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FISCAL POLICY AND INTERNATIONAL TRADE: AN APPLICATION TO THE EUROPEAN COUNTRIES IN TRANSITION

In this paper we will study the relationship between the government balance and the current account in the scenario of an economic union where fiscal consolidation is constrained by the fiscal discipline required by supranational agreements. For the empirical application we will use data on the Central and Eastern European Countries (CEEC). These former socialist countries experienced a significant growth after their accession to the European Union (EU), which led to a high potential for convergence with their Western EU partners but, sometimes, at the cost of unsustainable external positions. Recently, after the economic crisis, some of them have recovered their external disequilibria, although the fiscal consolidation required for recovery would mean a brake on their process of growth and convergence.

1. INTRODUCTION

The relationship between fiscal policy and international trade, and the implications for economic growth have not been widely discussed. Although, on the one hand, the role of fiscal policy for economic growth has been a recurrent topic of research profusely analysed (see Alesina and Perotti, 1995; Cour et al., 1996; Alesina and Ardagna, 1998; Alesina et al., 2002; Calderón and Schmidt-Hebbel, 2008; the European Central Bank, 2013, among others; a survey can be seen in Díaz-Roldán and Martínez-López, 2006). On the other hand, the relationship between openness and economic growth is a debated topic as addressed by Giavazzi and Pagano (1990), Krugman (1996), Frankel and Romer (1999), Miller and Russek (2003), and Andersen and Babula (2008), to name but a few.

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Regarding economic policy grounds, in recent years following the economic crisis there has been a debate on the role of economic policies. It is well known that the success of fiscal consolidation depends on improvement in primary fiscal balances and on macroeconomic conditions. However, the extent to which fiscal policies affect the trade balance and the implications for growth is a question that has not yet been answered by the literature.

Monacelli and Perotti (2008) studied the effects of government spending on trade. They found that a rise in government spending generates an appreciation of the terms of trade and a fall in the price of traded goods. Nickel and Vansteenkiste (2008) analysed the relationship between fiscal policy and balance of payments, concluding that the effects of the fiscal deficit on the current account deficit depend on the initial public debt level. Barrios et al. (2010) estimated the determinants of successful fiscal consolidation and found that the repairing of the banking sector is a key condition. They also stressed that the initial public debt level plays a significant role in achieving a successful fiscal consolidation, but they did not explore the effects of fiscal adjustment on the external sector. Riguzzi (2011) studied the extent to which the degree of openness influences the transmission mechanism of fiscal policy. He found that openness to trade limits both the stimulating effect of government spending on output and the contractive effect of higher taxes on output. More recently, Karras (2012) tested the effectiveness of fiscal policy in open economies, and he found that an increase in trade openness reduces the magnitude of the long-term fiscal multiplier.

As can be seen, the public debt level seems to be a determinant of the success of fiscal consolidation and its implications for external deficits. In any case, none of the papers mentioned above study the relationship between government deficits and the current account deficit in the particular scenario of an economic union where fiscal consolidation is constrained by the fiscal discipline imposed by supranational agreements. Our main contribution will be to explore such issues in an economic union scenario where fiscal rules are allowed.

We will perform the empirical applications for the Central and Eastern European Countries (CEEC). These former socialist countries experienced a significant growth after their accession to the EU which led to a high potential for convergence with their Western EU partners, but sometimes at the cost of unsustainable external positions. Trying to test the export-led growth hypothesis Bajo-Rubio and Díaz-Roldán (2009) found that in the Czech Republic the trade balance would not have arrived at the

unsustainable position, and accordingly, the foreign sector would have played a quite beneficial role in the economic evolution of the Czech economy over the last fifteen years. For the rest of the CEEC the results would have been neutral regarding the role of the foreign sector, with the exception of the Baltic states (in particular Latvia and Lithuania), which showed external deficits potentially unsustainable in the long run and they also suffered a huge drop in their rates of growth. Recently, after the economic crisis, some of them have recovered their external disequilibria, although the fiscal consolidation required for recovery would mean a brake on their process of growth and convergence.

The structure of the paper is as follows: in the next section we will summarize some considerations on the EU, and in section 3 we will obtain and discuss some empirical results using fiscal rules. Then in section 4, we will relate the obtained results to the performance of the current account. Finally, in section 5, the concluding remarks will be presented.

2. THE MACROECONOMICS OF THE EUROPEAN UNION AND THE CEEC

Starting on 1 January 1999, twelve European countries formed a monetary union, the so-called Economic and Monetary Union (EMU). In the context of the European Union (EU), from the beginning the success of the EMU has been related to the benefits of the single currency, presumed to favour a higher degree of integration of financial markets, also to the sound public finances guaranteed by the fiscal discipline provided by the EMU. When signing the Stability and Growth Pact (SGP), Member States committed themselves to reach a medium-term budgetary position close to balance. In fact, the Maastricht Treaty stresses as a basic requirement that the Member States of the EMU should avoid excessive deficits, and that the reference values for deficit-to-GDP and debt-to-GDP ratios have worked in practice as an explicit fiscal rule. Yet in practice, the policy orientation of the SGP has not been fully satisfied. This has opened a debate about the usefulness and effectiveness of fiscal rules in the EMU, and on their complementarities with discretionary fiscal policy measures and automatic stabilisers to deal with short-term fluctuations.

On 1 May 2004, eight Central and Eastern European countries (CEEC hereafter), i.e. the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, the Slovak Republic and Slovenia, joined the EU (together Cyprus

Table 1

Government deficit (-)/surplus (+), debt and current account (% of GDP) GDP rate of growth (% change on previous year)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EU-27															
Def/sup	-1	0.6	-1.5	-2.6	-3.2	-2.9	-2.5	-1.5	-0.9	-2.4	-6.9	-6.5	-4.4	-3.9	-3.3
Debt	65.6	61.8	60.9	60.3	61.9	62.2	62.7	61,5	58.9	62.2	74.5	80.2	82.7	85.5	87.4
CC	-0.6	-1.3	-1	-0.2	-0.3	-0.4	-0.8	-1,3	-1	-2.1	-0.7	-0.5	-0.2	0.6	1.2
GDPgwt	2.9	3.9	2	1.3	1.5	2.6	2.2	3.4	3.2	0.4	-4.5	2	1.7	-0.4	0.1
Bulgaria															
Def/sup	0.1	-0.5	1.1	-1.2	-0.4	1.9	1	1.9	1.2	1.7	-4.3	-3.1	-2	-0.8	-1.5
Debt	77.6	72.5	66	52.4	44.4	37	27.5	21.6	17.2	13.7	14.6	16.2	16.3	18.4	18.9
CC	-4.7	-5.4	-5.5	-2.4	-5.3	-6.4	-11.6	-17.6	-25.2	-23.1	-8.9	-1.5	0.1	-0.8	1.9
GDPgwt	2	5.7	4.2	4.7	5.5	6.7	6.4	6.5	6.4	6.2	-5.5	0.4	1.8	0.6	0.9
Czech Republic															
Def/sup	-3.6	-3.6	-5.6	-6.5	-6.7	-2.8	-3.2	-2.4	-0.7	-2.2	-5.8	-4.7	-3.2	-4.2	-1.5
Debt	15.8	17.8	23.9	27.1	28.6	28.9	28.4	28.3	27.9	28.7	34.6	38.4	41.4	46.2	46
CC	-2.4	-4.6	-5.1	-5.3	-6	-5.1	-1	-2	-4.3	-2.1	-2.4	-3.9	-2.7	-1.3	-1.4
GDPgwt	1.7	4.2	3.1	2.1	3.8	4.7	6.8	7	5.7	3.1	-4.5	2.5	1.8	-1	-0.9
Estonia															
Def/sup	-3.5	-0.2	-0.1	0.3	1.7	1.6	1.6	2.5	2.4	-3	-2	0.2	1.1	-0.2	-0.2
Debt	6.5	5.1	4.8	5.7	5.6	5	4.6	4.4	3.7	4.5	7.1	6.7	6.1	9.8	10
CC	-4.3	-5.4	-5.2	-10.6	-11.3	-11.3	-10	-15.3	-15.9	-9.2	2.7	2.8	1.8	-1.8	-1
GDPgwt	-0.3	9.7	6.3	6.6	7.8	6.3	8.9	10.1	7.5	-4.2	-14.1	2.6	9.6	3.9	0.8
Hungary															
Def/sup	-5.5	-3	-4.1	-9	-7.3	-6.5	-7.9	-9.4	-5.1	-3.7	-4.6	-4.3	4.3	-2.1	-2.2
Debt	60.8	56.1	52.7	55.9	58.6	59.5	61.7	65.9	67	73	79.8	82.2	82.1	79.8	79.2
CC	-7.8	-8.6	-6.1	-7	-8	-8.7	-7.5	-7.4	-7.3	-7.3	-0.2	0.2	0.4	0.8	3
GDPgwt	3.2	4.2	3.7	4.5	3.9	4.8	4	3.9	0.1	0.9	-6.8	1.1	1.6	-1.7	1.1
Latvia															
Def/sup	-3.8	-2.8	-2	-2.3	-1.6	-1.1	-0.4	-0.6	-0.7	-4.4	-9.2	-8.2	-3.5	-1.3	-1
Debt	12.4	12.4	14.1	13.6	14.7	15	12.5	10.7	9	19.8	36.9	44.5	42	40.8	38.1
CC	-8.9	-4.9	-7.7	-6.7	-8.2	-12.9	-12.6	-22.5	-22.4	-13.2	8.6	2.9	-2.1	-2.5	-0.8
GDPgwt	2.9	5.3	7.3	7.1	7.7	8.8	10.1	11	10	-2.8	-17.7	-1.3	5.3	5.2	4.1

Lithuania

Def/sup	-2.8	-3.2	-3.5	-1.9	-1.3	-1.5	-0.5	-0.4	-1	-3.3	-9.4	-7.2	-5.5	-3.2	-2.2
Debt	22.7	23.6	23	22.2	21	19.3	18.3	17.9	16.8	15.5	29.3	37.8	38.3	40.5	39.4
CC	-11	-5.9	-4.7	-5.1	-6.7	-7.6	-7.1	-10.6	-14.4	-12.9	3.7	0.1	-3.7	-0.2	1.5
GDPgwt	-1	3.6	6.7	6.8	10.3	7.4	7.8	7.8	9.8	2.9	-14.8	1.6	6	3.7	3.3

Poland

Def/sup	-2.3	-3	-5.3	-5	-6.2	-5.4	-4.1	-3.6	-1.9	-3.7	-7.5	-7.8	-5.1	-3.9	-4.3
Debt	39.6	36.8	37.6	42.2	47.1	45.7	47.1	47.7	45	47.1	50.9	54.9	56.2	55.6	57
CC	-7.4	-6	-3.1	-2.8	-2.5	-5.3	-2.4	-3.8	-6.2	-6.6	-3.9	-5.1	-5	-3.7	-1.3
GDPgwt	4.5	4.3	1.2	1.4	3.9	5.3	3.6	6.2	6.8	5.1	1.6	3.9	4.5	2	1.6

Romania

Def/sup	-4.4	-4.7	-3.5	-2	-1.5	-1.2	-1.2	-2.2	-2.9	-5.7	-9	-6.8	-5.5	-3	-2.3
Debt	21.7	22.5	25.7	24.9	21.5	18.7	15.8	12.4	12.8	13.4	23.6	30.5	34.7	38	38.4
CC	-4	-3.6	-5.5	-3.3	-5.9	-8.4	-8.6	-10.5	-13.4	-11.6	-4.2	-4.4	-4.5	-4.4	-1.1
GDPgwt	-0.4	2.4	5.7	5.1	5.2	8.5	4.2	7.9	6.3	7.3	-6.6	-1.1	2.3	0.6	3.5

Slovak Republic

Def/sup	-7.4	-12.3	-6.5	-8.2	-2.8	-2.4	-2.8	-3.2	-1.8	-2.1	-8	-7.5	-4.8	-4.5	-2.8
Debt	47.8	50.3	48.9	43.4	42.4	41.5	34.2	30.5	29.6	27.9	35.6	41	43.6	52.7	55.4
CC	-5.6	-3.4	-8.3	-7.9	-5.9	-7.8	-8.5	-7.8	-5.3	-6.2	-2.6	-3.7	-3.8	2.2	2.1
GDPgwt	0	1.4	3.5	4.6	4.8	5.1	6.7	8.3	10.5	5.8	-4.9	4.4	3	1.8	0.9

Slovenia

Def/sup	-3	-3.7	-4	-2.4	-2.7	-2.3	-1.5	-1.4	0	-1.9	-6.3	-5.9	-6.4	-4	-14.7
Debt	24.1	26.3	26.5	27.8	27.2	27.3	26.7	26.4	23.1	22	35.2	38.7	47.1	54.4	71.7
CC	-3.2	-2.7	0.2	1	-0.8	-2.6	-1.7	-1.8	-4.2	-5.4	-0.5	-0.1	0.4	3.3	6.3
GDPgwt	5.3	4.3	2.9	3.8	2.9	4.4	4	5.8	7	3.4	-7.9	1.3	0.7	-2.5	-1.1

Notes: The government deficit (-)/surplus (+) is defined as the difference between the revenue and the expenditure of the general government sector. The debt corresponds to the consolidated general government gross debt at nominal value, outstanding at the end of the year. The current account registers the value of exports (credits) and imports (debits) of goods, services, income and current transfers

Source: Eurostat.

and Malta). Four of those countries, namely the Czech Republic, Hungary, Poland and the Slovak Republic, founded the Visegrád Group in 1991, also called the Visegrád Four (V4), after the dissolution of Czechoslovakia in 1993. The aim of the V4 countries was to reinforce economic cooperation and European integration among them.

Later, after the EU enlargement of 2004, Bulgaria and Romania joined the EU in 2007, and more recently Croatia in 2013. These countries should enter the EMU and adopt the euro sooner or later after their integration into the EU. To do this, they must fulfil all the conditions that had to be met by the current EMU members, i.e. a budget deficit of less than 3% of GDP and government debt lower than 60% of GDP, low inflation, and interest rates close to the EU average. Also, in order to be able to adopt the euro, the new members must have observed the normal fluctuation margins provided by the European exchange-rate mechanism (ERM-II) for at least two years without devaluing its currency.

The purpose of this paper is to study the relationship between the government balance and the current account in the scenario of an economic union in the group of European transition countries. We will use data of European countries (source: Eurostat) from 1999 (from where the whole data for each country is available) to 2013, the year of the last enlargement. In Table 1 we show the government deficit (−)/surplus (+), the government debt, the current account (in percentage of GDP), and the GDP rate of growth (% change on previous year) for the EU-27 and for Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, the Slovak Republic and Slovenia (the CEEC). In 1999 the government deficit and the government debt of the EU-27 were 1.0 and 65.6, respectively. In that year most of the CEEC exhibited values of the deficit higher than 3.0, although the levels of public debt were lower than 60.0. In 2013 the government deficit and the government debt of the EU-27 were 3.3 and 87.4, respectively, while the CEEC exhibited lower levels of deficit (except Poland and Slovenia), and debt. After the economic crisis, only Hungary and the EU-27 as a whole showed figures for debt above the 60.0 limit required by the Maastricht Treaty. Regarding the current account, the CEEC have improved their position after joining the EU, although all of them showed both government deficits and a current account deficit during the whole period. If we look at the rates of growth, all the countries experienced significant growth after their accession to the EU but the figures have diminished after the economic crisis.

The economic crisis is not a good environment, and contributes to difficulties when deciding how to finance the public deficit. In such a context, the scope of fiscal policies for stabilization purposes seems to be reduced. Moreover, the current account imbalances have amplified the effect of the actual economic and financial crisis in Europe and could prove difficult to achieve recovery. To what extent do fiscal consolidations impact competitiveness and limit economic growth? In order to illustrate this question, we first will assume that the UE-27 countries could have made use of a fiscal rule to limit excessive deficits. How would this have changed the actual data on public deficit is reported in Table 1. The next question would be whether there are implications of using fiscal rules on current account. To answer those questions, in the next sections we will explore in a very simple way the relationships between fiscal discipline and the current account.

3. THE USE OF FISCAL RULES

The recent economic crisis has contributed to creating difficulties when deciding how to finance the public deficit. Thus, in such a context the scope of fiscal policies for stabilization purposes is more reduced. Moreover, the current account imbalances have amplified the effect of the actual economic and financial crisis in Europe and could make the recovery difficult. The fiscal consolidation in the EMU has been enforced by the Pact for the Euro trying to reinforce the coordination of economic policy in favour of competitiveness and convergence, pointing out as an essential need that the member states implement in national laws the budget rules (Hernández de Cos and Moral-Benito, 2011).

Regarding the use of fiscal rules, we should mention the papers by Kopits (2001), Fatás and Mihov (2006) and for the European case, Ballabriga and Martínez Mongay (2003). The latter estimated monetary and fiscal rules for the eurozone, concluding that monetary policy rules are not sufficient to guarantee price stability, stating that they should be accompanied by an explicit objective of public deficit. Debrun et al. (2008) studied the relationship between fiscal discipline and fiscal policy rules, as well as the implications of these on the business cycle. To do this they incorporate a series of fiscal solvency indices into a fiscal reaction function, estimated by means of EU-25 panel data for the period 1990-2005. They concluded that fiscal rules favour fiscal discipline, providing more balanced budgets and less pro-cyclical fiscal policies.

In a broader context, Calderón and Schmidt-Hebbel (2008) tried to identify the causes favouring the choice of a rules-based tax regime, finding that the achievement of both budgetary stability and government stability determine the decision of adopting a fiscal policy rule. Later on, Brzozowski and Siwińska-Gorzelak (2010) analysed the impact of fiscal rules on the volatility of fiscal policy, and they found that rules based on deficit control tend to produce destabilizing effects, while the rules aimed to limit the public debt show stabilizing effects.

Aiming to shed some light on the debate on the convenience of using fiscal rules and their policy implications, we will perform a counterfactual analysis. Our purpose is twofold. On the one hand, we will try to offer a general view on the performance of fiscal rules, designed to control excessive government deficits. On the other hand, we will explore the implications of using fiscal rules on the external position of the countries. In other words, we will try to analyse the effects of public deficits on current account when governments decide to encourage fiscal policy discipline by using a fiscal rule. Having that in mind, first we will calculate the value of public deficit given by fiscal rules[1], and next we will obtain the current account value resulting from the use of fiscal rules.

In our first step, following Ballabriga and Martínez-Mongay (2003), we will consider a fiscal rule which relates an explicit public deficit target (in terms of the GDP), g^o, with public debt deviations (in terms of the GDP) in respect to its optimal level $(d_{-1} - d^o)$, and the output level y:

$$g_i^o = - \; [\delta(d_{i,-1} - d_i^o) + \theta y_i]. \, i = 1, 2 \tag{1}$$

The public deficit adjusts according to the following path, where $0 \leq \rho \leq 1$:

$$g_i = (1 - \rho)g_i^o + \rho g_{i,-1}. \tag{2}$$

From equations (1) and (2), we obtain the fiscal rule:

$$g_i = -(1-\rho)\delta(d_{-1} - d^o) + \rho g_{i,-1} - (1-\rho)\theta y. \tag{3}$$

Note that if $(d_{i,-1} - d_i^o) > 0$, then the country has a relatively high level of debt, while the opposite holds for $(d_{i,-1} - d_i^o) < 0$.

[1] From a different point of view, Díaz-Roldán and Montero-Soler (2011) analyze the convenience of using fiscal rules for the New Member States (NMS) of the EMU. They found that the success of fiscal policy decisions depends on the symmetric or asymmetric nature of the shocks to be dealt with.

We would like to test whether the public deficit would have been different if CEEC would have followed a fiscal rule. Since we are also interested in exploring the implications of fiscal consolidation both in foreign sector and growth, we will relate public deficit with the rate of growth, $\hat{y}$, instead of the output level, y. In that way, our fiscal rule will be:

$$g_i = -(1-\rho)\delta(d_{-1}-d^o)+\rho g_{i,-1}-(1-\rho)\theta\hat{y}. \qquad (4)$$

Hence, according to the rule given by equation (4), we will calculate the "theoretical" public deficit in the three following scenarios:

(i)The fiscal authorities give identical weights to debt deviations and to the output level, being $\delta = \theta = 0.5$, also the deficit is adjusted, in the same proportion, being $(1-\rho) = \rho = 0.5$. This will be the "symmetric" scenario.

(ii)The fiscal authorities are particularly concerned about fiscal discipline and they are averse to debt deviations, so, $\delta = 0.75$ and $\theta = 0.25$; because public deficit was high in the past, so, $(1-\rho) = 0.25$ and $\rho = 0.75$. We will call this the disciplined, conservative or "debt averse" scenario.

(iii)The fiscal authorities are particularly concerned about economic growth, so, $\delta = 0.25$ and $\theta = 0.75$; and about the deficit target, so, $(1-\rho) = 0.75$ and $\rho = 0.25$; this will be the "growth promoting" scenario.

As is well known, the Maastricht Treaty stressed as a basic requirement that the Member States of the EMU should avoid excessive deficits, no more than 3% of the GDP, and the government debt should not exceed 60% of GDP. Those reference values for deficit-to-GDP and debt-to-GDP ratios have worked in practice as an explicit fiscal rule. In this paper we will adopt those values as reference. According to those requirements, the fiscal rules for the cases detailed above will be:

(i)   "Symmetric" scenario:

$$g = -0.25(d_{-1}-60)+0.5g_{-1}-0.25\hat{y},$$

(ii) "Debt averse" scenario:

$$g = -0.1875(d_{-1}-60)+0.75g_{-1}-0.0625\hat{y},$$

(iii) "Growth promoting" scenario:

$$g = -0.1875(d_{-1}-\ 60)+0.25g_{-1}-0.5625\hat{y}.$$

In Table 2 we show the actual value for the government deficit/surplus taken from Table 1, and the computed values for the government deficit/surplus given by the fiscal rules under the three scenarios proposed above.

Table 2

Public deficit (-)/surplus (+)

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EU-27													
Def/sup	-1.5	-2.6	-3.2	-2.9	-2.5	-1.5	-0.9	-2.4	-6.9	-6.5	-4.4	-3.9	-3.3
FRs	-0.6	-1.3	-1.8	-2.7	-2.6	-2.8	-1.9	-0.3	-0.6	-7.6	-8.7	-7.8	-8.4
FRd	0.0	-1.4	-2.1	-2.9	-2.7	-2.6	-1.6	-0.5	-1.9	-8.0	-8.8	-7.5	-7.7
FRg	-1.3	-1.3	-1.6	-2.6	-2.4	-3.0	-2.5	-0.2	1.5	-5.6	-6.4	-5.1	-5.8
Bulgaria													
Def/sup	1.1	-1.2	-0.4	1.9	1.0	1.9	1.2	1.7	-4.3	-3.1	-2.0	-0.8	-1.5
FRs	-4.4	-2.1	-0.1	2.0	5.1	7.0	9.0	9.8	13.8	9.1	9.0	9.8	9.8
FRd	-3.0	-0.6	0.2	2.2	5.3	6.4	8.2	8.5	10.3	5.3	5.8	6.7	7.1
FRg	-4.8	-3.5	-2.0	-0.9	1.2	2.7	4.1	4.8	12.2	7.2	6.4	7.4	7.1
Czech Republic													
Def/sup	-5.6	-6.5	-6.7	-2.8	-3.2	-2.4	-0.7	-2.2	-5.8	-4.7	-3.2	-4.2	-1.5
FRs	8.0	5.7	4.0	3.3	4.7	4.6	5.3	6.9	7.9	2.8	2.6	3.3	1.6
FRd	5.0	2.4	1.1	0.6	3.3	3.1	3.8	5.3	4.5	0.3	0.4	1.2	-0.5
FRg	5.3	4.2	2.4	1.6	1.3	1.2	2.1	4.1	7.9	1.9	1.9	3.3	2.0
Estonia													
Def/sup	-0.1	0.3	1.7	1.6	1.6	2.5	2.4	-3.0	-2.0	0.2	1.1	-0.2	-0.2
FRs	12.1	12.1	11.8	12.9	12.3	12.1	13.3	16.3	15.9	11.6	11.0	13.1	12.3
FRd	9.8	9.9	9.9	11.1	11.0	11.0	11.8	12.6	9.0	8.3	9.5	10.7	9.2
FRg	6.7	6.6	5.9	7.1	5.7	5.1	6.8	13.5	17.6	8.0	4.6	8.2	8.9
Hungary													
Def/sup	-4.1	-9.0	-7.3	-6.5	-7.9	-9.4	-5.1	-3.7	-4.6	-4.3	4.3	-2.1	-2.2
FRs	-1.5	-1.4	-4.5	-4.5	-4.1	-5.4	-6.2	-4.5	-3.4	-7.5	-8.1	-3.0	-6.3
FRd	-1.8	-2.0	-6.2	-5.5	-5.0	-6.5	-8.2	-5.2	-4.8	-7.2	-7.5	-0.8	-5.4
FRg	-2.1	-2.2	-3.7	-4.3	-3.8	-4.5	-3.5	-3.1	0.5	-5.5	-6.1	-2.1	-4.9
Latvia													
Def/sup	-2.0	-2.3	-1.6	-1.1	-0.4	-0.6	-0.7	-4.4	-9.2	-8.2	-3.5	-1.3	-1.0
FRs	8.7	8.7	8.5	8.3	8.2	8.9	9.5	13.1	12.3	1.5	-1.6	1.5	3.1
FRd	6.4	6.7	6.5	6.7	7.0	7.9	8.2	9.2	5.3	-2.5	-3.6	0.4	2.4
FRg	4.1	4.1	3.8	3.1	2.5	2.6	3.5	11.0	16.4	2.8	-2.1	-0.4	1.0

Lithuania

Def/sup	-3.5	-1.9	-1.3	-1.5	-0.5	-0.4	-1.0	-3.3	-9.4	-7.2	-5.5	-3.2	-2.2
FRs	5.8	5.8	5.9	7.3	7.5	8.2	7.9	9.6	13.2	2.6	0.5	1.8	2.5
FRd	4.0	3.9	5.0	5.9	6.0	7.0	7.0	7.2	6.8	-1.4	-1.6	-0.3	1.1
FRg	2.3	2.2	0.8	2.8	2.9	3.3	2.3	6.2	15.8	2.5	-1.0	0.6	1.0

Poland

Def/sup	-5.3	-5.0	-6.2	-5.4	-4.1	-3.6	-1.9	-3.7	-7.5	-7.8	-5.1	-3.9	-4.3
FRs	4.0	2.6	1.0	-1.2	0.0	-0.4	-0.4	1.5	1.0	-2.5	-3.8	-2.1	-1.3
FRd	2.0	0.1	-0.7	-2.6	-1.6	-1.0	-0.8	1.1	-0.5	-4.2	-5.2	-3.2	-2.2
FRg	2.9	2.1	-0.1	-2.1	-0.7	-2.1	-2.4	-0.5	0.6	-2.4	-3.5	-1.7	-1.1

Romania

Def/sup	-3.5	-2.0	-1.5	-1.2	-1.2	-2.2	-2.9	-5.7	-9.0	-6.8	-5.5	-3.0	-2.3
FRs	5.6	5.6	6.5	6.8	8.7	8.5	9.2	8.5	10.5	4.9	3.4	3.4	3.1
FRd	3.2	3.5	4.8	5.6	6.6	6.9	6.9	6.2	4.9	0.1	0.3	0.6	1.7
FRg	2.7	2.7	3.2	2.1	5.1	3.5	4.8	4.0	11.0	5.2	2.5	3.0	1.4

Slovak Republic

Def/sup	-12.3	-6.5	-8.2	-2.8	-2.4	-2.8	-3.2	-1.8	-2.1	-8	-7.5	-4.8	-4.5
FRs	-1.0	-4.6	-1.6	-1.2	1.7	1.8	3.0	3.2	5.3	8.2	1.0	0.3	1.3
FRd	-3.4	-7.6	-3.1	-3.3	0.9	1.3	2.2	2.5	4.0	4.8	-1.7	-2.3	-0.6
FRg	-0.4	-3.2	-2.1	-1.6	-0.3	-0.9	-0.5	-1.2	2.0	8.3	0.1	0.0	0.9

Slovenia

Def/sup	-4.0	-2.4	-2.7	-2.3	-1.5	-1.4	0.0	-1.9	-6.3	-5.9	-6.4	-4.0	-14.7
FRs	5.9	5.4	6.1	5.8	6.0	6.1	6.0	8.4	10.5	2.7	2.2	0.6	-0.3
FRd	3.4	3.0	4.1	3.9	4.2	4.8	4.8	6.7	6.2	-0.2	-0.5	-2.2	-1.9
FRg	3.8	3.1	3.8	3.0	3.3	2.6	2.0	5.0	11.1	2.3	2.1	2.2	0.7

Notes: The row Def/sup shows the actual value of government deficit (-)/surplus (+) as percentage of GDP (see Table 1). The rows FRs, FRd and FRg, show the results given by the fiscal rule in the three proposed scenarios (i), (ii) and (iii) in section 3

Source: own elaboration based on data of Table 1 and the fiscal rules proposed in section 3.

Using fiscal rules seems to reduce public deficit in some cases, or even turn the deficit into a surplus. Although for Hungary, fiscal rules prove to be useful before the economic crisis but not later, and for the EU-27 as a whole using fiscal rules should have been advised only between 2007 and 2010 as can be seen in Table 2 and Figure 1.
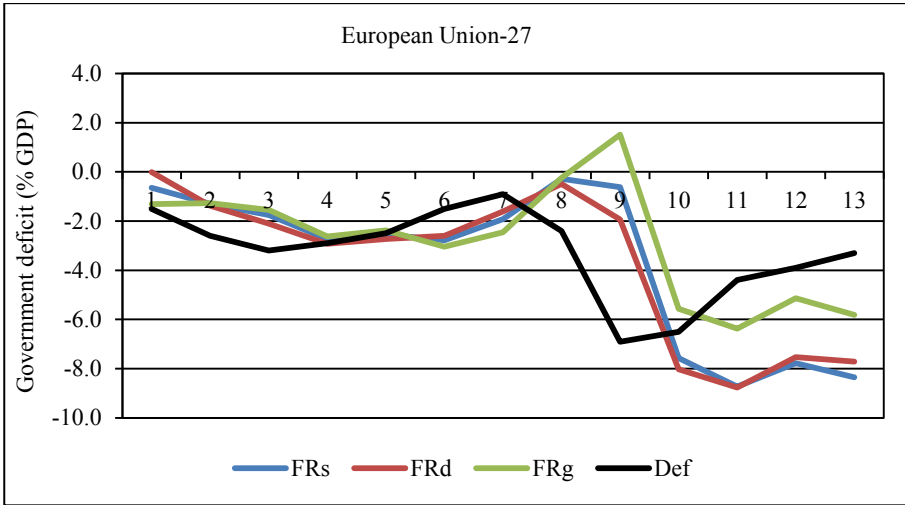

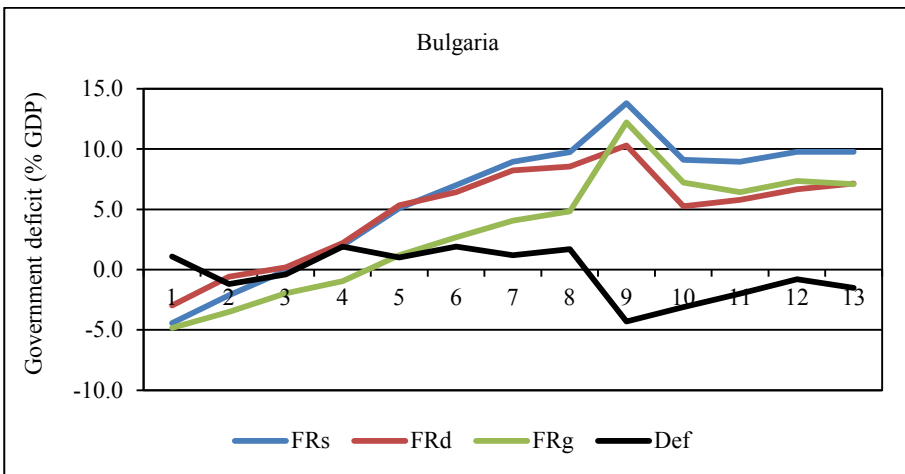Figure 1.A: EU-27 government deficit (% GDP)
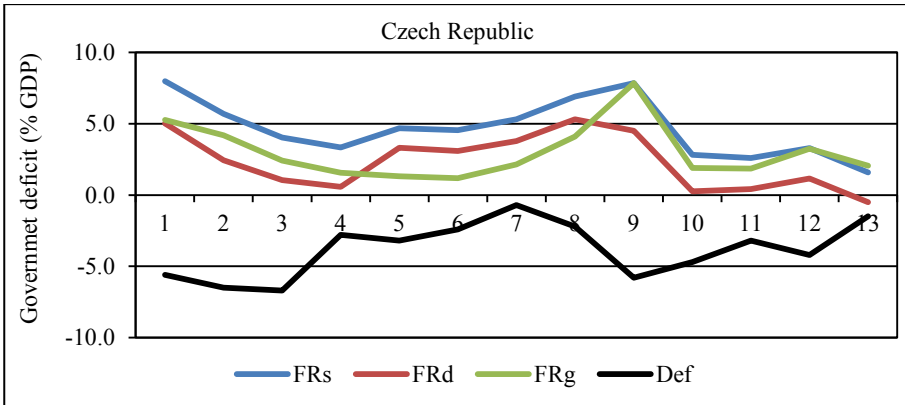

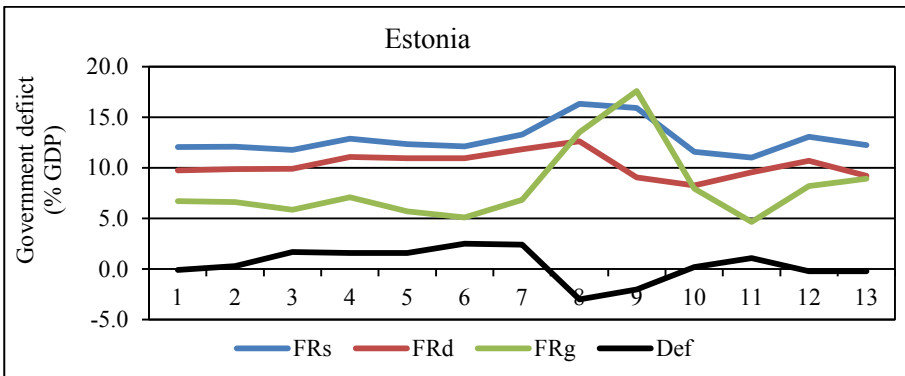Figure 1.B: Bulgaria government deficit (% GDP)

Figure 1.C: Czech Republic government deficit (% GDP)

Figure 1.D: Estonia government deficit (% GDP)
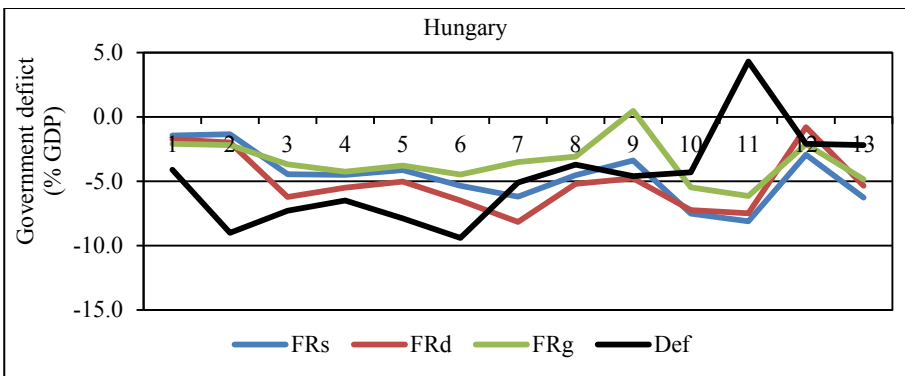
Figure 1.E: Hungary government deficit (% GDP)
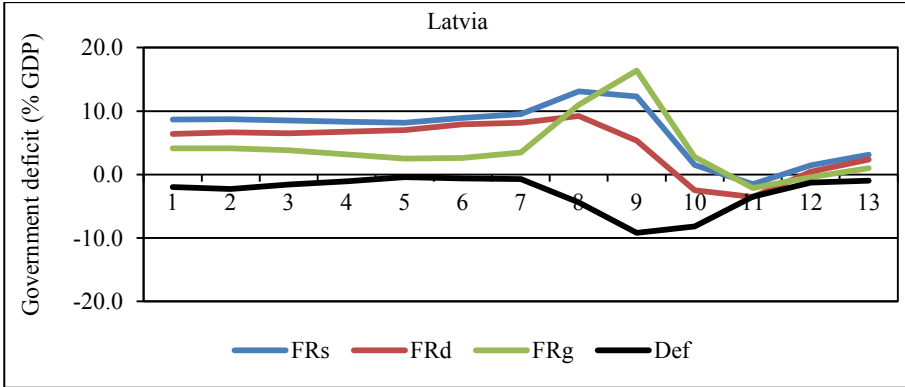
Figure 1.F: Latvia government deficit (% GDP)
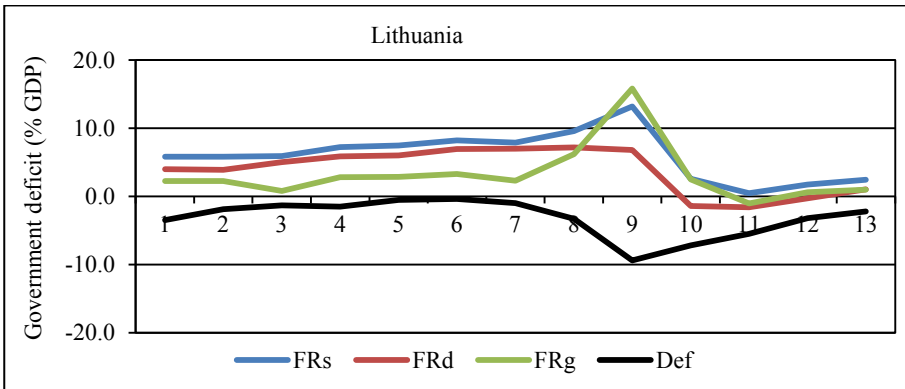
Figure 1.G: Lithuania government deficit (% GDP)
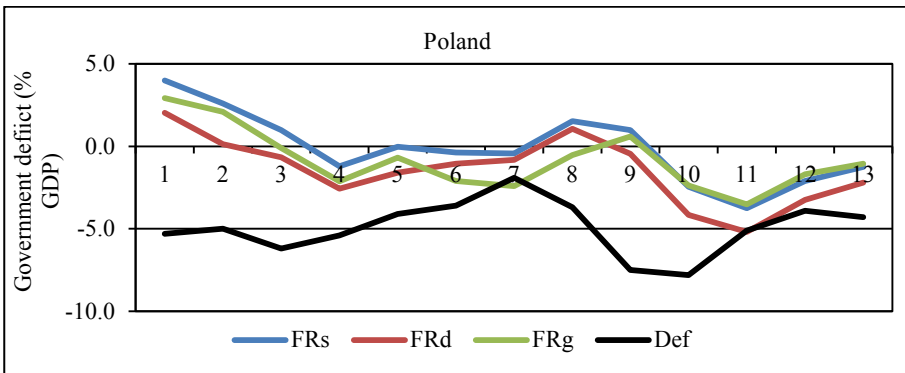
Figure 1.H: Poland government deficit (% GDP)
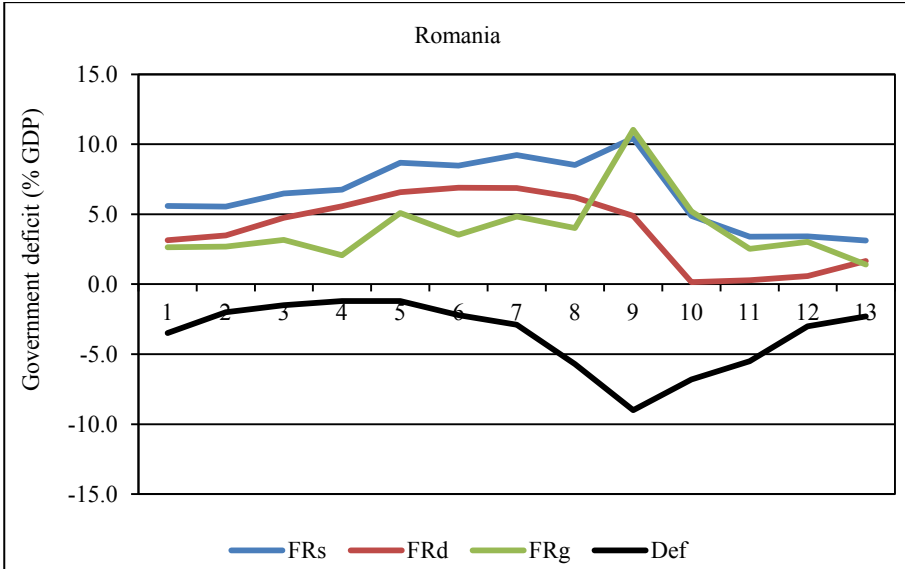
Figure 1.I: Romania government deficit (% GDP)
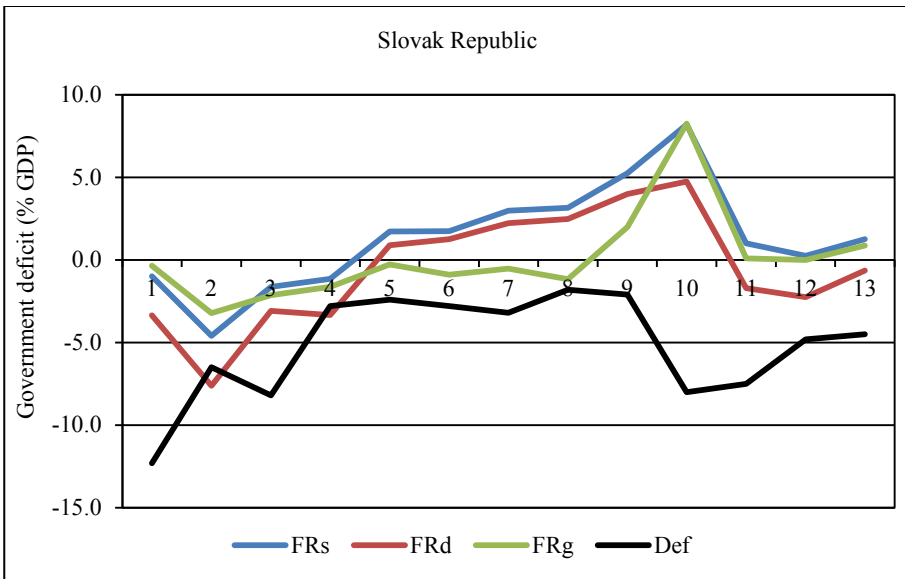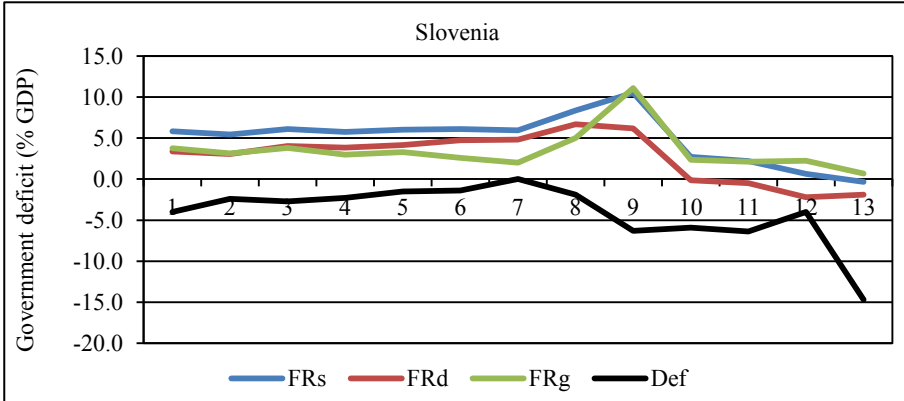

Figure 1.J: Slovak Republic government deficit (% GDP)

Figure 1.K: Slovenia government deficit (% GDP)

Figure 1: Government deficit (% GDP)

Source: own elaboration based on data of Table 2.

4. IMPLICATIONS FOR THE CURRENT ACCOUNT

In the second step, since we are interested in studying the implications of fiscal consolidations on external deficit, we would like to know the path of current account under the three scenarios proposed in section 3. In the spirit of the fiscal rule given by equation (4), we will assume that the current account path, CC, depends negatively on the public deficit, g, and the output rate of growth, $\hat{y}$, and positively on the past current account CC_{-1}. In that way, we built a kind of "*current account rule*" that offers the values of current account viewed as the product of a weighted average of government deficit and the rate of growth plus an smoothing parameter[2].

Therefore, we can write the foreign sector rule as:

$$CC = -(ag + b\hat{y}) + gCC_{-1}. \tag{5}$$

Using the database provided by Eurostat for the variables reported in Table 1, we have estimated equation (5) using panel data for the 27 countries of the

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[2] Note that our fiscal rule, based on Ballabriga and Martínez-Mongay (2003), shows government deficit deviations from a certain goal as a weighted average of deviations of public debt and growth. This fiscal rule is equivalent to the monetary rule proposed by Taylor (1993), where the deviations of the real interest rate from its equilibrium value are a weighted average of deviations of inflation and output gap. In both cases, policy rules are intended to use the policy instrument (government deficit or interest rate) for smoothing the path of policy goals or in other words, to stabilize deviations from the desired values of inflation and output, for monetary policy, and public debt and output for fiscal policy.

EU with fixed effects to capture the peculiarities of the countries. Estimating by OLS when there are endogenous explanatory variables, the estimators of the parameters obtained are not consistent. Yet estimating by using instrumental variables (two-stage least squares), we can obtain consistent estimates of the parameters in the presence of endogenous explanatory variables, using as instruments lagged values of the regressors. Since our specification includes a lag of the endogenous variable as regressor, the estimates may present problems of autocorrelation and thus lead to inefficient estimators. In trying to correct it, we used the Generalized Method of Moments (GMM) for dynamic panel data models (Arellano and Bover, 1990; Arellano and Bond, 1991), which provides efficient estimators[3].

The results of the estimates by MGM are shown in Table 3. We can observe that the signs and significance of the coefficients obtained are as expected. Both the coefficient of determination as well as the Durbin-Watson statistic provide consistent values, while the *p*-value of the statistic J (Sargan) shows that there is no empirical evidence against the validity of the instruments. Therefore, we chose as the basic specification the one obtained by estimating MGM as reported in Table 3.

Table 3

EU-27 estimates by GMM

Dep vb. *CC*	*FRs*	*FRd*	*FRg*
α	-0.12 (-2.24)	-0.12 (-2.06)	-0.19 (-2.32)
β	-0.52 (-7.44)	-0.48 (-6.45)	-0.61 (-7.32)
γ	0.68 (6.81)	0.68 (6.80)	0.68 (6.90)
	$R^2_{adj} = 0.89$ **DW**= 1.94 **J**= 41.34 **p(J-stat)**=0.000	$R^2_{adj} = 0.89$ **DW**= 1.96 **J**= 44.47 **p(J-stat)**=0.000	$R^2_{adj} = 0.89$ **DW**= 1.94 **J**= 40.75 **p(J-stat)**=0.000

Notes: t-ratios in parentheses; instruments are two lags of the regressors and two lags of FRs, FRd and FRg; critical values for J, chi-squared (33) are 43.74 (10%) and 47.39 (5%)

Source: own elaboration based on data of Table 1 and the equation (5).

In Table 4 we show the actual value for the current account taken from Table 1, and the computed values for the current account given by the foreign sector rules under the three scenarios proposed in section 3, and the

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[3] Estimates by OLS and instrumental variables are available upon request.

Table 4

Current account deficit

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
EU-27													
CC	-1	-0.2	-0.3	-0.4	-0.8	-1.3	-1	-2.1	-0.7	-0.5	-0.2	0.6	1.2
CCs	-1.8	-1.2	-0.7	-1.2	-1.1	-2.0	-2.3	-0.9	1.0	-0.6	-0.2	1.0	1.4
CCd	-1.8	-1.1	-0.6	-1.1	-1.0	-1.8	-2.1	-0.7	1.1	-0.4	-0.1	1.0	1.2
CCg	-1.9	-1.2	-0.8	-1.3	-1.2	-2.0	-2.4	-0.9	1.0	-0.6	-0.2	1.1	1.5
Bulgaria													
CC	-5.5	-2.4	-5.3	-6.4	-11.6	-17.6	-25.2	-23.1	-8.9	-1.5	0.1	-0.8	1.9
CCs	-5.3	-5.9	-4.5	-7.3	-8.3	-12.1	-16.4	-21.5	-14.5	-7.4	-3.0	-1.4	-2.2
CCd	-5.0	-5.5	-4.1	-6.7	-7.6	-11.0	-14.8	-19.4	-12.7	-6.3	-2.5	-1.0	-1.8
CCg	-5.3	-5.9	-4.6	-7.5	-8.5	-12.4	-16.6	-21.8	-14.7	-7.7	-3.3	-1.7	-2.4
Czech Republic													
CC	-5.1	-5.3	-6	-5.1	-1	-2	-4.3	-2.1	-2.4	-3.9	-2.7	-1.3	-1.4
CCs	-5.7	-5.2	-6.1	-6.9	-7.6	-4.9	-5.0	-5.4	0.0	-3.3	-3.9	-1.7	-0.6
CCd	-4.9	-4.4	-5.2	-6.0	-6.8	-4.3	-4.4	-4.7	0.3	-2.7	-3.3	-1.3	-0.3
CCg	-6.0	-5.5	-6.4	-7.2	-7.9	-5.2	-5.2	-5.6	-0.2	-3.5	-4.1	-1.8	-0.7
Estonia													
CC	-5.2	-10.6	-11.3	-11.3	-10	-15.3	-15.9	-9.2	2.7	2.8	1.8	-1.8	-1
CCs	-8.4	-8.4	-12.7	-12.5	-13.8	-13.5	-15.9	-10.6	-0.8	-0.9	-4.4	-2.4	-3.1
CCd	-7.5	-7.5	-11.4	-11.2	-12.5	-12.3	-14.4	-9.2	0.1	-0.6	-4.0	-2.1	-2.6
CCg	-8.8	-8.8	-13.1	-12.9	-14.2	-13.9	-16.3	-10.8	-1.0	-1.3	-4.8	-2.7	-3.4
Hungary													
CC	-6.1	-7	-8	-8.7	-7.5	-7.4	-7.3	-7.3	-0.2	0.2	0.4	0.8	3
CCs	-7.6	-6.3	-6.3	-7.4	-7.5	-6.5	-4.3	-4.9	-1.0	0.2	0.3	1.5	0.7
CCd	-6.8	-5.6	-5.4	-6.5	-6.6	-5.7	-3.6	-4.3	-0.6	0.2	0.3	1.2	0.6
CCg	-7.7	-6.5	-6.4	-7.6	-7.6	-6.6	-4.4	-4.9	-0.9	0.2	0.3	1.7	0.8
Latvia													
CC	-7.7	-6.7	-8.2	-12.9	-12.6	-22.5	-22.4	-13.2	8.6	2.9	-2.1	-2.5	-0.8
CCs	-8.2	-10.0	-9.6	-11.2	-15.0	-15.4	-21.6	-15.3	-1.2	6.3	-0.6	-4.3	-4.2
CCd	-7.3	-8.9	-8.6	-10.0	-13.6	-13.9	-19.5	-13.4	-0.2	6.2	-0.3	-3.8	-3.8
CCg	-8.6	-10.3	-10.0	-11.5	-15.4	-15.8	-22.1	-15.6	-1.3	6.1	-0.9	-4.5	-4.4

Lithuania

CC	-4.7	-5.1	-6.7	-7.6	-7.1	-10.6	-14.4	-12.9	3.7	0.1	-3.7	-0.2	1.5
CCs	-8.2	-7.4	-9.5	-9.3	-10.1	-9.9	-13.2	-12.4	-2.7	1.4	-3.1	-4.7	-2.1
CCd	-7.3	-6.6	-8.7	-8.3	-9.1	-8.9	-12.0	-11.0	-1.6	1.7	-2.6	-4.0	-1.8
CCg	-8.5	-7.8	-9.9	-9.6	-10.5	-10.2	-13.6	-12.7	-2.8	1.1	-3.4	-4.9	-2.3

Poland

CC	-3.1	-2.8	-2.5	-5.3	-2.4	-3.8	-6.2	-6.6	-3.9	-5.1	-5	-3.7	-1.3
CCs	-5.2	-3.1	-4.0	-4.3	-5.5	-4.8	-6.1	-7.1	-5.4	-4.4	-5.4	-4.2	-3.2
CCd	-4.5	-2.6	-3.5	-3.8	-4.8	-4.3	-5.5	-6.4	-4.7	-3.8	-4.7	-3.6	-2.8
CCg	-5.4	-3.4	-4.3	-4.5	-5.7	-5.0	-6.3	-7.2	-5.6	-4.6	-5.5	-4.3	-3.3

Romania

CC	-5.5	-3.3	-5.9	-8.4	-8.6	-10.5	-13.4	-11.6	-4.2	-4.4	-4.5	-4.4	-1.1
CCs	-6.1	-7.1	-5.7	-9.2	-8.9	-11.0	-11.5	-13.9	-5.7	-2.9	-4.6	-3.8	-5.2
CCd	-5.3	-6.2	-5.1	-8.3	-7.9	-9.9	-10.3	-12.4	-4.5	-2.1	-3.8	-3.1	-4.6
CCg	-6.4	-7.4	-6.0	-9.6	-9.2	-11.3	-11.9	-14.3	-6.0	-3.2	-4.9	-4.0	-5.4

Slovak Republic

CC	-1	-0.2	-0.3	-0.4	-0.8	-1.3	-1	-2.1	-0.7	-0.5	-0.2	0.6	1.2
CCs	-4.1	-8.0	-8.1	-6.9	-9.0	-10.5	-11.3	-7.4	-2.7	-4.3	-4.2	-3.6	1.1
CCd	-3.6	-7.1	-7.2	-6.2	-8.1	-9.6	-10.3	-6.7	-2.0	-3.6	-3.6	-3.0	1.1
CCg	-4.2	-8.2	-8.3	-7.1	-9.2	-10.8	-11.6	-7.6	-2.8	-4.6	-4.4	-3.8	1.0

Slovenia

CC	-1	-0.2	-0.3	-0.4	-0.8	-1.3	-1	-2.1	-0.7	-0.5	-0.2	0.6	1.2
CCs	-4.0	-2.5	-1.6	-3.5	-4.6	-4.9	-5.6	-5.6	-0.8	-1.3	-0.7	1.5	2.9
CCd	-3.4	-2.1	-1.3	-3.1	-4.0	-4.4	-5.0	-5.0	-0.2	-0.9	-0.3	1.7	2.8
CCg	-4.3	-2.8	-1.8	-3.8	-4.8	-5.2	-5.9	-5.9	-1.0	-1.6	-0.9	1.4	2.8

Notes: The row CC shows the actual value of current account as percentage of GDP (see Table 1). The rows CCs, CCd and CCg, show the results given by the foreign sector rule in the three proposed scenarios (i), (ii) and (iii) in section 3

Source: own elaboration based on data of Table 1, Table 2 and the estimation of equation (5) reported in Table 3.

values estimated for the EU-27 as reported in Table 3. According to those results, the use of fiscal rules does not always translate into clear effects on current account deficit (see Table 4 and Figure 2).
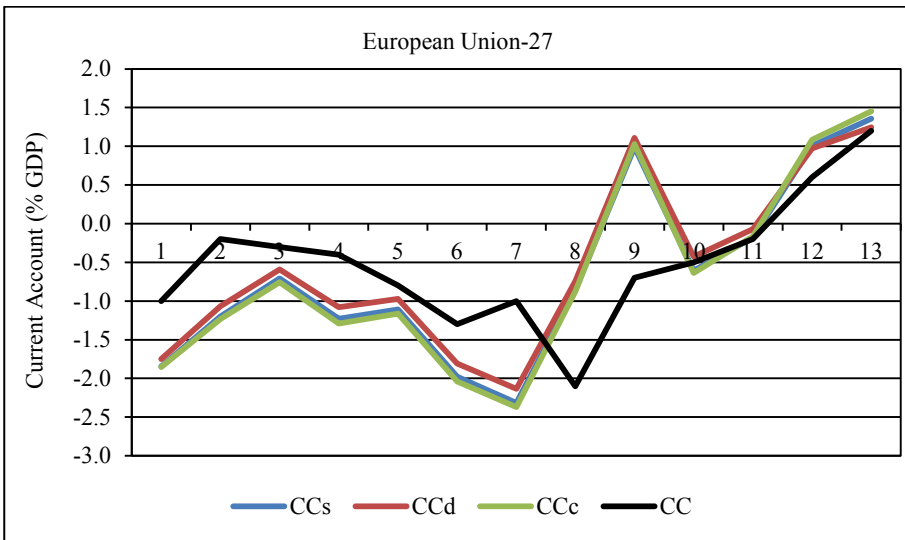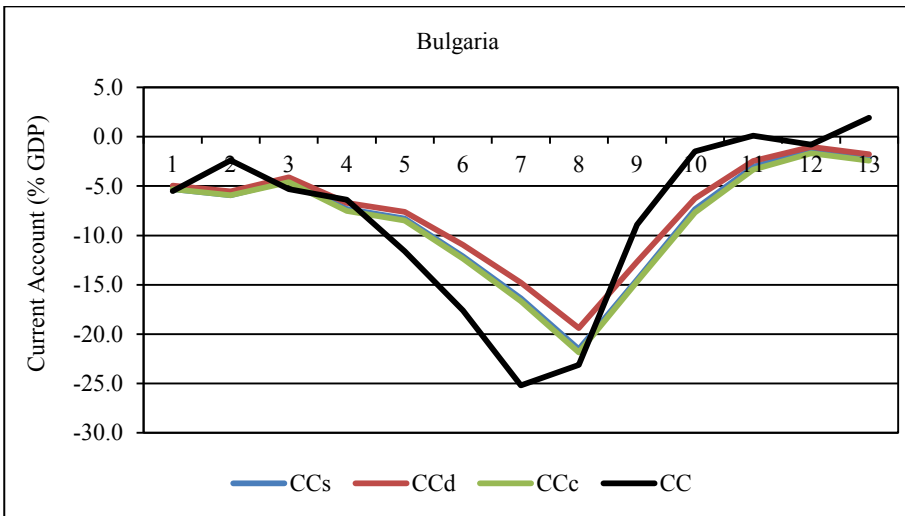

Figure 2.A: EU-27 current account (% GDP)

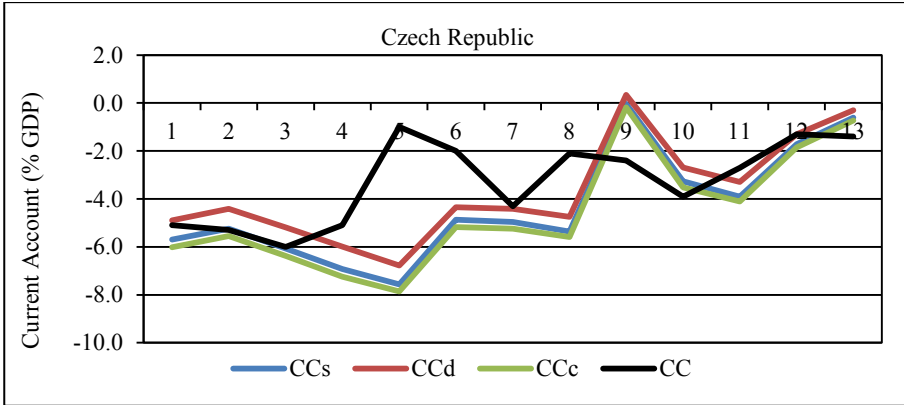Figure 2.B: Bulgaria current account (% GDP)
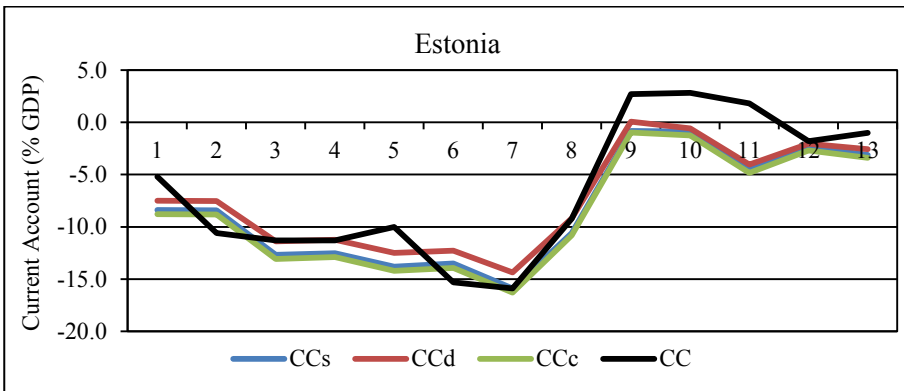
Figure 2.C: Czech Republic current account (% GDP)
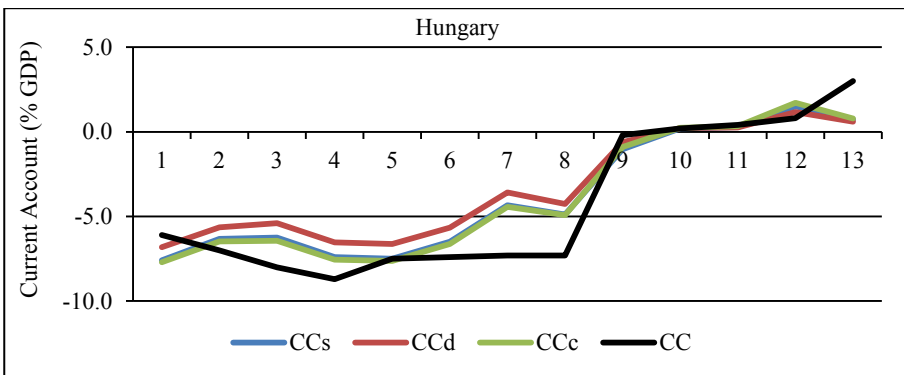

Figure 2.D: Estonia current account (% GDP)
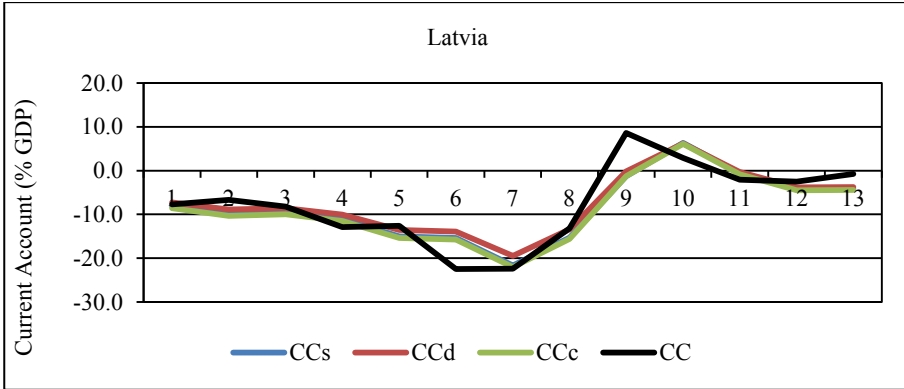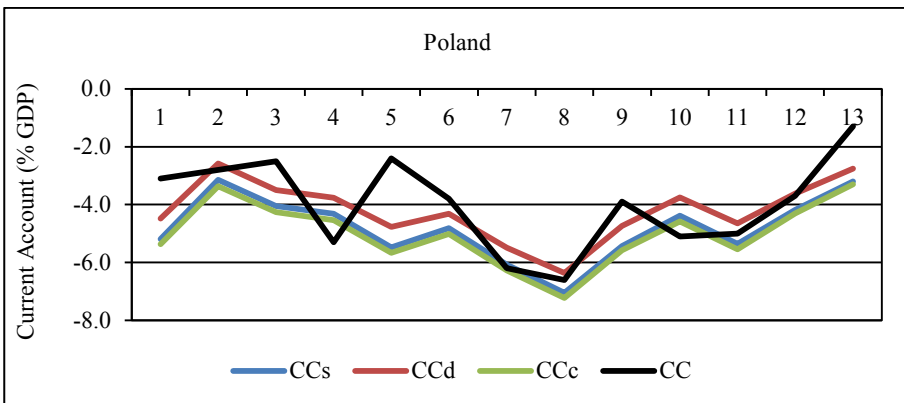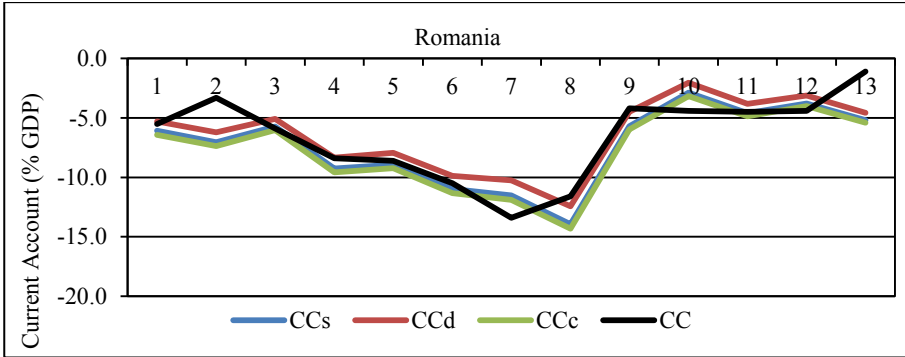

Figure 2.E: Hungary current account (% GDP)

Figure 2.F: Latvia current account (% GDP)
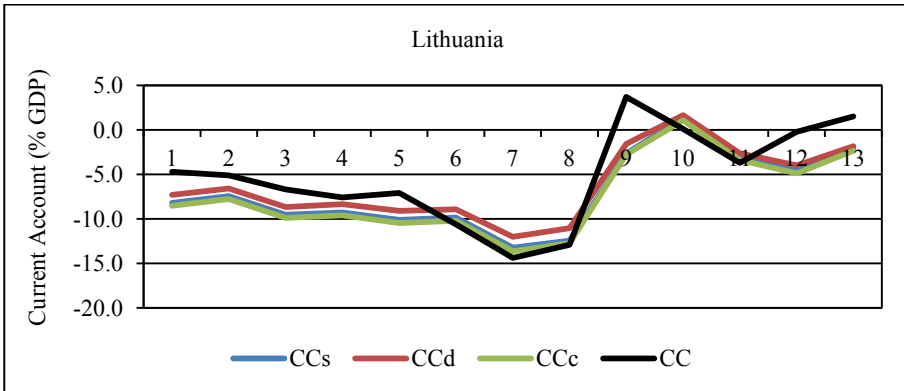
Figure 2.G: Lithuania current account (% GDP)

Figure 2.H: Poland current account (% GDP)
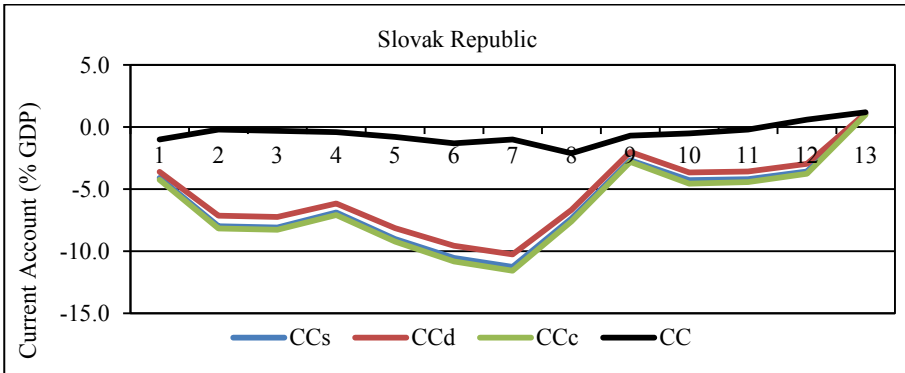
Figure 2.I: Romania current account (% GDP)

Figure 2.J: Slovak Republic current account (% GDP)

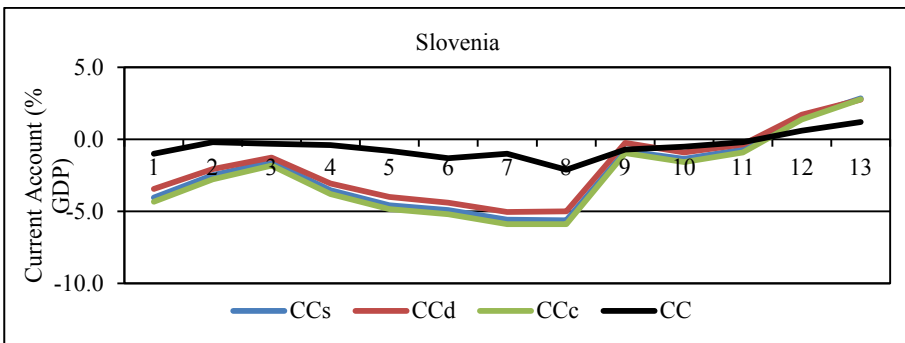

Figure 2.K: Slovenia current account (% GDP)

Figure 2: Current account (% GDP)

Source: own elaboration based on data of Table 4.

As seen in Figure 2, the implications of using fiscal rules would have had different effects on the current account performance of the analysed economies. In the EU-27 as a whole, and for the Czech Republic and Slovenia in particular, it seems that the outcomes of current account would have been better after following any kind of fiscal rule after the crisis, but not before. When looking at the rest of the CEEC countries, it seems that for Bulgaria, Estonia and Hungary, fiscal rules prove to benefit current account records but only for the years before the crisis. For Latvia, Lithuania, Poland and Romania the results are inconclusive, while for the Slovak Republic when using fiscal rules the current account deteriorates.

In Table 5 we offer a summary on the usefulness of fiscal rules and their implications on current account records according to the results shown in Tables 2 and 4, and Figures 1 and 2. In general, the use of fiscal rules seems to be useful for reducing fiscal deficit and this outcome does not translate in a deterioration of the current account except for the Slovak Republic during the whole period, and for Bulgaria, Estonia and Hungary only after the crisis.

Table 5

Implications of Fiscal Rules on Current Account

	Fiscal Rules	FR and Current Account
EU 27	Positive 2007-2010	Positive after crisis
Bulgaria	Positive	No after crisis
The Czech Republic	Positive	Positive after crisis
Estonia	Positive	No after crisis
Hungary	Positive before crisis	No after crisis
Latvia	Positive	Ambiguous
Lithuania	Positive	Ambiguous
Poland	Positive	Ambiguous
Romania	Positive	Ambiguous
The Slovak Republic	Positive	No
Slovenia	Positive	Positive after crisis

Source: own elaboration based on Tables 2 and 4.

CONCLUSIONS

In this paper we have tried to analyse the relationship between public finances and the current account, in the novel economic framework provided by an economic union scenario, where we have considered the possibility of following an explicit fiscal rule to guarantee a medium-term budgetary position close to balance. To that purpose we have studied in a very simple

way, the relationships between the government balance sheet and their implications on the current account, when fiscal rules are allowed.

In particular, we have analysed the relationship between government deficits and current account in the economic scenario provided by the European countries in transition. Initially, those countries showed a considerable potential for catch-up and convergence with their Western EU partners, but after the recent economic crisis of 2008 the evolution of the European countries in transition has not been homogeneous.

In our attempt to shed some light on the debate on the convenience of using fiscal rules, and their policy implications in that context, we have performed a counterfactual analysis. First, we have tried to offer a general view on the performance of fiscal rules, designed to control excessive government deficits. Then we explored the implications of using fiscal rules on the external position of the European countries in transition.

Regarding fiscal policy, after the recent economic crisis, at the EU level, the implementation of fiscal rules has been strongly enforced to smooth the negative effects of such depleted public finances. Those rules set limits on deficit, debt and public spending. Fiscal policy management is thus conditioned by three constraints. In this paper we have analysed a simpler fiscal rule linked to the economy and the debt of each country. Our rule only considers a single restriction and shows the deficit that would have been obtained by setting a debt target.

After applying our proposed rule to the CEEC we can conclude that using fiscal rules seems to contribute to a reduction in the public deficit. These findings are consistent with the Stability Plan for 2013-2016 which includes a spending rule. In the countries analysed, using fiscal rules seem to reduce public deficit in some cases, or even turn the deficit into a surplus. However, fiscal rules for Hungary proved to be useful before the economic crisis but not later, and for the EU-27 as a whole, using fiscal rules should have been advised only between 2007 and 2010. Our results are in line with those obtained by Díaz-Roldán and Montero-Soler (2011), regarding the success of fiscal rules for the new member states of the EMU. The authors found that the success of the fiscal regime is related to the nature of the shocks hitting the economy. As we have pointed out, when adopting a fiscal rule, not only the initial debt levels of the countries should be considered, but also the specific features of the economies involved. In other words, when countries do not demonstrate homogeneous economic frameworks, they should not apply identical fiscal policies.

This finding proves to be particularly interesting in the group of the European countries in transition when we look at the implications of the use of fiscal rules on the current account. Regarding the external sector, the implications of using fiscal rules would have had different effects on the current account performance of the analysed economies. In the EU-27 as a whole, and for the Czech Republic and Slovenia in particular, it seems that the outcomes of current account would have been better after following any kind of fiscal rule after the crisis, but not before. When looking at the rest of the CEEC, it seems that for Bulgaria, Estonia and Hungary, fiscal rules prove to benefit current account records but only for the years before the crisis. For Latvia, Lithuania, Poland and Romania the results are inconclusive, while for the Slovak Republic the current account deteriorates when using fiscal rules.

In our paper, after performing the empirical application, we can see that even when using a fiscal rule seems to be advisable, the European transition countries should not use the same type of fiscal rule. For most of them, the symmetric fiscal rule and the growth promoting one show similar results. Yet, after 2009 the growth promoting fiscal rule shows the worst result for Estonia. Moreover, when looking at the figures for the Visegrád Group, we can see that for all of them fiscal rules prove to be useful (except for Hungary after the crisis), but their impact on the current account is completely different for the four Visegrád countries. This result is even more noticeable when comparing the Czech Republic with the Slovak Republic.

Therefore, we could conclude with due caution that the use of fiscal rules contributes to rationalizing fiscal consolidation efforts, but this outcome does not necessarily translate in an improvement of current account figures. For the particular group of countries analysed in this paper, our results could indicate the diversity of several aspects of CEEC economic frameworks. Such a diversity should not be neglected in the context of the integration process, but a wider analysis of those considerations goes beyond the aim of this paper.

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