EU-CONSENT EU-Budget Working Paper No. 4

INTEGRATING THE MACRO-ECONOMIC DIMENSION INTO THE EU BUDGET: REASONS, INSTRUMENTS AND THE QUESTION OF DEMOCRATIC LEGITIMACY

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EU-Consent EU-Budget Working Paper No. 4

August 2007

EU-Consent homepage : www.eu-consent.net

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EU-CONSENT is financially supported by the EU's 6th Framework Programme

Integrating the macro-economic dimension into the EU budget: reasons, instruments and the question of democratic legitimacy

by Sebastian Dullien and Daniela Schwarzer[1]

ABSTRACT

The EMU has been designed without an instrument for automatic fiscal stabilization on the European level. We argue that the macro-economic dimension should be taken into account more strongly in the debate on EU and EMU budgetary governance in order to contribute to the development of a coherent and efficient budgetary system. Based on new empirical data, this article suggests that fiscal stabilisation on the national level has likewise worked insufficiently in the EMU. This is suboptimal if the EU seeks to reach its self-defined targets of the Lisbon Agenda. Recent theoretical contributions suggest that a positive macroeconomic environment is key to productivity growth and structural reform. There are hence strong economic arguments for rethinking the set-up for fiscal stabilization policies in the EMU. We assess the major weaknesses of the current EU and EMU budgetary systems and suggest three remedies to the underperformance of automatic stabilisers: making EU-expenditure sensitive to the cyclical situation of the recipient country, introducing an EU corporate tax upon the upcoming revision EU budget before 2013 and setting up a European unemployment scheme. The paper likewise discusses the legitimatory and institutional requirements of such a new EU budgetary system.

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1. Introduction

1.1. Three dispersed debates

The debate about fiscal policy in the EU and EMU is split up into at least three strands: the discussion on the reform of the EU budget, in particular in view of its contribution to the achievement of the Lisbon goals; the impact of the constraints imposed on national fiscal policies in the EU and EMU (debate on the reformed Stability and Growth Pact, on long-term sustainability and sound public finances etc.); the macro-economic role for fiscal policies in the EMU (e.g. the role of automatic stabilizers and interregional stabilization in a currency area).

The debate on the **EU budget** has been going on for years reaching peaks each time a new budgetary preview was negotiated. It particularly intensified in 2005, due to the tensions that emerged after the EU Constitutional Treaty had been rejected and before the compromise on the 2007-2013 budget was found. The fact that the Conclusions of the European Council of December 2005 contain the "rendez-vous-clause" which prescribes a profound reform debate on the EU public finances, shows that the current system has reached its end: Firstly, because the final compromise on the 2007-2013 budget could only be found with the perspective of turning the whole system on its head, and secondly, because the decision-makers themselves had to acknowledge that the process of negotiations as such was no longer sustainable given, among other reasons, the growing number of participants, the increasing heterogeneity of national interests, and, possibly, also the more pronounced emphasis of national preferences than used to be the case during the cold war and its immediate aftermath.

The recent debate on the reform of the EU budgetary system focuses on three related issues.[2] The current concerns the expenditure side and hence the vast area of the EU policies which require budgetary means (for the time being notably agricultural and structural policies). The second aspect concerns the income side. Critical analysts claim to end the horse-trading culture between net contributors and net recipients which has dominated all recent budget decisions and which has prevented a future-oriented debate on public expenditure in the EU. An alternative would be a transparent system of EU public finances, possibly including an increased amount of EU's own resources. The third issue is the question of the sources of legitimacy and scrutiny of a new EU budgetary system and an improvement of the management of the EU budget.

The second debate on fiscal policy in the EU concerns **national public finances** and has developed with hardly any connection to the debate on the EU budget[3]. Contributions mostly focus on the adequacy of the EU budgetary rules (notably the Stability and Growth Pact and the Excessive Deficit Procedure). The economic contributions to this debate mostly deal with the question whether the targets for budgetary policy are adequate to meet certain objectives such as sound public finances and long-term sustainability. The political economy view in contrast frequently deals with questions related to the rules' application, the functioning of soft coordination, the chance to implement sanctions etc. Recently, the quality of public finances has gained importance in the debate on national fiscal policy coordination in the EMU. In addition to the objective to reach the nominal targets defined in the Excessive Deficit Procedure, the debate now focuses on the question how to improve the perspectives for growth-enhancing policies and how to ensure longterm-sustainability.

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[2] See for instance Sapir (2003), Buti/Nava (2003), Becker (2007), Begg (2005), Enderlein et al. (2005), Collignon (2003), and the contributions in the volume edited by Lefebvre (2004).

[3] An political exception are claims by the German government not to increase their contribution to the EU budget at a time when the country was under strong pressure to reduce its public deficit as an Excessive Deficit Procedure under Art. 104 TEC had been launched against Germany.

The third debate concerns the question how **automatic stabilization** works in the EU under the two major given constraints: the existence of a single currency and a single monetary policy for 13 of the 27 member countries, and the budgetary limits that are imposed on all EU countries through Art. 104 TEC and the Stability and Growth Pact. This debate strongly interrelates with the second discussion mentioned above[4], notably when analysts of the Stability Pact turn to the question whether the rules are likely to promote anti- or pro-cyclical fiscal policies. While this debate has not yet reached the political level, it is gaining attraction among economists as the interaction between a positive macroeconomic environment and productivity growth, as well as the political economy of structural reforms are getting better understood in recent theoretical contributions. These insights into the interrelatedness of macro- and micro-economic policies may finally bring the macro-economic element back into the political debate, which has been largely absent since the Maastricht ordo-liberal compromise was forged.

1.2. Outline of the paper

We argue that these debates should be interlinked in order to contribute to the development of a coherent and efficient budgetary system in the EU and EMU. This paper discusses in how far policy-decisions under the current fiscal set-up may have (unintended) consequences for related areas. Given the degree of integration in the EU (and especially the EMU), not only the allocative and redistributive dimension of public policy, but also its stabilizing role should be catered for at the European level.

Section 2 provides new evidence that budgetary policy in Germany and Portugal turned pro-cyclical. Automatic stabilizers worked less. At the same time, there are growing indications that a better management of economic fluctuations held increase the long-term growth potential. A better fiscal management is hence a necessary complement of the Lisbon Agenda. The empirical data presented here supports the conclusion of the theory of fiscal federalism that economic stabilization should happen on the highest possible level in a monetary union, and not in its sub-units.

Against this background, section 3 of the paper assesses the major weaknesses of the current EU budgetary system in this perspective and suggests a way to include the stabilizing function in the EU budget: by setting-up an EMU wide unemployment scheme and by introducing a European corporate tax.

Section 4 discusses the kind of democratic legitimisation that such an EU-budget would require, as this would imply an important step forward in EU integration through a reformed and volume-wise increased budget.

2. Arguments for a coherent and efficient system

2.1. Interdependencies and spill-overs: The need for stabilization policies

There are growing indications that a better management of economic fluctuations helps to increase the long-run growth potential (see below). In recent years, even organizations such as the OECD which usually focus on supply-side policies (2005, p. viii) warned that "more robust domestic demand may also help avert a stalling of economic reforms, in a context where their potential deflationary impact raises apprehensions in many segments of public

[4] See for instance Collignon 2003, 131ff who analyses the European Policy Mix under the Stability and Growth Pact.

opinion". A better fiscal policy management is hence increasingly seen as a necessary complement of a successful Lisbon strategy.

The second interlinkage between the Lisbon Agenda and the budget debate concerns the financing of the reforms needed for the implementation of the Lisbon agenda. Firstly, there is not much room for allocative policies on the national level under the constraints imposed by the Stability and Growth Pact. Secondly, the EU budget is generally judged as being in a complete mismatch to the tasks the EU has assigned itself.[5] While this second interlinkage between the EU budget and the Lisbon Agenda is largely debated in the literature on the future of the EU budget following the so-called Sapir-Report,[6] the remainder of this paper focuses on the stabilizing function of public expenditure and a potential model for EMU.

In the theory of monetary integration, it has long been argued that Europe might need a stronger centralization of fiscal policy (i.e. Wyplosz/Baldwin 2006, 358). According to the arguments deduced from the theory of optimum currency areas (OCA), handing over autonomy over monetary policy requires alternative adjustment mechanisms for asymmetric macroeconomic shocks. According to the classic Mundell (1961) OCA criteria, one possible adjustment mechanism can be the mobility of the factors of production, especially labour. If one region is hit by a negative shock, workers would quickly migrate to other regions, keeping unemployment in the adversely affected region low. An alternative adjustment mechanism could be a high flexibility of wages and prices. If one region is hit by an adverse shock, wages and prices for that region's goods would fall quickly, thus increasing demand again.

However, if a high degree of labour mobility or wage flexibility cannot be attained, alternative mechanisms might be necessary. One of these mechanisms can be fiscal policy, trying to bolster regional demand by increased expenditure, higher transfers or lower taxes if a region is hit by a transitory asymmetric negative demand shock and trying to dampen demand in an exuberant regional boom.

Against this background, one could even make the argument that stabilization requirements for fiscal policy are actually bigger than in other federal entities as the United States of America. First, labour mobility in Europe is lower than the US, not least because there are a almost a dozen different languages in EMU and customs still differ more than between regions of the US. Second, wages are usually assumed to be less flexible in Europe, again strengthening the case for more national stabilization policies.

While this argument has been solidly funded in traditional old Keynesian-style macroeconomic textbook models such as the Mundell-Fleming model and has been widely debated early in the debate on how to structure economic governance for a monetary union,[7] it fell into disregard afterwards. This shift in the debate probably had two reasons: First, among academic economists, the belief in the effectiveness of fiscal policy faded with the ascent of New Classical Economics in the late 1980s. Second, political realities of the early 1990s made any closer political union with a larger budget virtually unthinkable.

One central proposition of the New Classical Economists was the idea of Ricardian Equivalence, the notion that an increase in budget deficits via tax increases or expanded expenditure would be without effect as economic subjects would rationally expect higher taxes as a pay-back in the future and would accordingly already cut their expenditure in the present. In the meanwhile, this argument has lost power. First, there are a number of empirical indications that Ricardian equivalence does not hold in its absolute form (see survey by Riciutti 2003). Second, extensions of modern micro-founded models have provided new rationale for the effectiveness of fiscal policies. There are now a number of models which

[5] See for instance the harsh critique formulated by Buti and Nava (2003).

[6] See Sapir (2003).

[7] See the special Reports and Studies Issue No. 5/1993 of the European Economy, especially Goodhart/Smith (1993), Majocchi/Rey (1993), Papaspyrou (1993), Italianer/Vanheukelen (1993) and Pisani-Ferry et al. (1993).

show that fiscal stabilization policy can be effective if there are households which are liquidity-constraint and have limited access to unsecured loans, as well as models which provide microeconomic rationale for consumers' rule-of-thumb behaviour which also renders fiscal policy effective again.[8]

In addition to these revived traditional arguments, recent research both from the field of new growth theory as well as from dynamic general equilibrium models have increased the case for counter-cyclical fiscal policy not only on a regional, but also on an aggregate level. Galí et al. (2005) find that in a dynamic general equilibrium model, business cycle fluctuations distort the efficiency of an economy if price and/or wage rigidities or other types of market frictions exist, the cost of which can be quite substantial. According to them, major recessionary episodes as the ones experienced in the US in the 1970s or in the early 1980s are related with welfare losses in the magnitude of up to 8 percent of one year's consumption, depending on assumptions of different parameters – a figure well above that quoted by Lucas (2003) in his critique of stabilization policies. In a further paper, Galí (2005) argues that these results reinstate the old Keynesian proposition that it might be "require[d] that appropriate fiscal and monetary policies are undertaken to guarantee that a higher level of activity is attained."

In a New Growth Theory framework, Aghion and Howitt (2006) go even further. They argue that excessive macroeconomic fluctuation might hinder companies from conducting an optimum level of research and developments, especially if financial markets are underdeveloped and firms may thus not be able to bridge periods of low earnings with fresh credit. Aghion and Marinescu (2006) show econometrically that this effect is significant at a macroeconomic level.

Both the Galí et al. as well as the Aghion/Howitt arguments would call for a strong counter-cyclical fiscal policy: Not only are labour and product markets in Europe generally perceived to be more inflexible than in the United States (thus increasing price and wage stickiness which would lead to higher welfare costs of recessions), financial markets are also generally seen as less developed than on the other side of the Atlantic. According to Aghion and Marinescu (2006), the possible increase in GDP growth due to a better stabilization policy in Europe could amount to almost a whole percentage point.

2.2. The case for automatic stabilizers

However, there are strong reservations against discretionary fiscal stabilization policy.[9] There is firstly an information problem. In order to enact appropriate expansionary policies, a macroeconomic shock needs to be detected early and the type of the shock analysed accordingly. As most economic data is only available with a significant time lag (in most European countries, GDP data is only published 6 weeks after the end of a quarter) and is subject to large volatility and revisions, there is a danger that a lot of fluctuations are only detected with a significant delay. However, by itself, this should not necessarily be an argument against discretionary fiscal policies. After all, monetary policy does aim at stabilizing fluctuations as well even though central banks are faced with the same information dilemma as governments.

In addition, budgetary processes in most industrialized countries can result in a long lag between the first idea of conducting a counter-cyclical: Usually, a budget is decided on once a year, even though recent evidence as the tax cuts in the USA after September 11, 2001 (in which tax return checks were sent to households were quickly after Congress agreed on tax cuts as a stabilization tool) show that the process can in principle be sped up.

[8] See for a survey Andersen (2005).
[9] Ibid.

Finally, economic considerations in modern models hint that stabilization policy is most effective when it is limited to a short period of time (Andersen 2005). The argument behind this conclusion is that a permanent increase in deficits will lead to an adjustment of the public sector towards the expected higher tax rates in the future, while a temporary increase might just provide additional income to households of which a part is liquidity constraint. If fiscal policy is set in a discretionary manner, there might be reluctance to cut back public spending or increase taxes again even after the need for stabilization has ceased just because these measures are unpopular. As Tanzi (2003) has argued, politicians tend not to apply anti-cyclical logic in boom times. Thus, there is a broad consensus that fiscal stabilization works best via automatic stabilizers, and not through discretionary spending.

2.3. Stabilization Policy: Experience in the first years of EMU

In principle, one should think that Western Europe's welfare states (and thus the EMU countries) are well positioned to use their fiscal policy as a stabilizing tool. With a relatively high government-revenue-to-GDP ratio and a progressive tax system as well as a rather generous social security system, automatic stabilizers should be strong. This is also the result of recent estimates of the stabilization properties of tax and benefit system. According to a detailed analysis of tax and benefit systems, van den Noord (2000) finds that in most EMU countries, a change in GDP by 1 percent actually changes the general government's budget balance by 0.5 percent of GDP, compared to only 0.25 percent for the US. In a simulation with the cyclical fluctuation of the 1990s, he finds that these automatic stabilizers have thus erased roughly 25 percent of the fluctuations in GDP in the larger EMU countries (the argument being that an increase of the deficit of 1 percent in the deficit actually increases GDP by 0.5 percent).

However, as van den Noord notes, for the overall stabilization outcome from fiscal policy, it is important to look beyond the automatic stabilizers. After all, it is possible that one country manages to counteract cyclical fluctuations with discretionary fiscal policy, even if automatic stabilizers are rather small. Similarly, it is possible that a government counteracts the effects from the automatic stabilizers with a pro-cyclical discretionary fiscal policy, thus dampening or even completely eliminating the positive effects from the automatic stabilizers. This was exactly what some critics of the European Stability and Growth Pact had warned about: According to them, if countries with a budget deficit close to the limit of 3 percent of GDP were hit by a recession, they would be forced to cut back spending or increase taxes in the downturn, thus elimination the stabilization effect from the automatic stabilizers.

So far, most authors who had empirically tried to model the effect of EMU, concluded that fiscal policy has not become more pro-cyclical after the beginning of European Monetary Union, noting however that overall fiscal policy in Europe was acyclical to pro-cyclical even before the start of EMU (i.e. Galí/Perotti 2003). The result of an acyclical to pro-cyclical fiscal policy in EMU, but not in the US is also mirrored in the very recent contributions of Lane (2003) and Aghion/Marinescu (2006).

However, former studies did not yet completely include the time after 2002 when the excessive deficit procedure was applied to Portugal and Germany. Using time series which include also the long period of sub-par growth in many European countries after 2001 as well as the first period in which the excessive deficit procedure was used against countries in EMU,[10] this paper comes to different conclusions.[11]

The analysis for the time before EMU mirrors that of Galí/Perotti: Overall, discretionary fiscal policy in the run-up of EMU seems to have been slightly pro-cyclical, especially in

[10] The Commission started the Excessive Deficit Procedure against Portugal with its report in September 2002 and against Germany in November 2002.

[11] For the econometric analysis, see the appendix.

Belgium and Italy, but also (albeit not statistically significant) in France and Spain.[12] This probably reflects the governments' resolve to get their budget deficits down to meet the Maastricht criteria for joining EMU and in the case of Belgium and Italy the already high debt level. After the beginning of EMU, discretionary fiscal policy seems to be acyclical overall, just as Galí and Perotti have found.

However, our details on the time after EMU differ from the Galí/Perotti-results in an important manner: In the two countries which were first subject to the excessive deficit procedure, Germany and Portugal, fiscal policy turned strongly (albeit in the case of Portugal the coefficient is not statistically significant at the 10-percent level) pro-cyclical after the introduction of the euro. This result actually shows that the concerns of those that have warned that the Stability and Growth Pact might have hindered the working of the automatic stabilizers and might thus have prolonged the economic downturn in these two countries (a period which was not included in the Galí/Perotti analysis) were right. In fact, in Germany, the Schröder government with its *Hartz* labour market reforms actually cut unemployment benefit duration and benefit levels for the long-term unemployed, thus actively reducing the scope of the automatic stabilizers. In Portugal, the VAT was increased in a midst of an economic slump in order to lower the budget deficit. Interestingly, fiscal policy in Ireland also turned pro-cyclical the coefficient is highly significant).

The developments in the euro-area are even more interesting if one compares them with those in other major OECD economies. Among the world's largest four economies (US, Japan, Euro-Zone and Great Britain), the euro-zone is the entity for which there is the fewest evidence for a counter-cyclical discretionary fiscal policy both prior to 1999 and after the creation of the euro. In the US, discretionary fiscal policy has always been strongly (and in a statistically significant manner) counter-cyclical. Japan ran a strongly counter-cyclical fiscal policy prior to 1999, but no systematic reaction to the cycle can be detected since. In Britain, the degree of counter-cyclicality seems actually to have increased after 1999, even if the coefficients are not statistically significant.

However, even though discretionary fiscal policy has been pro-cyclical in some EMU countries, this does not necessarily mean that overall fiscal policy cannot be counter-cyclical. In order to check whether the overall policy stance has been counter-cyclical, we have thus run in addition a number of simple regressions of the actual (headline, not cyclically adjusted) deficit on the output gap. Regarding both discretionary fiscal policy and automatic stabilizers together, over the whole period from 1991 to 2006, only for two small countries in EMU, namely Austria and Finland, a statistically significant reaction of fiscal policy towards the output gap can be detected. In these countries, fiscal policy has thus actually systematically stabilized cyclical fluctuations. In all the other EMU countries, the coefficients are mostly small and all not statistically significant.

Again, this contrasts with the US and Japan:[13] In these countries, overall fiscal policy reacts strongly counter-cyclically towards the output gap, with coefficients as high as 0.9 in the US and 0.6 in Japan, meaning that overall, an increase in the output gap by one percentage point causes the overall deficit to widen almost by one percent of GDP in the US and by more than half a percent in Japan. Thus, discretionary fiscal policy in EMU obviously counteracted the automatic stabilizers to a degree that no significant stabilizing effect of overall fiscal policy has remained.

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[12] Note that negative coefficients denote pro-cyclical fiscal policies while positive coefficients show counter-cyclical fiscal policies.

[13] It should be noted here, however, that the Durbin-Watson test statistics for the US as well as for some EMU countries point towards misspecifications in the equation. However, as re-specifying the equation for each country would lead to a loss in comparability, they are reported nevertheless. For EMU as a whole as well as for Japan and Great Britain, the equation seems well specified in the form reported.

2.4. Explaining Europe's failure to stabilize

So even though European countries should have a stronger counter-cyclical fiscal policy than Japan or the United States, the outcome is the opposite. One explanation for this may be the actual level on which stabilization policy in Europe is conducted. With the European budget extremely small in relation to GDP and focused on structural not cyclical expenditure, stabilization policy is left to the single nation states. As Goodhart/Smith (1993, pp. 423) note, the smaller and the more open a country, the less incentive a local government will have to use fiscal stabilization policies: In a very open economy, a large part of the stabilization effort can be expected to result in higher imports and thus beneficial effects for the trading partners, not for the home economy. Thus, fiscal stabilization policy has positive external effects. Stabilization policy thus has public goods character for a currency union. This point has also been made by scholars of Fiscal Federalism who argue hat fiscal stabilization should take place on the highest possible level of government in a currency union.[14] In today's EMU, the costs of stabilization policy in the form of higher government debt, however, have to be completely borne by the national government which undertakes it. If a single government weights its own benefits from stabilization against its own costs for such a policy, it will rationally decide for a degree of stabilization which is significantly lower than it would be optimal for the currency union as a whole.[15]

The extent to which the special structure of the European Union might hinder fiscal stabilization policy is thereby not trivial: According to OECD data, the average EMU country has an import penetration (measured as imports as share of final expenditure) of roughly 35 percent, compared to 15 percent in the US and only 10 percent in Japan.[16] In addition, this problem is likely to get worse over time: With an increasing economic integration of goods and service markets in EU, the import penetration of the member countries can still be expected to grow. Especially the Southern European countries are still only relatively little integrated, with import penetration in Italy running as low as 20 percent, significantly below of the 30 percent in Germany or the 40 percent of the Netherlands.[17]

2.5. Requirements of a coherent system

If one took the economic goals outlined in the preamble of the European treaty, "to achieve the strengthening and the convergence of their economies and to establish an economic and monetary union" as well as "to promote economic and social progress for their peoples, taking into account the principle of sustainable development" literally, there would need to be a significant shift in both the way the European Union raises revenue as well as it spends the money.

Three main principles would stick out:

1. **Money should be spent in a way that enhances the productivity of the European economy and thereby works towards the Lisbon targets**. After all, productivity is the single most important determinant which determines incomes and thereby "economic progress". Moreover, by spending money for productivity enhancement both at a common market level as well as in individual countries which lag behind in productivity, convergence in incomes across the EU is fostered.

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[14] See Collignon (2004), Begg (2005), Buti/Nava (2005) for their ways to integrate this argument in the current debate on budgetary policies in the EU.

[15] This is nothing else than Samuelson's (1954) seminal analysis, that the private provision of goods with positive externalities leads to an under-provision of these goods.

[16] Data from OECD Economic Outlook Autumn 2006.

[17] Note that Austria and Finland, the two small countries which according to the econometric study have run a counter-cyclical fiscal policy over the past years, have been surprisingly closed given their small size.

2. **In contrast to today, both EU revenue and expenditure should be raised and spend in a way that does not contribute to boom and bust periods in the business cycle.** Today, EU expenditure in infrastructure is paid and spent even if an economy is overheating, thus aggravating the cycle and increasing the risk for a sharp downturn later. As the stability of the business cycle is a supplement to structural reforms in the process of increasing productivity, this leads to a sub-optimal outcome.
3. **An explicit pillar to stabilize the business cycle, both at the regional level as well as at the union level should be introduced.** As the structure of the European Union can be expected to lead to a sub-optimal degree of stabilization if the decision is left to national governments, the EU budget should have an explicit stabilization target.

The following sections analyse the revenue and expenditure side of the current EU budget and describe in how far changes in the current system are necessary to come closer to fulfilling these efficiency criteria.

3. State of the art and the structure of a new budgetary system

3.1. The income side

The EU budget is funded through four kinds of 'own resources': agricultural levies, i.e. charges on agricultural imports from non-EU countries, customs duties, i.e. levies on imports from non-EU countries, value added tax, a harmonised rate applied in all EU countries which should not exceed 1 per cent of the EU GDP, and the GNP-based own resource which covers the difference between planned expenditure and the amount yielded from the other three resources. This latter source of finance today contributes more than 50 per cent of the revenues, as revenues from agricultural and other import duties had considerably decreased in the last decades.

The term 'own resources' is misguiding in the sense that the EU does not have any competency to shape its own income. The EU Treaty only defines the decision-making procedure to reach a Council decision on the system of the European Communities' own resources. The responsibility to decide on the financing of the EU's budget and the distribution of contributions among the member countries is hence on the national level. Member states decide with unanimity, which makes the budget negotiations a lengthy and tedious process.

The review debate which the "rendez-vous-clause" imposes in the next years will deal with the question of a new system of own resources for the European Union. Ideally, this would be one which better takes into account the wealth in the member countries than the current system of four own resources does (and which is additionally distorted by e.g. the UK national rebate). This debate had already been fought during the European Convention, where it clearly showed that only a minority of countries defined such a system as being in their interest (namely Austria, Belgium, France, Germany, Luxemburg and Portugal).

The arguments that are usually put forward to defend tax-based own resources are: increased transparency, increased EU autonomy, a more direct link to the citizen and more scrutiny of EU public finances, the need for an increased democratic legitimisation and justification of public expenditure in the EU. To this, we would add the cyclical stabilization function a trans-European tax.

3.2. The expenditure side in the 2007-2013 budgetary framework

The EU's expenditure is currently concentrated on two major areas: the common agricultural policy (almost 680 bn €) and the structural and cohesion policy (308 bn €). Both areas

together make up 70 % of the budgetary outline 2007-2013.[18] The bulk of EU public expenditure hence goes into *redistribution*.
Allocative expenditure is comparatively minor, summing up to 74 bn € for the Lisbon Agenda (improvement of competitiveness), the financing of the EU's citizenship and cooperation in justice and home affairs (10.7 bn €), the EU's international role (49.4 bn €) and administrative costs of 49.8 bn €.
There is currently no expenditure devoted to *stabilization* purposes, the third pillar of public expenditure in state-like entities which run an economy. The structure of the EU budget as such prevents that any money flows into automatic macro-economic stabilization. The main reason are the structure of the income and the expenditure sides and the organisation of the EU budget process in six year programmes which leave no room for the reaction to cyclical developments. All expenditure is distributed or allocated along multi-annual programmes which follow other objectives than cyclical stabilization (e.g. redistribution to underdeveloped regions or uncompetitive market segments, allocation of means to create infrastructure, to finance research etc.).

3.2. Evaluating the budget – bringing stabilization in

With regard to the principles defined above for a coherent budgetary system which enhances the growth potential of the European economies, the budget fails widely. Not only is a large part of the budget used for purely redistributive purposes, one could even argue that large parts of the budget actually support the status quo and hinder change: The expenditure for agriculture is a pure mechanism to provide a permanent transfer to certain rural regions of the European Union, without bringing any advantages with regard to social or economic progress or development[19].
In addition, both for the part of the budget which is used for redistributive purposes as well as which is actually used to promote economic progress, productivity and convergence, a problem is that both the way how revenue is raised as well as how the means are dispersed does at best nothing to stabilize regional and EU-wide business cycles, at worst even amplifies existing fluctuations and misalignments.
Different from the tax system of most modern countries, the EU revenue process is geared to have no stabilization effect whatsoever. National budgets usually finance themselves from a combination of different taxes, some of which are highly cyclically sensitive such as capital gains taxes, progressive income taxes or profit taxes. The budget process in most countries works such as that if there is an unexpected shortfall, the gap is filled by increased government borrowing.
In principle, the VAT and the tariff part of EU revenue could work in a similar manner. However, both VAT and tariffs are some of the least cyclically sensitive sources of revenue, as consumption is relatively smooth over the business cycle. Moreover, as any shortfall in VAT revenue is automatically filled via "own resources" which are extracted from the member states, this small effect is even completely counteracted by the logic of the EU budget revenue. Without the possibility to go into debt or at least draw down from reserves accumulated earlier, the EU budget cannot act as an overall stabilizer for the European business cycle.
The situation for the expenditure side is even worse, especially because for some of the countries, transfers from Brussels are much more important relative to GDP and affect a much smaller sector of the economy than the revenue side. For example, structural funds alone amounted on average to almost 10 bn € for Spain annually in the years 2000 to 2006 (more

[18] The figures are taken from the Interinstitutional agreement with the European Parliament of April 4, 2006 which is based on the Council decision of December 17, 2005.
[19] See for instance the critique of Becker (2007), Begg (2005), Buti/Nava (2003).

than 1 percent of GDP), with most of this money going into an already overheating construction sector, the now excessive size of which is considered to be one of the main vulnerabilities of the Spanish economy. One problem is that the money is spent at a predetermined speed without any consideration for the situation of the national business cycle. It is thus well possible that the structural funds first amplify a national boom and then expire exactly at a moment when the economy slumps.

Some of these problems would require relatively little changes in the overall budget process: On the expenditure side, one could for example condition the speed of disbursement for investment spending on the position of the business cycle. Under such a regime, work on decided infrastructure projects would be delayed when the national economy in question is growing above trend and expedited when growth falls below trend. In other words: The idea is not to suddenly reduce funding without prior notice, but rather to extend or speed up the funding period if need be. In most cases, this should be a measure appreciated by the contractors in the infrastructure projects (and could even be negotiated in agreement with them). In a period of e.g. an overheating construction sector, contractors may be happy to delay certain projects to a time when their order books are less packed and they have the human resources to do the job.[20] Without additional costs, the existing structural funds could thus be brought to a secondary use of stabilizing national business cycles. This principle could also be applied when some of the expenditure is shifted from traditional cohesion and structural fund expenditure towards areas which are more compatible with the Lisbon agenda such as research and development or higher education, with higher disbursement in times of economic slump and lower disbursement in times of rapid growth.

On the revenue side, a shift towards a more cyclically sensitive tax than the VAT would improve the stabilization properties. A progressive personal income tax would probably provide the best stabilization properties (Goodhart/ Smith 1993). However, as introducing such a tax on the European level would be extremely complicated given the huge differences in the national preferences and tax bases for personal income taxes across the European Union, a European Union corporate tax seems to be the second best solution to finance the budget.

Introducing a common federal EU corporate tax would not only have the advantage of shifting from an acyclical to a more cyclical revenue source, but would in addition allow to introduce a minimum level of taxation for the European Union which would limit the excesses of harmful tax competition. As it is also the case in the United States of America, introducing an EU corporate tax would not impair the single countries' power to levy an additional corporate tax on profits in their jurisdiction, thus still allowing for a certain degree of tax competition.

In principle, the whole EU budget beyond the revenue from tariffs could be easily financed with a union-wide corporate income tax without increasing the overall tax burden for corporations: On average, taxes on corporate income amounted to 3.2 percent of GDP in 2004, with corporate income taxes in all single EU countries exceeding 1.5 percent of GDP (see OECD 2006, p. 76). The whole EU budget of 1.27 percent of GDP could thus be easily financed by a common corporate tax, leaving all countries ample room for an additional national corporate income tax. Shifting taxation to this new source would be neutral both for national budgets as well as for taxpayers: As the EU would be financed with corporate income taxes, the revenue now allocated to the EU budget from the VAT and the national budgets

[20] Another idea, which would yet be politically more complicated to implement, is to vary national co-payments according to the cyclical condition of the economy (yet, again, not altering the overall amount of money the country receives, but only to time span in which the sum is paid out).

would be available for national expenditure, allowing the countries to lower their own corporate income taxes by the amount of the new EU wide tax.[21]
In order to allow not only stabilization of the business cycle across region, but also across time, the EU would need to be allowed to build up reserves in an economic upswing and draw down on them in a downswing – a stark change from the current practice. If the new budget system were to be phased in at a favourable point of the business cycle (and thus at a point of high tax revenue), this could work without allowing the European Union actually to go into debt: The EU would thus first build up reserves from which it could draw afterwards, thus avoiding the politically sensitive debate whether the European level actually would be allowed to issue debt titles of its own.

3.3. Introducing a third pillar of public expenditure in the EU

However, as the primary goal of most of the current expenditure as well as any additional expenditure aimed at reaching the Lisbon targets is to improve the structure of the economy, not to stabilize the cycle, the effects from these changes in the budget on the stabilization properties might be limited. In order to reach a stabilization closer to those of other advanced countries (and notably countries which have been doing much better in improving productivity such as the United States), an explicit pillar for stabilization policies in the EU would be desirable. In the early 1990s, there has been a lively debate on possible stabilization schemes (Goodhart/Smith 1993; Majocchi/Rey 1993; Italianer/Vanheukelen 1993; Pisani-Ferry/Italianer/Lescure 1993). The interesting result from this discussion has been that expenditure for a reasonable stabilization scheme would not need to be large: Italianer and Vanheukelen for example have proposed a stabilization scheme which could mitigate roughly a fourth of all country-specific GDP fluctuation with an average cost of only 0.2 percent of GDP and a theoretically possible maximum cost of only 0.75 percent of EU GDP. In their model, single countries would be paid a variable amount should national unemployment rise significantly faster than unemployment in the rest of the union.
However, the Italianer/Vanheukelen proposal does not really address the political economy problems of stabilization policies in very open economies described above: Even if national governments were given money in a downturn, it is not clear whether they would use them for stabilizing expenditure increases or tax cuts. Especially for countries already constrained by very high deficits (possibly breaching the limit set in the SGP), the incentive might remain to use the additional funds for budget consolidation, which would not stabilize the cycle.
An alternative solution would thus be the explicit introduction of a basic unemployment insurance on the European level. Under such a scheme, part of the national unemployment insurance systems would be replaced by a European scheme.
Under this system, for all employees in Europe, a certain payroll tax (back-of-the envelope calculations propose that roughly two percent would suffice) on the wages paid until a certain limit (possibly the national median wage) would be collected. From this money, employees which have paid contributions for more than a year and become unemployed would be allowed to draw benefits of half their last salary up to a limit (possibly half the median wage) for a period of six months. This basic unemployment insurance would replace part of the national system. In addition, each nation could still have its own national unemployment insurance which would top up the payments from Europe (either in the monthly benefit amount or in the duration of benefits).[22]

[21] Spahn (1992) makes the interesting proposal of a EU wide cash-flow tax for corporations which at the same time would guarantee that more taxes are paid by older, mature economies in which less investment takes place, while investment is promoted.
[22] For more details, see Dullien (2007).

These features would have the advantage that the new system would fit very nicely with existing unemployment insurance schemes in the EMU. All EMU countries (with the exception of Ireland and Greece) have unemployment insurance systems which are financed by payroll taxes and which pay benefits relative to the wage earned before becoming unemployed. By not changing the overall benefits paid to single unemployed, but only changing its source of funding, there would be no deterioration in the incentives to look for new work.

Overall, this system would drain purchasing power from countries in which the economy booms as unemployment in these countries would fall. If a country goes into crisis, purchasing power and thus domestic demand would automatically be shored up. The system would explicitly only compensate for cyclical unemployment and not structural unemployment as only those can receive payments who have been regularly employed for a certain period prior to unemployment. Short-term unemployment is an excellent indicator for the output gap: Those who have recently become unemployed are by definition unused potential of the national economy in question. In addition, by reacting to unemployment, the mechanism would not induce transfers caused by quarter-to-quarter fluctuations in GDP growth figures, but only if an economy experiences a protracted up- or downturn of the kind that could be expected to have effects on the long-term growth path.

As the need for a common stabilization policy is larger inside EMU than in the rest of European Union (since EMU countries have no national monetary policy left), an option would be to introduce such a basic unemployment insurance first only for the EMU (or even only part of the EMU), with a voluntary option for other EU countries to join.[23] This might be politically more feasible than trying to get all EU members to agree to such a scheme, given especially the British (and some Central and Eastern European countries' preferences) not to add any further social dimension to European integration.

As the experience from the United States of America shows, the overall amount of money for a meaningful stabilization via the unemployment insurance does not need to be large. According to Chimerine et al. (1999), the U.S. unemployment insurance has roughly stabilized 15 percent of fluctuations in GDP, even though it only moves about 0.4 percent of GDP each year.

Organizing a transfer via an unemployment insurance instead of via one of the formerly discussed stabilization schemes such as the proposals by Italianer/Vanheukelen (1993) or Hammond/von Hagen (1995) has a number of advantages. First, formerly discussed schemes would have simply transferred money to and from the national governments in question. Given the political economy arguments against stabilization policy, there would be no guarantee that the governments would actually use the funds in a cyclically sound manner. It is well possible that a government in a downturn might receive money from Brussels, but does not spend it in order to have funds available to cut taxes or increase expenditure just before the next general election. By funnelling the money directly to the unemployed, it is guaranteed that it contributes to cyclical stabilization. Second, the unemployment insurance would be truly automatic. All other schemes would need an institution in Brussels which computes transfer flows by a more (in the Hammond/von Hagen case) or less (in the Italianer/Vanheukelen case) complicated econometric procedure. Such technocrats deciding on transfers to and from national budgets would be an easy target for political attacks.

[23] Especially for countries already member of EMS-II, but not yet member of EMU, participation in the unemployment insurance might be attractive as these countries also have only limited freedom in their national monetary policy.

4. Reformed budgetary procedures

4.1 Sources of legitimacy of the current EU budgetary system

The introduction of an EU tax and a European unemployment scheme would raise the procedural requirements to decide on a democratically legitimate EU budget. Currently, the European Parliament and the Council of the European Union together constitute the Union's budgetary authority and decide each year on its expenditure and revenue.[24] The Commission prepares a preliminary draft budget, which it submits to the Council of the European Union. On this basis, the Council draws up a draft budget, which it forwards to the European Parliament for first reading. Parliament amends the draft in the light of its political priorities and returns it to the Council, which can amend it in its turn before returning it to the European Parliament. Parliament adopts or rejects the amended budget at second reading. The President of the European Parliament finally adopts the budget. In the case of 'compulsory expenditure' (e.g. agricultural expenditure and expenditure linked to international agreements) the Council has the last word. In the case of 'non-compulsory expenditure' Parliament decides in close collaboration with the Council.

The discretion of all institutions in this annual budget process is strongly limited by the annual spending limits laid down in the multi-annual financial perspective and the Treaty principle that the EU budget may not run a deficit. The Financial Perspective is an inter-institutional agreement between the European Parliament, the Council and the Commission, in which they pre-agree a maximum expenditure (though there is a margin for unforeseen expenditure between the authorised own resources ceiling and the actual payment appropriations). The European Parliament's role is hence clearly limited in comparison to the traditional role of national Parliaments.

Given the large amount of national GDP-based contributions which flow through national Treasuries, the main source of legitimacy runs through the national governments. In other words: national governments decide on their contribution to the EU budget and have to defend this vis-à-vis their electorate. As the benefits of EU integration and of the policies financed through the EU budget are (at least for the net contributors) difficult to justify vis-à-vis their own electorate, the basis of legitimacy for the current EU budget is comparatively low. The debate on the EU Financial Perspective is hence habitually characterised by nationalistic discourses on "*le juste retour*", like the famous "I want my money back"-approach by the former UK Prime Minister Margaret Thatcher.

4.2. Arguments to reform the budgetary procedures

A new European budgetary system which involves both a restructuring of the income and the expenditure side requires new budgetary procedures for the following reasons:

- Even if the budget as such was not fundamentally changed, budgetary compromise in the EU-27 is extremely difficult as the negotiations of the Financial Framework 2007-2013 has shown. The reasons for the difficulties in decision-making not only result from the sheer number of negotiators but also from the heterogeneity of their preferences given the differences in economic conditions, per capita income, policy preferences, cultural and societal values, etc.
- The lack of trans-European legitimisation mechanisms provides a bias towards national reasoning and not towards a reasoning in terms of European public goods. Collective action problems and temptations for free-riding prevent coherent action with the EU's resources.

[24] The EU budgetary rules are laid down in Art. 268 – 280 of ECT.

- Log-rolling is a problem in this context as member states are more likely to find a compromise if they trade different policies and financial flows against each other (Collignon 2003).
- The "no-taxation-without-representation"-rule also has its validity for the EU: if EU taxes are raised, their imposition has to be based on a democratically fully legitimate and transparent process, giving to voters to chance to sanction those who have imposed the taxes, and giving newly elected majorities the chance to change the direction of socio-economic policies reflected both in income and expenditure side of the EU budget.

4.3. Democratising the budgetary procedure

A modern EU budget including a stabilization function along with the allocative and redistribute functions should be based on new decision-making mechanisms which allow to reach democratic and (from an EU and EMU perspective) more efficient solutions than the current procedure does.

The mechanisms should not encourage nationalistic/communitarian approaches, but should be based on individualistic/liberal principles. A modern approach would be to recommend redistribution across citizens as reflected in a tax system which is based on the individual's ability to pay for the provisions of public goods (such as the European corporate tax or a common progressive income tax system) – or in the European unemployment scheme suggested in this paper. Regional policies should continue to supplement the distribution policies on the individual level (Collignon 2003).

The mechanisms should be fully transparent, the budgetary authority fully accountable and democratically legitimised and scrutinised. This would weaken the national bias in the current debate, based on the argument that the process has to remain as it is because the national level is the only arena where democratic options can be exercised.

In order to prevent gridlock and inefficient finance solutions, the European Commission should propose a budget that will subsequently be legitimised by the European Parliament as ultimate authority, with the participation of the Council of Ministers. Ultimately, a democratic political EU system should include an executive which has the means to decide how to raise the means that are necessary to implement its objectives. Citizens should be able to sanction this government, which should be fully scrutinised by a stronger European Parliament.

This provision would provide the European parliament with the power to raise taxes, and it would provide it with budgetary authority on the expenditure side. This would be substantially different to the current setting in which the European Parliament is only able to vote and decide on the small part of non-compulsory expenditure. The current setting is hence inadequate for the tasks of the Union and incompatible with democracy.

Furthermore, from the point of view of stabilization policy, at least the budgets of the 13 EMU member countries should be coordinated with the EU budgetary means (Buti/Nava 2003, 5ff). Regarding the goals of the Lisbon Agenda, in particular the objective to spend 3% of GDP on research and development, there should be a coordination of the financing of costly technology projects. The Financial Perspectives should hence be integrated with the national Stability programmes to encourage coherent European-wide stabilization policies. The allocation function would still be primarily on the national level, but the intensified coordination of national budgets and the new stabilizing mechanism on the EU level would allow defining a consistent aggregate policy stance.

5. Conclusion

The EU budgetary policy illustrates particularly that the interest representation of the EU's citizens through their governments in intergouvernmental bargainings does not necessarily yield efficient, democratic, or legitimate results. In EU budgetary policy, the EU citizens cannot express their collective preferences for relevant policies, and elections, which should be a chance for citizens to change policy orientations, have no impact on the EU spending policies. Not only has the European Parliament limited budgetary power while the essential decisions are taken in the Council. Also, the instrument of multi-annual budgetary planning, which does not coincide with the legislative term of the European Parliament, imposes a particular constraint on the European Parliament's budgetary competence, which in turn is not responsible before the electorate for the money raised and spent (as the budget is based on an intergovernmental bargain, the European Parliament is not associated with the related costs).

The proposal put forward in this paper would be a quantum leap in EU budgetary policy – and in integration as such, given the need for democratic legitimacy of the new mechanism. As has been pointed out by Enderlein et al. (2005) in an ECB-Discussion Paper, a further development of the EU's public finances has to go hand in hand with the development of the EU as a political entity.

If evaluated against the background of the current political debate on the EU budget, problems involved in saving the political content of the EU Constitutional Treaty and the lack of political leadership for further reaching reforms, our proposal may seem far fetched: The political debate on the reform of the EU budgetary system which received an important impulse through the almost-failure of the 2007-2013 negotiations still concentrates on efforts which can be described as adjusting a few screws in the system. Our proposal does not consider the "political equilibrium" of the current *juste retour*-system as sacrosanct or unchangeable.

Assuming that the guiding principle of any future EU budgetary system should be the added value generated in terms of European public goods by EU expenditure, our proposal in line with the theory of Fiscal Federalism which would assign radically new functions to the EU budget. In contrast to many contributions to the current debate on the EU budgetary framework, our proposal does not take the smallest common denominator of an EU-27 as the determinant for the proposal to be put forward.

Our starting point was the acknowledgement of the existence of Europe's monetary union and the new efficiency requirements that budgetary policies have to meet in the field of stabilization. Since the introduction of the euro, not only has progress in the Lisbon process all but stalled, but also economic tensions in EMU have grown with excessively prolonged boom and bust cycles in single countries leading to dangerous imbalances (see Dullien/Schwarzer 2005, 2006). Both problems could in principle be at least mitigated by a more intelligent use of funds. Combining a relocation of expenditure towards more productivity-enhancing goals such as research and development with a more stability-enhancing revenue and spending and an additional explicit stabilization pillar in European Union finances could provide a triple benefit: First, productivity growth could be boosted, bringing the EU closer to its target to become the most competitive economy. Second, it would also improve the economic workings of the Eurozone. Together, this can reduce the risk of political backlash against European integration.

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Appendix: Econometric Estimates

In order to evaluate in how far fiscal policy in the Eurozone and in other important industrialized countries has reacted to the business cycle over past years, we have broadly followed the approach chosen by Galí/Perotti (2003). However, different from this original work which only used data up to 2002, we have used time series which include all years until 2006. Different from Galí/Perotti, we do not differentiate in the time period before and after the Masstricht treaty was signed in 1992, but the period from the early 1990s until the actual start of EMU in 1999 with the period since then.
Table 1 shows the results from a number of estimated equations of the form:

$$d_t^* = c + \phi_{BEMU} E_{t-1} x_t + \phi_{EMU} E_{t-1} x_t + \phi_{lag} d_{t-1}^* + \phi b_{t-1} + u_t$$

With d_t^* denoting the cyclically adjusted primary government balance, d_{t-1}^* denoting the lagged deficit, x_t denoting the output gap and b denoting the debt to GDP level. The two coefficients ϕ_{EMU} and ϕ_{BEMU} allow for different reactions for the time before EMU and in EMU, with the first one being applied for the years until 1998 and the second one for the period starting in 1999. The idea behind this analysis is as follows: The cyclically adjusted primary deficit is the current deficit adjusted for the workings of the automatic stabilizers and the debt service. As the deficit beyond the automatic stabilizers and beyond the interest service can be seen as the discretionary fiscal policy variable, its reaction to the output gap shows in how far policy makers are reacting to a the business cycle. Including the debt level into the equation just mirrors the assumption that policy makers are nevertheless concerned about the overall level of public debt and aim at attaining a certain debt-to-GDP-ratio. As there is the problem of endogeneity between the cyclically adjusted budget deficit and the output gap, the equations have been estimated by a two-stage-least-square procedure with the use of instruments following Galí/Perotti (in addition to the lagged deficit and the debt level, the output gaps of other countries have been used as instruments).[25]
In a second step, an additional analysis is run in order to evaluate whether overall fiscal policy has reacted systematically to a change in output gap. To this end, for all of the countries an estimation of the following form has been estimated (without differentiating between pre- and post 1999 periods):

$$d_t = c + \phi_{lag} d_{t-1} + \phi_x x_t + \phi_b b_{t-1} + u_t$$

With d_t denoting the headline deficit and all other variables defined as above. The results are presented in Table 2.

[25] Details on the instruments used can be obtained from the authors on request.

Country	c	(t)	Φ_{lag}	(t)	Φ_{BEMU}	(t)	Φ_{EMU}	(t)	Φ_{debt}	(t)
aut	-8.44	(-0.75)	0.54	(1.93)	0.47	(0.56)	0.04	(0.09)	0.14	(0.80)
bel	1.76	(0.61)	0.48	(1.86)	-1.04	(-1.71)	0.71	(0.88)	0.01	(0.26)
deu	2.09	(0.80)	2.07	(2.43)	1.01	(1.31)	-1.52	(-1.91)	-0.04	(-0.97)
e12	-17.35	(-3.20)	0.31	(1.48)	-0.30	(-1.63)	-0.04	(-0.35)	0.26	(3.20)
esp	7.58	(2.85)	-0.06	(-0.17)	-0.17	(-0.52)	-0.38	(-0.99)	-0.09	(-2.38)
fin	-1.04	(-0.39)	0.58	(2.22)	0.21	(0.87)	0.85	(2.27)	0.05	(1.43)
fra	-1.23	(-0.87)	0.74	(3.13)	-0.38	(-0.93)	-0.08	(-0.17)	0.02	(0.74)
gbr	-7.36	(-4.13)	0.76	(6.48)	0.20	(0.57)	0.74	(0.79)	0.17	(4.32)
irl	1.14	(0.75)	0.65	(2.08)	0.32	(0.97)	-0.49	(-1.84)	0.02	(0.64)
ita	-2.74	(-0.32)	0.36	(0.97)	-1.02	(-1.52)	-0.02	(-0.05)	0.04	(0.48)
lux	-0.87	(-0.05)	0.50	(1.22)	-0.18	(-0.12)	0.06	(0.05)	0.29	(0.10)
nld	-1.63	(-0.46)	1.11	(1.27)	1.47	(1.03)	-0.88	(-1.14)	0.03	(0.60)
prt	17.00	(0.69)	0.14	(0.23)	0.39	(0.73)	-1.25	(-0.95)	-0.29	(-0.69)
swe	-1.71	(-0.28)	0.67	(2.97)	-0.68	(-0.45)	0.20	(0.28)	0.05	(0.53)
jpn	-3.16	(-2.60)	0.64	(4.35)	0.59	(1.88)	0.09	(0.32)	0.01	(1.10)
che	-2.10	(-0.82)	0.26	(0.81)	0.59	(1.75)	0.14	(0.29)	0.06	(1.11)
can	-5.54	(-1.90)	0.88	(5.08)	0.16	(0.46)	-0.94	(-1.67)	0.08	(1.89)
usa	-11.39	(-3.34)	0.73	(8.71)	0.60	(1.84)	0.67	(2.34)	0.19	(3.36)

Table 1: Reaction of structural primary deficit on the output gap

Country	C	(t)	Φ_{lag}	(t)	Φ_{gap}	(t)	Φ_{debt}	(t)
Aut	-14.08	(-2.63)	0.59	(2.81)	0.46	(1.78)	0.21	(2.46)
Bel	-5.26	(-1.22)	1.17	(5.83)	-0.18	(-0.59)	0.05	(1.28)
Deu	-0.38	(-0.12)	1.05	(1.72)	-0.06	(-0.18)	0.01	(0.27)
e12	-18.52	(-4.38)	1.02	(3.88)	-0.19	(-0.80)	0.27	(4.15)
Esp	9.04	(1.09)	-0.03	(-0.04)	0.67	(0.85)	-0.18	(-1.03)
Fin	-3.61	(-1.51)	0.57	(2.81)	0.75	(2.95)	0.10	(2.02)
Fra	-8.98	(-1.47)	-0.09	(-0.09)	0.76	(0.83)	0.10	(1.85)
Gbr	-8.29	(-5.07)	0.82	(6.03)	0.45	(1.23)	0.19	(4.50)
Irl	-1.34	(-0.52)	2.16	(2.20)	-0.62	(-1.25)	0.03	(0.66)
Ita	-9.81	(-2.79)	0.79	(9.96)	-0.14	(-0.60)	0.08	(2.74)
Lux	-7.74	(-1.74)	0.40	(1.40)	0.37	(1.34)	1.37	(1.83)
Nld	-1.90	(-0.52)	1.07	(1.60)	-0.10	(-0.26)	0.04	(0.50)
Prt	-14.60	(-2.20)	0.80	(2.74)	0.31	(1.62)	0.24	(1.93)
Swe	-11.87	(-1.32)	1.30	(2.37)	-0.66	(-0.66)	0.21	(1.42)
Jpn	-4.14	(-4.41)	0.69	(5.15)	0.57	(2.74)	0.02	(2.30)
che	-3.78	(-2.79)	0.33	(1.36)	0.73	(3.05)	0.08	(3.01)
can	-8.39	(-2.13)	1.43	(3.82)	-0.70	(-0.98)	0.10	(2.27)
usa	-11.75	(-6.09)	0.75	(7.40)	0.91	(5.31)	0.19	(5.83)

Table 2: Reaction of total deficit on changes in the output gap

The data for the econometric estimations has been taken from the EU commission's AMECO database (Fall 2006) for all EU countries and from the OECD Economic Outlook (Fall 2006) for Japan, the US, Canada and Switzerland.[26] Budget deficits for EU countries are corrected for proceeds of the sale of UMTS mobile phone network licenses as they can be seen as one-off-events that did not figure into the general consideration for discretionary fiscal policy (in

[26] While data for 2006 still have been estimates, they can be considered to be already reasonably accurate as final data for the first half of the year already has been available to the institutions at the time of the forecasts.

fact, the EU finance ministers had agreed in advance to pay back public debt with the windfall revenue) and can also be assumed to have rather limited immediate effect on the business cycle. For most countries, the time series runs from 1991 to 2006. However, for a small number of countries (i.e. Spain, Euro-12), the time series only starts in 1996.