobs - in terms of employment and/or earnings. In addition, most of the effect

⁹ Kreiner and Tranæs (2005) show that in a situation in which job search is unobservable it may be optimal to introduce workfare, i.e. requiring unproductive activities in exchange for UI benefits. Workfare allows for a distinction in incentives between voluntary and involuntary unemployed.

¹⁰ See also Rosholm (2008).

caused by the mandatory participation in a program is in the beginning of the unemployment spell and in particular before the start of the program. In other words, the threat effect seems to be important in driving the results although in some cases positive treatment effects related to the job search programs cannot be ruled out. All in all, it is clear that ALMP affect incentives of UI recipients to search for and accept jobs. Conditional on the characteristics of a UI system more activating ALMP lead to shorter durations of UI spells.

3.2 Social assistance

Social Assistance (SA) for the unemployed is typically available for the long-term unemployed for whom UI is exhausted and for the non-eligible for UI. In most cases social assistance is means-tested. To the extent that the differences between UI and SA in terms of benefit level and eligibility are smaller, UI recipients will have less of a need to find a job before their UI benefits expire (Pellizzari, 2006). In other words, in addition to reducing incentives when individuals receive a SA benefit, a generous SA system may also reduce the job finding incentives of UI recipients.¹¹

3.3 Employment protection legislation

Both employment protection legislation (EPL) and UI protect workers against uninsurable labor market risk. There are three key differences between the two institutions (Boeri and Van Ours, 2008). First, EPL protects only those who already have a job. Second, EPL does not impose a tax burden on workers. Third, under EPL it is the employer who has to offer income to the workers laid off, while UI is a risk-sharing device that ends-up imposing a fiscal externality on all workers and employers. If UI is experience rated, the third difference between UI and EPL is reduced. When UI is experience rated and EPL is a pure transfer, it does not make much difference for those who have a job whether they are protected by

¹¹ Pavoni and Violante (2007) investigate an optimal welfare-to-work program, consisting of three phases: UI, monitoring of search, SA. In their theoretical model human capital depreciates with unemployment duration causing job offers decrease during unemployment. When unemployed reach the SA phase they are no longer required to search for a job as their job offer arrival rate is too low.

EPL or by UI. Except that the severance provided under EPL is generally provided in a single installment, while UI benefits offer a stream of (monthly) transfers up to the maximum duration of benefits.

Employment protection legislation affects the hiring and firing decisions of firms. When EPL is strict workers have higher protection against layoffs but also hiring rates are reduced. While lower firing rates affect the unemployment inflow, less hirings affect the unemployment outflow. Across OECD countries there is a negative correlation between the strictness of EPL and the generosity of the UI system. Countries with strict EPL have less generous UI systems and vice versa.

4 The Swedish UI system

Table 1 presents differences in labor market position across various age groups in Sweden. Young men and women – aged 15 to 24 – have a low employment rate, which is due to the fact that many youngsters are still involved in the educational system. Young men and women also have high unemployment rates which are related to them entering the labor market for the first time. Employment rates among prime age men and women – aged 25 to 54 – are high while unemployment rates are rather low. Among older men and women – aged 55 to 64 – employment rates are somewhat lower than among prime age individuals, but 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 of losing their job so the fact that they have an average unemployment rate may point to unemployment duration being above average. Due to lack of information about inflow and durations we present in Table 2 unemployment by duration. Clearly older workers have a far longer duration of unemployment. Whereas for prime age males (females) the share of long-term unemployed (more than a year) in 2008 was 17 % (14 %) this was 32 % (25 %) among older workers.

The rest of this section provides a brief description of the Swedish Unemployment Insurance system and a comparison to the UI systems of other EU countries.

4.1 General characteristics

Sweden has a so called "Ghent" system of UI. In the 1930s state support to the unemployment funds organized by the national trade unions was introduced (Lundberg and Åmark, 2001). Such

union-run unemployment funds were first successful in the Belgian city of Ghent, hence the name. The Swedish Unemployment Insurance system is administered by 32 private unemployment insurance funds (July 2009), which cover the fields of activity or professions of trade unions.¹² All unemployment insurance funds must be approved and registered by the Unemployment Insurance Board (IAF), which supervises the unemployment insurance system and is responsible for ensuring application of the law and rules on unemployment insurance legislated by the Swedish parliament.

Unemployment benefits are financed by tax revenue and the contributions of members of the unemployment insurance funds. Membership to an unemployment insurance fund is voluntary and is a requirement for receiving income-related benefits with the additional requirement of being a member of the UI fund for at least 12 months. Unemployed workers who are not members of a UI fund are entitled to a basic benefit under Unemployment Assistance (UA), which is substantially lower than the maximum income-related benefits. This basic amount is paid only to those who have reached the age of 20, while the income-related amount has no age limit. Both groups of unemployed workers are entitled to benefits if they meet some work and job search requirements. Workers are only entitled to benefits if they, during the last twelve months before becoming unemployed, have worked at least 80 hours per month during at least six months or at least 480 hours during six continuous months with at least 50 hours per month. The search requirements include to be registered at the public employment office, be ready for a job, actively looking for a job and be prepared to accept a suitable job offer. Those unemployed workers who are not eligible either for unemployment insurance or for unemployment assistance may receive social assistance, which is administered by the municipalities and is an income- and assets-tested benefit under the additional requirement of actively seeking employment.

Benefits are paid during working days and the eligibility lasts for 300 benefits days (420 calendar days). Benefit duration is extended with another 150 days for those with children under 18 years old at the end of the regular benefit period of 300 days. There is a waiting period of the first seven days of unemployment in which the unemployed worker is not entitled to benefits.

¹² Belgium, Denmark and Finland still have a Ghent system; Norway abolished the system in 1938.

Unemployed workers who are not members of a UI fund but meet the qualification requirements are entitled to UA and receive the basic insurance benefit. The basic insurance is paid out in proportion to the average hours worked, which amount to SEK 320 per day for a person who has worked full time, without absence. Unemployed workers who are entitled to the income-related benefit receive an amount based on their previous income from gainful employment, which has a declining profile. During the first 200 days, the beneficiary receives 80 per cent of previous earnings. For the remaining period until day 300, the amount is reduced to 70 per cent of previous earnings. The minimum amount for a person who has worked full-time is SEK 320 per day up to a maximum amount of SEK 680 per day. After the maximum benefit duration of 300 days the unemployed receive 65 per cent of previous income conditional on entering a labor market program ("The job and development guarantee").

Those less than 25 years of age face a different benefit structure. For those eligible for UI (income-related benefits) the declining profile of benefits has a different structure compared to those above age 25. In particular, the maximum benefit rate of 80 per cent is received only for the first 100 days, it is then reduced to 70 per cent for the following 100 days and drops to 65 per cent after 200 days. Those who do not qualify for UI and UA receive SEK 135 per day if they have completed upper secondary school or who are aged 20 or more. This corresponds to the study allowance paid to participants in tertiary education (not including subsidised loans). For those with incomplete upper secondary education aged 18–20, the benefits are SEK 48 per day, corresponding to the study allowance paid to upper secondary school participants. Additionally, participation in the "job guarantee for youth" program is required after the first 100 days as a condition for receiving further benefits. The program can last up to 15 months.

4.2 Comparison with other EU countries

The structure of the Swedish UI system has similarities to the systems in other European countries but also differs in a number of dimensions. In Appendix 2 we provide a description of the main characteristics of the UI systems in the EU countries distinguish-

ing between the general conditions and the benefit levels and durations.

One of the similarities between the Swedish UI system and that of most other EU countries 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. Only in Austria and in Germany voluntarily unemployed are eligible to UI, although in Germany there is a waiting period of 12 weeks. For the eligible unemployed a waiting period of a few days exists in a number of countries. Apart from Sweden in which the waiting period is seven days, a waiting period also exists in France, Finland, Greece, Italy, and the UK and varies from 3 to 8 days. In this sense, Sweden has one of the longest waiting periods among these countries.

Another similarity between the Swedish UI and that of the other EU countries 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. The exact requirements vary a lot across countries. In this respect Sweden is very similar to Denmark in that there is a minimum period of full-time employment required for the basic allowance and membership to an unemployment insurance fund of at least 1 year for qualification of earnings-related benefits.

In most countries benefits are determined by the previous earnings of the unemployed. This is the case for the income-related part of the Swedish UI system. In addition, as it is the case for Sweden, 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 benefit rate is a percentage of the previous earnings varying from 50 per cent in Greece to 90 per cent in Denmark. In this respect Sweden's benefit rate of 80 per cent for the first 200 days is among the highest. One dimension in which the Swedish UI system differs from most of the other EU countries is that the benefit rate has a declining profile, being lower after the first 200 days. It is only Belgium and Italy that share this feature with Sweden.

As to the duration of benefits, Sweden differs from many other countries as benefit duration is fixed and does not depend or vary across unemployed workers. This is similar to Denmark and the UK, but differs from the structure of the UI systems of many

other countries. In particular, benefit duration depends on the length of contribution and age in Germany, Greece, Italy, Austria, Portugal and France. In Spain it only depends on contributions, while benefit duration is unlimited in Belgium.

Table 3 gives an overview of the differences in unemployment rates and employment rates between EU countries. In 2009 unemployment rates for prime age men ranged from a low 3.0 % in the Netherlands to a high 16.2 % in Spain. With 6.4 % the Swedish rate is well below the average of 7.6 %. Also the unemployment rate of prime age women is below EU average. The employment rate for prime age men does not vary a lot, from 78.0 to 90.8 %, with Sweden being somewhat above the average of 86.3 %. For prime age women the range of the employment rates is substantially larger, from 59.1 to 82.9 %, with an average of 73.7 %. The Swedish rate of 81.9 % is close to the top end of the distribution.

Table 3 also provides information about UI net replacement rates at the start of the unemployment spell (but following any waiting period). The net replacement rates are calculated at two-thirds of the average wage and at 1.5 times the average wage. And, they are calculated for two family types, a one-earner married couple with two children and a single person without children. For a low wage couple with children the net replacement rate does not vary much, from 71 to 88 % with an average of 77 % and Sweden with 82 % being above average. For low wage single workers the range in net replacement rate across EU countries is substantially larger, from 54 to 83 %, with an average of 67 % and Sweden with 72 % again being above average. The variation in net replacement rates is larger and the relative position of Sweden is reversed for high wage workers. For a high wage couple with children the net replacement rate varies from 36 to 78 % with an average of 55 % and Sweden with 46 % being below average. For high wage single workers the range in net replacement rate across EU countries is even larger, from 23 to 84 %, with an average of 46 % and Sweden with 38 % again being below average. The last two columns of Table 3 show that irrespective of the type of family the drop in net replacement rate when going from a low wage to a high wage is among the largest in Sweden. Clearly the cap in UI benefits is more important in Sweden than in many other EU countries.

5 Policy issues concerning the design of the Swedish UI system

In the final section we draw conclusions about relevant policy issues related to the design of the UI system. We confront the main lessons from the literature overview on UI related incentives with the characteristics of the Swedish UI system.

5.1 Benefit structure

The level of UI benefits in Sweden has the unique feature of a declining profile over the spell of unemployment. The maximum duration of benefits is uniform across various groups in the labor market. The existence of a fixed benefit duration with a declining profile of benefit levels is consistent with the theoretical evidence on the optimal design of UI as it creates incentives to find a job.

The initial replacement rate of 80 per cent is quite high but due to the relatively low benefit ceiling the net replacement rate is much lower among high wage workers. The fixed maximum benefit duration in Sweden is different from other European countries where the maximum benefit duration is often age-dependent, either directly or through entitlement criteria that relate the maximum duration of benefits to previous work experience. Similarly to Sweden, older workers in other European countries face a lower unemployment probability but they experience longer unemployment spells. The rationale behind age-dependent unemployment insurance is twofold. The first is related to the labor market position of older workers who once unemployed might face worse employment prospects. The second is related to the fact that young and older workers are characterized by different expected horizons in the labor market.

To the extent that the labor market position of older workers is weak the insurance component in the trade-off between providing insurance and reducing moral hazard is larger. However, unconditional extension of benefits to older workers might reduce their re-employment incentives. Recent evidence suggests that in countries in which UI can be used as a pathway to early retirement unemployment for older workers is an absorbing state (Tatsiramos, 2010).

The proximity to retirement might also modify the trade-off between insurance and incentives. For instance, a declining profile of benefits might not be effective in introducing incentives to exit from unemployment when there is short distance to retirement. As discussed in Section 2.1.5, the theory of optimal UI suggests that employment taxes can be combined with a declining profile of benefits in order to create incentives for exiting unemployment. For older workers incentives to search and find a job may be increased by providing employment subsidies. However, if the time horizon is too short this will not work either. Shortly before retirement – up to a couple of years – older unemployed workers may stop searching for a job altogether irrespective of the structure of benefits and taxes or subsidies on employment. Combining the UI system and pension system may revitalize search of older unemployed workers for example by taxing pensions in proportion to the length of the unemployment spells (Hairault et al., 2010). Providing age-dependent benefits in the form of longer benefit durations for older workers in combination with a tax on pensions will provide more insurance and at the same time introduce incentives to search for employment.

5.2 Eligibility conditions

Eligibility conditions include general conditions of being available for work and actively searching for a job, the qualifying period that is required to be employed in order to be eligible for benefits, the waiting period that is required before the benefits are available for the unemployed and the condition to be laid off. In all these conditions Sweden is very much in line with other European countries so there seems no reason to consider adjustments to the system. These conditions are also in line with the optimal design of a UI system discussed in Section 2.1.5.

Linking eligibility to benefits with the employment history is certainly an effective mechanism to prevent unemployment cycles with short intermediate employment spells. The qualifying period may also be linked with the unemployment duration in a way that enhances the incentives to search for a job. This can be implemented by explicitly linking the duration of the current unemployment spell with the minimum months of employment required in order to renew the entitlement for UI in a future unemployment spell. This mechanism can enhance the incentives to search for employment throughout the unemployment spell and avoid the situation in which the unemployed search more intensively only closer to when benefits are about to expire.

In the current Swedish UI system an unemployed worker can renew his or her entitlement conditional on working for 6 months before re-entering unemployment. If the worker is laid-off earlier than the 6 months then he or she may receive the remaining days of benefits from the previous spell. One possibility to link directly the duration of the unemployment spell with the employment requirement is to consider a qualifying period that is increasing with the unemployment duration. For instance, for unemployment spells below 6 months (or the equivalent in benefit days) the qualifying period may be the current 6 months of employment. For each additional month in unemployment beyond month 6 the qualifying period increases by one month. That is, an unemployed worker who finds a job after 7 months will need to work for 7 months in order to renew his or her entitlement to benefits. This can increase up to 12 months for those who reach benefit exhaustion. In case the worker re-enters unemployment before satisfying the employment condition then he or she will receive the remaining benefit from the previous unemployment spell. For a worker who becomes unemployed after 6 months of work the benefit duration will be the full period if the worker has been unemployed for 6 months. For those who have been unemployed for more than 6 months the benefit duration will be the remaining benefits left up to 6 months depending on the length of the previous unemployment duration.

Contrary to the eligibility condition of a qualifying period (minimum employment period) that affects the incentives during employment, linking the qualifying period with the length of the unemployment duration introduces additional incentives during the unemployment spell. These additional incentives complement

the entitlement effects that exist with the existing declining profile of benefits. Additionally, this mechanism might reduce the spike in the exit rate from unemployment close to when benefits are about to expire by defining another focal point earlier in the unemployment spell, i.e. the unemployment duration with the minimum employment duration required to renew the entitlement to benefits. In the example above, this point was an unemployment duration of 6 months.

5.3 Relation of UI to other policies

When it comes to the effect of other policies on UI incentives we discussed Active Labor Market Policies, Social Assistance and Employment Protection Legislation.

Concerning ALMP there have been recent improvements to avoid adverse incentives to participate in these programs. Earlier, the clock in UI stopped ticking if an unemployed worker entered a labor market program during an ongoing insured unemployment spell. Under the new rules days spent in programs are counted in the same way as days with UI benefits. To the extent that participation in ALMP is compulsive and thus creates incentives for at least some workers to avoid participation by accepting regular jobs we see no reason to change the current system.

Concerning social assistance, the interaction with UI might reduce incentives to search for a job. When social assistance is generous the structure of UI might not be effective in introducing incentives to exit from unemployment.

Concerning EPL there are no direct incentive effects on the UI system. To the extent that EPL might be reduced for reasons other than the functioning of the UI system this may have effects on workers' demand for additional UI.

5.4 Business cycles and funding of UI

Throughout our paper we consider a UI system in a comparative static sense, i.e. the key elements – level and duration of benefits – are not varying over the business cycle. We also provide only a limited discussion of issues related to the funding of the UI system. The main reason is that there is hardly any UI incentive

directly related research on both issues. In this section we discuss both a cyclical UI system and the funding of UI in relation to potential incentives.

There are two ways business cycles affect unemployment. The first, which is a direct one, is related to an increase in layoffs and a reduction in hiring by firms in the case of a recession. The second, which is indirect, is related to a change in the composition of unemployed workers. For instance, during a recession more older workers and higher educated ones enter the unemployment pool. Labor market policies should adjust to the extent that the compositional change is large. Most of the existing empirical evidence, however, suggests that the compositional changes are rather limited.¹³

The occurrence of longer unemployment durations during recessions might still call for a UI structure that is sensitive to the business cycle. For instance, in the US, the maximum duration of UI benefits is extended from 26 to 39 weeks when the labor market in a particular state enters a recession and unemployment increases above a certain level. This system has been present for decades. Recently, there was a further extension of unemployment benefit duration related to the current crisis. Depending on the unemployment rate at the state level, under the heading of "Emergency Unemployment Compensation", benefits could be extended up to 53 weeks and under the heading of "Extended Benefits" another 20 weeks of benefits could be added, resulting in a total maximum of 99 weeks of benefit provision.¹⁴

Cyclical adjustment of maximum benefit durations will compensate the unemployed for a loss of income but also affects incentives for UI recipients. An extension in a depressed market might reinforce moral hazard problems particularly for low income workers. Furthermore, once a cyclical system is introduced workers might anticipate extensions of maximum benefit durations reducing their efforts to find a job. Finally, extensions might be more needed in systems in which social assistance is rather limited as is the case for the U.S. In the case of Sweden with an established

¹³ See for example Imbens and Lynch (2006), Abbring, Van den Berg and Van Ours (2001), Van den Berg and Van der Klaauw (2001), Verjo (2008) who find a small compositional effect. Rosholm (2001) finds instead that compositional variation is important in explaining unemployment duration and that the average quality of those becoming unemployed improves during booms.

¹⁴ As far as we know there are no empirical studies investigating the recent benefit extensions in the U.S. context.

safety net through social assistance we see little reason to introduce a cyclical UI system.

Finally, concerning the funding of the UI system, the Swedish combination of state funded UI benefits, which partially rely on voluntary contributions through membership fees of UI funds, might also indirectly affect incentives. In 2004, the amount of UI paid was covered for less than 10 % by membership fees, the rest was paid through taxes. Recently, the funding of the UI system has been changed: membership fees are increased substantially and a small degree of experience rating has been introduced (Forslund, 2009). As union fees in general included UI fund fees, union membership became much more expensive leading to a drop in union density. Unemployed workers who are not members of a UI fund, but meet the same work and job search requirements, are entitled to a fixed daily benefit, which is substantially lower than the maximum income-related benefit. Increasing UI membership fees will reduce UI membership and this reduction in membership may be very selective – i.e. may trigger adverse selection because at the margin employed workers with a low unemployment probability balancing expected benefits and costs will choose not to become a member of a UI fund. This can potentially lead to under-insurance for a significant part of the unemployed and reduce the number of unemployed workers eligible for UI.

6 Overall assessment

Steady state unemployment depends on inflow into and outflow from unemployment. The overall effect of the generosity of UI on unemployment depends on its relative effect on the two flows. 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 this trade-off between insurance and incentives.

Benefit structure and eligibility conditions are the most important elements for the design of UI. 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 outflow. The eligibility conditions, which affect the unemployment inflow, specify the requirements in order to be eligible for UI. These include general conditions of being available for work and actively searching for a job, the qualifying period that is required to be employed in order to be eligible for benefits, the waiting period that is required before the benefits are available for the unemployed and the condition to be laid off.

Overall, the unemployment situation in Sweden is relatively good. The unemployment rate is below the EU average, and the incidence of long-term unemployment is among the lowest in Europe. There exist, however, some heterogeneity with older workers experiencing low unemployment rates but long unemployment spells.

The design of the Swedish UI system has integrated all the incentive mechanisms that are known to influence the outflow and inflow into unemployment. These include the declining profile of the benefits, which is unique among the EU countries, and the eligibility conditions such as the qualifying period and the waiting period.

One concern with the current situation is the declining membership rates in the UI funds. Over time this may lead to an increase in the membership fees, which can further reduce participation. This reduction in the UI membership may be very selective and trigger adverse selection by attracting only those with a relatively higher risk of becoming unemployed. This will affect the financial stability of the UI funds and might trigger a spiral of further increases in the premiums and declines in membership. This might lead to under-insurance for a significant part of the unemployed and reduce the number of unemployed workers eligible for UI.

Finally, there is room for improvement in combining more insurance with more incentives to work. This is the case for older workers where age-dependent benefits will increase the insurance component without harming incentives. In addition, reforming the qualifying period in a way that increases the incentives to search throughout the unemployment spell might reduce the incentives to wait until benefits are about to expire and avoid repetitive transitions between bad jobs and unemployment.

References

- Abbring, J.H., G.J. Van den Berg and J.C. Van Ours (2001) Business cycles and compositional variation in U.S. unemployment, *Journal of Business and Economic Statistics*, 19(4), 436–448.
- Acemoglu, D. and R. Shimer (1999) Efficient unemployment insurance, *Journal of Political Economy*, 107, 893–928.
- Addison, J.T. and M.L. Blackburn (2000) The effects of unemployment insurance on post-unemployment earnings, *Labour Economics*, 7, 21–53.
- Addison, J.T. and P. Portugal (2004) How Does the Unemployment Insurance System Shape the Time Profile of Jobless Duration? *Economics Letters*, 85, 299–234.
- Anderson, P.M. and B.D. Meyer (1997) Unemployment insurance take-up rates and the after-tax value of benefits, *Quarterly Journal of Economics*, 112, 913–937.
- Atkinson, A.B. and J. Micklewright (1991) Unemployment compensation and labor market transitions: a critical review, *Journal of Economic Literature*, 29, 1679–1727.
- Belzil, C. (2001) Unemployment insurance and subsequent job duration: job matching versus unobserved heterogeneity, *Journal of Applied Econometrics*, 16, 619–636.
- Black, D.A., J.A. Smith, M.C. Berger and B.J. Noel (2003) Is the threat of re-employment services more effective than the services themselves? Evidence from random assignment in the UI system, *American Economic Review*, 93, 1313–1327.
- Blau, D.M. and P.K. Robins (1986) Job search, wage offers, and unemployment insurance, *Journal of Public Economics*, 29, 173–197.

- Blundell, R., M. Costa Dias, C. Meghir and J. Van Reenen (2004) Evaluating the employment impact of a mandatory job search program, *Journal of the European Economic Association*, 2, 569–606.
- Boeri, T. and J.C. van Ours (2008) *Economics of imperfect labor markets*, Princeton and Oxford, Princeton University Press.
- Burgess, P.L. and J.L. Kingston (1976) The impact of unemployment insurance benefits on reemployment success, *Industrial and Labor Relations Review*, 30, 25–31.
- Burdett, K. (1979) Unemployment insurance payments as a search subsidy: A theoretical analysis, *Economic Inquiry*, 42, 333–343.
- Cahuc, P. and Lehmann, E. (2000) Should unemployment benefits decrease with the unemployment spell? *Journal of Public Economics* 77, 135–153.
- Caliendo M., K. Tatsiramos and A. Uhlendorff (2009) Benefits duration, unemployment duration and job match quality: A regression discontinuity approach, *IZA Discussion Paper No.* 4670.
- Card, D., R. Chetty and A. Weber (2007) The spike at benefit exhaustion: Leaving the unemployment system or starting a new job?, *American Economic Review*, 97, 113–118.
- Card, D. and P. B. Levine (2000) Extended benefits and the duration of UI spells: Evidence from the New Jersey Extended Benefit Program, *Journal of Public Economics*, 78, 107–138.
- Carling, K., Holmlund and A. Vejsiu (2001) Do benefit cuts boost job findings? Swedish evidence from the 1990s, *Economic Journal*, 111, 766–790.
- Carling, K., P-A. Edin, A. Harkman and B. Holmlund (1996) Unemployment duration, unemployment benefits, and labor market programs in Sweden, *Journal of Public Economics*, 59, 313–334.
- Centeno, M. (2004) The match quality gains from unemployment insurance, *Journal of Human Resources*, 34, 839–863.
- Centeno, M., and A. Novo (2009) Unemployment insurance generosity and post- unemployment wages: Quantile treatment effects, mimeo.

- Chetty, R. (2008) Moral Hazard vs. Liquidity and Optimal Unemployment Insurance, *Journal of Political Economy*, 116, 173–234.
- Christofides, L.M. and C.J. McKenna (1995) Unemployment insurance and moral hazard in employment, *Economics Letters*, 49, 205–210.
- Christofides, L.M. and C.J. McKenna (1996) Unemployment insurance and job duration in Canada, *Journal of Labor Economics*, 14, 286–312.
- Classen, K. (1977) The effect of unemployment insurance on the duration of unemployment and subsequent earnings, *Industrial and Labor Relations Review*, 30, 438–444.
- Dolton, P. and D. O'Neill (1996) Unemployment duration and the restart effect: some experimental evidence, *Economic Journal*, 106, 387–400.
- Dolton, P. and D. O'Neill (2002) The long-run effects of unemployment monitoring and work-search programs: experimental evidence from the United Kingdom, *Journal of Labor Economics*, 20, 381–403.
- Ehrenberg, R. and R.L. Oaxaca (1976) Unemployment insurance, duration of unemployment, and subsequent wage gain, *American Economic Review*, 66, 754–766.
- Fallick, B. C. (1991) Unemployment insurance and the rate of re-employment of displaced workers, *Review of Economics and Statistics*, 2, 228–235.
- Forslund, A. (2009) Labor supply incentives, income support systems and taxes in Sweden, IFAU Discussion paper.
- Forslund, A. och Vikström, J. (2010), *Arbetsmarknadspolitikens effekter på sysselsättning och arbetslöshet – en översikt*, Supplement to the Long-term Survey of the Swedish Economy 2011, Stockholm.
- Fredriksson, P. and B. Holmlund (2006a) Improving incentives in unemployment insurance: a review of recent research, *Journal of Economic Surveys*, 20, 357–386.
- Fredriksson, P. and B. Holmlund (2006b) Optimal unemployment insurance design: time limits, monitoring, or workfare? *International Tax and Public Finance*, 13, 565–585.

- Gautier, P. and B. van der Klaauw (2010), *Effective Policy Interventions to Reduce Moral Hazard in the Labor Market*, Supplement to the Long-term Survey of the Swedish Economy 2011, Stockholm.
- Graversen, B.K., and J.C. van Ours (2008) How to help unemployed find jobs quickly; experimental evidence from a mandatory activation program, *Journal of Public Economics*, 92, 2020–2035.
- Hairault, J., F. Langot, S. Ménard, T. Sopraseuth (2010) Distance to retirement and older workers' employment: the case for delaying the retirement age, *Journal of the European Economic Association*, 8, 1034–1076.
- Ham, J.C., and S.A. Rea (1987) Unemployment insurance and male unemployment in Canada, *Journal of Labor Economics*, 5(3), 325–353.
- Hoelen, A. (1977) Effects of unemployment insurance entitlement on duration and job search outcome, *Industrial and Labor Relations Review*, 30, 45–50.
- Holmlund, B. (1998) Unemployment insurance in theory and practice, *Scandinavian Journal of Economics*, 100, 113–141.
- Hopenhayn, H. and J.B. Nicolini (1997) Optimal unemployment insurance, *Journal of Political Economy*, 105(2), 412–438
- Hopenhayn, H. and J.B. Nicolini (2009) Optimal unemployment insurance and employment history, *Review of Economic Studies*, 76, 1049–1070
- Hunt, J. (1995) The Effect of unemployment compensation on unemployment duration in Germany, *Journal of Labor Economics*, 13, 88–120.
- Imbens, G. and L. Lynch (2006) Re-employment probabilities over the business cycle, *Portuguese Economic Journal* 5(2), 111–134.
- Green, D.A. and W.C. Riddell (1997) Qualifying for unemployment insurance: an empirical analysis, *Economic Journal*, 107, 67–84.
- Green, D.A. and T.C. Sargent (1998) Unemployment insurance and job durations: seasonal and non-seasonal jobs, *Canadian Journal of Economics*, 31, 247–278.

- Katz, L. F. and B. D. Meyer (1990) The impact of the potential duration of unemployment benefits on the duration of unemployment, *Journal of Public Economics*, 41, 45–72.
- Klepinger, D.H., T.R. Johnson, and J.M. Joesch (2002) Effects of unemployment insurance work-search requirements: the Maryland experiment, *Industrial and Labor Relations Review*, 56, 3–22.
- Kreiner, C.T., and T. Tranæs (2005) Optimal workfare with voluntary and involuntary unemployment, *Scandinavian Journal of Economics*, 107, 459–474.
- Lalive, R. (2008) How do extended benefits affect unemployment duration? A regression discontinuity approach, *Journal of Econometrics*, 142, 785–806.
- Lalive, R. and J. Zweimüller (2004) Benefit entitlement and the labor market: evidence from a large-scale policy change, in: Agell, J., M.Keene, and A.Weichenrieder (eds.), *Labor Market Institutions and Public Policy*, MIT Press.
- Lalive R., J.C. Van Ours, J. Zweimüller (2006) How changes in financial incentives affect the duration of unemployment, *Review of Economic Studies*, 73, 1009–1038.
- Lalive, R., J.C. van Ours and J. Zweimüller (2011) Equilibrium unemployment and the duration of unemployment benefits, *Journal of Population Economics*, forthcoming.
- Lundberg, U. and K. Åmark (2001) Social rights and social security: the Swedish welfare state, 1900–2000, *Scandinavian Journal of History*, 26, 157–176.
- Marimon, R. and F. Zilibotti (1999) Unemployment vs. mismatch of talents: reconsidering unemployment benefits, *Economic Journal*, 109, 266–291.
- Meyer, B. D. (1990) Unemployment insurance and unemployment spells, *Econometrica*, 58, 757–782.
- Mortensen, D.T. (1977) Unemployment insurance and job search decisions, *Industrial and Labor Relations Review*, 30, 505–517.
- Mortensen D.T. and C.A. Pissarides (1999) New developments in models of search in the labor market, in Ashenfelter, O and D Card (eds.), *Handbook of Labor Economics*, Amsterdam: North-Holland.

- Nickell, S. J. (1979) The effect of unemployment and related benefits on the duration of unemployment, *Economic Journal*, 353, 34–49.
- Pavoni N. (2007) On optimal unemployment compensation, *Journal of Monetary Economics*, 54(6), 1612–1630.
- Pavoni N. and G.L. Violante (2007) Optimal welfare-to-work programs, *Review of Economic Studies*, 74, 283–318.
- Pedersen, P. and N. Westergård Nielsen (1993) Unemployment: a review of the evidence from panel data, *OECD Economic Studies*, 20, 65–114.
- Pellizzari, M. (2006) Unemployment duration and the interactions between unemployment insurance and social assistance, *Labour Economics*, 13, 773–798.
- Roed, K. and T. Zhang (2003) Does unemployment compensation affect unemployment duration?, *Economic Journal*, 113, 190–206.
- Rosholm, M. (2008) Experimental evidence on the nature of the Danish employment miracle, *IZA Discussion Paper* no. 3620.
- Sianesi, B. (2004) An evaluation of the Swedish system of active labor market programs in the 1990s, *Review of Economics and Statistics*, 86(1), 133–155.
- Shavell, S. and L. Weiss (1979) The optimal payment on unemployment insurance benefits over time, *Journal of Political Economy*, 87, 1347–1362.
- Shimer R. and I. Werning (2008) Liquidity and insurance for the unemployed, *American Economic Review*, 98(5), 1922–1942.
- Tatsiramos, K. (2009) Unemployment insurance in Europe: Unemployment duration and subsequent employment stability, *Journal of the European Economic Association*, 7(6), 1225–1260.
- Tatsiramos, K. (2010) Job Displacement and the transition to re-employment and early retirement for non-employed older workers, *European Economic Review*, forthcoming.
- Van den Berg, G. J. (1990) Nonstationarity in job search theory, *Review of Economic Studies*, 57, 255–277.
- Van den Berg, G. J. and B. Van der Klaauw (2001) Combining micro and macro unemployment duration data, *Journal of Econometrics*, 102, 271–309.

- Van Ours, J.C. and M. Vodopivec (2006) How shortening the potential duration of unemployment benefits entitlement affects the duration of unemployment: Evidence from a natural experiment, *Journal of Labor Economics*, 24, 351–378.
- Van Ours, J.C., and M. Vodopivec (2008) Does reducing unemployment insurance generosity reduce job match quality?, *Journal of Public Economics*, 92, 684–695.
- Verho, J. (2008) Determinants of unemployment duration over the business cycle in Finland, Helsinki Center of Economic Research, Discussion Paper No. 226.
- Wang, C. and S. Williamson (1996) Unemployment insurance with moral hazard in a dynamic economy, *Carnegie Rochester Conference Series on Public Policy*, 44, 1–41.
- Winter-Ebmer, R. (1998) Potential unemployment benefit duration and spell length: Lessons from a quasi-experiment in Austria, *Oxford Bulletin of Economics and Statistics*, 60, 33–45.
- Winter-Ebmer, R. (2003) Benefit duration and unemployment entry: quasi-experimental evidence for Austria, *European Economic Review*, 47, 259–273.

Appendix A: Characteristics of the Swedish UI system

	Age 25+	Age <25
A1. Entitlement		
<i>General conditions</i>	Fit for work Available for at least 3h/day or 17h/week Actively looking for a job	
<i>Employment conditions in the last year*</i>	Registered at the Public Employment Service Worked for at least 6m (80h/m) or for 480h (50h/m) continuously in 6m	
<i>Exceptions</i>	2m replaced with parental leave or military service	
<i>Contribution</i>	* Extension of time period (last year) if sick or children <3yrs Member of UI society for 12m	
A2. Structure		
<i>Benefit Amount – Percent of Average Earnings in the Preceding 12 months</i>		
80%	First 200 days	First 100 days
70%	Following 100 days	Following 100 days
65%	After 300 days	After 200 days
<i>Maximum</i>	680SEK/day	
<i>Minimum</i>	320SEK/day and full time job	
<i>Benefit Duration</i>	300 days (60 weeks) Additional 150 days if children <18	
<i>Waiting period</i>	7 days	
<i>Exceptions</i>	If Age <25 caring for child: Amount as for Age +25	
A3. Eligibility		
<i>Activation – Work and Development Guarantee</i>		
	Offered after 300 days Mandatory if receiving benefits	After 15 months in Youth Guarantee Program

	Age 25	Age <25
B. Unemployment Assistance		
B1. Entitlement		
<i>General conditions</i>		Fit for work Available for at least 3h/day or 17h/week Actively looking for job Registered at the Public Employment Service
<i>Employment conditions in last year*</i>		Worked for at least 6m(80h/m) or for 480h(50h/m) continuously in 6m
<i>Exceptions</i>		2m replaced with parental leave or military service *Extension of time period (last year) if sick or children <3yrs
<i>Contribution</i>		None
B2. Structure		
<i>Benefit Amount</i>		320 SEK/day for full time job
<i>Benefit Duration</i>		300 days
<i>Waiting Period</i>		7 days
<i>Exceptions</i>		Not paid to workers below age 20
B3. Eligibility		
<i>Activation</i>		For those below 25: option for municipalities For older workers: if beneficial
C. Youth Guarantee Program		
<i>General Conditions</i>		Age <25 After 100 days in unemployment
<i>Benefit Amount</i>		
A. see A2 if qualify for UI		
B. See B2 if qualify for UA		
C. If not qualify for UI and UA benefits depend on educational qualifications		
1. With Upper Sec. Ed. or aged 20		134 SEK/day
2. Incomplete Upper Sec. Ed. and aged <20		48 Sek/day

Table A.1 Unemployment rates and employment rates by age and gender; 2009

	Men		Women	
	Unemployment rate (%)	Employment rate (%)	Unemployment rate (%)	Employment rate (%)
15-24	26.3	37.3	23.7	38.8
25-34	8.5	84.3	7.7	77.7
35-44	5.2	89.6	5.5	84.5
45-54	5.7	86.4	4.8	83.2
55-64	5.8	73.3	4.6	66.8

Employment rate = employment as a share of the population;

Unemployment rate = unemployment as a share of the labor force (= employment + unemployment)

Source: Statistics Sweden

Table A.2 Unemployment duration by age and gender; 2008 (%)

	Men				Women			
	< 6 months	6-12 months	>12 months	Total	< 6 months	6-12 months	>12 months	Total
15-24	89	7	4	100	89	7	7	100
25-54	65	18	17	100	70	16	14	100
55-64	53	16	32	100	56	19	25	100

Source: OECD Labor Force Statistics

Table A.3 Cross-country differences in unemployment rates and employment rates of prime age men and women; enemployment benefits net replacement rates by earnings an family tayp

	Men		Women		Net replacement rates					
	UR (%)	ER (%)	UR (%)	ER (%)	67% A	AW B	150% A	AW B	Diff A	(%) B
Sweden	6.4	86.9	6.0	81.9	82	72	46	38	-44	-47
Austria	4.4	88.5	4.0	79.5	71	55	51	42	-28	-24
Belgium	6.7	85.7	6.9	73.8	71	78	44	43	-38	-45
Denmark	5.7	90.8	4.7	82.9	88	83	59	47	-33	-43
Finland	7.1	87.2	6.1	80.4	83	65	57	44	-31	-32
France	7.2	90.8	8.2	76.8	81	70	67	69	-17	-1
Germany	7.6	87.6	6.9	75.4	78	59	66	57	-15	-3
Greece	6.4	88.4	12.4	62.2	71	54	36	27	-49	-50
Ireland	14.0	78.0	6.7	67.1	74	42	46	23	-38	-45
Italy	5.9	84.7	8.5	59.1	73	73	54	44	-26	-40
Netherlands	3.0	90.7	3.3	79.6	78	73	60	56	-23	-23
Portugal	8.5	84.5	10.1	74.9	77	78	78	84	1	8
Spain	16.2	77.3	16.9	63.8	75	77	53	42	-29	-45
Sweden	6.4	86.9	6.0	81.9	82	72	46	38	-44	-47
United Kindom	6.8	86.4	5.2	74.4	79	54	50	26	-37	-52
Average	7.6	86.3	7.6	73.7	77	67	55	46	-29	-32

Note: UR = Unemployment rates, ER = employment rates, prime age = 25–54 years; 2009. Net replacement rates initial phase of unemployment but following any waiting period; 2008. A = One-earner married couple with 2 children; B = Singel person no children, AW = Average wage of adult, full-time worker (OECD definition).

Source: OECD Statistics.

Appendix B: Characteristics of European UI systems

B Characteristics of European UI systems

1. Conditions

Main conditions	Qualifying period	Waiting period
<p>Austria :</p> <p>Unemployment benefit (Arbeitslosengeld): The unemployed person must</p> <ul style="list-style-type: none"> * be unemployed, capable of work and willing to work, * be at the disposal of the job office, * may not have exhausted the duration of benefit. <p>Unemployment assistance (Notstandshilfe): Additionally, the unemployed person must have exhausted the right to unemployment benefit and be in a state of need.</p>	<p>52 weeks of insurance periods within the last 24 months. 26 weeks within the last 12 months for persons under the age of 25. It is possible to claim Unemployment assistance, once the right to Unemployment benefit has been exhausted.</p>	<p>No waiting period. Upon termination of employment relationship through the employee's fault or in the case the employee terminates the employment relationship without good reason the entitlement is suspended No waiting period.</p>
<p>Belgium :</p> <ul style="list-style-type: none"> * Is involuntarily unemployed; * to be without work; * to be fit for work; * to be available for the labour market; * aged between 16 and 65; * is registered as a jobseeker; * is actively seeking work; * resident in Belgium; * to be without remuneration. 	<p>Period varies according to the age of the insured person between 312 working days during the previous 18 months, and 624 working days over the previous 36 months.</p>	<p>No waiting period.</p>
<p>Denmark :</p> <ul style="list-style-type: none"> * No working activity; * Capable of working; * Available for the labour market; * Age between 18-65 years; * Registered as job seeker and at the disposal of the employment office; * Actively seeking employment and co-operating with the employment office to build up an individual action plan; * Residing in Denmark. 	<p>Basic allowance: A minimum period of full-time employment of 52 weeks during the 3 preceding years is required. Only employment carried out while being insured is taken into account. Earnings-related fund: 1 year of insurance with fund.</p>	<p>Employees: No waiting period. Self employed: 4 weeks.</p>
<p>Finland : Insurance:</p> <ul style="list-style-type: none"> * To be involuntarily unemployed; * Not working; * To be capable for work; * To be available for full time work; * Age between 17-64; * To register as a job seeker and to be at the disposal of the employment office; * To be actively seeking employment; * To be resident. <p>Assistance (Labour market support, työmarkkinatuki). As above and in several cases need for assistance.</p>	<p>Insurance: Basic unemployment allowance (peruspäiväraha):</p> <ul style="list-style-type: none"> * Employees: Initial condition at least 43 weeks of employment during the last 28 months and during each week at least 18 hours. Re-eligibility condition at least 34 weeks of employment during the last 24 months and during each week at least 18 hours. * Self-employed persons: at least 24 months of entrepreneurship during the last 48 months. <p>Earnings-related unemployment allowance (ansiooperusteinen työttömyyspäiväraha): As under "basic unemployment allowance" and to have fulfilled the employment requirement while being insured as a member of an unemployment fund. Assistance (Labour market support, työmarkkinatuki): No qualifying period; means test.</p>	<p>Insurance: 7 working days during 8 consecutive weeks. Assistance (Labour market support, työmarkkinatuki): 5 working days during 8 consecutive weeks. Persons entering the labour market for the first time have a waiting period of 5 months. This is not applied to persons who have completed their vocational training.</p>
<p>France : Unemployment insurance (assurance chômage):</p> <ol style="list-style-type: none"> a) Not to have left previous employment voluntary, without good cause; b) to be effectively and permanently looking for work; c) to be physically able to work; d) to be registered as jobseeker and to conform to a personalised back-to-work action plan; e) to be under the age of 60. However, the indemnity is maintained until the person reaches the full retirement age (maximum 65 years) taking into account the maximum time limit for the benefit. f) Residence in France. <p>Unemployment assistance (régime de solidarité): Conditions b) to f) and means-test.</p>	<p>Unemployment insurance (assurance chômage): At least 4 months (122 days) insurance during the last 28 months (36 months for those aged 50 and over) preceding the unemployment. Unemployment assistance (régime de solidarité): For the Allowance of specific solidarity (allocation de solidarité spécifique): 5 years of activity during the 10 years preceding the end of the working contract.</p>	<p>Unemployment insurance (assurance chômage): The waiting period comprises paid holidays plus a general period of 7 days plus a waiting period equal to the amount of the redundancy payment divided by the amount of the salary of reference within a limit of 75 days. Unemployment assistance (régime de solidarité): No waiting period.</p>

<p>Germany : Unemployment insurance (Arbeitslosenversicherung): An employed person is considered to be unemployed if he or she</p> <ul style="list-style-type: none"> * is not engaged in an employment relationship (without work), * takes an effort to put an end to this situation (efforts of his or her own) and * is available for the placement efforts undertaken by the employment agency (availability). <p>If the unemployed person has terminated his or her employment relation without any important reasons or has given reason to the termination of the employment relationship due to any behaviour of his or her that is contrary to the employment contract, a waiting period of up to 12 weeks may become effective. The person's employment, self-employment or activity as collaborating family member does not rule out that the person is without work if the time of the work or activity performed is less than 15 hours per week.</p> <p>The following persons are entitled to receive unemployment benefit II:</p> <ul style="list-style-type: none"> * between 15 and under 65 or 67 years of age; * employable * in need of help; * must have his or her usual residence in Germany; 	<p>Unemployment insurance (Arbeitslosenversicherung): The unemployed person must have been compulsorily insured for at least 12 months during the last 2 years.</p> <p>Basic security benefits for jobseekers (Grundsicherung für Arbeitsuchende): No qualifying period.</p>	<p>No waiting period.</p>
<p>Greece :</p> <ul style="list-style-type: none"> * To be unemployed involuntarily; * not to be working for more than 3 days a week, or 12 days a month; * to be capable of and available for work; * to be registered at an employment exchange and to be at the disposal of the exchange; 	<ul style="list-style-type: none"> * At least 125 days of work during the 14 months preceding job loss or, at least, 200 days of work during the 2 years preceding job loss. * For first time claimants, an additional requirement of at least 80 days of work per year during the 2 previous years applies. 	<p>6 days.</p>
<p>Ireland: Insurance and Assistance:</p> <ul style="list-style-type: none"> * Is involuntarily unemployed; * is not engaged in employment or is not a full-time student; * is capable for work; * is available for full-time work; * aged between 16 (18 in the case of Assistance) and 66 or, with certain limited exceptions in receipt of another welfare benefit or pension; * is registered as a jobseeker; * is actively seeking work. <p>Assistance:</p> <ul style="list-style-type: none"> * Satisfy a residence condition. 	<p>Insurance:</p> <ul style="list-style-type: none"> * 104 weekly contributions paid; and * 39 weekly contributions paid or credited during the relevant contribution year preceding the benefit year, of which a minimum of 13 must be paid contributions. The latter requirement may be satisfied by contributions paid in some other contribution years, or * 26 weekly contributions paid in each of the two relevant tax years preceding the benefit year. <p>Assistance: No qualifying period; means test.</p>	<p>Insurance: 3 days. Assistance: 3 days. (Except when claimant was in receipt of insurance immediately prior to claim.)</p>
<p>Italy :</p> <ul style="list-style-type: none"> * To be involuntarily unemployed, * is not engaged in work for more than 5 consecutive days; * no income higher than the personal annual taxable limit; * to be capable of work; * to be available for the employment office; * does not benefit from any pension; * claim to be presented within 68 days (98 in case of dismissal without notice). 	<p>Ordinary unemployment benefit: Two years of insurance and 52 weekly contributions during the last 2 years.</p> <p>Special unemployment benefit: 10 monthly contributions of 43 weekly contributions during the last two years in the building industry.</p>	<p>Waiting period of 8 days.</p>
<p>Netherlands:</p> <ul style="list-style-type: none"> * To be involuntary unemployed, * loss of at least 5 or half of the working hours per week, * to be capable for work, * to be available for work, * below the age of 65, * seeking employment, * residence in the Netherlands, * application for benefit on the first day of unemployment, * timely registration with the Institute for Employee Benefit Schemes (UWV) Work Company [Uitvoeringsinstituut Werknemersverzekeringen (UWV) Werkbedrijf]. 	<p>Mobility Allowance: At least 12 months of insurance, of which at least 6 months of effective work. A person who has been employed for at least 26 weeks in the 36 weeks before the first day of unemployment (weeks' condition) qualifies for a three-month benefit. A person who has received wages for at least 52 days in four of the five calendar years preceding the year in which s/he became unemployed, (years' condition) qualifies for a benefit payable for a number of months that equals the number of months in employment (with a maximum of 38 months).</p>	<p>No waiting period.</p>
<p>Portugal :</p> <p>Unemployment insurance:</p> <ul style="list-style-type: none"> * Involuntary total unemployment; * to be capable of and available for work; * to have registered at the employment office; * to be an active job seeker; * not to be in receipt of an invalidity or old-age pension. <p>Unemployment assistance: Same conditions as above plus: To have exhausted entitlement to unemployment benefit or not to have completed the qualifying period required for unemployment benefit; to fulfil the condition of resources.</p>	<p>Unemployment insurance: At least 450 days of salaried work and contribution payment, or assimilated situation, in 24 months preceding commencement of unemployment.</p> <p>Unemployment assistance: At least 180 days' salaried work in the 12 months preceding commencement of unemployment.</p>	<p>No waiting period.</p>

Spain : Insurance:

- * involuntarily unemployed as legally defined;
- * capable and willing to work;
- * to be over 16 years of age and under ordinary retirement age for the purpose of receiving such pension, except in cases where the worker does not credit sufficient contributions;
- * register as job seeker and to be at the disposal of the employment office with an obligation to actively seek employment;
- * affiliated to a social security scheme that cover this risk and to be an active contributor or in a situation treated as such on the date when the job is lost.

Assistance:
Allowance and Active Integration Income

- * involuntarily unemployed as legally defined;
- * to be 16-65 years of age;
- * register as job seeker and actively seeking employment;
- * no income from any other source exceeding 75% of the minimum wage
- * not being entitled to unemployment benefits or allowances

Insurance: Minimum contribution period of 360 days during the 6 years immediately preceding the legal unemployment situation.

Assistance:

- * Allowance:
Generally none, although certain unemployment allowances require a minimum contribution of 3 months (with family responsibilities) or 6 months (without family responsibilities) or 6 years in the course of the person's career (persons over 52 years of age).

* Active Integration Income (Renta Activa de Inserción, RAI): No qualifying period required.

Insurance: In general, no waiting period.
Assistance:

- * Allowance:
One month at the disposal of the employment office as from the expiry date of the contributory benefit. In other cases, there is no waiting period.

* Active Integration Income (Renta Activa de Inserción, RAI):
In general, no waiting period.

Sweden :

- * To be unemployed involuntarily;
- * to be fit for work and otherwise not prevented from taking a suitable work (at least 3 hours per day and at an average of at least 17 hours per week and continuously);
- * one is only entitled to unemployment benefit until and including the month before the person reaches the age of 65;
- * to be registered at the employment office as a job-seeker;
- * actively seek for a suitable job.
- * co-operate with the Employment service to build up an individual action plan.

- * To have been employed or self-employed for at least 6 months and at least 80 hours of work per month during the last 12 months or
- * To have been employed or self-employed for at least 480 hours during a consecutive period of 6 months with at least 50 hours of work every month during the last 12 months (working condition).
- * In order to get earnings-related benefit the applicant must also be a member of an unemployment insurance fund for at least 12 months. In order to promote membership of unemployment insurance funds, and against the backdrop of the economic downturn, months between 1 January and 31 December 2009 are counted twice.
- If necessary at most 2 months in the working condition may be replaced by leave of absence with Parent's cash benefit (förlädrapenning) or compulsory military service.

7 days.

United Kingdom : Contribution-based Jobseekers' Allowance:

- * to be involuntarily unemployed,
 - * is not engaged in work for 16 or more hours a week;
 - * to be capable of work;
 - * to be available for work;
 - * is under pensionable age;
 - * has entered into a Jobseekers' agreement;
 - * to be actively seeking employment;
 - * is in Great Britain;
 - * is not a full-time student;
 - * has met the contributory conditions, see further "Determining factors";
 - * is not engaged in a trade dispute.
- Income-based Jobseekers' Allowance: As above other than the contribution-based conditions but, in addition:
- * must not have savings in excess of GBP 16,000 (€ 18,687);
 - * partner must not be working for more than 24 hours a week.
- Special rules may apply to claimants under 18 years old.

Contribution-based Jobseekers' Allowance:
No qualifying period, but contributions must have been paid. See 'determining factors'.

Income-based Jobseekers' Allowance:
No qualifying period, but claimants must be 'habitually resident' in the UK. Whether a claimant is considered 'habitually resident' is decided on a case-by-case basis.

3 days.

2A. Benefits

Determining factors	Earnings taken as reference and ceiling
Austria : Unemployment benefit (Arbeitslosengeld): Previous earnings. Unemployment assistance (Notstandshilfe): Previously received Unemployment benefit.	Unemployment benefit (Arbeitslosengeld): Average earnings of the last complete calendar year. Special payments (13th and 14th salary) are taken proportionally into account. Ceiling: € 3,750 per month.
Belgium : Except for some lump-sum amounts, the daily benefits are income related, with a lower and an upper ceiling. Variable rates according to the family situation (see below).	Three monthly salary ceilings: * higher salary ceiling (first 6 months of unemployment): € 2,206.46; * medium salary ceiling (subsequent 6 months of unemployment): € 2,056.46; * basic salary ceiling (after 12 months of unemployment): € 1,921.71.
Denmark : Regulated once a year according to the sickness benefit.	Calculation usually based on average earnings of preceding 12 weeks or three months, contributions to the Labour Market Fund (Arbejdsmarkedsfonden) deducted. No ceiling.
Finland : Insurance: Previous earnings. Assistance (Labour market support, työmarkkinatuki): Flat rate benefit; means-test; size of the family.	Insurance: Basic unemployment allowance (peruspäiväraha): no reference to earnings; flat rate benefit. Earnings-related unemployment allowance (ansioperusteinen työttömyyspäiväraha): * Employees: Calculation usually based on average earnings of qualifying period of 43 weeks or 34 weeks if in the scope of the re-eligibility condition. No ceiling. * Self-employed persons: Earnings on which premiums have been paid for the last 24 months. Usually the earnings equal to income confirmed under the self-employed persons' pensions act. No ceiling. Assistance (Labour market support, työmarkkinatuki): No reference to earnings; flat rate benefit.
France : Unemployment insurance (assurance chômage): Earnings on which contributions have been paid. Unemployment assistance (régime de solidarité): Means-tested.	Unemployment insurance (assurance chômage): Earnings on which contributions have been paid for last 12 months. 75% of former daily salary. Four times the ceiling of social security (€ 11,436 per month). Unemployment assistance (régime de solidarité): Flat-rate benefit paid fully or differentially, according to the person's income.
Germany : Unemployment insurance (Arbeitslosenversicherung): Benefits are based on the salary, on the fiscal category figuring in the tax card and on the existence or not of children. Basic security benefits for jobseekers (Grundsicherung für Arbeitsuchende): Need-oriented and means-tested welfare aid, the amount of which is determined in line with social assistance, in order to guarantee a socio-cultural subsistence level.	Unemployment insurance (Arbeitslosenversicherung): Average daily wage during the last year up to a ceiling of benefits of € 5,400 per month in the old Länder and € 4,550 per month in the new Länder. Basic security benefits for jobseekers (Grundsicherung für Arbeitsuchende): The necessary subsistence level is granted according to the standard benefits at federal level in the form of standard rates (Regelsätze) which are the same all over Germany. Actual housing and heating costs are covered to the full amount if these are adequate. The standard allowance is granted as a lump-sum covering the costs for food, personal hygiene, household equipment and personal needs of daily life.
Greece : The monthly salary for the employees and the daily salary for blue-collar workers.	Earnings at the time of job loss.
Ireland: Insurance and Assistance: Flat-rate benefits.	Insurance: Reduced rates payable where earnings in relevant tax year are less than € 300 per week of employment. Otherwise maximum rate payable.
Italy : Previous salary with a ceiling.	Average remuneration during the last 3 months. No ceiling.
Netherlands: Employment history based on the actual working years and reference earnings.	Last daily wage with a maximum of € 186.65.
Portugal : Unemployment insurance: Reference salary. Unemployment assistance: Indexing reference of social support IAS (indexante dos apoios sociais).	Unemployment insurance: Average daily wage for 12 months preceding the 2 months prior to commencement of unemployment. No ceiling. Unemployment assistance: indexing reference of social support IAS (indexante dos apoios sociais).
Spain : The unemployment benefit (prestación por desempleo) amount is determined on the basis of contributions which are established according to salaries. The amount of the unemployment allowance and the Active Integration Income (Renta Activa de Inserción, RAI) are calculated according to the Public Income Rate of Multiple Effects (Indicador Público de Renta de Efectos Múltiples, IPREM) established annually by law.	Insurance: The amount of the benefit is determined on the average of the employee's contribution bases for the 180 days immediately preceding unemployment. Assistance: The amount of the allowance is related to the amount of the Public Income Rate of Multiple Effects (Indicador Público de Renta de Efectos Múltiples, IPREM) in force.
Sweden : Earnings-related benefit (inkomstbortfallsförsäkring): Previous earnings during a period of 12 months. Basic allowance (grundförsäkring): Flat-rate benefit.	Earnings-related benefit (inkomstbortfallsförsäkring): Calculation is normally based on previous daily average earnings in a reference period of 12 months. For self-employed persons calculation is based on taxed income during the last 3 years. Basic allowance (grundförsäkring): Not earnings related. Earnings ceiling: SEK 18,700 (€ 1,744) per month or SEK 680 (€ 63) per day.
United Kingdom : Contribution-based Jobseekers' Allowance: * Contributions paid in one of the 2 tax years on which the claim is based amounting to at least 25 times the minimum weekly contribution for that year, and * contributions paid or credited in both the appropriate tax years amounting to a total of at least 50 times the minimum weekly contribution for that year. Income-based Jobseekers' Allowance: A means-tested benefit. See above under "Means Test".	Not applicable. Flat-rate benefit.

Source: European Commission - Mutual Information System on Social Protection (MISSOC), Year 2009

2b. Benefits

Rates of the benefits	Duration of benefits
Austria : Unemployment benefit (Arbeitslosengeld): Basic amount: 55% of daily net income with a lower ceiling of € 25.75 if the daily unemployment benefit does not exceed, without the family supplements, 60% of the daily net salary and, with the family supplements, 80% of the daily net salary. Lowest daily rate: € 6.88 or € 9.18. Highest daily rate: € 43.87. Unemployment assistance (Notstandshilfe): 92% (in some cases 95%) of the basic amount of unemployment benefit. In case of short-term entitlement to unemployment benefit, there is a reduction after 6 months of "higher" daily rates. Transitional benefit (Übergangsgeld) and transitional benefit after part-time for elder workers (Übergangsgeld nach Altersteilzeit): Basic amount of unemployment benefit plus 25% plus potential family supplements.	Unemployment benefit (Arbeitslosengeld): Depends on insurance duration and age. Insurance periods and duration of payment: 52 weeks within 2 years: 20 weeks; 156 weeks within 5 years: 30 weeks; 312 weeks within 10 years and 40 years of age: 39 weeks; 468 weeks within 15 years and 50 years of age: 52 weeks. This duration will be extended by the period during which the beneficiary participates in a follow-up training or retraining measure or in a reintegration measure commissioned by the Labour Market Service and by 156 or 209 weeks if the beneficiary participates in a work foundation (special training measure). Transitional benefit (Übergangsgeld) and transitional benefit after part-time for elder workers (Übergangsgeld nach Altersteilzeit): Until the requirements for an old-age pension are met. Unemployment assistance (Notstandshilfe): No limit (except in case of active search for employment).
Belgium : Unemployment benefit (allocations de chômage/werkloosheidsuitkeringen): Cohabitants with dependants: 60% of reference earnings, max. € 50.92, min. € 38.00. Single persons: in the 1st year of unemployment 60%, max. € 50.92, min. € 31.93. From 2nd year onwards 53.8%, max. € 39.76. Cohabitants without dependants: 60% in the 1st year of unemployment, max. € 50.92, min. € 29.56. From 2nd year onwards 40%, max. € 29.33, or fixed amount min. € 16.86. Waiting allowance (allocations d'attente/ wachtuitkeringen) (based on study records): Cohabitants with dependants: € 37.02. Cohabitants without dependants (household with only replacement incomes): Age below 18: € 9.54, over 18: € 15.34. Single persons: Age below 18: € 10.52, 18 - 20: € 16.53, 21 and over: € 27.38. Unemployment benefit plus age supplement (complément d'ancienneté/ancienniteitstoeslag) after 1st year of unemployment to older workers (over 50) with employment of at least 20 years: Cohabitants with dependants: from € 48.67 (max.) to € 40.62 (min.). Single persons: € 44.35 (max.), € 33.99 (min.) according to the category. Cohabitants without dependants: € 40.33 (max.), € 27.61 (min.) according to the category.	4 years within a 6-year period.
Denmark : 90% of previous earnings, but not more than DKK 3,110 (€ 418) per week. Unemployed persons who satisfy certain conditions in respect to periods of employment are entitled to 82% of the maximum amount, regardless of previous earnings. Young unemployed persons immediately after vocational training of 18 months' duration or after military service: up to DKK 2,812 (€ 378).	4 years within a 6-year period.
Finland : Insurance: Basic unemployment allowance (peruspäiväraha): € 25.63 per day. * Increased basic unemployment allowance (korotettu peruspäiväraha): € 30.04 per day. * Re-employment-programme supplement (työllistymisohjelmälisa): € 30.04 per day. * Earnings-related unemployment allowance (ansioerusteinen työttömyyspäiväraha): The amount of the basic allowance + 45% of the difference between the daily wage and the basic allowance. If the monthly wage is greater than 90 times the basic amount, i.e. € 2,306.70 the amount is 20% of the excess. * Increased earnings-related allowance: The earnings-related component is increased to 55% and 32.5% of the excess of € 2,306.70 during the first 150 days if the employment relationship was terminated for economic and production-related reasons and the person has been a member of unemployment fund for at least 5 years and has been employed for at least 20 years. Allowance with re-employment programme supplement is increased to 65% and 37.5% of the excess of € 2,306.70 for those in the programme. Assistance (Labour market support, työmarkkinatuki). Full labour market support amounts to € 25.63 per day. A full allowance is payable if the monthly income	Insurance: 500 calendar days. An employee born prior to 1950 and who has reached the age of 57 while in receipt of an unemployment allowance may be paid until the age of 60, after which entitled to unemployment pension. An employee born in 1950 or thereafter who has reached the age of 59 while in receipt of an unemployment allowance may be paid until the age of 65. Assistance (Labour market support, työmarkkinatuki): No limit.
France : Unemployment insurance (assurance chômage): 40.4% of reference daily wages (RDW) & 43 € 11.04 per day or 57.4% of the RDW within the limit of 75% of the RDW. The best result is taken into account. Minimum: € 26.93 per day. Unemployment assistance (régime de solidarité): * Allowance of specific solidarity (allocation de solidarité spécifique): Maximum € 14.96 per day. * Temporary waiting period allowance (allocation temporaire d'attente) € 10.54 per day.	Unemployment insurance (assurance chômage): The duration of payment of the benefit corresponds to the length of insurance taken into account for acquiring entitlement to benefits (between 4 months and 2 years or 3 years if the beneficiary is aged 50 and over). Unemployment assistance (régime de solidarité): * Allowance of specific solidarity (allocation de solidarité spécifique): 6 months, renewable. * Temporary waiting period allowance (allocation temporaire d'attente): maximum 12 months.
Germany : Unemployment insurance (Arbeitslosenversicherung): * Beneficiaries with children: 67% of net earnings (net earnings are determined on a flat-rate basis by deducting the usual employee's stoppage from the gross salary). * Beneficiaries without children: 60% of net earnings. Basic security benefits for jobseekers (Grundsicherung für Arbeitsuchende): Employable persons in need receive Benefits securing their subsistence (unemployment benefit II - Arbeitslosengeld II): * Regular benefit: * Single person: € 359 per month, * partners over the age of 18: 90% of the regular benefit, * other employable family members: 80% of the regular benefit. The financial benefits mentioned above are reduced by the income and assets to be credited.	Unemployment insurance (Arbeitslosenversicherung): The duration of benefits (DB) depends on the duration of compulsory insurance coverage (DI) and on the age of the beneficiary: Basic security benefits for jobseekers (Grundsicherung für Arbeitsuchende): Unemployment benefit II (Arbeitslosengeld II) and social benefit (Sozialgeld) are in principle unlimited if the conditions of eligibility are met; however, the benefit is only granted as a rule for a duration of six months, then it is necessary to prove the entitlement again.
Greece : Blue-collar workers: 40% of daily wage. White-collar workers: 50% of monthly wage. Minimum: Two-thirds daily minimum wage. Maximum (basic amount plus extra for dependants): 70% of fictitious reference earnings for the appropriate insurance class. After prescribed payment period has expired, additional benefit of 50% of allowance.	Generally proportional to periods of employment: Employment duration: * 125 days: 5 months* 150 days: 6 months * 180 days: 8 months * 220 days: 10 months * 250 days: 12 months If aged 49 or more: 210 days: 12 months In all cases, 3 additional months at reduced rate, if 4,050 days of work, 12 additional months. For the newcomers on the labour market (youngsters between 20-29 years): 5 months of benefits. In all cases, 25 instalments of daily unemployment benefit for each month.
Ireland: Insurance: Flat-rate benefit: € 196 per week. Assistance: Short-term and long-term: € 196 per week. From May 2009, the rate of Jobseeker's Allowance is € 100 per week for new claimants aged under 20 years of age (does not apply if an increase for a child dependant is payable).	Insurance: 312 days but limited to 234 days if applicant has paid less than 260 weekly contributions since first entering insurance. If applicant is 65, the allowance will be paid until 66 (pension age) if 156 weekly contributions have been paid. Assistance: No limit up to the age of 66.

Italy :	<p>Ordinary unemployment benefit:</p> <ul style="list-style-type: none"> * Persons under 50 years of age: 60% for the first 6 months, 50% for the following 2 months; * Persons aged 50 or over: 60% for the first 6 months, 50% for the following 2 months, 40% for the following 4 months. <p>The benefit is calculated on the basis of average earnings during the last 3 months, with a monthly maximum of € 858.58 for earnings below € 1,857.48 and of € 1,031.93 for earnings equal to or exceeding € 1,857.48.</p> <p>Special unemployment benefit (construction): 80% of previous earnings, with a monthly maximum of € 1,030.30 for earnings below € 1,857.48 and of € 1,238.32 for earnings equal to or exceeding € 1,857.48.</p> <p>Mobility allowance: For the first year 100% of the extraordinary earnings supplement, for the following months 80%. The maximum amounts of the ordinary unemployment benefit apply.</p>	<p>Ordinary unemployment benefit: 210 days (300 days for the unemployed aged over 50 years).</p> <p>Special unemployment benefit: 90 days with of extension in the event of a recession.</p> <p>Mobility allowance: 36 months with possibility of extension until 48 months for regions in Southern Italy.</p>
Netherlands:	<p>75% of the last daily wage (which is set at a maximum of € 186.65) during the first two months, 70% thereafter.</p>	<p>A person who only meets the weeks' condition receives benefits for a maximum duration of 3 months. A person who satisfies the years' condition receives benefits for as many months as the number of months in employment, with a maximum of 38 months.</p>
Portugal :	<p>Unemployment insurance:Unemployment benefit (subsídio de desemprego): 65% of reference wage. Maximum: 3 times the indexing reference of social support IAS (indexante dos apoios sociais = € 419.22). Minimum: benefit equal to the indexing reference of social support IAS unless worker's remuneration is below that level. In this case, the benefit amount corresponds to the average payment.</p> <p>Unemployment assistance:Unemployment allowance (subsídio social de desemprego): 100% of the IAS for the unemployed with dependants and 80% for those living alone.In case of prolongation (see below "Duration of benefits"): daily benefit of 1/30 of 60% of the IAS. Increase of 1/30 of 10% of the IAS per child living in the household; however, the daily benefit cannot exceed 1/30 of the IAS.</p>	<p>Unemployment insurance:Duration of benefits proportional to age and length of contribution: (1) aged less than 30 years: * contribution period < 24 months: 270 days of payment; * contribution period > 24 months: 360 days of payment; 30 extra days every 5 years of registered income before unemployment. (2) aged from 30 to 40 years: * contribution period < 48 months: 360 days of payment; * contribution period > 24 months: 540 days of payment; 30 extra days every 5 years of registered income during the last 20 years preceding unemployment. (3) aged from 40 to 45 years: * contribution period < 60 months: 540 days of payment; * contribution period > 60 months: 720 days of payment; 30 extra days every 5 years of registered income during the last 20 years preceding unemployment. (4) aged 45 years or more: * contribution period < 72 months: 720 days of payment; * contribution period > 72 months: 900 days of payment; 60 extra days every 5 years of registered income during the last 20 years preceding unemployment.</p> <p>Unemployment assistance:Duration of benefits according to age and length of contribution period, with the same periods as unemployment insurance.</p> <p>Insurance: Depending on contribution period over preceding 6 years. The duration of the payment varies from a minimum of 4 months to a maximum of 2 years.</p> <p>Unemployment assistance: (1) Allowance: * Normally 6 months, possible extension in 6 months periods, up to a total of 18 months. * Extension of this period is possible in special cases. * In the case of workers over 52 who fulfil all the conditions to retire except for the age, the duration is extended until reaching retirement age. (2) Active Integration Income (Renta Activa de Inserción, RAI): A maximum of 11 months.</p>
Spain :	<p>Insurance: 70% of the calculation basis for first 180 days; afterwards 60%. Maximum: 175%, 200% or 225% of the Public Income Rate of Multiple Effects (Indicador Público de Renta de Efectos Múltiples, IPREM) according to the number of dependent children. Minimum: 107% of the IPREM with dependent children; 80% of the IPREM without dependent children.</p> <p>Assistance: (1) Allowance:80% of the IPREM. For long-term unemployed over 45 years of age who have exhausted a contributory benefit for 720 days, there is a special 6 month allowance varying from 80% to 133% of the IPREM according to the number of dependent family members. (2) Active Integration Income (Renta Activa de Inserción, RAI):80% of the IPREM in force. In 2009, the IPREM amounts to € 17.57 per day or € 527.24 per month or € 6,326.86 per year.</p>	<p>Insurance: Depending on contribution period over preceding 6 years. The duration of the payment varies from a minimum of 4 months to a maximum of 2 years.</p> <p>Unemployment assistance: (1) Allowance: * Normally 6 months, possible extension in 6 months periods, up to a total of 18 months. * Extension of this period is possible in special cases. * In the case of workers over 52 who fulfil all the conditions to retire except for the age, the duration is extended until reaching retirement age. (2) Active Integration Income (Renta Activa de Inserción, RAI): A maximum of 11 months.</p>
Sweden :	<p>Earnings-related benefit (inkomstbortfallsförsäkring):80% of reference earnings during 200 days. Thereafter 70% during 100 days. Maximum SEK 680 (€ 63) per day. Basic allowance (grundförsäkring):SEK 320 (€ 30) per day. If the working requirement is fulfilled by part-time work, the basic allowance is proportionally reduced.</p>	<p>300 days and 450 days for applicants who have a child under the age of 18 years old. The period cannot be prolonged.</p>
United Kingdom :	<p>Contribution-based Jobseekers' Allowance:Aged 25 or over:GBP 64.30 (€ 75) per week.Aged 18-24:GBP 50.95 (€ 60) per week.Aged 16-17:GBP 50.95 (€ 60) per week.No increase for dependants.Income-based Jobseekers' Allowance:Amount varies according to family circumstance and income but basic levels are:Couples (both under 18):GBP 76.90 (€ 90) per week.Couples (both over 18):GBP 100.95 (€ 118) per week.The basic level of benefit for single people is the same as for contribution based Jobseekers' allowance.</p>	<p>Contribution-based Jobseekers' Allowance: Limited to 182 days in any jobseeking period. Income-based Jobseekers' Allowance: Unlimited duration as long as entitlement conditions continue to be satisfied.</p>

Source: European Commission - Mutual Information System on Social Protection (MISSOC), Year 2009