3 Agreeing to an unemployment insurance system for the euro area?

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In this chapter we offer novel answers to three related questions:

- What are the potential benefits of developing a European unemployment insurance system (EUIS)?
- Could all the European countries involved benefit from a common, simple change to their current unemployment insurance systems?
- Could unanimous agreement for this change be achieved without needing permanent transfers across countries?

To properly address these questions, we first develop a dynamic equilibrium model with job search frictions, which provides a new characterisation of how different euro area labour markets are and therefore calls into question whether such an agreement can ever be reached. Nevertheless, our answer to the final question is: yes, it can be done!

Should the EU provide unemployment insurance?

The recent financial and sovereign debt crises have affected European labour markets asymmetrically, both in terms of duration and the severity of unemployment. In particular, stressed countries (such as Greece, Portugal and Spain) have experienced high levels of unemployment, making it very difficult, if not impossible, to provide

1 This chapter is based on ADEMU Working Paper No. 2018/xxx (Ábrahám et al. 2018).

adequate insurance for the unemployed while, at the same time, satisfying low-deficit commitments (the Fiscal Compact). Even if the EU economy is now growing, this does not mean that the scars of the crisis have healed, that resentment has receded, or that the European unemployment problems are problems of the past, and the question often asked is whether the EU can, and should, provide unemployment insurance. This has raised interest in proposals for a Europe-wide, or perhaps a euro area-wide, unemployment insurance system, which date back to the Marjolin Report (European Commission 1975), where a "Community Unemployment Benefit Fund" was first proposed. The European Commission has been working on this issue, and a "German-Spanish proposal for a robust European Unemployment Insurance" (Dullien et al. 2018) by a group of Members of the European Parliament, will soon be discussed in the Parliament. Quantitative and theoretical studies have also been presented in recent years, assessing the potential costs and benefits of an EUIS (Moyen et al. 2016, Dolls et al. 2018).

As with any major social reform at the EU level, there is a polarised, and politicised, debate regarding the desirability of an EUIS. The proponents of such a new policy suggest that, in addition to improving solidarity and labour market integration, the system could provide insurance for country-specific shocks by pooling resources, thus allowing countries to go through crises without suffering the consequences of distortionary tax rises; the system could possibly also foster necessary labour reforms. Opponents say that UI policies should remain fully in the hands of the member states, and that such a system cannot ever be politically feasible (or desirable) as it would always imply permanent cross-subsidisation from countries with better labour market institutions (with low unemployment) to high-unemployment countries, which would therefore have even less incentive to reform their labour markets.

Weighing up the costs and benefits across Europe

We take a step back and study quantitatively how these potential benefits and costs weigh against each other. Following Krusell et al. (2011), we use a dynamic general equilibrium model with job search frictions to analyse workers' stocks and flows across labour market states (employment, unemployment and inactivity) in order to assess the impact of an EUIS under alternative unemployment insurance policies. Our analysis provides a parsimonious way of comparing labour market institutions across Europe. Our first finding is not new but our simple representation is: there are large and systematic differences that can be summarised by how a few labour market frictions differ across labour markets. Almost surprisingly, in spite of the differences, our model suggests that welfare-maximising unemployment benefit policies are very similar among the countries that have been analysed: in all countries, a long duration of unemployment benefits and a relatively low replacement rate of around 15% is welfare-improving, compared to the status quo. The resulting tax differences across countries reflect their structural labour market differences, in terms of job creation and destruction. These tax differences also provide clear incentives for labour market reforms.

As part of the ADEMU research project, we provide the first assessment of an EUIS that takes into account individual agents' optimal reactions to changes in UI policies in terms of labour supply, job search effort, labour market participation and private savings decisions, across different euro area countries. Moreover, we describe the necessary changes in taxes – in the long run and in the short run in response to shocks – that would finance different specifications of UI systems. Using a dynamic general equilibrium model, we show how taxes and unemployment benefit policies affect agents' private decisions and how these private decisions shape aggregate responses to policies. We carry out this assessment on the basis of a multi-country model of EU labour markets that takes into account institutional differences across countries, as well as current country-specific national unemployment insurance policies (labour income tax, benefit replacement rate and duration of benefit receipt). The model successfully replicates the observed long-term heterogeneity in labour market outcomes (employment and unemployment rates, duration of unemployment spells, flows across employment states, and so on). Our analysis highlights the fact that taking into account inactivity and the distortionary effect of the taxes financing the unemployment insurance system is crucial to understanding both the aggregate and distributional implications of unemployment insurance policies. The structural model parameters provide a unique diagnosis of European labour market institutions and UI policies, and allow for a meaningful comparison across European countries. Figure 1 shows the heterogeneity in exogenous job arrival rates for the unemployed who actively search for a job versus inactive agents. Figure 2 depicts the heterogeneity in unemployment benefit policies across Europe (replacement rate versus maximum duration of benefits).

Figure 1 Labour market institutions (model)

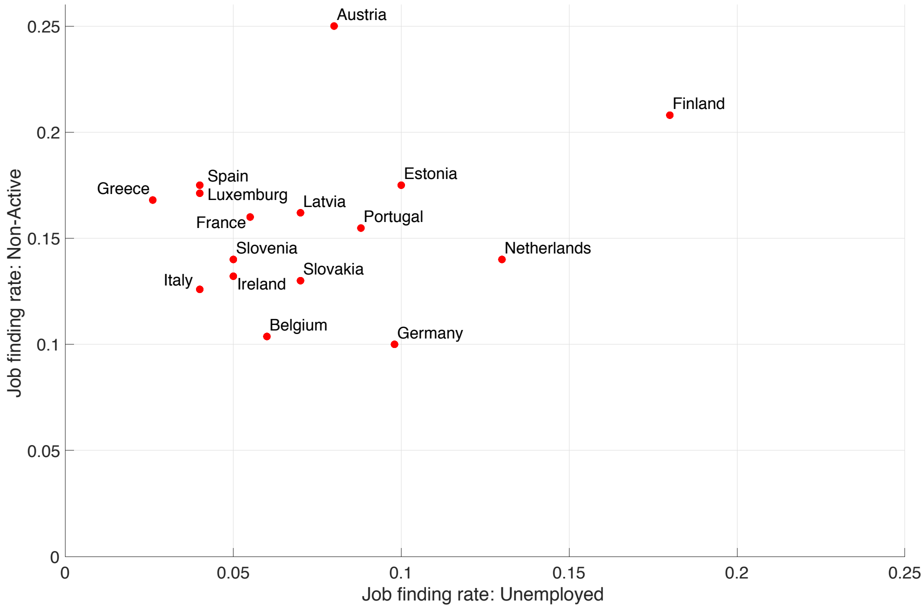
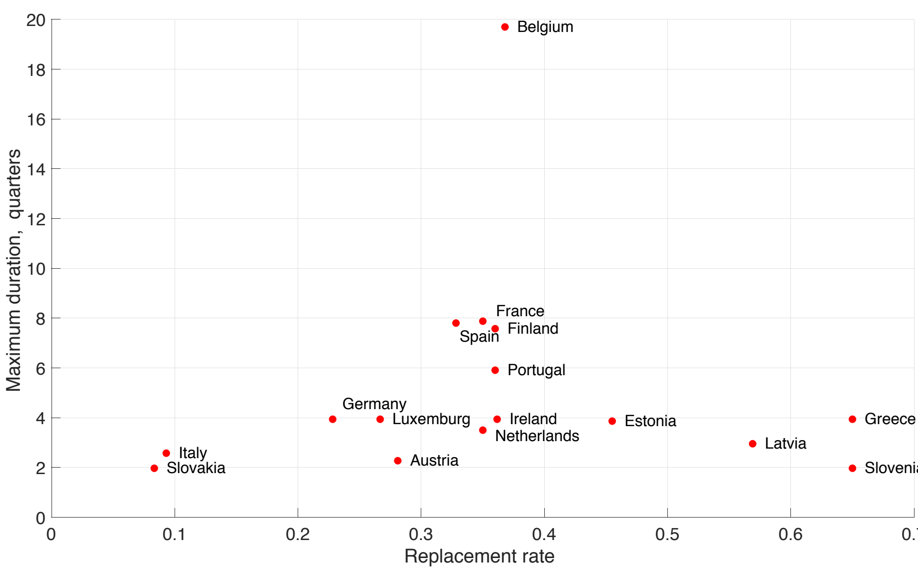


Figure 2 Unemployment benefit policy (data)



On the basis of this calibration, we perform a set of policy experiments. In the political debate, proponents of a common European unemployment insurance system often emphasise the risk-sharing benefits of such a system. Business cycles are not perfectly synchronised across Europe and recessionary countries often have difficulties raising the funds for increased expenditures on unemployment benefits without violating the regulatory (Fiscal Compact) rules of the EU. Our first experiment therefore targets a quantitative evaluation of the potential pure risk-sharing benefits of an EUIS. To this end, we compute the labour market and welfare consequences of a deep recession in two alternative scenarios: (i) the government is in financial autarky and needs to raise taxes on the employed in order to maintain a balanced UB budget; and (ii) the country is insured against increased unemployment and can go through the recession without raising taxes. Otherwise, we assume that the unemployment insurance system remains the same in all countries in both cases.

We find that the risk-sharing benefits resulting from the welfare differences of the second scenario with respect to the first one are small (less than 0.1% consumption equivalent variation for each country), and marginally higher for the employed, whose taxes are smoother, than for the unemployed, whose benefits do not change. This experiment is purposefully constructed to provide an upper bound for the true benefits. The experiment implies that although insurance benefits exist, their small size may not justify the introduction of an EUIS, unless other factors increase its value.

In light of this result, one may doubt the desirability of a European unemployment insurance system; even more so as the observed heterogeneity in labour market institutions (see Figure 1) suggests that the optimal benefit systems could differ substantially across European countries, making it difficult for governments to reach a common ground. To evaluate this claim, we compute the optimal unilateral reform of the unemployment benefit system (financed at the national level) separately for each country. We find that the optimal mix of replacement rate, and duration of unemployment benefits, is surprisingly similar across the countries studied.

All countries would benefit from an unlimited duration of benefit receipt, and almost all countries a replacement rate of between 10% and 20% (the exceptions are France and Luxembourg, with optimal replacement rates of 30% and 40%, respectively). In addition, for every single country, a reform of this type (unlimited duration and replacement rate at anything between 10% and 20%) would lead to welfare gains compared to the status quo. These policies provide better insurance against unemployment shocks as they eliminate the risk of losing eligibility before finding a job. At the same time, the relatively low replacement rate will keep the tax burden – and hence labour market distortions – low. The main difference in the optimal policies is thus the tax rate needed to finance the very similar benefit systems. Taken together, these results suggest that European governments may be able to reach a consensus on introducing a minimal harmonised European benefit system (potentially with the possibility for national governments to complement it with additional benefits).

Table 1 shows the average welfare gains[2] (in percent of consumption equivalent variation) of introducing such a harmonised system (unlimited duration and a replacement rate of 15%). The last column presents the payroll tax rates that national governments need to charge wage earners in order to avoid permanent cross-country transfers. These tax differences across countries mostly reflect their structural labour market differences which are kept constant, in terms of job creation and destruction, and they may serve as an incentive device for labour market reforms. The elimination of permanent transfers through varying contribution payments is a necessity in order to reach a consensus across European countries. As Figure 3 shows, aggregate employment remains stable (the same is true for all the large countries, but not for all small ones) but there is a small transfer from inactivity to unemployment. Table 2 shows the welfare gains if the same harmonised benefit system were to be financed jointly with common tax rates at the European level. Austria, France and Luxembourg would be likely to oppose the introduction of such a system. Interestingly, some of the net payers (Germany, Belgium, Finland and Ireland) would still prefer the reform, indicating that the current tax-benefit system in some countries is far from optimal. Hence, they would benefit from longer eligibility and lower replacement rates (lower taxes), although they would pay permanent transfers into the system.

2 The present value welfare gains from the introduction of the reform to the convergence of the economy, where the union of the ten countries is a closed economy, i.e. interest rates are endogenous.

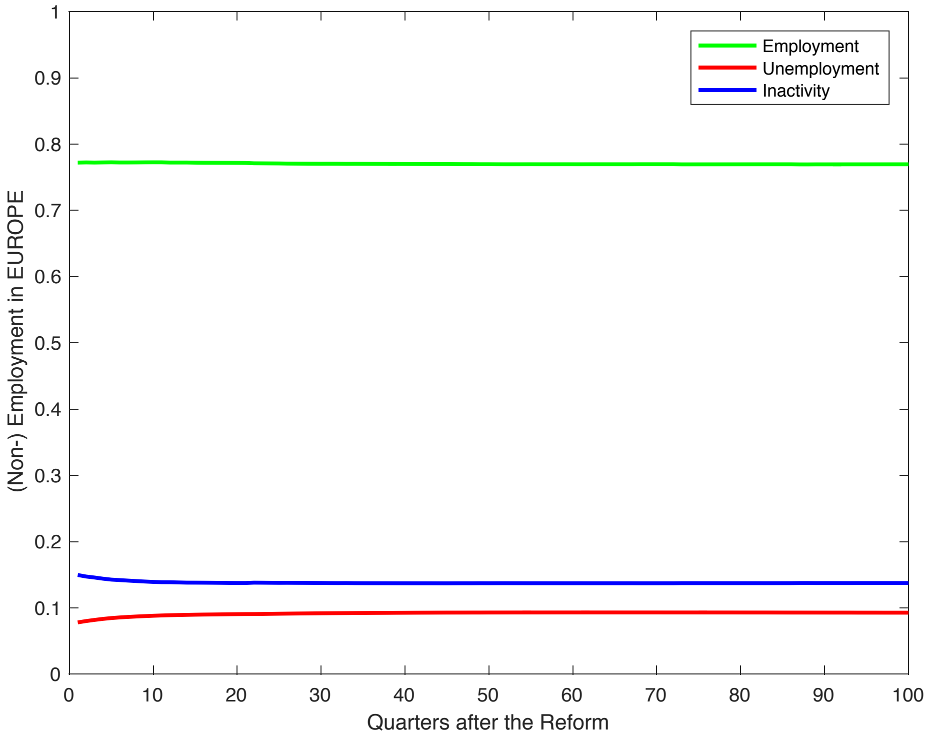
Table 1 Welfare gains (% of consumption equivalent variation) and tax rates (%)

	Employed	Unemployed	Inactive	Total	Tax Rate
Austria	0.21	0.51	0.24	0.23	0.73
Belgium	1.05	-0.24	0.81	0.92	0.45
Germany	0.34	0.44	0.28	0.38	1.27
Spain	0.65	0.65	0.58	0.62	2.53
Finland	2.09	1.83	1.90	2.03	0.22
France	0.11	0.18	0.09	0.11	1.23
Ireland	0.77	1.31	0.73	0.79	1.34
Italy	0.48	1.58	0.51	0.60	1.90
Luxembourg	0.30	0.51	0.33	0.32	0.55
Netherlands	0.06	0.13	0.03	0.08	1.57

Table 2 Welfare gains (% of consumption equivalent variation), tax rate (%) and transfers (in % of GDP)

	Employed	Unemployed	Inactive	Total	Tax rate	Transfer
Austria	-0.31	-0.05	-0.28	-0.29	1.47	-0.51
Belgium	0.36	-1.01	0.18	0.25	1.47	-0.71
Germany	0.16	0.79	0.14	0.20	1.47	-0.14
Spain	1.51	1.42	1.31	1.45	1.47	0.74
Finland	1.11	0.63	0.92	1.04	1.47	-0.87
France	-0.06	-0.02	-0.08	-0.06	1.47	-0.16
Ireland	0.66	1.07	0.63	0.68	1.47	-0.09
Italy	0.75	2.13	0.76	0.87	1.47	0.29
Luxembourg	-0.43	-0.20	-0.34	-0.40	1.47	-0.64
Netherlands	0.14	0.55	0.12	0.17	1.47	0.07

Figure 3 Employment, unemployment and inactivity after the EUIS reform



Conclusions

Should we introduce a common European unemployment insurance system? Our results show that the risk-sharing benefits seem to be very low and by themselves would be unlikely to provide a strong enough rationale for the introduction of such a system, although we do not account for additional benefits that a common UI system can provide in terms of labour market integration and mobility. At the same time, we also show that despite the large differences across European labour markets, the optimal unemployment insurance policies are remarkably similar, and the gains to be made by changing the current UI systems in a common direction are substantial. If the permanent differences in labour market institutions (and consequently in unemployment rates) are neutralised by country-specific tax rates, a common system could improve welfare in all countries. This implies that the cross-subsidisation problem can be dealt with by an ‘experience rating’ system, where countries’ contribution to the common pool depends on their long-run unemployment rate.

An EUIS could be implemented through the existing national UI systems with the support of an EUIS Fund absorbing deficits and surpluses due to unemployment deviations from the ‘national unemployment steady state’. The contract between the fund and a national UI system can be designed to be revenue neutral (see Chapter 2).

In sum, according to our analysis the main advantage of an EUIS is twofold.

- First, it allows member countries to move towards a more efficient unemployment insurance system, while there may be non-properly accounted general equilibrium effects and political constraints to moving in this direction individually.
- Second, the differential tax rates associated with the EUIS would provide a transparent way of assessing the benefits of labour market reforms for the member countries.[3]

Furthermore, member countries can always improve upon the common system if they wish – for example, by increasing their replacement rates – and an EUIS can also enhance labour cohesion and mobility across EU participating countries, and social identity with the EU, which is exactly in the spirit of the original proposal of the Marjolin Report of 1975!

3 This design avoids moral hazard problems present in other formulations; see Jung et al. (2017) for a model where there are ample possibilities for moral hazard distortions.

References

Ábrahám, Á, J Brogueira de Sousa, R Marimon and L Mayr (2018), "On the Design of a European Unemployment Insurance System (EUIS)", ADEMU Working Paper No. 2018/106.

Dolls, M, C Fuest, D Neumann and A Peichl (2018), "An Unemployment Insurance System for the Euro Area? A Comparison of Different Alternatives using Micro Data", *International Tax and Public Finance* 25(1): 273-309.

Dullien, S, J Fernández, M López, G Maas, D del Prado and J von Weizsäcker (2018), "Fit for purpose: a German-Spanish proposal for a robust European Unemployment Insurance", Working Paper.

European Commission (1975), *Report of the Study Group "Economic and Monetary Union 1980",* Directorate General for Economic and Financial Affairs, Brussels.

Jung, P, K Kuester and M Ignaszak, (2017), "Federal Unemployment Insurance – Theory and an Application to Europe", TU Dortmund.

Krusell, P, T Mukoyama, R Rogerson and A Sahin (2011), "A three state model of worker flows in general equilibrium", *Journal of Economic Theory* 146(3): 1107-1133.

Moyen, S, N Stähler and F Winkler (2016), "Optimal Unemployment Insurance and International Risk Sharing", Bundesbank Discussion Paper No. 33/2016.

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