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A European Unemployment Benefits Scheme: The rationale and the challenges ahead

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Abstract

This paper aims to frame the debate on a European Unemployment Benefits Scheme (EUBS) as a shock absorber for EU economies around its origins on the one hand, and its most controversial aspects, on the other. The paper focuses on several key aspects of the EUBS, the first being the options for financing the scheme. This can be divided into those requiring the imposition of an *ad-hoc* tax in member countries and those relying on general contributions from these countries, which can in turn be financed in various ways. Second, it focuses on the extent to which harmonisation of current national unemployment benefit schemes would be needed. Harmonisation implies changing national legislation and practices, which creates political and administrative difficulties. Third, the study examines the problem of schemes generating regular monetary transfers from certain countries to others, and the associated problem of moral hazard. There are two broad ways to solve this problem: *ex-ante* or *ex-post* balancing. Fourth, it discusses which countries should join the EUBS. There are arguments for limiting membership to euro-area members, or for extending it to the entire European Union, but participation should in any case be mandatory. Finally, it reviews the costs of the various forms of EUBSs proposed in the literature, concluding that they tend to stay below 1% of the member countries' aggregate GDP.

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Further progress requires the manifestation of a political will. This will is today uncertain and needs to show itself and to fortify itself by action. At a time when Europe finds itself confronted with redoubtable dangers, under the name of 'inflation', 'massive balance of payments deficits' and 'unemployment', the only reasonable way for the member countries is to face together (…) these perils.

Marjolin Report, Brussels, March 1975[1]

1. Introduction

This paper reviews the existing proposals for a supranational European unemployment benefits scheme (EUBS). This review constitutes the first building block of the study "Feasibility and Added Value of a European Unemployment Benefit Scheme", commissioned by DG EMPL and carried out by a consortium led by CEPS. The objective is to draw lessons from existing research on an EUBS and to frame the current debate in a long-term perspective. This is particularly important in light of the inclusion of the creation of an automatic stabiliser for the euro area in the Five Presidents' Report (Juncker et al., 2015).

More specifically, the paper reviews three interrelated (and partially overlapping) streams of literature. The first, reviewed in section 2, concerns the rationales for a macroeconomic stabilisation policy in the Economic and Monetary Union (EMU). The second (section 3) includes studies that suggest options for establishing macroeconomic stabilisation mechanisms in the euro area or the EU. The third group of studies (section 4) is specifically devoted to schemes related to unemployment. Lessons from these streams of literature are summarised in section 5. Besides reviewing the relevant literature, we interviewed some of the experts involved in the theoretical and political debates relevant to this paper (who were also authors of some of the papers covered by our survey). These interviews represent a complementary source of knowledge to the relevant papers and reports, and help us to understand the broader context in which they were written.

The literature reviewed includes a number of reports to the European Commission that touch on monetary and fiscal policy in EMU (Marjolin et al., 1975; MacDougall et al., 1977; Padoa Schioppa et al., 1987; Emerson et al., 1990). These studies are milestones in the history of ideas surrounding EMU. Marjolin et al. and MacDougall et al, argue (already respectively in 1975 and 1977) on the basis of the observation of federal systems around the world, that EMU could only be successfully implemented with the delegation of substantial powers in fiscal policy to the European level. This

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[1] Report of the Study Group on "Economic and Monetary Union 1980".

would allow for a macroeconomic policy aiming at redistribution and stabilisation. Padoa-Schioppa et al. (1987) maintain and expand the argument on which the previous reports are based, but take the size of the European budget as a given (in their computations, they assume that the budget will remain constant at around 1% of European GDP). Emerson et al. (1990) present different arguments that, overall, suggest that market forces should be able to address the imbalances generated by the common currency without the need for a substantial common macroeconomic policy. Section 2 also reviews a set of economic papers that confirm, discuss or develop the arguments first developed in these four seminal studies (Goodhart and Smith, 1993; Majocchi and Rey, 1993; Frankel and Rose, 1998; Kalemli-Ozcan et al., 2001; Allard et al., 2013; Enderlein et al., 2013; Vetter, 2014).

Section 3 reviews papers that propose potential mechanisms to be used for a European macroeconomic stabilisation policy. These include not only unemployment-based schemes –such as that proposed by Marjolin et al. (1975) and elaborated upon by many other authors, including Dullien (2007, 2013) and Beblavý et al. (2015) – but also possible alternatives, such as a regional policy characterised by cyclical and conditional grants (Padoa-Schioppa et al., 1987; MacDougall et al., 1997); public investments in social housing, renewable energy and transportation (Drèze and Durré, 2014); a European debt agency issuing its own bonds and lending money to European countries with certain conditions (Enderlein et al., 2013); a supranational fund making transfers, earmarked for a reduction in payroll taxes, to countries experiencing economic difficulties (Enderlein et al., 2013); and a progressive tax imposed by the European Commission, such as a carbon tax (Majocchi and Rey, 1993).

The last stream of literature (Section 4) reviewed in this paper is specifically related to the EUBS. These include the following:

- Papers proposing 'genuine' schemes whereby the EUBS operates in the form of a European worker insurance with similar conditions across European countries (Dolls et al., 2014; Jara Tamayo and Sutherland, 2014). These studies define the enrolment and benefit conditions for workers in the insurance system and simulate different social outcomes under alternative EUBSs.
- A paper proposing a 'genuine top-up' scheme in which workers maintain the choice to enrol in a national unemployment insurance if this is more attractive (Delpla, 2012).
- Studies that focus not on the conditions under which workers can enrol or benefit from the EUBS, but on the conditions under which countries can become beneficiaries of the scheme (Italianer and Vanheukelen, 1993; Dullien, 2013, 2014; Beblavý and Maselli, 2014; Beblavý et al., 2015). These authors define the contributions to and benefits from the EUBS at the national level, and simulate the effect of alternative EUBS schemes on the net payments of each country and the associated macroeconomic stabilisation.

Some additional research is reviewed in Section 4, which elucidates the most important problems associated with the EUBS and the relevance of different solutions (De Grauwe, 2003; Card et al., 2007; Krueger and Mueller, 2010; Pisani-Ferry et al, 2013).

We focus on six aspects of the EUBS. First, we focus on the options for financing the scheme, which can be divided into those requiring the imposition of an ad hoc tax in member countries and those relying on general contributions from these countries, which can in turn be financed in various ways. Second, we focus on the extent to which harmonisation of current national unemployment benefit schemes would be needed. Harmonisation implies changing national

legislation and practices, causing political and administrative difficulties. Third, we study the problem of schemes generating regular monetary transfers from certain countries to others, and the associated problem of moral hazard. There are two broad ways to solve this problem: *ex ante* or *ex post* balancing. Fourth, we discuss which countries should join the EUBS. There are arguments for limiting membership to euro area countries, or for extending it to the European Union, but participation should in any case be mandatory. Fifth, we review the costs of the EUBSs proposed in the literature, concluding that they tend to stay below 1% of the member countries' aggregate GDP. Finally, we look at the stabilisation effect of the EUBS. The conclusion is that an EUBS could operate transfers to those member countries most affected by economic recession that exceed 20% of the difference between the countries' actual GDP and its trend, hence yielding a substantial stabilisation effect.

2. Macroeconomic rationales for a stabilisation policy in EMU

In this section, we discuss the arguments for and against the existence of a European-level macroeconomic stabilisation policy. The discussion starts from the reports to the European Commission that constituted the intellectual building blocks of the future EMU – Marjolin et al. (1975), MacDougall et al. (1977), Padoa-Schioppa et al. (1987) and Emerson et al. (1990) – but will also refer to other studies that discuss or develop the arguments developed in these reports. It is interesting to note that the debate took place in three distinct waves. The first was in the 1970s, when the first reports on the creation of the monetary union were written already containing the main arguments and concepts (for instance, the existence of spillover effects and the need to deal with balance of payment imbalances). The second wave started at the end of the 1980s, when the creation of EMU became a concrete project. In this phase, the earlier arguments were revisited. Yet, the debate did not lead to the creation of a fiscal capacity for the euro area despite the facts that, unlike in the 1970s, unemployment had become a prominent issue everywhere and fiscal policy was firmly recognised as a demand management instrument. We investigate the reason for this through informal interviews with some of the authors of those articles. The third wave started in the aftermath of the Great Recession and is ongoing.

It was argued in 1975 that economic and monetary unions can exist with very different degrees of integration. However, the United States, Australia, Germany and Canada are all endowed with important automatic mechanisms to offset fluctuations in economic activity. These include unemployment allowances and budgetary assistance to compensate a reduction in revenues (Marjolin et al., 1975).

Moreover, those economic and monetary unions are characterised by a number of distinguishing features that – besides the existence of a central bank and the free circulation of individuals, goods, services and capital – include the existence of a centralised fiscal and social security system. This centralised scheme operates, in a more or less visible way, a redistribution of wealth between the different regions comprising the union, complementing the other channels through which, in an integrated economy, possible deficits in the balance of payments of particular regions level out. Hence, the scheme also has the function of contributing to offsetting fluctuations in economic activity across different regions.

The economic rationales for a common fiscal policy belong essentially to three main lines of argument: spillover effects, current account imbalances and market failures.

First, a sound macroeconomic policy reducing the impact of an economic crisis in an economically weak region can have positive effects on the other regions, because it avoids negative spillover

effects. The importance of this type of spillover effect, both from a theoretical point of view and in the context of the EMU, has also been recognised in later literature (e.g. Majocchi and Rey, 1993; Frankel and Rose, 1998; Kalemli-Ozcan et al., 2001; Allard et al., 2013). A demand shock in one country can spill over to other countries when the economies are integrated. Hence, a sound common macroeconomic policy can bring benefits for every country in the monetary union by increasing economic stability. Such a sound macroeconomic policy would be mostly concerned with risk-sharing among countries when asymmetric shocks (i.e. shocks hitting relatively small subsets of countries) are prevalent (Kalemli-Ozcan et al., 2001); and it would be more concerned with a common budgetary policy of borrowing from future income at times of economic difficulty if the shocks are correlated (Frankel and Rose, 1998). In light of the evidence of the last two decades, it seems that important common shocks have been experienced in EMU, but also large country-specific shocks (Allard et al., 2013). As explained by Allard et al. (2014), country-specific shocks remained more frequent than expected. Some were due to the local credit booms and busts or to the different adaptation strategies to globalisation, and others to policies themselves. Whether the Great Recession is itself an idiosyncratic shock is open to debate. On the one hand, GDP fell substantially in nearly all countries, but on the other hand, unemployment rates moved along a strongly diverging path after 2008.

The more integrated national economies become, the less effective the national instruments of economic policy, because a large part of the fiscal stimulus translates into an increase in imports. As re-formulated in later literature (Goodhart and Smith, 1993; Majocchi and Rey, 1993; Enderlein et al., 2013), this argument has to do with the idea of fiscal policy as a common good among integrated economies; national governments may be reluctant to implement a fiscal policy of the optimal size (in terms of average expenditure as a percentage of GDP) because they will not be able to reap all the benefits, some of which will accrue to neighbouring economies. Hence, a common fiscal policy is needed to reach the optimal level of resources devoted to fiscal policy. In other words, "multiplier effects on internal demand of tax or expenditure changes are dampened by a high propensity to import" (Majocchi and Rey, 1993, p. 460). Alcidi and Gros (2014) argue, however, that the magnitude of spillover effects depends on the economic and financial context. In normal times, when financial stability is not at risk, there are no spillover effects even if financial markets put a premium on a higher debt level. In contrast, during financial crisis, the case for coordination of national policies becomes strong.

After the creation of the euro, the potential problems related to its current account imbalances remained; a lesson learnt the hard way during the Eurozone crisis. A large and sustained deficit can be considered a sign of an expansionary policy (Majocchi and Rey, 1993). If fully in control of monetary policy, the country in question would use the exchange rate to facilitate an adjustment. This not being available, the adjustment has to happen entirely in the real economy through a deflationary process. Majocchi and Rey (1993) observe that the adjustment within a currency union is made easier by smooth functioning of capital markets, but it is also more painful as it causes a deterioration in the economic situation of the country that is adjusting. Fiscal policies can seek to offset the demand differences between countries (Guyon, 2007). This can happen in two ways: by adopting an expansionary fiscal policy in the surplus country, and/or by cushioning the adjustment in the deficit country with an automatic stabiliser.

The latter argument in favour of the adoption of an automatic stabiliser belongs in the realm of market failures. Goodhart and Smith (1993, p. 421) observe that, "the case for government intervention usually rests on the existence of some market failure, or imperfection. In the case of intervention for the purpose of stabilisation, the purported failure is that of (labour) markets to

clear, whether by means of wage flexibility or by migration (though migration would not be an effective response to a common shock)."

They argue that in the European Community, labour markets appear relatively sluggish in adjustment; not only is the elasticity of wages to unemployment lower than in other advanced economies, but also migration occurs in smaller numbers between European countries compared to American states.[2] Therefore, given European rigidities, "unless stabilized, adverse shocks are likely to impinge to some considerable extent on real variables, output and unemployment (rather than primarily on nominal variables)" (ibid.). Aware that the possibility of fiscal support can reduce the incentive to promote an adjustment and thus delay it, Goodhart and Smith argue that short-term stabilisation would not be strong enough to balance the pressure coming from higher unemployment and lower income in the case of prolonged or permanent shock.

These views are shared by Majocchi and Rey (1993), who argue that labour mobility seems too low to bear a significant share of the adjustment even in existing federations, which are not segmented by the cultural and linguistic barriers that exist in the European Union.[3] They also bring forward the argument by Begg (1989) that wage depression (assuming that it happens fast enough) can have further depressive effects on the local economy due to the reduced demand in non-tradable goods. The limits of mobility in Europe are also confirmed by more recent studies (see Barslund et al., 2015).

It is worth recalling at this stage that fiscal policy acts along two dimensions that remain conceptually distinct: stabilisation, calling for policies in which net transfers from the union to the regions are only a function of the rate of change of economic activity; and redistribution, implying that net transfers are a function of variables related to the level of economic activity, such as the unemployment rate or GDP per capita (Goodhart and Smith, 1993). Often, when implementing a policy, the policy-maker has in mind one of these two dimensions. However, as the two dimensions are interconnected, in practice it is difficult to design a policy that is effective with respect to one and neutral with respect to the other (for example, designing a policy which has only a stabilisation effect without generating any redistribution of wealth). This argument is made by Vetter (2014) in the context of an EUBS, and will be further explored in Section 5.

Much attention is dedicated in the MacDougall Report to stabilisation. It is argued that the transition from a group of national economies to an integrated economy changes the pattern of production and exchange, with some peripheral regions losing out. This process is discussed in more depth, and on the basis of concepts borrowed from spatial economic analysis, in a later report to the European Commission by Padoa-Schioppa et al. (1987). Two factors may be particularly important. First, there are economies of scale offered by centrally located urban agglomeration, which would tend to favour those economies that are located at the core of the European economy. Second, integration between very different economies such as those of the European Union is likely to translate into expanded inter-industry trade, allowing the most

[2] Recent research shows that some progress has been achieved in this regard. Although cross-country mobility remains low compared to the US, it has shown an increasing trend in recent years. Moreover, the lower cross-country mobility is compensated by the propensity of Europeans to relocate within countries (Beyer and Smets, 2015).

[3] Migration can also be seen as a process that imposes personal costs on the displaced migrants, and preventing excessive migration may even be a policy goal, as stated in the MacDougall Report (MacDougall et al., 1977).

advanced economies to increase their specialisation in high-technology industries at the expense of the peripheral economies. Given that the European Union has mostly been premised on economic benefits, it is important that those countries that risk losing out from further integration are compensated to avoid the risk of economic and political instability and the threat of secession. The creation of the Structural Funds and the Cohesion Fund responds precisely to this need.

The vision in the MacDougall Report is one of a fully-fledged economic union in which federal public expenditure is around 20-25% of GDP. Yet the authors admit that, "it is most unlikely that the Community will be anything like so fully integrated in the field of public finance for many years to come as the existing economic unions" (p. 11). As part of the transition towards the fully-fledged union, they foresee a stage with a smaller integration of approximately 5-7% of GDP. The first step towards this evolution would be 'pre-federal' integration when the European Community's political structure is built up. Even at this stage, they argue, Community action in the areas of structural and cyclical policies (regional, manpower and unemployment policies) is needed to ensure that the benefits of closer integration are seen to accrue to all.

None of the many proposals put forward in the first two waves of the debate (in the 1970s and in the 1990s) was put into practice. The line that prevailed is that market adjustment mechanisms would be able to play an important role in macroeconomic stabilisation process. In "One market, one money", Emerson et al. (1990) argue that European markets will be more integrated as a consequence of the currency union, so that current accounts surpluses and deficits deriving from asymmetric shocks will be less of a problem because of capital and labour adjustments. Capital would be free to move from region to region to cover the imbalances. In addition, the rate of profits would be higher in regions doing well economically than in those hit by a shock, and if the financial market is integrated (implying that the ownership of public companies is more or less evenly distributed across Europe), this will mean that there will be a transfer of dividends from the former regions to the latter. Wages are likely to become more flexible in the currency union because (among other reasons) of the rules on public deficits and debt that governments have subscribed to. If the commitment of governments is credible, then both they and trade unions will consider fewer policy alternatives to adjusting wages than they did before the currency union. Labour mobility is a substitute to wage flexibility, because workers can migrate from a country in recession to another country, increasing employment and aggregate demand in the latter. Since the completion of the internal market will ensure the complete freedom of movement of persons across the EU, labour mobility is expected to increase substantially and to contribute more than in the past to the absorption of asymmetric shocks. Emerson et al. (1990) also argue that asymmetric shocks would become less frequent in an integrated economic area. Macroeconomic policy coordination may be quite effective in reacting against common shocks, because most or all countries of the currency union are involved and have a common interest in overcoming the crisis. The authors conclude that, "on balance, it can therefore be assumed that the need for fiscal policy adjustments will decrease" (p. 105).

Conversations with some of the authors of the reports and papers reviewed revealed that in the 1990s, it was broadly accepted by experts that there was a need for a European fiscal capacity, but there was political reluctance to bring this idea to the fore. One of the main reasons was that in 1993 there were a large number of important topics on the Maastricht Treaty negotiating table, which was at risk of not being ratified in some countries. With so many topics on the political agenda, policy-makers felt that the issue of a fiscal stabiliser, and in particular of an EUBS, would have to wait since it was not viewed as a game-changer. In fact, negotiations on that front would have been made difficult by the political argument that an EUBS could not be carried out with a

common European budget without the common authority having a say on labour markets reforms. Increasing the size of the budget was also politically challenging.

A number of independent experts working for the Commission (Courchene et al., 1993) expended considerable effort in identifying what the minimal necessary budget capable of sustaining European economic and monetary union might be. By rigorously applying the subsidiarity principle and leaving only a marginal role to redistribution and macroeconomic stabilisation, they concluded that the minimum level, including a relatively inexpensive stabilisation mechanism, was about 2.2% of GDP. However, these computations did not receive much attention in the European policy-making environment. Interestingly, Courchene et al. (1993, p.24) provide a possible explanation for this while commenting on the debate on the European budget that was ongoing in the early 1990s – several European countries that were in poor economic shape in the 1990s begrudged an increase in the Union's budget, after the Commission had imposed severe rules on their budgetary policies through the Maastricht Treaty.

It was stressed in these conversations with authors that two more considerations in the 1990s prevented the idea of a common fiscal policy from becoming reality. One was the material complication of having a separate budget for EMU once it became clear that the UK would not be part of the currency union. This issue became more and more important as the idea of the EU enlargement materialised. The other was the fact that large shocks triggered by the financial sector were difficult to envisage at a time when the most important shock to deal with was the reunification of Germany. Given that macroeconomic stabilisation was not generally viewed as a major problem at the time, efforts were concentrated in designing policies consistent with the four building blocks identified by Delors et al. (1988): (i) a completed single market, (ii) a common competition and market policy, (iii) a common structural and regional policy, and (iv) macroeconomic policy coordination (that was deemed sufficient to avoid large macroeconomic disequilibria).

The EU budget remained at around 1% of GDP and it was confidently expected that financial markets, combined with internal mobility and national stabilisers, would rebalance economies in the event of shocks. Today, it is fair to say that the experience of the Great Recession has convinced many economists of the need to reopen the debate on what de Grauwe (2013) recently called "design failures" of the Eurozone architecture. This message was also heard by policy-makers at the highest European level; the creation of an automatic stabiliser directly entered the Four Presidents' Report in 2012 (Van Rompuy et al., 2012) and the Five Presidents' Report in 2015 (Juncker et al., 2015). More specifically, the 2015 report, *Completing Europe's Economic and Monetary Union*, argues in favour of a system designed for the "cushioning of large macroeconomic shocks and thereby make EMU overall more resilient", along the lines of the proposal by Beblavý et al. (2015).

3. Possible stabilisation mechanisms

A state or a federation has many ways of influencing the economy through fiscal policy. Accordingly, many suggestions have been made by policy-makers and scholars alike for possible types of European institutional intervention in the economy. The literature reviewed in this section proposes a number of potential mechanisms for a European-level macroeconomic stabilisation mechanism.

An EUBS was one of the very first proposals in this respect, already featuring prominently in the report by Marjolin et al. (1975). The view of these authors was that an EUBS would accomplish

the missions of fiscal policy, stabilisation and redistribution. This would be managed by an independent administrative body directed with the participation of social partners, and funded by a contribution from income paid by employers and employees. If an employee becomes unemployed, he or she would receive either a lump-sum daily allowance or a percentage of his or her previous income for a fixed amount of time. National states would be allowed to adjust contributions and allowances upwards at their own expense. Such a scheme would generate a flow of redistributive transfers from regions with high structural unemployment to regions with low structural unemployment, which the authors consider to be a positive characteristic of the scheme. Furthermore, if a country faces a period of recession or stagnation, its unemployment rate would increase, leading to an increase in the net transfers from the EUBS and reducing the impact of the economic shock. This proposal, with a large number of variants, has been discussed in a number of later studies, as the next section will show. Before delving further into these, we review the possible alternatives to an unemployment-based scheme.

Another area of fiscal policy with a stabilisation purpose that received early and extensive attention is that of regional policies. The link between regional policy and macroeconomic stabilisation was not made clear by Marjolin et al. (1975), but was made explicit by the subsequent report by MacDougall et al. (1977), who discussed a possible system of cyclical grants to local or regional governments. This would be a system of financial redistribution based on grants subject to different types of constraints: specific conditions aimed at increasing economic capacity; economic criteria connected to the relative cyclical and the structural economic situations of the regions; and conditions on economic policy performance in those cases where member states have some control over economic outcomes. The idea of conditional regional policy re-emerged in the report by Padoa-Schioppa et al. (1987). The suggestion in this report is to help regions that are less economically developed or are experiencing economic decline in two ways: by subsidising the interest rate paid on loans taken on by the private sector from the European Investment Bank or other credit institutions; and by offering grants financed by the structural funds to regions in economic difficulty. The first type of transfers would be conditional on the quality of the programmes receiving support, whereas the second would be conditional on the implementation of a medium-term macroeconomic strategy incorporating structural policies and reform.[4]

The proposal by Drèze and Durré (2014) is slightly different in that it suggests starting a programme of public investment especially concentrated in the areas of social housing, renewable energy and transportation. One shortcoming of this scheme is that it could involve complex arrangements. Suppose that an EMU-level institution finances the construction of houses in Spain for citizens in need. It would not be easy to determine who (European institutions, the Spanish or local government) should define the criteria for access to the social housing programme, who should own the buildings, and so on. Moreover, a European-level investment policy could hardly be an automatic stabiliser – given the time needed to propose, approve and implement projects, it is more likely to be a pro-cyclical policy.

A quite different option is to establish a European Debt Agency (Enderlein et al., 2013) that would issue its own bonds. The idea is that each member of the euro area would issue a part of its debt

[4] It is interesting to note that some of the programmes envisaged in cyclical regional policies are related to human capital and training, which shows that not only passive labour policies such as the EUBS, but also active labour market policies have received great attention in the debates surrounding the European Commission.

(around 10% of GDP) as bonds issued by this agency, creating a liquid market of 'eurobonds'. Countries experiencing tough economic times could increase their debt issued through the European Debt Agency to up to 20% of their GDP without very strict policy conditions. However, requests to further increase the share of debt issued through these eurobonds would be negotiated so that the help would be conditional on implementing certain macroeconomic and structural policies. This idea has also been discussed, although not at great length, by Moesen and De Grauwe (2009), Allard et al. (2013) and Pisani-Ferry et al. (2013).

One last proposal that deserves attention is that by Enderlein et al. (2013), who suggest, as a means of creating a euro area macroeconomic stabilisation policy, the establishment of a European fund based on member countries' contributions. This fund would transfer funds to a particular country when it faces a negative point in its economic cycle that would be earmarked for a reduction of payroll taxes. A similar proposal is discussed in a study by Carnot et al. (2015). Enderlein et al. (2013) recognise that, in theory, spending on the economy directly (as in the regional policies discussed above) or through unemployment benefits would yield a higher multiplier than reducing payroll taxes. However, they argue that the latter measure has the advantage of not substituting any government spending programme. Hence, it does not give governments the possibility to divert the money saved to different spending purposes that are more affected by agency or by problems of moral hazard.

It is worth noting that the way in which fiscal policy is funded could also contribute to macroeconomic stabilisation, if the revenue collection scheme were designed in a progressive way, as noted by Marjolin et al. (1975) and MacDougall et al. (1977). A progressive tax implies that the relative contribution to the central budget of regions with a deteriorating economic performance decreases, reducing the drop in disposable income. McKay and Reis (2013) review three stabilisers on the revenue side in the US: personal income tax, corporate income tax and property tax. The first is not only the most studied but also the most important in terms of size, as it amounts to approximately 11% of GDP or one third of the US budget (ibid.).

As anachronistic as it may sound today, Marjolin et al. (1975) suggest, still on the revenue side, financing the European Community budget with a tax on land usage in industrial sites, which would reflect both the economic capacity of a country and its position in the economic cycle. Majocchi and Rey (1993) suggest financing the EU budget through a carbon tax or through a system of contributions whereby each country pays a percentage of its GDP computed as a base rate plus a progressivity coefficient that increases the proportional contribution of richer countries. Of course, much greater room for manoeuvre in this sense would be given if the EU or the euro area were to be endowed with a substantial budget (Allard et al., 2013).

Yet, despite the wealth of alternatives, a common unemployment insurance scheme has been considered by many authors to be the most attractive option, for a number of reasons. Unemployment benefits:

- represent a type of expenditure that is quintessentially anti-cyclical, as unemployment rises when a country experiences economic difficulties;
- provide a way to support income very quickly once recession or stagnation hits a particular country;
- support those individuals in society who bear a large part of the social costs in a recession (in the case of the EUBS, this could be a way to show European citizens that there is a solidarity net at the European level, increasing their trust in European institutions);

- represent a type of expenditure with a high 'multiplier effect', because households that lose a source of income need to sustain their consumption levels; and
- kick in automatically in the event of recession.

However, the design of the EUBS will have to overcome a number of obstacles that have been clearly identified in the literature. These obstacles are outlined in the next section, together with some solutions proposed in the literature.

Box 1. The unemployment benefits multiplier

Since Keynes' times, economists have believed that public expenditure generates an input to growth that is higher than the expenditure itself, due to a multiplier effect. The multiplier varies according to both the type of expenditure and the characteristics of the economy (IMF, 2009). Quantifying this multiplier is extremely challenging, as witnessed by the fact that studies do not agree on a common number. Different methodologies lead to different results, even when the same case is analysed (Spilimbergo et al., 2009). Zandi (2008) calculates that in the US, a $1 increase in unemployment benefits generates an estimated $1.64 in near-term GDP. Vroman (2010) believes this impact to be greater – every $1 spent on unemployment insurance increases economic activity by $2. An older study by the US Department of Labor estimates that, on average over six periods defined between 1972 and 2001, $1 of unemployment insurance benefit generated GDP growth of $2.15, with the multiplier effects of each of these six periods ranging between $1.54 and $3.07 (see Chimerine et al., 1999). Monacelli et al. (2010) estimate that "in response to an increase in government spending normalised to 1% of GDP, we estimate an output multiplier well above one, in the range of 1.2-1.5 (at one-year and two-year horizon respectively)". A recent estimate by the US Congressional Budget Office (2010) is less precise – increasing aid to the unemployed by $1 is estimated to have increased GDP by between $0.7 and $1.9 during the period 2010-2015.

4. Challenges of an EUBS and proposed solutions

This section illustrates the main challenges related to the implementation of an EUBS, together with some solutions proposed in the literature. We focus on studies that simulated the effect of potential EUBS because these studies had to make choices regarding their operational definitions and how some commonly encountered problems were dealt with. Examples of such studies include Dullien (2013, 2014), Italianer and Vanheukelen (1993), Beblavý and Maselli (2014), Beblavý et al. (2015), Jara and Sutherland (2014) and Dolls et al. (2014).

Financing the scheme

Four sources of finance have been suggested for the EUBS, also on the basis of the experiences of unemployment benefit schemes in federal countries: a payroll tax, a corporate tax, a contribution paid by member countries defined as a percentage of GDP and not linked to a joint ad hoc tax, and debt.

The payroll tax – used in the EUBS proposed by Dullien (2013, 2014) – and the corporate tax (Pisani-Ferry et al., 2013) have the advantage of creating a 'genuine' unemployment benefit scheme, in the sense that they generate a system that works as insurance at a microeconomic level, where the worker or the employer pays a contribution that is directly linked to the assistance the

worker will receive in the event of remaining unemployed. These financing schemes would also endow the Commission with a budget that is directly related to a well-defined source of revenue.

Most EUBS simulation studies (Italianer and Vanheukelen, 1993; Beblavý and Maselli, 2014, 2015; Dolls et al., 2014) prefer to model the contribution to the EUBS as a percentage of a country's GDP, either fixed or variable. This does not mean that these papers are critical of payroll and corporate taxes as a way to finance an EUBS. In fact, defining the payment as a percentage of a country's GDP is a very general way of defining the country's pay-in, which can coincide with a payroll or corporate tax if the member countries agree that this is the way the national contribution should be collected. In the absence of such an agreement, defining the contribution as a sum relative to GDP leaves member countries free to decide how to collect the necessary resources. In the latter case, the EUBS works as insurance between countries (a so-called 'equivalent system').

The issue of debt is more controversial, because it would imply the ability of the fund to issue supranational bonds. The related political debate goes beyond the scope of this paper, and of the papers that we cover in the literature review in this section. However, some authors have discussed the potential benefits accruing from the ability to issue debt. Dullien (2013) notes how the macro-stabilisation properties of the EUBS would be improved if it were allowed to run surpluses in good times and deficits in bad, possibly covered by borrowing on the financial market. The ability to issue debt might become particularly important in the case of symmetric shocks.

Harmonisation and political feasibility

One major obstacle to establishing an EUBS is that national unemployment benefit schemes are already in place – and have been in some countries for a century – that were set up as a result of political decisions taken by national governments. Hence, they may reflect national preferences concerning the generosity of the welfare system or the incentives to be offered to individuals, or constitutional constraints.

National unemployment benefit schemes are differentiated along three important dimensions: the eligibility requirements (understood as referring to both the personal scope and the entitlement conditions), the generosity of the benefits (determined by the replacement rate and the reference wage), and the duration of the unemployment benefit. Eligibility rules determine which unemployed citizens qualify for unemployment benefit. One particularly important eligibility rule determines how many months a citizen must have worked (or have been insured) in a specified period prior to becoming unemployed in order to receive benefit. The duration is the number of months for which the unemployment benefit is paid out. In many countries, the duration of unemployment benefit varies according to the insurance record and/or the age of the unemployed person. The replacement rate is the proportion of the reference wage (defined by law as a function of past wages) that will be paid out as an unemployment benefit, so that the unemployment benefit equals the reference wage times the replacement rate. Throughout the call for tender, there seems to be the assumption that the replacement rate will not vary by month, although this is not necessarily the case in the national benefit schemes. In some cases, the replacement rate may be irrelevant because the benefits are flat (i.e. they are the same independently of previous earnings). In fact, in over a third of EU member states, unemployment benefit rates vary according to the duration of unemployment – with benefit amounts typically decreasing as unemployment persists. Other factors may also affect the replacement rate in the

national benefit schemes, such as the insurance records and family composition of beneficiaries. The widespread use of (both lower and upper) ceilings for reference earnings and/or benefit amounts further complicates the picture of this dimension of unemployment benefit schemes. It should also be borne in mind that a minority of national benefit schemes provide a flat-rate unemployment benefit, the amount of which is unrelated to previous earnings.

The aforementioned dimensions of unemployment benefit schemes generate incentives for individual behaviour that have long been studied by economists (Card et al., 2007; Krueger and Mueller, 2010). For example, a longer duration and higher replacement rate may reduce the efforts made by an unemployed person to find a new job.

National unemployment benefit schemes across Europe present very different characteristics (Esser et al., 2013, Strauss et al., 2013), so complete harmonisation could prove very difficult to achieve. This, together with the issue of moral hazard, constitutes a major barrier to the implementation of an EUBS, as also stressed in a Deutsche Bank research briefing (Vetter, 2014).

Objectively, setting up an EUBS from scratch would raise major administrative issues. For this reason, the literature reviewed in this paper unanimously suggests building the EUBS on the basis of existing national benefit schemes.

Nevertheless, different policy designs require different levels of harmonisation. An *equivalent* EUBS is one in which financial transfers from the supranational fund occur only from and to member states, and not directly to unemployed individuals. The transfers from the EUBS to countries are earmarked for unemployment benefits. This design, in principle, could leave member states free to distribute the money to unemployed individuals according to existing national legislation, reducing the need for harmonisation of national legislation. Pisani-Ferry et al. (2013), for example, assume in their simulation exercise that the EUBS would pay to every country the amount required to pay benefits according to their national legislation. Such a system could have perverse incentive effects, as countries would be incentivised to increase the generosity of their unemployment benefit legislation with the EUBS covering the costs. However, it is clear that this would lessen the need to enforce the harmonisation of national legislations.

A *genuine* EUBS is one in which financial transfers from the supranational fund directly target unemployed individuals. The national benefit schemes are responsible for collecting the payments from individuals, reporting data on the work history of individuals to the EUBS, and mediating in the transfer from the EUBS to citizens. A genuine EUBS would require more harmonisation of national legislation because citizens should be treated in the same way by the EUBS in terms of eligibility requirements and the duration and amount of the unemployment benefits. Examples of genuine systems – proposed, for example, by Strauss et al. (2013) – are modelled in Dolls et al. (2014) and Jara and Sutherland (2014). One type of genuine scheme that, in a sense, requires less harmonisation is that proposed by Delpla (2012). In this scheme, every European worker is able to choose between a national and a European labour contract, which differ only in terms of their unemployment insurance provision. The EUBS would cover only workers who choose the European labour contract, so that in principle there would be no need to change the national provisions. This can be considered an example of a 'top-up' EUBS, in which the EUBS tops up the national benefit scheme when workers find it insufficient, but does not intervene otherwise.

To summarise, national unemployment benefit schemes are differentiated along three main dimensions: eligibility requirements, the generosity of benefits (determined by the replacement rate and the reference wage) and the duration of the unemployment benefit. Different countries made very different choices on these dimensions, presumably partly reflecting different political preferences. Hence, harmonising national benefit scheme systems may prove both administratively and politically difficult. Alternative EUBS variants differ in the extent to which they require harmonisation, with an equivalent EUBS requiring the least harmonisation.

Moral hazard and permanent financial transfers/stabilisation versus redistribution

A mechanism implying financial transfers between economic regions belonging to a monetary union may generate a risk of moral hazard, especially if the economic regions have substantial policy powers, as is the case for European countries (De Grauwe, 2003). The government of a recipient country may decide not to implement unpopular policies, such as pension reforms, to boost the country's future economic performance if it knows that this will be compensated by increased financial support from the federation.[5]

Two main mechanisms have been suggested in the literature with this purpose, with different implications for the problem of moral hazard: the introduction of a trigger; and experience rating, or 'claw-back'. The former solution requires careful definition of a trigger to determine when the transfers will be operated in favour of a particular country. The trigger is composed of an indicator and a threshold; in every period (typically a month, trimester or year) in which the indicator exceeds the threshold, transfers are operated towards a particular country (Beblavý et al., 2015). Permanent transfers are avoided in two cases. The first is if the indicator is related to the rate of change of an indicator of economic activity, rather than on its level. In this case, every country would be likely to become a recipient of transfers at some point, and the incentives to avoid implementing policies yielding long-term economic growth would be limited because the transfers would not be long lasting. Typically, the indicator chosen for the trigger in the context of the EUBS is the unemployment rate (Italianer and Vanheukelen 1993; Dullien, 2007, 2012, 2013; Beblavý and Maselli, 2014; Beblavý et al., 2015). Second, if the threshold is sufficiently high that only major economic shocks would trigger transfers from the EUBS, then transfers cannot be permanent by definition. In addition, the social costs of these shocks would presumably be too high to induce moral hazard on the government side.[6]

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[5] The moral hazard argument, however, is symmetric: in a monetary union, pursuing national policies in an uncoordinated way may lead to high social costs in the partner countries. This is the reason why EMU countries opted for coordination in the first place and it is also the reason why today a debate exists on the creation of a fiscal capacity in the eurozone.

[6] A number of studies in the literature suggest a variety of ways of defining the trigger such that permanent transfers would be avoided. Such studies have typically analysed equivalent EUBSs, i.e. schemes in which a supranational fund collects payments from the national countries and, when certain conditions are met, operates transfers towards some countries, which are earmarked for unemployment citizens.

Dullien (2013) defines the trigger in three different ways for the three scenarios of his simulations:

- an unemployment rate above 7%, with an increase above one percentage point over past 12 months;
- an unemployment rate above 5%, with an increase above one percentage point over past 12 months; and
- an unemployment rate above 7%, with an increase above 15% over past 12 months.

Italianer and Vanheukelen (1993) suggest the following trigger:

The literature simulating the effect of the EUBS has experimented with claw-back as an *ex post* mechanism to get close to the neutral balance of the net, long-term transfers from member countries to the EUBS. Claw-back is a mechanism by which the contribution of each country to the EUBS fund depends on the net balance of the past net contributions of that country. Schemes of this type have been proposed by Dullien (2014), Dolls et al. (2014), and Beblavý and Maselli (2014). The first of these three studies proposes a system by which a country's contribution rate is increased by 0.3% of GDP if the net contribution has been negative for two consecutive years, or decreased by 0.3% if it has been greater than 1% of GDP for two consecutive years. Simulation results indicate that a claw-back option limits the risk of non-neutral net contributions, although it reduces the stabilisation capacity of the EUBS, at least in the event of long-lasting recessions. Dolls et al. (2014) suggest a mechanism by which the contribution of each country is adjusted every three years. The new contribution is computed such that if the country continues to receive the same amount of benefits as in the last triennium, the net balance will be reduced by 100% in the next three years (or by 50%, in the alternative option explored by the authors). Quite surprisingly, the results of their simulation indicate that neither option is very effective in reducing the risk that some countries will be net payers or net contributors in the medium term. Beblavý and Maselli (2014) suggest increasing a country's contribution when the negative net balance vis-à-vis the EUBS exceeds 1% of GDP for this country.

The choice of mechanism to avoid permanent net transfers in favour of a subset of countries is, in part, related to the choice of the type of EUBS. A trigger is a logical option in the case of an equivalent EUBS (i.e. a scheme agreed between countries, not workers). In a genuine EUBS, individual citizens benefit from individual entitlements vis-à-vis the EUBS, and it seems inappropriate to introduce a trigger that switches individual entitlements 'on' or 'off' on the basis of the macro-performance of the country in which the individuals happen to live. Experience rating or a claw-back system can be implemented both in an equivalent and a genuine EUBS, but if a genuine EUBS is financed by individual contributions, making the level of individual contributions by employers and/or employees variable on the basis of past macro-performance may also raise issues of political feasibility and legitimacy.

- the increase in the unemployment rate over past 12 months is positive and greater than the average increase over the other members of the European Union.

Beblavý and Maselli (2014) design the trigger in the following way:

- the difference between the unemployment rate and the non-accelerating wage rate of unemployment (NAWRU) exceeds 2%.

Beblavý et al. (2015) analyse three different EUBSs, with the following triggers:

- the short-term unemployment rate exceeds the sum of its 10-year average and one-tenth of its 10-year standard deviation;
- the short-term unemployment rate exceeds the sum of its 10-year average and its 10-year standard deviation; and
- the short-term unemployment rate exceeds the sum of its 10-year average and twice its 10-year standard deviation.

Note that if the threshold is expressed in absolute terms – as in all the papers mentioned except Beblavý et al. (2015) – there are, in principle, incentives for a more subtle form of moral hazard. In this case, it can be argued that a country has an incentive to reduce counter-cyclical policies because this would increase its likelihood of receiving benefits. A solution to this problem is presented by Beblavý et al. (2015), who explicitly link the threshold to the volatility of the short-term unemployment rate.

In addition to mitigating moral hazard, a trigger system can have another advantage, notably when it is related to changes in unemployment rather than levels of unemployment. In such a system, every country is likely to be a recipient of transfers at some point in time. Thus, the avoidance of permanent transfers (APT) enhances the political legitimacy of the scheme. However, ATP does not mean that every country would benefit to the same extent.

It is important to distinguish two properties of an EUBS: APT on the one hand, and the neutral balance of the net, long-term contribution of each country on the other. The neutral balance of the net, long-term contribution (NBC) is a stricter condition, which is not implied by APT. Suppose that country A receives on average larger net contributions than country B when it is a net beneficiary, the two countries pay the same amount into the EUBS every year, and country A is as likely as country B to be a net beneficiary. In that case, the EUBS will exhibit APT but not NBC, because no country will always be a net recipient, yet country A will be a net beneficiary in the long term.

A system of experience rating or claw-back mitigates the risk of moral hazard, since a country pursuing persistently lax policies will be confronted with increasing contributions. Such mechanisms reduce the risk of permanent *net* transfers, and bring the system closer to NBC. However, it is not clear that a strict principle of NBC *per se* is a solution to moral hazard. Certainly, the possibility for a country to have a positive position against the EUBS in the long term may create incentives to design economic policies in such a way that this happens. A strong emphasis on NBC *per se* can be seen as more important with a view to the political legitimacy of the system at large. Political legitimacy encompasses the avoidance of moral hazard, but also includes issues related to the cross-country redistribution of resources in an inter-temporal perspective.

Avoiding moral hazard and permanent net transfers is one of the most pressing challenges in the design of a common shock absorber for the EU/euro area. Any mechanism that systematically helps an economy in crisis may reduce the pressure for structural reforms in this country. The literature shows that there is more than one option for reducing the risk of moral hazard. For instance, the EUBS could be activated by changes (to a lesser or greater degree) in unemployment rather than by levels. Or the trigger could be set sufficiently high that the EUBS would intervene only in the case of severe recession. In addition to these '*ex ante*' mechanisms (which fit in naturally with an equivalent EUBS), several ways exist to adjust national contributions to the scheme *ex post*. Experience rating or claw-back can link the pay-in to the pay-out. These mechanisms are unlikely to generate net payments that are perfectly balanced, but they should contribute to avoiding permanent net transfers to a subset of countries and thus to solving the problem of moral hazard.

As a matter of fact, moral hazard can also exist in countries in which different layers of government intervene in the regulation of unemployment and in activation policies. Multi-tiered regulation of unemployment and activation is present in some federal countries, but also in some unitary states. If such states are indeed confronted with issues similar to the moral hazard problem outlined in this section, it is important to examine whether they use financial mechanisms to avoid this (possibly linked to performance measurement) and/or preventive mechanisms of a non-financial nature. Non-financial preventive mechanisms can take the form of minimum requirements with regard to the activation of unemployed people, but performance measurement and management can also play a role in non-financial approaches. Hence, an empirical study of unemployment regulation and activation in multi-tiered institutional settings should complement the theoretical analysis described in this section.

Member countries

At the beginning of the discussion of an EUBS, it seemed that if a monetary union were ever to be realised, it would involve all members of the European Community. Most of the arguments developed to support the cause of the EUBS were related to the consequences for European countries of being in a monetary union, for example the loss of the prerogative of monetary policy and increased economic integration. Accordingly, early simulations of the effect of the EUBS (see Italianer and Vanheukelen, 1993) did not make a distinction between members of the EU and members of the euro area.

However, only a certain number of EU countries actually adopted the common currency. It is not clear whether only countries in the euro area should be included in the EUBS or all EU members, or indeed any EU members on a voluntary basis. One argument for including every EU member is that, if the purpose of the scheme is to insure countries against asymmetric shocks, then a larger pool of insured countries is better than a smaller pool (Beblavý and Maselli, 2014). A second argument is that this would impose some minimal common standards, in terms of welfare, across the whole European Union and demonstrate citizen solidarity at the European level. This has been the typical 'social' argument for the EUBS, already advanced by Marjolin et al. (1975). In contrast, leaving every country free to decide whether or not to join would make the EUBS politically acceptable to everyone.

Most simulation studies limit themselves to countries in the euro area (Dullien, 2007, 2013; Pisani-Ferry et al., 2013; Dolls et al., 2014; Jara and Sutherland, 2014), either because most of the economic arguments supporting the EUBS (explained in Section 2) have been developed with the currency union in mind, or sometimes because of data limitations. By contrast, Beblavý and Maselli (2014) and Beblavý et al. (2015) include all EU members in their EUBS. One proposal contemplating the possibility for countries to opt out of the scheme comes from Delpla (2012), with both citizens and countries left with the possibility to opt out. Other authors, however, argue that the EUBS would be more effective if participation were mandatory, in order to avoid adverse selection into the insurance scheme (Beblavý and Maselli, 2014). In fact, participation is mandatory for every state in federations such as the US and Switzerland (Dullien, 2007; Beblavý et al., 2015).

There are arguments for including all EU members in the EUBS, but also for restricting participation to euro area countries only. It is difficult to give a clear recommendation here, so in the end the decision may be based on political considerations. Nonetheless, irrespective of which set of countries is selected, economic theory would strongly advocate a mandatory system. In the case of voluntary participation, a problem of adverse selection would arise, as only those with a higher probability of requiring help will participate (Beblavý and Maselli, 2014).

Size of the EUBS

In designing an EUBS, it is necessary to think about the potential size of the scheme in terms of GDP. This is clearly related to the stabilisation effect that one would wish the EUBS to have, which would seem to draw very wide boundaries since, as we saw in Section 2, different scholars and policy-makers have had very different views in this respect. However, these boundaries are considerably narrowed by the fact that national unemployment benefit schemes are already in place, and it is difficult to imagine that the EUBS would be much more generous or restrictive than the systems already in place. A simple example of this is given by Italianer and Vanheukelen (1993), who estimate the hypothetical annual costs of the EUBS by multiplying the number of unemployed individuals by the average EU wage and then by a replacement rate set at 70%. The

result is that the EUBS would cost 0.5% of GDP, which is within the range of costs estimated by later literature.

More recent simulation studies typically set an EUBS with a given duration of unemployment benefits, a replacement rate determining the size of the benefits relative to a reference wage, and a coverage rate (the proportion of unemployed individuals who would receive benefits). These parameters are chosen to be roughly in line with those in place in some EU countries (typically, the median country). Once these parameters are chosen, the size of the EUBS is estimated based on these choices. Most simulation studies set the maximum duration to 12 months (Dullien, 2007, 2012, 2013; Beblavý and Maselli, 2014; Dolls et al., 2014), the replacement rate at 40% or 50% (Dullien, 2007, 2013; Beblavý and Maselli, 2014; Dolls et al., 2014; Jara and Sutherland, 2014; Beblavý et al., 2015), and the coverage rate at 75% or 80% (Beblavý and Maselli, 2014; Beblavý et al., 2015) unless it is computed endogenously according to other rules (Dullien, 2013; Dolls et al., 2014; Jara and Sutherland, 2014).

However, some simulation studies include a trigger in their EUBS so that the payment is only disbursed under certain conditions. This makes the EUBS much cheaper, because the claim (the amount transferred to a given country once the conditions are satisfied) remains in line with the scheme of the median country, but the transfers occur only under particular circumstances.

For example, under the scenarios in which the trigger conditions are most restrictive, Beblavý and Maselli (2014) estimate the average hypothetical cost of their EUBS scheme between 1999 and 2012 to be 0.07% of EU GDP (the average cost is close to 0.3% in their least restrictive scenarios). Like these authors, Dullien (2007, 2013) defines different scenarios, with an annual cost varying from 0.75% to 0.85% of euro area GDP (Dullien, 2007) or between 0.3% and 0.6% of EU GDP (Dullien, 2013).

Dolls et al. (2014) suggest a genuine scheme with no trigger, and the estimated annual cost for the euro area is around €50 billion per year (0.6% of GDP). An upper bound to the EUBS cost is given by Pisani-Ferri et al. (2013), who assume that the scheme would cover all the unemployment benefit costs incurred by member countries, which on average for the period 2002-2010 equalled 1.8% of GDP in the euro area. This system, however, would be far more generous than the systems devised in the rest of the literature, which usually estimate the cost of an EUBS to be between 0.3% and 0.85% of member countries' GDP. In the US, the cost of regular benefits was estimated to be in the range of $40.5 billion in 2014, which is equivalent to 0.23% of GDP (Whittaker and Isaacs, 2014).

To summarise, the size of the EUBS finds some sort of 'natural bounds' in the generosity of national unemployment benefit schemes. These bounds are likely to be around 0.3% (lower bound) and 0.85% (upper bound).

Stabilisation impact

Given this approximate cost of the EUBS, what then would be the effect on macroeconomic stabilisation? The answer to this question depends on the design of the EUBS and on the way in which the stabilisation effect is estimated.

In terms of the design of the EUBS, at least three features impact the average stabilisation effect of one euro spent on unemployment benefits. First, some unemployment benefit schemes – for example, that of the US (see Dullien, 2007) – extend the duration of unemployment benefits in the case of a particularly severe or prolonged recession. This mechanism introduces a form of cyclical

variability in the parameters of the scheme, with the effect of increasing support to the economy when it is particularly weak. Intuition suggests that the marginal stabilisation effect of one euro spent on unemployment benefits is higher in these circumstances, and this intuition is confirmed by Dullien (2007), who finds in his simulations that providing extended benefits substantially increases the stabilisation effect of the EUBS, with limited costs. A second feature impacting the average stabilisation effect per euro spent on the EUBS is the presence of a trigger. A trigger makes any transfer from the EUBS to a country conditional on that country experiencing a severe downturn. By limiting transfers to those times in which they are most needed, the presence of a trigger increases the stabilisation effect by intervening with substantial help only during major unemployment shocks, as shown in the simulations by Brandolini et al. (2014).[7] Third, allowing some redistribution of resources across countries makes the EUBS more flexible, and increases its stabilisation effect. This is shown by Brandolini et al. (2014) in their comparison through simulation of 72 alternative EUBSs.[8]

The way in which the stabilisation effect is computed can make a difference to the resulting estimate. This is probably the reason why the economic literature came to very different conclusions on the stabilisation effect of unemployment benefit schemes, as noted by Dullien (2013), who discusses this issue in some depth. First, one can analyse the *average* or the *marginal* stabilisation effect, depending on whether the analysis focuses on the whole business cycle (average effect) or only on recession. In the latter case, one obtains the marginal stabilisation effect, which is typically larger than the average effect because the goal of the scheme is to help the economy during recession. In addition, the stabilisation effect can be estimated using the long-term GDP trend as a benchmark or past GDP (peak-to-trough analysis), with the former type of computation being theoretically more sound and the latter typically yielding larger estimates. Dullien (2013) suggests looking at marginal stabilisation effects, and uses the long-term GDP trend as the benchmark against which to compare current GDP.

More precisely, Dullien's (2013) measure of the net balance of payments for a given country in a given period is the ratio between the country's net balance of payments over the given period and the deviation of the country's GDP from the 'potential' GDP lying on the country's trend line. He computes this statistic for 11 western European countries, and for two recessions per country (with a few exceptions, the two recessions are typically those of 2001-2012 and 2008-2009). Under both his variants of the EUBS, the average stabilisation effect over all countries and recessions is around 11%. This could be interpreted as the estimated marginal effect for the average country. However, to find the 'true' marginal effect of the EUBS, one should look at the stabilisation effect during a recession for the most severely hit economies. For example, the stabilisation effect would have been over 50% for Austria in 2001-2012, and over 20% for Spain in 2008-2009. It seems sensible, when assessing the stabilisation effect of the EUBS, to look at both the 'average-country' marginal stabilisation effect (the average effect across all member countries during a recession)

[7] This conclusion seems intuitive as long as the cost of the EUBS is relatively low. If the cost is relatively high, however, the risk is that large financial transfers would be concentrated in very few recessions, foregoing other opportunities to spend the available funds. Hence, the average effect per euro spent could be reduced by the presence of a trigger.

[8] Interestingly, Brandolini et al. (2014) find that an EUBS with partial experience rating (where the pay-in is linked to the pay-out, but the long-term balance of the country vis-à-vis the EUBS is not necessarily zero) outperforms both a system with a strict NBC condition and a system in which every country pays a flat contribution rate into the EUBS independently of received transfers.

and the 'true' marginal stabilisation effect (the effect during a recession in the most severely hit countries). Dullien's measure of a stabilisation effect is the same as that already used by Italianer and Vanheukelen (1993), who, using quite a rough rule-of-thumb, estimated that their EUBS would have had an average stabilisation effect of 20% across European countries.

This way of computing the stabilisation effect has the advantage of being intuitive and computationally simple. However, it is likely to represent a lower bound for the stabilisation effect because it does not take the fiscal multiplier into account. This is a challenging task, because the fiscal multiplier must be guessed. Beblavý and Maselli (2014) and Beblavý et al. (2015) suggest a value of 1.5 for the multiplier, implying that €1 of expenditure on unemployment benefits would raise the GDP of the receiving country by €1.5. However, their estimates of the stabilisation effect are not comparable to those of other papers in the literature, because they use the ratio between the net balance of payments to the fund in a given year (multiplied by 1.5) and total GDP (instead of using the deviation of GDP from its norm, as is done in the rest of the literature). However, one could apply the 1.5 coefficient to the estimate by Dullien (2013), obtaining an estimate of about 16.5% for the average-country marginal effect of the EUBS, and a much larger estimate for the 'true' marginal effect.

Consistent with the microeconomic nature of their simulation, Dolls et al. (2014) estimate the stabilisation effect in a way that is similar to Dullien (2013), but instead of taking the aggregate net balance of payments, they compute it starting from the contributions and benefits of the single individuals. More precisely, they compute the net sum of contributions paid to the EUBS and benefits received from the same fund for every individual in a given country, and divide this number by the sum of individuals' changes in employment income. Given this choice of indicator, they find a stabilisation effect of between 23% and 31% for the GIIPS countries (Greece, Ireland, Italy, Portugal and Spain) at the beginning of the current economic crisis. Although they do not mention it explicitly, given the choice of countries and years, this corresponds to the marginal stabilisation effect (more precisely, to the 'true' marginal effect) of their proposed EUBS. However, it is difficult to understand how this estimate corresponds to the real stabilisation effect that could be observed in the economy. On one hand, similar to Dullien (2013), Dolls et al. (2014) do not take into account equilibrium effects at the macroeconomic level – such as the fiscal multiplier – which would imply that their estimate would be lower than the real stabilisation effect. On the other hand, they compare the net changes in contributions and benefits only to the changes in employment income, which represents only a fraction of the change in total incomes in the economy. Hence, the real stabilisation effect could also be lower. Interestingly, these effects would exactly balance each other out if one uses a multiplier equal to 1.5, as in Beblavý et al. (2015), and follows the commonly used rule of thumb that employment incomes constitute two-thirds of total incomes.

A study by Brandolini et al. (2014) reports that an unemployment-based shock absorber for the euro area would have reduced the coefficient of variation of GDP (another way to measure the stabilisation effect) by 0.03% over the period 2002-2012. Different designs of the EUBS impact the stability of the economic system differently; for example, their scheme with 'partial experience rating' would offer up to three times the level of stabilisation of their baseline scheme, but would imply cross-country redistribution.

To summarise, when assessing the stabilisation effect of the EUBS, it is important to consider both the 'average-country' marginal stabilisation effect (the average effect across all member countries during a recession) and the 'true' marginal stabilisation effect (the effect during a recession in the

most severely hit countries). Most papers in the literature estimate the stabilisation effect for each country as a ratio between the net balance of payments of the country vis-à-vis the EUBS and the change in aggregate income within that country (for example, deviation of current GDP from its trend). However, it might be advisable to produce an alternative estimate of the stabilisation effect by multiplying the numerator by a fiscal multiplier. Typically, the reviewed studies estimate the average-country marginal stabilisation effect to be between 10 and 30%. The 'true' marginal stabilisation effect is likely to be over 20%.

Key lessons of existing proposals

In this section, we present a synthetic view of the main typology of proposals for an EUBS, as discussed above. For each, we outline the main advantage, the main problem, the size and the key features. Table 1 outlines the main lesson from each scheme. This overview complements the following section, which presents the main conclusions from this work.

Table 1. Key lessons of existing schemes

Study	Genuine or equivalent	Trigger	Claw-back	Member countries	Size (% of GDP)	Key advan-tage	Key problem	Main lesson
Dullien (2007)	Genuine	Yes	No	Euro area	0.3-0.6	Extended benefits	Admin complexity	Stabilisation can be achieved with a small budget
Beblavý and Maselli (2014); Beblavý et al. (2015)	Equivalent	Yes	Yes	EU	0.07-0.3	Relatively high impact with small budget	Lack of visibility	A high trigger reduces the scope for moral hazard
Dolls et al. (2014); Jara and Sutherland (2014)	Genuine	No	Yes	Euro area	0.6	Solidarity element	Some redistribution unless claw-back	
Italianer and Vanheukelen (1993)	Equivalent	Yes		Not specified	0.2%	Balanced budget every year	No budget in case of symmetric shock	Operating on changes in unemployment rather than levels limits moral hazard
Pisani-Ferri et al. (2013)	Equivalent	No	No	Euro area		No need for harmonisation	No mechanism to prevent moral hazard	

Source: Authors' own elaboration.

5. Conclusions

The debate around the creation of a Europe-wide shock absorber has been rekindled in recent years, but the initial idea dates back to the 1970s, as we show in our review. Based on an analysis of both recent and less recent work, we draw the following conclusions.

Market, state or EU: Who smooths out which shocks?

The problem of how to stabilise the economy in the event of adverse shocks is far from new to economists. Traditionally, economic thinking has placed this responsibility at the national level. Unemployment insurance schemes – some more generous than others, and some more effective than others – exist in all European countries (and in most other advanced economies). Studies on the architecture of fiscal policies in federations suggest that the stabilisation function is carried out by the federal level. This is, for instance, the case also in the US and Canada.

In the making of EMU, several economists and policy-makers believed that a stabiliser would be necessary to react to the asymmetric shocks affecting one or more countries. The focus on idiosyncratic shocks was due to the fact that symmetric shocks could be dealt with through monetary policy. However, the idea that prevailed at the time of signing the Maastricht Treaty was that markets and cross-country labour mobility would suffice to stabilise the economy, and that asymmetric shocks would become less frequent in the monetary union. On top of this, little attention was paid to understanding the extent to which the EMU architecture could foster divergence rather than convergence. The divergence in unemployment rates and growth rates experienced in the aftermath of the Great Recession reinforces the rationale for a common stabilisation mechanism.

The knowledge that we have gained thanks to 16 years of EMU shows that large shocks are not only possible, but can also have dramatic social consequences, and that even in the current crisis labour mobility is very limited (Barslund et al., 2015). At the same time, national stabilisers failed to fully absorb the shocks (Dolls et al., 2014).

Shock absorption and redistribution

An important aspect of the creation of a supranational shock absorber is limiting cross-country redistribution. This is an important and sensitive topic given the intrinsic diversities of European labour markets. The review of existing work revealed that designing a system with zero redistribution on a yearly basis is possible, but at the price of having a rigid and less effective system. Many proposed EUBSs therefore aim to avoid permanent transfers in the long term, so that redistribution can be substantial in the short term but becomes less relevant in the medium to long term.

Alternative policies exist, but the EUBS is an attractive policy tool

Unemployment benefits are not the only tool to stabilise the economy. Other options exist, such as a cyclical regional policy, a common investment policy, an income-based insurance mechanism or a debt agency. Despite the absence of literature that systematically compares all these options, unemployment insurance has been considered by many to be an ideal solution because it

represents a type of expenditure that is quintessentially anti-cyclical; it has a (presumably) good fiscal multiplier and it is activated automatically in the event of recession.

There are several possible sources of revenue to finance the EUBS

There are four main options for financing the EUBS scheme: a payroll tax, a corporate tax, a contribution paid by the member countries and defined as a percentage of GDP, and debt. Different authors propose different financing schemes based on these four sources of revenue.

Harmonisation of the national unemployment benefit schemes may prove difficult

National unemployment benefit schemes are differentiated along three main dimensions: the eligibility requirements, the generosity of the benefits (determined by the replacement rate and the reference wage), and the duration of the unemployment benefit. Different countries made very different choices on these dimensions, presumably reflecting different political preferences. Harmonising national schemes may thus prove administratively and politically difficult. Alternative EUBS variants differ in the extent to which they require harmonisation, with an equivalent EUBS being the least demanding in this respect.

Different tools exist to avoid permanent financial transfers benefiting particular countries

Avoiding moral hazard and permanent transfers is one of the most pressing political challenges in the design of a common shock absorber for the EU/euro area. The risk is determined by the fact that any mechanism that systematically helps a crisis economy may create incentives not to implement reforms in that country. The literature review revealed that there is more than one option for reducing this kind of moral hazard and permanent transfers. For instance, the EUBS could be activated by changes (to a lesser or greater degree) in economic indicators such as unemployment, or it could be activated only in the presence of severe recession. In addition to these *ex ante* mechanisms, there are several ways to adjust national contributions to the fund *ex post*. This can be done via linking the pay-in to the pay-out with an experience rating or with a claw-back clause. These mechanisms are unlikely to generate a net balance of payments that is perfectly balanced, even in the long term. However, they should be effective in avoiding permanent transfers to a subset of countries, which could be equally effective in solving the problem of moral hazard.

The EUBS could involve either all EU members or all euro area countries

There are arguments for including all EU member states in the EUBS, but also for restricting participation to countries in the euro area. Since it is difficult to give a clear recommendation, the decision may ultimately be based on political considerations. Nonetheless, regardless of which set of countries is selected, economic theory would advocate a mandatory system. In the case of voluntary participation, the problem of adverse selection would arise.

The EUBS is likely to cost less than 1% of EU output

The size of the EUBS finds some sort of 'natural bounds' in the generosity of national unemployment benefit schemes. Existing simulations set these bounds at 0.3% (lower bound) and 0.85% (upper bound) of EU/euro area GDP.

The marginal stabilisation effect of the EUBS for countries severely hit by a recession may well be over 20%

When assessing the stabilisation effect of the EUBS, it is important to look at both the 'average-country' marginal stabilisation effect (the average effect across all member countries during a recession) and the 'true' marginal stabilisation effect (the effect during a recession in the most severely hit countries). Most studies in the literature estimate the stabilisation effect for each country as a ratio between the net balance of payments of the country vis-à-vis the EUBS and the change in aggregate income within that country (for example, deviation of current GDP from its trend). However, it might be advisable to produce an alternative estimate of the stabilisation effect by multiplying the numerator by a fiscal multiplier. Typically, the reviewed studies estimate the average-country marginal stabilisation effect to be between 10% and 30%. The 'true' marginal stabilisation effect is likely to be above 20%.

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