GOVERNING A SUSTAINABLE EUROZONE

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Abstract:
The design failures of the Eurozone have been recognized quite late and have led the Eurozone policymakers to apply wrong macro-economic policies since the eruption of the sovereign debt crisis. This has led to a dismal macroeconomic performance of the Eurozone countries as compared to the EU-countries that decided not to be part of the monetary union.
We provide empirical evidence that suggests that the biggest shocks in the eurozone were the result of business cycle movements. These were relatively well synchronised, except for their amplitude. We argue that efforts to stabilise the business cycles should be strengthened relative to the efforts that have been made to impose structural reforms, and consider the implications for the governance of the eurozone.

Keywords: Monetary union, Optimal Currency Areas, business cycle, stabilization, Eurozone

JEL classification: F41, F44, F45

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1. Introduction

The sovereign debt crisis that erupted in 2010 exposed the design failures of the Eurozone. These have long been known. Right from the start of the Eurozone economists warned that these design failures would lead to problems and conflicts within the currency union, and that the Eurozone in the end would fall apart if these failures were not corrected (see e.g. Feldstein(1997), Friedman(1997), De Grauwe(1998))[1].

The existence of design failures raises the question of how the governance of the Eurozone can be redesigned so as to avoid a future disintegration. This is the question that we analyze in this paper. We will study how the Eurozone should be governed so as to make it sustainable in the long run.

The paper is organized as follows. Section 2 discusses the design failures of the Eurozone. Section 3 analyzes the influence of the theory of optimal currency areas (OCA) on the governance of the Eurozone, and argues that the OCA-theory imposed a governance structure that did not correct for the main design failures. Section 4 reinterprets the OCA-theory to arrive at what we believe are the correct governance principles. Section 5 provided empirical evidence for our claims and Section 6 derives the implications for a sustainable governance. Section 7 provides the conclusions.

2. Design failures of the Eurozone

"Visionary" European politicians brushed aside the warnings from economists in the 1990s that the euro is based on a flawed construction. Nothing would stop their great monetary dream, certainly not the objections of down-to-earth economists. What are these design failures? We analyze two of these in this paper. There are others that are not discussed separately here, in particular the so-called doom-loop between sovereigns and banks. As we will stress this design failure is very much related to the second one discussed in this section.

[1] Se also Baldwin and Giavazzi(2015)

2.1 The Eurozone is not an optimal currency area

The European monetary union lacked a mechanism that can stop divergent economic developments between countries. Some countries experienced a boom; others a recession. Some countries improved their competitiveness; others experience a worsening. These divergent developments led to large imbalances, which crystallized in the fact that some countries built up external deficits and other external surpluses.

When these imbalances had to be redressed, it appeared that the mechanisms to redress the imbalances in the Eurozone ("internal devaluations") are very costly in terms of growth and employment, leading to social and political upheavals. Countries that have their own currency and that are faced with such imbalances can devalue or revalue their currencies. In a monetary union, countries facing external deficits are forced into intense expenditure reducing policies that inevitably lead to rising unemployment. This problem has been recognized by the economists that pioneered the theory of optimal currency areas (Mundell(1961), McKinnon(1963), Kenen(1969). Later important contributions include Bayoumi and Eichengreen(1993), Krugman(1993)).

The standard response derived from the theory of optimal currency areas is that member countries of a monetary union should do structural reforms so as to make their labour and product markets more flexible. By increasing flexibility through structural reforms the costs of adjustments to asymmetric shocks can be reduced and the Eurozone can become an optimal currency area. This has been a very influential idea and has led Eurozone countries into programs of structural reforms.

It is often forgotten that although the theoretical arguments in favour of flexibility are strong the fine print of flexibility is often harsh. It implies wage cuts, less unemployment benefits, lower minimum wages, easier firing. Many people hit by structural reforms, resist and turn to parties that promise another way to deal with the problem, including an exit from the Eurozone. From an economic point of view flexibility is sometimes the solution. From a social and political point of view flexibility is the problem. We return to this issue in section

5 where we show that the shocks that hit the Eurozone were in fact not of the kind that were emphasized by the OCA-theory.

2.2 Fragility of the sovereign in the Eurozone

When the Eurozone was started a fundamental stabilizing force that existed at the level of the member-states was taken away from these countries. This is the lender of last resort function of the central bank. Suddenly, member countries of the monetary union had to issue debt in a currency they had no control over. As a result, the governments of these countries could no longer guarantee that the cash would always be available to roll over the government debt. Prior to entry in the monetary union, these countries could, like all stand-alone countries, issue debt in their own currencies thereby giving an implicit guarantee that the cash would always be there to pay out bondholders at maturity. The reason is that as stand-alone countries they had the power to force the central bank to provide liquidity in times of crisis.

What was not understood when the Eurozone was designed is that this lack of guarantee provided by Eurozone governments in turn could trigger self-fulfilling liquidity crises (a sudden stop) that would degenerate into solvency problems. This is exactly what happened in countries like Ireland, Spain and Portugal[2]. When investors lost confidence in these countries, they massively sold the government bonds of these countries, pushing interest rates to unsustainably high levels. In addition, the euros obtained from these sales were invested in "safe countries" like Germany. As a result, there was a massive outflow of liquidity from the problem countries, making it impossible for the governments of these countries to fund the rollover of their debt at reasonable interest rate.

This liquidity crisis in turn triggered another important phenomenon that we have documented in the previous section. It forced countries to switch-off the automatic stabilizers in the budget. The governments of the problem countries had to scramble for cash and were forced into quick austerity programs, by cutting spending and raising taxes. A deep recession was the result. The

[2] Greece does not fit this diagnosis. Greece was clearly insolvent way before the crisis started, but this was hidden to the outside world by a fraudulent policy of the Greek government of hiding the true nature of the Greek economic situation (see De Grauwe(2011)).

recession in turn reduced government revenues even further, forcing these countries to intensify the austerity programs. Under pressure from the financial markets and the creditor nations, fiscal policies became pro-cyclical pushing countries further into a deflationary cycle. As a result, what started as a liquidity crisis in a self-fulfilling way degenerated into a solvency crisis.

Thus, we found out that financial markets acquire great power in a monetary union: they can force countries into a bad equilibrium[3] characterized by increasing interest rates that trigger excessive austerity measures, which in turn lead to a deflationary spiral that aggravates the fiscal crisis, (see De Grauwe(2011) and De Grauwe and Ji(2013)). This was the same problem as the one identified by Calvo(1988) and Eichengreen and Hausmann (2005) in emerging countries that are afflicted by an "original sin" that forces them to borrow in foreign currencies.

It is in this fragile environment that the doom-loop between banks and sovereigns pops up as was made vividly clear in Ireland after 2010. Bank failures in Ireland forced the Irish government to step in to bailout banks. In doing so the Irish government had to issue a lot of debt. As this was not backed up by the domestic central bank, this created a run on the Irish government bond market. In other countries the causality ran the other way (e.g. Greece): the crisis in the government bond market that erupted because of the absence of a lender of last resort in the government bond market triggered a banking crisis because the domestic banks were the major holders of domestic government bonds.

From the preceding it follows that in a monetary union sovereigns singled out by financial markets cannot defend themselves unless they get help from other countries and from the European Central Bank. But these are not willing to do that easily. The ECB recognized this problem when it started its OMT-program in 2012. This certainly helped to pacify financial markets at that time and avoided the collapse of the Eurozone. The issue arises of how credible the OT-program is for future use. The ECB has been unwilling to use it during the latest Greek crisis. This refusal was based on the view that the Greek government is insolvent and,

[3] The dynamics that leads to bad equilibria is similar to the one that has been analyzed by Obstfeld(1986) in the context of fixed exchange rate regimes. See also Gros(2007)

therefore, central bank's liquidity provision is not the right remedy. This can lead to doubts about the future willingness of the ECB to provide liquidity to future governments in times of crisis.

It is clear that these design failures have been responsible for the dismal macroeconomic performance of the Eurozone countries since the eruption of the financial crisis. In Figure 1 we compare the evolution of real GDP in the Eurozone with real GDP in the US and in the EU-countries not belonging to the Eurozone (EU10). The difference is striking. Prior to the financial crisis the Eurozone real GDP was on a slower growth path than in the US and in EU10. Since the financial crisis of 2008 the divergence has increased even further. Real GDP in the Eurozone stagnated and in 2016 was only marginally higher than in 2008. In the US and EU-10 one observes (after the dip of 2009) a relatively strong recovery.

Figure 2 shows the evolution of unemployment in the same group of countries. We observe the same phenomenon: A recovery in the US and EU-10 after 2010 shown by the decline in unemployment. This contrasts with the Eurozone where unemployment continued to increase until 2014 so that in 2016 it was almost twice as high than in EU-10.

Figure 1:

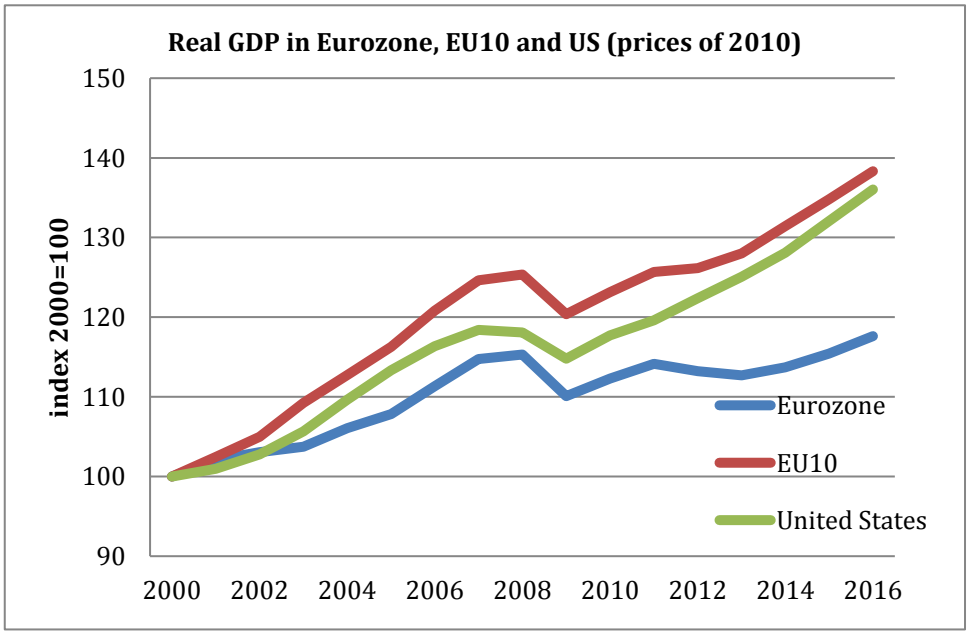
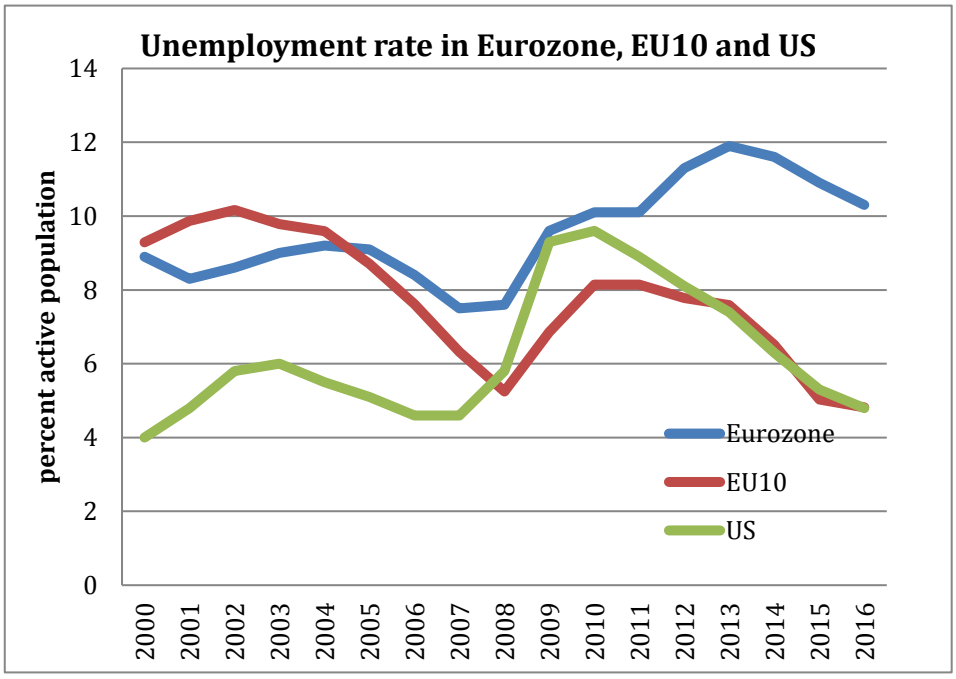


Figure 2:



Source: European Commission, Ameco database

Figures 1 and 2 teach us that the European monetary union has failed dismally in delivering on the promises that were made at the start of the union, i.e. that EMU would lead to more economic growth and employment. The opposite has occurred. Member countries of the Eurozone have on average experienced less growth and more unemployment than the EU-countries that decided to stay out of the Eurozone. Such an outcome, if maintained, undermines the social consensus in favour of a monetary union.

3. Governance of a monetary union: the influence of the OCA-theory

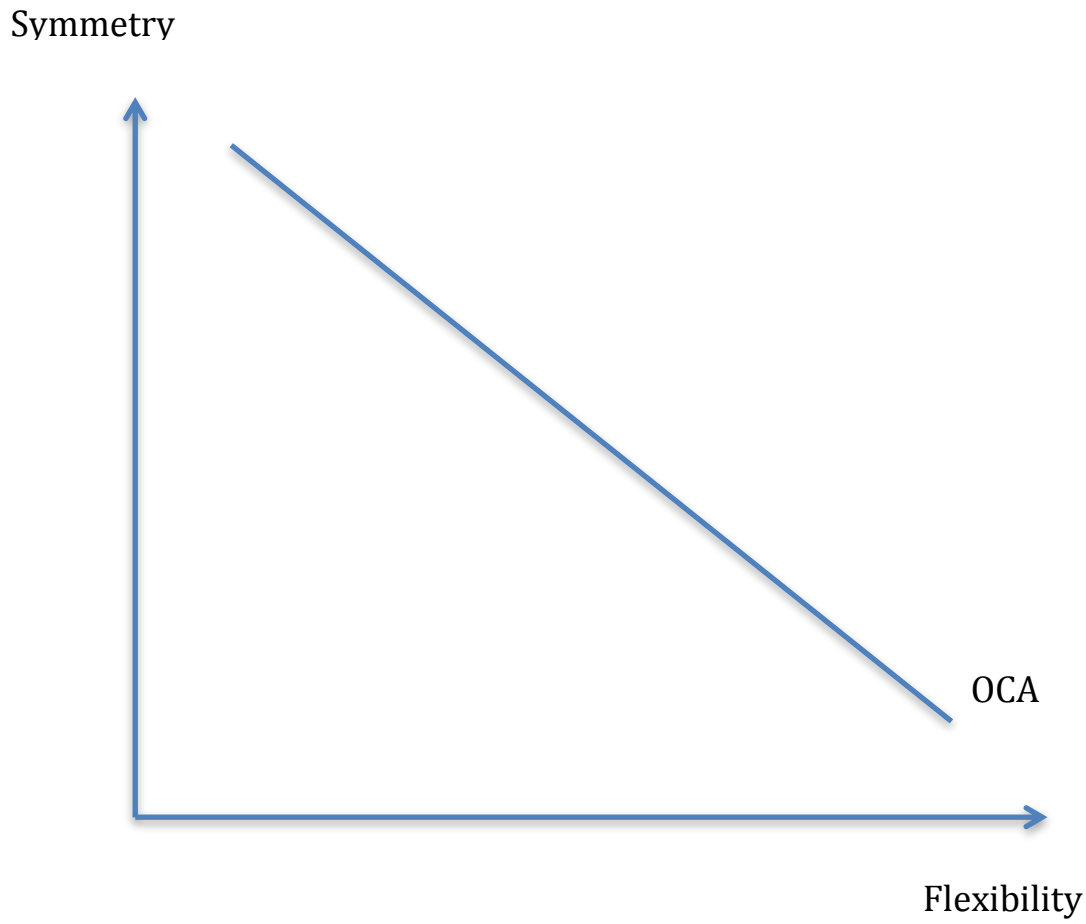
Since the eruption of the sovereign debt crisis in the Eurozone, substantial efforts have been made to create a new form of governance for the Eurozone that will make the monetary union more robust in absorbing future economic and financial shocks. Much of the drive to adapt the governance of the Eurozone has been influenced by the traditional theory of optimal currency areas (OCA), which stresses the need for flexibility in product and labour markets. As a result, the Eurozone countries have been pushed towards structural reforms that aim to reduce the structural rigidities in product and labour markets, in the hope that

this would lead to a more resilient monetary union capable of withstanding future asymmetric shocks.

The theory of optimal currency areas (OCA) has created a set of ideas that has a significant influence on the governance of the Eurozone and on views about how this governance should be strengthened in the future. The best way to make this clear is to present the core of the OCA theory, using a well-known graphical representation of this theory (see De Grauwe (2014)). This is done in Figure 3. On the horizontal axis we set out the degree of flexibility in the labour and goods markets. This measures the degree to which wages and prices adjust freely to shocks and the degree to which workers are mobile. We assume that these different dimensions of flexibility can be represented by one index. On the vertical axis we set out the degree of symmetry between countries, i.e. the degree of co-movement (correlation) of macroeconomic variables such as output and employment. Thus, when there are a lot of asymmetric shocks we move downwards along the vertical axis. By contrast, when shocks become less asymmetric we move upwards along the vertical axis.

The downward sloping OCA line represents the trade-off between symmetry and flexibility. Hence, when the degree of symmetry declines (there are more asymmetric shocks) countries in a monetary union need more flexibility to deal with these shocks. The OCA-line separates the space into two zones. The OCA-zone above the OCA-line contains the collection of points at which symmetry and flexibility are high enough to guarantee that the benefits of the monetary union exceed the costs. The points below the OCA-line are the points at which symmetry and flexibility are too low, i.e. countries located in that zone will find that the costs of the monetary union exceed the benefits. The OCA-line that separates the two zones can therefore also be defined as the collection of points for which the benefits and the costs of the monetary union are equal.

Figure 3. OCA theory tradeoff between symmetry and flexibility



This theory has been very influential for the governance of the Eurozone and continues to be so. It is at the core of the policy prescriptions that call for structural reforms so as to make the labour and goods markets more flexible. In fact, since the start of the sovereign debt crisis in 2010 member countries have been pressured by the European Commission to introduce a whole set of structural reforms. The member countries that turned to the Eurozone for financial support (Greece, Ireland, and Portugal) were given this support conditional on introducing a series of structural reforms that would make labour and goods markets more flexible. The underlying rationale was the OCA theory that stresses the need for flexibility to deal with asymmetric shocks in a monetary union.

One of the underlying assumptions of this theory and its prescription for flexibility is that the asymmetric shocks are permanent. When shocks are permanent, e.g. a change in preferences that leads consumers in one country to

buy more of the foreign than of the domestic good, or a productivity increase in one but not in another country, then there is really no other way in a monetary union to deal with such a shock other than changing relative prices (wages or product prices) or by a movement of labour and capital.

Things are very different, however, when shocks are temporary. In that case, it can be argued that flexibility is not necessary. In fact it can even be harmful. Take the case of business cycle movements. When these are asymmetric, i.e. when they are not synchronised, it makes little sense to adjust by relative price changes and/or by movements of labour and capital. Flexibility may in fact exacerbate the business cycle movements and its asymmetry. For example, if country A experiences a recession and country B a boom the movement of labour from A to B is likely to exacerbate the recession in country A and the boom in country B. Or take flexibility of wages. If during the recession country A is forced to reduce wages, the immediate effect of the wage cuts will be a decline in aggregate demand, which will make the recession in country A more severe.

From the preceding analysis it follows that temporary shocks, such as business cycle movements, should be dealt with differently, i.e. by stabilisation efforts that smooth consumption over time.

However, the OCA theory that focuses on the trade-off between flexibility and symmetry was developed on the assumption that asymmetric shocks are permanent. These shocks are also typically exogenous, like meteor impacts. There is nothing one can do about these. One is forced to adjust by making the system more flexible.

Business cycle shocks, by contrast, can be said to be endogenous. They are the result of endogenous movements in optimism and pessimism that lead to booms and busts. These movements have been endemic in capitalism and will continue to do their work also in a monetary union. They have been described by Minsky (1986) and Kindleberger (2001). To the extent that these movements are not synchronised, they do not call for more flexibility; rather they call for insurance mechanisms that allow countries experiencing a downturn to be compensated by countries that experience a boom, in such a way that when the fortunes of countries are reversed the transfers are reversed.

It has long been recognised that such an insurance mechanism requires some form of budgetary union. Thus, endogenous and asymmetric business cycle movements call for very different institutions in the union from the permanent and exogenous shocks that have been at the core of the OCA analysis.

4. Governance of a monetary union in the face of temporary shocks

In this section we consider what the nature of the institutions of a monetary union should be when the shocks are endogenous, temporary and asymmetric. We will focus on business cycle movements that are driven by 'animal spirits', i.e. movements of optimism and pessimism that lead to booms during periods of optimism and recessions during periods of pessimism. In this section we focus on the theory. In the next section we analyse the empirical question of the nature of the asymmetric shocks in the Eurozone.

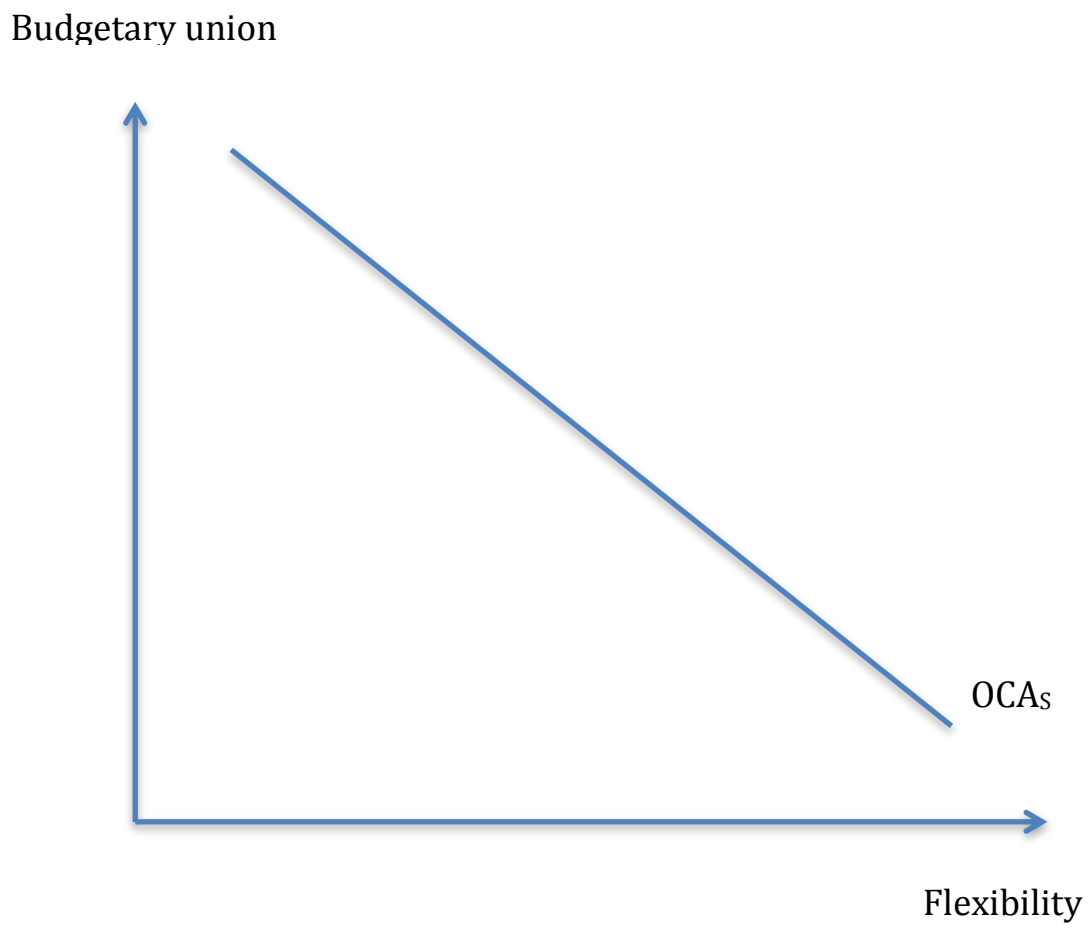
We start from a similar tradeoff to the one in Figure 3, but now we concentrate on the tradeoff between flexibility and budgetary union. We define a budgetary union as a (partial) transfer of the national power to tax and to spend to European institutions. A budgetary union has the effect of creating an insurance mechanism that allows countries experiencing bad economic times to be compensated by countries that fare well.

The way this tradeoff is constructed is as follows (Figure 4). On the vertical axis we set out the degree of budgetary union. The higher the degree of budgetary union the more we move upwards along the vertical line. On the horizontal axis we set out the same measure of flexibility as that used in figure 3. The OCA$_S$ line now measures the minimum combinations of budgetary union and flexibility needed to make a monetary union economically attractive (higher benefits than costs). It is negatively sloped for the following reason. When budgetary union increases, insurance against asymmetric shocks increases, making monetary union less costly. As a result, there is less need for flexibility. We move upward along the negatively sloped OCA$_S$ line.[4]

[4] We call this tradeoff the OCAs line because the idea of such a tradeoff comes from André Sapir (2015).

This is an important insight. Flexibility may sound great for many economists and central bankers, but it is costly for those people who are forced to be flexible. Flexibility means that these people may have to accept a wage cut or be forced to emigrate. We learn from Figure 4 that a movement towards budgetary union alleviates the (painful) need to be flexible. It may also make a monetary union more acceptable to large segments of the population. At the same time, however, it may make those who are asked to transfer revenue unhappy, resisting such a "Transfer Union".

Figure 4. Tradeoff between budgetary union and flexibility



We can use the insights of Figure 4 to analyse the importance of the nature of the asymmetric shocks. We have made the distinction between asymmetric shocks that are exogenous and permanent, and asymmetric shocks that are temporary

and endogenous. We have argued that when a permanent (exogenous) shock occurs flexibility is the only option to adjust to this shock. By contrast, when business cycle movements are desynchronised it is not optimal to use flexibility. In that case an insurance mechanism is the appropriate way to govern the monetary union. A budgetary union provides this.

It can now be shown that the nature of the shocks influences the slope of the tradeoff.[5] When the shocks are mainly of the permanent type, we obtain a steep tradeoff. We show this in Figure 5. We have also put the Eurozone of 19 members below the OCAs-line, suggesting that the present Eurozone is not an optimal currency area. The steep tradeoff implies that a small increase in flexibility leads us quicker into the OCA zone than a budgetary union. In the most extreme case, i.e. when all shocks are of a permanent nature, the tradeoff becomes vertical. In that case no amount of budgetary union will bring us into the OCA-zone. There is then no other way but to increase flexibility.

Things are very different when the shocks are temporary, driven by business cycle movements. In that case the tradeoff is flat (Figure 6). As a result, much flexibility is needed to move the Eurozone into the OCA area compared to budgetary union. A relatively small increase in budgetary union will bring us into the OCA-zone. In the most extreme case, i.e. when all shocks are of a temporary nature,, the trade-off is horizontal. In that case no amount of flexibility will succeed in bringing the Eurozone into the OCA-zone. The only way to achieve optimality will be through a budgetary union.

One complication that arises here has to do with hysteresis. Sometimes temporary shocks can lead to hysteresis effects. For example, a recession typically leads to plant closures and dismissal of workers. To the extent that these workers have developed firm specific skills that are lost when the firm disappears, the workers lose part of their human capital making it difficult to find another (comparable) job. Unemployment can then become protracted. Another example relates to the nature of the boom. If, as was the case in Ireland and Spain, the boom is concentrated in the housing market, many workers are attracted to this sector during the boom. After the crash they are dismissed. They

[5] We are grateful to Frank Vandenbroucke for suggesting that the nature of the shocks affects the slope of the tradeoff.

may find it difficult to use their skills acquired in the housing market in other sectors of the economy. There is a large literature on sources of hysteresis (See Blanchard, et al.(1986), Ball(2009), Fatas and Summers(2015)).

The existence of hysteresis has implications for our discussion. It implies that if a business cycle shock occurs it matters a great deal to try to use stabilization so as to avoid hysteresis effects. If temporary business cycle shocks have permanent effects the need to set up schemes that will mitigate the impact of these shocks becomes even more important.

Figure 5. How to move the Eurozone towards the OCAs-area when permanent shocks dominate?

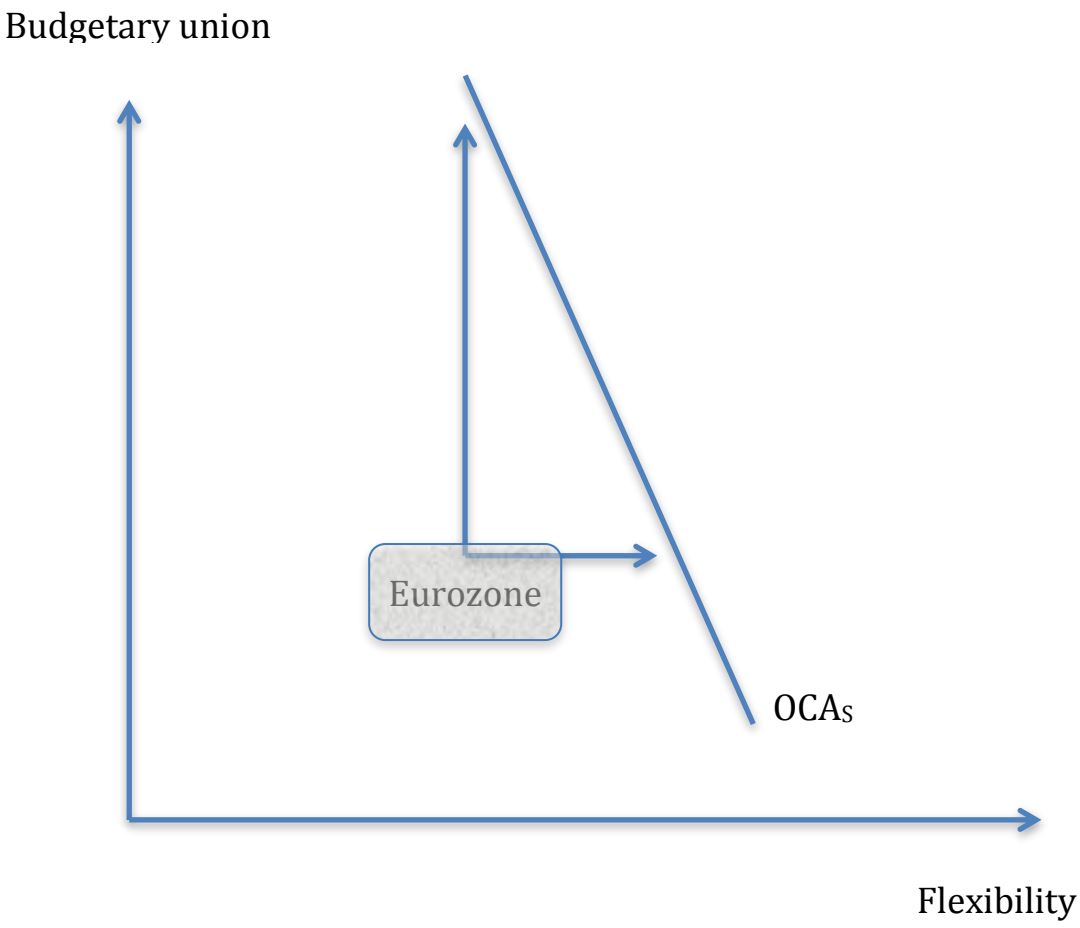
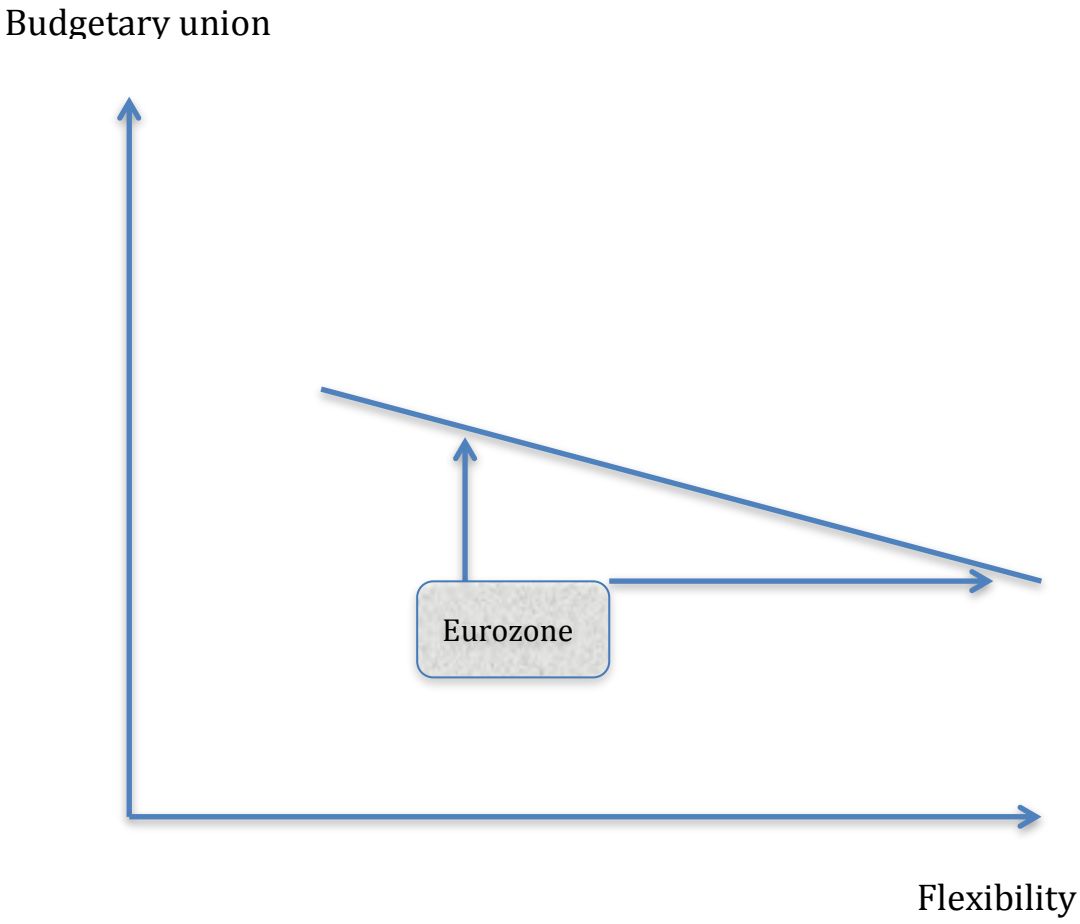


Figure 6. How to move the Eurozone towards the OCA_S-area when business cycle movements dominate?



Figures 5 and 6 lead to another interesting insight. Flexibility in labour markets is something national governments can do. There is no need for further integration to increase flexibility. Budgetary union, however, is of a different nature. It requires political integration. In other words, while flexibility is in the realm of national governments, budgetary union is a European affair (Sapir (2015)). Thus, when shocks are permanent they have to be dealt with at the national level while when shocks are temporary the response should be at the level of the Eurozone.

5. The nature of shocks in the Eurozone: empirical evidence

It is not always easy to separate permanent from temporary shocks in economic time series. Here we use a Hodrick-Prescott filter (HP) that allows us to estimate the long-term trend component in GDP. The cyclical component is obtained by subtracting the trend component from the observed GDP[6] (for more detail, see appendix, where we also analyse the robustness of the results for changes in the smoothness parameter lambda in the HP filter).

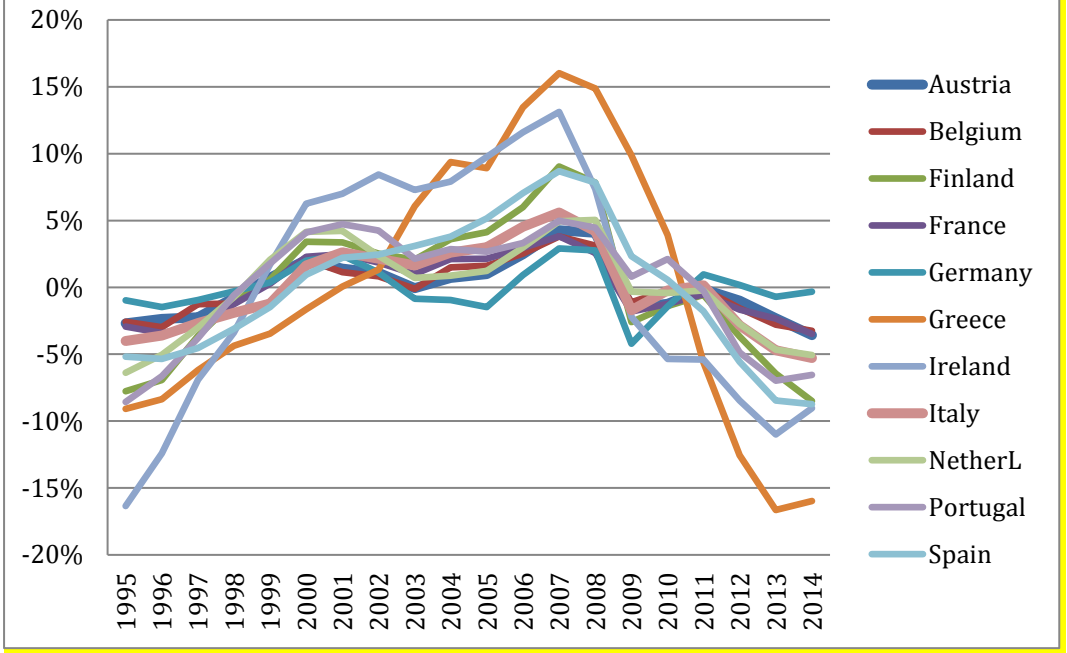
The results of this exercise are shown in Figure 7. We show the movements of the business-cycle components in the different Eurozone countries. These appear to move together but are of very different amplitude. Some countries like Ireland and Spain experience a very strong boom and later bust, while countries like Belgium, Austria and Germany experience similar cycles but of much less amplitude.

In order to gauge the relative importance of cyclical and trend components in GDP growth we compare the mean (absolute)[7] cyclical growth of GDP with the (absolute) mean trend growth of GDP for each country. We show the results in Table 1. We observe that for the core countries (Austria, Belgium, Germany, and the Netherlands) the cyclical growth and trend growth components are of similar magnitudes, although the cyclical component is systematically larger than the trend component. In the countries of the periphery (Spain, Portugal, Ireland, Italy, and Greece) this is very different. We observe that for these countries the cyclical growth component is much larger than the trend growth component (the most extreme case being observed for Greece). Thus, in the peripheral countries the GDP growth rates have been dominated by cyclical movements in economic activity of the boom-bust type.

[6] There is a literature based on Blanchard and Quah (1989) that is based on estimating a VAR and, after imposing identifying restrictions, is able to estimate the temporary and the permanent component in output shocks. We discuss this literature in De Grauwe and Ji(2016)).

[7] As the cyclical component alternates between positive and negative numbers we have to take the absolute values.

Figure 7. Business cycle component of GDP growth



Source: Own calculation based on Eurostat.

Table 1. Mean (absolute) trend growth and mean (absolute) business cycle change in GDP (in percent) during 1999-2014

	Mean cycle	Mean trend	ratio
Austria	1,79%	1,77%	1,01
Belgium	1,72%	1,67%	1,03
Germany	1,55%	1,23%	1,26
France	2,15%	1,49%	1,44
Netherlands	2,66%	1,66%	1,60
Finland	4,35%	2,02%	2,15
Spain	4,58%	2,07%	2,21
Ireland	8,01%	3,35%	2,39
Portugal	3,67%	0,81%	4,53
Italy	2,86%	0,41%	7,05
Greece	9,09%	0,90%	10,11

Source: Computations based on data from Eurostat.

What are the implications of these results? First, since the start of the Eurozone, cyclical (temporary) movements have been the dominant factor behind growth variations in GDP. This is especially the case in those peripheral countries where cyclical movements in economic growth are many times higher than the long-

term growth rates. Thus, as mentioned earlier, booms and bust in economic activity seems to be the overwhelming characteristic of movements in GDP in the countries of the periphery.

Second, it appears that the cyclical movements of GDP are highly correlated in the Eurozone. This was evident from Figure 7. It is also confirmed by Table 2, which shows the correlations in the cyclical components of GDP growth across the Eurozone. We observe high correlation coefficients of bilateral cyclical components of GDP growth, typically 0.8 or more[8]. It is interesting to note that the country with the lowest correlation coefficients is Germany (although the German correlation coefficients are all positive). Thus, one can conclude that the business cycles of the Eurozone countries were highly correlated. Germany stands out as the country with the lowest (positive) correlations of its business cycle with the rest of the Eurozone.

Table 2. Correlation coefficients of cyclical components of GDP growth

	Austria	Belgium	Finland	France	Germany	Greece	Ireland	Italy	Netherl	Port
Austria										
Belgium	0,97									
Finland	0,97	0,98								
France	0,93	0,95	0,97							
Germany	0,69	0,57	0,55	0,59						
Greece	0,73	0,82	0,84	0,74	0,09					
Ireland	0,85	0,89	0,92	0,95	0,41	0,81				
Italy	0,91	0,96	0,98	0,96	0,50	0,86	0,93			
Netherlands	0,93	0,94	0,93	0,91	0,60	0,75	0,86	0,90		
Portugal	0,98	0,89	0,89	0,87	0,37	0,82	0,87	0,90	0,94	
Spain	0,85	0,91	0,94	0,87	0,27	0,97	0,90	0,95	0,86	0,90

Source: Own calculations based on Eurostat.

Thus, the asymmetry between the Eurozone countries is to be found not so much in a lack of correlation in business cycle movements but in the *intensity* of the boom-bust dynamics of growth rates. Put differently, Eurozone countries' business cycles seem to have been relatively well correlated. The difference between these countries was that some (mainly in the periphery) experienced much higher variance in business-cycle fluctuations than others (in the core). As

[8] In De Grauwe and Ji(2016) we study a behavioral macroeconomic model and show that in such a model "animal spirits" can easily get correlated internationally, producing high correlations of business cycles.

a result, the asymmetry between member countries is to be found in the variance of the business cycles.

In order to obtain a more precise estimate of the asymmetry in the amplitudes of the business cycles, we regressed each country's domestic cyclical component on the Eurozone common cyclical component. The estimated slope coefficients reveal the extent to which the domestic cycles are smaller or lower in amplitude than the common cycle. The estimated slope coefficients are presented in Table 3. It is striking to find how different these slope coefficients are. Germany, Belgium, Austria and France have slope coefficients that are significantly lower than 1, suggesting cycles of significantly lower amplitude than the euro-cycle. Conversely, Finland, Spain, and especially Ireland and Greece, have slope coefficients significantly higher than 1. This suggests that these countries experienced much higher amplitudes in their business cycles than the common euro-cycle.

Table 3. Slope of regression domestic cycle on euro-cycle

	slope
Germany	0,21
Belgium	0,48
Austria	0,49
France	0,55
Italy	0,77
Netherlands	0,80
Portugal	1,02
Finland	1,21
Spain	1,22
Ireland	2,07
Greece	2,18

Source: Own calculations.

6. Implications for the governance of the Eurozone

The findings reported in the previous sections put the need for stabilisation in the Eurozone in a new light. We analyse two implications that involve steps towards budgetary integration.

First, the finding of the overwhelming importance of the cyclical and temporary component of output growth should lead to the conclusion that efforts to stabilise the business cycle should be strengthened relative to the efforts that have been made to impose structural reforms. In terms of our theoretical analysis this means that Figure 6 is probably the relevant one. Again, this does not mean that flexibility can be disposed of.

6.1 Common unemployment insurance

A second implication of our empirical results relates to the many proposals made to create a fiscal space at the Eurozone level in the form of a common unemployment insurance system (see e.g. Van Rompuy, et al.(2012), the so-called "Four Presidents report", Enderlein, et al. (2012), Beblavy, et al. (2015)). The proposals for such an insurance system have very much been influenced by the standard assumption made in the OCA-theory that shocks are asymmetric, i.e. that when one country experiences a recession, and thus increasing unemployment, the other country experiences a boom, and declining unemployment. This facilitates the workings of the common unemployment insurance system. The booming country transfers resources to the country in a recession and thereby smoothes the business cycles in the two countries. Technically and politically such a system encounters relatively few problems.

Problems may arise when, as we have found, business cycles are relatively well synchronised but of very different amplitudes in the different member countries. In that case most countries will tend to experience a recession at about the same time; in some countries the recession will be mild but in others very intense. This creates both an economic and a political problem. First, countries with a mild recession are asked to transfer resources to countries experiencing a stronger recession. This tends to reduce the intensity of the recession in the latter country at the expense of making it more intense in the former country. It is not clear that this improves welfare. Second, it is likely to create important political problems in the former country that is asked to transfer resources when the economy is not doing well.

Another way to formulate the previous insights is the following. The traditional proposals for a eurozone unemployment insurance mechanism are predicated on the view that there is a need to smooth differences in unemployment changes across countries. That is, it is assumed that some countries experience increases others declines in unemployment. The insurance mechanism then smoothes these inter-country differences. We have noted, however, that this is not a typical eurozone asymmetry. What we found is that most countries are likely to experience a boom and a recession at about the same time, with different intensities and amplitudes. There is therefore relatively little need for inter-country smoothing of business cycle movements. The more pressing need is to smooth volatilities over time.

The previous analysis suggests that common unemployment insurance schemes should put emphasis on smoothing over time and not so much on inter-country smoothing. This can be achieved by allowing the common unemployment insurance scheme to accumulate deficits and surpluses over time. The fiscal rule that could be imposed is that the insurance scheme balances over the business cycle. Beblavy and Maselli (2014) have performed interesting simulations of several schemes that impose such a fiscal rule. In general it appears from these simulations that such an insurance mechanism can be implemented. Such a rule would make it possible to automatically balance the need for inter-country and inter-temporal smoothing.

The previous analysis makes clear, however, that given the importance of common business cycle movements, a common unemployment insurance mechanism will need a capacity to issue bonds during recessions when the payments made by the insurance scheme will exceed the contributions by the member states. During these periods the deficits of the scheme will have to be financed by the issue of common bonds, which one may want to call Eurobonds. Put differently, the common unemployment insurance mechanism will have to work like a common fund that is capable of issuing debt during recessions. If this is not allowed, a common unemployment insurance system cannot contribute much to common stabilization efforts. Thus a workable common unemployment benefit scheme will necessarily imply some form of budgetary union.

Such a budgetary union can be kept relatively mild by imposing the fiscal rule mentioned earlier, i.e. that during common booms, the bonds issues during the recession are retired, thereby insuring that there is no long-term accumulation of common bonds. Today, this is probably as far as one can go in the direction of a budgetary union.

6.2 National stabilisation?

In principle, inter-temporal smoothing could be done at the national level, by allowing the national budgets to do the job. However, the large differences in the amplitude of business-cycle movements makes such a purely national approach problematic, as it leads to large differences in the budget deficits and debt accumulation between countries. These differences quickly spill over into financial markets when countries that are hit very hard by a downward movement in output are subjected to sudden stops and liquidity crises (see De Grauwe (2011)). This is likely to force them to switch off the automatic stabilisers in their national budgets (De Grauwe and Ji (2012)). As we argued, there this can push countries into a bad equilibrium.

Put differently, in the absence of a budgetary union, large differences in the amplitude of the business cycles are likely to hit the countries experiencing the more severe recession by "sudden stops", i.e. by large liquidity outflows that force them to abandon any ambition to stabilise the business cycle shocks. In addition, these liquidity outflows are inflows in some other countries in the monetary union, typically those that are least hit by the recession.[9] Their economic conditions improve at the expense of the others. The stabilisation of common business shocks with different amplitudes at the national level makes the system unstable.

In this respect the research of Alcidi and Thirion (2015) is relevant. These authors find that while the core eurozone countries have been able to stabilise part (about 50%) of the business-cycle shocks at the national level since the

[9] This is confirmed by the empirical work of Furceri and Zdzienicka (2013) and Hoffmann and Nitschka (2012) who find that during recessions risk sharing through financial markets declines dramatically.

eruption of the debt crisis in 2010, the peripheral countries have been unable to do so, and also unable to profit from insurance mechanisms at the level of the eurozone. As a result, most (90%) of the business-cycle shocks had to be absorbed by drops in consumption (and therefore in employment).

National stabilisation efforts do not work but introduce an element of instability into a monetary union, mainly because they leave the countries most hit by the business-cycle shocks unable to stabilise. Thus, when business-cycle shocks dominate (as we have shown in the previous section) it will be necessary to follow a common approach to the stabilisation of the business cycles. The common unemployment insurance mechanisms discussed in the previous section move us in this direction. Whether these schemes are important enough to perform a significant stabilizing role remains to be seen. The common insurance mechanisms now being proposed (see Beblavy and Maselli (2014)) have a relatively small inter-temporal smoothing component, amounting to no more than 0.1% to 0.2% of GDP over the business cycle, certainly insufficient to produce a significant inter-temporal smoothing at the EU-level.

Thus, in the long run further steps towards a budgetary union will be necessary. By centralising part of the national budgets into a common budget managed by a common political authority, the different increases in budget deficits following from a (common) recession translate into a budget deficit at the union level. As a result, the destabilising flows of liquidity between countries disappear, and the common budgetary authority can allow the automatic stabilisers in the budget to do their role in smoothing the business cycle. In fact, because a common budget also generates implicit inter-country transfers the countries with the deepest recession will profit from the automatic stabilising features of the common budget most. As a result, a common budget provided the most effective way to stabilise the business cycle.

It is clear, however, that a budgetary union in which a significant part of national taxation and spending is transferred to a European government and parliament is far off. For the time being less ambitious efforts, such as the common unemployment insurance systems, are all that is feasible. They are important

though in that they make clear the direction the Eurozone institutions will have to take in the future (see also Vandenbroucke(2015) on this).

7. Conclusion

The design failures of the Eurozone have been recognized quite late and have led the Eurozone policymakers to apply wrong macro-economic policies since the eruption of the sovereign debt crisis. This has led to a dismal macroeconomic performance of the Eurozone countries as compared to the EU-countries that decided not to be part of the monetary union.

Since the sovereign debt crisis in the Eurozone, member countries have been pushed towards introducing more flexibility into labour and product markets. This drive towards structural reforms was very much influenced by the traditional theory of optimal currency areas (OCA). This theory stresses that in the face of asymmetric shocks member countries should have a sufficient degree of labour and product market flexibility to adjust to these shocks. Without such flexibility adjustment will be impossible, thereby undermining the sustainability of the monetary union.

The underlying assumption of the OCA prescription for structural reform is that asymmetric shocks are permanent (e.g. permanent changes in preferences or productivity shocks). When the shocks are temporary it does not follow that more flexibility is the answer. More specifically, when the shocks are the result of unsynchronised business cycle movements, the way to deal with them is by stabilisation efforts.

In this paper we have provided empirical evidence to suggest that the most significant shocks in the Eurozone have been the result of boom and bust, driven by waves of optimism and pessimism. These business-cycle movements have been relatively well-synchronised. What was not synchronised was the amplitude of these business-cycle movements, where some countries experienced much greater amplitude in business cycles than others.

In principle, these business-cycle movements could be stabilised at the national level without the need for budgetary union. However, as the amplitude of these

movements is so different, countries experiencing the deepest recession are likely to be hit by 'sudden stops', i.e. liquidity outflows triggered by fear and panic, which forces them to switch off the automatic stabilisers in the budget, preventing them from conducting any stabilisation.

We argued that the best possible way to deal with the business-cycle movements whose amplitude is unsynchronised is by introducing a budgetary union. By centralising part of the national budgets into a common budget managed by a common political authority, the various increases in budget deficits following from a (common) recession translate into a budget deficit at the union level. As a result, the destabilising flows of liquidity between countries during the recession disappear, and the common budgetary authority can allow the automatic stabiliser in the common budget to perform its role in smoothing the business cycle.

It is highly unlikely that the governance of the Eurozone will move in the direction of creating institutions capable of providing the necessary stabilisation of booms and busts that national governments are no longer able to provide. The willingness to move in this direction is minimal. This has much to do with the absence of a "deep variable" in the monetary union. This deep variable is the sense of belonging to the same (European) nation and that creates the political basis for organizing transfers between countries. The absence of this deep variable makes it inevitable that one looks for schemes that introduce some stabilisation at the Eurozone level without going all the way towards budgetary union.

We discussed common unemployment insurance schemes that are now being proposed and stressed that these have to put more emphasis on inter-temporal insurance and less on inter-country insurance. This also implies that they should have the capacity to issue bonds during recessions, and to do the opposite during an economic boom, making sure that over the business cycle there would be no net issue of common bonds.

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