CHAPTER 3 FISCAL POLICY

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1. Introduction

The creation of a single currency in Europe has been accompanied by some major challenges to the role of fiscal policy. The challenges came from two main directions. First, as each country had to abandon monetary policy as a tool for stabilizing its national business cycles, it seemed natural for fiscal policy to take a more prominent role in controlling cyclical fluctuations. At the same time, concern about the stability and credibility of the new currency, and the possibility that governments would not internalize the consequences of their behavior, meant that the institutional framework for national fiscal policies became rather restricted, defined as it now was by the limits on debt and deficits of the Maastricht Treaty and further elaborated by the Stability and Growth Pact.

The run-up to the launch of the euro was difficult and driven by the strict criteria defined by the Maastricht Treaty. With the introduction of the euro in January 1999, and the replacement of the Maastricht Treaty criteria by the rules of the Stability and Growth Pact, the issues became broader, shifting from a subject of debate among academics to a real-time challenge for policy-makers. In the early years of the monetary union, the framework for fiscal policy embedded in the Stability and Growth Pact has already been subjected to much criticism and has clearly failed to provide a credible framework for the conduct of fiscal policy. Although the Pact was intended to encourage an environment of discipline, coordination and stability, its constraints in fact became binding for several countries, as well as representing a challenge to macroeconomic stability and the credibility of the Pact in the very first years of the EMU.

We review the behavior of fiscal policy after the introduction of the euro in several dimensions: pro cyclicality, volatility, coordination and the role of automatic stabilizers. We describe how the common currency and the constraints associated with the Stability

and Growth Pact have shaped fiscal policy among the members of the union. Our focus is on understanding whether the new framework has helped or hurt the conduct of fiscal policy for the members of the euro area and the three members of the EU who opted out of the common currency but were subject to the same fiscal policy constraints.

Our results show that despite the significant change in the institutional setting, the cyclical behavior of fiscal policy in the EU15 countries has not changed much since the introduction of the new currency. The bad news is that fiscal policy tends to be more procyclical in the euro area than it is in other countries, where we see a tendency for fiscal policy to become even more countercyclical, as it has done in the USA. The good news is that the automatic stabilizers are strong, and we have observed a tendency towards countercyclicality in some of the countries. We also note that a broad-based decline in the volatility of discretionary fiscal policy in all the major economies. This decline is quite substantial in the euro area, and appears in most of the member states. Further, the discrepancy in fiscal policy across euro-area countries – in terms of the dispersion of cyclically-adjusted balances – has decreased threefold since 1999.

The paper is organized as follows: we first provide a framework for assessing the quality of fiscal policy. How can we tell whether fiscal policy has improved or deteriorated since the introduction of the euro? In Section 3 we describe the behavior of fiscal policy at the national level, while Section 4 considers whether there is coordination `between fiscal policies and examines the stance on euro fiscal policy Section 5 concludes.

2. Defining and measuring "good" fiscal policy

The first problem when it comes to analyzing recent developments in the euro area arises from the fact that consensus regarding what constitutes good fiscal policy is difficult to reach. We adopt a very simple approach in this paper, describing the performance of the fiscal policy authorities and the environment in which they operate under three main headings: (1) long-term sustainability; (2) reactions in fiscal policy to fluctuations in the business cycle; (3) volatility. We assume that good fiscal policy must be sustainable and

countercyclical, and that it should not be a significant source of volatility. We look briefly below at the logic behind this characterization.

2.1. Sustainability of fiscal policy

In the EMU context, the Maastricht Treaty identifies sustainability as the main goal of the fiscal framework. This is corroborated by repeated statements from the ECB stressing that "sound fiscal policies and a monetary policy geared to price stability are fundamental for the success of a Monetary Union. They are prerequisites for macroeconomic stability and cohesion in the euro area".[1]

Unsustainable fiscal policy may generate excessive macroeconomic volatility, which in turn would make it difficult to achieve the goal of the central bank regarding the maintenance of stability within the EMU. This might be more relevant to a monetary union with a decentralized fiscal policy where coordination might be more difficult or simply not in the interest of the national governments.

While sustainability refers to the long-term behavior of fiscal policy, it is also connected in many ways with the discussion of policies for the stabilization of business cycles. The lack of discipline in fiscal policy can complicate the macroeconomic management of the economy. First, from a dynamic point of view, if governments are confronted by unsustainable levels of debt, they will have very little scope for adopting automatic stabilizers in bad times, which means that all the pressure will fall on monetary policy to regulate the business cycle.[2] Secondly, unsustainable plans will have to be made into sustainable ones by fiscal consolidations, which are likely to have a short-term effect on the economy. Finally, high debt levels lead to higher interest rates and lower levels of investment and growth.

[1] Statement of the Governing Council of the ECB, March 21 2005.
[2] As pointed out by Melitz (2000) and Perry (2002).

There is yet another connection between sustainability and the cyclical nature of fiscal policy -- one that is related to the design and implementation of budgetary plans. When it comes to the discussion of what constitutes a sustainable fiscal policy, it is necessary to measure, characterize and monitor annual budgets. In view of the short-term fluctuations in budgets due to automatic stabilizers, it becomes necessary to capture the structural balance in a given year, i.e. the budget balance adjusted for cyclical changes. Without a proper understanding of how fiscal policy behaves over the business cycle, it is impossible to provide long-term guidance with regard to budgetary plans. This has been one of the major difficulties in implementing the limits on deficits and debt in accordance with the Maastricht Treaty. So long as they were still based on simple principles of sustainability, there were endless discussions on the special circumstances that led to balances that did not correspond with the levels projected. The 2005 reform of the Stability and Growth Pact allowed for a more flexible interpretation of the limits, taking into account the cyclical position of the economy as well. There is no agreement, however, on how this adjustment should be made, and there are some who regard this flexibility as a relaxation of the constraints.

To sum up: although the main concern of the EMU fiscal policy framework was long-term sustainability, the implementation of the rules have led to debate focusing more on the cyclical behavior of fiscal policy. I will now turn to this debate.

2.2. Fiscal policy stance and the management of business cycles

Fiscal policy as a tool for managing business cycles is expected to be countercyclical. Governments are supposed to run a surplus when times are “good” and a deficit when they are “bad”. From the perspective of monetary policy, if this last is not the case, then high deficits during an economic boom may lead to inflationary pressure and may force the ECB to maintain interest rates that are higher than they would otherwise have been.

When analyzing the cyclical behavior of fiscal policy, it is important to recognize that fiscal policy is a combination of automatic stabilizers and discretionary policy, and we

cannot forget that, for most countries, most cyclical changes in budgets are a result of automatic stabilizers. Automatic stabilizers tend to be countercyclical, particularly for countries with a large government. The logic is that the size of a government is related to the safety network that it provides.[3]

When it comes to discretionary fiscal policy, the evidence is less positive. In many countries, governments adopt a procyclical policy (spending more in good times). The evidence is strong in the case of Latin American economies but mixed for those in the OECD and Europe.[4]

We will rely on cyclically-adjusted OECD measures of the budget balance to analyze these two components of cyclical fiscal policy.[5]

2.3. Volatility

Fiscal policy can be a trigger of business cycles. When governments implement changes in fiscal policy for political reasons or, more generally, for reasons which are not driven by economic conditions, then the changes will lead to fluctuations in output and consumption. In principle, such policies may have a negative effect on the economy if they simply add volatility, which in some cases may slow down growth.[6]

[3] The reason for this link is the empirical regularity described in Gali (1994) and confirmed in Fatás and Mihov (2001b) that large governments display less volatile business cycles.
[4] Lane (2003), Wyplosz (2005), Kaminsky, Reinhardt and Vegh (2004), and Alesina, Campante and Tabellini (2007) present evidence on the cyclical properties of fiscal policy for this group of countries.
[5] For details of this methodology, see Girouard and Andre (2005). The methodology ensures consistency in the way fiscal policy is decomposed into the three components. A drawback however, is that it relies heavily on the process of extracting the cyclical component out of fiscal policy, which requires strong assumptions on potential output and cyclical elasticities of different fiscal variables and could potentially create a bias in the results. Blanchard (1993) and Mohr and Morris (2007) discuss the potential drawbacks of cyclically-adjusted measures of fiscal policy.
[6] The effects of fiscal policy shocks have received a good deal of attention following the publication of Blanchard and Perotti (2002), Fatás and Mihov (2001a and 2003), and Burnside, Eichenbaum and Fisher (2004).

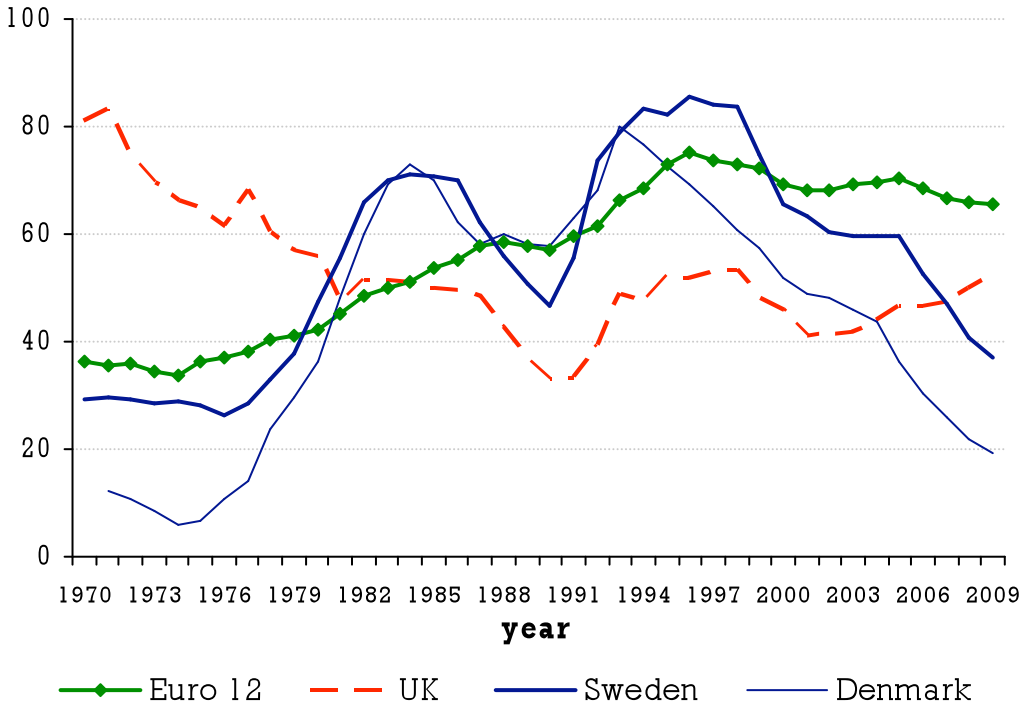
The question of volatility has not been a major concern in the context of the monetary union, but it could be interesting to see whether there is any evidence of changes in the use of discretionary fiscal policy. It is possible that the absence of national currencies has altered governments' prediction for policies that generate a political business cycle.

3. Fiscal stance at the national level

3.1 Sustainability of fiscal policy

Figure 1 illustrates the development of the debt-to-output ratio for the euro area, Denmark, Sweden and the UK. The evolution of this ratio in the euro countries shows a rising trend until the mid-1990s. There is then a clear downward trend from this point on. The same appeared in the UK up to 2001--2002. The trend in the euro area has been interpreted as a clear sign of the discipline that its entry conditions impose on all members. Denmark and Sweden display a similar trend, in part driven by their efforts to qualify for entry into the monetary union. In both cases the trend is stronger than in the euro countries, as the debt-to-GDP ratio drops from over 80% to 20% in Denmark and to less than 40% in Sweden.

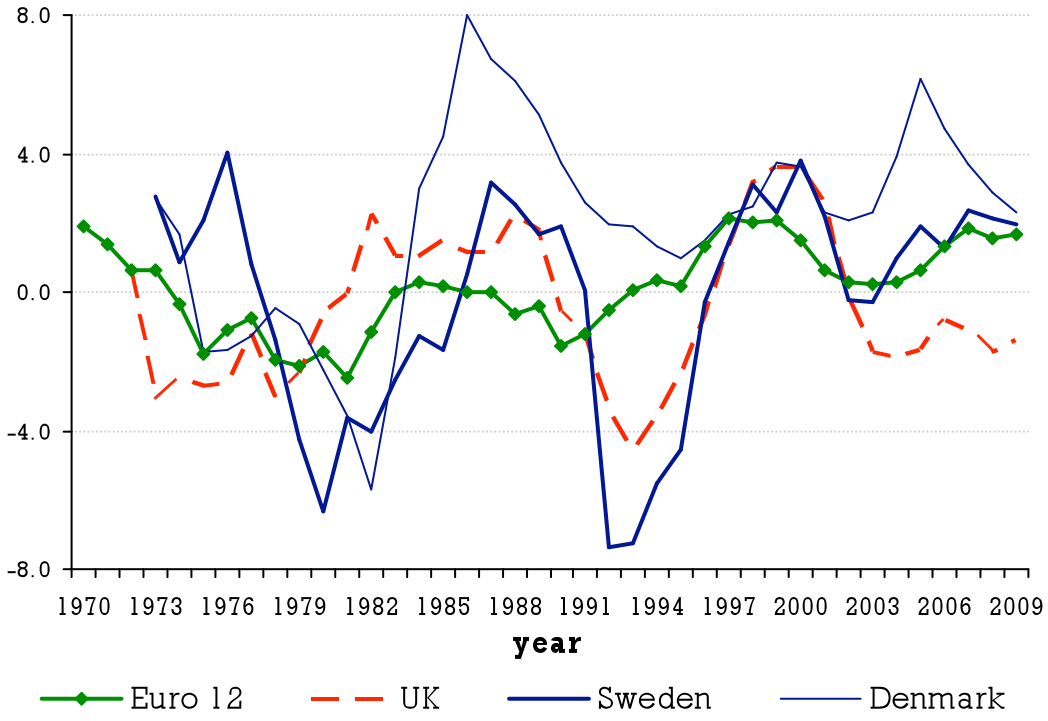
Figure 1. Gross Government Debt (% of GDP)



Notes: Data are from the OECD Economic Outlook. The series for the UK are gross government financial liabilities as a percentage of GDP. For the euro area the series are gross government financial liabilities (Maastricht definition) as a percentage of GDP. The data for 2008 and 2009 are forecasts.

Figure 2 provides further insights regarding these trends by presenting structural budget balances, measured as the cyclically adjusted balance as a per cent of potential GDP (to adopt the OECD methodology). The 1970s, the late 1980s and the early 1990s all showed high deficits in all the countries in the sample. We see once more that the 1990s represented years of declining budget deficits for all the EMU candidates, seeking to qualify for the 3% deficit limit of the Maastricht Treaty.

Figure 2. Cyclically adjusted budget balance as a % of potential GDP.



Notes: Data are from the OECD Economic Outlook. Data for 2008 and 2009 are forecasts.

The graph also suggests that once the final call for those wanting to join the monetary union went out in 1998 on the basis of the 1997 data, efforts to reduce deficits and debt clearly declined. The euro structural balances improve again after 2003/2004, which coincides with a period of faster growth rates.

Did the monetary union have any effect on debt and deficit dynamics? From these two figures it is difficult to find any significant effect. Debt falls fast in Sweden and Denmark, but within the euro area there have been countries reporting a similar decline – namely Ireland, the Netherlands or Belgium, which in mid-1990s started with a debt of 140% of GDP but managed to bring this down to about 80%. Thus, the overall picture does not reveal any substantive differences in debt and deficit dynamics as between the three outsiders and the members of the EMU.

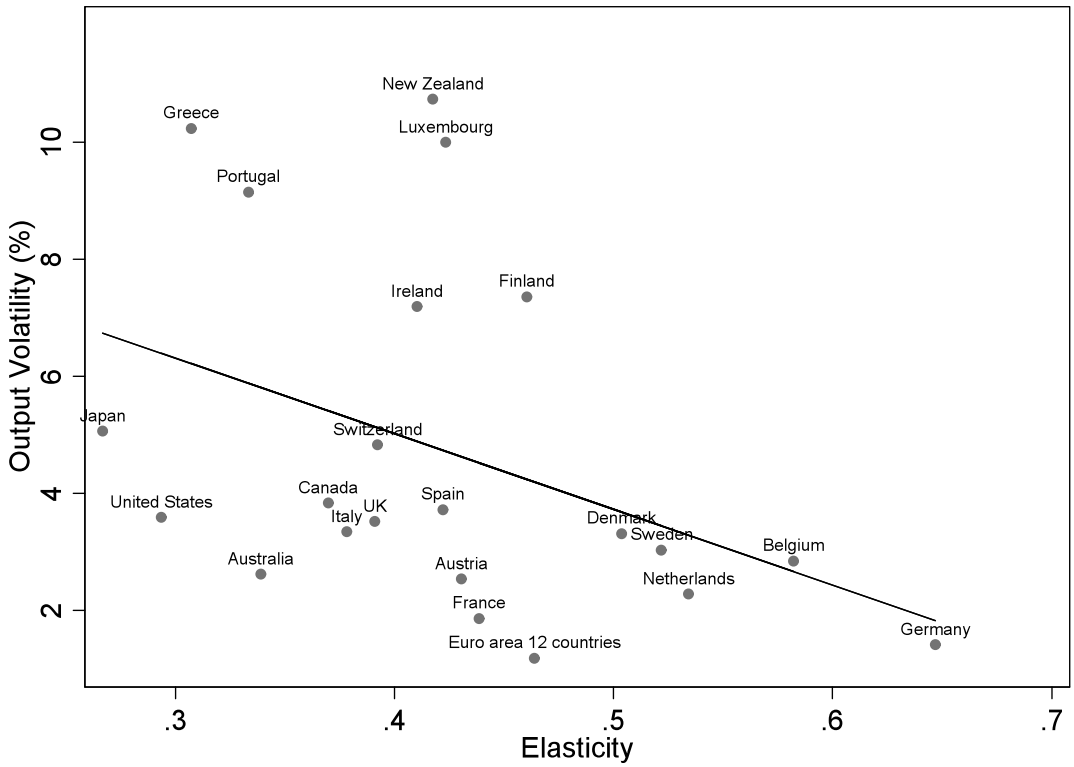
3.2 Automatic stabilizers at the national level

We can now turn to the analysis of automatic stabilizers by looking at the way this component behaves in the course of the business cycle (measured as the GDP-gap).[7] Automatic stabilizers, as might be expected, are strongly countercyclical. Their cyclicality varies from a low of 0.3 (Greece) to a high of 0.65 (Germany), while in the US and the UK these coefficients are 0.29 and 0.39 respectively. Thus in the euro area a 1 % increase in the gap generates a budget surplus of about 0.46%, while in the US, the surplus goes up only by 0.29%.[8]

Do automatic stabilizers stabilize the economy? In Figure 3, we have plotted the elasticity of the overall balance versus the volatility of GDP. The relationship is clearly negative – countries with more automatic stabilizers have less volatile cycles.

Figure 3. GDP volatility and automatic stabilizers

[7] We are measuring automatic stabilizers as the difference between the actual and the cyclically-adjusted budget balance.
[8] The automatic stabilizers component that we are measuring is derived from the tax and spending elasticities used by the OECD. Given that there is no time-variation in these elasticities, there is no point in measuring the time variation of automatic stabilizers.



The opt-outs are very similar to the countries in the euro area – Sweden and Denmark have the same elasticity and volatility as the Netherlands, while the UK is close to Italy. Overall, neither in terms of cyclicality, not in terms of stabilization, do we see much difference between the euro area and the three outsiders.

3.3 A look at national discretionary fiscal policy

National governments are worried that in the absence of monetary policy they need to be more aggressive in the use of fiscal policy as a way to smooth the business cycle. This is even more relevant in the European context where mobility of labor is very limited. Has this happened? Or have the constraints on deficits and debt limited the flexibility available to discretionary fiscal policy?

We now analyze how discretionary fiscal policy has reacted to the business cycle.[9] In other words, beyond the automatic stabilizers that we have described above, have governments used fiscal policy as a stabilizing tool? Overall, we do not see strong evidence that fiscal policy has reacted aggressively to the business cycle.[10] This could be an indication that governments have not engaged in a consistent manner. The evidence points towards procyclicality at the national level, more so in the euro countries. If we look at the pre- and post-1999 periods, has policy changed? It is difficult to reach strong conclusions, given that we are talking about a small number of years, but there is a tendency for policy to become countercyclical, which is what we would have expected because of the absence of monetary policy. However, the change is small and it is not just happening in the euro countries. As an example, in the US, we see a much larger change towards countercyclical policy.

3.4. Volatility

We now look at the volatility of discretionary fiscal policy measured as the standard deviation of changes in the fiscal policy stance which are not related to the state of the economy.[11]

Most euro countries display low volatility of exogenous discretionary policy. We also see that this volatility has decreased in the second half of the sample (after 1999) for all countries with the exception of Austria, Ireland and Luxembourg. Some of the largest decreases are in euro countries.[12] France sees volatility going from a low 0.51 to 0.17. Germany from 0.71 to 0.49. Italy from 1.41 to 0.41. The three outsider countries also see their volatility of fiscal policy go down, but they start from higher levels. Sweden goes

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[9] Discretionary fiscal policy is captured by two measures: In the equation below the coefficient β represents the discretionary reaction of policy to the state of the business cycle, while the residual from this equation measures discretionary policy unrelated to the cycle. In this section we discuss the reaction of policy to the cycle.

$$\textit{Cyclically adjusted fiscal balance present year} = \textit{constant} + \beta \cdot \textit{state of economy present year} + \lambda \cdot \textit{government debt preceding year} + \phi \cdot \textit{cyclically adjusted fiscal balance preceding year} + \textit{residual}$$

[10] For empirical estimates see Fatás and Mihov (2009). This is also documented in Gali and Perotti (2003) for an earlier period.

[11] In other words, the standard deviation of the residuals when estimating the policy rule in footnote 9.

[12] The estimates reported in this section are based on Fatás and Mihov (2009).

from 3.0 to 1.1; Denmark from 1.37 to 1.2; the UK from 1.85 to 0.9. Outside of the EU-15, only Canada and the U.S. show substantial reduction in policy volatility. This is good news for EMU. It says that national governments have not taken advantage of a common currency to implement changes in fiscal policy that are unrelated to economic conditions. In that sense this could be seen as an indication of the discipline provided by the Stability and Growth Pact. This decline in volatility of fiscal policy fits well with what is known as The Great Moderation debate. There is strong evidence that the volatility of business cycles has been reduced partly as a result of less volatile economic policy. Our results support this claim and suggest that the discipline of the EMU fiscal framework has helped EU countries in achieving that moderation.

4. Coordination of national fiscal policies. Is there a euro-wide fiscal policy stance?

4.1 Coordination of national fiscal policies.

In the previous sections of the paper we looked at the behavior of fiscal policy at the national level. Have we seen any change towards coordination of these policies? Is there anything like a euro fiscal policy? There are two reasons to look at coordination. First, as countries share a common currency, there could be interest rate effects of fiscal policies in other countries. Second, if we consider the stabilization of the euro area and adopt the perspective of the ECB, we need to investigate whether fiscal policy is helping or hurting the ability of the central bank to do its job.

Although there is no government behind the behavior of the euro aggregate - it is simply the collection of individual policies - these individual policies have been designed within the institutional framework of the Maastricht Treaty and the Stability and Growth Pact, so the idea of euro-wide fiscal policy is not entirely meaningless. The framework has possibly introduced some commonalities across national fiscal policies. For example, the run up to the euro launch led to fiscal consolidation efforts for many of the governments.

In addition, the interpretation and implementation of the Stability and Growth Pact has led to increasing emphasis on the coordination of national fiscal policies.

Should coordination of fiscal policies be an objective? While the ECB might be interested in seeing a common and countercyclical fiscal policy among the euro countries, we cannot forget that with a common monetary policy, fiscal policy should behave in an even less coordinated fashion as it needs to deal with idiosyncratic national shocks. So there is a natural tension between the need to deal with national business cycles and the desire of the European institutions to see a common economic policy.

Figure 4. Dispersion of cyclically-adjusted budget balances
(standard deviation across countries in %)

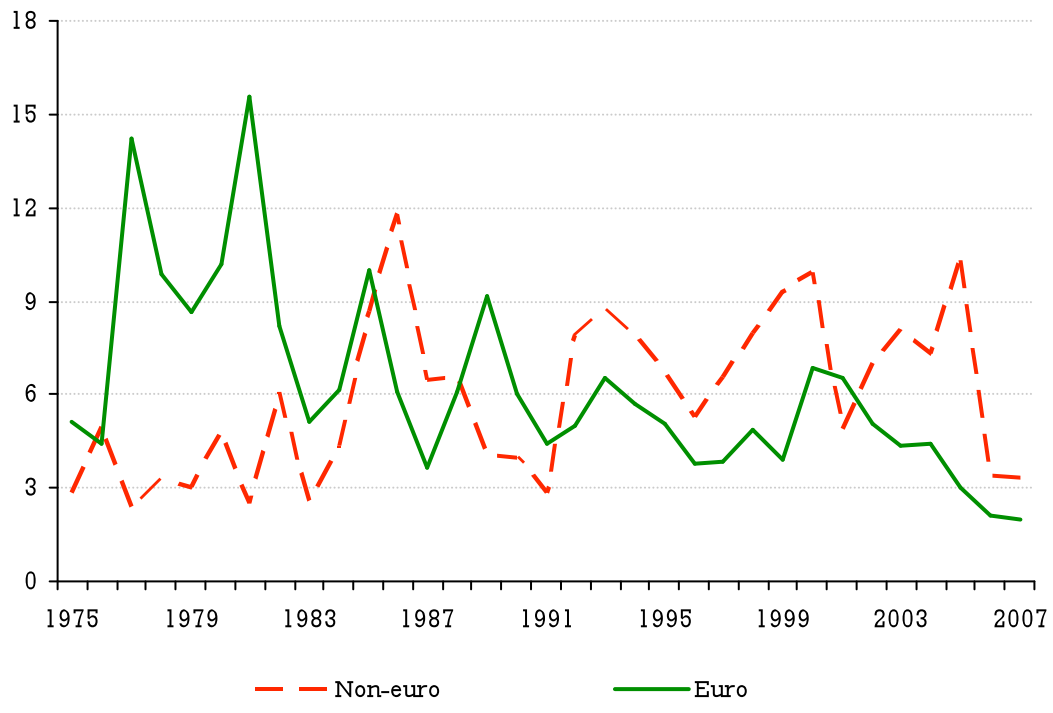
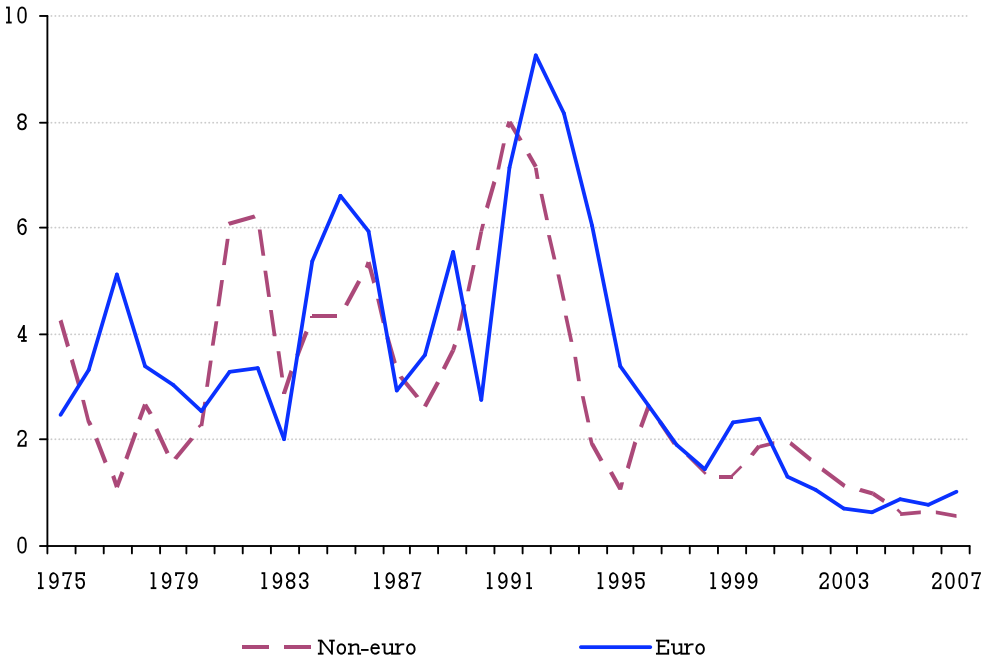


Figure 4 plots the annual standard deviation of the structural budget balance across euro countries and compares it to the same measure for the non-euro countries in the sample.[13] Since 1999, there is a clear trend towards less dispersion among the euro countries which is not evident for the rest of the countries. This trend can be the result of proactive coordination but it could also be the outcome of some countries being close to or above the limits established for budget deficits.

The trend towards more similar structural balances may also be a result of synchronization of business cycles. Indeed, Figure 5 shows that the dispersion of the output gap has been declining steadily since the early 1990s. Interestingly, however, this trend is visible both for the euro area and for the group of the non-euro area countries. So the comparison of Figures 4 and 5 indicates that within the euro countries there is more to the synchronization of fiscal policy stances than just the synchronization of business cycles. This should not be a surprise, given the emphasis by the European Commission on the convergence of national fiscal policies.

Figure 5. Dispersion of GDP-gaps
(standard deviation across countries in %)

[13] The non-euro countries are: Australia, Canada, Denmark, Japan, New Zealand, Sweden, Switzerland, UK, and the US. Norway is excluded from this calculation because of the high volatility of the budget stemming from fluctuations in oil prices.



4.2 The euro fiscal policy stance

We have looked before at the cyclical stance of fiscal policy at the national level, but what about at the euro level? Has fiscal policy facilitated the task of the ECB? If we look at the way the structural budget balance for the euro area has behaved over the business cycle, we observe that the discretionary component of fiscal policy behaves in a procyclical manner. In fact, the euro area fiscal policy is among the most procyclical policies of the countries we consider. In addition, the euro area is an exception as it is one of the few areas or countries where policy has remained as procyclical after 1999 as it was before.

To some it might seem surprising that the euro area fiscal stance is clearly procyclical, given that in recent years we have seen an improvement in the budget balance during a period (post-2003) where the economy displayed increasing growth rates. It might seem that these results contradict those in other papers that show a cyclical or even countercyclical fiscal policy for euro countries. It is important to emphasize that we are

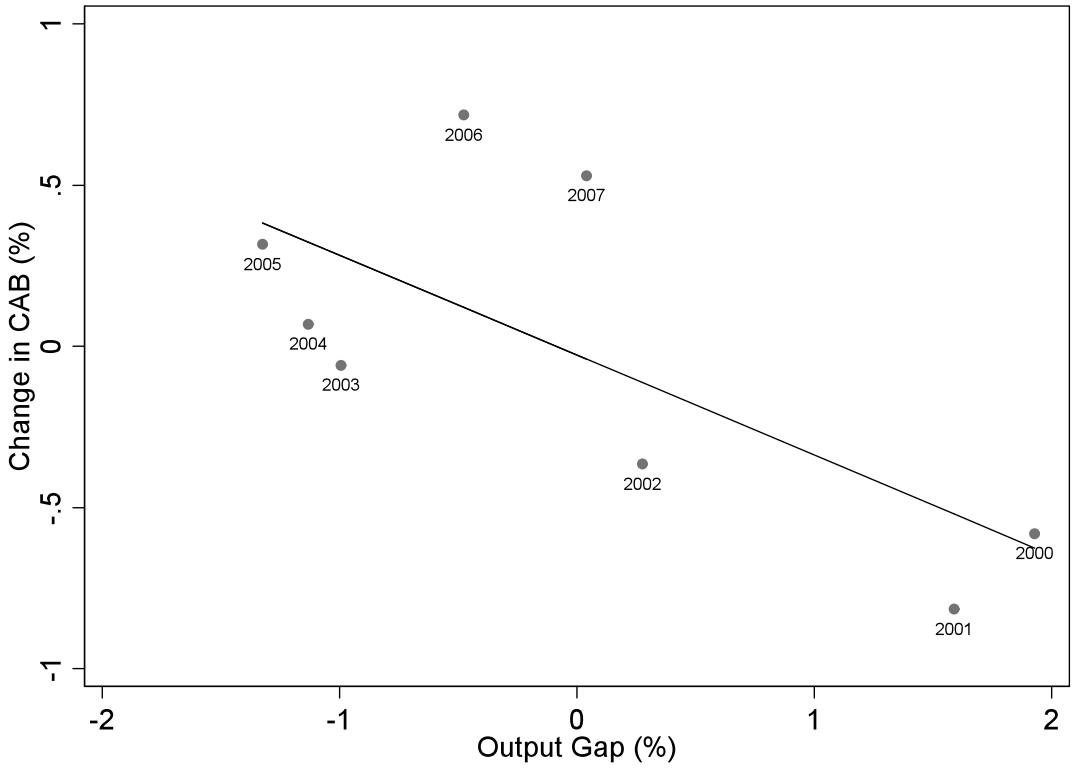
looking at the cyclicality of the *cyclically-adjusted* budget balance, so we are ignoring automatic stabilizers.[14]

To understand better the strong procyclicality of fiscal policy in the euro area, we have plotted the change in the cyclically-adjusted budget balance against the GDP-gap for the years between 2000 and 2007.[15]

Figure 6a) plots these two variables for the euro area and Figure 6b) does the same for the USA.

Figure 6. Fiscal Policy Stance and the GDP-gap

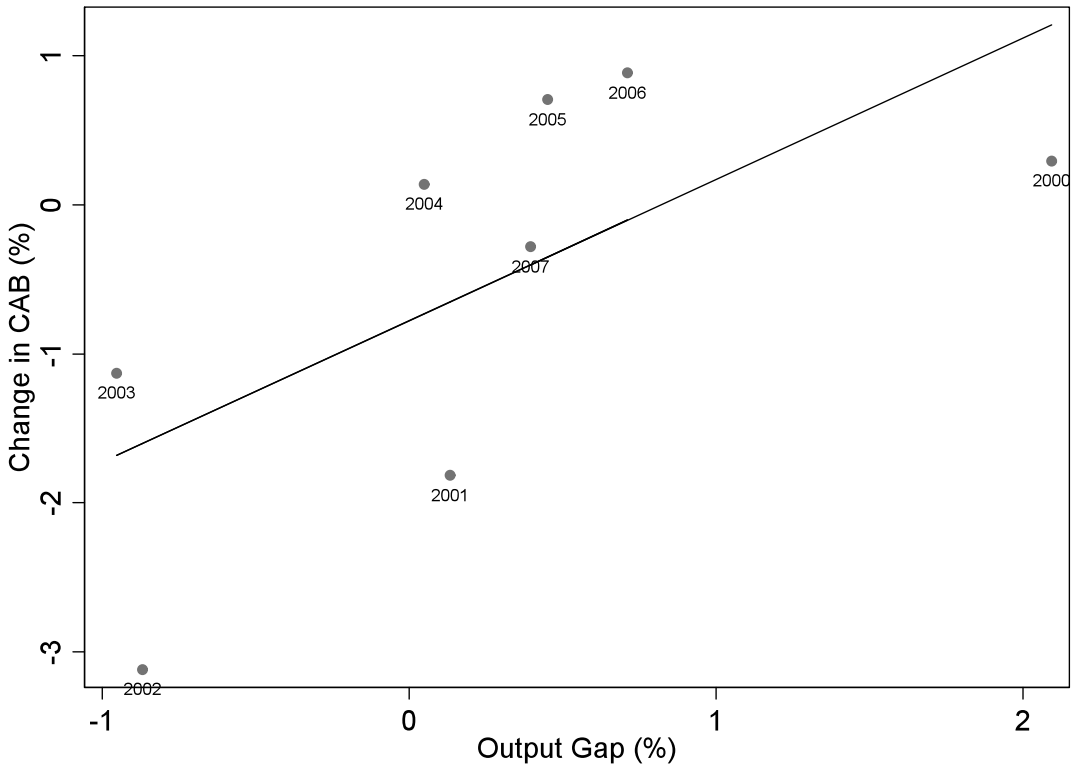
a) euro countries



[14] A regression of the primary balance on the output gap indicates countercyclicality of fiscal policy stance in the euro area. If one includes real GDP growth instead of the gap, then countercyclicality becomes even more pronounced and statistically significant.

[15] It is quite common in the literature to look at this graphical representation of the fiscal policy stance (see *European Economy* 2008 or Alesina, Campante and Tabellini (2007)).

b) USA



The difference between the two plots is shocking. While for the US there is a clear positive correlation signaling strong countercyclical policy, for the euro area we see exactly the opposite, a strong negative correlation. The evolution of the euro fiscal stance is marked by decreasing balances after 2000, which reflect the relaxation of fiscal policy after the launch of the euro, a sign of fatigue after the strong pre-1998 decrease in deficits to qualify for membership of the monetary union. After the recession of 2002-2003 and despite the existence of a negative GDP-gap, there is an improvement in the structural balance which again represents procyclical policy. There are two reasons for this improvement: First, some of the euro countries were caught in levels of deficit that were too close to 3% (or above 3%) and they had little room to adjust their fiscal policies. In addition, and this is especially true in 2005, tax revenues increased faster than many governments expected. One interpretation is that the tax elasticity's were larger than normal. Some of this could be due to composition effects, such as an increase in profits as

a share of GDP during these years.[16] These increases in revenues and elasticities were assumed to be permanent by governments and led to increases in spending or decrease in taxes that in the years that followed (2006 and 2007) led to a structural balance that remained too low, despite the improvement in the cyclical condition of the economy.

This reading of the behavior of fiscal policy during these eight years reveals that some of it is due to special circumstances (such as the effects of the launch of the new currency), but it is also difficult to avoid a feeling that the fiscal policy framework did not work as expected, and it is likely that we will see similar behavior in the future.[17]

5. Concluding remarks

The European monetary union was launched ten years ago and over this period we have seen a debate about the successes and the failures of this unique experiment. The debate has been watched very carefully by the three countries that opted out of the single currency: Sweden, Denmark and the UK. In this paper we have reviewed the evidence on how fiscal policy has adapted to this new environment.

The debate on fiscal policy has been focused around the strict constraints defined by the Maastricht Treaty on deficits and debt. Their goal was to ensure the sustainability of public finances and to avoid the possibility of negative influences from fiscal policy on the conduct of monetary policy by the ECB. On the other side of the debate were those who argued that these constraints would limit the ability of fiscal policy to deal with national business cycles at a time when it was most needed. Now that we have seen ten years of data, what have we learned?

[16] See European Economy (2008).

[17] We need to be very careful interpreting some of these results because of the use of the GDP-gap and the possibility that it is not measured properly. If we use growth rates as an indicator of the cyclical position of the economy, the picture will not look that dramatic. For the US there is still clear countercyclicality in fiscal policy but for the euro area we see a positive slope, signaling acyclical or mildly countercyclical policy.

The evidence we present here suggests that the effects of the monetary union on fiscal policy have been fairly minor. The assessment of the performance of fiscal policy in the euro countries, relative to the three countries that opted out of the project as well as other non-euro countries shows that there is not much difference across these two groups. One notable exception is the US, where fiscal policy turned distinctly countercyclical after 1999.

From the point of view of long-term sustainability, the run-up to the euro launch had a clearly positive impact on debt levels, but once the euro was launched there is little evidence that the limits on deficits and debt have had any major impact on long-term sustainability. At the same time, this partial failure has not had any negative impact on the conduct of monetary policy, which raises questions about the strong focus on sustainability that the European institutions have maintained since the Maastricht Treaty.

When it comes to the cyclical behavior of fiscal policy, the good news is that European countries tend to have stronger automatic stabilizers built into their large governments and that these help to stabilize national business cycles. When we look at discretionary fiscal policy, we see a strong countercyclical behavior in most countries. Overall, euro countries have more procyclical policies than the other countries in the sample, but the policy seems to have become more countercyclical after the introduction of the euro, as would be expected. However, the change is small and does not appear in all euro countries, signaling that fiscal policy may not be taking over the stabilizing role that national monetary policy cannot play.

When we take adept the perspective of the ECB and look at the cyclical stance of the euro-wide fiscal policy, the results are puzzling; we observe a clear procyclical policy both before and after 1999, in contrast to the US where we see a policy that is clearly countercyclical.

Overall, our findings suggest that fiscal policy has not played a strong role during the first ten years of the euro. There has been considerable continuity in terms of less-than-ideal

fiscal policies, characterized by difficulties in reducing debt levels and providing a clearly countercyclical stance to stabilize business cycles. Much of what we have seen is linked to national decisions, and some countries have followed better policies than others. In that sense, it would not be right to blame the monetary union for some of these policies. However, one cannot ignore that these results also provide a picture of a failing institutional framework for fiscal policy – one that has been focused on the concepts of sustainability and coordination without much success, at a time when it should have been focused on strengthening automatic stabilizers and designing a proper framework for the conduct of fiscal policy over the business cycle.

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