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The redistributive and stabilising effects of an EMU unemployment benefit scheme under different hypothetical unemployment scenarios

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The redistributive and stabilising effects of an EMU unemployment benefit scheme under different hypothetical unemployment scenarios [1]

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Abstract

The idea of a common unemployment benefit system for the European Monetary Union (EMU) has provoked increasing interest in both the political and academic spheres because of its potential to smooth fluctuations in income across member states and to strengthen income security for the unemployed. In this paper, we simulate two hypothetical negative employment shocks and make use of the microsimulation model EUROMOD to explore the implications for income protection of the introduction of an EMU unemployment insurance (EMU-UI) scheme, for a selected number of countries of the Monetary Union. Our results show that the EMU-UI has the potential to reduce the risk of poverty for those affected by the negative employment shock and to have an additional positive effect on within-country income stabilisation, although the effects of the EMU-UI vary considerably in size across the countries analysed.

JEL: C81, H55, I3

Keywords: Unemployment insurance, European Monetary Union, Household income, Microsimulation.

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1. Introduction

The need for a common fiscal capacity at the European Monetary Union level in order to provide better shock absorption against asymmetric economic shocks has been increasingly discussed in the aftermath of the recent economic recession (European Commission, 2012, 2014). The potential of an unemployment insurance benefit at the European Monetary Union level (EMU-UI hereafter) to act as such shock absorber has attracted particular attention (see Andor, 2014; Dullien 2013, 2014; Dolls et al. 2014; Gros 2014; Lelouch and Sode 2014 ; Brandolini 2014).

Several authors have considered a common EMU-UI scheme given the substantial diversity in terms of design of existing national unemployment insurance schemes. Additionally, in the case of an EMU-UI mainly two different types of schemes have been discussed in previous studies. The first alternative is a so called "genuine" scheme, in the sense that its provision is not conditioned to the size of unemployment (or the economic conditions) of Member States. The "genuine" scheme aims to provide a basic level of insurance by replacing part of the national schemes. The common basic level of provision could then be topped-up by national unemployment insurance systems (Andor 2014, Dullien 2013). The second alternative, referred to as a "contingent" unemployment scheme, is meant to be triggered only in case of large economic shocks. A Member State would receive a transfer if, for instance, unemployment exceeds a certain threshold, with national unemployment systems acting as normal (Dolls et al. 2014; Gros 2014). Note that a supranational scheme which provides a basic common level of insurance across Member States is not indispensable to achieve income stabilisation (Brandolini, 2014). Income stabilisation from a scheme with specific country characteristics (for instance similar to the existing national systems) could be achieved by centralising the financing of the systems at the EMU level (Brandolini, 2014).

Previous studies have focused on the effect an EMU-UI would have had on income stabilisation had it been implemented before the economic recession. Dullien (2013) shows that the impact of the scheme would have varied significantly across countries but for sizeable shocks the additional stabilisation from the EMU-UI would have been large. In the same line, Dolls et al. (2014) find that a common EMU-UI scheme would have absorbed a significant part of the unemployment shock in the recent recession.[2] Lelouch and Sode (2014) find that countries such as Belgium, Germany, Netherlands, Austria, and Luxembourg would have benefited from a common EMU-UI in the early 2000s, while Greece, Spain and Portugal would have benefited after 2009. As such, these backward-looking analyses are only partially informative as they consider shocks observed in the past and do not provide an assessment of the potential of an EMU-UI in case particular unemployment shocks had affected different Member States. In this paper we propose to evaluate the potential effect of a common EMU-UI in case of two hypothetical unemployment shock scenarios.

Our analysis adopts a different approach by evaluating the extent to which an EMU-UI would enhance the income resilience of those predicted to fall into unemployment following two hypothetical unemployment shocks of, respectively, a 2% and 6% decrease of the employment rate. Making use of EUROMOD, the tax-benefit microsimulation model of the EU based on representative micro-data, we compare incomes in and out of work, considering scenarios with and without the EMU-UI, for those most likely to enter unemployment following the shocks ("new unemployed"). Our analysis focuses on thirteen Member States of the EMU: Germany, Estonia, Greece, Spain, France, Italy, Cyprus, Latvia, Luxembourg, Austria, Portugal, Slovakia and Finland.

It should be noted that our stock of "new unemployed", i.e. the people who are more likely to enter unemployment following our hypothetical shocks, are likely to possess

[2] The authors also provide an analysis of a wide range of design options for an EMU-UI.

characteristics which are significantly different from those of the individuals currently unemployed in each country and the unemployed at each point in time in the past, including the Great Recession. Depending on the country and the period analysed, the stock of current unemployed is heterogeneous with respect to unemployment durations and workers characteristics, as it is ultimately the result of specific shocks which we do not attempt to replicate. If, on the one hand, cross-country considerations of the potential role of an EMU-UI can be made simpler by the uniform nature of our simulated shocks, on the other hand the comparison of our results on potential coverage with actual data on benefit effective coverage and income protection for the new unemployed is made more difficult by this choice. As well as further discussing the issues in the remainder of the paper, in an attempt to provide results that are independent of the nature and the size of the shock we present results for the average effect across the whole population, with breakdowns for different demographic groups (e.g. women, individuals aged 15-24, etc.).

This paper contributes to the recent discussion about the assessment of the impact of a common EMU-UI in several ways. First, we provide some insights on national automatic stabilisers during the first year of unemployment, based on simulated transitions into unemployment of all people in work and in particular for those with the highest unemployment risk. In this context, we assess the extent to which an EMU-UI contributes to an increase in automatic stabilisation. Second, we provide some insights on forward-looking analysis of the redistributive and stabilising effects of an EMU-UI under two hypothetical shock scenarios. Third, we compare the effect of the EMU-UI of individuals with the highest unemployment risk to those for all people currently in-work, in order to highlight how the impact of entering unemployment and the effect of the EMU-UI vary with respect to the characteristics of individuals potentially affected by the simulated economic shocks. Finally, our analysis highlights that limited household income stabilisation would result through financing only, if the first slice EMU-UI would be identified as the “lowest” common denominator sitting within all the national schemes in all dimensions.

The remainder of this paper is structured as follows: Section 2 specifies the characteristics of the EMU-UI considered in this paper. Section 3 discusses the methods used to simulate the unemployment shocks and to evaluate the effect of an EMU-UI using EUROMOD. The results are presented in Section 4 focusing on six aspects of interest: coverage, beneficiaries, net replacement rates, risk of poverty, income stabilisation and budgetary costs. Finally, Section 5 summarises the main findings and suggests ideas for future research.

2. A common EMU-UI scheme

Existing unemployment insurance schemes vary widely in many dimensions such as eligibility conditions (minimum amount of contributions required, type of contract, age, etc.), level of payment (whether flat rate or proportional to a specific earnings base, presence of ceilings and floors, etc.), duration of entitlement and how they interact with the rest of the tax and benefit system (taxable or not, existence of unemployment assistance or social assistance, etc.). Table A1 in the appendix summarises the key characteristics of the national schemes in 2012 in the countries considered for the analysis.

In this paper we consider a “genuine” common EMU-UI scheme based on the assessment of key design issues set out in a paper prepared by a DG-EMPL working group “On Automatic Stabilisers”, with some minor refinements based on previous work by Jara and Sutherland (2014). The common EMU-UI would:

- Be available to all currently employed up to age 64, excluding the self-employed from the common provision.
- Be payable from the 4th month of unemployment up to the 12th month.
- Depend on having made contributions on earnings during at least three months in the previous 12 months

- Be paid at a level based on 50% of previous (most recent) own gross monthly earnings, with a floor set at 20% of median earnings, except for part-timers (no floor), in each country and a ceiling equal to median earnings in each country.
- Be treated in the same way as the existing national unemployment insurance in the rest of the tax benefit system (i.e. whether it is taxable or included in the income base for the assessment of other benefits)

The EMU-UI is considered as the first tranche of the unemployment insurance provision in each country, with national provision topping up to the existing level, if this exceeds the EMU-UI provision.[3] As previously found in Jara and Sutherland (2014), the specific characteristics of the common EMU-UI relative to the characteristics of the existing national systems will influence the potential effect of the EMU-UI to provide income protection and income stabilisation in case of unemployment.[4] The following section focuses on a stylised individual with given characteristics to compare entitlement to national and EMU unemployment insurance. The analysis provides a first assessment of the impact of the EMU-UI by contrasting the design of the national systems with that of the common scheme while holding constant individual characteristics.

Entitlement to national and EMU-UIs

Figure 1 shows the month-by-month entitlement to the national and the common EMU-UI scheme for a person who has been on national median earnings with a full contribution history and maximum duration of benefit receipt. It shows how the EMU-UI scheme only kicks in, by design, in month 4 and how national systems differ in terms of duration and level of payment.

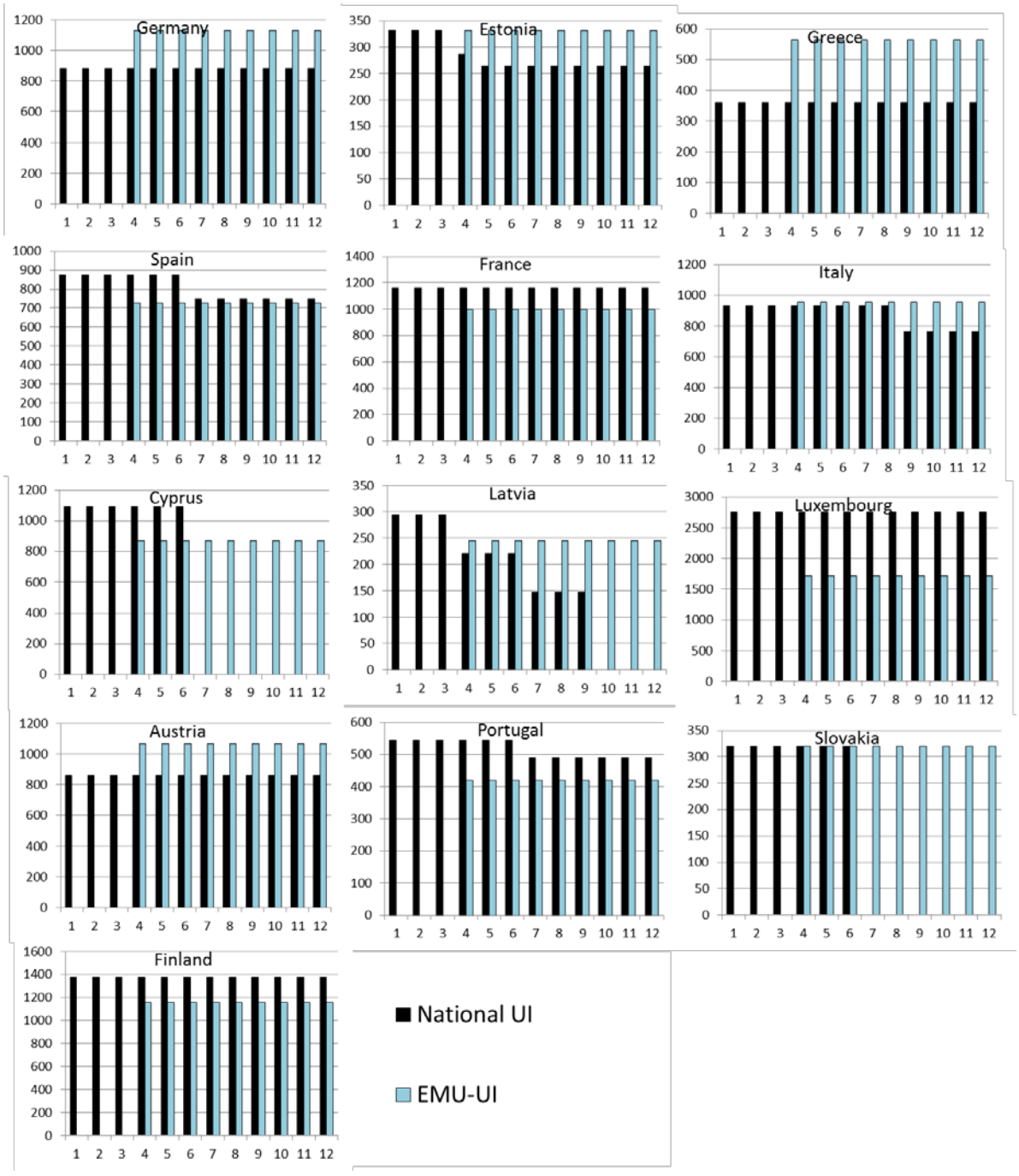
In Germany, Greece, France, Finland, Austria and Luxembourg the national UI entitlement is the same in each of the 12 months. In Cyprus and Slovakia the national entitlement is the same over time but duration is limited to 6 months. In Estonia, Italy, Portugal and Spain entitlement drops somewhat within the year and in Latvia it falls to zero in month 10.

The EMU-UI scheme is worth less than the national provision in each month in Spain, France, Portugal, Finland and Luxembourg. In Cyprus, the national scheme is worth more than the EMU until the national duration is exhausted. In Germany, Austria, Estonia, Greece, Italy and Latvia the EMU scheme is worth more than the national scheme in each of months 4-12. This is due to the fact that the level of payment of the national scheme is based on net earnings in Germany and Austria, because the national scheme is flat rate in Greece, and because the national benefit amount decreases after month 3 in Estonia and Latvia. In Slovakia the EMU scheme is worth about the same as the national until national duration is exhausted in month 6.

[3] Note that this particular dimension of the EMU-UI design is important when assessing the overall budgetary cost of the common scheme and the financing of the provision. Both aspects are disregarded at this point in our analysis.

[4] Potential problems related to the implementation of an EMU-UI, such as moral hazard or permanent transfers between countries should also be considered when designing the common scheme. Such problems are however related to the way contribution rates to finance the scheme are defined (e.g. uniform contribution rate, experience rating or claw-back mechanism). In this paper we do not consider financing of the scheme. For a discussion on financing, see Brandolini (2014), Dolls et al. (2014), Dullien (2013), among others.

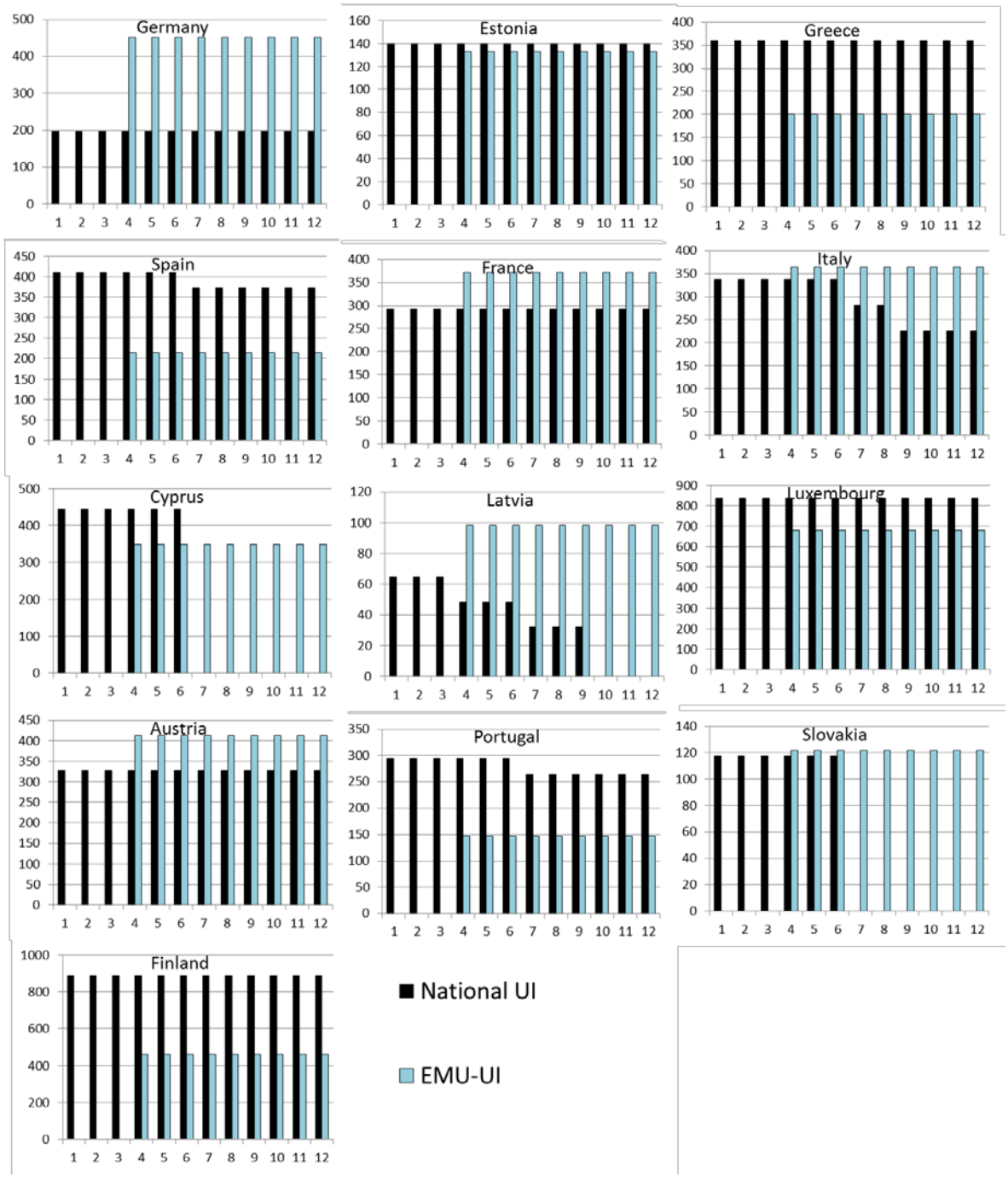
Figure 1: Entitlement to Unemployment Insurance benefits by months in EUROS – typical case median earnings



Source: own calculations using EUROMOD version G2.14

Figure 2 shows how the picture differs for a person in the bottom earnings quintile, again with full contributions and maximum duration of benefit receipt. The EMU-UI entitlement is higher than the national in Germany, France, Italy, Latvia, Austria and Slovakia. In all other countries the national entitlement is higher, which is mainly related to national floors being higher than the EMU-UI floor (Estonia, Austria, Luxembourg and Finland), or to the flat rate amount higher than the EMU-UI floor in Greece.

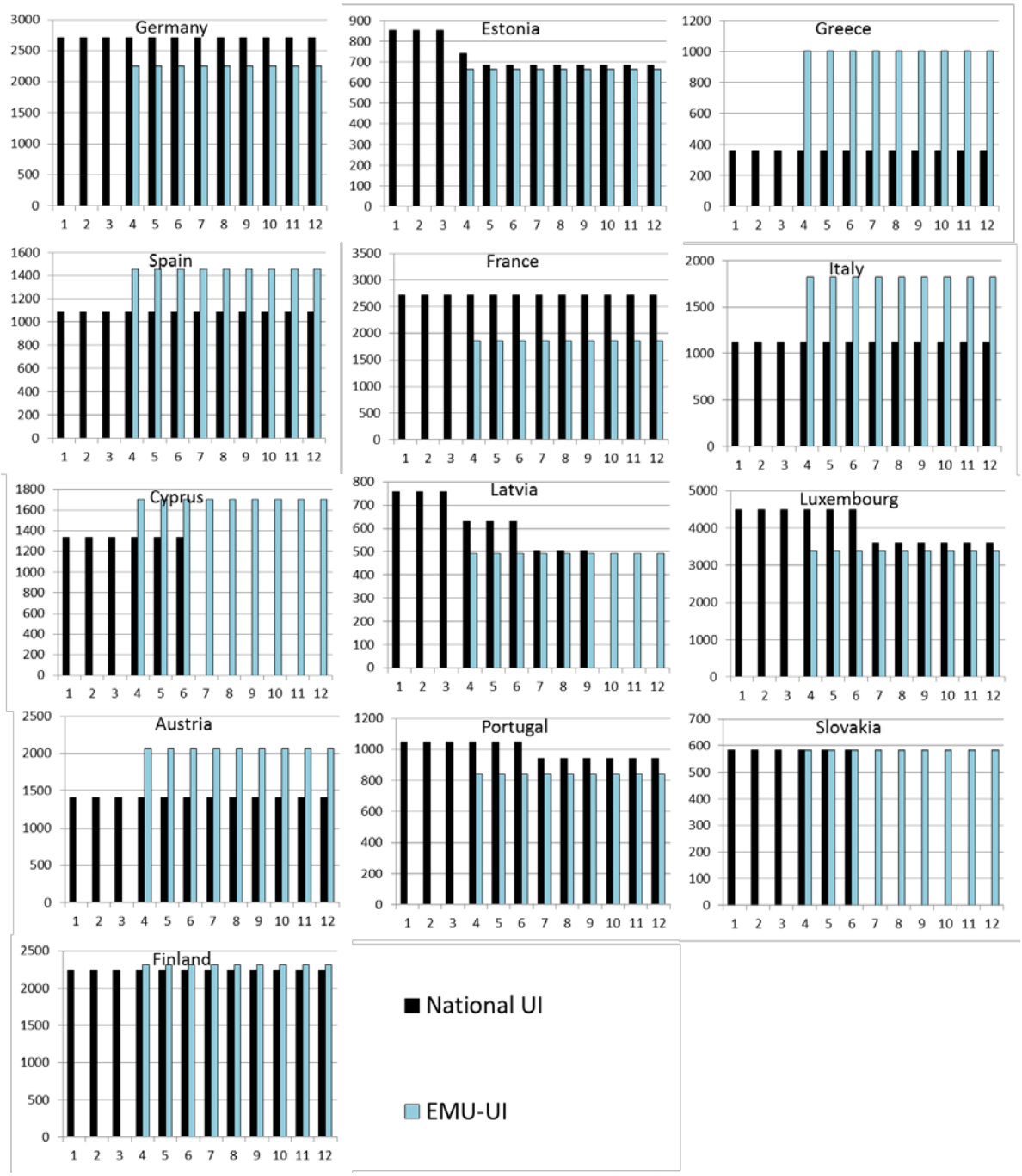
Figure 2: Entitlement to Unemployment Insurance benefits by months in EUROS – typical case bottom quintile earnings



Source: own calculations using EUROMOD version G2.14

Figure 3 shows the situation for a person with earnings at the top quintile in each country. The EMU-UI performs better than the national benefit in Greece (because the national benefit is flat rate), Italy, Spain, Austria, Finland and Cyprus. The effect is particularly large in Greece (because of the flat rate in the national system), Italy and Cyprus. Ceilings that operate in the national systems, together with rates lower than 50% of earnings set as payment for the EMU-UI scheme are the explanation for this effect.

Figure 3: Entitlement to Unemployment Insurance benefits by months in EUROS – typical case top quintile earnings



Source: own calculations using EUROMOD version G2.14

These illustrative calculations for stylised individuals provide some indication of the potential effect of the EMU-UI scheme. The common scheme would have, for instance, an important effect in Greece as the national insurance is flat rate and in Latvia, Cyprus and Slovakia, as the EMU-UI would extend duration of the insurance. The main results of this paper (see section 4) analyse to which extent actual populations potentially affected by a negative shock in employment would benefit from the introduction of the EMU-UI, in each month out of work during the first year of unemployment.

3. Methods and data

In this paper we provide some insights on the extent to which the introduction of an EMU-UI scheme would affect the resilience of household income to unemployment shocks in thirteen EMU countries. The analysis makes use of 2008 data from the European Statistics on Income and Living Conditions (EU-SILC) with the exception of France, where 2010 SILC is used.

Our methodology involves three main steps. First, we select in each country a subsample of people which is assumed to experience a transition from work into unemployment following a 2% and a 6% negative shock to employment rates.[5] Second, we make use of EUROMOD, the EU wide tax-benefit microsimulation model, to calculate their disposable income both before and after the transitions into unemployment, distinguishing between the scenarios with and without the EMU-UI. We use the 2012 tax-benefit system, including 2012 national unemployment insurance schemes as the starting point for our analysis. Incomes that are not simulated are updated to year 2012.[6] Third, we analyse the impact of the introduction of the EMU-UI scheme through a number of indicators related to household income resilience, coverage of the national and EMU-UI schemes and poverty rates. The reminder of the section describes in details these steps and introduces the indicators used in the analysis.

Selection of the new unemployed

The impact of the introduction of an EMU-UI on the resilience of household disposable income is evaluated by simulating two different negative shocks to country specific employment rates. First, we consider a "regular" 2% decrease in employment. Then, a "large or exceptional" 6% negative shock in employment is simulated. The size of these hypothetical shocks is based on information about changes in national employment levels in recessions over the recent decades in Europe.

We select our sample of "new unemployed", i.e. individuals making the transition into unemployment when the shocks occur, on the basis of their predicted probability of having experienced unemployment during the income reference period. Previous studies have shown that past unemployment experiences significantly affect future employability (e.g. Arulampalam et al 2000; Stewart 2007). Likely causes of unemployment scarring are negative signalling associated with unemployment, human capital depreciation, job rationing and last-in first-out policies (Kroft et al. 2013; Crépon et al 2013; Michaillat 2012, Eliason and Storrie 2004).

Using the number of months spent in unemployment during the income reference period as dependent variable, we perform a Poisson regression controlling for a number of individual and household characteristics. In particular, we assume that the observed number of months spent in unemployment (y) follows a Poisson distribution whose expectation (μ) is a modelled as a log-linear function of individual covariates. Following Rabe-Hesketh and Skrondal (2012), equations (1) and (2) formally describe the model.

$$\Pr(y;\mu) = \frac{\exp(-\mu)\mu^{y}}{y!} \qquad (1)$$

$$\ln(\mu_i) = v_i = \beta_1 + \beta_2 x_{2i} + \ldots + \beta_{ki} \qquad (2)$$

Individuals are then sorted according to the predicted probability of experiencing at least 1 month in unemployment during the income reference period, and the 2% and 6% with the highest unemployment risk are selected to simulate their transition into unemployment.

[5] Employment rates are computed as the ratio between working and active individuals.

[6] See Jara and Leventi (2014) for more details

The estimation sample is formed by individuals in work at the interview day, with positive earnings from employment and/or self-employment during the income reference period, aged between 15 and 64, not in education or part of the armed forces.[7] Our regressors include gender, age, education, earning quintiles, work experience, marital status, housing tenure, household composition, part-time work, industry and occupation.

Simulating transitions into unemployment and the common EMU-UI using EUROMOD

Our analysis makes use of EUROMOD, the EU tax-benefit microsimulation model, to calculate entitlement to unemployment insurance benefits as well as other benefits and personal taxes, and hence household disposable income under the different shock scenarios.[8] We use the 2012 tax-benefit system, including 2012 national unemployment insurance schemes as the starting point for our analysis.

The potential effect of the EMU-UI under the different shock scenarios is simulated in the following way. First, we calculate for each of those selected to make the transition into unemployment (the "new unemployed") the household disposable income before any transition into unemployment takes place. We will refer to this as the baseline household disposable income. Then, we set to zero the earnings of each "new unemployed" in the household, and simulate benefit entitlements (including EMU-UI), tax liabilities and ultimately their household disposable income under unemployment.[9] Additionally, as in Jara and Sutherland (2014), we also simulate transitions into unemployment for all people in work. Throughout our analysis, the results for the 2% and 6% shocks are compared to those of the overall working population to provide an idea of how the characteristics of those selected as "new unemployed" can influence the results.

As discussed in Jara and Sutherland (2014), simulating transitions to unemployment is particularly practical in order to simulate the policy rules determining entitlement to unemployment benefits. Necessary information to simulate unemployment benefits is usually not available in the data for those currently unemployed (e.g. previous earnings, months in work before unemployment, etc.), while information prior transition to unemployment can be used for entitlement in our simulations. As in Jara and Sutherland (2014), two important assumptions are made for the calculation of unemployment benefits for the new unemployed. First, unemployment duration is set to be equal to months in work during the year before the simulated transition. Second, the number of months worked in the qualifying period is also assumed to be equal to number of months in work before the transition.[10]

The national UI and the EMU-UI are simulated as separate policies in EUROMOD, in order to evaluate potential coverage of the EMU-UI independently of that of the

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[7] Our estimation sample also excludes those individuals experiencing inactivity as main activity in one of the months of the income reference period. This selection helps the use of the predicted probabilities as a proxy for future unemployment risk, as a small predicted number of months spent into unemployment imply a higher number of months spent in employment rather than inactivity.

[8] The results presented in this paper use EUROMOD version G2.14. Due to the continuous process of updating EUROMOD, it should be noted that the simulation of unemployment benefit in some countries may have been revised in later versions of the model. See Sutherland and Figari (2013) for further information about EUROMOD.

[9] Other relevant labour market variables entering the simulations are adjusted to reflect the corresponding change in their labour market situation e.g. labour market status set to unemployment, hours of work set to zero, etc.

[10] Number of months in work before the transition is recorded over the last 12 months. For this reason, each country's specific qualifying period is translated into a proportion of 12 months (see Jara and Sutherland, 2014). For instance, in Germany contribution is evaluated over a period of 24 months out of which, the person needs to have contributed at least 12 months. In this case, under our simulations, a person in Germany would be considered eligible if she has worked 6 out of the 12 months in the previous year.

national schemes and to be able to compare the benefit amounts in each month of the year. As mentioned in the description of the EMU-UI, the scheme is meant to provide a basic insurance provision, with national systems topping-up when the amount exceeds the EMU-UI amount in any month of unemployment. In practice, the simulated EMU-UI is compared each month to the national benefit and the analysis focuses on any additional protection provided by the EMU-UI (that is the additional amount exceeding the national benefit).

The following section provides a description of the indicators used to evaluate the impact of the introduction of the EMU-UI on the household disposable incomes of the "new unemployed".

Assessing the effect of the EMU-UI

Our analysis focuses on the additional effect of the EMU-UI in a number of dimensions. First, within our hypothetical framework, we provide some insight on the potential of the EMU-UI to extend coverage of UI among the new unemployed compared to the national systems. Different ways of measuring UI coverage exist and the levels, and to some extent country rankings, depend on the data and methods used (European Commission, 2013). In our analysis, we use the term "potential coverage" to refer to the proportion of the new unemployed who would be entitled to any UI in the first 12 months of unemployment, in order to avoid confusion with existing indicators.

The second dimension considered, refers to the proportion of new unemployed who would benefit from the EMU-UI, i.e. would have higher benefit entitlement as a result of the introduction of the EMU-UI. For completeness, we further distinguishing between those who would receive higher payments from the EMU-UI, while receiving the national provision and those who would do not qualify to the national benefit, but are entitled to the EMU-UI.

Third, in order to take into account the interactions of UI payments with the rest of the tax-benefit system in each country, we compare the effect of the EMU-UI on Net Replacement Rates: the ratio of household disposable income before the unemployment to that after unemployment. The net replacement rate faced by person i in household h is computed as:

$$NRR_{ih}{}^{S} = \frac{Y_{ih}^{S}}{Y_{h}^{B}}$$

where $\mathrm{Y}_{\mathrm{ih}}^{\mathrm{S}}\ (\mathrm{S} = \mathrm{N}, \mathrm{EU})$ represents the disposable income of household h when worker i enters unemployment and only the national unemployment benefit scheme is in place ($\mathrm{Y}_{\mathrm{ih}}^{\mathrm{N}}$) or also the EMU-UI is in place ($\mathrm{Y}_{\mathrm{ih}}^{\mathrm{EU}}$); $\mathrm{Y}_{\mathrm{h}}^{\mathrm{B}}$ represents the baseline household disposable income, i.e. the disposable income before transitions into unemployment are simulated. The Net Replacement Rate indicates the share of the pre-unemployment household disposable income which is still available after unemployment occurs. Increases in government transfers and reductions in taxation, as well as non-employment related incomes and incomes from other household members, are expected to positively affect Net Replacement Rates. For each "new unemployed", a Net Replacement Rates equal to 1 implies perfect equality in household disposable income before and after transition into unemployment.

Although rare, a small number of cases have negative household disposable income either in the baseline and/or after the transition into unemployment. These are usually due to high reported amounts of inter-household transfers or high amounts of property taxation which make the disposable income negative once earnings are set to zero. Due to the difficulty in interpreting NRRs when either the numerator or the denominator is negative, for simplicity, we exclude these cases from the analysis.

The potential of the EMU-UI to act as an automatic stabiliser in case of economic shocks is of particular interest in our analysis. In the next section we provide a picture of national automatic stabilisers for the Member States of the EMU considered, and the provide some insights on the extent to which the EMU-UI would add to the income stabilisation that occurs as a result of the operation of national tax-benefit systems.

We use the "income stabilisation coefficient" as defined in Bargain et al. (2013; equation 12):

$$\tau = 1 - \frac{\sum_i (Y_{ih}^B - Y_{ih}^S)}{\sum_i (X_{ih}^B - X_{ih}^S)} ,$$

where X_{ih}^B and X_{ih}^S stand for household *h*'s market income before and after transition to unemployment, respectively. As such, the income stabilisation coefficient represents the proportion of gross income from work lost on becoming unemployed, that is retained in the form of reduced taxes and increased benefits (i.e. unemployment insurance)

Two final dimensions are also considered in our analysis. On the one hand, the potential protection of the EMU-UI to prevent the "new unemployed" from falling into poverty and on the other hand the average additional budgetary cost of the EMU-UI in each country.[11]

4. Results

This section presents results of the potential effect of the EMU-UI on the different indicators defined in the previous section, under some specific hypothetical shocks. The effect of the EMU-UI on each particular indicator for individuals with the highest unemployment risk under the 2% and 6% shock scenarios is discussed with respect to that of all people in work. This contributes to providing an idea of how the impact of entering unemployment and the potential effect of the EMU-UI vary with respect to the characteristics of the individuals considered.

Estimation results and characteristics of new unemployed

Table A3 reports the estimated coefficients from the Poisson regression, where the dependent variable is the number of months spent in unemployment during the income reference period. We use the predicted probability of being in unemployment at least one month during the income reference period to identify those more likely to enter unemployment because of negative shocks to employment. Coefficients are to be interpreted as the expected changes in the logarithm of number of months in unemployment associated to a one unit increase of the independent variable of interest, holding everything else constant.

With the exception of Italy and Portugal, and holding everything else constant, being a female is associated with a reduction of (the logarithm of) the expected number of months spent in unemployment. The effect of age is heterogeneous across country. On the one hand, older workers haves higher expected numbers of months in unemployment than younger groups in Germany (if compared to the 15-24 band), Estonia, Luxembourg and Latvia. In most of the other countries being an older worker is however associated with a reduction in the expected number of months spent in unemployment during the income reference period. An exception to this is France, where the coefficients on age are not statistically significant. The coefficients on education bands are negative in most of the countries analysed, meaning that holding everything else constant those with tertiary education experience more months in unemployment than lower educated workers. Although counterintuitive, the result is explained by the inclusion of variables such as earning quintile, occupation and industry in the list of explanatory variables.

Earnings quintiles are the most important predictors of unemployment propensity. In all countries workers from the bottom earning quintile are significantly more likely to experience a higher number of months in unemployment than all the other earnings group. Being a part-time worker is associated with a lower predicted number of months in unemployment than a full-time worker. However, part time workers are

[11] Note that here we focus on the average additional budgetary cost, while the total cost of the EMU-UI is larger and therefore the cross-country stabilisation would be larger as well.

also more likely to be part of the lower earning quintile, as quintiles are computed on the basis of the yearly earnings.

In all countries an extra year of work experience is expected to reduce the predicted number of months in unemployment in most of the analysed countries. The results suggest that work experience reduces unemployment risk. With the exception of Cyprus and Greece, being married is predicted to reduce the expected number of months spent in unemployment. The association is not statistically significant for Italy and Luxembourg. The role played by number of children of different age bands is extremely heterogeneous across countries, while in most of the countries living in households with multiple earners and being a home-owner are each associated with a reduction in the predicted number of months spent in unemployment. The regression also includes controls for industry and occupation of the current job. Although not reported for brevity, the coefficients on some of them are strongly associated with unemployment propensity, and full tables are available from the authors on request.

On the basis of these estimates, we sort individuals by their predicted probability of experiencing at least one month in unemployment during the income reference period, and we move them into unemployment until we reach a number of "new unemployed" consistent with a 2% and a 6% shock to employment rates. Table A4 and A5 report the characteristics of the "new unemployed" following the two shocks. With respect to the 2% shock, it should be noted that in most of the countries we select male employees from the lowest earning quintile.

Among the factors which are likely to influence eligibility for UI benefits and replacement rates, it should be noted that under the 2% shock the share of new unemployed who were main earners before the transition varies considerably across countries, with Germany at one extreme (72% are main earners) and Cyprus at the other extreme (16% are main earners). Similarly, the proportion of part-timers among the "new unemployed" shows a high degree of heterogeneity, with France at one extreme (30.5% are part-timers), and Slovakia at the other extreme. The number of months worked during the income reference period by the "new unemployed" also varies considerably, with Luxembourg at one extreme (87% have worked between 10 and 12 months) and France at the other extreme (29% have worked between 1 and 3 months during the income reference period). Overall, it emerges that our selection process identifies as new unemployed individuals with widely differing characteristics across countries, with a major common characteristics of being low earners, mostly secondary earners in the household, and with a relatively high number of months spent in work during the income reference period.

Looking at the characteristics of new unemployed following the 6% shock, it should be noted that the proportion of earners from higher quintiles rises, as well as the proportion of new unemployed who worked from 10 to 12 months during the income reference period. In the remainder of the section we analyse how the introduction of the EMU-UI will influences the financial circumstances of the households of the "new unemployed" under both shocks.

It is important to remark that our shocks have a hypothetical nature and do not aim at replicating changes in unemployment which occurred at specific point times, for instance during the Great Recession. In order to highlight this point, in table A6 we report some of the characteristics of those in short-term unemployment in 2009. The table contains information on gender and age of those unemployed for less than 12 months during 2009.

Comparing the characteristics of the new unemployed in our analysis after the 2% shock, reported in table A4, with those of the short-term unemployed in 2009 several differences emerge. For instance, in Spain the proportion of women among the short-term unemployed in 2009 is substantially smaller than the one following our estimates, while the opposite is true for France. Differences emerge also if we compare the age profile of the 2009 short-term unemployed with those of our new unemployed. The new unemployed in our estimates are in general more concentrated

in the 25-49 age group, the proportions of both younger and older people is higher among the 2009 short-term unemployed.

The likely causes underlying such discrepancies are mainly related to the hypothetical nature of the simulated shocks. First, the extent to which employment rates suffered during the Great Recession has varied significantly across European countries, limiting the extent to which our hypothetical reduction of employment rates can be compared with changes in labour market conditions experienced by EU countries. Second, in our exercise, the individuals to be selected for transitions into unemployment are only those who have been either employed or unemployed during the income reference period, therefore, those with inactivity spells are disregarded. This might contribute to explain differences in the age distribution. For instance, we might not capture those who transit directly from education to unemployment. The analysis does not aim at correcting the main differences in the characteristics of the new unemployed compared to what is generally observed and the results should thus be interpreted as reflecting some hypothetical shocks.

Potential coverage

Figure 4 shows the percentage of those with the highest unemployment risk under the 2% and 6% shocks who would be eligible to receive national UI at some point in the year after becoming unemployed. It also shows the additional percentage that would be eligible to receive benefit from the EMU-UI while not qualifying for national benefit during the year. As was previously mentioned, we define "potential coverage" as the proportion of the new unemployed who would be entitled to any UI in the first 12 months of unemployment.

As such, our "potential coverage" measures are not fully comparable to other standard measures of coverage discussed in the literature, for several reasons. First, standard coverage rates calculated using information on the existing unemployed in surveys and administrative sources can include the long-term unemployed who may have exhausted their eligibility and therefore figures would be lower than our measures of "potential coverage". Second, even if only the short-term unemployed are considered in the calculation of coverage rates using surveys, there is usually no information about individuals' work history to determine whether they are eligible or not for unemployment benefit. Information about unemployment benefit and unemployment assistance receipt by duration of unemployment is available from Eurostat (based on self-declaration).[12] While these estimates have the advantage of allowing us to consider unemployment receipt for short-term duration (e.g. less than 12 months in unemployment), they are not necessarily comparable with our measures of "potential coverage". Our measures of "potential coverage" do not necessarily refer to actual unemployment benefit receipt, as those provided by Eurostat, but whether individuals fulfil the national eligibility conditions based on their previous work history. Furthermore, several reasons can explain differences between the sources. There might be reporting problems in the data in the sense that some individuals might be eligible for unemployment benefits (from their work history) but appear as non-registered or not receiving unemployment benefit in the survey (such as linked to non-take-up). Furthermore, our calculations of "potential coverage" will be necessarily affected as not all the information needed to simulate eligibility is available in the data. In particular, the assessment of eligibility conditions for the new unemployed under the simulations inevitably relies on some of assumptions, due to the weakness of the information available in the underlying data (such as regarding some details of work history over the latest year and beyond). For instance, administrative procedures needed to register as unemployed in order to receive the benefit cannot be simulated in our model. In this sense, we expect our measures of "potential coverage" to be higher than Eurostat measures of effective unemployment benefit receipt. Third, the characteristics of the new unemployed (e.g. their number of months in work before

[12] See Eurostat: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_ugadra&lang=en

entering unemployment) determine whether they would be entitled to any UI or not. The extent to which the characteristics of the new unemployed under our hypothetical shock scenarios differ from those of observed unemployed during the recent years also contributes to explaining differences between our "potential coverage" rates and actual levels of coverage. For this reason, in addition to results for the 2% and 6% shocks we refer to results of "potential coverage" calculated for the whole population, which are presented in the appendix. It should be noted that despite the caveats of our methodology, simulating transitions to unemployment and using information on previous employment to assess entitlement to unemployment benefits is the only method that allows simulating the effect that changes on eligibility conditions would have on "potential coverage". Any other method to assess effective coverage would require the imposition of additional assumptions about the shares of people that would be effectively covered.

According to our calculations, potential coverage rates under the 2% shock for the existing national UI benefits range from above 40% in Slovakia to more than 90% in Spain. As we would expect, potential coverage increases in all countries (except Italy, Spain, and Cyprus) under the 6% shock as the number of new unemployed fulfilling the contribution condition increases with the size of the shock (see months in work of the "new unemployed" in Tables A4 and A5 in the appendix). Under the 6% shock there is still substantial variation in potential coverage across countries, ranging from over 50% in Slovakia and more than 90% in France.

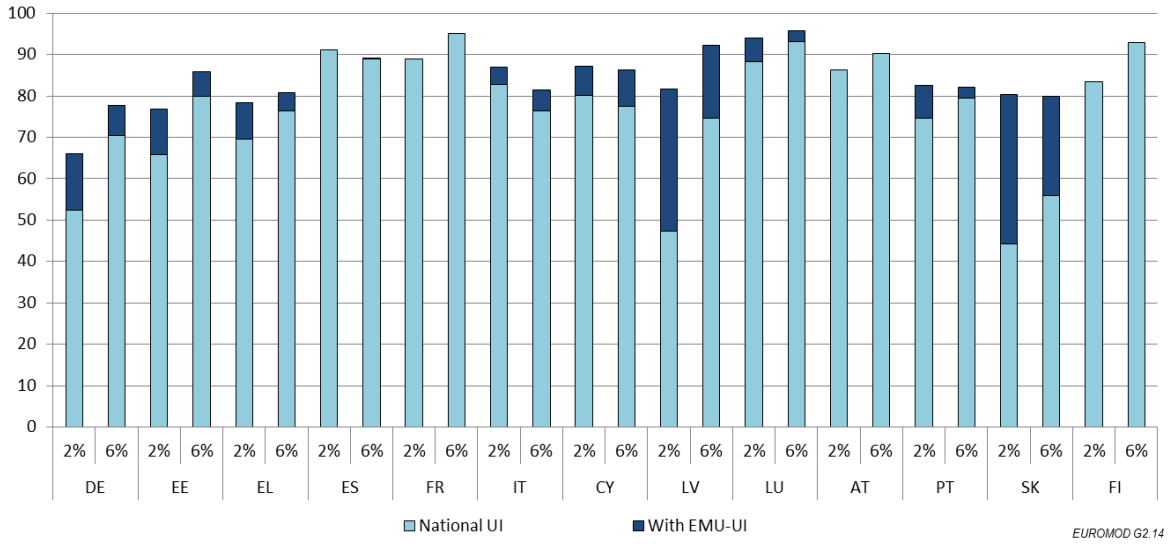
Our measures of potential coverage are considerably higher than the measures of unemployment benefit receipt provided by Eurostat, where the proportion of individuals with less than 12 months in unemployment receiving unemployment benefit is the highest in Germany (around 70% on average in 2009) and the lowest in Italy (around 10% on average in 2009). As previously mentioned, these differences are related to a number of factors including in particular the following. First, our measure of potential coverage does not refer to actual unemployment benefit receipt, as those from Eurostat, but to eligibility in terms of previous work history and assumptions are required to assess such eligibility in the simulations. Second, the characteristics of our new unemployed do not match those of the unemployed in the recent years, which will necessarily result in differences in terms of eligibility.

It can be useful to compare the potential coverage under these specific shocks with the potential coverage evaluated for all those currently in work in each country, presented in Figure A1 in the appendix. Note for instance that potential coverage for all people currently in work is substantially higher than under the two shocks in Germany, Estonia, Latvia and Slovakia when compared to the 2% shock. This is in general the pattern that we would expect, as among the individuals with high unemployment risk we find those who are not working the full year and would therefore not necessarily satisfy the contribution conditions for eligibility. Some exceptions are Greece, Italy, Austria Luxembourg and Cyprus, where potential coverage under both shocks is very similar to that of the whole currently working population. These are countries characterised by low shares of individuals working only few months in the year (1 to 3 months, see Table A2), as a result fewer people with such characteristics are selected following the estimation of unemployment risk (see Tables A4 and A5).

Estimations under these hypothetical shocks indicate that potential coverage would increase with the EMU-UI to different extents across countries. It would increase substantially under both shocks in Latvia (35% under the 2% shock and 17% under the 6% shock) and Slovakia (around 35% under the 2% shock and 25% under the 6% shock), mainly due to the less stringent contribution conditions of the EMU-UI compared to the national systems. The smallest extensions to potential coverage would be in France, Spain and Finland, the reason being that eligibility requirements for national benefits in terms of contribution conditions are less stringent (France and Spain) or similar (Finland) to those of EMU-UI. Austria also presents a low potential coverage, which is mainly related to the low percentage of people not fulfilling the contributions conditions of the national scheme in our simulations (as most people in

the data are in work for 7 months or more, see Table A2). The pattern of the effect of the EMU-UI in terms of potential coverage for the specific shocks is similar when we look at results for all those currently in work (see Figure A1 in the appendix).

Figure 4: Potential coverage: percentage of new unemployed under a 2% and 6% hypothetical shock in employment potentially covered by unemployment insurance benefit in case of an unemployment spell



Source: own calculations using EUROMOD version G2.14

Beneficiaries

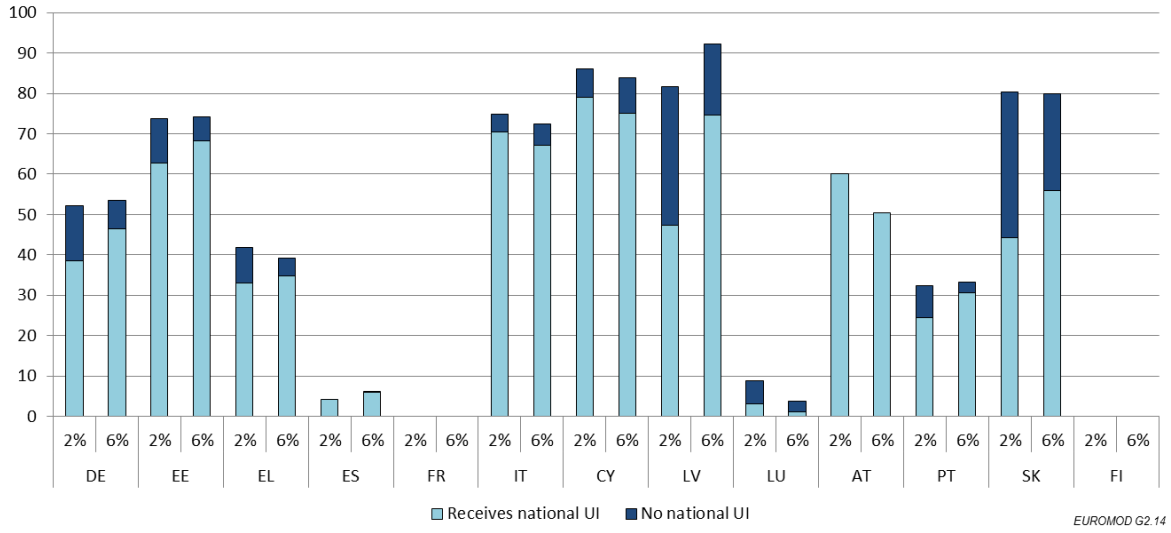
Figure 5 shows the proportion of those with the highest unemployment risk who would receive an additional payment from the EMU scheme at some point in the year following unemployment, under both the 2% and the 6% hypothetical shocks. The figure distinguishes between those who would benefit from the EMU-UI while already receiving the national provision (providing an indication of the extension of the EMU-UI in terms of benefit amount) and those, who would be newly covered by the EMU-UI scheme (providing an indication of the extension of the EMU-UI in terms of potential coverage).

The proportion of beneficiaries under both hypothetical shocks varies greatly across countries. In Spain, France and Finland and Luxembourg less than 10% of the potentially new unemployed would receive some extra benefit at some point in the year from the EMU-UI, this is mainly due to the fact that the national schemes in these countries have similar characteristics in terms of potential coverage and benefit amounts relative to the EMU-UI. The share of the potentially new unemployed who would receive an additional provision at some point in the year from the EMU-UI while also receiving the national benefit at some point is particularly high, under both shocks, in Cyprus, due to the extension in terms of benefit duration from the EMU-UI; in Italy and Estonia given that the national benefit amount decreases over the first 12 months; and in Austria because the national amount is defined in terms of net earnings. In terms of beneficiaries who do not receive the national benefit during the year following unemployment, the shares are the highest in Latvia and Slovakia, reflecting the effect of the EMU-UI in terms of increase of potential coverage, as observed in the previous section.

Figure A2 in the appendix presents, for all people currently in work, estimates of the percentage of those who would benefit from an additional payment from the EMU-UI. The overall pattern is roughly similar to that observed in the analysis of individuals with the highest unemployment risk. In particular, the lowest shares of beneficiaries are found in France, Spain, Finland and Luxembourg, and the highest in Estonia, Italy, Latvia, Cyprus, Slovakia and Austria. The main differences in terms of shares of

beneficiaries compared to the 2% and 6% shocks are observed in Germany, where the proportion of beneficiaries among all currently in work is around 70%; and in Greece, where the proportion of beneficiaries among all currently in work is lower than 60%. Table A6 in the appendix provides additional information about beneficiaries by characteristics of all people currently in work.

Figure 5: Beneficiaries: percentage of new unemployed under a 2% and 6% hypothetical shock in employment who would receive additional benefit through the EMU-UI in case of an unemployment spell



Note: as indicated by the different shading, some of the people potentially receiving an additional EMU provision would also receive some national provision, some not. Source: own calculations using EUROMOD version G2.14

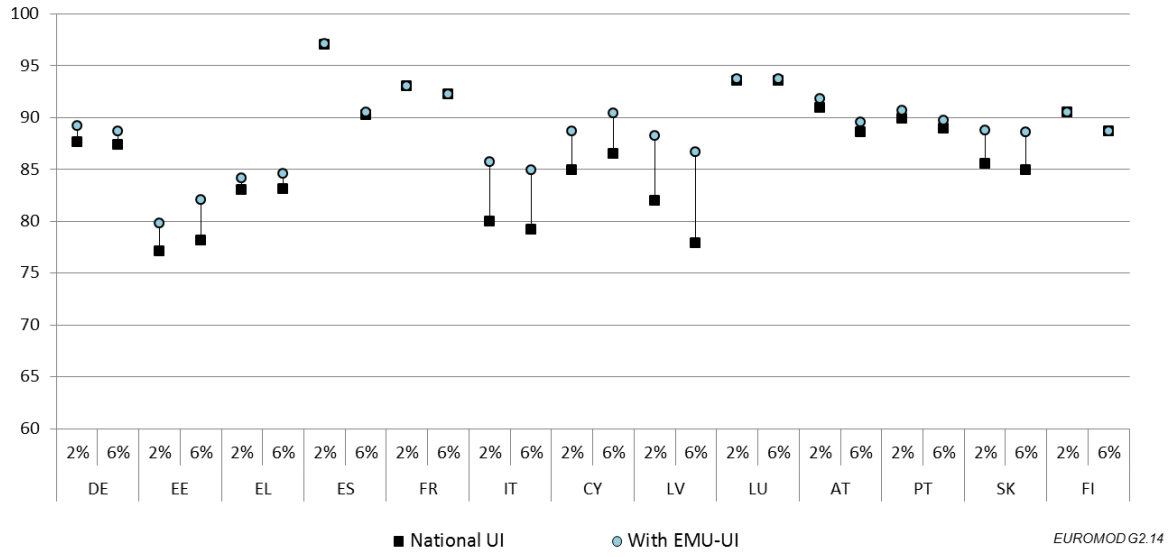
Net replacement rates

Figure 6 shows the additional protection of the EMU-UI to household disposable incomes following unemployment, under hypothetical shocks. It compares net replacement rates under the existing national tax-benefit systems and with the addition of the EMU-UI, assuming that the common scheme is treated in the same way as the national provision in the rest of the tax-benefit system.

The first thing to remark is that estimates of the mean net replacement rates for unemployment, without the additional EMU-UI, are in general extremely high for individuals with high unemployment risk under the 2% and 6% hypothetical shocks. They range from around 80% in Italy and Estonia to over 95% in Spain. In contrast, Figure A3 in the appendix shows that estimates of the mean net replacement rates for unemployment for all those currently in work are much lower in all countries, ranging from 66% in Greece to 87% in Luxembourg. Two main factors can explain the high net replacement rates for those selected for the 2 and 6% hypothetical shocks. First, among those with the highest unemployment risk we observe mainly individuals in the bottom quintile of the earnings distribution (see Tables A4 and A5 in the appendix). Net replacement rates for this population group could be particularly high, as they might not only be eligible for national unemployment insurance but also to other types of social assistance. The existence of minimum provisions for national unemployment insurance schemes could contribute to the high values of net replacement rates. Second, among those selected under the 2% and 6% hypothetical shocks we observe an important proportion of secondary earners (see Tables A4 and A5 in the appendix). In case the contribution of secondary earners to household income is low, net replacement rates will be high as the loss of earnings due to unemployment will only translate into a small reduction of household disposable income. Table A8 in the appendix confirms that on average net replacement rates of secondary earners are significantly higher than those of main earners, when the overall working population is considered.

The EMU-UI would increase mean net replacement rates, under both hypothetical shocks in all countries, although the effect is rather small. The exceptions are Italy and Latvia where mean net replacement rates increase by around 5 percentage points, and to a lesser extent Cyprus and Slovakia with an increase of around 3 to 4 percentage points. The potential effect of the EMU-UI would be stronger when mean net replacement rates for all people currently in work are considered (see Figure A3 in the appendix). Net replacement rates increase by around 10 percentage points in Slovakia, Cyprus and Latvia; by more than 5 percentage points in Greece and Italy; and between 4 to 5 percentage points in Germany, Estonia and Austria. Table A8 in the appendix provides additional information about the effect of EMU-UI on net replacement rates by characteristics of all people in work.

Figure 6: Mean net replacement rates: household disposable income post unemployment as percentage of household disposable income pre unemployment, without and with EMU-UI, for new unemployed under 2% and 6% hypothetical shock in employment in case of an unemployment spell



Source: own calculations using EUROMOD version G2.14

Risk of poverty

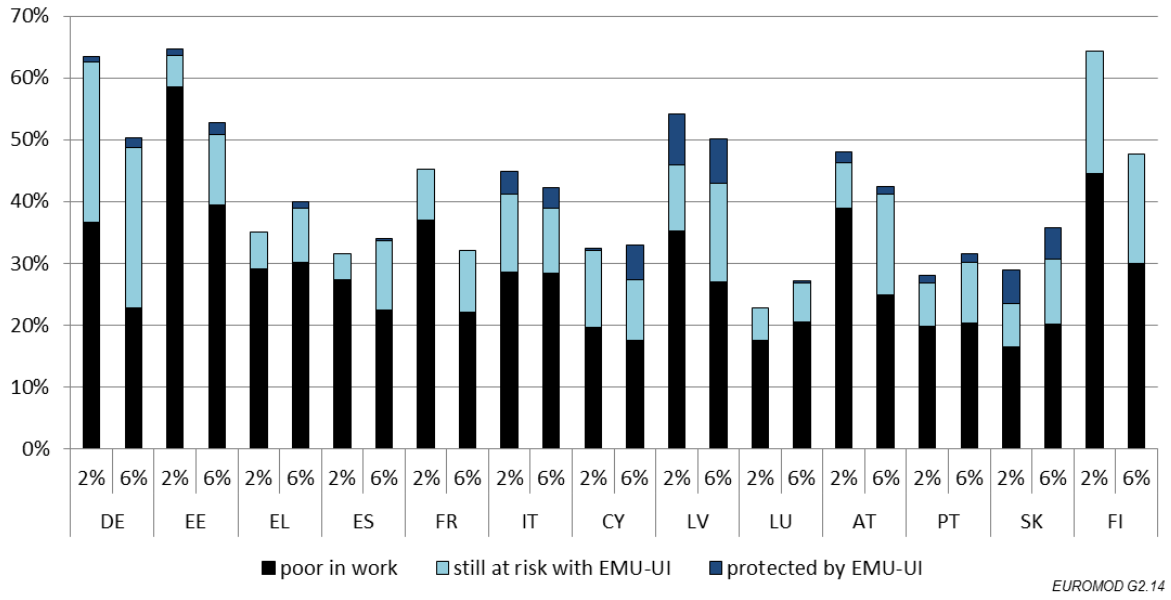
This section provides an evaluation of the potential of the EMU-UI to protect those with high unemployment risk from falling into poverty in case of unemployment. We consider as poverty threshold 60% of median equivalised disposable income in the baseline before unemployment. For both hypothetical shock scenarios, Figure 7 shows the proportion of those with the highest unemployment risk who have incomes below the poverty threshold while still in work (black part of the bars), those who would fall into poverty even if the EMU-UI was in place (light blue part of the bars), and those who would be protected from falling into poverty as a result of the EMU-UI (dark blue part of the bars).

The proportion of those poor while in work is very high (above 15%) in all countries under the 2% hypothetical shock, and particularly so in Estonia, and Finland (above 40%). This is mainly explained by the fact that those with the highest unemployment risk belong to the lowest quintiles of the earnings distribution (see Tables A4 and A5). In most countries, the share of those poor while in work decreases under the 6% hypothetical shock (as more people from higher earnings quintiles are selected) but it remains higher than that when all people currently in work are considered, as shown in Figure A4 in the appendix.

In all countries, the EMU-UI would provide additional protection against poverty for those with the highest unemployment risk under both shocks but its effect would be small in particular in Germany, Spain, France, Finland and Luxembourg. The effect

would be the largest in Latvia (7 percentage points), Slovakia (5 percentage points) and Italy (3 percentage points) under both hypothetical shocks, and in Cyprus under the 6% shock (5 percentage points reduction in risk of poverty). The positive potential effect of the EMU-UI to protect individuals from falling into poverty is larger when assessed over all those currently in work in case of unemployment, as shown in Figure A4 in the appendix. Only in Spain, France, Finland and Portugal the additional effect is smaller than 3 percentage points. The EMU-UI has a particularly positive effect in Cyprus, Latvia and Slovakia, where risk of poverty is reduced by around 12 to 13 percentage points.

Figure 7: At poverty risk in unemployment (for people with high unemployment risk, under a 2% and 6% hypothetical decrease in employment)



Notes: The poverty threshold is 60% median equivalised household disposable income in the baseline before unemployment. Source: own calculations using EUROMOD version G2.14

Income stabilisation

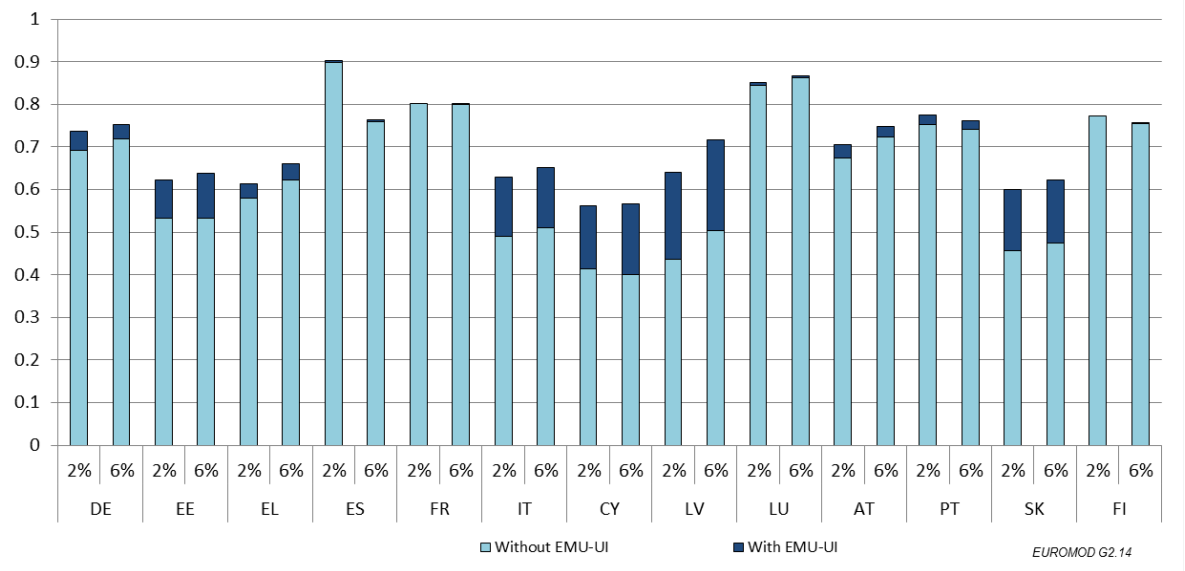
Figure 12 presents the within-country income stabilisation coefficient due to the national tax and benefit system as a whole (light blue part of the bars), as well as the additional effect of the EMU-UI (dark blue part of the bars), for those with the highest unemployment risk in the 2% and 6% hypothetical shock scenarios. In general, income stabilisation increases with the size of the shock, except in Spain and Portugal where it decreases and in Cyprus, where it remains relatively stable. Income stabilisation ranges between 41% in Cyprus and 90% in Spain under the 2% hypothetical shock; and between 40% in Cyprus and 88% in Luxembourg under the 6% hypothetical shock.

In general income stabilisation coefficients under the national systems for those with the highest unemployment risk differ significantly from those calculated for the overall working population, as shown in Figure A5 in the appendix. Countries where the difference is significant are Germany where income stabilisation is 74% for all people in work but it amounts to close to 70% under the 2% and 6% shocks; and Greece, where for the overall working population income stabilisation is 48%, while it amounts

to around 60% under both shocks.[13] The reasons behind these differences are related to the characteristics of those with the highest unemployment risk, selected for the hypothetical shock scenarios.

Figure 8 shows that the EMU-UI has the effect of increasing the degree of income stabilisation. The largest additional stabilisation under both hypothetical shock scenarios is in Latvia (around 20 percentage points), Italy, Cyprus and Slovakia (between 13 to 15 percentage points). The increase in income stabilisation due to the EMU-UI would be the largest for the same countries when the overall working population is considered (see Figure A5 in the appendix). In that case, there would be also sizeable effects in Greece (10 percentage points) and Estonia (around 8 percentage points). Table A9 in the appendix presents income stabilisation coefficients and the additional effect of the EMU-UI by characteristics of all people currently in work. Remark in particular that income stabilisation varies substantially among different earnings deciles and for individuals in different categories of months in employment. This is in line with the observed differences when income stabilisation results for those with the highest unemployment risk are compared to those of all people in work.

Figure 8: Income stabilisation: additional effect of EMU-UI for people with high unemployment risk, under a 2% and 6% hypothetical decrease in employment



Source: own calculations using EUROMOD version G2.14

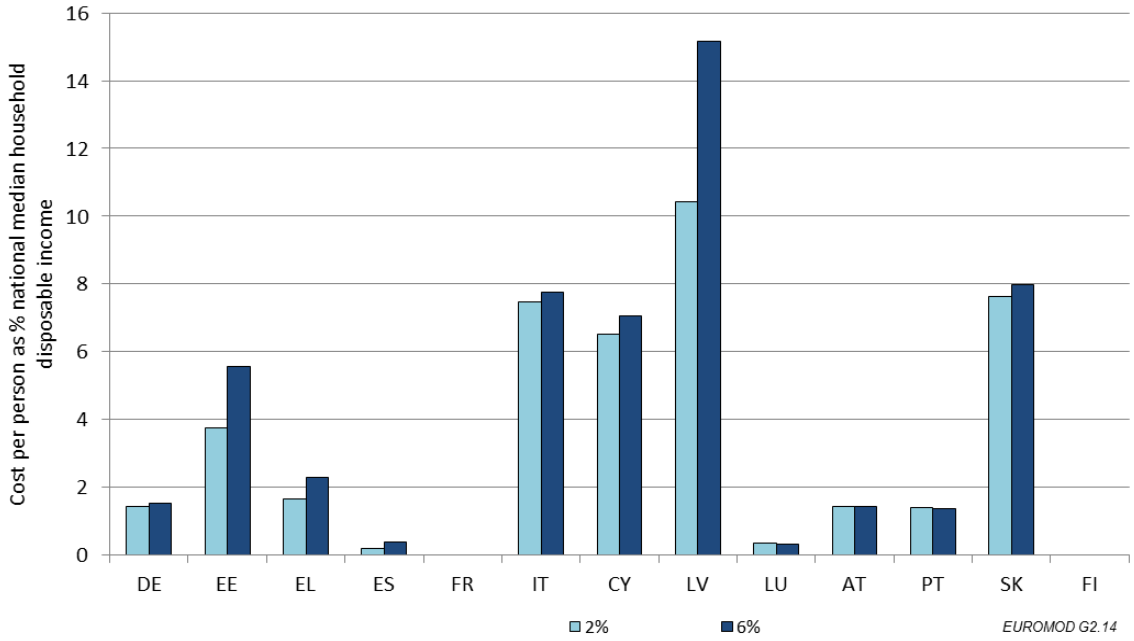
Budgetary cost

Figure 9 presents the average additional budgetary cost of the common EMU-UI scheme per unemployed person under the 2% and 6% hypothetical shock scenarios. The effect is measured as share of median household disposable income in each country, to factor out cross-country differences in income levels. With the exception of Latvia, the additional cost would be in general below 8% of median household disposable income for both hypothetical shocks. In general, the average additional cost of the EMU-UI increases with the size of the hypothetical shock, except in Spain, Portugal and Luxembourg. The additional cost would be the lowest in Spain, France, Finland and Luxembourg, while in Italy, Latvia, Cyprus and Slovakia we observe the highest additional costs. Figure A6 in the appendix shows the average additional

[13] These estimates of income stabilisation are higher than those shown by other studies such as Dolls et al. (2013). This is because in our analysis we focus on the effect of unemployment on incomes in the first year of unemployment when entitlements to UI benefits are at their highest.

budgetary cost of the EMU-UI for all people currently in work. The additional budgetary cost per person would be higher in all countries (except in France) when the overall working population is considered. The pattern across countries is similar to that observe for the hypothetical shock scenarios. The countries with the lowest estimated additional cost are Spain, France, Finland, Luxembourg but also Portugal, while those with the highest additional cost are Latvia, Cyprus, Slovakia and Italy but also Greece.

Figure 9: Average additional budgetary cost of EMU-UI per unemployed person (as % of median household disposable income), people with high unemployment risk, under a 2% and 6% hypothetical decrease in employment



Source: own calculations using EUROMOD version G2.14

5. Concluding remarks

This paper presents an assessment of the potential of an EMU-UI to provide additional income support and to increase within country income stabilisation. Two negative employment hypothetical shocks were simulated: an employment reduction of 2% and 6%. The shocks modelled in this paper have a hypothetical nature and do not aim at replicating changes in unemployment which occurred at specific points in times, for instance during the Great Recession. Given the hypothetical nature of the exercise, our paper does not attempt to match the characteristics of the new unemployed under our hypothetical shocks to those of the short-term unemployed observed in the recent years. Our results show that the EMU-UI, as simulated in this paper, would reduce the risk of poverty for those affected by the negative employment shock and would provide additional income stabilisation.

We find that the effects of the common EMU-UI would vary considerably across the countries analysed, as well as with the size of the shock. The extension in potential coverage of the "new unemployed" benefiting from the EMU-UI would be in general higher under the 2% hypothetical shock than under the 6% hypothetical shock. The factors driving these differences are the specific characteristics of the individuals selected to become unemployed (and the potential impact of assumptions needed to model eligibility due to lack of information in the data).

Among the "new unemployed" under the 2% hypothetical shock we have in general a high number of people with fewer months in employment (which we use to simulate eligibility to the benefit) and a high proportion of individuals in the bottom quintile of

the income distribution. The EMU-UI would increase coverage because its eligibility conditions are less stringent than those of the national schemes. Under the 6% hypothetical shocks the number of "new unemployed" fulfilling the eligibility conditions for the national unemployment insurance increases. It should be borne in mind that our measure of potential coverage refers to eligibility assessed in terms of previous employment history of the hypothetical "new unemployed" (together with some assumptions) and is therefore not comparable to coverage measured as effective unemployment benefit receipt of those currently unemployed (e.g. in the LFS), which is considerably lower. As it was the case for potential coverage, the proportion of beneficiaries from the EMU-UI would be higher under the 2% shock compared to the 6% shock. The main driver of these results is the higher number of individuals in the bottom quintile of the earnings distribution under the 2% shock, who would gain an additional payment from the common scheme.

Additionally, it is important to note that the characteristics of the "new unemployed" also influence the extent to which the effect of the EMUI-UI would vary across countries. Despite using the same methodology across countries to select individuals with high probabilities of unemployment risk, the characteristics of the "new unemployed" vary substantially across countries reflecting the specific characteristics of labour markets in each Member State. To illustrate this, we also evaluate the effects of the EMU-UI when transitions into unemployment are simulated for all individuals currently in work. Under such scenario, the effect of the EMU-UI on net replacement rates, poverty risk and income stabilisation is more important. In this sense, perhaps a better approach to understanding the differential effects of the EMU-UI to a typical shock could be to look at the overall averages (when the effect is simulated to all those currently in work) rather than the group estimated to be at highest risk of unemployment, since the selected individuals have very different characteristics across countries.

Another factor explaining differences in the effect of the EMU-UI across countries is that the existing national UI schemes vary considerably in design in different dimensions. In France, Finland and Spain the common EMU-UI has a very small effect on income stabilisation or poverty risk. This is because, the existing national schemes are more generous than the EMU-UI in most dimensions. At the other extreme, the EMU-UI would have a significant effect in Greece, Latvia, Cyprus and Slovakia. This is because the EMU-UI performs better in some dimensions compared to the national schemes. In Greece the flat rate national scheme offers low income replacement to high earners. In Cyprus and Slovakia the national benefit only lasts 6 months and in Latvia, only 9 months. Ceilings and floors than operate in the national systems as well as the definition of the earnings base and rate for the benefit payment also influence the results, as it is the case in Italy and Austria.

Our analysis also highlights two other relevant points in the debate about the potential of an EMU-UI. First, if the idea would be to cross-finance elements of the UIs that are common across countries, so that the risks are somehow mutual, our analysis shows that without reform, the common element of existing national UIs would be very small as it would need to conform to the "lowest" common denominator in every relevant dimension. For example it would need to last until only the 6th month of unemployment (as in Cyprus and Slovakia) and have more stringent eligibility conditions such as in Slovakia (9 months out of 12). The existence of flat rate benefits in some countries (as Greece) implies that this would need to be reflected in the design of the underwritten benefit. Second, if the idea would be alternatively, to allow for a larger stabilisation function, some national UIs would need to be reformed to allow for a larger common scheme. Our analysis explores the implications of such a scheme showing that little enlargement would be needed in some countries (as France, Finland or Spain) but in other cases more important extensions might be needed in some of the dimensions of the national schemes (e.g. duration in the case of Latvia, Cyprus and Slovakia, eligibility conditions in Slovakia).

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Appendix

Table A1: Key characteristics of unemployment benefit systems in 2012

Country	Contribution period [a] (in months)	Payment	Duration (months)	Assistance	Taxes and SICs
Germany	12/24	67-60% of net; max	12(24)	Means-tested UA	Indirectly (tax applied on taxable income increases if UB received)
Estonia	12/36	50% falling to 40% of gross; min, max	12	Flat UA	Tax and reduced SICs
Greece	5/12	Flat rate	10(12)	Flat UA (means-tested)	Tax (if taxable income > 30,000 euro/year)
Spain	12/72 (employees) 12/24 (self-employed)	70% falling to 60% of previous contributory base	24	Means-tested UA	Tax and SICs
France	4/28	40.4% of gross + fixed allocation	24	Means-tested UA	Tax and reduced SICs
Italy	12/24	60% falling to 40% of gross; min, max	8(12)	None	Tax
Cyprus	-	60% of basic amount of insurable earnings +50% of earnings exceeding the basic amount of insured earnings + increases for dependent spouse and children; min	6	Social assistance	neither
Latvia	9/12	50-65% of gross; reduces with length of unemployment	9	Social assistance	Neither
Luxembourg	6/12	80-85% of gross; max	12	Social assistance	Tax and SICs
Austria	12/24	55% of net earnings; min, max	9(12)	Means-tested UA	Neither
Portugal	12/24	65% falling to 55% of gross; min,max	11(12)	Means-tested UA	Neither
Slovakia	24/36	50% of previous contributory base	6	none	neither
Finland	8/28 (employees) 18/28 (self-employed)	basic component + 45% of difference between net daily wage and basic allowance + 20% difference between daily wage and daily limit; min, max	23	Means-tested UA	Tax and Health insurance contribution for medical care

Notes: a. Months of contributions/period in which contributions can be made. In Cyprus eligibility is defined in terms of the amount paid in contributions 26 weeks before unemployment. b. "Standard" maximum duration (typical maximum duration taking account of age and other criteria, where this is longer). UA – Unemployment assistance; SICs – Social Insurance contribution. Sources: MISSOC (July 2012) with additional information from EUROMOD Country Reports (https://www.iser.essex.ac.uk/euromod/resources-for-euromod-users/country-reports).

Table A2: Sample characteristics of all people in work

Country	DE	EE	EL	ES	FR	IT	CY	LV	LU	AT	PT	SK	FI
Sample observations	13,452	6,675	6,522	15,864	11,228	20,412	4,546	6,968	4,323	6,276	5,086	7,632	16,047
Population in work (thousands)	39,500	719	4,522	21,600	26,300	23,700	385	1,278	203	3,954	4,978	2,498	2,973
% female	48.2	50.1	41.1	42.9	48.1	40.1	44.8	49.8	42.7	44.3	45.5	47.3	48.5
% age 15-24	11.7	12.4	6.0	9.6	9.0	6.2	8.5	15.5	7.3	15.0	8.9	9.9	14.9
% age25-49	62.0	57.7	68.7	70.3	66.4	69.7	65.9	56.9	73.0	63.9	66.6	65.8	52.1
% age 50+	26.3	29.8	25.3	20.1	24.6	24.1	25.6	27.6	19.7	21.1	24.5	24.3	33.0
% education lower 2ndary	8.0	11.6	11.0	24.3	14.0	31.0	8.8	19.2	10.6	51.6	21.0	3.0	20.3
% education higher 2ndary	43.0	50.9	34.3	23.7	45.9	40.2	38.4	51.2	37.7	17.2	15.6	75.1	45.0
% education tertiary	40.5	33.1	28.0	34.5	33.7	17.1	34.9	23.7	26.9	13.5	14.5	20.1	33.2
% employee	92.6	95.9	69.9	88.6	95.4	79.3	86.6	97.1	96.8	89.5	86.2	91.6	92.0
% self-employed	7.4	4.1	30.1	11.4	4.6	19.6	13.4	2.9	3.2	10.5	13.8	8.4	8.0
% part-time	24.5	9.4	13.1	14.8	14.9	15.1	10.5	17.7	16.3	21.9	10.7	4.4	22.3
% main earner	64.3	61.6	61.4	58.9	64.5	65.9	55.8	53.0	64.2	60.4	56.8	53.5	61.7
% secondary earner	35.7	38.4	38.6	41.1	35.5	34.1	44.2	47.0	35.8	39.6	43.2	46.5	38.3
% in work 1-3 months	10.5	6.5	1.8	3.8	3.6	1.9	2.3	3.3	2.4	3.6	2.7	1.2	23.9
% in work 4-6 months	3.7	4.6	4.3	4.8	4.6	2.2	4.3	10.6	3.5	4.4	4.1	3.3	8.0
% in work 7-9 months	3.2	4.1	5.2	5.2	3.7	2.6	5.5	4.8	4.5	5.0	3.4	2.5	6.1
% in work 10-12 months	82.6	84.8	88.8	86.2	88.0	93.4	87.9	81.2	89.6	87.1	89.8	93.0	61.9

Notes: In this table "self-employed" are defined as those with self-employment income. They may also have employment income. Those defined as "employed" do not have self-employment income. Part-time is defined as reporting30 hours of work or less per week. The months in work categories refer to months in work before simulating transitions into unemployment. Source: own calculations using EUROMOD version G2.14

Table A3: Estimation results for unemployment risk

	DE	EE	EL	ES	FR	IT	CY	LV	LU	AT	PT	SK	FI
Female	-0.619***	-0.222**	-0.236***	-0.050	-0.567***	0.185***	-0.582***	-0.149**	-0.081	-0.809***	0.121	-0.105	-0.165***
	(-12.35)	(-2.11)	(-4.06)	(-0.93)	(-10.27)	(3.83)	(-7.81)	(-2.13)	(-0.58)	(-9.94)	(0.75)	(-1.47)	(-3.02)
Age 15-24	-0.825***	-0.347	0.743***	-0.061	0.197	1.166***	0.707***	-0.912***	-0.776*	0.207	0.102	-0.106	0.329
	(-5.44)	(-1.12)	(4.62)	(-0.40)	(1.24)	(7.81)	(3.43)	(-3.95)	(-1.91)	(0.77)	(0.21)	(-0.36)	(1.49)
Age 25-34	0.067	-0.696**	0.526***	0.253**	-0.010	0.880***	0.523***	-0.444**	-0.881***	0.637***	0.482	-0.082	0.140
	(0.62)	(-2.51)	(3.80)	(2.04)	(-0.07)	(6.70)	(2.96)	(-2.40)	(-2.64)	(2.85)	(1.16)	(-0.30)	(0.78)
Age 35-44	-0.133	-0.481**	0.474***	0.280**	0.028	0.593***	0.410***	-0.486***	-0.993***	0.731***	0.609*	0.271	0.002
	(-1.54)	(-2.09)	(3.86)	(2.58)	(0.22)	(5.09)	(2.78)	(-3.23)	(-3.38)	(3.90)	(1.86)	(1.13)	(0.01)
Age 45-54	0.003	-0.082	0.504***	0.276***	-0.121	0.165	0.470***	-0.004	-0.301	0.550***	0.404	0.874***	0.257***
	(0.04)	(-0.44)	(4.58)	(2.82)	(-0.97)	(1.55)	(3.68)	(-0.04)	(-1.17)	(3.19)	(1.46)	(4.11)	(3.08)
Education: lower sec or less	-0.273***	0.078	-0.133	-0.107	-0.388***	-0.161*	-0.228**	0.046	-1.093***	-0.131	-1.751***	0.306*	-0.233***
	(-3.39)	(0.46)	(-1.57)	(-1.55)	(-5.07)	(-1.73)	(-2.38)	(0.42)	(-5.69)	(-0.89)	(-5.94)	(1.78)	(-3.03)
upper sec. non tertiary	-0.055	0.140	-0.277***	-0.077	-0.174***	-0.215**	-0.296***	-0.104	-1.008***	-0.084	-1.206***	-0.318**	-0.265***
	(-1.07)	(1.04)	(-3.63)	(-1.09)	(-2.79)	(-2.49)	(-3.50)	(-1.16)	(-5.38)	(-0.56)	(-4.15)	(-2.39)	(-3.94)
Earnings Q2	-1.733***	-1.648***	-1.585***	-2.322***	-2.838***	-1.665***	-2.012***	-2.338***	-3.504***	-2.185***	-2.821***	-2.227***	-0.774***
	(-33.65)	(-16.18)	(-30.08)	(-45.31)	(-46.43)	(-29.50)	(-25.05)	(-28.64)	(-21.85)	(-26.16)	(-18.25)	(-24.70)	(-15.13)
Earnings Q3	-3.436***	-2.730***	-3.352***	-3.631***	-4.548***	-3.139***	-3.029***	-3.261***	-4.048***	-3.457***	-4.706***	-4.512***	-3.269***
	(-43.69)	(-18.67)	(-38.35)	(-49.67)	(-43.15)	(-29.97)	(-26.76)	(-37.70)	(-21.80)	(-32.11)	(-15.47)	(-18.87)	(-38.93)
Earnings Q4	-4.108***	-3.425***	-4.763***	-4.487***	-4.856***	-3.897***	-3.904***	-3.640***	-5.863***	-4.745***	-4.304***	-4.505***	-4.404***
	(-41.19)	(-18.37)	(-30.60)	(-43.12)	(-40.43)	(-24.69)	(-24.02)	(-37.05)	(-15.56)	(-27.85)	(-15.83)	(-17.68)	(-35.78)
Earnings Q5	-4.954***	-3.840***	-5.339***	-5.345***	-6.652***	-3.933***	-5.473***	-3.982***	-5.764***	-4.885***	-4.211***	-3.402***	-5.696***
	(-36.19)	(-16.66)	(-26.72)	(-33.69)	(-26.53)	(-21.47)	(-18.36)	(-33.43)	(-17.56)	(-25.45)	(-14.22)	(-21.29)	(-27.25)
Work experience	0.003	-0.055***	0.003	-0.001	-0.033***	-0.001	0.001	-0.030***	-0.002	-0.012**	0.004	-0.057***	0.000
	(0.91)	(-6.91)	(0.73)	(-0.28)	(-8.58)	(-0.23)	(0.26)	(-5.26)	(-0.16)	(-1.98)	(0.40)	(-9.41)	(0.06)
Part-time	-0.878***	-0.838***	-0.675***	-1.797***	-1.112***	-0.371***	-0.908***	-1.015***	-2.252***	-1.088***	-1.802***	-0.675***	-0.039
	(-15.46)	(-4.42)	(-9.04)	(-25.11)	(-18.63)	(-6.89)	(-8.87)	(-8.72)	(-11.14)	(-11.09)	(-8.61)	(-4.31)	(-0.63)
Married	-0.399***	-0.209**	0.359***	-0.117**	-0.041	0.063	0.188**	-0.044	-0.488***	-0.316***	-0.638***	-0.255***	-0.137**
	(-7.67)	(-2.04)	(5.54)	(-2.26)	(-0.71)	(1.19)	(2.53)	(-0.70)	(-3.92)	(-3.98)	(-3.95)	(-3.37)	(-2.56)
N children: age 0-4	0.198***	-0.241**	0.003	0.178***	-0.005	0.019	-0.025	0.085	0.249**	0.076	-0.008	-0.303***	-0.144**
	(3.48)	(-2.25)	(0.04)	(4.09)	(-0.11)	(0.40)	(-0.37)	(1.36)	(2.31)	(1.04)	(-0.05)	(-3.75)	(-2.52)
N children: age 5-9	0.117**	0.308***	0.042	0.060	0.109**	-0.236***	-0.058	0.146**	0.275***	-0.133*	0.350***	0.344***	0.119**
	(2.54)	(3.71)	(0.74)	(1.28)	(2.20)	(-4.50)	(-0.87)	(2.40)	(2.69)	(-1.92)	(2.61)	(5.48)	(2.50)
N children: age 10-14	0.085*	0.003	-0.010	0.025	-0.015	-0.053	0.120**	-0.052	0.226**	-0.152**	-0.160	0.013	0.016
	(1.79)	(0.04)	(-0.21)	(0.56)	(-0.28)	(-1.06)	(2.36)	(-0.82)	(2.33)	(-2.00)	(-1.06)	(0.20)	(0.40)
Number earners	-0.228***	-0.088*	-0.053*	-0.068**	-0.072**	-0.002	0.009	-0.061*	0.025	-0.262***	-0.083	-0.031	-0.252***
	(-6.47)	(-1.77)	(-1.95)	(-2.56)	(-2.51)	(-0.09)	(0.27)	(-1.94)	(0.29)	(-6.59)	(-1.09)	(-1.12)	(-7.77)
Home owner	-0.495***	-0.223*	0.009	-0.269***	-0.211***	0.037	-0.006	0.076	-0.633***	-0.068	-0.321**	-0.106	-0.234***
	(-10.70)	(-1.70)	(0.18)	(-5.61)	(-4.27)	(0.81)	(-0.09)	(0.94)	(-4.60)	(-0.97)	(-2.35)	(-1.27)	(-4.35)
_cons	2.193***	1.483***	1.093***	1.227***	2.666***	-0.668***	0.099	2.886***	3.087***	2.679***	1.956***	1.053***	2.231***
	(14.48)	(4.10)	(5.19)	(6.75)	(14.18)	(-3.40)	(0.36)	(10.35)	(6.70)	(9.06)	(3.20)	(3.15)	(8.92)
Occupation dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Industry dummies	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
N	10551	4522	5197	11736	8596	17329	3828	3893	3127	4657	3517	6868	9157

*Notes: Reference categories: Age: 55-64; Education: Tertiary; Earning Quintile: 1st; t statistics in parentheses; * p < 0.10, ** p < 0.05, *** p < 0.01*

Table A4: Sample characteristics of the new unemployed under a 2% shock

Country	DE	EE	EL	ES	FR	IT	CY	LV	LU	AT	PT	SK	FI
Sample observations	208	124	134	309	192	345	90	126	135	88	96	169	176
Population (thousands)	704	13	91	399	495	463	7	22	4	74	100	51	47
% female	42.6	33.1	48.3	65.4	34.4	45.6	56.2	47.2	64.2	40.5	57.5	38.6	50.1
% age 15-24	6.9	21.9	17.7	12.7	26.0	27.4	22.8	10.0	6.4	18.9	19.4	39.2	17.9
% age25-49	73.8	69.3	71.9	70.0	70.7	60.5	71.0	68.0	73.4	72.1	70.7	55.2	60.9
% age 50+	19.3	8.9	10.3	17.3	3.3	12.1	6.2	22.1	20.2	9.0	9.9	5.6	21.2
% education lower 2ndary	9.9	19.8	20.0	34.4	21.7	43.5	12.8	30.9	12.6	38.7	24.2	10.1	28.0
% education higher 2ndary	51.3	61.7	32.0	19.4	48.3	26.1	34.6	45.3	24.6	15.2	13.7	78.1	44.9
% education tertiary	33.0	14.0	16.5	18.3	25.0	11.3	25.4	14.2	25.2	6.6	18.7	9.6	25.6
% employee	82.2	77.5	90.6	93.4	98.4	85.7	94.4	96.7	96.3	93.0	87.4	88.1	98.4
% self-employed	17.8	22.5	9.4	6.6	1.6	14.3	5.6	3.3	3.7	7.0	12.6	11.9	1.6
% part-time	28.5	6.3	14.8	10.5	30.5	12.9	4.2	29.5	21.0	13.4	13.1	1.4	24.0
% main earner	71.9	53.8	38.8	30.2	47.6	40.5	16.4	35.0	40.4	44.1	37.8	24.8	66.2
% secondary earner	28.1	46.2	61.2	69.8	52.4	59.5	83.6	65.0	59.6	55.9	62.2	75.2	33.8
% in work 1-3 months	19.0	1.3	12.3	11.4	29.5	2.9	7.6	15.1	2.4	12.3	5.0	9.1	16.7
% in work 4-6 months	19.6	16.6	36.8	23.1	35.1	12.1	15.7	26.6	7.6	30.9	10.8	12.5	26.0
% in work 7-9 months	10.3	12.6	28.6	14.4	14.2	11.6	35.5	3.7	2.8	17.5	10.2	13.6	21.4
% in work 10-12 months	51.0	69.5	22.3	51.1	21.1	73.4	41.2	54.6	87.3	39.3	74.1	64.8	35.9
% earnings Q1	88.0	96.5	85.8	97.6	56.3	64.8	94.9	58.4	59.8	70.7	60.9	76.2	52.7
% earnings Q2	12.0	3.5	14.2	2.4	43.7	34.3	5.1	41.2	32.0	29.3	35.1	23.8	47.3
% earnings Q3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	8.1	0.0	4.0	0.0	0.0
% earnings Q4	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% earnings Q5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Notes: In this table "self-employed" are defined as those with self-employment income. They may also have employment income. Those defined as "employed" do not have self-employment income. Part-time is defined as reporting30 hours of work or less per week. The months in work categories refer to months in work before simulating transitions into unemployment. Source: own calculations using EUROMOD version G2.14

Table A5: Sample characteristics of the new unemployed under a 6% shock

Country	DE	EE	EL	ES	FR	IT	CY	LV	LU	AT	PT	SK	FI
Sample observations	657	385	388	920	601	1,165	276	364	356	321	288	486	653
Population (thousands)	2,099	38	272	1,198	1,483	1,379	22	65	12	218	300	152	140
% female	49.7	51.2	54.0	57.4	51.4	49.4	65.8	48.8	64.3	43.3	56.0	52.4	56.4
% age 15-24	6.7	21.6	13.5	8.1	24.1	22.3	23.7	9.8	5.0	12.6	12.5	23.4	14.2
% age25-49	71.0	59.6	72.5	79.0	64.7	68.7	64.1	67.6	67.5	76.0	73.3	64.1	57.2
% age 50+	22.3	18.7	14.0	12.9	11.1	8.9	12.2	22.6	27.5	11.4	14.3	12.5	28.6
% education lower 2ndary	9.5	18.2	17.2	32.4	19.0	40.8	11.6	27.0	8.7	49.9	20.2	6.9	26.3
% education higher 2ndary	52.4	61.5	31.3	19.4	52.9	33.7	38.7	52.8	24.1	13.7	19.5	83.7	49.8
% education tertiary	29.5	13.7	18.1	22.1	22.4	10.4	27.2	10.8	27.2	6.9	11.5	7.9	20.4
% employee	85.4	86.6	87.8	90.1	98.5	80.2	92.7	97.7	96.9	93.4	83.8	84.6	91.0
% self-employed	14.6	13.4	12.2	9.9	1.5	19.8	7.3	2.3	3.1	6.6	16.2	15.4	9.0
% part-time	37.8	7.6	25.4	25.6	53.8	19.6	12.9	10.3	35.1	31.9	21.7	2.3	18.6
% main earner	59.6	43.6	44.5	42.1	50.1	39.4	16.7	44.1	53.5	53.3	48.0	25.8	54.1
% secondary earner	40.4	56.4	55.5	57.9	49.9	60.6	83.3	55.9	46.5	46.7	52.0	74.2	45.9
% in work 1-3 months	8.7	0.9	7.2	4.5	12.4	2.6	6.5	5.4	0.9	4.8	1.7	4.7	7.0
% in work 4-6 months	10.3	7.7	23.2	10.3	15.8	7.3	14.4	12.4	2.7	14.4	4.0	7.5	15.7
% in work 7-9 months	8.6	8.1	20.6	10.7	7.5	7.7	23.5	4.5	4.9	15.8	4.4	10.4	18.2
% in work 10-12 months	72.4	83.3	48.9	74.5	64.3	82.4	55.7	77.6	91.5	65.1	89.9	77.4	59.1
% earnings Q1	65.9	76.5	58.0	58.0	36.6	59.9	93.9	20.2	47.9	47.5	46.4	74.4	29.0
% earnings Q2	33.7	19.0	41.7	42.0	54.7	38.9	6.1	70.0	35.2	43.7	48.1	25.6	71.0
% earnings Q3	0.3	4.5	0.3	0.0	8.8	0.5	0.0	9.7	16.2	8.8	3.3	0.0	0.0
% earnings Q4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.2	0.0	1.8	0.0	0.0
% earnings Q5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.4	0.0	0.3	0.0	0.0

Notes: In this table "self-employed" are defined as those with self-employment income. They may also have employment income. Those defined as "employed" do not have self-employment income. Part-time is defined as reporting30 hours of work or less per week. The months in work categories refer to months in work before simulating transitions into unemployment. Source: own calculations using EUROMOD version G2.14

Table A6: Characteristics of the short-term unemployed in 2009

Country	DE	EE	EL	ES	FR	IT	CY	LV	LU	AT	PT	SK	FI
Total number unemployed (1000s)	3,221.9	92.2	484	4,149.3	2,568.4	1,903	21.6	192	11.7	222.6	516.3	323.3	220.8
Unemployed<12months (1000s)	1,735	67.1	283.9	3,162	1,642	1,010	19.2	142.5	9	174.1	286.3	149	181.4
%<12months Female	42%	36%	53%	43%	49%	47%	47%	41%	47%	45%	48%	44%	46%
%<12 months Aged 15-24	22%	22%	23%	22%	30%	25%	26%	24%	29%	31%	23%	27%	36%
%<12 months Aged 25-49	59%	58%	66%	67%	58%	66%	57%	57%	57%	58%	64%	59%	46%
%<12 months Aged 50+	19%	20%	11%	11%	12%	9%	17%	19%	14%	11%	12%	14%	18%

Source: EUROSTAT, Labour Force Survey Database

Table A7: Beneficiaries: % benefiting from the EMU-UI by characteristics of all people in work

	DE		EE		EL		ES		FR		IT		CY		LV		LU		AT		PT		SK		FI	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
All	67.7	4.0	71.6	9.1	57.2	1.1	22.0	1.2	1.4	0.1	73.4	3.4	77.8	5.1	72.4	16.9	2.6	3.6	64.2	0.4	18.6	3.6	79.1	10.5	7.9	0.1
Male	68.1	3.9	68.4	9.9	58.0	0.7	25.0	1.2	1.1	0.1	70.8	3.2	76.3	4.2	74.1	15.5	1.8	3.2	73.0	0.4	19.4	3.6	78.0	8.2	10.5	0.1
Female	67.4	4.2	74.7	8.2	55.9	1.8	18.0	1.1	1.8	0.1	77.2	3.6	79.6	6.2	70.7	18.4	3.8	4.0	53.2	0.4	17.6	3.6	80.3	13.0	5.2	0.1
Age 15-24	61.4	14.7	60.3	16.5	52.7	4.2	14.5	4.3	2.7	0.0	66.7	11.6	56.5	26.6	46.1	43.8	5.7	20.9	55.3	0.0	70.3	11.1	46.6	43.3	1.6	0.7
Age25-49	70.3	2.4	80.9	4.5	61.8	1.1	21.6	0.9	1.3	0.0	76.4	3.1	85.4	2.1	86.5	8.6	2.1	2.0	68.0	0.3	17.7	2.6	83.6	6.2	7.9	0.0
Age 50+	64.4	3.1	58.3	14.8	45.6	0.5	26.8	0.7	1.3	0.4	66.2	2.0	65.3	5.8	58.1	19.2	3.7	3.0	59.0	1.2	2.2	3.5	80.4	8.6	10.7	0.0
Education lower 2ndary	54.0	12.2	61.8	11.4	47.1	1.3	11.8	1.1	3.0	0.1	72.6	2.0	67.0	5.6	58.6	27.8	2.8	7.4	66.8	0.4	28.9	3.5	79.3	16.0	3.6	0.5
Education higher 2ndary	72.2	4.2	74.6	8.3	59.5	1.3	17.0	0.3	1.5	0.1	75.3	3.6	80.3	5.7	73.8	16.3	2.5	2.3	66.6	0.3	30.9	1.8	79.9	9.1	5.2	0.0
Education tertiary	64.6	2.3	69.9	9.2	71.1	0.9	38.8	0.4	0.6	0.2	73.5	6.1	84.1	4.8	79.3	10.9	2.9	3.8	71.7	1.0	24.7	3.8	75.8	14.6	14.4	0.0
Employee	73.1	4.4	74.7	9.4	81.8	1.6	24.8	1.3	1.5	0.1	92.6	1.9	89.8	5.9	74.5	17.4	2.7	3.7	71.8	0.5	21.6	4.2	86.4	11.4	8.6	0.1
Self-employed	17.4	3.0	21.6	11.7	10.1	1.0	4.2	0.1	3.4	0.3	20.4	3.9	27.7	3.2	43.7	5.6	8.7	1.4	25.0	1.4	5.4	0.3	8.4	0.8	3.7	0.0
Part-time	48.9	5.2	36.4	16.6	37.5	2.9	16.8	1.7	0.0	0.3	74.4	4.2	52.9	14.2	31.9	45.4	3.9	8.0	25.1	0.8	15.3	5.8	57.8	26.0	1.8	0.4
Main earner	69.5	2.7	72.0	8.7	62.1	0.6	29.1	0.6	0.8	0.1	76.1	3.1	79.3	2.8	80.3	9.9	1.9	1.7	75.0	0.6	16.3	2.4	83.5	5.6	10.9	0.0
Secondary earner	64.6	6.4	70.9	9.6	49.3	2.0	11.8	1.9	2.5	0.1	68.2	4.0	75.9	8.1	63.4	24.9	4.1	7.0	47.8	0.1	21.6	5.1	74.1	16.1	3.2	0.3
In work 1-3 months	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
In work 4-6 months	25.3	68.6	45.2	36.8	47.0	20.0	13.0	9.2	1.7	0.0	25.4	6.5	40.7	30.1	6.0	81.9	15.9	80.5	58.9	0.2	9.1	56.8	0.0	94.1	6.4	0.4
In work 7-9 months	75.5	7.2	61.9	20.5	71.7	0.3	10.4	9.7	1.0	0.0	49.5	5.5	73.5	11.2	35.9	52.6	22.5	0.4	54.6	0.2	40.0	14.0	46.7	46.5	6.9	0.4
In work 10-12 months	77.9	1.6	79.0	7.7	58.0	0.3	24.1	0.3	1.5	0.1	76.6	3.3	81.9	3.7	86.2	7.1	1.2	0.9	67.7	0.5	18.8	0.8	83.8	6.7	11.3	0.1
Earnings Q1	28.7	12.2	29.4	14.3	7.8	4.7	4.5	2.8	9.8	0.1	35.9	4.2	54.1	15.7	25.4	46.2	9.1	14.4	28.7	0.3	10.1	10.2	46.0	33.4	0.7	0.5
Earnings Q3	86.6	1.2	90.3	6.2	74.0	0.1	5.5	0.5	0.1	0.0	85.3	2.6	84.3	3.0	83.7	9.7	1.0	1.3	81.9	0.4	25.2	2.6	87.3	6.7	1.4	0.0
Earnings Q5	61.4	1.2	63.2	8.0	72.6	0.0	81.1	0.0	0.5	0.2	84.2	3.9	85.8	1.8	91.7	3.9	1.3	0.3	86.6	0.8	10.8	1.0	80.2	3.8	34.8	0.0

Notes: (a) –benefiting from EMU-UI, while receiving national unemployment benefit; (b) benefiting from EMU-UI, not receiving national benefit. In this table "self-employed" are defined as those with self-employment income. They may also have employment income. Those defined as "employed" do not have self-employment income. Part-time is defined as reporting30 hours of work or less per week. The months in work categories refer to months in work before simulating transitions into unemployment. Source: own calculations using EUROMOD version G2.14

Table A8: Net Replacement Rates: additional effect of the EMU-UI by characteristics of all people in work

	DE		EE		EL		ES		FR		IT		CY		LV		LU		AT		PT		SK		FI	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
All	80.2	4.3	69.4	5.0	66.0	6.7	79.5	0.9	85.0	0.1	69.0	7.1	66.7	10.0	72.8	11.0	86.8	0.2	77.2	4.1	83.7	0.7	72.4	9.5	79.2	0.1
Male	76.7	4.6	65.6	5.5	58.7	7.6	75.7	1.0	83.1	0.1	65.1	7.7	59.1	11.7	70.1	11.7	83.4	0.2	73.0	5.1	80.0	0.8	69.5	10.2	77.1	0.1
Female	83.9	4.0	73.1	4.4	76.6	5.4	84.4	0.7	87.0	0.1	74.8	6.3	76.0	8.0	75.6	10.3	91.4	0.2	82.4	3.0	88.0	0.6	75.6	8.8	81.4	0.0
Age 15-24	90.6	2.9	74.3	7.5	82.5	3.3	89.3	1.0	89.5	0.2	80.7	5.7	84.5	4.9	80.2	10.8	91.2	1.1	86.7	2.0	89.6	2.1	79.1	6.8	88.6	0.0
Age25-49	79.7	4.5	68.3	4.9	64.3	7.2	79.0	0.8	84.9	0.1	66.8	8.6	65.9	11.0	70.1	12.2	87.7	0.1	76.6	4.5	84.3	0.6	71.6	9.8	77.8	0.1
Age 50+	76.7	4.5	69.4	4.1	66.8	6.2	76.3	1.1	83.5	0.1	72.2	3.0	62.7	9.2	74.2	8.7	81.7	0.1	72.1	4.5	79.8	0.5	71.8	9.9	77.2	0.1
Education lower 2ndary	88.3	2.8	73.5	5.1	69.1	4.8	82.5	0.5	87.5	0.1	69.8	6.7	72.8	7.0	77.5	10.1	89.7	0.2	77.3	4.3	84.9	0.7	77.0	6.9	84.3	0.0
Education higher 2ndary	82.4	4.1	70.0	4.7	65.4	6.6	80.3	0.6	85.8	0.1	68.9	7.5	67.4	10.2	73.6	11.0	87.8	0.2	75.5	4.6	84.4	0.9	73.5	9.1	78.9	0.1
Education tertiary	76.0	4.7	66.8	5.2	60.4	9.7	75.7	1.5	82.3	0.1	65.7	7.7	64.6	11.7	67.3	12.0	79.5	0.2	69.5	6.0	79.5	1.2	68.0	11.5	76.3	0.1
Employee	81.7	4.7	68.8	5.2	67.9	9.6	80.1	1.0	85.6	0.1	69.9	8.6	68.1	11.6	72.8	11.4	87.5	0.2	77.9	4.6	86.0	0.9	72.7	10.4	78.9	0.1
Self-employed	62.3	1.9	72.1	2.5	62.2	1.2	74.4	0.2	76.5	0.2	65.9	2.1	58.1	3.5	66.5	3.8	69.2	0.3	70.6	2.0	68.1	0.4	68.0	1.0	78.0	0.0
Part-time	89.4	1.6	82.0	2.5	83.7	5.2	87.4	1.2	91.8	0.0	78.4	5.1	79.4	5.5	86.5	6.3	93.4	0.3	84.5	1.2	91.0	0.8	83.9	4.2	90.6	0.0
Main earner	73.7	5.4	60.6	6.2	54.3	8.8	72.6	1.3	81.4	0.1	61.2	8.9	56.2	12.8	62.8	14.0	83.0	0.1	69.6	5.8	78.3	0.8	64.5	11.9	73.4	0.1
Secondary earner	91.8	2.3	83.5	3.0	84.8	3.3	89.2	0.4	91.4	0.1	84.1	3.6	79.9	6.5	84.1	7.6	93.5	0.3	88.7	1.6	90.7	0.6	81.5	6.8	88.5	0.0
In work 1-3 months	88.4	0.0	88.9	0.0	83.8	0.0	93.4	0.0	90.4	0.0	84.6	0.0	91.8	0.0	90.7	0.0	94.4	0.0	92.8	0.0	88.4	0.0	91.3	0.0	80.7	0.0
In work 4-6 months	88.0	1.9	83.2	1.8	80.9	2.0	89.8	0.5	91.5	0.0	82.9	0.6	88.8	1.0	87.8	4.1	88.1	2.2	86.6	1.0	85.4	1.4	84.2	2.2	85.9	0.0
In work 7-9 months	81.8	4.5	76.7	3.9	78.9	4.3	86.7	1.4	91.0	0.0	78.4	1.8	78.9	3.7	75.7	7.8	88.7	0.1	80.2	1.9	81.2	2.9	79.7	3.8	82.5	0.1
In work 10-12 months	78.7	5.0	66.8	5.6	64.2	7.2	77.8	0.9	84.1	0.1	68.1	7.5	64.2	11.1	70.0	12.6	86.4	0.1	75.9	4.6	83.5	0.6	71.5	10.1	77.4	0.1
Earnings Q1	93.9	1.2	85.0	1.5	95.0	0.4	96.5	0.3	95.0	0.5	79.9	2.9	88.7	2.5	89.9	4.4	94.3	0.5	94.1	0.7	89.9	0.5	86.8	3.2	97.2	0.0
Earnings Q3	78.4	5.1	68.2	6.0	65.0	5.9	78.7	0.3	86.2	0.0	71.0	7.2	65.1	10.7	71.2	12.6	90.2	0.2	77.7	3.1	85.1	0.9	72.6	9.9	75.8	0.0
Earnings Q5	68.2	5.5	55.9	5.8	44.2	11.8	63.5	3.0	75.6	0.0	56.9	10.9	49.4	16.0	57.8	13.2	68.6	0.0	60.2	8.8	72.0	0.5	59.4	13.6	67.4	0.3

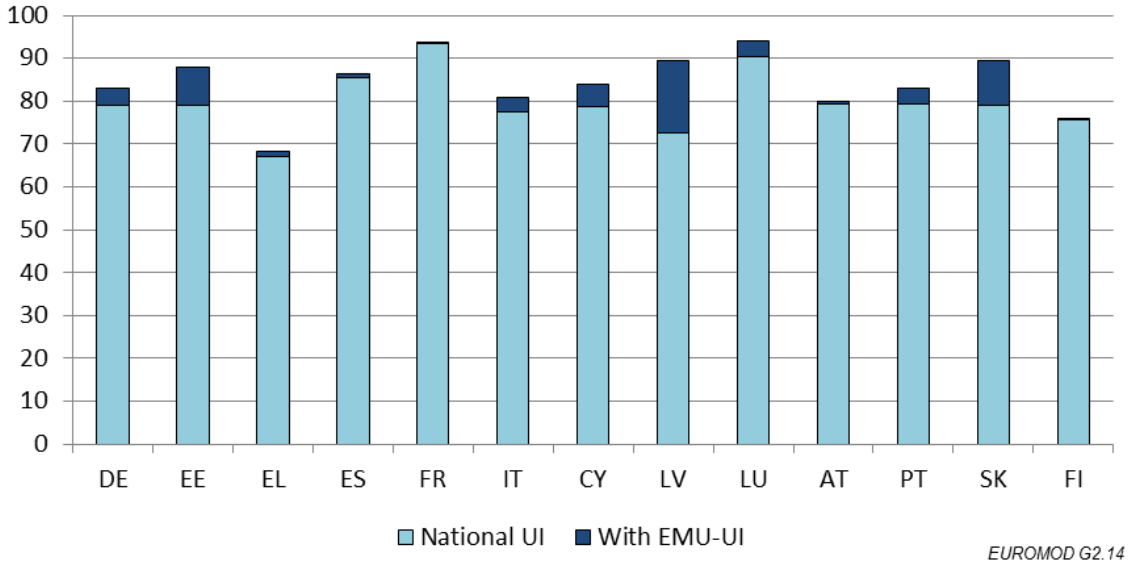
Notes: (a) –NRR under existing national systems; (b) additional effect of EMU-UI on NRR. In this table "self-employed" are defined as those with self-employment income. They may also have employment income. Those defined as "employed" do not have self-employment income. Part-time is defined as reporting30 hours of work or less per week. The months in work categories refer to months in work before simulating transitions into unemployment. Source: own calculations using EUROMOD version G2.14

Table A9: Coefficient of income stabilisation: additional effect of the EMU-UI by characteristics of all people in work

	DE		EE		EL		ES		FR		IT		CY		LV		LU		AT		PT		SK		FI	
	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
All	0.74	0.05	0.50	0.08	0.48	0.10	0.63	0.02	0.73	0.00	0.56	0.10	0.37	0.19	0.51	0.19	0.78	0.00	0.64	0.06	0.68	0.01	0.46	0.19	0.67	0.00
Male	0.73	0.04	0.49	0.08	0.47	0.10	0.62	0.02	0.73	0.00	0.55	0.09	0.36	0.18	0.50	0.18	0.76	0.00	0.64	0.07	0.65	0.01	0.46	0.18	0.67	0.00
Female	0.75	0.06	0.51	0.08	0.51	0.12	0.64	0.02	0.74	0.00	0.57	0.10	0.38	0.21	0.51	0.20	0.82	0.00	0.65	0.06	0.73	0.01	0.46	0.20	0.66	0.00
Age 15-24	0.72	0.09	0.42	0.17	0.56	0.08	0.67	0.03	0.78	0.00	0.54	0.13	0.34	0.22	0.41	0.32	0.72	0.04	0.64	0.05	0.69	0.07	0.39	0.21	0.65	0.00
Age25-49	0.75	0.05	0.52	0.07	0.47	0.11	0.64	0.02	0.74	0.00	0.54	0.12	0.38	0.20	0.51	0.18	0.80	0.00	0.66	0.07	0.70	0.01	0.47	0.18	0.68	0.00
Age 50+	0.72	0.04	0.46	0.07	0.48	0.09	0.59	0.02	0.71	0.00	0.60	0.04	0.33	0.17	0.54	0.14	0.72	0.00	0.61	0.06	0.62	0.01	0.45	0.19	0.64	0.00
Education lower 2ndary	0.71	0.06	0.47	0.11	0.49	0.08	0.66	0.01	0.76	0.00	0.56	0.10	0.38	0.16	0.48	0.23	0.80	0.00	0.65	0.07	0.70	0.01	0.47	0.17	0.65	0.00
Education higher 2ndary	0.75	0.06	0.51	0.08	0.49	0.10	0.64	0.01	0.75	0.00	0.56	0.10	0.37	0.20	0.51	0.20	0.80	0.00	0.64	0.07	0.71	0.01	0.46	0.19	0.66	0.00
Education tertiary	0.73	0.04	0.49	0.07	0.46	0.12	0.61	0.03	0.71	0.00	0.54	0.09	0.37	0.20	0.50	0.16	0.72	0.00	0.62	0.07	0.65	0.02	0.46	0.18	0.68	0.00
Employee	0.77	0.05	0.50	0.08	0.52	0.14	0.64	0.02	0.74	0.00	0.59	0.11	0.39	0.22	0.51	0.19	0.79	0.00	0.66	0.07	0.72	0.01	0.47	0.21	0.67	0.00
Self-employed	0.51	0.02	0.40	0.06	0.40	0.02	0.50	0.00	0.59	0.00	0.44	0.04	0.28	0.06	0.41	0.07	0.59	0.01	0.54	0.03	0.40	0.01	0.44	0.02	0.60	0.00
Part-time	0.71	0.05	0.42	0.09	0.56	0.15	0.61	0.05	0.76	0.00	0.58	0.10	0.35	0.21	0.41	0.29	0.81	0.01	0.60	0.04	0.70	0.04	0.39	0.17	0.64	0.00
Main earner	0.73	0.04	0.50	0.07	0.47	0.10	0.62	0.02	0.73	0.00	0.55	0.10	0.37	0.18	0.51	0.16	0.77	0.00	0.64	0.07	0.66	0.01	0.47	0.17	0.67	0.00
Secondary earner	0.76	0.07	0.49	0.09	0.51	0.11	0.66	0.02	0.75	0.00	0.57	0.10	0.36	0.21	0.49	0.24	0.81	0.01	0.64	0.05	0.72	0.02	0.44	0.21	0.66	0.00
In work 1-3 months	0.51	0.00	0.21	0.00	0.18	0.00	0.45	0.00	0.70	0.00	0.55	0.00	0.15	0.00	0.27	0.00	0.24	0.00	0.35	0.00	0.17	0.00	0.34	0.00	0.39	0.00
In work 4-6 months	0.56	0.08	0.44	0.06	0.45	0.06	0.62	0.02	0.76	0.00	0.54	0.02	0.38	0.06	0.36	0.17	0.41	0.09	0.45	0.04	0.38	0.07	0.25	0.12	0.57	0.00
In work 7-9 months	0.66	0.08	0.47	0.09	0.53	0.09	0.64	0.04	0.80	0.00	0.57	0.03	0.31	0.12	0.41	0.18	0.68	0.00	0.52	0.05	0.53	0.06	0.39	0.13	0.65	0.00
In work 10-12 months	0.75	0.05	0.50	0.08	0.48	0.10	0.63	0.02	0.73	0.00	0.56	0.10	0.37	0.20	0.51	0.19	0.78	0.00	0.65	0.06	0.69	0.01	0.47	0.19	0.71	0.00
Earnings Q1	0.60	0.08	0.41	0.07	0.73	0.02	0.79	0.02	0.74	0.03	0.44	0.08	0.43	0.13	0.37	0.29	0.73	0.02	0.61	0.04	0.57	0.02	0.41	0.16	0.78	0.00
Earnings Q3	0.76	0.06	0.51	0.10	0.51	0.09	0.66	0.01	0.78	0.00	0.58	0.10	0.34	0.20	0.51	0.22	0.85	0.00	0.67	0.05	0.72	0.02	0.47	0.20	0.66	0.00
Earnings Q5	0.72	0.03	0.49	0.06	0.44	0.10	0.57	0.03	0.69	0.00	0.55	0.10	0.37	0.19	0.50	0.14	0.69	0.00	0.61	0.07	0.64	0.01	0.46	0.17	0.67	0.00

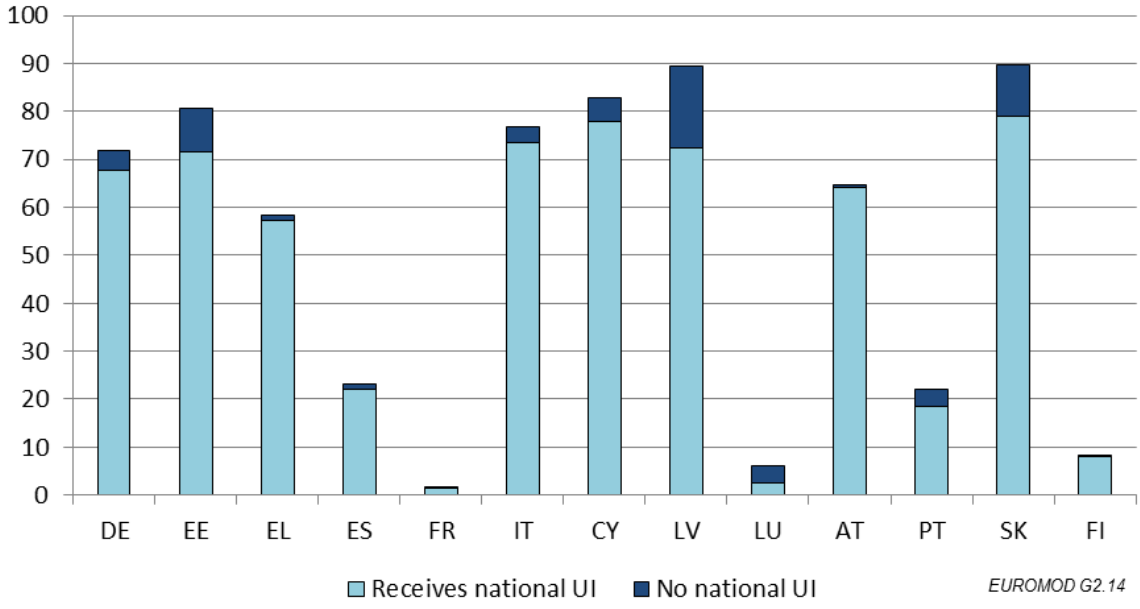
Notes: (a) –Coefficient of income stabilisation under existing national systems; (b) additional effect of EMU-UI on income stabilisation. In this table "self-employed" are defined as those with self-employment income. They may also have employment income. Those defined as "employed" do not have self-employment income. Part-time is defined as reporting30 hours of work or less per week. The months in work categories refer to months in work before simulating transitions into unemployment. Source: own calculations using EUROMOD version G2.14

Figure A1: Potential coverage: percentage of all people currently in work potentially covered by unemployment insurance benefit in case of an unemployment spell



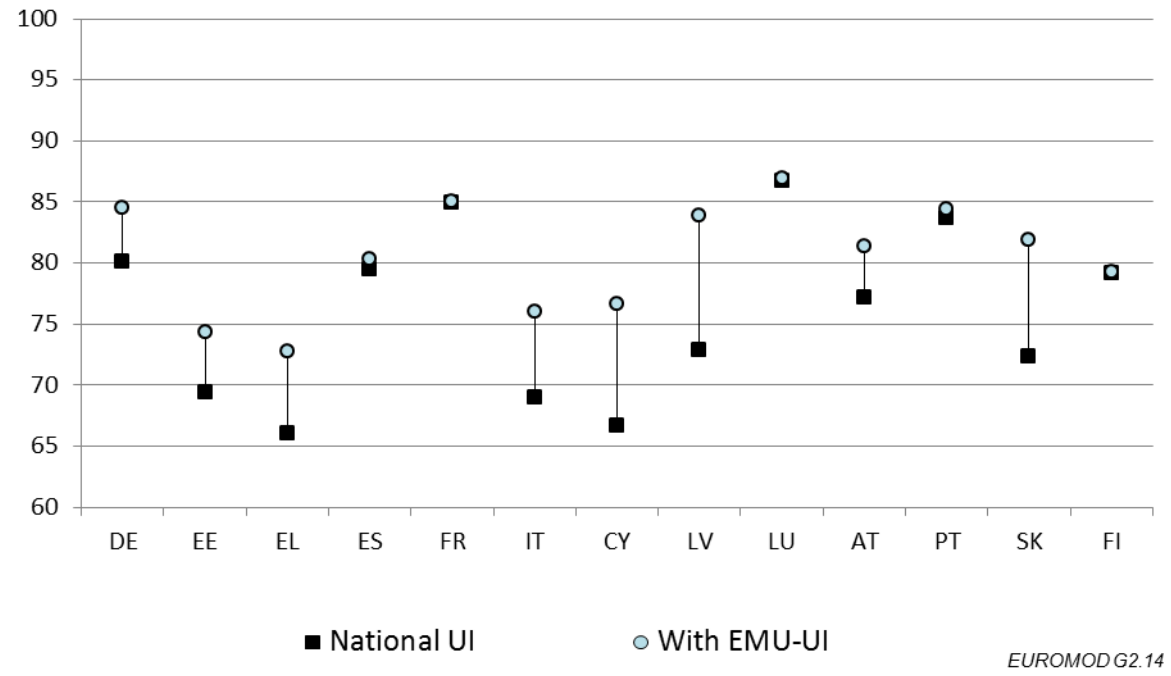
Source: own calculations using EUROMOD version G2.14

Figure A2: Beneficiaries: percentage of all people currently in work who would receive additional benefit through the EMU-UI in case of an unemployment spell



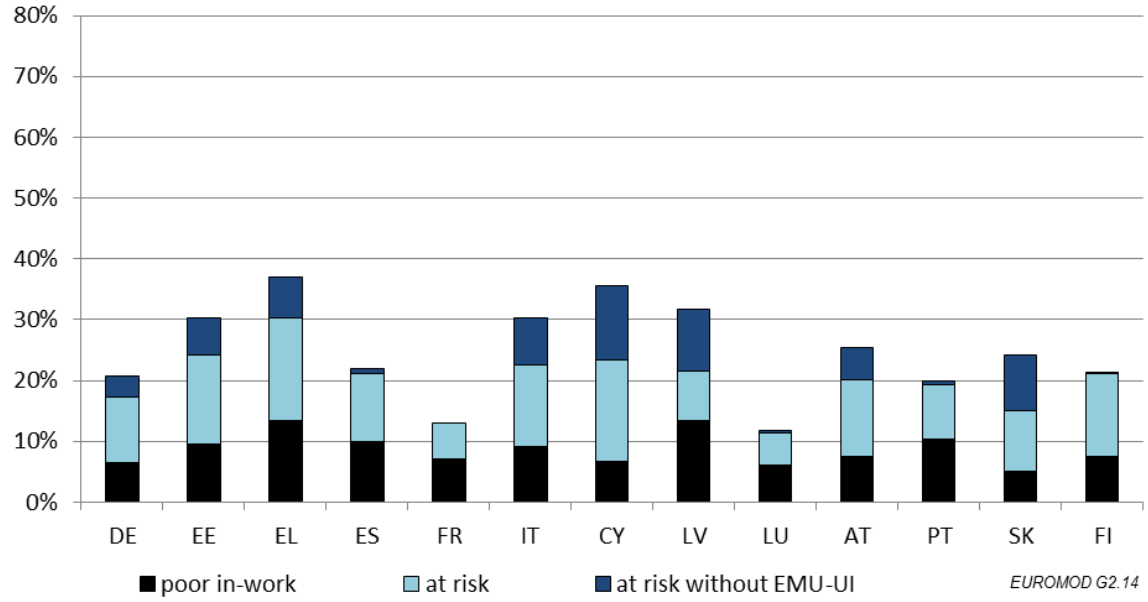
Note: as indicated by the different shading, some of the people potentially receiving an additional EMU provision would also receive some national provision, some not.
Source: own calculations using EUROMOD version G2.14

Figure A3: Mean net replacement rates: household disposable income post unemployment as percentage of household disposable income pre unemployment, without and with EMU-UI, for all people currently in work, in case of an unemployment spell



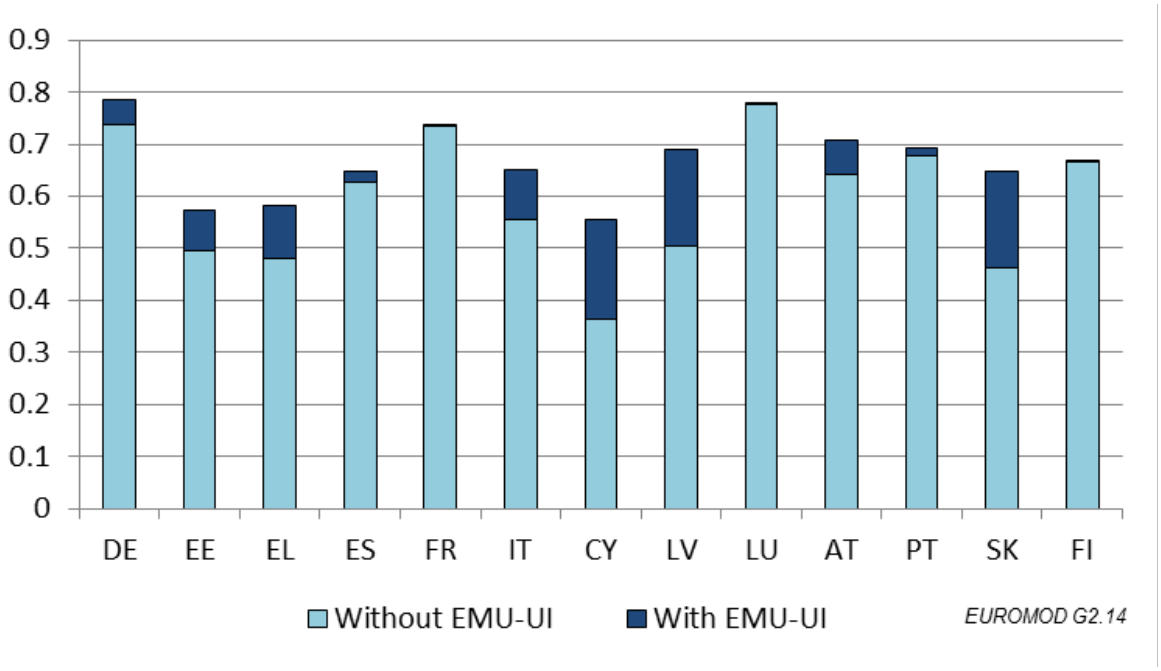
Source: own calculations using EUROMOD version G2.14

Figure A4: At poverty risk in unemployment (for all people currently in work, in case of an unemployment spell)



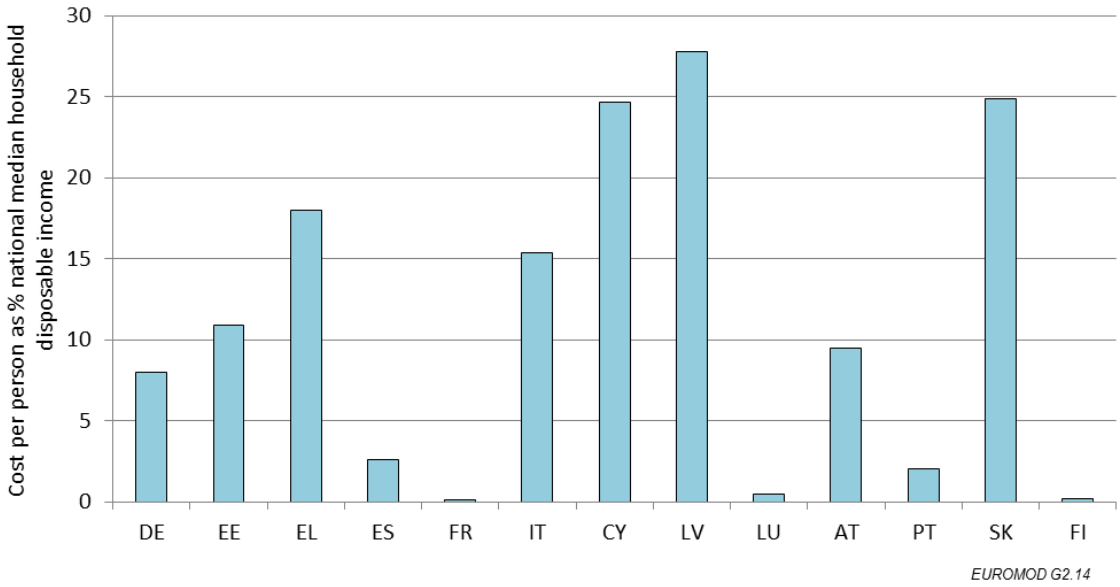
Notes: The poverty threshold is 60% median equivalised household disposable income in the baseline before unemployment.
Source: own calculations using EUROMOD version G2.14

Figure A5: Income stabilisation: additional effect of EMU-UI for all people currently in work, in case of an unemployment spell



Source: own calculations using EUROMOD version G2.14

Figure A6: Average additional budgetary cost of EMU-UI per unemployed person (as % of median household disposable income), for all people currently in work, in case of an unemployment spell



Source: own calculations using EUROMOD version G2.14