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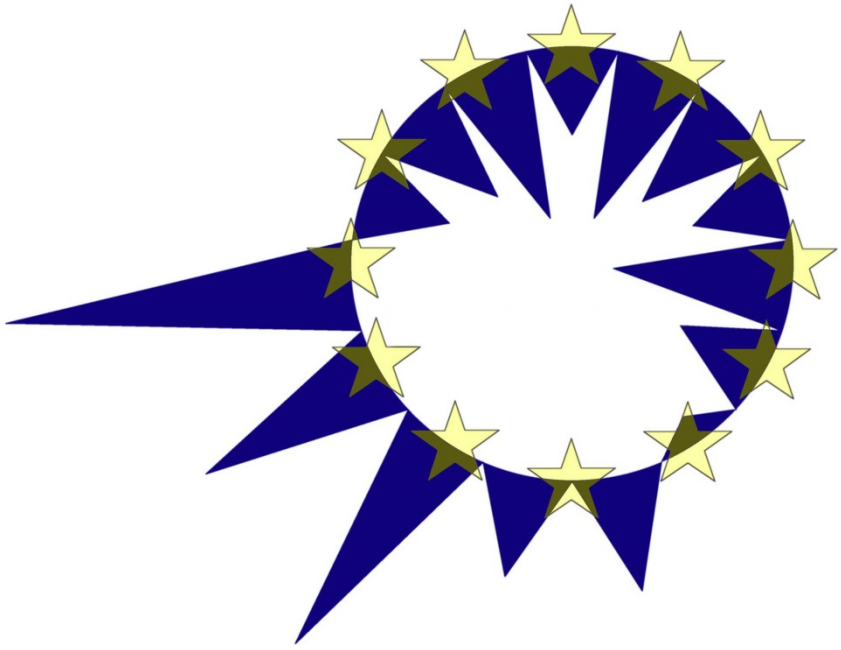

EUROMOD Working Paper No. EM 5/14

The implications of an EMU unemployment insurance scheme for supporting incomes

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April 2014

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Abstract

In this paper we explore the potential of a new unemployment insurance benefit at EMU level to improve the income protection available to the unemployed and their families. The benefit is designed to be additional to existing national provision where this falls short in terms of eligibility (coverage) and the amount payable. The "EMU-UI" has a common design across countries, which is intended to reduce the extent of current gaps in coverage where these are sizeable due to stringent eligibility conditions, to increase generosity where current unemployment benefits are low relative to earnings and to extend duration where this is shorter than 12 months. Our analysis compares the extent of the effect of these improvements across selected countries from the Monetary Union (Germany, Estonia, Greece, Spain, France, Italy, Latvia, Austria, Portugal and Finland) using EUROMOD to simulate entitlement to the national and EMU-UIs and to calculate the effect on household disposable income. We find that the EMU-UI reduces the risk of poverty for the new unemployed and has a positive effect on income stabilisation. The

[1] This work was financed by the European Commission, Directorate-General for Employment, Social Affairs and Inclusion through the Social Situation Monitor and this paper is also published as Social Situation Monitor Research Note 3/2013. It uses EUROMOD G1.4. We acknowledge the contribution of all past and current members of the EUROMOD consortium. The process of extending and updating EUROMOD is financially supported by the Directorate General for Employment, Social Affairs and Inclusion of the European Commission [Progress grant no. VS/2011/0445]. For Germany, France, Latvia, Portugal and Finland we make use of microdata from the EU Statistics on Incomes and Living Conditions (EU-SILC) made available by Eurostat under contract EU-SILC/2011/55; for Estonia, Greece, Spain, Austria and Italy the national EU-SILC "PDB" data made available by respective national statistical offices. We would like to thank Silvia Avram, Paola De Agostini, Francesco Figari, Chrysa Leventi, Jekaterina Navicke, Alari Paulus, Olga Rastrigina, Iva Tasseva and Alberto Tumino for advice and assistance. The authors alone are responsible for the analysis and interpretation of the data reported here.

extent of these effects varies in size across countries for two main reasons: notable differences in design of national unemployment insurance schemes and differences in labour force characteristics across countries, mainly in the proportion of self-employed workers who are typically not covered by national schemes. In countries such as France and Finland there is little effect of EMU-UI on poverty risk and stabilisation, while Greece, Italy and Latvia benefit the most, in particular from the EMU proportional scheme. Our analysis highlights potential areas of future research in terms of improving the design of the EMU-UI and accounting for national or EMU level ways of financing, as well as refinements to the methodology used to assess the effects of transitions to unemployment.

JEL Classification: C81, H55, I3

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

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1. Introduction and motivation

It is increasingly recognised that for the European Monetary Union (EMU), and the European project more generally, to be successful and sustainable there is a need for greater risk sharing across member states in order to provide better shock absorption against asymmetric economic fluctuations (European Commission, 2012). As part of a strategy to meet this need, an unemployment benefit system at the level of the EMU countries has been discussed (European Commission, 2013). This would serve as an insurance mechanism to smooth fluctuations in income across member states (see e.g. Dullien (2013)). It would also serve to strengthen income security for the unemployed themselves. To the extent that the EMU unemployment benefit added to existing coverage, or was more generous than existing systems (through higher level payments or longer duration, for example), not only would national automatic stabilizers be strengthened but also the individual income protection of the unemployed and their families would be improved, potentially enhancing social cohesion.

Existing national unemployment benefit schemes vary greatly in many dimensions (Esser et al., 2013). This makes the notion of an EMU scheme that reflects current national provision but provides an additional cross-country insurance and stabilization function, rather challenging. Alternatively, one can think of the EMU scheme as deliberately reducing the differences in extent of income protection for the unemployed across countries to some extent (levelling up rather than down).

The analysis in this paper contributes to the debate by providing evidence about the potential beneficiaries of an EMU unemployment benefit of a specific design, if it were to provide a minimum standard for the level and structure of benefit in each country and assuming that where existing provision is more generous (in any dimension) this remains in place. We examine who benefits, thereby identifying gaps and inadequacies in existing national systems using the EMU scheme as a benchmark. We also measure the net budgetary cost of the EMU scheme and thereby calculate the additional within-country automatic income stabilisation effect.

This paper does not consider how the EMU unemployment benefit would be financed or administered.[2] These aspects are of course critical for the design of an effective scheme, its

[2] Nor does it explore the inter-temporal implications of establishing an insurance fund at EMU level, or the effect of introducing triggers to the benefit design parameters (level, duration etc.) depending on macroeconomic conditions. Each of these has the potential to increase the between-country stabilisation effect.

political acceptability and its practical implementation, not least because they could add to the income stabilisation properties that we identify here in considering only the effect on beneficiaries. Nevertheless, understanding the relative effects of the EMU across countries with varying existing systems and labour markets is one important first step.

We make use of EUROMOD, the tax-benefit microsimulation model of the EU based on micro-data representative of households in each member state. This is used to simulate incomes in and out of work, both under existing unemployment benefit systems and with the addition of the EMU benefit for ten of the eighteen member states of the EMU: Germany, Estonia, Greece, Spain, France, Italy, Latvia, Austria Portugal and Finland. We follow the approach of previous analysis which "stress-tests" welfare systems for increasing unemployment (Avram et al., 2011; Figari et al., 2011; Fernandez Salgado et al., 2013) and simulate the effects of becoming unemployed on those that we observe in the micro-data to be in work, rather than analysing the incomes received by the currently unemployed. This is for two reasons.

First, in order to compare the effects of two policy regimes on income protection we need to be able to simulate the policy rules determining benefit entitlement. In most national unemployment insurance systems and one of the EMU benefit variants that we consider, eligibility and/or entitlement depends on previous earnings. This information is typically not available for the currently unemployed whereas it is for the currently in work. Secondly, the characteristics of the unemployed in any micro-dataset reflect the state of the labour market at the time the data were collected. The aim of this paper is to provide a generalisable assessment of the effects of existing unemployment benefit systems and what an EMU benefit could add, rather than one referring to a particular set of labour market circumstances.

This second consideration also leads us to depart from the earlier studies by not selecting the unemployed according to the characteristics of the most recent unemployment. These studies focus on the effects of tax-benefit systems on income protection with a particular focus on the crisis period. However, in this analysis the aim is to provide an assessment that will be as valid under future and unknown labour market conditions as it is now. We therefore calculate the effects for all of those currently in work on the basis that everyone has an equal chance of becoming unemployed under unknown economic conditions. However, in order to highlight how the systems operate differentially for groups with varying risk of unemployment, as well as other relevant characteristics, we provide results for sub-groups as well.

The remainder of this paper is structured as follows: Section 2 describes the main dimensions characterising national unemployment benefits in the countries that are analysed and specifies the design of the EMU-UI considered in this paper. Section 3

introduces the methods used to evaluate the effect of an EMU-UI using EUROMOD. The results are discussed in Section 4 in terms of six main aspects of interest: coverage, beneficiaries, net replacement rates, risk of poverty, income stabilisation and budgetary costs. Finally, Section 5 summarises the main findings, highlights some caveats of the analysis and suggests ideas for future research.

2. National unemployment benefits and the EMU-UI schemes

2.1 National unemployment benefits

Existing unemployment benefit systems vary widely in many dimensions, making comparisons and assessments quite complex as well as posing challenges for any attempt to suggest pathways to greater harmonisation. Esser et al. (2013) provide an excellent summary of the 2010 systems. The dimensions that are likely to have the most effect on the amount of benefit received by any particular person in unemployment are:

1. **Eligibility** in terms of meeting the minimum required amount of work or **contributions**; the period in which these occurred may matter too.
2. **Eligibility** in terms of **other conditions** (e.g. employment status (employed or self-employed), type of employment contract, age).
3. For those eligible, the **level of payment**. This may be proportional to previous earnings (either net or gross of income tax and/or social insurance contributions) or another reference income base, with or without floors and ceilings; or flat rate. It may also depend on the length of the period of contributing, and vary over the period of eligibility.
4. The **duration** of entitlement.
5. The existence or otherwise of an **unemployment assistance** scheme (and the conditions attached to it); in most but not all EMU countries unemployed people seeking work are eligible for **social assistance** if their family incomes are low enough and they meet other relevant conditions.

Table 1 in the Appendix summarises the key characteristics of the schemes in 2012 in the countries that we consider. The minimum contribution period varies from 4 months in France to 12 in Germany, Estonia, Spain, Italy and Portugal. In addition in most countries these contributions can have been made over a longer period and the implicit proportion of time working or contributing to qualify for benefit can be as low as 20% (Spain: 12 months out of the previous 60) or 14% (France: 4 months out of the previous 28) or as high as 75%

(Latvia: 9 months out of the previous 12).[3] Other conditions matter too. There are lower age limits in some countries and certain sorts of labour contracts are excluded in others. In general the self-employed are not covered by unemployment insurance (and do not pay contributions) but could be eligible for particular types of unemployment assistance benefits in some countries. The benefit payment is flat rate in Greece and is calculated as a percentage of previous earnings in a reference period in the remaining countries. This period may be the same as the contribution period or it can be shorter, sometimes that of the last earnings payment. In Finland, Germany and Austria the earnings base is calculated net of income tax and social insurance contributions. The percentage that is applied ranges from as high as 75% in Italy in the first months of unemployment to as low as 20% (Finland) or 25% (Italy) for earnings above an upper limit. In Germany the percentage depends on the presence of children (67%) or not (60%). In many countries there are minimum levels of contribution or payment and/or maximum payments. The latter can substantially reduce the replacement rate for higher earners. The level of payment in many countries reduces through time and within the 12 months considered in this paper in Estonia, Italy, Latvia and Portugal. The duration of entitlement depends on several criteria in some countries. Table 1 shows the maximum duration for "standard cases" but in many countries special cases (based on age or length of contribution for example) apply, extending duration up to or beyond the 12 months considered in this paper. Only in Latvia is maximum duration shorter than 12 months in all cases.

2.2 An EMU unemployment insurance

In much of the literature on between-country stabilisation effects the EMU scheme is considered as the foundation of the total provision, with residual national payments providing a top up in some cases (e.g. Dullien, 2013). In this analysis, in order to focus on the individual-level income protection effects, we consider the EMU scheme as a top up to the existing national provision where the latter falls short of the standard set by the EMU scheme in any of the dimensions considered. The distinction only becomes important when considering the between-country stabilisation potential of a scheme, which is not the focus of this paper. We return to this issue in the conclusion.

As well as some concrete proposals there are very many possible designs for a European or EMU unemployment benefit system. The scheme that we analyse here is based on the assessment of key design issues set out a paper prepared by a DG-EMPL working group "On Automatic Stabilisers". The benefit would:

[3] See European Commission (2013) Table 8.

- Be available to all currently employed and self-employed up to age 64.
- 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 33% of average earnings in the country OR 50% of previous (most recent) own gross monthly earnings, with no floors or ceilings. We consider these two alternative options separately.
- 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)
- Top up existing national provision each month by the amount that the EMU-UI entitlement exceeds than that due from the national benefit.[4]

3. Methods and data

3.1 The European tax-benefit model EUROMOD

To calculate entitlement to unemployment insurance and household disposable income under the different scenarios, our analysis makes use of EUROMOD, the EU tax-benefit microsimulation model based on information from EU-SILC. EUROMOD simulates cash benefit entitlements and direct personal tax and social insurance contribution liabilities on the basis of the tax-benefit rules in place and information available in the underlying datasets. Policies are those in place on June 30th in the year in question. Market incomes are taken from the data, along with information on other personal/household characteristics (e.g. age and marital status). See Sutherland and Figari (2013) for further information. In this analysis we use micro-data from the 2008 SILC, which includes income information from 2007, except in France, where 2010 SILC is used, with income information from 2009. We use the 2012 tax-benefit system, including 2012 national unemployment insurance schemes as the starting point for our analysis.

In this analysis labour market and other behaviour is assumed to be the same before and after the introduction of the EMU-UI, as is the behaviour of other household members when a person becomes unemployed.

[4] Our results can also be interpreted as showing the net effect of an EMU-UI substituting for the first tranche of national benefit (and topping it up if it is more generous), and with national provision remaining, topping up to the existing level, if this exceeds the EMU-UI provision.

3.2 Simulating the transition from work into unemployment

The strategy used in this paper in order to evaluate the potential effect of an EMU-UI consists in moving people from employment or self-employment into unemployment and re-calculating their new disposable income both with and without introducing the EMU-UI by means of the microsimulation model EUROMOD, hence capturing the implications of tax and benefit systems under their new labour market status. Contrary to previous EUROMOD studies using similar techniques, we do not select a specific group of people to move into unemployment. Instead, the effects of a transition to unemployment are simulated for all those currently in work and who are not recorded as receiving unemployment benefit in the data. We refer to this group of people as the "new unemployed".

The effects of transition to unemployment in our analysis are simulated in the following way. First, disposable income is calculated before transition to unemployment takes place. Then, for each earner in the household, individual earnings are set to zero and all benefits they would become eligible for (including EMU-UI) are simulated with EUROMOD, as well as their corresponding household disposable income under unemployment.[5] This is done separately for each earner in the household, making the assumption that the earnings of other household members are not affected by the individual's change in labour market status and income.

Table 2 shows the characteristics of the samples in each country, highlighting the extent to which the in-work labour force differs across countries. Of particular interest for our analysis is the percentage of self-employed workers in our samples. As previously mentioned, this group of workers is usually ineligible for national unemployment insurance benefits. Therefore, we would expect the EMU-UI to have a notably positive effect in countries like Greece and Italy, which are characterised by high proportions of self-employed workers, who would be covered under the EMU scheme.

Simulating transition to unemployment is particularly practical in order to simulate the policy rules determining entitlement to unemployment benefits. Most national unemployment insurance systems are based on previous earnings and this information is unavailable in the data for the currently unemployed. However, for the new unemployed, previous earnings are simply recorded as the earnings before their transition to unemployment. Other important assumptions need to be made for the calculation of

[5] 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.

unemployment benefits for the new unemployed. In particular, the number of months in unemployment needs to be determined. Here, unemployment duration is assumed to be equal to months in work during the year before the simulated transition. Moreover, the number of months worked in the qualifying period is also set equal to number of months in work before the transition, which is recorded over the last 12 months. For this reason, we translate each country's specific qualifying period into a proportion of 12 months. For instance, in Germany contributions are evaluated over a period of 24 months out of which the person needs to have contributed in 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.

The two assumptions described above have important implications for our results. First, using months in work in the previous year for both months in unemployment and contribution history might result in high Net Replacement Rates and Stabilisation coefficients, as most people who we simulate as moving into unemployment have been working for the whole year and would therefore be assumed to have contribution for the whole qualifying period. This would make them eligible for maximum unemployment duration, given their other personal characteristics. Second, because both months in unemployment and months of contribution history are assumed equal to months in work in the previous year, we cannot capture coverage of the EMU-UI for people in short term unemployment (1 to 2 months) because the eligibility is based on contributions of 3 or more months in the previous year.[6]

3.3 Simulating the EMU-UI

Standard EUROMOD simulations of unemployment benefits do not provide results of receipt on a month-by-month basis. However, for the specification of the EMU-UI described above, it is of particular interest to evaluate the additional effects for each month during the year. For the purpose of this paper, we adapt EUROMOD simulations of unemployment benefits in order to calculate both national contributory unemployment benefits and the EMU-UI on a month-by-month basis over the year. This allows us to calculate for each month any additional benefit amount provided by the EMU-UI.

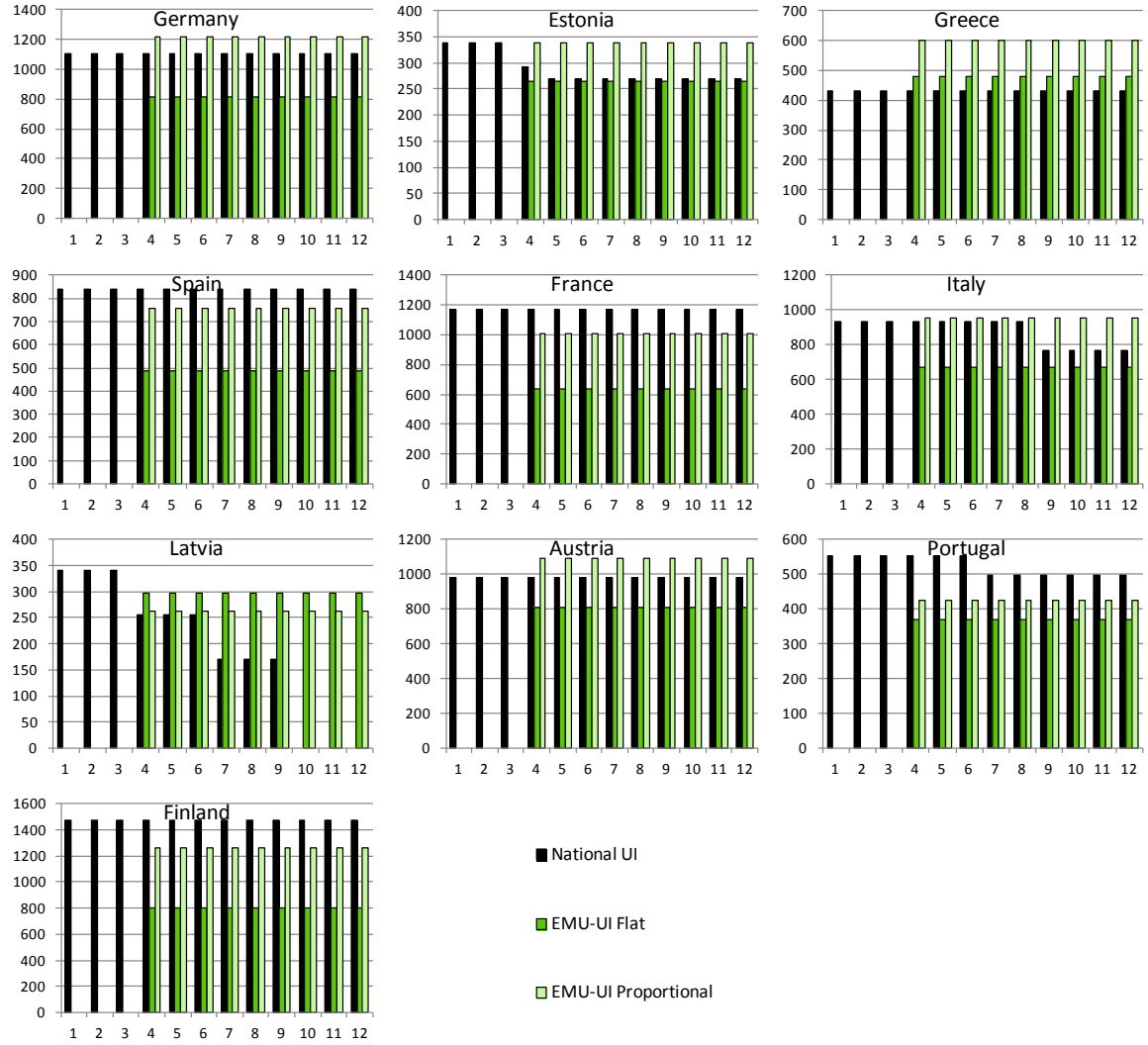
The national and the EMU-UI are simulated as separate policies in EUROMOD, in order to evaluate the coverage of the EMU-UI independently of that of the national schemes and to be able to compare the benefit amounts in each month of the year. As previously mentioned in the description of the EMU-UI, the scheme is meant to act as a top up for the

[6] An alternative would be to model unemployment duration for the individuals simulated as moving into unemployment, depending on their characteristics.

national schemes, meaning that each month the simulated EMU-UI benefit is compared to the national provision and the latter is topped up only in the case the EMU-UI amount exceeds the national benefit.

Figure 1 shows the month-by-month entitlement to the national and two alternative EMU-UI schemes for a person who has been on national median earnings with a full contribution history and maximum unemployment benefit duration. It shows how the EMU-UI schemes only kick in, by design, in month 4. In Germany, Greece, Spain, France, Austria and Finland the national UI entitlement is the same in each of the 12 months. In Estonia, Italy and Portugal it drops somewhat within the year and in Latvia it falls to zero in month 10. Both the flat and the proportional EMU-UI schemes are worth less than the national provision in each month in Spain, France, Portugal and Finland. In Greece and Latvia both EMU schemes are worth more than the national scheme in each of months 4-12. In Germany, Estonia and Austria, only the proportional EMU-UI scheme is more generous than the national benefit, this is due to the fact that the level of payment of the national scheme is based on net earnings in Germany and Austria, and because the national benefit amount decreases after month 3 in Estonia. The proportional EMU-UI is worth more than the flat EMU-UI in all countries except Latvia. In Italy the proportional scheme is worth about the same as the national benefit in months 4-8 but more in months 9-12.

Figure 1: Entitlement to Unemployment Insurance benefits by month – median earnings



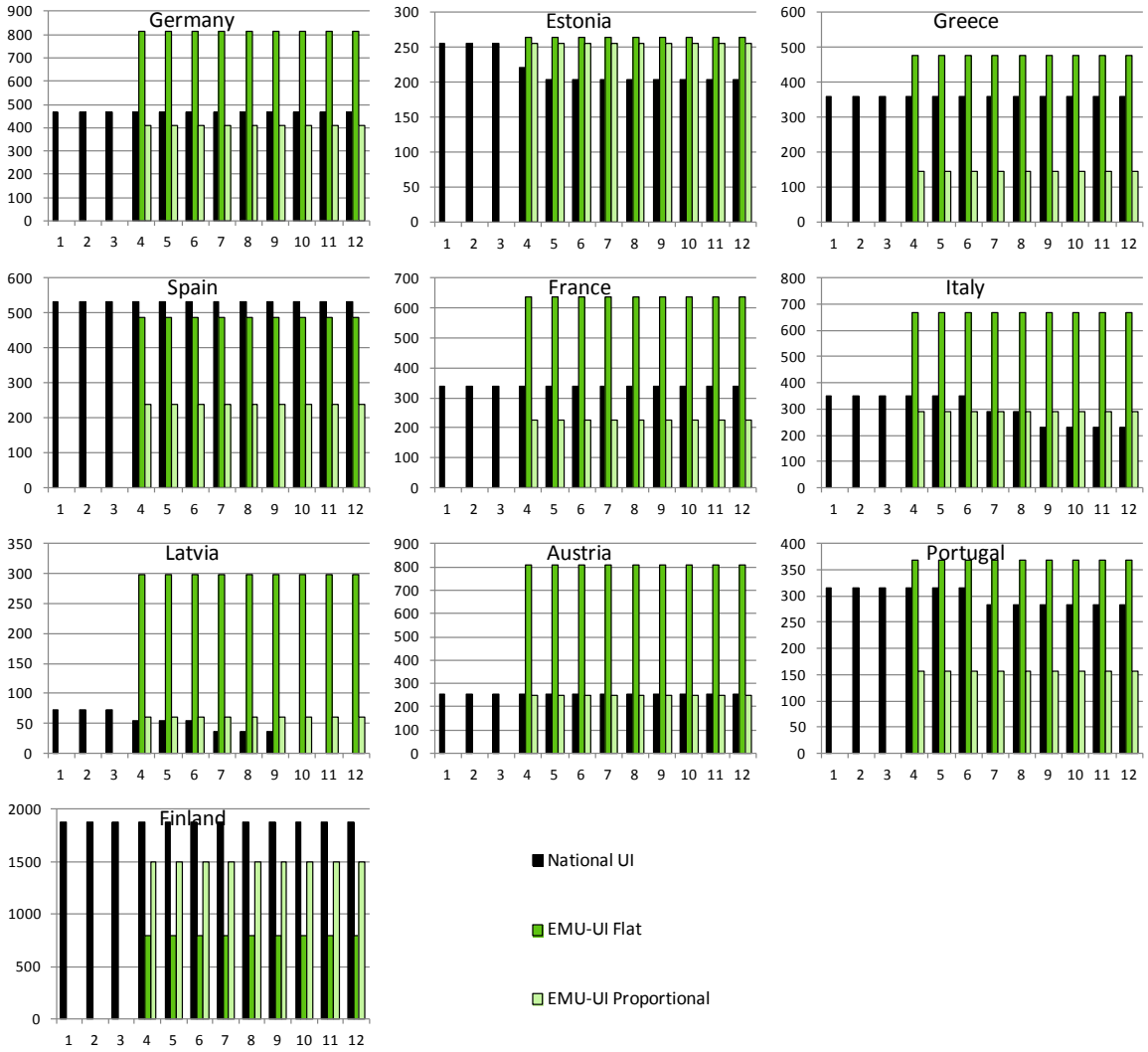
Source: own calculations using EUROMOD version G1.4

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. Not surprisingly, the flat EMU-UI scheme results in higher entitlements than the proportional EMU-UI in all countries except Finland. It is also more generous than the national schemes in all countries except Finland and Spain.[7] The proportional EMU-UI is also more generous than

[7] The national benefit amount in Spain is much higher than the proportional EMU-UI because the national scheme is evaluated over a different income base than the EMU-UI.

the Latvian national system and the same is true in months 9-12 in Italy. The difference is small in Austria.

Figure 2: Entitlement to Unemployment Insurance benefits by month – bottom quintile earnings

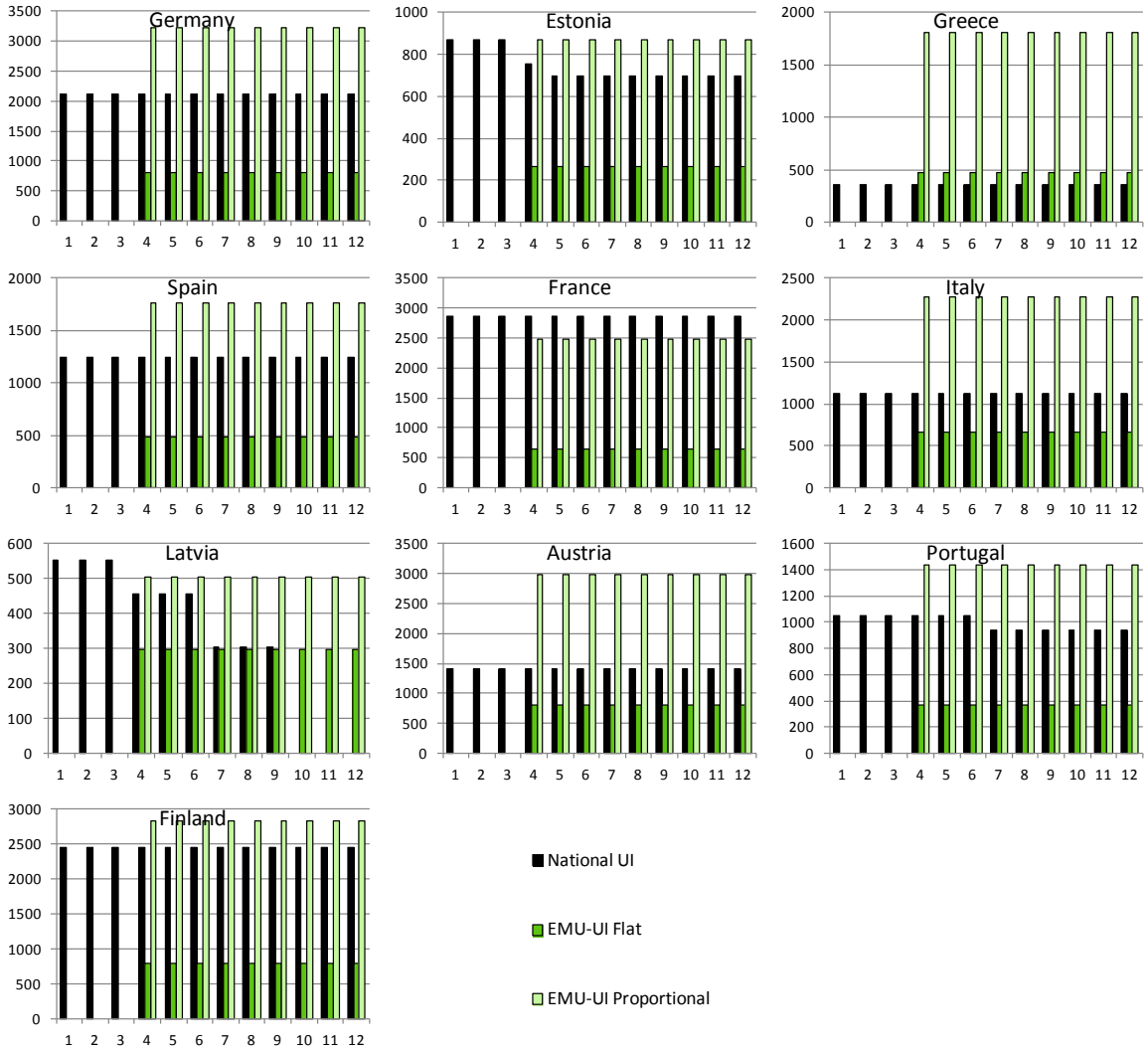


Source: own calculations using EUROMOD version G1.4

Figure 3 shows the situation for a person with earnings at the top quintile in each country. Not surprisingly, the proportional EMU-UI performs better (in the sense of being more generous) than the flat EMU-UI in all countries. It also performs better than the national benefit in all countries except France and the effect is very large in Greece, Italy and Austria. Ceilings that operate in the national systems, together with rates lower than the 50% used in the proportional EMU-UI scheme are the explanation for this effect. In Greece, where the national benefit is itself flat rate, the flat EMU-UI performs slightly

better. But in all other countries the national benefit pays more than the flat EMU-UI (except in Latvia in the months after the national benefit stops).

Figure 3: Entitlement to Unemployment Insurance benefits by month – top quintile earnings



Source: own calculations using EUROMOD version G1.4

These illustrative calculations for stylised situations provide some indication of the nature of the effect of the EMU-UI schemes. For example, it seems likely that the flat EMU-UI would have little effect in Spain and that both EMU-UI schemes would have a major effect on incomes in unemployment in Greece and Latvia. To explore whether this is so, and to compare how actual populations in each country would be affected, the next section analyses the effect of paying unemployed people the higher of the two benefits,

considering any additional benefit from the EMU-UI as a top up to the national benefit in each month. This is analysed as an average over the year.

4. Results

Our analysis focuses on the additional effect of the EMU-UI in a number of dimensions. First we analyse the extent to which the EMU-UI improves the coverage of UI among the new unemployed. There are several different ways of measuring UI coverage and the levels, and to some extent country rankings, depend on the data and methods used (European Commission, 2013). Here, we measure coverage as the proportion of the potential new unemployed (those currently in work) who are entitled to any UI in the first 12 months of unemployment. This is conceptually similar to the measure included in the SPIN database (see Esser et al., 2013) which measures the proportion of insured persons in the labour force. However, here the denominator for our calculation is the number of people currently in work (employed or self-employed, as captured by the EU-SILC information on income from work) and does not include those not in work. Hence we would expect our estimates of coverage to exceed those of SPIN, as well as the pseudo-coverage rates calculated using surveys and administrative sources, as these also include the longer-term unemployed who may have exhausted any eligibility for insurance benefits. Our analysis focuses on the first 12 months of unemployment and, as explained above, may over- rather than under-estimate the numbers entitled. In our analysis we compare the additional effect on coverage of the EMU-UI across countries.

Secondly, the proportion of our sample (all those in work) who would benefit from the EMU-UI is compared, distinguishing between those who receive higher payments of UI in any month, and those who are entitled to no national benefit, but do qualify for the EMU-UI. At this point it is also instructive to focus on the lowest paid workers, who may be less likely to be eligible for national benefits than workers in general. We consider those in the bottom quintile group of annual earnings separately.

Higher UI payments may mean that recipients pay higher income tax and social insurance contributions (see Table 1). They and their families may also see reductions in benefits that are assessed on other incomes, such as unemployment assistance (in some countries: see Table 1) or social assistance or other income-tested cash benefits and tax credits. Thus the net effects on household disposable income are of interest since the national tax-benefit systems treat UI income in different ways. Furthermore, the effect on the family in which the potentially unemployed person lives is also of importance. We compare the cross-country effects on Net Replacement Rates: the ratio of household disposable income before

unemployment to that after unemployment. We also examine the implications of becoming unemployed for risk of poverty, focusing on the difference made by the EMU-UI. As shown by Fernandez Salgado et al. (2013) a large part of the household income protection afforded to the unemployed is in the form of earnings received by other household members. For this reason it is also instructive to consider separately the position of people who are the sole earners in their household.

Of particular relevance to the evaluation of the EMU-UI as a potential automatic stabiliser is the extent to which it adds to the income stabilisation that occurs as a result of the operation of national tax-benefit systems. We calculate the "income stabilisation coefficient" as defined and used in Bargain et al. (2013; equation 12) which is

$$\tau = 1 - \frac{\sum_i (Y_i^{post} - Y_i^{pre})}{\sum_i (X_i^{post} - X_i^{pre})} ,$$

where Y_i^{pre} and Y_i^{post} stand for household *i*'s disposable income before and after transition to unemployment, respectively; X_i^{pre} and X_i^{post} stand for household *i*'s market income before and after transition to unemployment, respectively; and where transitions to unemployment are simulated for each earner in the household in turn, as mentioned above. Given the focus on short term unemployment in this study and the assumption that contribution conditions can be assessed on a pro rata basis using the previous year's employment, we would expect our estimates to be higher than those previously found in the literature.

We also calculate the average net budgetary cost per unemployed person of the EMU-UI in each country considered.

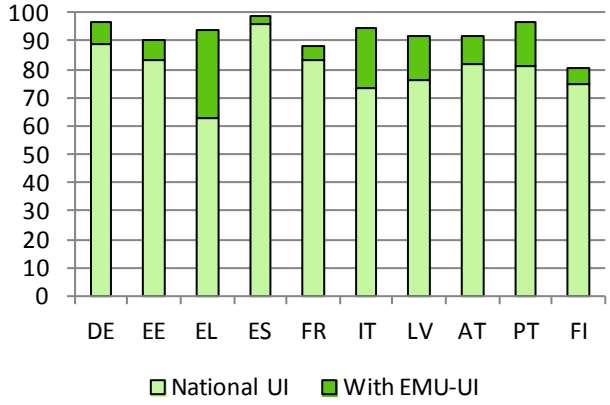
4.1 Coverage

Figure 4 shows the percentage of the employed and self-employed in each country who would receive national UI at some point in the year after becoming unemployed. It also shows the additional percentage who would receive benefit from the EMU-UI while not qualifying for national benefit during the year.

According to our calculations, coverage rates for the existing national UI benefits range from 96% in Spain and 89% in Germany to 63% in Greece and 73% in Italy. With the EMU-UI, they are increased substantially in Greece (31 percentage points), Italy (21 percentage points) mainly due to the large proportion of self-employed in these countries which would be covered by the EMU-UI; as well as in Latvia and Portugal (15 percentage points). The smallest extensions to coverage are in France, Spain and Finland (5 percentage points), 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. In the case of Spain, coverage with EMU-UI also increases only by little because the self-employed are covered by the national scheme.[8]

Figure 4: Coverage: percentage of people currently in-work covered by unemployment insurance



4.2

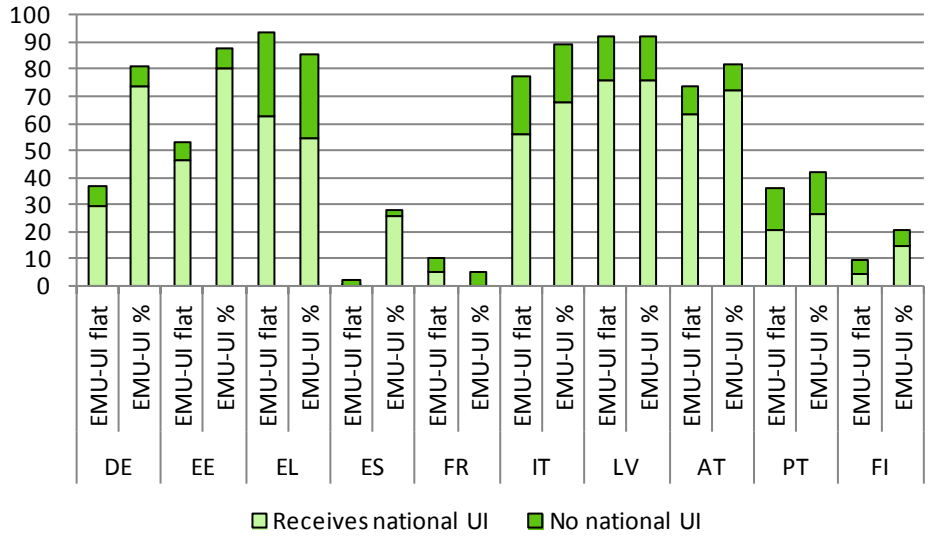
Source: own calculations using EUROMOD version G1.4

4.3 Beneficiaries

Figure 5 focuses specifically on the gainers from the EMU-UI. It shows the proportion of the whole sample (the potentially unemployed) who would receive an additional payment from the EMU scheme at some point in the 12 months following becoming unemployed. It distinguishes between those who would already be receiving some national insurance benefit during the year and those not receiving any national benefit, who would be newly covered by the EMU-UI scheme. The figure shows the effect for both the flat rate EMU-UI and that which depends on the person's own previous earnings (shown in the chart as "EMU-UI %"). The share of potentially unemployed who would benefit from either version of the EMU-UI varies widely across countries, from nearly 92% in Latvia for both versions of the scheme down to less than 3% for the flat rate EMU-UI in Spain and between 5% and 10% for the two schemes in France. The rate is particularly high in Latvia because everyone who qualifies benefits in months 10 to 12.

[8] In Spain, the self-employed are eligible for a particular type of unemployment benefit, which is similar in characteristics to that of the employed. In EUROMOD, we therefore allow the self-employed to be eligible to the national unemployment insurance scheme in order to capture to some extent the provision of the unemployment benefit for which they are eligible.

Figure 5: Beneficiaries: percentage of people currently in-work receiving additional benefit through the EMU-UI (All)



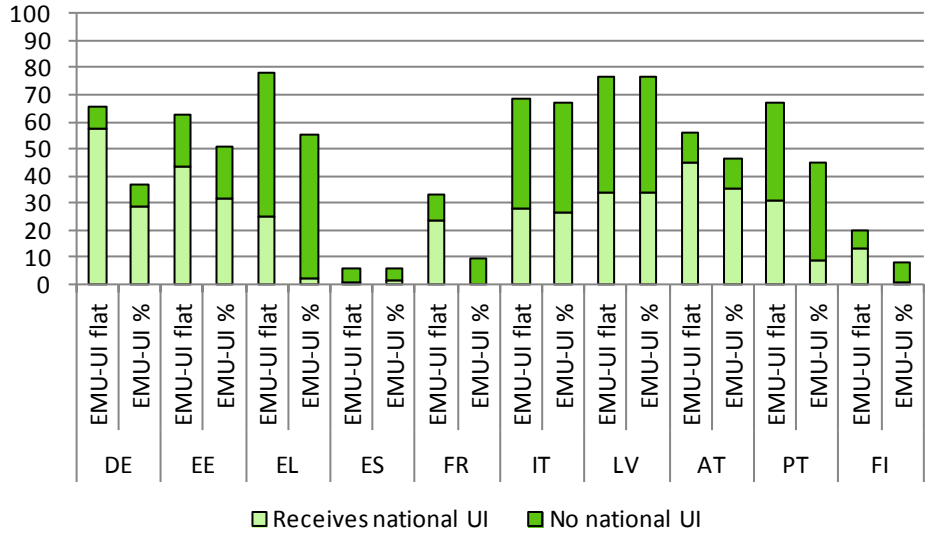
Source: own calculations using EUROMOD version G1.4

As indicated by the analysis of coverage in the previous section, the extent to which beneficiaries do not already receive some national UI benefits also varies and is substantial in Greece, Italy, Latvia and Portugal and smaller elsewhere. However, except in Spain, France, Portugal and Finland relatively large shares of the population at risk would receive some extra benefit at some point in the year from the EMU-UI while also receiving the national benefit at some point. The share is more than 50% in Estonia, Greece, Italy, Latvia and Austria, and for the proportional scheme in Germany. Where they differ, larger shares of the new unemployed benefit from the proportional scheme than the flat rate scheme, except in Greece and France.

Those with low annual earnings before becoming unemployed might be expected to be more likely to benefit from the EMU-UI than others, not least because people with short earnings histories are particularly represented in this group. Figure 6 shows the same information as Figure 5, but for the bottom quintile group of earners. Since the quintile group is defined in terms of annual earnings, there are a high proportion of people with less than 12 months of employment in this group; also those most likely to benefit from an extension in coverage due to less stringent contribution conditions under the EMU-UI (except in Spain, France and Finland). The share of those who benefit without already receiving national benefit is indeed generally much higher in Figure 6 than in Figure 5. Except in Latvia, the share of low earning people benefiting is lower for the proportional EMU-UI scheme than the flat rate scheme. As we have seen from the model family

analysis in Figures 1-3, lower earning people benefit to a greater extent from the flat rate EMU-UI and higher earning people from the proportional scheme. This effect is magnified by the minimum and maximum payments under the national scheme.

Figure 6: Beneficiaries: percentage of people currently in-work receiving additional benefit through the EMU-UI (bottom quintile group of earnings)



Source: own calculations using EUROMOD version G1.4

More information about the likelihood of benefiting from the EMU-UI by the characteristics of the potentially unemployed can be found in Table 3. This shows the proportions of each sub-group who would benefit, distinguishing between those receiving the EMU-UI in addition to the national insurance benefit, and those receiving the EMU-UI without eligibility for the national benefit. This shows how large proportions of the self-employed in most countries would benefit from the EMU-UI and in most cases this is because they are not entitled to national benefits. For example, in Greece our calculations suggest that 79% of the self-employed would be newly covered. As Table 2 shows, the self-employed make up a large proportion of those in paid work in Greece (39%) and hence this explains all of the extension of coverage in Greece (31% of the group as a whole, as shown in Figure 5). The self-employed do not benefit particularly in Spain because they are already covered by a national scheme.

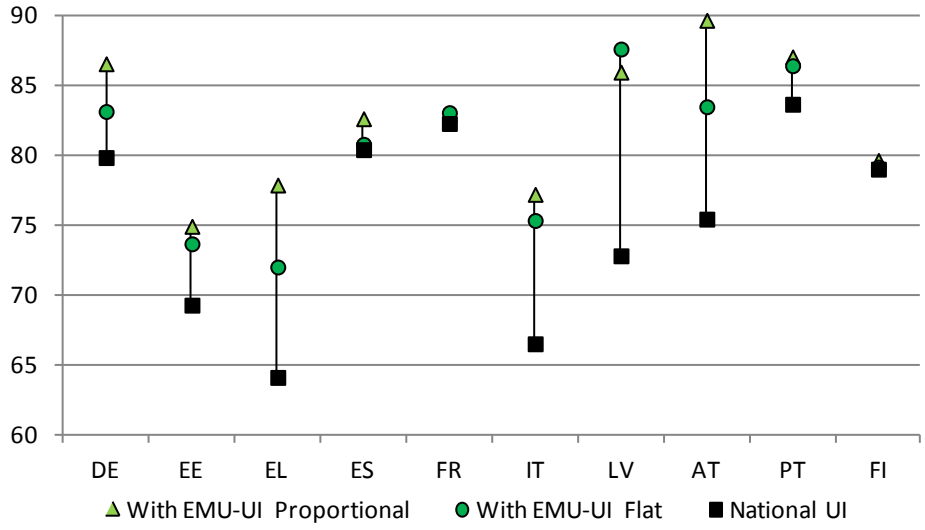
The information in Table 3 can be used to provide some intuition about the relative scale of beneficiaries that would result from an increase in unemployment among particular types of workers. For example, if new unemployment were concentrated among the less-educated (lower secondary education or less) then the flat rate EMU-UI would have a particularly large share of beneficiaries among those already entitled to national benefit in

Germany, Estonia, France and Portugal. However, there would be a particularly low share of such beneficiaries in Greece and Latvia. But in Latvia and also Estonia and Finland, there would be a relatively high proportion newly entitled to benefit among this group, for both the flat rate and proportional benefit schemes. On the whole members of this group qualifying for national UI would not benefit particularly from the proportional EMU-UI scheme. Portugal is an exception.

4.4 Net replacement rates

The EMU-UI would add additional protection to household incomes following unemployment, raising the net replacement rate (NRR). The extent of this effect is shown in Figure 7, comparing the ratio of household disposable income after unemployment to that before, under the existing national tax-benefit systems and with the addition of the EMU-UI, assuming that this is treated in the same way in national tax-benefit systems as the national UI (see Table 1). The EMI UI has a positive effect on the mean NRR in all countries to some extent, although the effect is very small in France and Finland. Except in Latvia the effect is generally larger under the proportional scheme and the effect is quite large (10 percentage points or more) in Greece, Italy, Austria and for both schemes in Latvia.

Figure 7: Mean net replacement rates: household disposable income post unemployment as a percentage of household disposable income pre unemployment, without and with EMU-UI

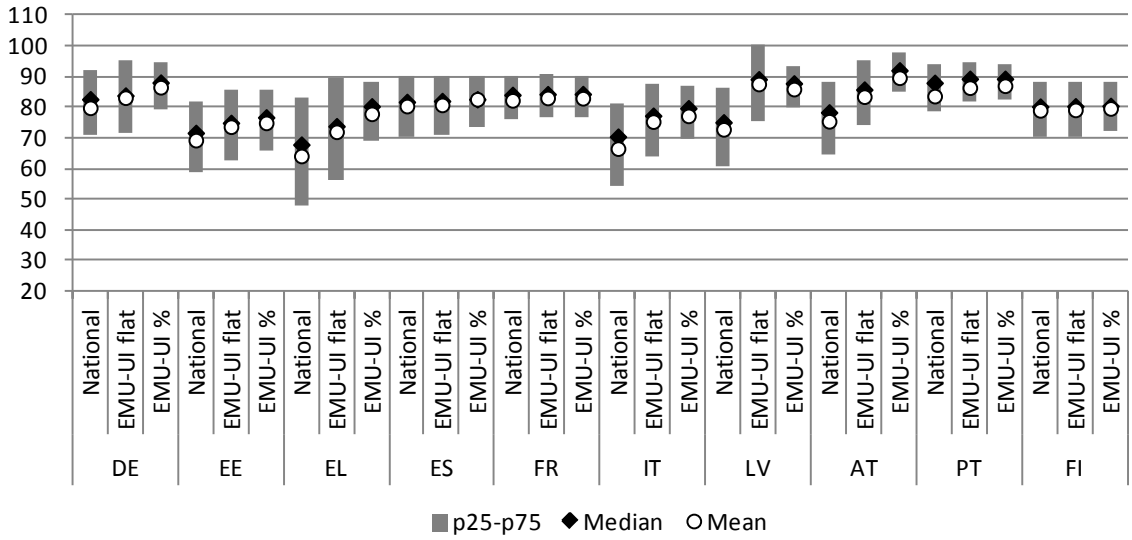


Source: own calculations using EUROMOD version G1.4

The change in the dispersion of NRRs matters too and Figure 8 shows not only the mean effect (shown as a white circle) but also some statistics indicating the distribution of NRR: P25 and P75 (shown as a grey bar) and the median (shown as a black diamond). The EMU-UI reduces, the dispersion of the NRR, especially in Greece, Italy, Latvia and Austria for the proportional scheme. This relates to the extension of coverage in these countries, and also the increase in the size of payment for those affected by ceilings and floors in the current national systems.

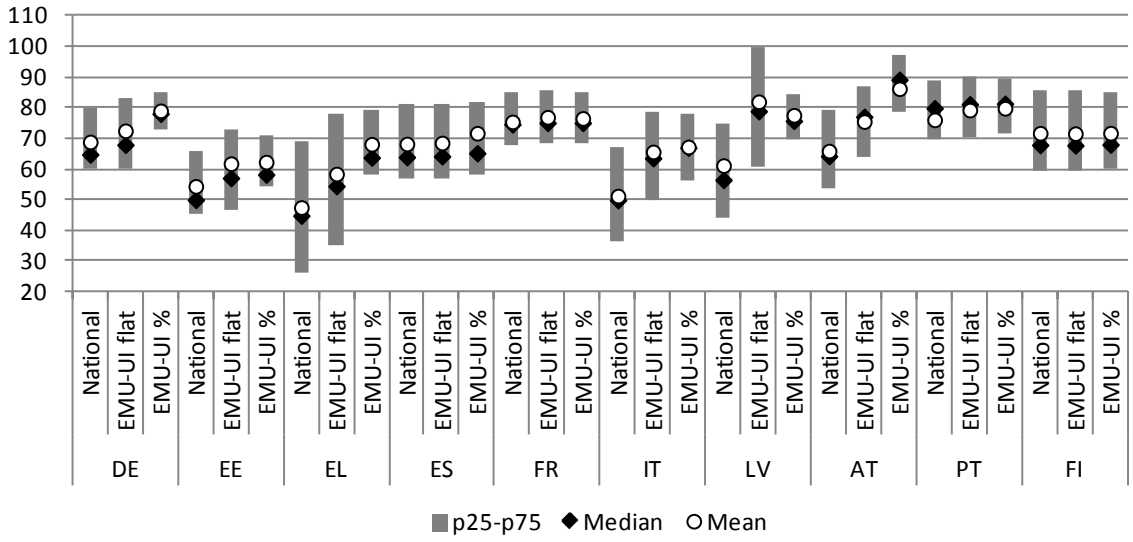
A substantial component of the NRRs is contributed by the earnings of other household members. For example, this income source (measured gross) ranges from between 56% in France and 61% in Portugal and Spain to 78% in Latvia and 76% in Italy of the mean post unemployment household income (not shown in the Figure). It is therefore instructive to consider NRRs calculated for households with only one person earning. When they become unemployed, benefits, including unemployment insurance, become much more important for household income replacement. This is shown in Figure 9. As expected the NRRs are lower on average and the EMU-UI, especially the proportional version, has a larger effect than for the population as a whole. It also reduces the dispersion by a greater amount.

Figure 8: Net replacement rates: household disposable income post unemployment as a percentage of household disposable income pre unemployment, without and with EMU-UI (all)



Source: own calculations using EUROMOD version G1.4

Figure 9: Net replacement rates: household disposable income post unemployment as a percentage of household disposable income pre unemployment, without and with EMU-UI (sole earner households)

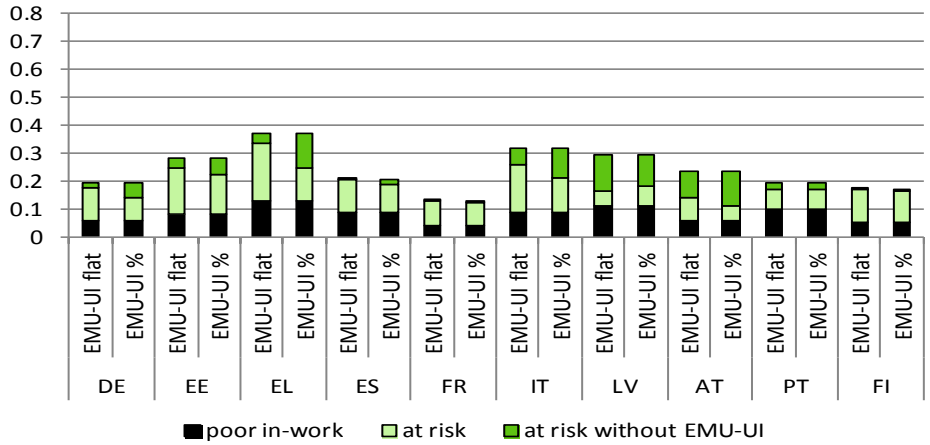


Source: own calculations using EUROMOD version G1.4

4.5 Risk of poverty

Becoming unemployed increases the risk of household incomes falling below the poverty threshold, here measured as 60% of median equivalised disposable income in the baseline before unemployment (see Table 2 for values of the threshold). Figure 10 shows the difference made by the EMU-UI in protecting incomes from falling below the poverty threshold (bright green part of the bars). It also shows the proportion of the sample who have incomes below the poverty threshold while still in work (black part of the bars), and those who would fall into poverty even if the EMU-UI was in place (pale green part of the bars). The additional protective effect of the EMU-UI is evident in all countries but is very small in France and Finland. It is large (more than 10 percentage points in Greece, Italy and Austria for the proportional scheme and in Latvia for both versions of the scheme. It is sizeable (at least 5 percentage points) also in Germany and Estonia for the proportional scheme and in Italy and Austria for the flat rate scheme.

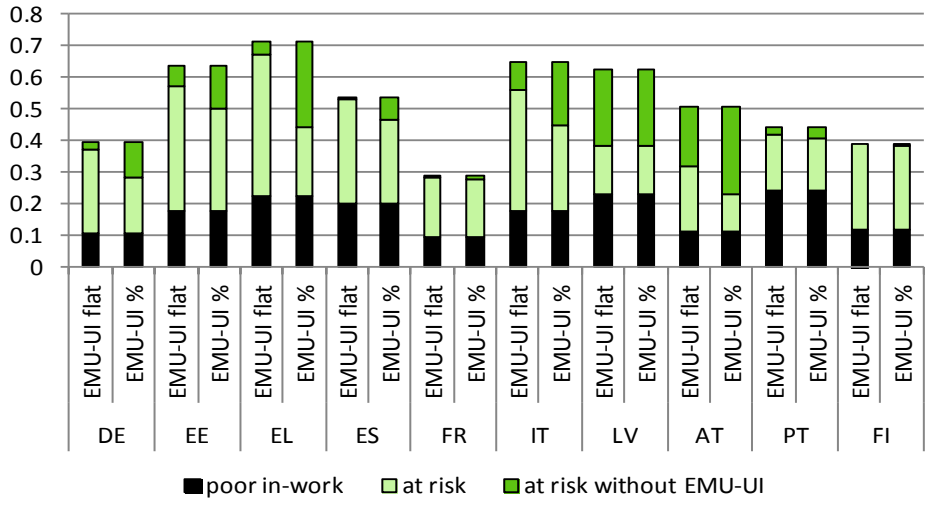
Figure 10: At risk of poverty in unemployment (all)



Notes: The poverty threshold is 60% median equivalised household disposable income in the baseline before unemployment. Source: own calculations using EUROMOD version G1.4

Figure 11 shows the same information but focusing on people in households with one earner, for whom the transition to unemployment would make a larger difference to household income. The risk of poverty while still in work is relatively high for this group, and is 20% or more in Greece, Latvia, Portugal and Spain. On becoming unemployed the risk of poverty rises to over 60% in Estonia, Greece, Italy and Latvia. The proportional EMU-UI reduces this considerably: by 13 percentage points in Estonia, 27 points in Greece, 20 points in Italy, 24 points in Latvia and 28 in Austria. The effect is also sizeable in Germany and Spain (11 and 7 percentage points reduction in poverty risk, respectively) and the flat rate EMU-UI has a marked effect in Latvia and Austria (24 and 19 point reduction respectively).

Figure 11: At risk of poverty in unemployment (sole earner households)

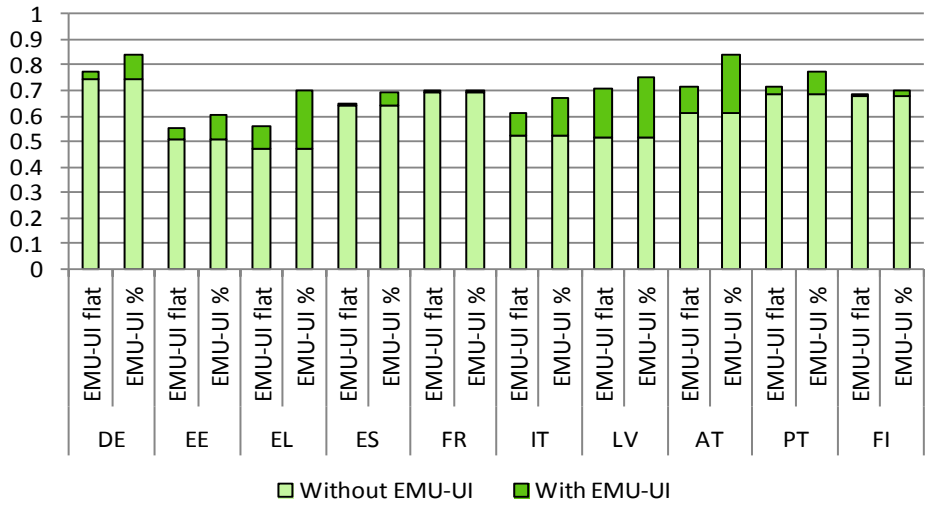


Notes: The poverty threshold is 60% median equivalised household disposable income in the baseline before unemployment. Source: own calculations using EUROMOD version G1.4

4.6 Income stabilisation

The coefficient of income stabilisation due to the tax benefit system as a whole is plotted in Figure 12. The additional effect of the EMU-UI is also shown. In Estonia, Greece, Italy and Latvia under the current system about 50% of the gross income from work that is lost on becoming unemployed is retained by the unemployed person in the form of reduced taxes and increased benefits, particularly UI. The coefficient is larger in the remaining countries, reaching 75% in Germany.[9] The EMU-UI has the effect of increasing the degree of income stabilisation, with the pattern across countries similar (although not identical) to that seen for beneficiaries, replacement rates and reduction in poverty risk. The largest additional stabilisation is in Greece, Latvia and Austria under the proportional EMU-UI scheme (by 23 to 24 percentage points in each case). There are also sizeable effects with the flat rate EMU-UI in Greece and Italy (9 points) and Latvia (19 points) and with the proportional EMU-UI in Germany and Estonia (10 points) and Portugal (9 points).

Figure 12: Income stabilisation coefficient: additional effect of EMU-UI



Source: own calculations using EUROMOD version G1.4

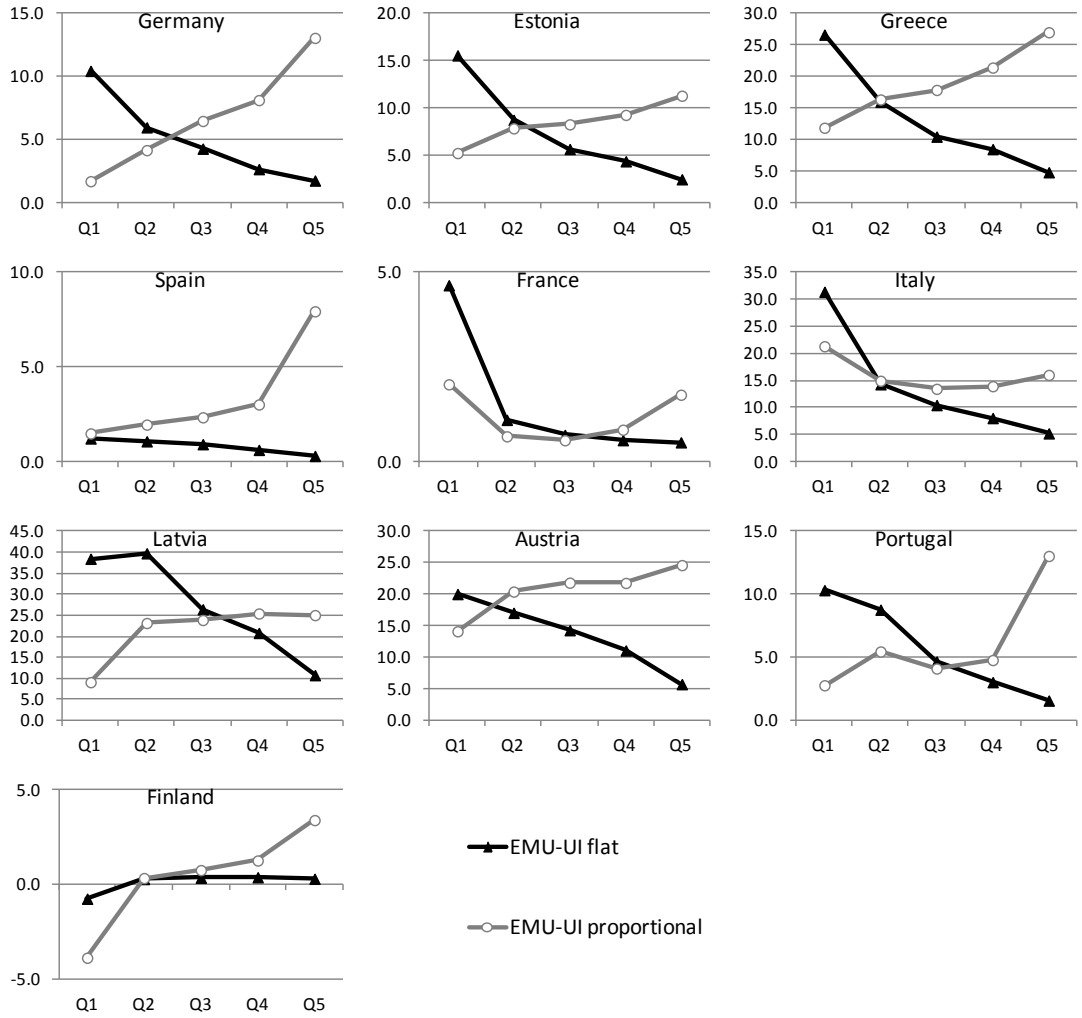
[9] These estimates of income stabilisation are higher than those shown by other studies such as Dolls et al. (2013). This is because in our analysis we focus on the effect of unemployment on incomes in the first year of unemployment when entitlements to UI benefits are at their highest. As explained above, we may also overestimate coverage to some extent, due to assumptions that are made about contribution conditions applying pro rata to the previous year of employment.

Table 4 shows how the additional income stabilisation due to the EMU-UI, measured in percentage points varies with the characteristics of the potentially unemployed person. Income stabilisation tends to be larger for women than men with the flat rate EMU-UI and larger for men than women with the proportional scheme. This can be explained by the lower earnings of women (on average) and the greater benefit that the flat rate scheme provides in the case of lower earnings (see Figures 2 and 3). There are no common patterns by educational attainment or age group.

As with Table 3 showing the share of beneficiaries by characteristics, Table 4 can be used to indicate the scale of stabilisation if unemployment is concentrated among groups with particular characteristics. For example, the increase in stabilisation would be particularly high with the proportional EMUI-UI if new unemployment were concentrated among the self-employed in Germany or younger age groups in Latvia. Under the flat EMU-UI the added stabilisation would be particularly small if unemployment were concentrated among older age groups in Italy or employees in Portugal.

Figure 13 shows how the additional income stabilisation varies across the distribution of household disposable income (before any additional unemployment). The black lines show the average additional effect of the flat EMU-UI by quintile of household income. Generally, they are downwards sloping: the proportional stabilisation is higher for households with lower incomes. The effect is very small in Spain and is only evident at the bottom of the distribution in France.

Figure 13: Income stabilisation coefficient: additional effect of EMU-UI by household income quintile group



Notes: Income quintiles (Q1(bottom)....Q5(top)) are calculated for equivalised household disposable income for the whole population, using the modified OECD equivalence scale to adjust for differences in household size and composition. Figures are drawn to different scales but the grid interval is the same (5 percentage points). Source: own calculations using EUROMOD version G1.4.

In Finland the additional stabilisation is negative for the bottom decile group because people eligible for the EMU-UI but not the national UI benefit become ineligible for a means-tested benefit. Under the national system this benefit is given to unemployed people not receiving the insurance benefit and we replicate this arrangement in our simulations of the EMU-UI. In this case the value of the EMU-UI (both schemes) is less than that of the means-tested benefit, and there are losers.

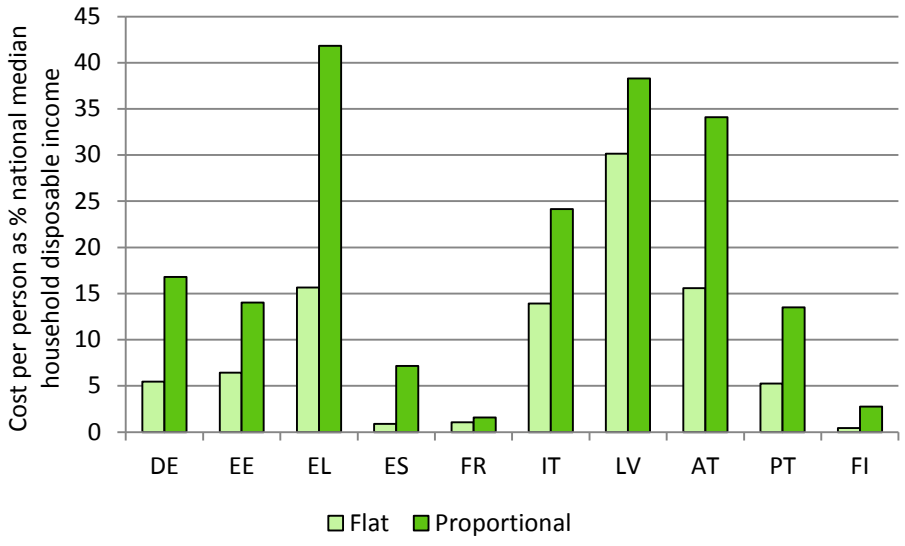
The grey lines show the additional stabilisation effect of the proportional EMU-UI. This is generally upwards sloping: the proportional scheme has a larger proportional stabilising

effect at high incomes than at low incomes. The position of the newly entitled self-employed in the income distribution modifies this effect in some cases. For example, in France and Italy the additional stabilisation is U-shaped across the distribution. The effect is particularly strong in Greece (which has a flat rate national system) and in Germany, Spain and Portugal there is a large increase in the top quintile. This can be explained by the EMU-UI providing a particularly large top up to the national UI in cases where an otherwise large benefit is capped by the ceiling in the national system.

4.7 Budgetary cost

The first round net budgetary cost of the additional effect of the two EMU-UI schemes is compared in terms of the average cost across all potentially unemployed in each country. This is shown in Figure 14, where the effect is measured as a proportion of median household disposable income in each country, to factor out cross-country differences in income levels. The proportional scheme is more costly in all countries and particularly so (relatively) in Germany, Greece and Spain. The cost is higher in countries with a greater proportion of beneficiaries and especially where there is a high proportion of newly-entitled. Under the proportional scheme the costs are highest (in order) in Greece, Latvia, Austria and Italy and under the flat scheme in Latvia, Greece and Austria, and Italy.

Figure 14: Average additional budgetary cost of EMU-UI per unemployed person (as % of median household disposable income)



Source: own calculations using EUROMOD version G1.4

5. Concluding remarks

5.1 Summary and discussion of findings

The EMU-UI as simulated in this paper would reduce the risk of poverty for those becoming unemployed and their households and add to the stabilising effects of tax-benefit systems when unemployment rises. These effects would occur partly through topping up the income from UI received by the unemployed in their first year out of work; and partly by extending coverage of UI to groups currently excluded. These groups include the self-employed in most countries, those on contracts not covered by insurance (as in Italy), as well as those employees with insufficient contributions to qualify in systems requiring high levels of these.

We find that these effects vary in size by country and also with the specific EMU scheme. The flat rate EMU-UI, set at 33% of average earnings tends to particularly benefit the lower paid and the proportional scheme, based on 50% of own last earnings, the higher paid.

Two factors drive the differences in the effect seen across countries. First and most important, the existing national UI schemes vary widely in design in many dimensions. In France and Finland we have seen that neither version of the EMU scheme would have a large effect on income stabilisation or poverty risk. This is because, in most dimensions, the generosity of the national scheme exceeds that of the EMU schemes, although it is also clear that there are beneficiaries, especially among the self-employed and younger workers. At the other extreme in Greece, Italy, Latvia and Austria the EMU proportional scheme would have a major effect on income stabilisation, and the flat scheme also would in Latvia. This is because there are dimensions of the national scheme that fall far short of the standard set by the EMU scheme. In Latvia the national benefit only lasts for 9 months. In Greece the flat rate national scheme offers low income replacement to high earners (and even the EMU flat rate scheme offers more). In Italy and Austria there are ceilings to their national benefits and in Austria too the earnings base is measured net of taxes and contributions (reducing the proportion of gross earnings to below that of the EMU-UI proportional scheme).

The second factor is the characteristics of the potentially unemployed and the extent to which they differ across countries. In particular the proportion that is self-employed or otherwise excluded from the national scheme is an important determinant of the potential extension in coverage that is possible for the EMU-UI to achieve. This is particularly high in Greece and Italy and particularly small in Estonia and Latvia. More generally, the shape

of the earnings distribution has some bearing on the relative generosity of the EMU flat rate scheme, and on the effects of ceilings and floors in the national scheme schedules.

Our results are relevant in two distinct ways. First, they can provide a measure of the extent to which a common EMU-UI could replace the existing national UIs, potentially providing a cross-country insurance mechanism with minimised cost or gainers and losers. We have clearly seen that the diversity of national systems in many dimensions would make the goal of a common scheme without losers and at low cost a challenge indeed. Nevertheless, our analysis has pointed to ways in which an EMU scheme might be designed with this in mind. Adding a ceiling and a floor to the proportional scheme would reduce the level of income stabilisation among the better off and could be designed to provide comparable stabilisation among low earners as the EMU flat rate UI considered here.

Secondly, if the aim is to add to the protective and stabilising effects of existing UI schemes, as well as providing a cross-country insurance mechanism, then our results show size and distribution of the effects. Inevitably this means increasing the generosity in one or more dimensions in the countries with the less generous, inclusive or long duration schemes (such as Greece, Italy or Latvia, respectively). However, according to our results, there would be beneficiaries in all or most countries, underlining the potential of EMU schemes to cover gaps of national benefits for specific population groups.

Furthermore, although we have presented the EMU-UI as a top-up to national schemes it is also possible to interpret our results as if the EMU-UI were the first tranche of benefit, replacing the national scheme up to the point that the national scheme is more generous (in all relevant dimensions) and under the assumption that national scheme payments would be reduced by the amount of the EMU scheme and no more. When considering the national-level effects alone, as is the case in this paper, the “additional” effect of the EMU-UI remains the same under the two interpretations of the EMU scheme. However, if the focus is on quantifying the cross-country stabilisation effect then this is maximised if as much as possible of total UI (and its financing) derives from the EMU scheme.

5.2 Caveats

Our simulations of entitlement to existing national UI benefits based on the information available in EU-SILC data have required a number of assumptions. These have the effect of over-estimating, to some extent, eligibility for national benefits. The extent of this over-estimation may vary across countries. This will have the effect of reducing the modelled impact of the EMU-UI schemes, which are simple, common across countries and require less information. In particular contribution conditions are constructed applying pro rata to the previous year of employment and months in unemployment are assumed equal to

employment duration in the previous year. We consider all of those currently in employment or self-employment to be equally likely to become unemployed in a future hypothetical downturn. We carry out calculations for each earning individual in the household in turn. However, in some circumstances, unemployment may happen at the same time (in the same year) to more than one active person in the same household. Our calculations do not cover this situation, although we do focus on sole earner households, whose loss of all household earnings on becoming unemployed has many characteristics in common with two or more earner households losing two or more wages.

5.3 Future work

This is the first attempt to use EUROMOD to simulate the detailed effects of possible EMU-level UI schemes. As such it has highlighted many areas that deserve further attention in future work. These include the following:

The two alternative schemes are on a very different scale: the proportional scheme is much more costly and has a larger effect in some but not all dimensions. Future work will compare the effects of schemes that have the same budgetary cost as each other, at EMU level. In addition, considering options for the financing of the EMU-UI (at national or EMU level) is clearly also relevant, not least because this will also have an impact on income stabilisation, replacement rates and risk of poverty.

As mentioned above, there is scope for refining the design of the EMU-UI in many ways. It would be particularly relevant to consider the effect of including the self-employed separately from the employed, as well as exploring the effect of varying some of the other key design parameters.

Further work is needed to devise ways of reducing (or quantifying) the effect of assumptions about duration of work and benefit receipt on our results.

Our calculations cover all of the potentially unemployed. A future study could simulate the incidence of unemployment from past or future hypothetical downturns in the manner of Fernandez Salgado et al. (2013). Given that the characteristics of the new unemployed vary with the nature of the downturn and the local labour market, this analysis could compare across countries the combined effect of differences in the composition (and scale) of new unemployment with differences in the national UI schemes.

6. References

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7. Appendix: Tables

Table 1: Key characteristics of unemployment benefit systems in 2012

Country		Contribution period (months)[a]	Payment	Duration (months)[b]	Assistance	Tax and SICs
Germany	DE	12/24	67-60% of net; max	12	Means-tested UA	Neither
Estonia	EE	12/36	50% falling to 40% of gross; min, max	12	Flat UA	Tax and reduced SICs
Greece	EL	6/14	Flat rate	10 (12)	Flat UA (not universal)	Tax
Spain	ES	12/60	70% falling to 50% of gross; min, max	24	Means-tested UA	Tax and SICs
France	FR	4/28	40% of gross; min, max	24	Means-tested UA	Tax and reduced SICs
Italy	IT	12/24	75% falling to 60% of gross; 25% above an earnings limit; min, max	8 (12)	None	Tax
Latvia	LV	9/12	50-65% of gross; reduces with length of unemployment	9	Social assistance	Neither
Austria	AT	12/24	55% of net; min, max	9 (12)	Means-tested UA	Neither
Portugal	PT	12/24	65% falling to 55% of gross; min, max	11 (12)	Means-tested UA	Neither
Finland	FI	8/28	45% of net; 20% above an earnings limit	17	Means-tested UA	Tax and reduced SICs

Notes: a. Months of contributions/period in which contributions can be made. 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).

Table 2: Sample characteristics of the potentially unemployed

Country	DE	EE	EL	ES	FR	IT	LV	AT	PT	FI
Sample observations	12,439	6,298	6,245	14,766	10,852	20,335	6,008	6,136	4,960	14,094
Population in work (000)	36,300	680	4,298	20,100	25,000	23,500	1,106	3,788	4,841	2,462
% male	52.0	49.3	59.4	57.5	51.4	60.0	49.9	54.5	54.8	53.3
% age 15-24	11.7	11.8	5.7	9.7	10.9	6.6	15.1	15.1	8.7	14.9
% age25-49	61.8	57.8	67.0	70.0	61.5	66.5	56.2	61.5	66.4	51.1
% age 50+	26.5	30.4	27.3	20.3	27.6	26.9	28.7	23.4	24.8	33.9
% education lower 2ndary	7.9	11.0	11.7	23.6	13.7	29.9	16.3	50.6	20.9	20.7
% education higher 2ndary	42.2	50.3	33.9	24.1	45.0	40.3	51.7	18.5	15.5	42.8
% education tertiary	41.4	34.4	27.7	35.5	33.9	17.3	25.8	14.1	14.5	35.1
% employee	92.8	96.0	65.5	87.7	95.0	74.9	97.0	87.4	85.8	91.0
% self-employed	9.4	7.4	39.3	13.5	9.0	27.6	6.4	17.9	17.4	17.6
% sole earner hhold	33.2	29.6	29.1	23.3	28.6	34.2	20.1	28.5	21.0	28.2
33% average earnings €/month	837	264	478	556	670	695	209	819	383	800
Poverty threshold €/month	960	336	504	715	1,063	820	259	1,048	458	1,139

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. Source: own calculations using EUROMOD version G1.4

Table 3: Beneficiaries: % benefiting from the EMU-UI by characteristics of the potentially unemployed

	DE		EE		EL		ES		FR		IT		LV		AT		PT		FI	
EMU-UI flat	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b	a	b
All	29.4	7.6	46.1	7.3	62.5	31.2	0.2	2.3	5.0	5.4	55.9	21.1	76.2	15.7	63.5	10.0	20.9	15.3	4.1	5.6
Male	17.6	8.9	37.8	6.7	60.8	33.3	0.2	2.3	2.4	6.4	53.1	24.5	77.9	14.6	63.2	11.2	19.7	17.3	3.6	6.5
Female	42.2	6.2	54.2	7.9	65.1	28.0	0.3	2.4	7.7	4.3	60.1	16.0	74.5	16.7	63.8	8.4	22.4	12.9	4.7	4.6
Age 15-24	61.6	6.6	62.1	13.9	72.4	8.9	1.8	13.0	6.9	6.0	58.7	16.4	47.4	43.0	66.4	1.0	73.8	12.3	10.8	1.2
Age25-49	26.0	7.2	49.4	2.4	68.7	29.3	0.0	1.3	4.2	4.6	73.8	21.2	92.1	6.4	82.5	10.2	20.2	13.3	2.7	5.3
Age 50+	23.1	8.9	33.6	14.0	45.3	40.6	0.0	0.7	5.9	6.9	11.0	22.0	60.3	19.5	11.4	15.0	4.2	21.6	3.3	8.1
Education lower 2ndary	55.3	7.5	53.0	10.0	52.2	34.8	0.4	2.3	9.0	5.6	57.6	23.3	58.3	27.7	66.1	10.3	30.1	13.6	5.2	7.7
Education higher 2ndary	37.2	5.1	49.1	6.7	67.7	28.7	0.1	1.7	4.9	5.4	59.5	20.1	78.3	15.4	60.0	7.6	31.9	8.5	5.0	6.7
Education tertiary	15.0	10.5	37.6	7.3	76.3	22.0	0.2	1.6	2.2	5.2	51.7	21.0	82.4	9.4	60.7	12.5	22.7	11.6	2.2	3.3
Employee	31.7	1.9	47.9	5.7	95.5	0.4	0.2	2.6	5.2	1.1	74.7	1.8	78.5	13.5	72.6	0.2	24.4	3.1	4.5	0.1
Self-employed	8.4	64.1	22.9	26.9	11.6	78.7	0.0	0.5	4.3	48.6	13.1	68.0	47.4	44.1	21.4	54.7	4.6	72.6	7.1	31.3
Earnings Q1	57.2	8.2	43.2	19.2	25.1	53.2	0.9	4.9	23.7	9.5	28.0	40.6	34.3	42.6	44.9	10.9	30.9	36.1	13.1	7.2
Earnings Q3	11.2	4.8	49.0	3.4	75.4	22.4	0.0	1.5	0.1	2.3	67.8	12.0	86.8	8.9	71.6	9.5	22.3	9.0	1.1	3.2
Earnings Q5	0.4	4.5	26.5	4.4	69.7	20.4	0.0	0.4	0.5	3.5	55.6	10.2	93.4	6.8	59.6	7.0	9.3	8.5	0.9	3.7
EMU-UI proportional																				
All	73.5	7.6	80.4	7.3	54.2	31.2	25.9	2.3	0.0	5.4	67.9	21.1	76.2	15.7	72.0	10.0	26.8	15.3	15.0	5.6
Male	77.0	8.9	82.6	6.7	55.0	33.3	31.6	2.3	0.0	6.4	66.0	24.5	77.9	14.6	75.8	11.2	29.4	17.3	20.6	6.5
Female	69.7	6.2	78.2	7.9	53.1	28.0	18.3	2.4	0.0	4.3	70.8	16.0	74.5	16.7	67.4	8.4	23.5	12.9	8.7	4.6
Age 15-24	53.9	6.6	63.4	13.9	46.3	8.9	5.5	13.0	0.0	6.0	57.6	16.4	47.4	43.0	65.7	1.0	68.6	12.3	1.7	1.2
Age25-49	77.2	7.2	93.0	2.4	60.4	29.3	25.6	1.3	0.0	4.6	73.5	21.2	92.1	6.4	81.6	10.2	25.4	13.3	17.1	5.3
Age 50+	73.4	8.9	62.9	14.0	40.9	40.6	36.6	0.7	0.0	6.9	56.5	22.0	60.3	19.5	50.7	15.0	15.8	21.6	17.8	8.1
Education lower 2ndary	47.7	7.5	66.3	10.0	39.9	34.8	16.6	2.3	0.0	5.6	67.6	23.3	58.3	27.7	75.9	10.3	33.4	13.6	5.0	7.7
Education higher 2ndary	75.6	5.1	81.7	6.7	57.8	28.7	20.2	1.7	0.0	5.4	70.8	20.1	78.3	15.4	69.4	7.6	45.3	8.5	7.8	6.7
Education tertiary	75.6	10.5	82.9	7.3	71.7	22.0	41.0	1.6	0.0	5.2	68.2	21.0	82.4	9.4	72.9	12.5	55.9	11.6	29.9	3.3
Employee	79.2	1.9	83.7	5.7	82.8	0.4	22.8	2.6	0.0	1.1	90.7	1.8	78.5	13.5	82.4	0.2	31.2	3.1	16.5	0.1
Self-employed	19.0	64.1	36.5	26.9	7.6	78.7	46.9	0.5	0.0	48.6	15.8	68.0	47.4	44.1	24.1	54.7	7.8	72.6	8.8	31.3
Earnings Q1	28.6	8.2	31.9	19.2	2.2	53.2	1.2	4.9	0.0	9.5	26.6	40.6	34.3	42.6	35.6	10.9	8.9	36.1	0.7	7.2
Earnings Q3	88.9	4.8	94.3	3.4	73.8	22.4	13.4	1.5	0.0	2.3	81.7	12.0	86.8	8.9	84.6	9.5	22.2	9.0	0.7	3.2
Earnings Q5	84.2	11.8	96.9	2.2	69.6	27.9	88.0	0.3	0.0	5.4	82.5	14.0	93.4	3.8	84.6	8.7	61.4	10.4	71.7	4.6

Notes: (a) – All benefiting from EMU-UI; (b) of which, those not receiving national UI. 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. Source: own calculations using EUROMOD version G1.4.

Table 4: Coefficient of income stabilisation: additional effect of EMU-UI by characteristics of the potentially unemployed (ppts)

	DE	EE	EL	ES	FR	IT	LV	AT	PT	FI
EMU-UI flat										
All	3.1	4.5	8.5	0.6	0.8	8.8	19.0	10.3	3.4	0.3
Male	1.8	3.4	7.5	0.5	0.7	8.5	16.3	8.8	3.1	0.2
Female	5.7	6.1	10.7	0.7	1.0	9.4	22.8	13.0	3.8	0.5
Age 15-24	19.4	12.2	9.9	7.4	2.4	14.2	35.6	24.2	7.3	0.6
Age25-49	2.5	3.2	9.1	0.3	0.5	10.5	17.5	11.3	2.9	0.2
Age 50+	2.5	5.4	7.1	0.1	1.2	4.2	17.1	3.1	3.9	0.5
Education lower 2ndary	14.4	8.6	11.5	0.8	1.3	11.7	30.4	11.4	3.6	0.6
Education higher 2ndary	4.1	4.8	9.7	0.6	0.9	8.8	22.5	8.7	2.3	0.4
Education tertiary	1.8	3.1	5.3	0.4	0.5	5.7	12.0	6.2	1.6	0.2
Employee	2.5	4.2	4.1	0.7	0.4	5.8	18.8	9.5	1.2	0.1
Self-employed	6.4	8.2	16.1	0.1	3.9	17.6	16.0	12.0	13.0	1.5
EMU-UI proportional										
All	9.6	9.8	22.8	4.9	1.2	15.2	24.2	22.5	8.7	2.0
Male	10.1	10.2	24.1	5.6	1.3	16.0	24.2	23.7	10.0	2.4
Female	8.6	9.2	20.1	3.7	1.1	13.7	24.1	20.3	6.7	1.3
Age 15-24	5.6	19.2	11.6	6.8	1.8	13.6	35.6	27.7	7.0	0.2
Age25-49	9.9	9.2	23.4	4.3	0.9	17.3	25.0	25.8	7.6	1.7
Age 50+	9.4	8.3	22.8	6.6	1.8	10.8	18.1	12.5	11.7	2.5
Education lower 2ndary	4.8	12.4	18.5	3.1	1.0	15.0	25.9	21.3	6.9	1.7
Education higher 2ndary	8.0	9.0	21.9	3.9	1.2	15.4	23.2	24.2	8.2	1.3
Education tertiary	10.7	10.1	26.4	6.5	1.2	16.1	25.0	25.1	12.6	2.5
Employee	7.2	9.8	19.1	4.4	0.2	12.6	24.2	21.5	6.0	1.3
Self-employed	23.3	8.3	28.1	9.2	8.4	22.1	14.9	23.9	20.8	4.9

Source: own calculations using EUROMOD version G1.4