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Deficit Policy within the Framework of the Stability and Growth Pact Empirical Results and Lessons for the Fiscal Compact

Nicolas Afflatet

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Department of Economics
Fächergruppe Volkswirtschaftslehre

Autoren / Authors

Nicolas Afflatet
Helmut-Schmidt-University Hamburg
Department of Public Economics
n.afflatet@gmail.com

Redaktion / Editors
Helmut Schmidt Universität Hamburg / Helmut Schmidt University Hamburg
Fächergruppe Volkswirtschaftslehre / Department of Economics

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Koordinator / Coordinator
Ralf Dewenter
wp-vwl@hsu-hh.de

Helmut Schmidt Universität Hamburg / Helmut Schmidt University Hamburg
Fächergruppe Volkswirtschaftslehre / Department of Economics
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DEFICIT POLICY WITHIN THE FRAMEWORK OF THE STABILITY AND GROWTH PACT

EMPIRICAL RESULTS AND LESSONS FOR THE FISCAL COMPACT

Nicolas Afflatet

Zusammenfassung / Abstract

This paper examines the question whether joining EMU or the breach of the Stability and Growth Pact in 2003 had an impact on the deficit policy of member states. The empirical analysis gives no hint for an alteration of deficit policy after having joined EMU or after having breached the Pact in 2003. These results can be explained with the fact that the Pact was undermined from its beginning and only had a limited disciplining effect henceforth. Otherwise the breakout of the ongoing debt crisis would not have been possible. These results advocate a sanctioning mechanism which cannot be influenced on a political level.

JEL-Klassifikation / JEL-Classification: E62 Fiscal Policy; H62 Deficit, Surplus

Schlagworte / Keywords: Stability and Growth Pact, Fiscal Rules, Deficits, Fiscal Policy

1. Introduction

"It is Germany's fault!", one might argue when talking about high deficits and debt of Eurozone (European Monetary Union, EMU) member countries. After all, Germany was part of the informal coalition which overrode the Stability and Growth Pact (further on simply called the Pact) in 2003. It has been argued that with Germany giving a bad example other countries would have followed by raising deficits and accumulating high debts (Issing 2012: 10; Sinn 2012: 88ff. Starbatty 2013: 58ff.). Although it would not be the main reason for the ongoing public debt crisis (Baldwin et al. 2015) it could have been one key element having contributed to it.

Ctry	1999	2000	2001	2002	2003	2004	2005	2006	2007
BEL	-0.6	0.0	0.4	-0.1	-0.1	-0.1	-2.5	0.4	-0.1
DEU	-1.6	1.1	-3.1	-3.8	-4.2	-3.8	-3.3	-1.6	0.2
IRL	2.6	4.9	0.9	-0.4	0.4	1.4	1.6	2.9	0.2
GRE	NA	-3.7	-4.5	-4.8	-5.6	-7.5	-5.2	-5.7	-6.5
ESP	-1.3	-0.9	-0.5	-0.3	-0.3	-0.1	1.3	2.4	2.0
FRA	-1.8	-1.5	-1.5	-3.1	-4.1	-3.6	-2.9	-2.3	-2.7
ITA	-1.9	-0.8	-3.1	-3.1	-3.6	-3.5	-4.4	-3.4	-1.6
LUX	3.4	6.0	6.1	2.1	0.5	-1.1	0.0	1.4	3.7
NLD	0.4	2.0	-0.2	-2.1	-3.1	-1.7	-0.3	0.5	0.2
AUT	-2.3	-1.7	0.0	-0.7	-1.5	-4.4	-1.7	-1.5	-0.9
PRT	-3.1	-3.3	-4.8	-3.4	-3.7	-4.0	-6.5	-4.6	-3.1
FIN	1.7	7.0	5.1	4.2	2.6	2.5	2.9	4.2	5.3

Table 1 Deficits in EMU (1999-2007)

Yet, Germany was not alone to violate the Pact. In 2003 five countries in total continually violated the deficit criterion.[2] Especially France and Italy had to expect to be sanctioned,

[2] The fiscal criteria of the Pact are in fact quite arbitrary. The three percent criterion was based solely on political considerations, not at all on economic ones: In 1981, the French president, François Mitterrand, had instructed the ministry of finance to find a simple rule to maintain financial stability. Two experts, Roland de Villepin and Guy Abeille, then invented the now famous 3% rule because the French deficit lay at about 2.6%. A consolidation of the budget to a deficit of 2% would have been politically too harsh, so they came up with three percent. Later, in the negotiations for the Maastricht treaty and especially the Pact, the 3% percent were used as a basis. With an assumed nominal growth of 5%, the debt quota would converge against the since then famous 60%. But it should not be forgotten that this rule of thumb can be very misleading. This can be pointed out by considering the deficit data of Germany and Ireland during the first years of the monetary union. With its strong growth rates, up to the financial crisis, Ireland could have run deficits at an average of 6.8% and would still have stayed under the 60% threshold. Germany however, with a much weaker growth, would have had to limit its deficits to 1.4% instead of the actual 2.9% to meet the 60% criterion.

too. But the Excessive Deficit Procedure (EDP) was suspended by the ECOFIN council.[3] Germany[4] and France had used their political influence to convince the other governments not to sanction them.

Since then, there has been a considerable amount of violations of the deficit criterion (table 1). Was the breach of the Pact in 2003 the initial dam failure? Or did it already take place earlier: Did the future member countries only commit themselves to consolidation until they had joined EMU? Both questions shall be treated here empirically.

Several authors already examined fiscal policy within the Maastricht framework more closely. Von Hagen and Strauch (2001) only find a weak disciplining effect of the Maastricht Treaty. For the first half of the nineties, they detect a "Maastricht effect". Consolidation successes of the second half must be attributed to the favorable economic conditions.

Lehment (2002) notes that in the first years after the decision to launch the currency union, the countries with the highest deficits reduced them most, but the same is true for Non-EMU countries. He also finds that smaller countries showed more success in reducing their deficits. His hypothesis to explain the lack of ambition to lower deficits is that bigger countries run less risk to get sanctioned because of the different voting shares. With Germany having ten and Finland three votes, it would be more difficult to gather a qualified majority to impose sanctioning on the bigger countries.[5]

Von Hagen (2003) shows that there was a considerable degree of consolidation fatigue in early years already. He also points out that the key to achieve the goals of the Pact is a large trend growth rate. Countries with low growth rates (e. g. Germany, France and Italy) should thereby restructure their budgets, lower the tax burdens and raise public

[3] The governments concerned argued that the Pact was too rigid and could be interpreted otherwise. It should thereby be reformed. Germany proposed for example to exclude payments to the EU from the deficit calculation, France wanted to exclude military spending and Italy proposed to drop payments for research. Of course, these measures would have benefited the countries proposing them. There was indeed a reform in 2005. It was made more "flexible" with a country exceeding the ceiling having five (!) years to meet the criterion. If the ceiling was broken because of spending contributing to European unity, it should not be punished at all (Feldstein 2005: 8). Feldstein commented this reform: "So there is no longer any restraint on individual country deficits" (9). The fact that the sanctioning mechanism was not improved is explained by De Haan et al. (2004: 13ff.) with the lack of will to delegate more power from the national states to the EU level.

[4] The German chancellor, Gerhard Schröder, ex-post justified the German policy with the pressure which already laid on the German government because of its reform agenda. To reach a deficit below 3% the minister of finance, Hans Eichel, would have had to cut down on 20 billion Euro. He considered it too big an imposition on the German social-democrats to save 20 billion and to push through the reform agenda.

[5] He rejects the explanation of a trade-off between deficits and growth because there is no empirical proof for this.

investments. In the short-run, this would probably lead to a raise in deficits and thereby a violation of the Pact. Respecting the rules would lead member countries in a situation in which they cannot reform their economies and still suffer from low growth rates. He sees the breach of the Pact in 2003 as a sign that member countries will not accept such a scenario. But he warns that countries should not simply ignore the rules because other states would follow their example.[6]

Busemeyer (2004b) follows a similar question as Lehment (2002): He does not find hints for an above-average performance of the EU or the EU countries compared to non-EU countries either. But for several single Euro member countries he detects indeed a better fiscal performance, especially for Belgium, Italy and Greece. The Pact thus had some disciplining effect. This confirms his previous research (Busemeyer 2004a) in which he also finds a disciplining effect, at least for smaller EMU countries.[7]

Von Hagen and Wolff (2006) look at the disciplining effect of the Pact from another perspective. By analyzing differences between debt and accumulated deficits, they find that countries used stock-flow adjustments as a form of creative accounting to hide deficits. They argue that although this creative accounting can be seen in higher debt quotas, governments have an incentive to use this method because greater attention is paid to deficits than to debt quotas. While some countries hardly used this method (e. g. the Netherlands, Belgium or Spain) others extensively did so (e. g. Greece or surprisingly Finland and Luxembourg). The Pact thus created incentives to bypass it to satisfy its criteria formally.

I am not aware of any studies analyzing the deficit policy of the Euro states in the context of the breach of the Pact in 2003. This article closes this gap. It is organized as follows: In the second chapter theoretical considerations and hypotheses for the empirical testing are presented. A regression analysis is employed to test the two hypotheses, the method and results are presented in chapter 3. The results are discussed in more detail in the fourth chapter. Policy implications which can be drawn from the empirical results are then put forward in the fifth chapter.

[6] Later on it will be explained in this article that there was indeed such a trade-off in Germany. The breach of the Pact was accepted to maintain enough political power for the implementation of the reform agenda. But in France, Italy and Portugal, there were no such reform programs. The Pact was violated without an exchange for better future growth rates.

[7] Several authors find that smaller countries showed more success in reducing deficits. De Haan et al. (2004) explain why bigger countries might choose loose fiscal policies while smaller countries might prefer tight fiscal policies: If a crucial element of the sanction is a loss in political reputation, bigger countries will accept this sanctioning more easily because their loss of reputation will be negligible. Smaller countries however might not be able to bear such damage.

2. Hypotheses

From a theoretical point of view, there are at least two arguments which favor sound fiscal policy. The first point is peer pressure within EMU: EMU member countries would put pressure on each other to achieve sound public finances. By denouncing single countries violating the stability criteria these countries would indirectly be forced to return to a path of sound public finance ("naming and shaming"). Direct political pressure of other member countries is another possibility of peer pressure. Hagen (2002) argues that in the first years of EMU it was peer pressure which led to convincing consolidation effects in smaller countries.

The second argument which supports consolidation is market discipline (Bishop et al. 1989, Frenkel and Goldstein 1991; Lane 1993)[8]. Buti et al. (1998) and de Haan et al. (2004) argue that financial markets would be worried about lasting excessive deficits and would thereby claim higher interest rates. This way, sanctioning would be imposed by markets and not by governments.

However, arguments against sound public finances can be found, too. One argument against sound public finances is the incentive for free-riding. It has been argued that once member countries have joined EMU they could benefit from the enlarged leeway and abstain from low deficits because all countries would have to pay for it via an expansive monetary policy which tries to monetize public debt (Beetsma and Bovenberg 2002; Feldstein 2005). As we know today, this argument can be broadened by the fact that all member countries have to pay for excessive deficits by means of rescue credits.

The second argument is the poor sanctioning mechanism of the Pact. De Haan et al. (2004) compare the Pact's sanctioning mechanism with budget rules in the federal US states. If governments of US states breach the self-imposed Balanced Budget Rules, courts take over control of the public budget. This possibility does not exist in the Eurozone. Only a fine can be imposed by the Commission because budgets remain in control of the member states and even this fine can still be prevented by member countries.

This opens up the danger of a "tactic of mutual keeping still" (Heinen 2009: 11), the third argument speaking against sound public finance in EMU. If a member country favors the

[8] See Afflatet (2015) for an overview.

punishment of an actual sinner, it has to fear that once it violates the criteria itself, the formerly punished country will advocate a punishment in return. As excessive debt is a general problem of democracies (Weizsäcker 2008), no government could be sure not be confronted with the Excessive Deficit Procedure (EDP) one day or another.

Based on these considerations we can derive the following testing hypotheses:

i. Did member states only show a satisfying fiscal performance until they were part of EMU? The free-riding argument and the poor sanctioning mechanism would suggest that deficits fell higher once member countries have joined EMU.

   Hypothesis I (null): Joining EMU did not affect deficit policy of EMU member countries negatively.

ii. Did member states change their deficit policy after 2003 when it was ultimately clear that this kind of misbehavior would not be punished? The Pact would then have had a disciplining effect before Germany and France set a bad example which suspended the Pact.

   Hypothesis II (null): The breach of the Pact in 2003 did not affect deficit policy of EMU member countries negatively.

3. Empirical Testing

a. Descriptive Statistics

Two unbalanced panels with different scopes were assembled for the empirical testing. One dataset containing all European Union countries was employed to test hypothesis I. In this dataset (table 2 in the annex gives an overview of the descriptive statistics of the cardinal variables), all member countries of the European Union were included. A dummy indicates whether and when they joined EMU. If deficit policy did significantly change once they were EMU members, hypothesis I is rejected.

The second dataset (table 3 in the annex gives an overview of the descriptive statistics of the cardinal variables) contains only the twelve initial member countries of EMU. Here, a dummy was set on one for all years after 2003. If deficit policy changed after the breach of the Pact in 2003, hypothesis II is rejected.

Besides the variables listed in table 2 and 3 several dummies and ordinal variables were employed: the number of ministers, a dummy for national parliamentary election years,

a dummy for governments including left parties and a dummy for coalition governments.[9] The correlation matrixes for the two datasets indicate no hints for multicollinearity (tables 4 and 5 in the annex).

The boxplots in figure 1 give a first impression about deficits and primary surpluses of EMU and Non-EMU countries. For both variables considered there seems to be no striking difference between EMU members and Non-EMU members. The medians of the deficits and primary surpluses of EMU member countries both lie well within the range of the medium quartiles of Non-EMU member countries. Therefore, the boxplot shows no hints to reject hypothesis I.

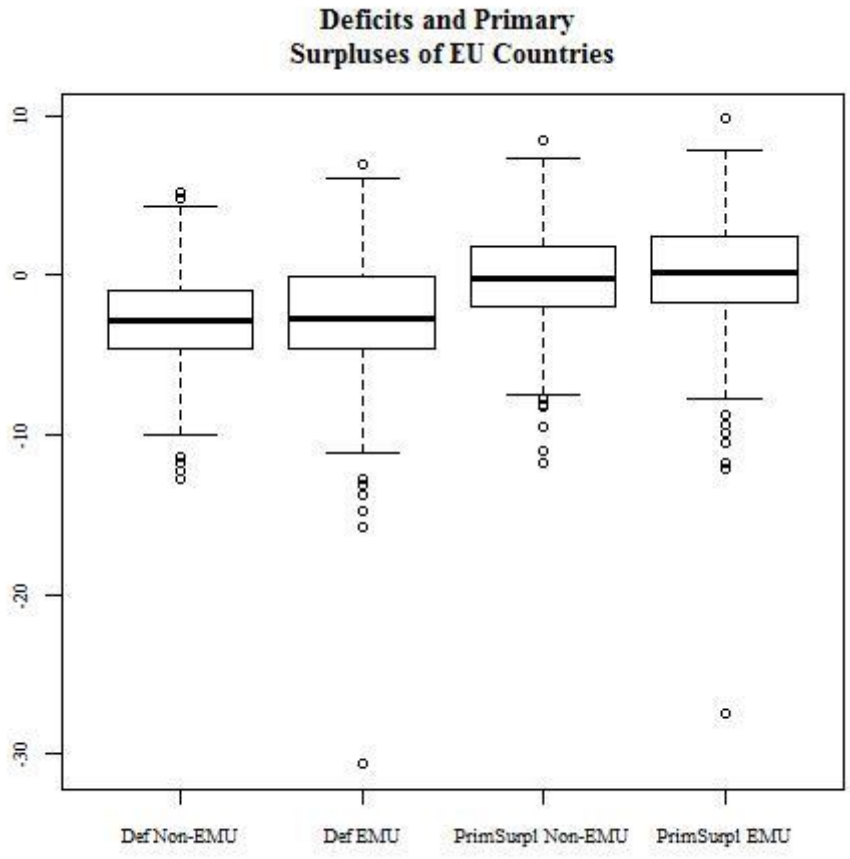

Figure 1 Deficits and Primary Surpluses of EU Countries (1995-2013)

For the second dataset, the situation is somewhat different (figure 2). Again, there seems to be no particular difference concerning deficits up to 2003 and afterwards. But the primary surpluses clearly show a difference before and after 2003. The median for the years after 2003 lies outside the range of the quartiles of the years up to 2003. Hence,

[9] A dummy for the financial crisis and the ongoing public debt crisis was also included but it did not contribute to the goodness of fit of the model. Thereby it was left out in the final model.

we find a hint that primary surpluses were smaller after the breach of the Pact in 2003. But with the Pact demanding deficits below 3% this cannot be seen as an argument that the breaching in 2003 had an impact on deficit policy of member states.

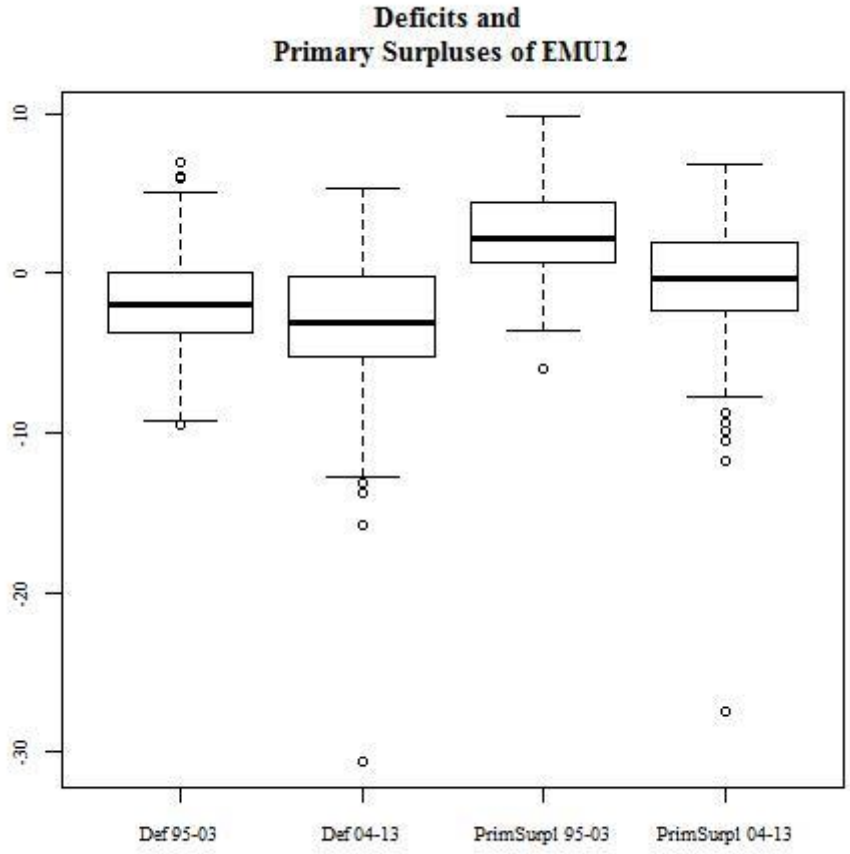

Figure 2 Deficits and Primary Surpluses of EMU Countries (1995-2013)

b. Econometric Method

A regression with fixed effects[10] was run for more precise results. This approach is broadly supported by the literature (Allison 1994; Woolridge 2002 and 2012).

Eight models were formulated to test the two hypotheses. One with the primary surplus ($s_{i,t}$) as dependent variable (models 1, 3, 5, 7), the other one with the national deficit (or budget balance, $b_{i,t}$) as dependent variable (models 2, 4, 6, 8). They were tested with once the dummy for joining EMU ($MembEuro$, models 1, 2, 3, 4) and once with the dummy for the breaking of the Pact in 2003 ($BreakingPact$, models 5, 6, 7, 8) as independent variable of interest.

[10] A Hausman-test to compare models with fixed and random effects clearly suggested fixed effects (see table 7).

$$s_{i,t} = \beta_0 MembEuro_i + \beta_1 X_{i,t} + \alpha_i + u_{i,t} \text{ (models 1 and 3)}$$

$$s_{i,t} = \beta_0 BreakingPact_i + \beta_1 X_{i,t} + \alpha_i + u_{i,t} \text{ (models 2 and 4)}$$

$$b_{i,t} = \beta_0 MembEuro_i + \beta_1 X_{i,t} + \alpha_i + u_{i,t} \text{ (models 5 and 7)}$$

$$b_{i,t} = \beta_0 BreakingPact_i + \beta_1 X_{i,t} + \alpha_i + u_{i,t} \text{ (models 6 and 8)}$$

In both regressions, $X_{i,t}$ catches the observable independent variables, α_i catches the unobserved variables which differ across the countries but remain constant over time, $u_{i,t}$ catches the unobserved variables which differ across time and countries.

As mentioned above, the EU dataset 1 was created to test hypothesis I and the EMU dataset 2 to test hypothesis 2. However, there might be a selection problem for the first dataset. Thus, hypothesis 1 was also tested with the second dataset (models 7 and 8). For this purpose the same dummy was employed here. Again, a dummy for the year 2003 was also used for the first dataset (models 3 and 4). The breaking of the Pact should not have had any influence on Non-EMU countries. But with primary surpluses as dependent variables tested, there could have been a change in interest rates which could become obvious, too.

c. Regression Results

The results of the regression analysis are indicated in table 6. For the first two models, the negative algebraic signs suggest that primary deficits and deficits fell bigger after having joined EMU. But the deficit variable is neither significant nor robust and although the primary surplus variable is significant it is not robust (table 8) either. The models 7 and 8 confirm the results for the EMU dataset. Joining EMU seems not to have had any significant effects on deficits or primary deficits. Hypothesis I must thereby be accepted.

Models 5 and 6 show similar results. The negative algebraic signs suggest that primary deficits and deficits fell bigger after 2003. These results are robust, but only the variable primary surplus is significant. If deficits did not change significantly after 2003 but primary deficits did, it must be due to a fall in interest payments. This finding can be confirmed with model 3. Model 4 seems to show that deficits fell bigger after 2003. Yet, the dataset in model 4 contains all EU countries. EU countries which are not EMU members do not have to fear sanctions when violating the stability criteria, the Pact thereby cannot be expected to have a real effect on them. The significant change in deficits (model 4) is more probably due to the impact of the debt crisis after 2009.

Hypothesis II must thereby be accepted, too: The breaking Pact of the Pact had no influence on deficits. The fall in primary surpluses with deficits remaining statistically insignificant can be explained with the fall in interest payments.

For the political variables no uniform results can be found. The dummy for election years has a negative algebraic sign in all eight models and it is robust, but it is not significant. Election years thereby could have had some impact on deficits. The results could be higher if only data for the central states were employed. All other political variables show changing algebraic signs. No consistent conclusion of political variables on deficits can be drawn from these results.

The macroeconomic variables show that a positive development has a positive influence on deficits. Especially a low output gap and high growth rates entail lower deficits. The unemployment rate, which is shown to be robust in all models except model 3, seems to have a negative impact on deficits. But it does not show to be significant. Finally, for the real exchange rate no clear result can be found: It does not show to be significant nor does it show to have uniform algebraic signs.

d. Model Analysis

Several tests to compare the results of the regression with fixed effects to other panel estimation methods were performed (table 7). The F-test comparing a pooled model with one with fixed effects clearly rejects the null for all models. The use of fixed effects is thus justified. With the Lagrange multiplier test rejecting the null in all cases, too, it is obvious that the heterogeneity between the individual countries should be taken into account.

However, the Hausman test does not reject the null in all cases. It suggests that models 6 and 7 should be performed with random effects instead. From an economic point of view, this seems improbable to be justified. Yet, the results do not change when the test is carried out with random effects.

4. Analysis of the Empirical Results

The results of the empirical analysis show that deficit policy did not significantly change once EMU countries had joined the currency union. Concerning the breaching of the Stability Pact in 2003, no significant change in deficit policy can be assessed either. Therefore both hypotheses must be accepted. Deficit policy was not affected by the two events.

These results contradict prevalent assumptions. Especially the fact that the breach of the Pact in 2003 did not lead to rising deficits is surprising at first sight. And yet, this result can be explained if another view is taken: I argue that the Pact could not be broken in 2003 because it had decisively been broken much earlier and had only a limited disciplining effect henceforth.

Before the start of EMU already, several countries did not fulfill the criteria formulated in the Maastricht treaty: Belgium and Italy were accepted as members although they clearly exceeded the 60% debt criterion. Germany's debt quota exceeded the critical value from 1998 on, too. To make the economic criterion fit the political requirement, the criteria were politically interpreted. For Belgium and Italy, a passage demanding a declining debt quota was introduced (Issing 2008: 11ff.), for Germany the costs of the reunification were excluded from the calculation.

A similar pattern can be found for the deficit criterion: To meet it, several countries used tricks to reduce their actual deficits. Germany sold stocks of the Deutsche Telekom and the Deutsche Post; France took over pension obligations from France Télécom and Italy introduced a refundable Euro tax. The Greek example is especially striking in this context. Table 1 shows that it never fulfilled the deficit criterion and yet it was never sanctioned. One reason is that it successfully manipulated its statistics (Moog and Raffelhüschen 2011: 10). Yet, other countries used methods of creative accounting to hide deficits, too (Hagen and Wolff 2006).

These early bypassings of the Pact are evidence of the inconsistency problem (Kydland and Prescott 1977). When EMU was designed it seemed reasonable (especially for Germany) to claim strict criteria to guarantee that all countries would follow the German objective of price stability and sound public finance.[11] But if all criteria had been

[11] The debt and deficit criterion do not primarily aim at the functioning of a monetary union. They rather aim especially at the German voters' (and politicians') fear that the value of the new currency could be

respected, the currency union would never have been founded as it was desired geographically. As a result, the criteria were eased to achieve the political goals – regardless of future costs. The optimal plan set before was abandoned because it seemed politically obstructive. This way, a new agenda for EMU was set: The criteria should still be valid formally but in practice violations of the rules would be handled with great neglect.

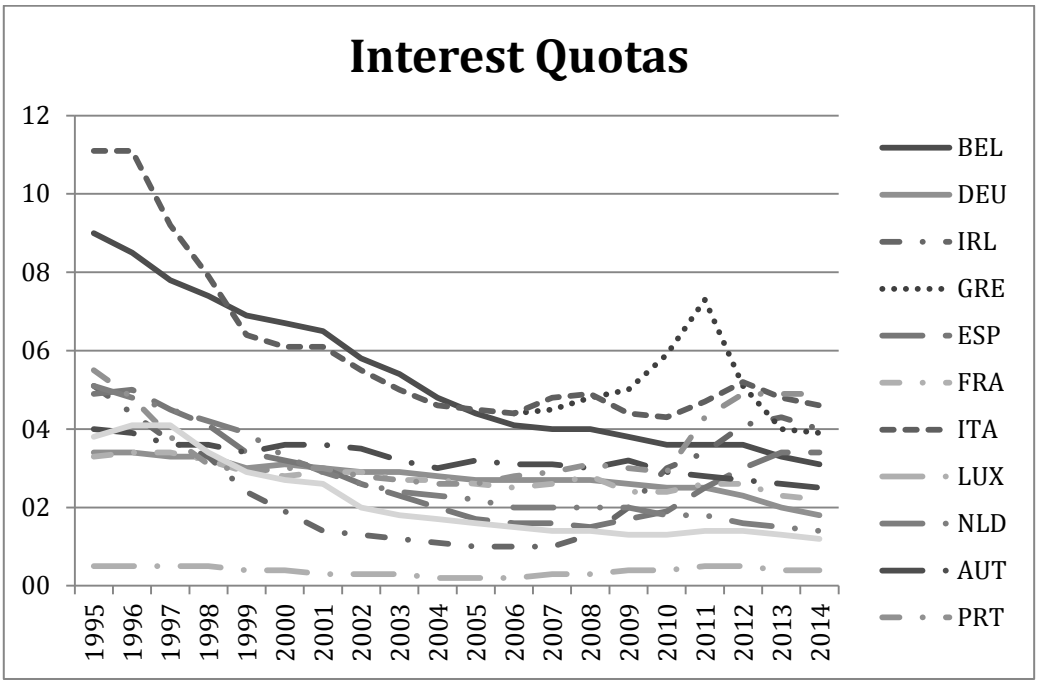

Figure 3 Interest Quotas in EMU (1995-2014)

The regression analysis above also showed that primary surpluses fell smaller once EMU was joined and after 2003. If deficits remained unchanged in both cases but primary surpluses were smaller, there must have been a substantial change in interest costs. Figure 3 confirms this point. Most countries benefitted from a distinct reduction in interest payments after the summit of Madrid (Sinn 2012: 75ff.). Interest rates converged to the German level once it was clear which countries would be part of EMU.[12]

Sinn (2012: 80ff.) has shown for Italy that governments preferred to spend the money saved on interest payments for other purposes instead to reduce its debt in a more

weakened by an inflation-friendly central bank due to financing problems of the member states. This fear is a result of historical experiences, especially of the Hyperinflation 1923 which was the result of a state unable to cover its additional expenses.

[12] Feldstein (2005) explains this with the faith of financial markets in a bail-out in case one member state would succumb to a debt crisis.

determined manner.[13] The regression analysis above shows that a general argument can be made out of this: Member countries benefitting from the decline in interest payments could have used the money to reduce their deficits and debt quotas. Such a policy would have corresponded to the spirit of the Pact. But only Ireland and Spain did so to a substantial degree. Most other member countries preferred to enjoy the enlarged fiscal leeway.

5. Policy Implications

The above regression analysis showed that neither joining EMU nor the breaching the Pact in 2003 had a significant impact on the deficit policy. The argument put forward here to explain these results is that the Pact was undermined from its beginning and therefore only had a very limited disciplining effect even before it was breached in 2003. Yet, it would have been crucial to have a disciplining effect. This has become obvious with the ongoing public debt crisis. Without the continued violation of the criteria of the Pact the crisis would very probably never have taken place.

The limited disciplining effect of the Pact would certainly have been improved by better sanctioning mechanisms (De Haan et al. 2004). This would have comprised penalty payments which would not have had to pass through a political process where the sinners can influence other members not to punish them or trade the intermission against other political favors as it was done along the history of EMU.

Sadly, this lesson was not learned when the Fiscal Compact was designed as an improved Stability Pact. The exclusion of automatic sanctioning which had been favored by Germany was part of the famous "Deauville Deal": In exchange for the French compliance to bail in creditors in case of future sovereign defaults, the automatic sanctioning mechanism was abandoned (Irwin 2013). Sanctions can still be prevented with the ECOFIN Council's qualified majority. First experiences confirm that violations of rules will remain unsanctioned: Although France and Italy continuously breach the deficit criterion the European Commission does not advocate sanctions and it shows no signs to do so anytime in the near future. The dilemma here is that the European institutions only have as much power as the national states are willing to transfer. For

[13] Had Italy used the saved interest to lower its debt quota, it would be at around 13% today (Sinn 2014: 3).

the moment, the national countries remain the decisive players and they are not ready to submit themselves to the European Institutions.

Another weakness of the new European fiscal structure has hardly been remarked: its inconsistency. On the one hand, a new Fiscal Compact is installed with the possibility of sanctioning. This Fiscal Compact demands for a structural budget balance of 0.5%. But the European Stability Mechanism (ESM) to bailout EMU member countries was installed. This is strikingly contradictory. If the European countries stick to the new rules, they will hardly get into a situation where they need the ESM. Such a contradiction can only be explained with the assumption that the European countries do not fully intend to respect the new rules. The commitment of the Fiscal Compact is thus very weak.[14]

A secondary result of the empirical analysis presented above is that primary surpluses fell ever shorter but deficits remained largely unchanged. This is a result of falling interest rates especially since the beginning of the 2000s. Because of the falling interest rates, several member countries saved huge amounts in interest payments. But instead of reducing their debt quotas they preferred to spend the money for other purposes. This is a clear warning of the introduction of joint liability, e. g. Euro bonds proposed in several different manners.[15] Advocates of joint bonds argue that this would lower credit costs for highly indebted countries. The so saved money could then serve to reduce the high debt quotas which would prevent further debt crises. But this argument must clearly be rejected: With the interest convergence in the years up to the debt crisis, this effect has already taken place once. However, the saved money was not used to reduce the actual debt but was spent otherwise. Even if joint bonds were linked to any potential political disciplining mechanism, it must strongly be doubted that they would have the desired effect. As long as Europe is not one nation with Commission's right to direct access to the member countries' budget[16], any political mechanism will always show loopholes and weaknesses.

[14] One might argue that with the Irish and Spanish example it can happen very quickly that a country showing sound public finances for a long time can get into fiscal stress. In such a case, the ESM could make sense. Yet, the IMF could also perform such a task. If the IMF steps in, it has the advantage that an external institution which is not strained with as many political complications and interdependence controls the achievements of the borrower.

[15] See for example Delpla and Weizsäcker (2010), European Commission (2011) or Sachverständigenrat (2012).

[16] If this goal shall ever be reached, remains a political question.

6. Annex

Dataset: European Union (1996-2013)						
Variable	**Source**	**Obs.**	**Mean**	**Min.**	**Max.**	**Std. Dev.**
Public Deficit	Eurostat	299	-2.3	-30.6	7.0	4.1
Primary Surplus	Own Calculations	299	0.5	-27.4	9.8	4.0
Real Growth	Eurostat	299	2.0	-8.5	11.3	3.1
Unemployment Rate	Eurostat	299	8.1	1.9	27.5	3.9
Real Exchange Rate (Index: 2005 = 100)	Eurostat	299	100.1	74.0	134.9	8.0
Current Account Balance	Eurostat	299	0.3	-14.9	13.2	5.3
Inflation	Eurostat	299	2.5	-1.7	18.5	2.0

Table 2 Descriptive Statistics of the Dataset European Union

Dataset: European Monetary Union (1996-2013)						
Variable	**Source**	**Obs.**	**Mean**	**Min.**	**Max.**	**Std. Dev.**
Public Deficit	Eurostat	195	-2.3	-30.6	7.0	4.3
Primary Surplus	Own Calculations	195	0.7	-27.4	9.8	4.1
Real Growth	Eurostat	195	1.8	-8.5	11.3	3.1
Unemployment Rate	Eurostat	195	8.2	1.9	27.5	4.3
Real Exchange Rate (Index: 2005 = 100)	Eurostat	195	99.8	90.5	107.5	2.9
Current Account Balance	Eurostat	195	0.7	-14.9	13.2	5.6
Inflation	Eurostat	195	2.1	-1.7	5.3	1.1

Table 3 Descriptive Statistics of the Dataset European Monetary Union

	MembEuro	Dummy 2003	ElectYear	GovInclLeftParty	CoalGov	NumbMin	OutputGap	RealGroww	Unemploy	RealExchRate
MembEuro	1	0.25	0.03	0.08	0.07	-0.34	0.00	-0.19	0.07	0.06
Dummy 2003		1	-0.02	0.07	-0.10	0.01	0.10	-0.06	0.02	0.44
ElectYear			1	0.02	0.01	0.00	0.01	0.03	-0.02	0.05
GovInclLeftParty				1	-0.09	0.04	-0.08	-0.09	0.00	0.06
CoalGov					1	-0.20	-0.06	0.06	-0.10	-0.06
NumbMin						1	0.07	-0.12	-0.01	-0.10
OutputGap							1	0.56	-0.56	0.01
RealGrow								1	-0.24	-0.05
Unemploy									1	0.17
RealExchRate										1

Table 4 Correlation Matrix

	MembEuro	PactBreaching	ElectYear	GovInclLeftParty	CoalGov	NumbMin	OutputGap	RealGroww	Unemploy	RealExchRate
MembEuro	1	0.41	0.03	-0.05	-0.10	0.05	0.02	0.02	0.00	0.00
PactBreaching		1	0.00	0.09	-0.14	0.06	-0.26	-0.39	0.14	0.21
ElectYear			1	0.04	0.01	-0.01	-0.03	-0.04	-0.01	0.03
GovInclLeftParty				1	0.12	0.05	-0.24	-0.19	0.08	0.22
CoalGov					1	-0.24	-0.12	0.07	-0.20	-0.01
NumbMin						1	0.01	-0.17	0.27	0.07
OutputGap							1	0.63	-0.61	-0.21
RealGrow								1	-0.37	-0.41
Unemploy									1	0.22
RealExchRate										1

Table 5 Correlation Matrix

	1) Primary Surplus Fixed Effects	2) Deficit Fixed Effects	3) Primary Surplus Fixed Effects	4) Deficit Fixed Effects	5) Primary Surplus Fixed Effects	6) Deficit Fixed Effects	7) Primary Surplus Fixed Effects	8) Deficit Fixed Effects
MembEuro	-1.59 (-2.60)**	-0.72 (-1.23)	-0.75 (-1.23)	-0.33 (-0.56)			-0.32 (-0.46)	0.47 (0.70)
BreakingPact					-1.59 (-3.73)***	-0.61 (-1.47)	-1.52 (-3.33)**	-0.71 (-1.61)
Dummy2003			-1.86 (-5.08)***	-0.85 (-2.35)*				
ElectYear	-0.54 (-1.50)	-0.50 (-1.45)	-0.59 (-1.70).	-0.52 (-1.52)	-0.27 (-0.63)	-0.15 (-0.37)	-0.26 (-0.61)	-0.16 (-0.39)
GovInclLeftParty	-0.45 (-1.18)	-0.84 (-2.28)*	-0.61 (-1.64)	-0.91 (-2.48)*	0.31 (0.64)	-0.02 (-0.05)	0.28 (0.58)	0.01 (0.03)
CoalGov	-0.34 (-0.56)	-0.17 (-0.30)	-0.41 (-0.71)	-0.21 (-0.36)	2.72 (2.72)**	2.84 (3.51)***	2.28 (2.73)**	2.82 (3.49)***
NumbMin	-0.19 (-1.78).	-0.11 (-1.01)	-0.16 (-1.51)	-0.09 (-0.86)	0.01 (0.08)	0.08 (0.59)	0.01 (0.10)	0.07 (0.56)
OutputGap	0.28 (2.99)**	0.31 (3.43)***	0.33 (3.60)***	0.33 (3.67)***	0.34 (2.88)**	0.33 (2.84)**	0.35 (2.91)**	0.32 (2.71)**
RealGrow	0.38 (4.88)***	0.32 (4.26)***	0.30 (3.91)***	0.28 (3.70)***	0.38 (3.78)***	0.36 (3.71)***	0.36 (3.52)***	0.37 (3.76)***
Unemploy	-0.07 (-0.64)	-0.14 (-1.30)	0.02 (0.17)	-0.10 (-0.91)	-0.10 (-0.74)	-0.26 (-2.06)*	-0.10 (-0.76)	-0.25 (-2.03)*
RealExchRate	0.04 (1.38)	0.06 (2.14)*	0.05 (1.72).	0.06 (2.29)*	-0.01 (-0.11)	0.07 (0.86)	-0.01 (-0.07)	0.07 (0.80)
N	299	299	299	299	195	195	195	195
R^2	0.34	0.37	0.44	0.38	0.46	0.46	0.46	0.46

Table 6 Regression Analysis[17]

	1) Primary Surplus	2) Deficit	3) Primary Surplus	4) Deficit	5) Primary Surplus	6) Deficit	7) Primary Surplus	8) Deficit
F test	F = 9.17 p = 0,00	F = 8.39 p = 0,00	F =8.39 p = 0,00	F = 8.91 p = 0,00	F = 5.70 p = 0,00	F = 7.96 p = 0,00	F = 5.67 p = 0,00	F = 7.81 p = 0.00
Lagrange Multiplier test	normal = 21.71 p = 0.00	normal = 23.93 p = 0.00	normal = 19.14 p = 0.00	normal =22.55 p = 0.00	normal = 7.40 p = 0.00	normal = 12.13 p = 0.00	normal = 7.45 p = 0.00	normal = 11.83 p = 0.00
Hausman test	X^2 = 31.51 p = 0.00	X^2 = 102.7 p = 0.00	X^2 = 35.61 p = 0.00	X^2 = 20.69 p = 0.02	X^2 = 90.35 p = 0.00	X^2 = 4.91 p = 0.84	X^2 = 5.49 p = 0.86	X^2 = n. a. p = n. a.

Table 7 Model Analysis

[17] . 10% confidence interval; * 5% confidence interval; ** 1% confidence interval; *** 0.1% confidence interval.

	1) Primary Surplus	2) Deficit	3) Primary Surplus	4) Deficit	5) Primary Surplus	6) Deficit	7) Primary Surplus	8) Deficit
	M Estimator	M Estimator	M Estimator	M Estimator	M Estimator	M Estimator	M Estimator	M Estimator
Intercept	-1.61 (-0.61)	-8.98 (-3.57)	-3.89 (-1.52)	-10.25 (-4.32)	-11.01 (-1.62)	-16.12 (-2.59)	-10.77 (-1.55)	-16.68 (-2.68)
MembEuro	0.15 (0.37)	0.44 (1.14)	0.66 (1.68)	0.67 (1.84)			-0.12 (-0.18)	0.98 (1.66)
BreakingPact					-1.68 (-4.27)	-0.52 (-1.45)	-1.65 (-3.83)	-0.77 (-2.00)
Dummy2003			-2.47 (-6.56)	-1.20 (-3.43)				
ElectYear	-0.58 (-1.47)	-0.51 (-1.35)	-0.68 (-1.79)	-0.54 (-1.54)	-0.39 (-0.99)	-0.17 (-0.47)	-0.39 (-0.95)	-0.19 (-0.52)
GovInclLeftParty	0.65 (1.80)	0.04 (0.11)	0.48 (1.38)	-0.08 (-0.25)	0.76 (1.94)	0.40 (1.11)	0.74 (1.86)	0.46 (1.27)
CoalGov	1.20 (2.77)	0.87 (2.12)	1.31 (3.15)	0.95 (2.47)	2.93 (5.97)	2.23 (4.96)	2.93 (5.84)	2.20 (4.90)
NumbMin	0.14 (2.38)	-0.02 (1.43)	0.15 (2.80)	0,08 (1.55)	0.19 (3.08)	0.02 (0.34)	0.19 (3.00)	0.03 (0.47)
OutputGap	0.09 (0.75)	-0.02 (-0.26)	0.05 (0.63)	-0.04 (-0.51)	0.21 (2.46)	0.13 (1.69)	0.21 (2.42)	0.09 (1.18)
RealGrow	0.41 (5.46)	0.52 (7.18)	0.33 (4.41)	0.48 (6.98)	0.38 (4.45)	0.54 (6.90)	0.37 (4.13)	0.59 (7.85)
Unemploy	-0.23 (-4.02)	-0.36 (-6.67)	-0.21 (-3.77)	-0.35 (-6.94)	-0.11 (-1.93)	-0.24 (-4.43)	-0.11 (-1.89)	-0.24 (-4.36)
RealExchRate	-0.00 (0.09)	0.06 (3.01)	0.03 (1.37)	0.08 (4.04)	0.07 (1.09)	0.13 (2.07)	0.07 (1.05)	0.12 (2.00)
N	299	299	299	299	195	195	195	195

Table 8 Robustness Check

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