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## An Unemployment Insurance Scheme for the Euro Area

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# An Unemployment Insurance Scheme for the Euro Area

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*Work in progress*

## Abstract

The Great Recession and the resulting European debt crisis revived a debate about deeper fiscal integration in the Eurozone. We discuss different alternatives how an unemployment insurance system for the euro area could be designed and run counterfactual simulations based on micro data to analyze the effectiveness of a basic scheme and a benefit extension program to act as an insurance device in the presence of asymmetric macroeconomic shocks. We find that a basic insurance scheme could be implemented with a relatively small annual budget of roughly 61 billion euros over the period 2008-2013. Net benefits would have stabilized incomes in particular in Cyprus, Estonia, Greece, Ireland, Portugal and Spain whereas Austria, Germany and the Netherlands would have been the largest net contributors.

**JEL codes:** F55, H23, J65

**Keywords:** European fiscal integration, redistribution, automatic stabilization

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This paper uses EUROMOD version F6.0+. EUROMOD is maintained, developed and managed by the Institute for Social and Economic Research (ISER) at the University of Essex, in collaboration with national teams from the EU member states. EUROMOD is based on the EU-SILC database which is made available by EUROSTAT. We would like to thank all past and current members of the EUROMOD consortium for the construction and development of EUROMOD and the European Commission for providing financial support for it as well as seminar audiences in Canazei (IT9), Paris (OECD) and Tübingen for valuable comments. Johannes Braese, Christoph Wilhelm and Martin Ungerer provided excellent research assistance. All results and their interpretation presented in this paper are the authors' responsibility.

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# 1. Introduction

The Great Recession and the resulting European debt crisis revived a debate about deeper fiscal integration in the Economic and Monetary Union (EMU). Some observers argue that the ongoing economic crisis in the euro area (EA)<sup>1</sup> where some member states lost access to private capital markets and could not let their national automatic stabilizers work has shown that the European currency union will not survive unless it is complemented by a 'fiscal union'. Options discussed range from enforced budget rules to the development of an own 'fiscal capacity' for the EMU. In December 2012, the President of the European Council, Herman van Rompuy, argued: *"An EMU fiscal capacity with a limited asymmetric shock absorption function could take the form of an insurance-type system between euro area countries. [...] The specific design of such a function could follow two broad approaches. The first would be a macroeconomic approach, where contributions and disbursements would be based on fluctuations in cyclical revenue and expenditure items.... The second could be based on a microeconomic approach, and be more directly linked to a specific public function sensitive to the economic cycle, such as unemployment insurance."*<sup>2</sup> The European Commission built upon these initiatives when launching its official report entitled *"A blueprint for a deep and genuine economic and monetary union - Launching a European Debate"* (European Commission 2012).

Since then, the perspectives of a European fiscal union and different reform proposals have been analyzed and discussed in various studies (see e.g. Bargain et al. 2013, Dolls et al. 2013, Dullien 2013, Enderlein et al. 2013 and IMF 2013). The question of how to optimally design a (European) fiscal union has also gained renewed interest in the more theoretical literature (see e.g. Drèze and Durré 2013, Engler and Voigts 2013, Evers 2012, Farhi and Werning 2012). While the main argument in favor of integrated fiscal mechanisms in the EMU is that they should act as insurance devices in the presence of asymmetric macroeconomic shocks, the main concerns in the debate relate to negative incentive effects inducing national governments to refrain from structural reforms and permanent transfer flows within the currency union.

To the best of our knowledge, this is the first paper which investigates the economic effects of an unemployment insurance system for the euro area using micro data which enable us to take individual household heterogeneity across and within Eurozone countries into account. This is of particular importance when assessing the macroeconomic stabilization effect of such a scheme since households can differ significantly regarding their propensity to consume and hence to adjust their consumption expenditure after shocks in disposable income.

Our main results are as follows. We find that a significant unemployment insurance scheme for the euro area which provides a minimum level of income insurance (replacement rate 50 per cent, maximum benefit duration 12 months) could be

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<sup>1</sup> In the following we equivalently use "EA", "EMU" and "Eurozone" to refer to the current member states of the European currency union and thus, only to those EMU members who have already introduced the Euro.

<sup>2</sup> 'Towards a genuine Economic and Monetary Union', Final Report, The President of the European Council, Brussels, 5 December 2012, p.11.

implemented with a relatively small budget. Over the period 2008-2013, the total volume would have been 365 billion euros, i.e. the average yearly benefits and contributions would have amounted to 61 billion euros. While the scheme analyzed in this study does not lead to permanent redistribution per se as only short-term unemployment is insured at the central level, our simulations show that (net) transfers from the euro area unemployment insurance scheme would have been unevenly distributed due a substantial divergence in unemployment rates within the Eurozone in recent years. Largest (net) contributors would have been Austria, Germany and the Netherlands with yearly contributions up to 0.6 per cent of GDP in the Netherlands in 2008. Households in Cyprus, Estonia, Greece, Ireland, Portugal and in particular Spain would have benefited most with yearly (net) benefits reaching their highest level in Spain in 2009 (1.4 per cent of GDP). The capacity of the basic UI scheme to provide income protection and hence automatic stabilization is limited by construction. Nevertheless, we find that household incomes would have been stabilized by a considerable degree, in particular in those countries most affected by rising unemployment. Our measure for automatic stabilization, the income stabilization coefficient, is close to 50 per cent in Greece, Ireland and Portugal in 2009, and in Italy in 2012. However, coverage rates of the euro area UI would have declined from 2009 onwards as the share of long-term unemployed got larger.

The reminder of this paper is structured as follows. The framework for our empirical analysis is described in section 2. The effectiveness of national unemployment insurance systems in the euro area to act as an automatic stabilizer as well as discretionary policy changes in that area implemented in recent year are thoroughly documented in section 3. Different alternatives how a supranational scheme for the euro area could be designed as well as their stabilization effect, the risk of permanent redistribution and moral hazard concerns are discussed in section 4. Results of our empirical analysis are presented in sections 5 and 6. Section 7 concludes.

## **2. Data and Methodology**

### **2.1. Data: EU-SILC and EUROMOD**

For our simulations, we rely on representative household micro data for the EA17 from 2008 covering income and population characteristics from 2007 and use the European tax-benefit calculator EUROMOD for counterfactual simulations. EUROMOD is a static tax-benefit calculator for the European Union countries which allows for comparative analysis of tax-benefit systems and their impact on the income distribution in a consistent way through a common framework. Most importantly, the micro data are harmonized across countries with common variable definitions. EUROMOD input-data are mainly based on the European Union Statistics on Income and Living Conditions (EU-SILC) released by Eurostat (c.f., Eurostat 2012). The simulated components include most direct taxes (especially income taxes on all sources of income including tax credits, payroll taxes and social insurance contributions) and benefits (e.g. welfare benefits, social assistance and some transfers based on previous contributions, e.g. unemployment benefits). Information on consumption is missing in the data; hence indirect taxes and taxes on

corporate profits are not included in the model, likewise in-kind benefits. Also, EUROMOD assumes full benefit take-up and tax compliance focusing on the intended effects of tax-benefit systems.

The main stages of the simulations are as follows. First, a representative micro-data sample of households (including information on all gross income components as well as demographic characteristics that are relevant to determine taxes and benefits) and the respective tax benefit rules are read into the model. Subsequently, the model constructs corresponding assessment units (for instance the individual or household) for each tax and benefit instrument according to the underlying eligibility rules. On that basis, all taxes and benefits are simulated and disposable income is calculated. For more detailed information on the current version of EUROMOD and the underlying input data, see Sutherland and Figari (2013).

## 2.2 Simulation experiment

An important feature of EUROMOD is that it allows for counterfactual ex-ante simulations. In our empirical analysis, we introduce an unemployment insurance scheme for the euro area and ask the question of what would have happened if such a scheme had been created before the start of the recent crisis. In order to shed light on this question, we take our base year household micro data reflecting incomes, labor market status and socio-demographic characteristics from 2007 and simulate unemployment shocks as observed in the period 2008-2013. Given that there are no harmonized panel data available for the EA17 spanning such a recent time period, we create a sample of repeated cross-sections for each country reflecting changes in unemployment and incomes. For the simulation of entries into and exits out of unemployment, we need to make assumptions about the structure of the new unemployed and employed, respectively. One possibility is to assume that the structure of the new (un)employed is equal to the existing pool of (un)employed.<sup>3</sup> Alternatively, one can assume that new (un)employed are similar to the total population<sup>4</sup>. We opt for the latter approach which seems to be the more realistic scenario in the period under consideration. In addition, we model changes in earnings along the intensive margin based on information about growth in nominal compensation per employee.

Note that in our simulations we do not account for behavioral responses such as migration, changes in hours worked or entries into and exits out of the labor force which are certainly all important channels. However, modelling all these responses would add considerable complexity to our analysis which instead focuses on the key economic effects of an unemployment insurance scheme for the euro area.

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<sup>3</sup> This can be modelled by reweighting the micro data (see Immervoll et al. 2006 and Dolls et al. 2012) or by estimating probabilities of becoming unemployment (Bell and Blanchflower 2010).

<sup>4</sup> C.f., Peichl and Siegloch (2012).

## 2.3. Descriptive information

In this section we report descriptive information on gross income levels in the euro area in 2007 which is the base year of our simulations and show how per capita compensation has changed over the simulation period. We report this information at the overall EMU level and for individual countries. Column 1 of Table 1 shows the population share of each Eurozone country. Average monthly employment income (in 2007 EURO) which is the basis for contributions into and transfer payments out of the simulated euro area unemployment insurance scheme is reported in column 2. Growth in nominal compensation per employee (in percent) from 2007 to 2013 is reported in columns 3-9.

Table 1 reveals considerable differences across individual countries with respect to income levels in 2007. Average monthly employment income ranges from 3729 Euros in Luxembourg, 187 per cent of the EMU average of 1996 Euros, to a value of 493 Euros in Slovakia, roughly 25 per cent of the EMU average. However, one should note that these income levels are not adjusted for differences in purchasing power, which would render income differentials somewhat smaller.

The development of the tax base of the simulated euro area UI scheme depends on changes in earnings along the extensive and intensive margin. In our empirical analysis, we account for extensive margin changes by simulating (un)employment shocks such that the reported unemployment rate in a country in year  $t$  is precisely reflected in our micro data<sup>5</sup>. Intensive margin changes are taken into account by adjusting nominal earnings by their growth factors. Columns 3-9 show that growth in nominal compensation per employee differed significantly within the euro area leading rather to a divergence than to a convergence process in income levels. Those countries most affected by the recent crisis have seen largest losses in employment income, albeit at different points in time. Countries such as Estonia (in 2009) and Ireland (2009-2011) were affected early on in the crisis, whereas others in more recent years (Greece from 2010-2013, Portugal 2011-2012, Cyprus and Slovenia from 2012-2013). These income changes, together with changes in unemployment, do have an important impact on the stabilizing and redistributive effect of the euro area UI scheme analyzed below.

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<sup>5</sup> Changes in unemployment over the sample period are discussed in section 5.

**Table 1: Average monthly gross income (2007 EUR) and growth in nominal compensation per employee (in per cent)**

	(1) POP	(2) GI	(3) $\Delta GI_{07}$	(4) $\Delta GI_{08}$	(5) $\Delta GI_{09}$	(6) $\Delta GI_{10}$	(7) $\Delta GI_{11}$	(8) $\Delta GI_{12}$	(9) $\Delta GI_{13}$
EMU	1	1996	2.60	3.48	1.81	1.96	2.17	2.03	1.51
AT	0.027	2320	2.62	3.14	2.49	1.18	2.38	2.55	2.34
BE	0.033	2476	3.41	3.56	1.16	1.37	3.08	3.73	2.25
CY	0.002	1742	2.78	3.36	2.59	2.56	2.49	-0.95	-9.45
EE	0.004	636	25.02	9.67	-3.11	2.31	0.55	5.95	6.74
FI	0.018	2054	3.65	4.36	2.31	1.76	3.24	3.53	2.39
FR	0.188	1953	2.60	2.77	2.04	2.46	2.50	2.19	1.41
GE	0.279	2417	0.78	2.11	0.14	2.36	2.96	2.64	1.93
GR	0.03	1514	4.70	3.58	3.53	-2.57	-3.38	-4.21	-7.00
IE	0.012	2612	5.56	5.19	-1.06	-3.81	-0.12	0.78	0.00
IT	0.173	1844	2.27	3.81	1.71	2.79	1.29	0.99	1.32
LU	0.001	3729	3.70	3.37	1.78	2.64	2.38	2.01	0.83
MT	0.001	1219	3.07	4.21	3.23	1.55	0.63	2.18	2.05
NL	0.054	2379	3.44	3.25	2.52	1.49	1.59	1.87	-0.15
PT	0.028	1113	3.59	3.02	2.79	2.03	-0.57	-2.04	2.48
SI	0.05	1139	6.16	7.21	1.85	3.89	1.63	-0.97	-0.25
SK	0.014	493	8.73	7.01	2.48	5.11	1.97	2.79	2.03
SP	0.129	1507	4.68	6.86	4.16	0.42	1.33	0.24	1.02

Note: POP, GI: Population share and gross income in 2007.  $\Delta GI$ : Growth in nominal compensation per employee (in per cent). Source: Own calculations based on EUROMOD and European Commission (DG ECFIN), AMECO.

## 2.4 Automatic stabilization effects

A key argument of proponents of enhanced fiscal integration is an increase in macroeconomic stability, both at the level of individual countries and the Eurozone as a whole. Automatic fiscal stabilization is associated with the ability of taxes and transfers to automatically stabilize disposable income and consequently consumption in the event of macroeconomic shocks. This relies on a simple mechanism: in the presence of a given negative shock to gross income, taxes decline and transfers increase, with the decline in disposable income being smaller than the shock to gross income. Several components of government budgets are affected by the macroeconomic situation in ways that operate to smooth the business cycle, with progressive income taxes and unemployment benefits being the most prominent examples. Automatic stabilization might not only have effects on disposable income but also on GDP itself. If fewer taxes are collected and more transfers are paid in a recession, this should support private incomes and dampen adverse movements in aggregate demand.

Naturally, cushioning shocks through taxes and transfers comes at the cost of an increase in the government budget deficit. The usual assumption is for this gap to be closed through debt financing. However, in the current Eurozone debt crisis, some countries have lost access to private capital markets and thus need outside help to close this gap.



We will return to the issue of debt financing of the euro area unemployment scheme further below.

The extent to which automatic stabilizers mitigate the impact of income shocks on household demand essentially depends on the tax and transfer system, determining the way in which a given shock to gross income translates into a change in disposable income. For instance, in the presence of a UI system with a replacement ratio of 60%, a shock on gross income at the extensive margin of 1000 Euros leads to a decline in disposable income of 400 Euros. In this case, the UI system absorbs 60% of the shock to gross income.

A common measure for estimating automatic stabilization is the “normalized tax change” used by Auerbach and Feenberg (2000) which can be interpreted as “the tax system’s built-in flexibility” (Pechman 1973, 1987). Based on this idea, Dolls et al. (2012) define the “income stabilization coefficient”,  $\tau$ , that shows how changes in market income  $X$  (defined as the sum of all incomes from market activities such as (self)-employment, business and property income) translate into changes in disposable income  $Y$  (market income minus taxes plus benefits) through changes in net tax payments  $T$ . They extend the concept of normalized tax change to include other taxes as well as SIC and transfers.

In our simulations, we follow their approach and calculate the income stabilization effects of an euro area unemployment insurance system in year  $t$  had such a system been in place in the period 2008-2013.  $\tau$  is computed using arithmetic changes between year  $t$  and  $t-1$  in benefits payments from the common euro area UI system ( $\sum_i \Delta B_i$ ) and employment income changes along the extensive margin ( $\sum_i \Delta X_i$ ) based on household micro level information:

$$\tau = \frac{\sum_i \Delta B_i}{\sum_i \Delta X_i}. \quad (1)$$

$\tau$  is positive if the sum of euro area UI benefit payments in year  $t$  is higher than in the previous year given a reduction in gross income and zero otherwise.

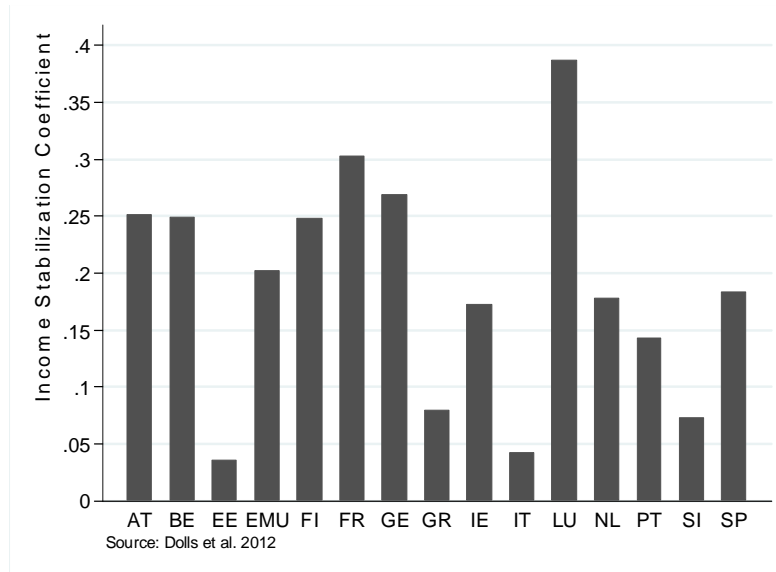
### 3. National UI systems in the crisis

Unemployment benefits are supposed to work as an automatic stabilizer in economic crises when economies are hit by rising unemployment rates. Before discussing potential costs and benefits of a centralized unemployment insurance system at the Eurozone level, it is therefore important to investigate the effectiveness of national unemployment insurance systems to cushion unemployment shocks. In this section, we review existing evidence on the shock-absorption capacity of national UI systems in Europe in the event of unemployment shocks. Moreover, we document discretionary policy changes regarding unemployment insurance in euro area countries during the crisis.

Dolls et al. (2012) use the same pre-crisis micro data as we do and run a controlled experiment in which the unemployment rate in each Eurozone country is increased such that total household income decreases by 5 per cent. They calculate income stabilization

coefficients described above for 14 Eurozone countries which are shown in Figure 1.<sup>6</sup> Their main findings can be summarized as follows. The extent to which unemployment shocks are absorbed by pre-crisis unemployment insurance systems differs substantially within the euro area. In most of the continental European and Nordic countries at least 25 per cent of the shock is cushioned, whereas there is very little stabilization in particular in Eastern and Southern European countries. Lowest values are found for Estonia, Greece, Italy and Slovenia. This finding is surprising from an insurance point of view since countries with low stabilization tend to be those with low incomes on average implying that households in these countries are particularly vulnerable to income losses.

**Figure 1: Income stabilization for unemployment shock scenario<sup>7</sup>**



Given the heterogeneity of national unemployment insurance systems within the euro area regarding their automatic stabilization effects before the start of the crisis<sup>8</sup>, it is instructive to scrutinize policy changes regarding national UI systems during the crisis and to assess whether these policy changes led to a convergence or divergence process in terms of income protection. Table A.1 in the Appendix reveals that in 2009 total unemployment expenditure increased by roughly 28% in the euro area and remained on a comparatively high level in the following years. Bontout and Lokajickova (2013) decompose these changes into the main factors influencing unemployment expenditure. They show that in 2009, the increase was mainly driven by rising numbers of short- and long-term unemployed and only to a minor extent due to higher average unemployment

<sup>6</sup> Conceptionally, the unemployment shock modelled in their paper differs from our modelling approach. While they assume that the structure of the new unemployed is equal to the existing pool of unemployed, we assume in our simulations that the new (un)employed have similar characteristics as the total population.

<sup>7</sup> Data for Cyprus, Malta and Slovakia was not available at the time of writing of that paper.

<sup>8</sup> See Figari et al. (2011) for further evidence on differences in the degree of income protection offered by tax-benefit systems in Europe in the event of income shocks.

expenditure per unemployed. In 2010, average expenditure per unemployed declined by more than 5 per cent (c.f., Bontout and Lokajickova 2013, p. 23). These numbers document the budgetary effect of rising unemployment in the euro area in recent years, but do not give an indication whether changes in average expenditure per unemployed are caused by more or less generous UI systems or by a changing structure of the new unemployed. In order to assess whether the stabilizing effect of national UI systems has changed in recent years, we focus on changes in replacement ratios, the maximum duration of benefit receipt, qualifying conditions and contribution rates and document discretionary policy changes during the crisis along these dimensions.

Table A.2 shows average replacement rates in the initial phase of unemployment for the period 2007-2011. Focusing on the so-called GIIPS countries (Greece, Ireland, Italy, Portugal and Spain) which were especially hit by rising unemployment in that period (see chapter 4), one can conclude that Spain is the only country from this group with relatively constant average replacement rates ranging between 73-74 per cent during this period. In Greece, Ireland, Italy and Portugal, replacement ratios became somewhat less generous after 2009, e.g. falling to 52 per cent in Greece in 2011 which was the second lowest value in the Eurozone after Malta (47.5 per cent). Qualifying conditions became stricter in Ireland (from 2009 onwards, 104 weeks of contributions instead of 39), but were alleviated in Portugal (falling from 450 days of employed work and contribution payment to 360 in 2013, c.f., Table A.3). The permitted maximum duration of benefit receipt was reduced in Ireland (from 390 days in 2007 to 312 days in 2009 and further to 234 days in 2013) and Portugal (different durations depending on the age of the unemployed), c.f. Table A.4. Finally, policy changes also affected contribution rates and ceilings up to which contributions have to be paid. Table A.5 shows that in Greece the lower monthly ceiling of 2,432 Euros for employees who had been insured since 1993 or before was raised to the general ceiling of 5,546 Euros which broadened the tax base for the national UI system, but increased the tax wedge for the working population. In Ireland, the ceiling for employees increased from 48,000 Euros in 2007 to 75,036 Euros in 2009 and was completely abolished afterwards. At the same time, costs for employers were reduced by lowering the employer contribution rate from 8.5 per cent in 2011 to 4.25 per cent in 2013.

#### **4. Possible characteristics of an Eurozone wide unemployment insurance scheme**

There are different options how an unemployment insurance scheme for the Eurozone could be designed. In particular, specific choices need to be made regarding eligibility rules, replacement ratios and duration of benefit receipt. Additionally, the interaction between the euro area and the national unemployment insurance systems needs to be considered. The common system could partly replace national systems by providing a minimum benefit level for a limited duration or complement national systems by providing additional transfers in economic downturns. Closely related is the question when transfers from the common insurance system should kick in. They could be conditioned on macroeconomic indicators such as the unemployment rate and would be

triggered if certain thresholds are reached or, alternatively, kick in automatically if an eligible person becomes unemployed. Finally, there are different options for the financing. It can take place at the national level or be pooled at the Eurozone level. In the following, we discuss the characteristics of three possible variants of a common unemployment insurance scheme for the euro area: a minimum insurance scheme, a benefit extension program and a scheme that fully replaces national systems.

#### 4.1. A basic UI scheme

An unemployment insurance scheme for the euro area which provides a minimum level of insurance has first been proposed by Deinzer (2004) and Dullien (2007, 2013). By providing a minimum insurance for a limited time period, such a scheme would partly replace national unemployment insurance systems which could top up benefits from the euro area system. All unemployed with previous employment (and possibly self-employment) income would be eligible for benefits, depending on the duration of previous employment. UI payments from the common scheme could kick in directly at the beginning of the unemployment spell or after a short 'waiting period'. The maximum duration of benefit receipt would be limited to a certain time period, for example 12 months. This could be prolonged by national UI systems. Such a system would leave room for diversity between member states. Differences with regard to replacement rates and benefit duration could be maintained by additional transfers from national UI systems.

##### **How much stabilization is provided by the common system and when does the stabilization from the central level kick in?**

Transfers from the central level are timely as benefits are paid from the start of the unemployment spell or after a short waiting period. In contrast to a benefit extension program which is triggered if certain thresholds are reached, all new unemployed who fulfill the eligibility criteria receive transfers from the common euro area unemployment insurance system. Given that the common system provides a minimum level of insurance, the stabilization effect of the common system is limited by construction but could be enhanced by national systems. As benefits from the common system expire after a certain time period, stabilization from the central level decreases in the share of long-term unemployed in an economy. In sum, at least part of the stabilization in the presence of unemployment shocks is provided by the euro area unemployment insurance system which might help avoiding pro-cyclical fiscal policy in severe economic downturns if countries have lost access to capital markets.

##### **How large is the risk of permanent redistribution?**

Given that the scheme conditions on job losses, i.e. on *changes* in employment status rather than on unemployment *levels*, the risk of permanent transfers is limited. Differences in unemployment rates alone do not lead to permanent redistribution because benefits expire. It may nevertheless happen that (net) transfers from the euro area unemployment insurance system are unevenly distributed across countries if flows into unemployment diverge permanently.

Therefore a key factor determining redistributive effects of such a minimum insurance scheme is the share of short-term unemployed. If countries A and B are characterized by

the same income distribution, the unemployment rates do not deviate over time, but the share of short-term unemployed is constantly higher in country A relative to country B, the former will receive a higher share of transfers from the common unemployment insurance system. The reason is that there are more people entering (and leaving) unemployment, and those entering unemployment receive benefits.<sup>9</sup>

**Would such a scheme undermine the incentives of national governments to address structural weaknesses? How large is the risk of administrative manipulation?**

This risk is an unavoidable feature of insurance mechanisms. The risk that a common minimum unemployment insurance system undermines the incentives of national governments to implement structural reforms is likely to be limited, though. Structural weaknesses usually affect medium to long term growth and employment perspectives. Transfers from the common system expire after a certain time period. After this time period, national governments will have to bear the full costs of unemployment. Therefore the common unemployment insurance system would undermine incentives to address structural weaknesses much less than a system of permanent transfers.

Administrative manipulation might be a more important issue. A common unemployment insurance system which is (only) targeted at short-term unemployment could be exploited by using administrative discretion to increase the number of transfer recipients, essentially by raising the number of unemployed that can be classified as newly unemployed. Incentives to manipulate and costs of this manipulation would depend on the characteristics of the system like the required employment period and the length of the waiting period for eligibility to euro area unemployment benefits. The shorter both periods are, the less costly is administrative manipulation, but shorter periods also reduce the desired insurance effect.

**To what extent is individual behavior distorted, i.e. how strong are moral hazard concerns?**

Whether distortions at the individual level change would depend on whether overall benefits (national and European benefits combined) change, relative to the status quo, given that the euro area unemployment insurance system would partly replace existing national systems.

## **4.2. A benefit extension program**

An alternative option for a euro area unemployment insurance scheme would be to complement national systems by providing additional benefits which could either top-up national benefits or kick-in if national benefits expire. The payout rules would be trigger-based, i.e. benefits from the common system would be paid if the level and/or change in unemployment reached pre-determined thresholds. Contributions to the scheme could be lowered or suspended in those countries where transfer payments had been triggered in order to increase the stabilizing effect of the program. Such a system would be broadly comparable with various benefit extension programs in the US. There, regular UI benefits can be extended through a combination of permanent and temporary legislation. The

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<sup>9</sup> Economies where seasonal employment like in tourism, for instance, play an important role, would be likely to have larger flows into and out of unemployment.

federal Extended Benefits (EB) program provides additional 13-20 weeks of benefits to workers in states where the level and change in the state unemployment rate is above a specified threshold. The EB program has been supplemented by temporary programs, most recently by the Emergency Unemployment Compensation (EUC) program which provides up to 47 weeks of additional unemployment benefits to jobless workers who have exhausted their regular benefits (see e.g., Center on Budget and Policy Priorities 2013, CBO 2012 or Farber and Valletta 2013 for more information).

**How much stabilization is provided by the common system and when does the stabilization from the central level kick in?**

A euro area unemployment benefit extension program would not provide benefits in normal times but would only kick-in in deep recessions when certain indicators such as the unemployment rate reaches pre-defined thresholds. It would thus provide stabilization when it is mostly needed.

**How large is the risk of permanent redistribution?**

This depends on the exact rules and specifications of such a scheme. If the scheme only conditions on the level of the unemployment rate, the probability that there is permanent redistribution from low to high unemployment countries is high. This risk could be reduced by additionally conditioning on other factors such as changes in unemployment. Further important factors would be if the triggers are country-specific or not and, closely related, the link between contributions and benefits. In contrast to the basic euro area unemployment insurance system which pays benefits to all unemployed who previously contributed to the scheme, a benefit extension program could break the link between contributions and benefits, e.g. if payouts from the common system are trigger-based. Hence, contribution and payout rules would need to be carefully chosen so that the general acceptance of the scheme would not be undermined by a perceived unbalancedness of transfer payments.

**Would such a scheme undermine the incentives of national governments to address structural weaknesses? How large is the risk of administrative manipulation?**

The risk that national governments do not address structural weaknesses of the economy could be higher than under a minimum insurance scheme given that the extended benefit program would not only cover cyclical but potentially also structural unemployment.

**To what extent is individual behavior distorted, i.e. how strong are moral hazard concerns?**

Extended unemployment insurance benefits which prolong the period of UI receipt can have adverse incentive effects. For example, Farber and Valletta (2013) and Rothstein (2011) find a small but statistically significant reduction in unemployment exit rates in the US in the Great Recession caused by extended unemployment benefits. However, the social costs may be overestimated when market externalities of UI extension programs are not properly accounted for (Lalive et al. 2013).

#### **4.3. A fully centralized UI system**

A third option would be to introduce a full euro area unemployment insurance scheme. This reform would be far-reaching as national UI systems would be *fully* replaced by a euro area UI system, in contrast to alternatives 1 and 2 where the euro area system would

either partly replace or complement national UI systems. Several options for designing such a system are possible – such as choosing a specific system among the existing ones or simply some kind of average system. The latter approach has the (political economy) advantage that one does not have to make a choice in favour of one and against all other countries. Such an average euro area UI system could be estimated along the lines of Bargain et al. (2013) and Dolls et al. (2013) who use the European tax-benefit calculator EUROMOD and representative household micro data to estimate a joint tax and transfer system for 11 Eurozone countries and the EA17.

**How much stabilization is provided by the common system and when does the stabilization from the central level kick in?**

By construction, those member states whose national UI systems provide below-average stabilization, e.g. because of below-average replacement rates, duration of benefit receipt or low coverage rates, would experience a gain in stabilization whereas the opposite would be true for member states with above-average stabilization effects of their national systems. Automatic stabilization effects would only be provided by the central level as contributions and benefits would be paid into/from the common system.

**How large is the risk of permanent redistribution?**

The risk of permanent redistribution from low to high unemployment member states is substantially higher than under alternatives 1 and 2 given that the scheme would not only insure cyclical, but also structural unemployment.

**Would such a scheme undermine the incentives of national governments to address structural weaknesses? How large is the risk of administrative manipulation?**

The incentives of national governments to implement structural (labor market) reforms could be severely affected by a euro area UI system that fully replaces national systems since (direct) costs of unemployment would be completely borne by the central level.

**To what extent is individual behavior distorted, i.e. how strong are moral hazard concerns?**

As with the basic unemployment insurance system, in principle distortions at the individual level should not depend on the tier of government which administers the unemployment insurance system.

## **5. Economic effects of a basic unemployment insurance scheme for the euro area**

### **5.1. Key features of a basic unemployment insurance scheme for the Euro area**

Given the three broad alternatives for a euro area unemployment insurance scheme presented above, the key question is which scheme would best serve its purpose of improving economic resilience of the EMU by cushioning asymmetric shocks without leading to permanent transfers across member states and without undermining incentives of national governments to implement structural reforms. These criteria are explicitly emphasized in the van Rompuy report *“Towards a Genuine Economic and Monetary Union”* and in the report *“A blueprint for a deep and genuine economic and monetary union –*

*Launching a European Debate*” both outlining a roadmap for the (potential) further institutional development of EMU (see van Rompuy et al. 2012 and European Commission 2012).

The choice of the UI scheme analyzed in our empirical analysis is based on the following considerations. In terms of political feasibility, it is unlikely that a euro area unemployment insurance scheme that fully replaces national systems would be unanimously supported by all EA member countries. That is why we disregard alternative 3 described above. Comparing alternatives 1 and 2, one can conclude that both approaches would help absorb cyclical asymmetric shocks in the EMU, albeit in a different way. A key difference is the timing when transfers from the common level kick in, either immediately or only when national benefits expire or certain triggers are reached. Other characteristics would be similar, for example the general requirement of active job search to be eligible for UI benefits from the common system. In our empirical analysis, we consider the economic effects of a basic unemployment insurance scheme as a benchmark case. Clearly, the basic euro area UI system could be combined with elements of an extended benefit program, e.g. transfers could be activated once unemployment rates are above a certain threshold and continue rising. Our benchmark simulations provide a useful starting point to illustrate the economic effects of a common UI system in the euro area.

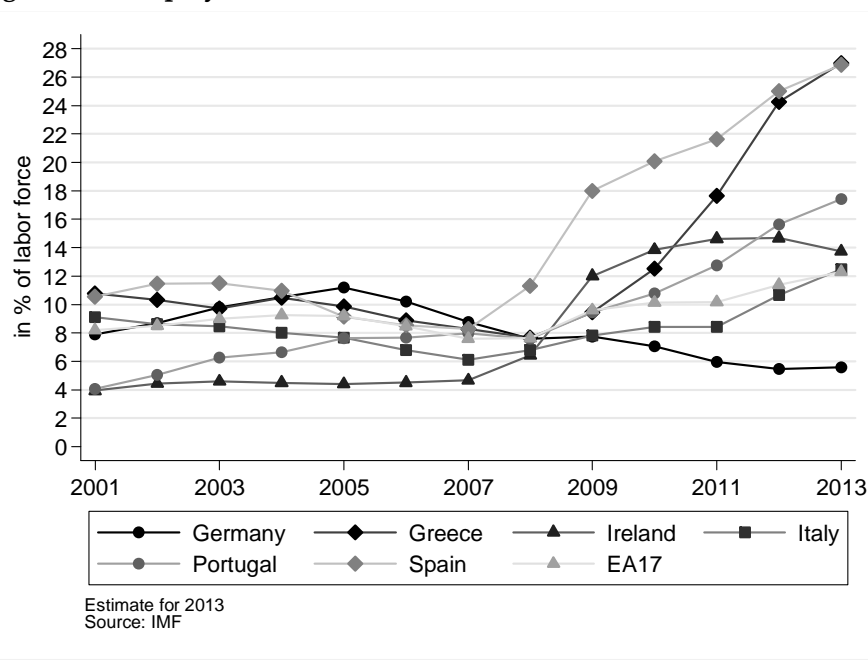
We use 2007 micro household data and employ counterfactual ex-ante simulation methods to ask the question of what would have happened during the crisis had the euro area had a common unemployment insurance system in place from 2008-2013. In our set-up, the common system has a replacement rate of 50% of previous (gross) wages which corresponds to the lowest replacement rate of national UI systems in the euro area in 2007 (Greece, see Table A.2 in the Appendix). All new unemployed with previous income (as well as self-employment income) are eligible for benefits from the euro area UI system for up to 12 months. The scheme is financed by a proportional payroll tax and is calibrated so that it is revenue neutral over the period 2008-2013, i.e., it can run deficits in single years, but needs to be balanced over a longer time period. The total contribution rate (sum of employer and employee social insurance contributions) is 1.9% on all employment income. The total volume of this scheme at the EMU-level is 365 billion euros over the whole simulation period (2008-2013), i.e. the average yearly budget is roughly 61 billion euros.

## **5.2. Changes in (short-term) unemployment and coverage rates**

Before assessing the redistributive and stabilizing effects of a euro area UI system, it is instructive to consider how unemployment rates in EMU have developed since the start of the common currency and, in particular, during the simulation period 2008-2013 including the recent deep recession which had a tremendous impact on labor markets in Europe. Figure 2 shows unemployment rates in Germany, the so-called GIIPS countries (Greece, Italy, Ireland, Portugal and Spain) as well as in the EA17 since 2001.



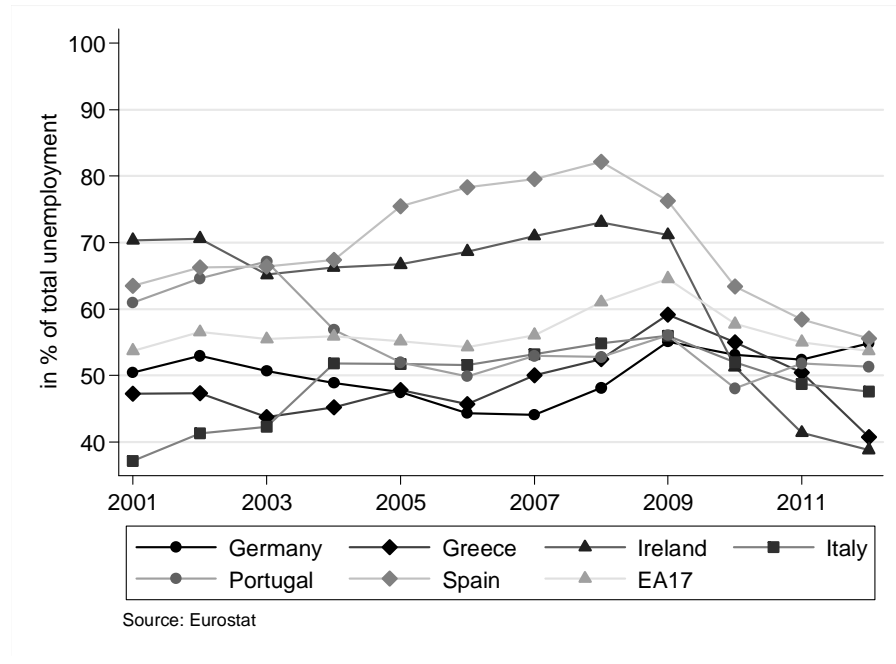
**Figure 2: Unemployment rates in selected EA member states 2001-2013**



The figure reveals that unemployment rates have followed different cycles within the euro area. In Germany, it was increasing from 2001 onwards reaching its peak in 2005 with a rate of 11.2% (see also Table 2 and Figure 7 for unemployment rates of all EA member states). In that year, the German unemployment rate was above the EA17 average and also higher than in the GIIPS countries. In contrast unemployment was declining from 2003-2007 in Spain and from 2004-2008 in Greece indicating that these two countries were in a different position of the business cycle in these years. Since then, unemployment has been rising in Spain and Greece up to a rate of 27% in 2013. Unemployment has also been increasing in Portugal, Ireland, and Italy since 2007, but, compared with growth rates in Spain and Greece, to a much smaller extent. IMF forecasts for the coming years suggest, however, that in Ireland the peak has been reached in 2012. Against this trend in the GIIPS countries, Germany's unemployment rate has been declining in recent years, despite a huge drop in its GDP of almost 5% in 2008.

For an assessment of an unemployment insurance scheme that only insures the first 12 months of unemployment, it is equally important to consider the share and absolute number of short-term unemployed which is depicted in Figures 3 and 4 for Germany and the GIIPS countries (see also Table 3 and Figure 8 for shares and absolute numbers of short-term unemployment for all EA member states).

**Figure 3: Share short-term unemployment rates in selected EA member states 2001-2012**



**Figure 4: Absolute number short-term unemployed in selected EA member states 2001-2012**

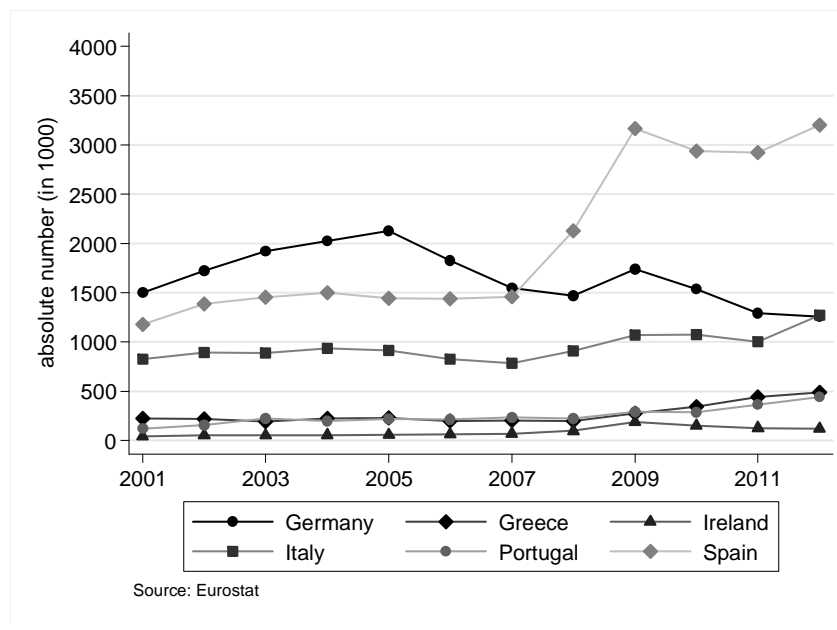


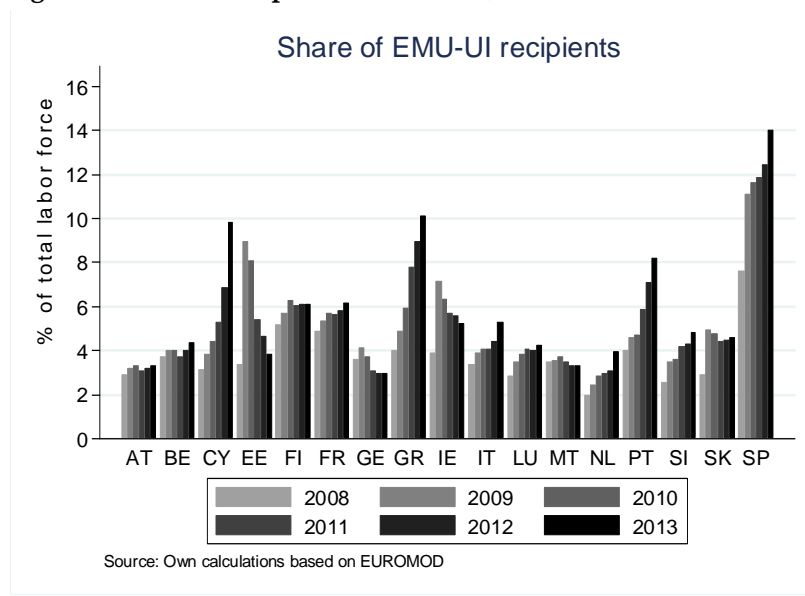
Figure 3 shows that fluctuations in the share of short-term unemployment are rather large. In the recent recession, the share of short-term unemployed increased in the majority of euro area member states from 2007 to 2008 and at the Eurozone level also from 2008 to 2009 (Table 3), but fell afterwards, in particular in those countries which were severely affected by rising unemployment (see e.g. Spain, Ireland and Greece in

Figure 3). Figure 4 reveals that absolute numbers of short-term unemployed were still rising up to 2012 (the last year for which data on short-term unemployment is available) in Spain, Italy, Greece and Portugal which can be explained by the ongoing rise in unemployment in these countries.

This pattern has important implications for the coverage and hence the stabilizing effect of a common unemployment insurance scheme in a currency union. In a deep economic crisis such as in the 2008-2009 crisis, a basic unemployment insurance scheme which covers (only) short-term unemployment has its strongest stabilizing effect when the increase in short-term unemployment is largest. This effect attenuates the larger the share of the long-term unemployed becomes. Contrary, a benefit extension program which kicks in after certain thresholds are reached or after regular (national) UI benefits expire, unfolds its stabilizing effects only in deeply affected member states in the former or with considerable time lag in the latter case.

Our simulations confirm these implications for the basic euro area unemployment insurance scheme. Figure 5 shows that the share of benefit recipients from the euro area UI system (relative to the total labor force) would have increased in the majority of member states from 2008-2013. The largest increases would have occurred in Cyprus, Greece, Portugal and Spain, countries with huge inflows into unemployment. Notable exceptions would have been Estonia, Germany and Slovakia where the share of recipients would have gone down after 2009 due to declining unemployment rates (Estonia and Germany) and lower shares of short-term unemployed (Estonia and Slovakia).

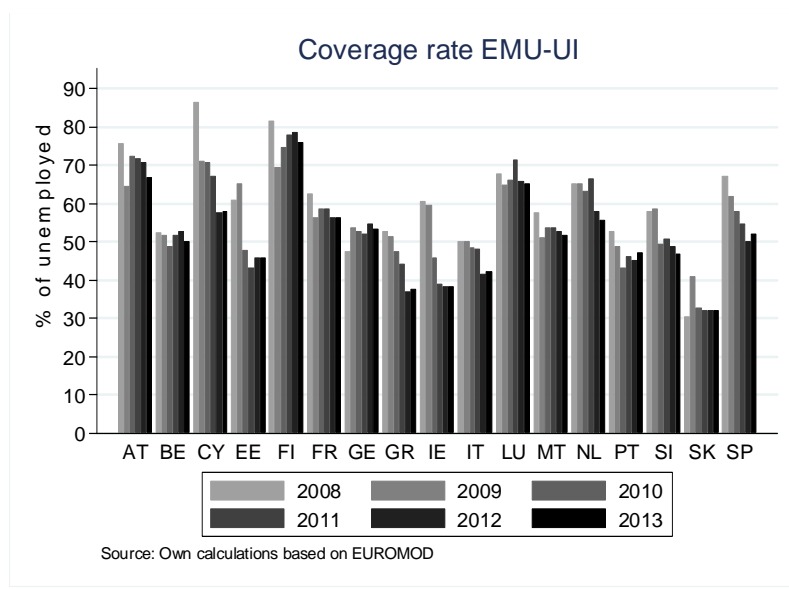
**Figure 5: Share of recipients of EMU-UI, 2007-2013**



However, in spite of rising shares of benefit recipients from the euro area UI system, the coverage ratios, i.e. the share of unemployed who would have received transfers from the common euro area UI system, would have declined significantly in those countries most affected by rising unemployment. In Spain, the ratio would have declined from 67% in

2008 to 52% in 2013, in Greece from 53% to 38%, in Ireland from 61% to 38% and in Portugal from 53% to 47%. For the EA17, the share would have decreased from 57% to 51% (see Figure 6 and Table 7).

**Figure 6: Coverage rate of EMU-UI, 2008-2013**



**Figure 7: Unemployment rates in the EA17, 2007-2013**

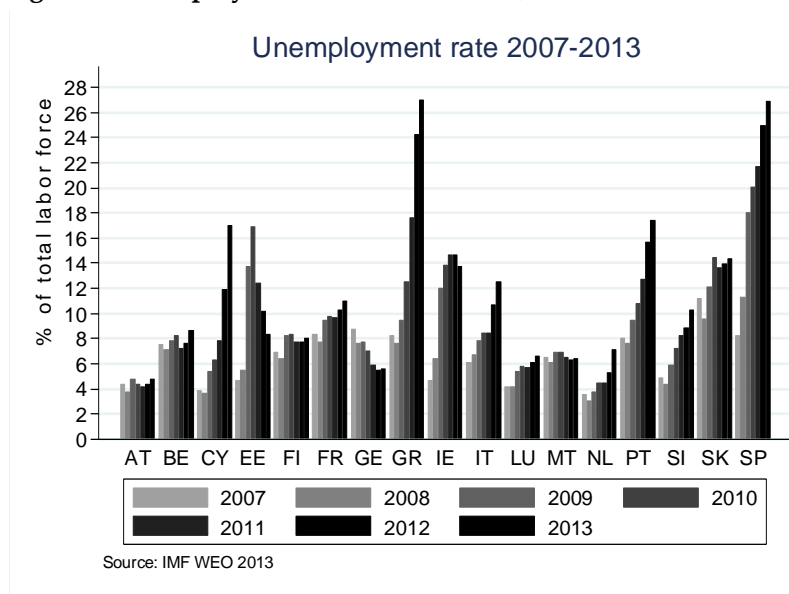


Figure 8: Share short-term unemployed, 2007-2013

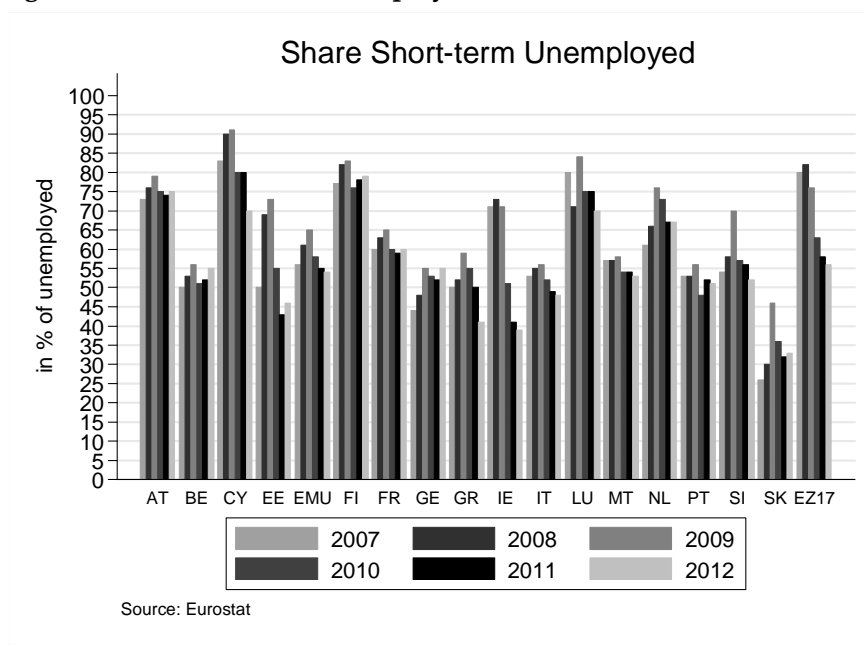


Table 2: Unemployment rates (in % of total labor force) in the EA17, 2000-2013

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EMU	8.7	8.2	8.5	9.0	9.3	9.2	8.5	7.6	7.6	9.6	10.1	10.2	11.4	12.3
AT	3.6	3.6	4.2	4.3	4.9	5.2	4.8	4.4	3.8	4.8	4.4	4.2	4.3	4.8
BE	6.9	6.7	7.6	8.2	8.3	8.4	8.2	7.5	7.1	7.8	8.2	7.2	7.6	8.7
CY	4.8	3.9	3.5	4.1	4.6	5.3	4.5	3.9	3.6	5.4	6.3	7.9	11.9	17
EE	13.7	12.6	10.3	10.0	9.7	7.9	5.9	4.7	5.5	13.8	16.9	12.5	10.2	8.3
FI	9.8	9.1	9.1	9.0	8.8	8.4	7.7	6.9	6.4	8.2	8.4	7.8	7.8	8.0
FR	9.0	8.2	8.3	8.9	9.3	9.3	9.2	8.4	7.8	9.5	9.7	9.6	10.3	11.0
GE	8.0	7.9	8.7	9.8	10.5	11.2	10.2	8.8	7.6	7.7	7.1	6.0	5.5	5.6
GR	11.4	10.8	10.3	9.7	10.5	9.9	8.9	8.3	7.7	9.5	12.5	17.7	24.2	27.0
IE	4.3	3.9	4.4	4.6	4.5	4.4	4.5	4.7	6.4	12.0	13.9	14.6	14.7	13.7
IT	10.1	9.1	8.6	8.5	8.0	7.7	6.8	6.1	6.8	7.8	8.4	8.4	10.7	12.5
LU	2.4	2.2	2.5	3.3	3.7	4.1	4.2	4.2	4.2	5.4	5.8	5.7	6.1	6.6
MT	6.8	7.6	7.4	7.7	7.2	7.3	6.9	6.5	6.1	6.9	6.9	6.5	6.3	6.4
NL	3.1	2.5	3.1	4.2	5.1	5.3	4.4	3.6	3.1	3.7	4.5	4.4	5.3	5.3
PT	4.0	4.1	5.1	6.3	6.7	7.6	7.7	8.0	7.6	9.5	10.8	12.7	15.7	17.4
SI	6.7	6.2	6.3	6.7	6.3	6.5	6.0	4.9	4.4	5.9	7.3	8.2	8.9	10.3
SK	18.9	19.5	18.8	17.7	18.4	16.4	13.5	11.2	9.6	12.1	14.5	13.7	14.0	14.4
SP	13.9	10.6	11.5	11.5	11.0	9.2	8.5	8.3	11.3	18.0	20.1	21.7	25.0	26.9

Source: IMF World Economic Outlook, October 2013, Estimate for 2013

**Table 3: Share of short-term unemployment (less than 12 months, in % of total unemployment) in the EA17, 2000-2012**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EMU	53	54	57	56	56	55	54	56	61	65	58	55	54
AT	72	74	85	77	72	75	73	73	76	79	75	74	75
BE	44	48	51	54	50	48	49	50	53	56	51	52	55
CY	77	80	83	82	74	78	82	83	90	91	80	80	70
EE	53	59	54	64	47	47	52	50	69	73	55	43	46
FI	76	77	79	79	79	74	75	77	82	83	76	78	79
FR	60	63	67	64	61	59	59	60	63	65	60	59	60
GE	50	50	53	51	49	47	44	44	48	55	53	52	55
GR	43	47	47	44	45	48	46	50	52	59	55	50	41
IE	62	70	71	65	66	67	69	71	73	71	51	41	39
IT	39	37	41	42	52	52	52	53	55	56	52	49	48
LU	100	100	84	89	85	77	74	80	71	84	75	75	70
MT	72	86	86	100	70	54	60	57	57	58	54	54	53
NL	100	100	74	72	68	60	58	61	66	76	73	67	67
PT	57	61	65	67	57	52	50	53	53	56	48	52	51
SI	37	37	45	43	47	53	51	54	58	70	57	56	52
SK	46	42	35	34	36	28	24	26	30	46	36	32	33
SP	58	63	66	66	67	75	78	80	82	76	63	58	56

Source: Eurostat, 2013 values not available yet

**Table 4: Absolute number short-term unemployed (less than 12 months) in 1000 in the EA17, 2000-2012**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EMU	6626.3	6047.9	6882.8	7100.9	7462.2	7359.4	6793	6371.9	7049.3	9463.9	8969.3	8638.1	9520
AT	129.6	112.8	156.1	144.6	146.2	154.4	141.7	135.4	122.6	160.6	140.7	132.5	142.2
BE	126.9	128.5	151	180.6	166.1	188.2	186.6	174.7	174.3	211.6	207.4	179.1	203.7
CY	11.4	10.2	8.6	10.8	10.8	14.6	13.4	12.5	12.3	19.2	20.9	26.7	36.1
EE	45.2	40.2	26.7	40.8	31.5	24.3	21	16.2	26.5	69	63.3	37.4	32.4
FI	217.5	204.9	218.7	218.5	214.2	161.4	151.1	139.8	137.4	181.4	167.4	159.5	159.4
FR	1586	1408.9	1530.9	1386.1	1487.7	1417	1394.9	1313.4	1272.3	1644.8	1562	1516.1	1669.3
GE	1479.8	1501.6	1722.4	1921.1	2023.5	2129.7	1829.7	1546.7	1469.5	1738	1536.4	1293.2	1255.6
GR	225	226.2	218.6	191.8	222.6	228.3	198.5	203.5	198.3	278.6	345.6	442.2	489.7
IE	46.2	43.1	54.4	53.3	55.5	58.8	64.3	70.4	97.7	188.3	152.8	127.4	119.9
IT	976.2	825	893.8	887.2	936.7	914.2	823.9	782.9	908.2	1072.5	1073	1003.3	1274.7
LU	3.1	2.4	3.2	5.3	7.9	6.6	6.8	6.2	7.1	9	6.9	8.3	8.7
MT	1.6	4.2	6.9	7.8	4.2	6.2	6.7	6.2	5.9	6.7	6.4	6.3	6.2
NL	0	0	151.3	209.2	262.1	237.3	187.8	164.5	154.9	225.1	278	254.2	304.2
PT	102.7	122.7	156.5	223.7	197.2	218.2	212.7	236.5	223.6	293.5	286	366	441.1
SI	24.9	19.4	26.3	27	28.4	34.8	30.8	27	26.3	42.7	42.7	46.5	46.7
SK	218.8	211.9	168.8	151.4	177.1	120.8	84	76.3	77.8	149	139.9	117.1	123.8
SP	1421.1	1178	1384.9	1455.1	1500.3	1443.4	1438.5	1459.2	2127.6	3165.3	2937.7	2920.7	3204

Source: Eurostat, 2013 values not available yet

**Table 5: Absolute number long-term unemployed (more than 12 months) in 1000 in the EA17, 2000-2012**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
EMU	6259.8	5424.7	5363	5838	6033.6	6100.4	5836.3	5064.1	4565	5243	6632.9	7122.9	8277.5
AT	51.5	40.3	28.7	43.3	56.4	52.7	53.6	49.8	39.5	43.6	47.5	46.6	46.8
BE	163.6	137.4	148.6	155.8	163.2	201.5	195.8	177.3	158.1	167.7	197.4	167.4	164.7
CY	2.5	1.8	2.6	4	4.2	3	2.6	1.4	1.9	5.3	6.8	15.7	15.7
EE	40.3	33.7	27.6	25.6	34.8	27.9	19.5	15.9	11.9	26.1	52.6	49.4	38.1
FI	70.8	63.3	59	59.3	57.2	56.3	50.9	41.5	31.4	36.8	53.4	45.9	43.8
FR	1045.3	822.1	745.4	838.6	959.7	987.9	1008	882.3	764.7	898.3	1050.8	1073.5	1128.4
GE	1570.4	1526.9	1580.8	1921.6	2176.8	2399.8	2365	2015.5	1626	1450.2	1381.7	1192.1	1046.4
GR	294	252.3	243.3	248.5	270	249	236	203.5	179.6	192.4	283.1	434.7	714
IE	28.6	19.5	22.8	29.3	29.1	29.5	29.6	29.4	36.3	77.2	147.6	185.7	193.4
IT	1545.4	1426.7	1296.3	1239.5	926.2	911.8	810.9	704.3	763.9	857	1009.8	1081	1439.1
LU	0	0	0.8	0.8	1.5	2.1	2.5	1.7	3.1	1.9	2.5	2.9	3.9
MT	2.7	1.6	1.5	0	3.5	5.4	4.5	4.6	4.4	5.1	5.6	5.4	5.6
NL	0	0	55.1	86.3	126.1	159.3	141.9	107	82.6	74.2	105.7	128	156.4
PT	86	79.2	86	109.4	149.9	202.8	214.4	210.9	201.5	232.3	313.2	340.1	418.9
SI	41.6	34.9	31.8	35.1	32.1	31.3	29.9	22.9	19.2	18.3	32.6	36.8	42.9
SK	264.1	296.3	317.2	296.2	314	309.2	271.1	219.5	177.9	174.6	249.1	247.9	254.3
SP	1047.6	677.6	707	736.1	726.2	469.1	398.5	374.6	463.1	984	1694.6	2078.2	2564.9

Source: Eurostat, 2013 values not available yet



**Table 6: Total number unemployed in 1000 in the EA17, 2000-2012**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EMU	13,218.6	11,723.7	12,334.1	13,121.1	13,683.1	13,600.6	12,758.0	11,532.9	11,708.6	14,798.7	15,691.6	15,835.4	17,881.5	17,881.5
AT	181.1	154.3	187.0	188.0	203.4	207.7	195.6	185.6	162.3	204.4	188.2	179.0	189.1	189.1
BE	290.5	265.9	300.8	337.3	329.4	390.4	383.2	353.0	333.4	379.6	405.9	346.7	369.0	369.0
CY	15.4	12.8	10.8	14.1	15.2	19.5	17.0	15.4	14.5	21.7	26.4	34.0	52.0	52.0
EE	85.5	81.5	60.6	70.7	66.2	52.2	40.5	32.0	38.4	95.1	115.9	86.8	70.5	70.5
FI	296.6	275.6	280.0	280.7	275.5	219.7	204.4	183.3	172.1	220.9	224.3	208.7	206.8	206.8
FR	2,631.4	2,230.8	2,276.5	2,308.4	2,487.7	2,432.0	2,431.9	2,223.0	2,064.4	2,575.2	2,640.0	2,612.1	2,824.3	2,824.3
GE	3,122.9	3,078.5	3,362.0	3,894.0	4,261.1	4,570.8	4,245.4	3,601.0	3,136.0	3,228.2	2,945.5	2,501.4	2,316.5	2,316.5
GR	519.1	478.4	462.1	441.7	492.6	477.3	434.5	406.9	377.9	471.1	628.7	876.9	1,203.8	1,203.8
IE	75.4	65.8	77.6	84.1	86.3	88.6	94.4	101.4	134.7	267.7	302.7	316.7	316.0	316.0
IT	2,542.4	2,268.4	2,206.4	2,145.8	1,923.3	1,888.6	1,673.4	1,506.0	1,691.9	1,944.9	2,102.4	2,107.8	2,743.6	2,743.6
LU	4.3	3.4	5.1	7.1	10.2	9.1	9.7	8.6	10.8	11.7	10.1	11.6	12.8	12.8
MT	9.7	11.3	11.0	12.0	11.5	11.7	11.2	10.8	10.3	12.0	12.2	11.7	11.8	11.8
NL	220.2	174.6	214.3	302.9	394.8	402.1	335.7	277.9	243.0	303.7	389.9	388.6	468.5	468.5
PT	198.5	202.9	243.1	333.4	347.3	422.3	427.8	448.6	427.1	528.6	602.6	706.1	860.1	860.1
SI	66.4	55.1	58.1	62.1	60.5	66.0	60.8	49.9	45.5	61.0	75.4	83.2	89.6	89.6
SK	490.5	508.7	486.3	447.7	491.0	430.0	355.4	295.7	255.7	323.5	389.2	365.0	378.0	378.0
SP	2,468.8	1,855.6	2,092.6	2,191.2	2,227.2	1,912.5	1,837.1	1,833.9	2,590.6	4,149.5	4,632.4	4,999.0	5,769.0	5,769.0

Source: Eurostat, 2013 values not available yet

**Table 7: Coverage rate of EMU-UI, 2008-2013**

	2008	2009	2010	2011	2012	2013
EMU	56.7	56.1	54.3	53.3	49.9	50.9
AT	75.7	64.5	72.4	71.7	70.7	66.8
BE	52.4	51.6	48.9	51.7	52.6	50.0
CY	86.4	70.9	70.7	67.1	57.7	57.9
EE	60.7	65.0	47.9	43.2	45.9	45.9
FI	81.6	69.4	74.7	77.8	78.6	75.9
FR	62.5	56.3	58.5	58.5	56.4	56.3
GE	47.5	53.5	52.7	52.0	54.5	53.3
GR	52.5	51.5	47.5	44.2	37.0	37.6
IE	60.5	59.6	45.9	38.8	38.2	38.3
IT	49.9	50.0	48.3	48.1	41.5	42.3
LU	67.6	64.7	66.3	71.2	65.8	65.0
MT	57.7	51.1	53.5	53.7	52.6	51.8
NL	65.2	65.0	63.2	66.5	58.0	55.6
PT	52.6	48.7	43.3	46.2	45.2	47.1
SI	57.8	58.6	49.6	50.7	48.7	46.9
SK	30.4	40.8	32.8	32.1	32.1	31.9
SP	67.3	61.8	57.9	54.7	49.9	52.1

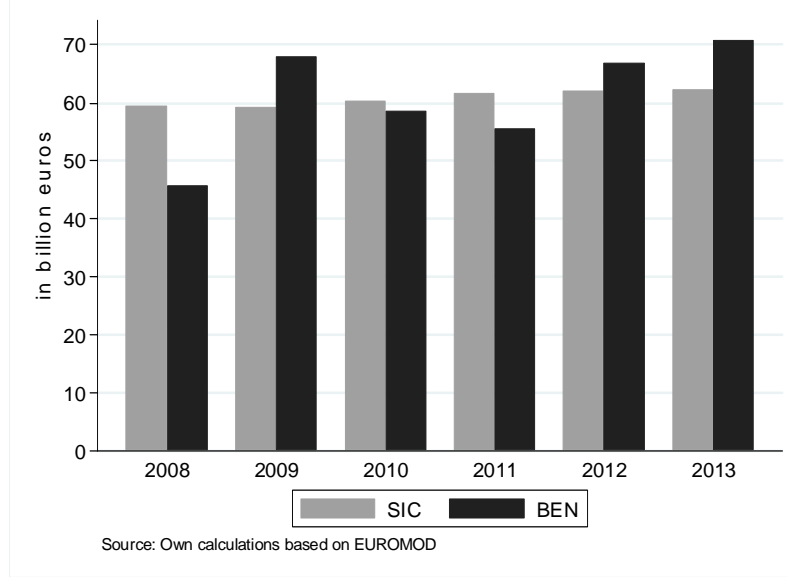
Note: Coverage Rate in % of all unemployed

Source: Own calculations based on EUROMOD.

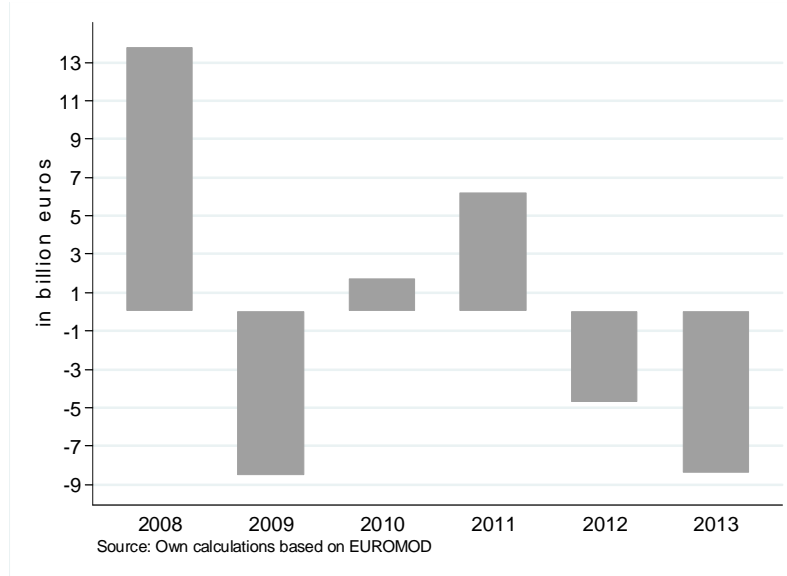
### 5.3. Budgetary effects and financial flows

As stated above, the simulations are based on the assumption that the euro area unemployment scheme can run deficits and surpluses in single years, but the contribution rate is set such that the scheme is balanced over the whole simulation period 2008-2013. In order to achieve revenue neutrality, a proportional payroll tax of 1.9% on all employment income is required. Figure 9 shows the sum of contributions into and payouts from the scheme at the Eurozone level. While contributions are relatively stable over the six year period, increasing from 59 billion euros in 2008 to 62 billion in 2013, benefit payments fluctuate to a much larger extent (see also Table 8). They reach their peak in 2009 and 2013 (68 and 71 billion euros), i.e. in those years when aggregate growth in unemployment was highest, and have their lowest level in 2008 (46 billion euros) when the aggregate unemployment rate in the Eurozone did not change relative to the previous year (see Table 2). Consequently, the scheme would run surpluses in 2008, 2010 and 2011 and deficits in 2009, 2012 and 2013 (see also Figure 10). Over the whole period 2008-2013, the total volume of the scheme would have been 365 billion euros at the Eurozone level.

**Figure 9: Contributions and benefits euro area UI scheme 2008-2013**



**Figure 10: Deficits and surpluses euro area UI scheme 2008-2013**



At the national level, our simulations demonstrate that with yearly net contributions ranging from 7.4 to 13 billion euros, Germany would have been the largest contributor to the scheme in absolute terms (Figure 11 and Table 8) whereas when expressed relative to GDP, Austria, Germany and the Netherlands would have borne the largest burden (Figure 12 and Table 9). Among the net recipients would have been Spain, France, Greece and Portugal, i.e. those countries mostly affected by rising unemployment.

Figure 11: EMU-UI Net contributions 2008-2013 (in billion euros)

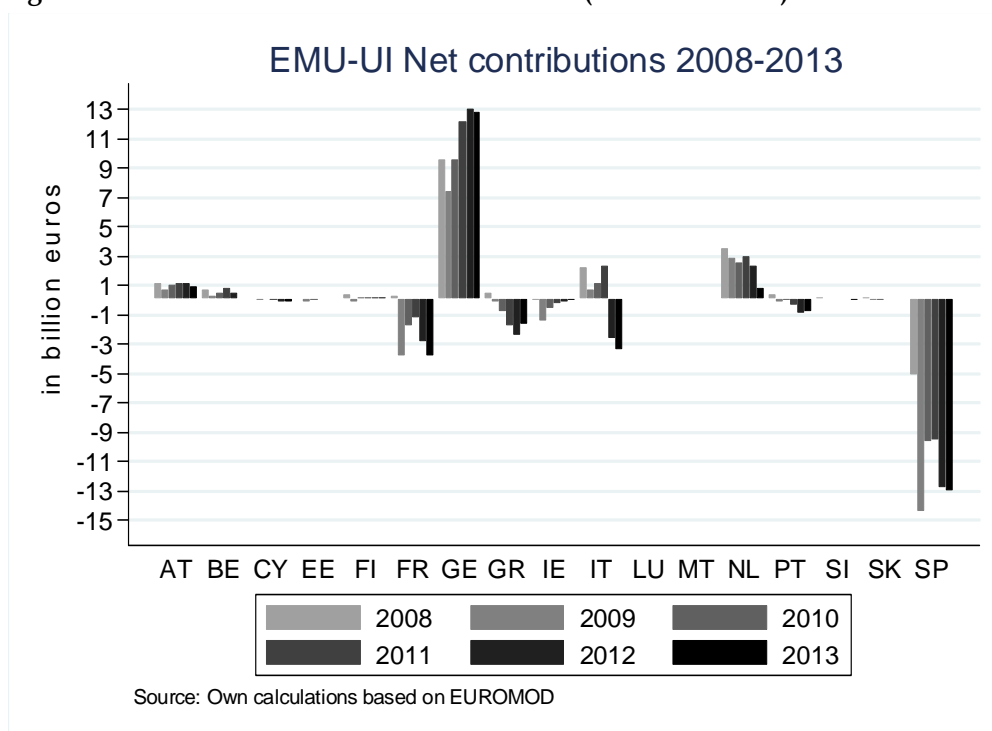
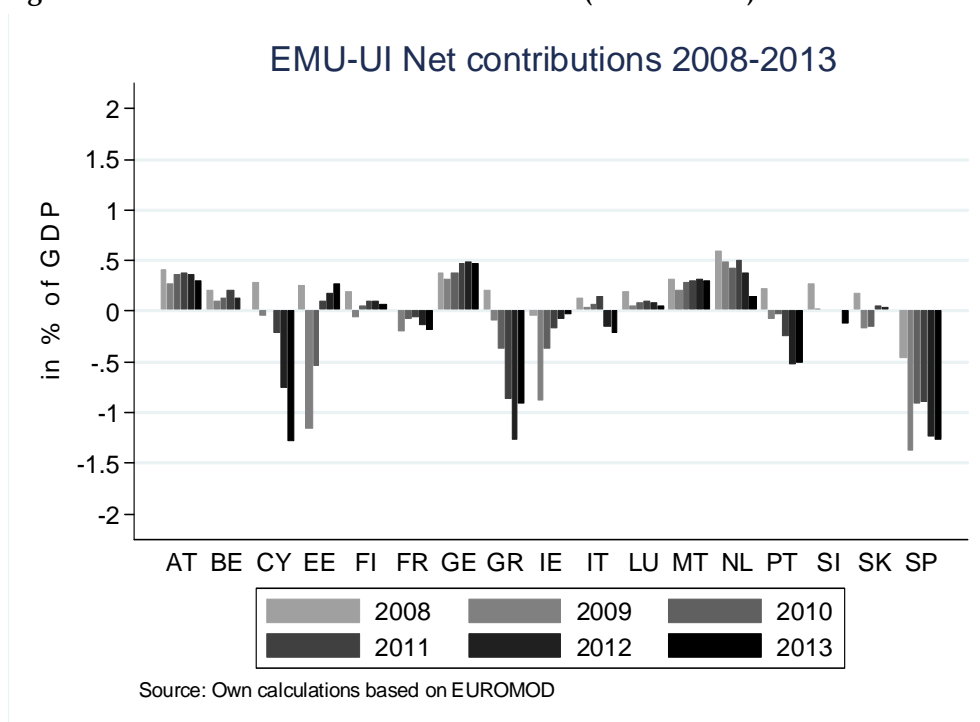
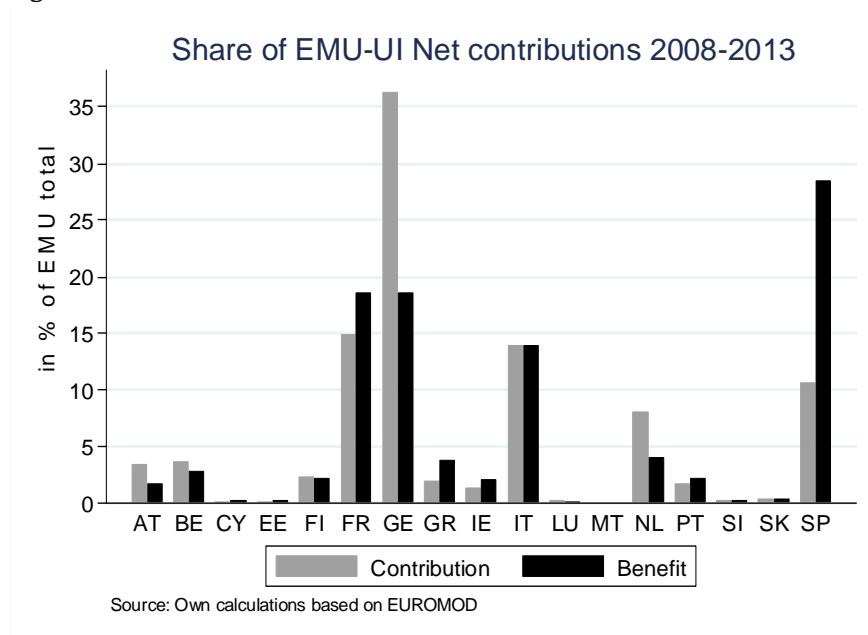


Figure 12: EMU-UI Net contributions 2008-2013 (in % of GDP)



**Figure 13: Share of net contributions relative to EMU total**



**Table 8: EMU-UI benefits, contributions and net balance (in billion euros)**

	2008			2009			2010			2011			2012			2013		
	BEN	SIC	BAL	BEN	SIC	BAL	BEN	SIC	BAL	BEN	SIC	BAL	BEN	SIC	BAL	BEN	SIC	BAL
EMU	45.70	59.45	13.75	67.88	59.33	-8.55	58.50	60.21	1.72	55.38	61.58	6.20	66.80	62.08	-4.72	70.67	62.28	-8.39
AT	0.84	1.98	1.14	1.28	2.01	0.73	1.00	2.04	1.05	0.97	2.10	1.13	1.06	2.15	1.09	1.25	2.19	0.94
BE	1.39	2.12	0.72	1.80	2.13	0.32	1.70	2.15	0.44	1.47	2.24	0.77	1.82	2.31	0.49	2.30	2.34	0.04
CY	0.06	0.11	0.05	0.12	0.11	-0.01	0.11	0.11	0.00	0.15	0.11	-0.04	0.25	0.11	-0.04	0.25	0.11	-0.14
EE	0.06	0.11	0.04	0.26	0.09	-0.16	0.17	0.09	-0.08	0.08	0.10	0.02	0.07	0.11	0.03	0.07	0.12	0.05
FI	1.02	1.39	0.37	1.52	1.39	-0.13	1.30	1.41	0.11	1.27	1.47	0.20	1.32	1.52	0.19	1.42	1.55	0.13
FR	8.49	8.78	0.30	12.59	8.79	-3.80	10.79	8.99	-1.80	10.53	9.23	-1.30	12.26	9.37	-2.89	13.29	9.42	-3.86
GE	11.33	20.87	9.54	13.48	20.87	7.39	11.97	21.53	9.56	10.25	22.45	12.19	10.13	23.16	13.03	10.77	23.58	12.81
GR	0.92	1.40	0.48	1.65	1.42	-0.22	2.19	1.34	-0.85	3.05	1.22	-1.83	3.53	1.07	-2.45	2.65	0.96	-1.68
IE	1.01	0.92	-0.09	2.30	0.86	-1.45	1.40	0.81	-0.59	1.09	0.80	-0.29	0.95	0.80	-0.15	0.89	0.81	-0.07
IT	6.18	8.35	2.16	7.72	8.40	0.68	7.44	8.57	1.13	6.41	8.68	2.28	11.17	8.55	-2.62	11.91	8.49	-3.42
LU	0.06	0.13	0.07	0.11	0.13	0.02	0.10	0.14	0.04	0.10	0.14	0.04	0.11	0.14	0.03	0.12	0.14	0.02
MT	0.02	0.04	0.02	0.03	0.04	0.01	0.02	0.04	0.02	0.02	0.04	0.02	0.02	0.04	0.02	0.02	0.05	0.02
NL	1.31	4.81	3.50	2.07	4.90	2.83	2.42	4.93	2.51	2.05	5.01	2.96	2.76	5.06	2.30	4.10	4.96	0.86
PT	0.68	1.06	0.37	1.22	1.07	-0.15	1.13	1.07	-0.06	1.48	1.04	-0.44	1.86	1.99	-0.88	1.86	0.99	-0.87
SI	0.08	0.19	0.10	0.18	0.19	0.01	0.19	0.19	0.00	0.19	0.19	0.00	0.18	0.19	0.01	0.23	0.19	-0.04
SK	0.13	0.25	0.11	0.35	0.25	-0.11	0.35	0.25	-0.10	0.22	0.26	0.04	0.24	0.26	0.02	0.26	0.27	0.01
SP	12.09	6.94	-5.15	21.19	6.68	-14.51	16.20	6.54	-9.66	16.05	6.50	-9.55	19.05	6.23	-12.81	19.24	6.14	13.10

Source: Own calculations based on EUROMOD

**Table 9: EMU-UJ benefits, contributions and net balance (in % of GDP)**

	2008			2009			2010			2011			2012			2013		
	BEN	SIC	BAL	BEN	SIC	BAL	BEN	SIC	BAL	BEN	SIC	BAL	BEN	SIC	BAL	BEN	SIC	BAL
EMU	0.5	0.6	0.1	0.8	0.7	-0.1	0.6	0.7	0.0	0.6	0.7	0.1	0.7	0.7	0.1	0.7	0.7	-0.1
AT	0.3	0.7	0.4	0.5	0.7	0.3	0.3	0.7	0.4	0.3	0.7	0.4	0.3	0.7	0.4	0.4	0.7	0.3
BE	0.4	0.6	0.2	0.5	0.6	0.1	0.5	0.6	0.1	0.4	0.6	0.2	0.5	0.6	0.1	0.6	0.6	0.0
CY	0.4	0.6	0.3	0.7	0.7	-0.1	0.7	0.7	0.0	0.9	0.6	-0.2	1.4	0.6	-0.8	1.9	0.6	-1.3
EE	0.4	0.6	0.3	1.8	0.7	-1.2	1.2	0.6	-0.5	0.5	0.6	0.1	0.4	0.6	0.2	0.4	0.6	0.3
FI	0.5	0.7	0.2	0.9	0.8	-0.1	0.7	0.8	0.1	0.7	0.8	0.1	0.7	0.8	0.1	0.7	0.8	0.1
FR	0.4	0.5	0.0	0.7	0.5	-0.2	0.6	0.5	-0.1	0.5	0.5	-0.1	0.6	0.5	-0.1	0.6	0.5	-0.2
GE	0.5	0.8	0.4	0.6	0.9	0.3	0.5	0.9	0.4	0.4	0.9	0.5	0.4	0.9	0.5	0.4	0.9	0.5
GR	0.4	0.6	0.2	0.7	0.6	-0.1	1.0	0.6	-0.4	1.5	0.6	-0.9	1.8	0.6	-1.3	1.4	0.5	-0.9
IE	0.6	0.5	0.0	1.4	0.5	-0.9	0.9	0.5	-0.4	0.7	0.5	-0.2	0.6	0.5	-0.1	0.5	0.5	0.0
IT	0.4	0.5	0.1	0.5	0.6	0.0	0.5	0.6	0.1	0.4	0.6	0.1	0.7	0.5	-0.2	0.8	0.5	-0.2
LU	0.2	0.4	0.2	0.3	0.4	0.1	0.3	0.3	0.1	0.2	0.3	0.1	0.2	0.3	0.1	0.3	0.3	0.1
MT	0.4	0.7	0.3	0.5	0.7	0.2	0.4	0.7	0.3	0.4	0.7	0.3	0.3	0.7	0.3	0.3	0.6	0.3
NL	0.2	0.8	0.6	0.4	0.9	0.5	0.4	0.8	0.4	0.3	0.8	0.5	0.5	0.8	0.4	0.7	0.8	0.1
PT	0.4	0.6	0.2	0.7	0.6	-0.1	0.7	0.6	0.0	0.9	0.6	-0.3	1.1	0.6	-0.5	1.1	0.6	-0.5
SI	0.2	0.5	0.3	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.5	0.5	0.0	0.7	0.5	-0.1
SK	0.2	0.4	0.2	0.6	0.4	-0.2	0.5	0.4	-0.2	0.3	0.4	0.1	0.3	0.4	0.0	0.4	0.4	0.0
SP	1.1	0.6	-0.5	2.0	0.6	-1.4	1.5	0.6	-0.9	1.5	0.6	-0.9	1.9	0.6	-1.2	1.9	0.6	-1.3

Source: Own calculations based on EUROMOD

## 5.4. Automatic stabilization effects

To what extent does the basic unemployment insurance scheme analyzed in our simulation provide income stabilization? In order to investigate this important function of the euro area UI scheme, we follow the literature on automatic stabilization effects of tax-benefit systems (c.f., Auerbach and Feenberg 2000, Dolls et al. 2012, Bargain et al. 2013) and calculate the income stabilization coefficient defined in section 2 which relates changes in taxes and benefits to changes in gross income. It thus measures how much of a shock on gross income is absorbed by the tax-benefit system. In other words, changes in net incomes are smaller than gross income changes if a fraction of the shock is cushioned by taxes or benefits and UI can thus have a consumption-smoothing effect (cf., Baily 1978, Gruber 1997, Chetty 2008). To what extent the cushioning of the shock translates into demand stabilization depends on how households adjust their consumption expenditure after changes in net income (c.f., Jappelli and Pistaferri 2010 for a survey). The higher the share of credit-constrained households, the larger will be the stabilizing effect on aggregate demand.<sup>10</sup> For the purpose of this study, we rely on the income stabilization coefficient as an indicator for the automatic stabilization effect of the euro area UI scheme given that unemployment is a good predictor for limited liquidity (Gruber 1997, Browning and Crossley 2001, Bloemen and Stancanelli 2005).

UI can stabilize disposable income either through reduced contributions or through benefit payments. In our simulations, we calculate changes in benefit payments from and social contributions into the euro area UI scheme from year  $t$  to year  $t+1$  at the country-level and relate these changes to gross income changes at the extensive margin, i.e. due to job losses or exits out of unemployment, for the stabilizing effect of UI benefits and to the sum of changes at the extensive *and* intensive margin, i.e. due to changes in earnings, for the stabilizing effect of UI contributions. The UI scheme does have a stabilizing effect if total benefit payments at the country level are higher or contributions are lower than in the previous year conditional on an aggregate loss in gross income.

Figure 14 shows stabilization results for the GIIPS countries, Table 10 for the EA17. Our micro data allow us to precisely calculate stabilization effects of the euro area UI taking into account the heterogeneity of the population. The first important result is that in 2009 the euro area UI would have had a stabilizing effect in all 17 member states. This is due to the fact that in 2009 unemployment rates and the share of short-term unemployed went up in the euro area and, equally important, that the scheme can build up deficits in single years. Any shock absorption scheme without the latter capacity would have unfolded a destabilizing effect in those member states which were comparably less severe affected in that recession year. Euro area UI benefits would have absorbed 42.5 percent of the shock on gross income at EMU-level with national values ranging from 32.5 percent in Italy to almost 130 percent in Germany.<sup>11</sup> The stabilizing effect of reduced contribution payments

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<sup>10</sup> See e.g. Dolls et al. 2012 who use information on financial wealth, home-ownership and direct survey evidence to identify credit-constrained households in their micro data.

<sup>11</sup> Note that (aggregate) income stabilization at the country-level can be higher than the replacement rate of 50 percent if the share of short-term unemployed increases from year  $t$  to  $t+1$ . In

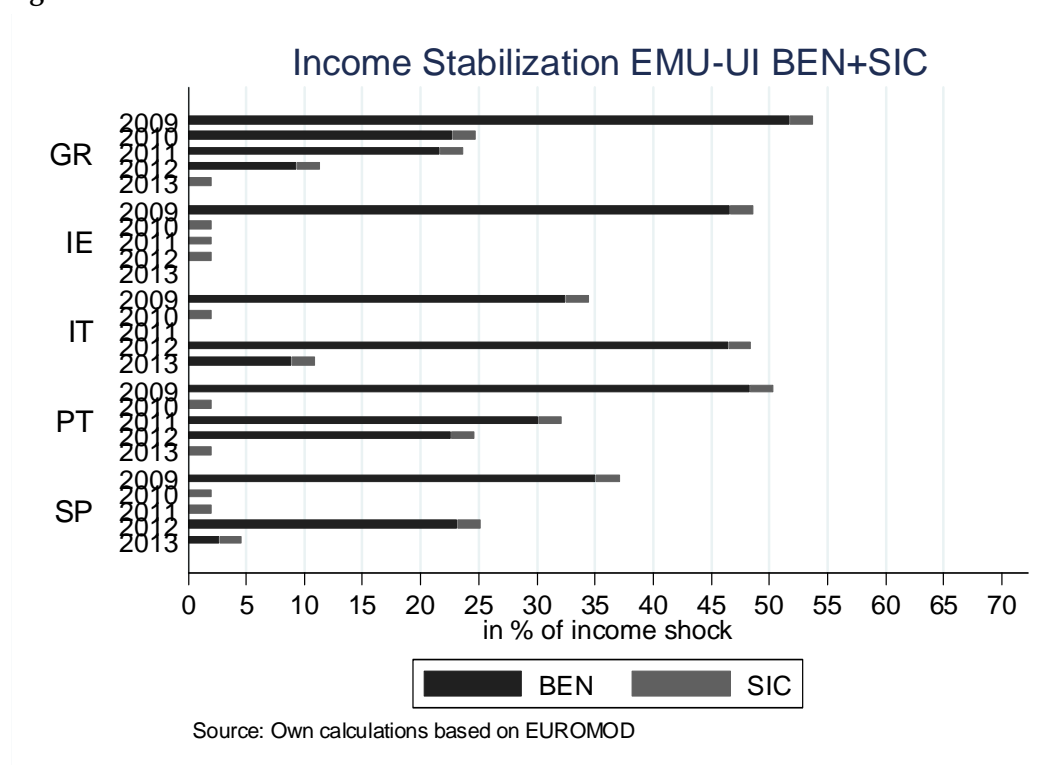


amounts to 1.9 percent which is equal to the proportional payroll tax. Note that we account for extensive and intensive margin income changes when calculating the stabilizing effect of contributions which explains why stabilization stemming from changes in contribution payments can be zero even if unemployment increases. This happens if income growth at the intensive margin outweighs income losses at the extensive margin.<sup>12</sup>

Interestingly, in spite of declining coverage rates (see Table 7) Greece and Spain are the only member states which would have been stabilized either by UI benefits and/or reduced contributions over the whole sample period. At the other end of the spectrum are countries such as Estonia or Malta which would have been stabilized only in two out of 5 years. One can thus conclude that the basic UI scheme analyzed in our simulations would have supported those countries with the worst labor market developments and hence, would have had the intended effect in terms of income stabilization.

Work in progress

**Figure 14: Income stabilization EMU-UI in selected member states**



that case, the aggregate change in benefits can be even higher than the aggregate gross income loss, which, in the case of Germany would have led to a stabilization coefficient of more than 100 percent in 2009.

<sup>12</sup> If we account for income changes at the extensive margin only, social insurance contribution to the euro area UI would have a strictly positive stabilizing effect if the total number of contributors to the scheme goes down.

**Table 10: Income stabilization coefficient**

	2009		2010		2011		2012		2013	
	BEN	SIC	BEN	SIC	BEN	SIC	BEN	SIC	BEN	SIC
EMU	42.5	1.9	0.0	0.0	0.0	0.0	37.8	0.0	12.8	0.0
AT	41.5	0.0	0.0	0.0	0.0	0.0	60.8	0.0	38.3	0.0
BE	50.4	0.0	0.0	0.0	0.0	0.0	72.8	0.0	38.1	0.0
CY	56.0	0.0	0.0	0.0	42.9	0.0	38.6	1.9	19.7	1.9
EE	43.2	1.9	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0
FI	35.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.7	0.0
FR	48.2	0.0	0.0	0.0	0.0	0.0	55.2	0.0	30.1	0.0
GE	129.4	1.9	0.0	0.0	0.0	0.0	0.0	0.0	44.0	0.0
GR	51.8	0.0	22.7	1.9	21.7	1.9	9.4	1.9	0.0	1.9
IE	46.7	1.9	0.0	1.9	0.0	1.9	0.0	0.0	0.0	0.0
IT	32.5	0.0	0.0	0.0	0.0	0.0	46.5	1.9	8.9	1.9
LU	55.9	0.0	0.0	0.0	0.0	0.0	41.3	0.0	31.6	0.0
MT	38.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.4	0.0
NL	45.4	0.0	18.7	0.0	30.2	1.9	22.6	1.9	0.0	0.0
PT	48.4	0.0	0.0	0.0	30.2	1.9	22.6	1.9	0.0	0.0
SI	66.3	0.0	5.2	0.0	4.4	0.0	0.0	1.9	35.8	1.9
SK	65.0	1.9	0.1	0.0	0.0	0.0	67.9	0.0	30.3	0.0
SP	35.1	1.9	0.0	1.9	0.0	1.9	23.2	1.9	2.7	1.9

Source: Own calculations based on EUROMOD.

## 6. Economic effects of a benefit extension program for the euro area

Work in progress

## 7. Conclusions

The current economic crisis in the Eurozone has brought the idea of deeper fiscal integration to the top of the European policy agenda. A common unemployment insurance system is one key reform proposal which could serve as a fiscal risk sharing mechanism in the euro area. However, main concerns often expressed in these debates include permanent transfer flows induced by such a supranational automatic stabilizer and the risk of moral hazard.

In this paper, we have presented different possible variants of an unemployment insurance system for the euro area and discussed their implications for stabilization, redistribution and moral hazard. Using counterfactual simulation techniques based on harmonized European micro data, we have examined the economic effects of a basic unemployment insurance scheme that provides a minimum level of insurance for the period 2008-2013. We have shown that such a scheme could help countries in severe

economic crises avoiding pro-cyclical fiscal policy as some shock absorption would be provided by the central level. Finally, we have addressed many specific issues regarding design and administration.

## References

- Auerbach, A. and D. Feenberg (2000). 'The significance of federal taxes as automatic stabilizers'. *Journal of Economic Perspectives*, 14(3): 37-56.
- Bargain, O., M. Dolls, C. Fuest, D. Neumann, A. Peichl, N. Pestel and S. Sieglöcher (2013): 'Fiscal Union in Europe? Redistributive and Stabilizing Effects of a European Tax Benefit System and Fiscal Equalization Mechanism', *Economic Policy*, July 2013, 375-422.
- Baily, M. (1978): 'Some aspects of optimal unemployment insurance'. *Journal of Public Economics*, 10: 379-402.
- Bell, D. and D. Blanchflower (2010), 'UK unemployment in the Great recession', *National Institute Economic Review*, 214, R3-R25.
- Bloemen, H. and E. Stancanelli (2005): 'Financial Wealth, Consumption Smoothing and Income Shocks Arising from Job Loss.' *Economica* 72 (August): 431-52.
- Bontout, O. and T. Lokajickova (2013): 'Social protection budgets in the crisis in the EU', Working Paper 1/2013, European Commission.
- Browning, M. and T. Crossley (2001): 'Unemployment Insurance Levels and Consumption Changes', *Journal of Public Economics* 80 (April): 1-23.
- Center on Budget and Policy Priorities (2013), 'Introduction of unemployment insurance', by C. Stone and W. Chen.
- Chetty, R. (2008). 'Moral hazard versus liquidity and optimal unemployment insurance', *Journal of Political Economy*, 116 (2): 173-234.
- Congressional Budget Office (2012). 'Unemployment insurance in the wake of the recent recession', Pub. No. 4525
- Deinzer, R. (2004). 'Konvergenz- und Stabilisierungswirkungen einer europäischen Arbeitslosenversicherung', Berlin: Duncker & Humblot.
- Dolls, M., C. Fuest, D. Neumann and A. Peichl (2013). 'Fiscal integration in the Eurozone: Economic effects of two key scenarios', ZEW Discussion Paper No. 13-106.
- Dolls, M., C. Fuest and A. Peichl (2012): 'Automatic Stabilizers and Economic Crisis: US versus Europe', *Journal of Public Economics*, 96, 279-294.
- Drèze, J. and A. Durré (2013). 'Fiscal integration and growth stimulation in Europe', CORE DP 2013/13.
- Dullien, S. (2007). 'Improving economic stability: What the euro area can learn from the United States' unemployment insurance', Working Paper FG 1, 2007/11, July 2007, SWP Berlin.
- Dullien, S. (2013): 'A euro-area wide unemployment insurance as an automatic stabilizer: Who benefits and who pays?', Paper prepared for the European Commission (DG EMPL), January 2013.
- Enderlein, H., L. Guttenberg and J. Spiess (2013). 'Blueprint for a cyclical insurance in the euro area', Project "EU&Differentiated Integration".
- Engler, P. and S. Voigts (2013). 'A transfer mechanism for a monetary union', SFB649 Discussion Paper 2013-013.

Esser, I., T. Ferrarini, K. Nelson, J. Palme and O. Sjöberg (2013), 'Unemployment benefits in EU Member States', report prepared for the use of the European Commission, DG Employment, Social Affairs and Inclusion.

European Commission (2012), 'A blueprint for a deep and genuine economic and monetary union – Launching a European Debate', Communication from the Commission, 777 final/2.

Eurostat (2012), 'Task 5.1.1. - Working paper with the description of the Income and living conditions dataset'.

Evers, M. (2012). 'Federal fiscal transfer rules in monetary unions', *European Economic Review*, 56, pp. 507-252.

Farber, H. and R. Valletta (2013). 'Do extend unemployment benefits lengthen unemployment spells? Evidence from recent cycles in the U.S. labor market', NBER Working Paper 19048.

Farhi, E. and I. Werning (2012). 'Fiscal Unions', NBER Working Paper No. 18280.

Figari, F., A. Salvatori and H. Sutherland (2011) "Economic downturn and stress testing European welfare systems". *Research in Labor Economics* 32, pp.257-286.

Gruber, J. (1997). 'The Consumption Smoothing Benefits of Unemployment Insurance', *The American Economic Review* 87 (1): 192-205.

Jappelli, T., and L. Pistaferri (2010). 'The consumption response to income changes'. *Annual Review of Economics* 2, 479–506.

Immervoll, H., H. Levy, C. Lietz, D. Mantovani and H. Sutherland (2006), 'The sensitivity of poverty rates to macro-level changes in the European Union'. *Cambridge Journal of Economics* 30, 181–199.

IMF (2013), 'Toward a Fiscal Union for the Euro Area', IMF Staff Discussion Note, SDN/13/09.

Lalive, R., C. Landais and J. Zweimüller (2013). 'Market externalities of large unemployment insurance extension programs', CESifo Working Paper No. 4413.

Pechman, J. (1973). 'Responsiveness of the federal income tax to changes in income', *Brookings Papers on Economic Activity*.

Pechman, J. (1987). 'Federal tax policy', Brookings Institution, Washington.

Peichl, A. and S. Siegloch (2012), 'Accounting for labor demand effects in structural labor supply models', *Labour Economics*, 19(1), 129-138.

Rothstein, J. (2011). 'Unemployment insurance and job search in the Great Recession', NBER Working Paper No. 17534.

Stovicek, K. and A. Turrini (2012), 'Benchmarking unemployment benefits in the EU', IZA Policy Paper No. 43.

Sutherland, H. and F. Figari (2013). 'EUROMOD: the European Union tax-benefit microsimulation model', *International Journal of Microsimulation* 6(1) pp. 4-26.

Van Rompuy, H., J.M. Barroso, J.C. Juncker and M. Draghi (2012): Towards a genuine Economic and Monetary Union, Report to the European Council Meeting, December, 13.-14., 2012.

## Appendix

**Table A.1: Unemployment expenditure in million euros**

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
EMU	126,640.83	127,958.88	139,234.70	147,458.12	148,570.42	145,755.31	138,586.97	129,383.56	131,248.10	167,773.18	166,209.51	155,606.69
AT	3,051.11	3,139.97	3,583.64	4,002.45	4,087.08	3,963.05	4,057.32	3,754.90	3,632.94	4,423.43	4,391.02	3,987.28
BE	8,122.73	8,248.24	9,153.42	9,978.55	10,333.75	10,453.56	10,554.03	10,351.80	10,459.45	12,015.11	12,190.78	11,994.05
CY	120.97	119.57	106.42	106.25	129.73	148.83	174.42	137.78	163.50	153.78	164.65	185.97
EE	12.87	13.68	11.57	20.90	20.59	18.28	13.74	19.55	40.16	138.79	86.84	57.89
FL	3,549.21	3,407.74	3,528.49	3,750.45	3,879.84	3,768.18	3,572.26	3,307.87	3,124.66	3,818.49	3,945.74	3,384.63
FR	31,507.63	31,807.61	35,366.09	38,243.34	38,499.30	38,239.18	36,215.58	34,724.47	33,492.61	38,033.85	39,508.22	38,296.65
GE	47,277.93	46,976.88	50,323.54	51,478.66	50,513.81	46,770.41	42,371.92	36,713.37	34,244.97	43,230.15	39,854.25	31,613.99
GR	2,117.60	2,227.92	2,445.40	2,280.87	2,489.78	2,398.61	2,238.96	2,272.82	2,692.69	3,332.17	3,269.37	3,717.71
IE	1,581.97	1,612.99	1,839.07	1,912.07	2,015.93	2,048.40	2,226.89	2,445.25	3,026.58	4,953.07	5,618.63	5,336.63
IT	5,751.99	5,506.65	6,163.79	6,468.00	6,931.49	7,242.00	7,363.55	6,603.43	7,360.78	11,154.63	11,911.50	11,384.21
LU	148.23	180.93	197.45	248.32	289.84	322.80	325.47	331.57	330.85	433.20	449.90	432.33
MA	18.68	19.32	39.48	33.12	30.77	30.08	30.63	26.61	27.35	31.29	29.80	30.31
NL	6,027.24	6,014.13	6,626.58	8,016.49	8,240.82	8,150.00	7,177.10	6,259.62	5,854.56	7,895.79	8,641.24	8,054.28
PT	1,016.01	1,047.64	1,249.82	1,787.60	1,939.99	2,051.95	1,981.61	1,826.23	1,656.29	2,162.02	2,311.00	2,125.03
SI	238.46	216.52	192.24	188.84	197.39	211.50	185.72	138.09	125.46	184.65	207.49	249.65
SK	281.79	212.98	255.00	346.75	371.31	211.16	217.47	249.94	280.34	453.11	449.98	383.38
SP	14,822.52	16,320.05	17,662.72	18,350.57	18,583.55	19,727.33	19,995.05	20,293.13	24,625.97	35,343.22	33,359.14	34,233.24

Source: Eurostat

**Table A.2: Unemployment benefit replacement rates**

	2007	2008	2009	2010	2011
AT	63.50	63.50	63.33	63.33	63.00
BE	66.67	66.67	74.83	74.17	72.00
CY	67.83	n.a.	n.a.	n.a.	n.a.
EE	61.83	61.83	61.17	62.00	62.33
FI	61.50	61.17	60.83	61.83	61.83
FR	72.00	71.83	71.83	71.83	71.83
GE	68.50	68.33	68.50	68.83	67.67
GR	50.50	55.00	55.67	50.83	52.17
IE	59.50	60.33	64.33	61.83	60.50
IT	67.17	70.50	71.00	69.67	68.67
LU	85.00	85.00	84.33	84.33	85.33
MT	51.17	50.33	50.33	49.83	47.50
NL	78.50	78.67	78.17	77.83	78.83
PT	83.17	83.00	83.00	80.17	80.50
SI	72.00	74.00	74.50	77.67	83.17
SK	68.00	68.50	67.33	67.50	68.50
SP	74.00	73.33	73.00	73.50	72.83

Definition: average unemployment benefit replacement rate during the first year of unemployment across two income situations (100% and 67% of average earnings) and three family situations (single, one-earner married couple, two-earner married couple). The initial net replacement rates measure is defined: Initial phase of unemployment but following any waiting period (excluding social assistance, covering two earning levels and three family situations, as mentioned above). Any income taxes payable on unemployment benefits are determined in relation to annualized benefit values (i.e. monthly values multiplied by 12) even if the maximum benefit duration is shorter than 12 months. For married couples the percentage of AW relates to the previous earnings of the "unemployed" spouse only; the second spouse is assumed to be "inactive" with no earnings and no recent employment history. Where receipt of social assistance or other minimum-income benefits is subject to activity tests (such as active job-search or being "available" for work), these requirements are assumed to be met. AW: Average Worker; an adult full-time worker in the covered industry sectors whose wage earnings are equal to the average wage earnings of such workers.

Source: CESifo DICE

**Table A.3: Qualifying conditions for unemployment benefits**

	2007	2009	2011	2013
AT	52 weeks of insurance periods within the last 24 months. 26 weeks within the last 12 months for persons under the age of 25.	52 weeks of insurance periods within the last 24 months. 26 weeks within the last 12 months for persons under the age of 25.	52 weeks of insurance periods within the last 24 months. 26 weeks within the last 12 months for persons under the age of 25.	52 weeks of insurance periods within the last 24 months. 26 weeks within the last 12 months for persons under the age of 25.
BE	Period varies according to the age of the insured person between 312 working	Period varies according to the age of the insured person between 312 working	Period varies according to the age of the insured person between 312 working	Period varies according to the age of the insured person between 312 working

	<p>days during the previous 18 months, and 624 working days over the previous 36 months.</p> <p>Conditions relate to extent of contributions paid:</p> <p>The insured person has been insured for at least 26 weeks up to the date of unemployment, Lower part of insurable earnings up to the date of unemployment equal to at least 26 times the weekly Basic Insurable Earnings (Βασικές Ασφαλιστέες Αποδοχές) of CYP 82.67 (€ 142) per week; and Paid and credited insurable earnings in the benefit year are at least equal to 20 times the weekly amount of Basic Insurable Earnings.</p> <p>Definitions:</p> <p>Lower part of insurable earnings: insurable earnings up to Basic Insurable Earnings.</p> <p>Upper part of insurable earnings: insurable earnings over Basic Insurable Earnings.</p> <p>Benefit year: Starts from the first Monday of July and ends the last Sunday prior to the first Monday from which the benefit year will start.</p>	<p>days during the previous 18 months, and 624 working days over the previous 36 months.</p> <p>Conditions relate to extent of contributions paid:</p> <p>* The insured person has been insured for at least 26 weeks up to the date of unemployment, * Lower part of insurable earnings up to the date of unemployment equal to at least 26 times the weekly Basic Insurable Earnings (Βασικές Ασφαλιστέες Αποδοχές) of € 154.07 per week; and * Paid and credited insurable earnings in the benefit year are at least equal to 20 times the weekly amount of Basic Insurable Earnings.</p> <p>Definitions:</p> <p>Lower part of insurable earnings: insurable earnings up to Basic Insurable Earnings.</p> <p>Upper part of insurable earnings: insurable earnings over Basic Insurable Earnings.</p> <p>Benefit year: Starts from the first Monday of July and ends the last Sunday prior to the first Monday from which the benefit year will start.</p>	<p>days during the previous 18 months, and 624 working days over the previous 36 months.</p> <p>Conditions relate to extent of contributions paid:</p> <p>* The insured person has been insured for at least 26 weeks up to the date of unemployment, * Paid basic insurance up to the date of unemployment equal to at least 26 times the weekly Basic Insurable Earnings (Βασικές Ασφαλιστέες Αποδοχές) of € 167.05 per week (0.50 insurance point); and * Paid and assimilated insurance in the the relevant contribution year is at least equal to 20 times the weekly amount of Basic Insurable Earnings (0.39 insurance point).</p> <p>Definitions:</p> <p>Basic insurance: insurable earnings up to Basic Insurable Earnings (up to one insurance point). One insurance point: equal to 52 times the weekly basic amount = € 8,687.</p> <p>Relevant contribution year: the last contributions year, prior to the benefit year, which includes the date of fulfilling the relevant insurance conditions.</p> <p>Benefit year: the period which starts the first Monday of July of each year and ends the last Sunday prior to the</p>	<p>days during the previous 21 months, and 624 working days over the previous 42 months.</p> <p>Conditions relate to the extent of contributions paid:</p> <p>* the insured person has been insured for at least 26 weeks up to the date of unemployment; * paid basic insurance up to the date of unemployment equal to at least 26 times the weekly Basic Insurable Earnings (Βασικές Ασφαλιστέες Αποδοχές) of €174.38 per week (0.50 insurance point); and * paid and assimilated insurance in the relevant contribution year is at least equal to 20 times the weekly amount of Basic Insurable Earnings (0.39 insurance point). Following the exhaustion of payment, entitlement can be regained after 26 weeks of employment from the day of exhaustion and provided that insurance has been paid during that period equal to at least 26 times the weekly Basic Insurable Earnings (Βασικές Ασφαλιστέες Αποδοχές).</p> <p>Definitions:</p> <p>Basic insurance: insurable earnings up to Basic Insurable Earnings (up to one insurance point). One insurance point: equal to 52 times the weekly basic amount = € 9,068.</p>
CY				

			first Monday of July of the following year.	Relevant contribution year: the last contribution year, prior to the benefit year, which includes the date of fulfilling the relevant insurance conditions. Benefit year: the period which starts the first Monday of July of each year and ends the last Sunday prior to the first Monday of July of the following year.
EE	Unemployment Insurance Benefit (töötuskindlustushüvits): Insurance period (payment of contributions) of 12 months over the 36 months preceding registration as an unemployed.	Unemployment Insurance Benefit (töötuskindlustushüvits): Insurance period (payment of contributions) of 12 months over the 36 months preceding registration as an unemployed.	Unemployment Insurance Benefit (töötuskindlustushüvits): Insurance period (payment of contributions) of 12 months over the 36 months preceding registration as an unemployed.	Unemployment Insurance Benefit (töötuskindlustushüvits): Insurance period (payment of contributions) of 12 months over the 36 months preceding registration as an unemployed.
FI	Insurance: Basic unemployment allowance (peruspäiväraha): 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.	Insurance: Basic unemployment allowance (peruspäiväraha): * 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.	Insurance: Basic unemployment allowance (peruspäiväraha): * Employees: Initial condition at least 34 weeks of employment during the last 28 months and during each week at least 18 hours. * Self-employed persons: at least 18 months of entrepreneurship during the last 48 months.	Insurance: Basic unemployment allowance (peruspäiväraha): * Employees: Initial condition at least 34 weeks of employment during the last 28 months and during each week at least 18 hours. * Self-employed persons: at least 18 months of entrepreneurship during the last 48 months.
FR	Unemployment insurance (assurance chômage): At least 6 months (182 days) insurance during the last 22 months preceding the unemployment.	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	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	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



GE	Unemployment insurance (Arbeitslosenversicherung): The unemployed person must have been compulsorily insured for at least 12 months during the last 2 years.	the unemployment.	the unemployment.	the unemployment.
		Unemployment insurance (Arbeitslosenversicherung): The unemployed person must have been compulsorily insured for at least 12 months during the last 2 years.	Unemployment insurance (Arbeitslosenversicherung): The unemployed person must have been compulsorily insured for at least 12 months during the last 2 years.	Unemployment insurance (Arbeitslosenversicherung): The unemployed person must have been compulsorily insured for at least 12 months during the last 2 years.
GR	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.	* 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.	* 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.	* 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. From the reference periods the two last months are excluded.
		* For first time claimants, an additional requirement of at least 80 days of work per year during the 2 previous years applies.	* For first time claimants, an additional requirement of at least 80 days of work per year during the 2 previous years applies.	* For first time claimants, an additional requirement of at least 80 days of work per year during the 2 previous years applies.
IE	Insurance: 39 weekly contributions paid; and 39 weekly contributions paid or credited during the relevant contribution year preceding the benefit year, or 26 weekly contributions paid in each of the two relevant tax years preceding the benefit year.	Insurance: * 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.	Insurance: * 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.	Insurance: * 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.
		Insurance: * 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.	Insurance: * 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.	Insurance: * 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.
IT	Ordinary unemployment benefit: Two years of insurance and 52 weekly contributions during the last 2 years. Special unemployment benefit:	Ordinary unemployment benefit: Two years of insurance and 52 weekly contributions during the last 2 years.	Ordinary unemployment benefit: Two years of insurance and 52 weekly contributions during the last 2 years.	Employment social allowance (Assegno Sociale per l'Impiego, ASpl): Having matured at least two years of work insurance contributions one of which accrued
		Special unemployment	Special unemployment	

	10 monthly contributions of 43 weekly contributions during the last two years in the building industry.	benefit: 10 monthly contributions of 43 weekly contributions during the last two years in the building industry.	benefit: 10 monthly contributions of 43 weekly contributions during the last two years in the building industry..	during the two years prior to the onset of unemployment. Mini ASpl: Having matured at least 13 weeks (3 months) of contributions during the 12 months prior to dismissal.
LU	At least 26 weeks of employment during the last year.	At least 26 weeks of employment during the last year.	At least 26 weeks of employment during the last year.	At least 26 weeks of employment during the last year.
MT	50 weeks of paid contributions of which at least 20 paid or credited should be in the last two previous years.	50 weeks of paid contributions of which at least 20 paid or credited should be in the last two previous years.	50 weeks of paid contributions of which at least 20 paid or credited should be in the last two previous years.	50 weeks of paid contributions of which at least 20 paid or credited should be in the last two previous years.
NL	Short-term benefit (kortdurende uitkering): At least 26 weeks of paid employment during the last 36 weeks (week condition). Salary-related benefit (loongerelateerde uitkering): 26-weeks-condition and employment in at least 4 years during the last 5 calendar years, in each of which a salary over 52 days was paid (4-out-of-5 condition).	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).	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).	A person who has received wages in at least 26 weeks out of 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 208 hours 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).
PT	Unemployment insurance: At least 450 days of salaried work and contribution payment, or assimilated situation, in 24 months preceding commencement of unemployment.	Unemployment insurance: At least 450 days of salaried work and contribution payment, or assimilated situation, in 24 months preceding commencement of unemployment.	Unemployment insurance: At least 450 days of employed work and contribution payment, or assimilated situation, in the 24 months preceding commencement of unemployment.	Unemployment insurance: At least 360 days of employed work and contribution payment, or assimilated situation, in the 24 months preceding commencement of unemployment.
SI	At least 3 years (2 years in case of temporary	At least 3 years (2 years in case of temporary	At least 2 years of unemployment	At least 2 years of unemployment

	employment) of unemployment insurance contributions during the last 4 years.	employment) of unemployment insurance contributions during the last 4 years.	insurance contributions during the last 3 years (4 years in case of temporary employment).	insurance contributions during the last 3 years (4 years in case of temporary employment).
SK	At least 12 months of employment (full time equivalent) during the previous 18 months.	At least 12 months of employment (full time equivalent) during the previous 18 months.	At least 9 months of insurance during the previous 24 months.	At least 9 months of insurance during the previous 24 months. For unemployed persons younger than 30 years: at least 6 months of insurance during the previous 24 months.
SP	Insurance: Minimum contribution period of 360 days during the 6 years immediately preceding the legal unemployment situation.	Insurance: Minimum contribution period of 360 days during the 6 years immediately preceding the legal unemployment situation.	Insurance: Minimum contribution period of 360 days during the 6 years immediately preceding the legal unemployment situation.	Insurance: Minimum contribution period of 360 days during the 6 years immediately preceding the legal unemployment situation.
Source: European Commission (http://www.missoc.org/MISSOC/INFORMATIONBASE/COMPARATIVETABLES/MISSOCDATABLE/comparativeTableSearch.jsp)				

**Table A.4: Duration of unemployment benefit receipt**

	2007	2009	2011	2013
AT	<p>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.</p> <p>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</p>	<p>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</p>	<p>Unemployment benefit (Arbeitslosengeld): Duration of payment depends on insurance duration and age: 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. After completion of a vocational rehabilitation from the statutory social insurance the duration of payment amounts to 78 weeks. The duration will be extended by the period during which the beneficiary participates in a follow-</p>	<p>Unemployment benefit (Arbeitslosengeld): Duration of payment depends on insurance duration and age: 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. After completion of a vocational rehabilitation from the statutory social insurance the duration of payment amounts to 78 weeks. The duration will be extended by the period during which the beneficiary</p>

	by the Labour Market Service and by 156 or 209 weeks if the beneficiary participates in a work foundation (special training measure).	Service and by 156 or 209 weeks if the beneficiary participates in a work foundation (special training measure).	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). old-age pension are met.	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).
BE	No limit (except for certain cases of long-term unemployment or in case of active search for employment).	No limit (except in case of active search for employment).	No limit (except in case of active search for employment).	No limit (provided the beneficiary actively looks for work and notably follows a pathway to work).
CY	156 days.	156 days.	156 days.	156 days.
EE	Unemployment Insurance Benefit (töötuskindlustushüvits): 180 calendar days for a person with an insurance period less than 56 months, 270 calendar days for a person with an insurance period from 56 to 110 months, 360 calendar days for a person with an insurance period of 111 or more months.	Unemployment Insurance Benefit (töötuskindlustushüvits): * 180 calendar days for a person with an insurance period less than 56 months, * 270 calendar days for a person with an insurance period from 56 to 110 months, * 360 calendar days for a person with an insurance period of 111 or more months.	Unemployment Insurance Benefit (töötuskindlustushüvits): * 180 calendar days for a person with an insurance period less than 56 months, * 270 calendar days for a person with an insurance period from 56 to 110 months, * 360 calendar days for a person with an insurance period of 111 or more months.	Unemployment Insurance Benefit (töötuskindlustushüvits): * 180 calendar days for a person with an insurance period less than 56 months, * 270 calendar days for a person with an insurance period from 56 to 110 months, * 360 calendar days for a person with an insurance period of 111 or more months.
FI	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	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	Insurance: Maximum period of 500 calendar days. A jobseeker born prior to 1950 can then apply for unemployment pension (Työttömyyseläke). A jobseeker born in 1950-1954 may, notwithstanding the maximum period, be paid unemployment allowance until the end of the calendar month in which s/he reaches the age of 65, provided s/he has reached the	Insurance: Maximum period of 500 calendar days. A jobseeker born prior to 1950 can then apply for unemployment pension (Työttömyyseläke). A jobseeker born in 1950-1954 may, notwithstanding the maximum period, be paid unemployment allowance until the end of the calendar month in which s/he reaches the age of 65, provided s/he has reached the

	until the age of 65.	until the age of 65.	age of 59 before the maximum period expires and has acquired, on expiry of the maximum period, at least five employment years - as defined by law - over the last 20 years. A jobseeker born in 1955 or later may, notwithstanding the maximum period, be paid unemployment allowance until the end of the calendar month in which s/he reaches the age of 65, provided s/he has reached the age of 60 before the maximum period expires and has acquired, on expiry of the maximum period, at least five employment years - as defined by law - over the last 20 years.	maximum period expires and has acquired, on expiry of the maximum period, at least five employment years - as defined by law - over the last 20 years. A jobseeker born in 1955 or later may, notwithstanding the maximum period, be paid unemployment allowance until the end of the calendar month in which s/he reaches the age of 65, provided s/he has reached the age of 60 before the maximum period expires and has acquired, on expiry of the maximum period, at least five employment years - as defined by law - over the last 20 years.
FR	Unemployment insurance (assurance chômage): Duration of payment of the benefit varies according to length of insurance and to age; minimum: 7 months, maximum: 36 months.	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 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 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).
GE	Unemployment insurance (Arbeitslosenversicherung): The duration of benefits (DB) depends on the duration of compulsory insurance coverage and on the age of the beneficiary: DB (months)      Age (years) 12                      6 16                      8 20                      10	Unemployment insurance (Arbeitslosenversicherung): The duration of benefits (DB) depends on the duration of compulsory insurance coverage (DI) and on the age of the beneficiary: DI (months)      Age (years)      DB (months) 12                      6                      6 16                      8                      8	Unemployment insurance (Arbeitslosenversicherung): The duration of benefits (DB) depends on the duration of compulsory insurance coverage (DI) and on the age of the beneficiary: DI (months)      Age (years)      DB (months) 12                      6                      6 16                      8                      8	Unemployment insurance (Arbeitslosenversicherung): The duration of benefits (DB) depends on the duration of compulsory insurance coverage (DI) and on the age of the beneficiary: DI (months)      Age (years)      DB (months) 12                      6                      6 16                      8                      8

24	12	20	10	20	10	20	10
30	55	15	24	12	24	12	24
36	55	18	30	50	15	30	50
(Provision in force	36	55	18	36	55	18	36
since 1 January 2004 for	48		58	48	58	24	48
new entitlements after							58
1 February 2006).							24

24(Provision in force since 1 January 2008; special provision for persons who completed their 50th or 58th year of age before 1 January 2008 and whose entitlement is not yet exhausted, in case they had the entitlement for the maximum period of entitlement according to the provision that was valid till 31 December 2007: increase to 15 or 24 months).

GR	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.	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.	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.	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 If one of the above conditions for granting unemployment benefits is fulfilled and 4.050 or more days of insurance are certified: 12 months.  For the newcomers on the labour market (young people between 20-29 years): 5 months (€73.37).  Every beneficiary is entitled to 25 days of insurance for each month during which unemployment benefit
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IE	Insurance: 390 days but limited to 312 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.	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.	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.	is granted.
IT	Ordinary unemployment benefit: 210 days (300 days for the unemployed aged over 50 years). Special unemployment benefit: 90 days with of extension in the event of a recession.	Ordinary unemployment benefit: 210 days (300 days for the unemployed aged over 50 years). Special unemployment benefit: 90 days with of extension in the event of a recession.	Ordinary unemployment benefit: 240 days (360 days for the unemployed aged over 50 years). Special unemployment benefit: 90 days with of extension in the event of a recession.	Insurance: 234 days but limited to 156 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.  Employment social allowance (Assegno Sociale per l'Impiego, ASpl): statutory durations will be gradually increased according to age:  * Unemployed persons under 50 will be granted the benefit for 8 months till 2014, then increased to 10 months in 2015;  * Unemployed persons between the age of 50 and 54 will be granted the benefit for a period of 12 months till 2015;  * Unemployed persons aged 55 and over will be granted the benefit for 12 months in 2013 then increased to 14 months in 2014 and 16 months in 2015.  From January 2016 onwards:  * Unemployed persons under 55 will be granted the benefit for 12 months;  * Unemployed persons aged 55 and over will be granted the benefit for 18 months.
				Mini ASpI:

				Granted for a number of weeks corresponding to half the number of weekly contributions paid during the last year prior to dismissal. .
LU	365 calendar days during a reference period of 24 months (without exceeding the duration of working days over the reference period). 182 extra calendar days for persons particularly "difficult" to place. For unemployed of 50 years and more prolongation of 12, 9 or 6 months respectively if 30, 25 or 20 years of affiliation to pension.	* 365 calendar days during a reference period of 24 months (without exceeding the number of working days over the reference period).  * 182 extra calendar days for persons particularly "difficult" to place.  * For unemployed persons over 50 years of age, prolongation of 12, 9 or 6 months if 30, 25 or 20 years of affiliation to pension insurance, respectively.	* 365 calendar days during a reference period of 24 months (without exceeding the number of working days over the reference period).  * 182 extra calendar days for persons particularly "difficult" to place.  * For unemployed persons over 50 years of age, prolongation of 12, 9 or 6 months if 30, 25 or 20 years of affiliation to pension insurance, respectively.	* 365 calendar days during a reference period of 24 months (without exceeding the number of working days over the reference period).  * 182 extra calendar days for persons particularly "difficult" to place.  * For unemployed persons over 50 years of age, prolongation of 12, 9 or 6 months if 30, 25 or 20 years of affiliation to pension insurance, respectively.
MT	A maximum of 156 days' benefit or when the number of benefit days paid do not exceed the number of contributions paid under a Contract of Service. For example, a person claims Unemployment Benefit (Beneficju ghal dizimpjieg) after working for 70 weeks since his entry in the Scheme. He will be entitled to a maximum of 70 days. All other number of days paid as sickness and unemployment prior to this claim will also be deducted. So if he has previously taken 8 days sick leave his entitlement would be of 62 days.	A maximum of 156 days' benefit or when the number of benefit days paid do not exceed the number of contributions paid under a Contract of Service. For example, a person claims Unemployment Benefit (Beneficju ghal dizimpjieg) after working for 70 weeks since his entry in the Scheme. He will be entitled to a maximum of 70 days. All other number of days paid as sickness and unemployment prior to this claim will also be deducted. So if he has previously taken 8 days sick leave his entitlement would be of 62 days.	A maximum of 156 days' benefit or when the number of benefit days paid do not exceed the number of contributions paid under a Contract of Service. For example, a person claims Unemployment Benefit (Beneficju ghal dizimpjieg) after working for 70 weeks since his/her entry in the Scheme. S/he will be entitled to a maximum of 70 days. All other number of days paid as sickness and unemployment prior to this claim will also be deducted. So if s/he has previously taken 8 days sick leave his/her entitlement would be of 62 days.	A maximum of 156 days' benefit, provided that the number of benefit days paid does not exceed the number of contributions paid under a Contract of Service. For example, a person claims Unemployment Benefit (Beneficju ghal dizimpjieg) after working for 70 weeks since his/her entry in the Scheme. S/he will be entitled to a maximum of 70 days. All other number of days paid as sickness and unemployment prior to this claim will also be deducted. So if s/he has previously taken 8 days sick leave his/her entitlement would be of 62 days.
NL	Short-term benefit (kortdurende uitkering):	A person who only meets the weeks' condition receives	A person who only meets the weeks' condition receives	A person who only meets the weeks' condition receives



	6 months.	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. See "1. Conditions", "Qualifying period".	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. See "1. Conditions", "Qualifying period".	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. See "1. Conditions", "Qualifying period".
PT	<p>Salary-related benefit (loongerelateerde uitkering):</p> <p>The benefit will be payable for as many months as the number of years in employment (with a maximum of 38 months).</p> <p>Unemployment insurance:</p> <p>Duration of benefits proportional to age and length of contribution:</p> <p>(1) aged less than 30 years:</p> <p>contribution period &lt; 24 months: 270 days of payment;</p> <p>contribution period i 24 months: 360 days of payment; 30 extra days every 5 years of registered income before unemployment.</p> <p>(2) aged from 30 to 40 years:</p> <p>contribution period &lt; 48 months: 360 days of payment;</p> <p>contribution period c 24 months: 540 days of payment; 30 extra days every 5 years of registered income during the last 20 years preceding unemployment.</p> <p>(3) aged from 40 to 45 years:</p> <p>contribution period &lt; 60 months: 540 days of payment;</p> <p>contribution period c 60 months: 720 days of payment; 30 extra days every 5 years of registered income during the last 20 years preceding unemployment.</p> <p>(4) aged 45 years or</p>	<p>Unemployment insurance:</p> <p>Duration of benefits proportional to age and length of contribution:</p> <p>(1) aged less than 30 years:</p> <p>* contribution period &gt; 24 months: 360 days of payment; 30 extra days every 5 years of registered income before unemployment.(2)</p> <p>aged from 30 to 40 years:</p> <p>* contribution period &gt; 24 months: 540 days of payment; 30 extra days every 5 years of registered income during the last 20 years preceding unemployment.(3)</p> <p>aged from 40 to 45 years:</p> <p>* contribution period &gt; 60 months: 720 days of payment; 30 extra days every 5 years of registered income during the last 20 years preceding unemployment.(4)</p> <p>aged 45 years or more:</p> <p>* contribution period &gt;</p>	<p>Unemployment insurance:</p> <p>Duration of benefits proportional to age and length of contribution:</p> <p>(1) aged less than 30 years:</p> <p>* contribution period &lt; 24 months: 270 days of payment;</p> <p>* contribution period &gt; 24 months: 360 days of payment; 30 extra days every 5 years of registered income before unemployment.(2)</p> <p>aged from 30 to 40 years:</p> <p>* contribution period &lt; 48 months: 360 days of payment;</p> <p>* contribution period &gt; 24 months: 540 days of payment; 30 extra days every 5 years of registered income during the last 20 years preceding unemployment.(3)</p> <p>aged from 40 to 45 years:</p> <p>* contribution period &lt; 60 months: 540 days of payment;</p> <p>* contribution period &gt; 60 months: 720 days of</p>	<p>Unemployment insurance:</p> <p>Duration of benefits proportional to age and length of contribution:</p> <p>(1) aged less than 30 years:</p> <p>* contribution period &lt; 15 months: 150 days of payment;</p> <p>* contribution period ≥ 15 months and &lt; 24 months: 210 days of payment;</p> <p>* contribution period ≥ 24 months: 330 days of payment; 30 extra days every 5 years of registered income during the last 20 years preceding unemployment.</p> <p>(2) aged from 30 to 40 years:</p> <p>* contribution period &lt; 15 months: 180 days of payment;</p> <p>* contribution period ≥ 15 months and &lt; 24 months: 330 days of payment;</p> <p>* contribution period ≥ 24 months: 420 days of payment; 30 extra days every 5 years of registered income</p>

	<p>more: contribution period &lt; 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>72 months: 900 days of payment; 60 extra days every 5 years of registered income during the last 20 years preceding unemployment.</p>	<p>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 &lt; 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>during the last 20 years preceding unemployment.  (3) aged from 40 to 50 years:  * contribution period &lt; 15 months: 210 days of payment;  * contribution period ≥ 15 months and &lt; 24 months: 360 days of payment;  * contribution period ≥ 24 months: 540 days of payment; 45 extra days every 5 years of registered income during the last 20 years preceding unemployment.  (4) aged 50 years or more:  * contribution period &lt; 15 months: 270 days of payment;  * contribution period ≥ 15 months and &lt; 24 months: 480 days of payment;  * contribution period ≥ 24 months: 540 days of payment; 60 extra days every 5 years of registered income during the last 20 years preceding unemployment.</p>
SI	<p>Unemployment Benefit (Dávka v nezamestnanosti): 6 months (4 months in case of temporary employment).</p>	<p>Unemployment Benefit (Dávka v nezamestnanosti): 6 months (4 months in case of temporary employment).</p>	<p>Unemployment Benefit (Dávka v nezamestnanosti): 6 months (4 months in case of temporary employment). After a period of 3 months, the beneficiary has the choice either to continue receiving benefit (for another 3 months maximum) or</p>	<p>Unemployment Benefit (Dávka v nezamestnanosti): 6 months (4 months in case of employees on fixed-term labour contracts). After a period of 3 months, the beneficiary has the choice either to continue receiving benefit (for another 3</p>

			to cancel the registration as jobseeker and obtain a bonus.	months maximum) or to cancel the registration as jobseeker and obtain a bonus.
SK	Depends upon length of insurance: 3 months for insurance of 1 to 5 years, 6 months for insurance of 5 to 15 years, 9 months for insurance of 15 to 25 years, 12 months for insurance of 25 years or more, 18 months for insured persons over 50 years of age and insurance period of more than 25 years, 24 months for insured persons over 55 years of age with on insurance period of more than 25 years.	Depends upon length of insurance: * 3 months for insurance of 1 to 5 years, * 6 months for insurance of 5 to 15 years, * 9 months for insurance of 15 to 25 years, * 12 months for insurance of 25 years or more, * 18 months for insured persons over 50 years of age and insurance period of more than 25 years, * 24 months for insured persons over 55 years of age with on insurance period of more than 25 years.	Depends upon length of insurance: * 3 months for insurance of 9 months to 5 years, * 6 months for insurance of 5 to 15 years, * 9 months for insurance of 15 to 25 years, * 12 months for insurance of 25 years or more, * 19 months for insured persons over 50 years of age and insurance period of more than 25 years, * 25 months for insured persons over 55 years of age with on insurance period of more than 25 years.	Depends upon length of insurance and partly also on age: * insurance period between 9 months and 5 years: 3 months, * insurance period between 5 and 15 years: 6 months, * insurance period between 15 and 25 years: 9 months, * insurance period of 25 years or more: 12 months (19 months if over age 50; 25 months if over age 55). Only for unemployed persons younger than 30 years: * insurance period of at least 6 months: 2 months.
SP	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.	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.	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.	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.

Source: European Commission  
(<http://www.missoc.org/MISSOC/INFORMATIONBASE/COMPARATIVETABLES/MISSOCDATABLE/comparativeTableSearch.jsp>)

**Table A.5: Unemployment Insurance Contribution**

	2007	2009	2011	2013
AT	6.00% total, of which 3.00% employees, 3.00% employers. Ceiling: In principle, € 3,840 per month, for special payments (13th and 14th salary) € 7,680 per	6.00% total, of which 3.00% employees, 3.00% employers. Ceiling: In principle, € 4,020 per month, for special payments (13th and 14th salary) € 8,040 per	6.00% total, of which 3.00% employees, 3.00% employers. Ceiling: In principle, €4,200 per month, for special payments (13th and 14th salary) €8,400 per year.	6.00% total, of which 3.00% employees, 3.00% employers. Ceiling: In principle, €4,440 per month, for special payments (13th and 14th salary) €8,880 per

	year. No employers' or employees' contributions for women over the age of 56 years and men over the age of 58 years.	year. No employers' or employees' contributions for women and men over the age of 57 years. Employees' contributions are omitted or reduced in case of low incomes. There is no employee contribution to be paid up to €1,128. Contribution rate paid by employee with an income over €1,128 up to €1,230 amounts to 1% and with an income over €1,230 up to €1,384 to 2%.	No employers' or employees' contributions for women and men who have reached the age of 58 before 1 June 2011. Employees' contributions are omitted or reduced in case of low incomes. There is no employee contribution to be paid up to €1,179. Contribution rate paid by employee with an income over €1,179 up to €1,286 amounts to 1% and with an income over €1,286 up to €1,447 to 2%.	year. No employers' or employees' contributions for women and men who have reached the age of 58 before 1 June 2011. Employees' contributions are omitted or reduced in case of low incomes. There is no employee contribution to be paid up to €1,219. Contribution rate paid by employee with an income over €1,219 up to €1,330 amounts to 1% and with an income over €1,330 up to €1,497 to 2%.
BE	Part of the contributions from global management, which varies according to need.	Part of the contributions from global management, which varies according to need.	Part of the contributions from global management, which varies according to need.	Part of the contributions from global management, which varies according to need.
CY	6% of the global contribution in respect of employed persons is transferred out of the Social Insurance Fund (Ταμείο Κοινωνικών Ασφαλίσεων) paid into a separate Unemployment Benefit (Επίδομα Ανεργίας) Account.	6% of the global contribution in respect of employed persons is transferred out of the Social Insurance Fund (Ταμείο Κοινωνικών Ασφαλίσεων) paid into a separate Unemployment Benefit (Επίδομα Ανεργίας) Account.	From the overall contribution a percentage of 1.15% of the insurable earnings of employed persons is allocated to the Unemployment Benefit Account (Λογαριασμό Παροχών Ανεργίας).	From the overall contribution a percentage of 1.15% of the insurable earnings of employed persons is allocated to the Unemployment Benefit Account (Λογαριασμό Παροχών Ανεργίας).
EE	Unemployment Insurance Benefit (töötuskindlustushüvits): 0.9% of gross wages total, of which 0,6% employee, 0,3% employer.	Unemployment Insurance Benefit (töötuskindlustushüvits): 3% of gross wages total, of which 2% employee, 1% employer.	Unemployment Insurance Benefit (töötuskindlustushüvits): 4.2% of gross wages total, of which 2.8% employee, 1.4% employer.	Unemployment Insurance Benefit (töötuskindlustushüvits): 3% of gross wages total, of which 2% employee, 1% employer.
FI	Earnings-related security (ansioperusteinen sosiaaliturva): Employer: 0.75% on first € 840,940 of payroll, 2.95% on exceeding amount Insured:	Earnings-related security (ansioperusteinen sosiaaliturva): Employer: 0.65% on the first €1,788,000 of payroll, 2.70% on exceeding amount Insured:	Earnings-related security (ansioperusteinen sosiaaliturva): Employer: 0.80% on the first €1,879,500 of payroll, 3.20% on exceeding amount Insured:	Earnings-related security (ansioperusteinen sosiaaliturva): Employer: 0.80% on the first €1,990,500 of payroll, 3.20% on exceeding amount Insured:

FR	6.4% total, of which 2.4% employee, 4.0% employer. Monthly ceiling: € 10,728 Annual ceiling: € 128,736	6.4% total, of which 2.4% employee and 4.0% employer. Monthly ceiling: € 11,436 Annual ceiling: € 137,23	6.4% total, of which 2.4% employee, 4.0% employer. Monthly ceiling: € 11,784 Annual ceiling: € 141,408	Employees: 2.4% Employers: 4%. For recruitments as of 1 July 2013, variation of the employer contribution rate according to the type of contract and age. Monthly ceiling: €12,344 Annual ceiling: €148,128
GE	Unemployment insurance: 4.2% total, of which 2.1% employee, 2.1% employer. Annual ceiling: € 63,000 in the old Länder and € 54,600 in the new Länder.	Unemployment insurance: 2.8% total, of which 1.4% employee, 1.4% employer. Annual ceiling: € 64,800 in the old Länder and € 54,600 in the new Länder.	Unemployment insurance: 3.0% total, of which 1.5% employee, 1.5% employer. Annual ceiling: € 66,000 in the old Länder and € 57,600 in the new Länder.	Unemployment insurance: 3.0% total, of which 1.5% employee, 1.5% employer. Annual ceiling: €69,600 in the old Länder and €58,800 in the new Länder.
GR	5% total, of which 1.33% employee, 3.67% employer. Persons insured before 1.1.1993: Ceiling: € 2,315.00 per month. Persons insured since 1.1.1993: Ceiling: € 5,279.60 per month.	4% total, of which 1.33% employee, 2.67% employer. Persons insured before 1/1/1993: Ceiling: € 2,432.25 per month. Persons insured since 1/1/1993: Ceiling: € 5,543.55 per month.	5% total, of which 1.83% employee, 3.17% employer. Beginning of application: 1/8/2011. Persons insured before 1/1/1993: Ceiling: € 2,432.25 per month. Persons insured since 1/1/1993: Ceiling: € 5,543.55 per month.	5% total, of which 1.83% employee, 3.17% employer. Beginning of application: 1/8/2011. Ceiling: €5,546.80 per month.
IE	Included in the overall Social Insurance rates.  Overall Social Insurance (excluding contribution for sickness and maternity benefits in kind) rates: Self-employed: 3.0%. No ceiling. Employee: 4.0%. The first € 127 of weekly earnings is excluded from the calculation of the percentage payable. Employees with earnings up to € 339 per week are exempt from making a	Included in the overall Social Insurance rates.  Overall Social Insurance rates (excluding contribution for sickness and maternity benefits in kind): * Employee: 4.0%. The first € 127 of weekly earnings is excluded from the calculation of the percentage payable. Employees with earnings up to € 352 per week are exempt from making a contribution. Annual ceiling: € 75,036.	Included in the overall Social Insurance rates.  Overall Social Insurance rates (excluding contribution for sickness and maternity benefits in kind): * Employee: 4.0%. The first € 127 of weekly earnings is excluded from the calculation of the percentage payable. Employees with earnings up to € 352 per week are exempt from making a contribution. No ceiling.	Included in the overall Social Insurance rates.  Overall Social Insurance rates (excluding contribution for sickness and maternity benefits in kind): * Employee: 4.0%. Employees with earnings up to €352 per week are exempt from making a contribution. No ceiling. * Employer: 4.25% (including a 0.35% National Training Fund Levy) on incomes up to €356 per week. 10.75%

	<p>contribution. Annual ceiling: € 48,800. Employer: 8.5% (including a 0.7% National Training Fund Levy) on incomes up to € 356 per week. 10.75% (including a 0.7% National Training Fund Levy) on all earnings where weekly income is in excess of € 356. No ceiling.</p>	<p>* Employer: 8.5% (including a 0.7% National Training Fund Levy) on incomes up to € 356 per week. 10.75% (including a 0.7% National Training Fund Levy) on all earnings where weekly income is in excess of € 356. No ceiling.</p>	<p>* Employer: 8.5% (including a 0.7% National Training Fund Levy) on incomes up to € 356 per week. 10.75% (including a 0.7% National Training Fund Levy) on all earnings where weekly income is in excess of € 356. No ceiling.</p>	<p>(including a 0.7% National Training Fund Levy) on all earnings where weekly income is in excess of €356. No ceiling.</p>
IT	<p>Industry (with over 50 employees): 4.71% total, of which 0.30% employee, 4.41% employer. Commerce (with over 50 employees): 2.51% total, of which 0.30% employee, 2.21% employer. The rate includes 1.61% contribution for unemployment benefit and 3.1% (industry) for topping up earnings in case of partial unemployment; this supplement made up as follows: 2.2% ordinary earnings supplement (Cassa integrazione guadagni ordinaria), 0.9% extraordinary earnings supplement (Cassa integrazione guadagni straordinaria), (0.3% of which is from the employee, 0.6% from the employer). No ceiling.</p>	<p>Both industry and commerce (almost all enterprises): 1.61%, paid by the employer. No ceiling in either case.</p>	<p>Both industry and commerce (almost all enterprises): 1.61%, paid by the employer. No ceiling in either case.</p>	<p>Both industry and commerce (almost all enterprises): 1.61%, paid by the employer. Additional contribution of 1.40% (thus a total contribution rate of 3.01%) in case of fixed-term work contracts. No ceiling in either case.</p>
LU	<p>The employment fund is financed by solidarity taxes from individuals and legal persons and by a general annual contribution from the State.</p>	<p>The employment fund is financed by solidarity taxes from individuals and legal persons and by a general annual contribution from the State.</p>	<p>The employment fund is financed by solidarity taxes from individuals and legal persons and by a general annual contribution from the State.</p>	<p>The employment fund is financed by solidarity taxes from individuals and legal persons and by a general annual contribution from the State.</p>
MT	<p>Included in the overall contribution.</p>	<p>Included in the overall contribution.</p>	<p>Included in the overall contribution.</p>	<p>Included in the overall contribution.</p>
NL	<p>The contributions to</p>	<p>The contributions to</p>	<p>The contributions to</p>	<p>The contributions to</p>

	<p>unemployment insurance (Werkloosheidswet, WW) consists of two separate components: one is paid into the General Unemployment Fund (Algemeen werkloosheidsfonds, Awf); the other, into the social security agency's Redundancy Payment Fund (Wachtgeldfonds, Wgf). Awf contribution: 8.25% total, of which 3.85% employee, 4.40% employer. Wgf contribution: 1.75% paid by the employer. Ceiling for WW-contributions: The WW contribution is paid over a maximum of € 174.64 per day with a contribution-free allowance of € 60 per day. The mentioned Wgf-contribution is an average; it may vary according to branch of industry.</p>	<p>unemployment insurance (Werkloosheidswet, WW) consists of two separate components: one is paid into the General Unemployment Fund (Algemeen werkloosheidsfonds, Awf); the other, into the social security agency's Redundancy Payment Fund (Wachtgeldfonds, Wgf). Awf contribution: 4.15% paid by the employer. Wgf contribution: 1.75% paid by the employer. Ceiling for WW-contributions: The WW contribution is paid over a maximum of € 185.46 per day with a contribution-free allowance of € 63 per day. The mentioned Wgf-contribution is an average; it may vary according to branch of industry.</p>	<p>unemployment insurance (Werkloosheidswet, WW) consists of two separate components: one is paid into the General Unemployment Fund (Algemeen werkloosheidsfonds, Awf); the other, into the social security agency's Redundancy Payment Fund (sectorfondsen, Sfn). Awf-contribution: 4.20% paid by the employer. Sfn-contribution: 1.90% paid by the employer. Ceiling for WW-contributions: The WW contribution is paid over a maximum of € 189.60 per day with a contribution-free allowance of € 65.25 per day. The mentioned Sfn-contribution is an average; it may vary according to branch of industry.</p>	<p>unemployment insurance (Werkloosheidswet, WW) consists of two separate components: one is paid into the General Unemployment Fund (Algemeen werkloosheidsfonds, Awf); the other, into the social security agency's Redundancy Payment Fund (sectorfondsen, Sfn). Awf-contribution: 1.70% paid by the employer. Sfn-contribution: 2.76% paid by the employer. Ceiling for WW-contributions: The WW contribution is paid over a maximum of € 195.96 per day. The mentioned Sfn-contribution is an average; it may vary according to branch of industry.</p>
PT	Included in the overall contribution.	Included in the overall contribution.	Included in the overall contribution.	Included in the overall contribution.
SI	<p>Contributions as a percentage of the assessment base: 1% employee, 1% employer, 2% voluntarily insured. No contribution of employee and employer if the employee receives Old-age pension. Assessment base ceiling: Minimum SKK 7,600 (€ 226) per month (minimum wage), maximum SKK 56,283</p>	<p>Contributions as a percentage of the assessment base: 1% employee, 1% employer, 2% voluntarily insured. No contribution of employee and employer if the employee receives Old-age pension. Assessment base ceiling: Minimum € 295.50 per month (minimum</p>	<p>Contributions as a percentage of the assessment base: 1% employee, 1% employer, 2% voluntarily insured. No contribution of employee and employer if the employee receives Old-age pension. Assessment base ceiling: Minimum (only for</p>	<p>Contributions as a percentage of the assessment base: 1% employee, 1% employer, 2% voluntarily insured. Assessment base: Employees and employer: monthly gross earnings. Voluntarily insured: sum assigned by insurer. No contribution of employee and</p>

	(€ 1,677) per month (3 times the average monthly wage in 2006). Lower minimum ceilings for persons with disabilities and young persons (see 3. "Sickness and maternity: cash benefits").	wage), maximum € 2,892.12 per month (4 times the average monthly wage in 2008). Lower minimum ceilings for persons with disabilities and young persons (see Table I, 3. "Sickness and maternity: Cash benefits").	self-employed and voluntarily insured) 44.2% of national average wage; maximum € 2,978 per month (4 times the average monthly wage in 2009).	employer if the employee receives Old-age pension, Early pension or full Invalidity pension. Assessment base ceiling: Minimum (only for self-employed and voluntarily insured) 50% of national average wage; maximum €4,025 per month (5 times the average monthly wage in 2012).
SK	0.20% of gross wages total, of which 0.14% employee, 0.06% employer. No ceiling.	0.20% of gross wages total, of which 0.14% employee and 0.06% employer. No ceiling.	0.20% of gross wages total, of which 0.14% employee and 0.06% employer. No ceiling.	0.20% of gross wages total, of which 0.14% employee and 0.06% employer. No ceiling.
SP	Unemployment insurance: 7.30% total, of which 1.55% employee, 5.75% employer. Ceiling: € 2,996.10 per month.	Unemployment insurance: 7.05% total, of which 1.55% employee, 5.50% employer. Ceiling: € 3,166.20 per month.	Unemployment insurance: 7.05% total, of which 1.55% employee, 5.50% employer. Applied to a maximum ceiling (tope máximo de cotización) of € 3,230.10 per month.	Unemployment insurance: 7.05% total, of which 1.55% employee, 5.50% employer. Applied to a maximum ceiling (tope máximo de cotización) of €3,425.70 per month.

Source: European Commission  
 (http://www.missoc.org/MISSOC/INFORMATIONBASE/COMPARATIVETABLES/MISSOCDA  
 TABASE/comparativeTableSearch.jsp)