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Steps Towards a European Fiscal Union. Has the Revised Stability and Growth Pact Delivered So Far?

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Abstract

Since 2008-09, the European Union (EU) experienced two major economic crises revealing all the flaws of the existing model of economic governance. By leaving the majority of the countries with high levels of deficit and public debt, the two crises have shown that the Economic and Monetary Union (EMU) is indeed an unfinished project where the monetary union alone is not sufficient to safeguard the entire EU economy. To strengthen the EMU and to mitigate future risks that could possibly lead to the collapse of the euro-area, many called for a deeper fiscal integration by creating a central fiscal capacity for the EMU or, in other words, a fiscal union. Due to the present political unfeasibility of such an endeavour, however, concrete steps towards a European Fiscal Union (EFU) have been modest and the revised Stability and Growth Pact (SGP) remains its core building block. As the Pact defines supranational and shapes the creation of national fiscal rules, maintaining its credibility continues to be vital. This article analyses the effects of the fiscal rules on the public finances of the member states. It is assumed that by adhering to the supranational and adopting quality domestic fiscal rules, the member states are better equipped in remaining fiscally prudent, thus also affirming the revamped SGP as a solid base for the furthering of the EFU. The two-track evaluation approach defines dynamic panels for the EFU as a whole and for the selected country groups. It finds certain benevolent effects on budgetary performance at the EFU level, as well as for the countries with higher quality of the fiscal rules.

Keywords

Fiscal rules; FRI; SGP; Public finances; EMU; Fiscal union

A decade ago, the European Union (EU) experienced two major economic crises – financial and sovereign debt crisis – revealing all the flaws of the existing model of economic governance. The two crises have shown that the Economic and Monetary Union (EMU) is indeed an unfinished project where the monetary union alone is not sufficient to safeguard the entire EU economy (Stiglitz 2017; Schneider, Zuleeg and Emmanouilidis 2014; Jones, Kelemen and Meunier 2016; Bongardt and Torres 2017). More precisely, a comprehensive EMU implies the existence of the monetary-fiscal dichotomy.[1] As fiscal policy has not been conferred to the EU as its competence, but has remained under the national domain, the EU capabilities in preventing and/or containing economic shocks have consequently remained limited. To strengthen the EMU and to mitigate future risks that could possibly lead to the collapse of the euro-area, many have called for a deeper fiscal integration (Thirion 2017; Nicoli 2013; Juncker, Tusk, Dijsselbloem, Draghi, et al. 2015; European Fiscal Board 2019; De Grauwe 2013; Dan 2014). Such an institutional architecture would ideally extend beyond the current rule-based framework by taking the form of a central fiscal capacity or, in other words, a fiscal union.

The EMU's fiscal integration has therefore been seen as any attempt to further centralise fiscal policies (Thirion 2017) and as such, it would encompass a gradual, transformative process from a fiscal union based on common rules (i.e. the status quo) to a fully-fledged European Fiscal Union (EFU) with a substantial Eurozone budget, an enabled stabilisation function and an enhanced risk sharing.[2] This final degree of the EFU, also defined in the Five Presidents' Report (Juncker et al. 2015), would entail a significant degree of economic convergence, financial integration, further coordination and pooling of decision making on national budgets, with adequate strengthening of democratic accountability. The conditions for entrenching the monetary into the fiscal union (De Grauwe 2013), however, fall short of appearing as good enough incentives for the institutional (re)construction. Completing the EMU requires the Member States (MS) to give up a part of national sovereignty whilst pursuing a deeper integration and this, for the time being, does not appear politically feasible (European Fiscal Board 2019). Moreover, a higher degree of fiscal integration is not conceivable without the fundamental Treaty changes that are needed for the further pooling of competences to the EU level.

Yet, in the absence of compound, centralised fiscal initiatives, sound foundations for fiscal prudence in the MS remain essential (Dabrowski 2014). The Maastricht Treaty and the subsequent Stability and Growth Pact (SGP) have defined the uniform fiscal rules or the nominal anchors (caps) on deficit and debt for the MS. Whereas these benchmarks had already been violated in the past, the majority of the governments found themselves with high and precarious levels of deficits and public debts in the aftermath of the two crises. The institutional overhaul that followed as a response to the adverse effects of this turmoil strengthened the SGP by adding new layers of harmonised regulation to the framework: 'Six-Pack', 'Two-Pack' and Fiscal compact (Ioannou and Stracca 2014).[3] The new economic governance thus increased the surveillance and coordination of domestic fiscal and economic policies through the European Semester (Savage and Howarth 2018), as well as enforced the Pact's preventive and corrective mechanisms related to the macroeconomic and fiscal imbalances.

Amendments to the supranational fiscal framework have consequently prompted the MS to make adjustments to their national fiscal systems so as to guarantee compliance with the EU rules. As a result, domestic landscapes of fiscal rules have become rather complex and with questionable effectiveness (Pench, Ciobanu, Zogala and Manescu 2019; Gaspar and Amaglobel 2019; European Fiscal Board 2019; Deroose, Carnot, Pench and Mourre 2018; Darvas, Martin and Ragot 2018; Beetsma, Thygesen, Cugnasca, Orseau et al. 2018), leading to believe that the underlying SGP is challenging to comprehend and even more so to implement. Even though a simpler, more transparent and predictable framework is an essential component of the EMU deepening (Beetsma et al. 2018), the revised Pact represents the main building block of the fiscal union (Thirion 2017; Dabrowski 2014) as it centralises certain aspects of fiscal policy. It is therefore vital that the common fiscal rulebook remains credible.

This article sets out to analyse the effects of the fiscal rules on the public finances of the MS constituting a fiscal union. It is assumed that by adhering to the supranational and adopting quality domestic fiscal rules, the MS are better equipped in remaining fiscally prudent, thus also affirming the revamped SGP as a solid base for the furthering of the EFU. The article is organised as follows. Section two reviews the relevant literature on both supranational and national fiscal rules. The following two sections refer to the empirical analysis on the effects of the fiscal rules on budgetary indicators. The applied two-track methodology approaches the works of Marneffe, van Aarle, van der Wielen and Vereeck (2011) and Bergman, Hutchison and Jensen (2013) in setting-up the panel regressions. In particular, section three reveals the estimates of the EFU's budgetary performance, while section four does the same for the selected countries grouped on the basis of the quality and the quantity of their fiscal rules. The last part of the paper is reserved for the concluding remarks.

FISCAL RULES IN THE EUROPEAN FISCAL UNION

In a fiscal union based on common rules (Thirion 2017) such as the E(M)U, the constituting countries must respect the supranational fiscal rules so as to ensure long-term fiscal sustainability and to support countercyclical fiscal policy (Darvas et al. 2018). The MS also define complementary domestic rules in order to be compliant with the EU ones. The challenge lies, however, in the implementation of the rules due to the relative position of the legal acts introduced at the EU level. A fiscal rule stemming from a regulation is expected to be the same in content, format and timing for all MS, thus guaranteeing full convergence. Directives, on the other hand, allow for a relatively wider margin of freedom in transposition, which ultimately leads towards larger variation amongst the countries. On top of the EU law, the MS can introduce additional fiscal rules on their own, or as a result of the obligations stemming from the intergovernmental agreements, in both cases potentially exacerbating diversity. These three types of changes significantly affect the overall quality of the fiscal systems. Additionally, the adherence to the supranational rules remains attainable only if the MS manage to eschew the preventive and corrective mechanisms of the SGP.

Supranational Rules on Public Finances

A fiscal rule is defined as a permanent constraint on fiscal policy expressed in terms of overall fiscal performance through indicators such as government budget deficit, borrowings and debt, including the key subsets of these aggregates like the government revenues or expenditures (Kopits and Symansky 1998; Darvas et al. 2018). The EU rules on public finances, as laid down in Article 126 and Protocol No. 12 of the Treaty of the Functioning of the European Union (TFEU), demand a budget deficit of less than three per cent of GDP and a public debt below 60 per cent of GDP (or an accelerated approach towards the set limit). The complementing SGP underpins the aforementioned thresholds through its preventive and corrective arm. With a goal of ensuring sound budgetary policies in the MS over the medium term, the preventive arm also defines auxiliary supranational rules. These comprise a country-specific medium-term objective (MTO) expressed in structural terms and an accompanying expenditure benchmark that outlines the net growth rate of government spending at or below a country's medium-term potential economic growth rate in relation to its MTO (European Commission 2020).

Any departure from the MTO, which takes into account the need to achieve sustainable debt levels while securing the governments with enough room for discretion and a safety margin against breaching the deficit and debt caps, triggers the Significant Deviation Procedure (SDP). The procedure, in principal, gives the MS the opportunity to correct a deviation from their MTO or the adjustment path towards their MTO (i.e. the expenditure benchmark) and to avoid the opening of the corrective proceeding of the Pact (European Commission 2020). The SDP, however, is relatively novel as it stems from the 'Six-Pack' and thus far, it has been activated only for Romania and Hungary in 2017 and 2018 respectively.

The corrective arm or the Excessive Deficit Procedure (EDP), on the other hand, has been operational since the Pact's inception and it is a direct indicator of (non)adherence to the nominal anchors enshrined in the TFEU. This practice has been considerably strengthened in 2011 by adding non-compliance with the debt (on top of the deficit criterion) as a criterion for its triggering, and introducing a graduated system of financial sanctions for the euro-area MS (also in the preventive arm). Whereas both nominal benchmarks had already been breached in the past, the financial and sovereign debt crisis led to the majority of MS being placed under the EDP. Even though the main purpose of the procedure has always been to motivate countries in timely correcting the undesired excesses, the EDP's average duration has been between four and five years (European Fiscal Board 2019), therefore often facilitating the postponement of fiscal consolidation in the MS (Darvas et al. 2018).

Yet, the procedure comes with another major flaw which renders the whole mechanism arguably weak (Bongardt and Torres 2017). The effects of the sanctioning mechanisms, whether pre or post overhaul, remain unseen as sanctions for the undesired excesses have never been imposed. The corrective arm continues to be politically driven (European Fiscal Board 2019) and avoiding penalties is often linked with factors like the country's negotiating capacities or the so-called 'unexpected adverse economic events' (Glencross 2018). Despite failing to impose sanctions and thus possibly affecting its credibility, the EDP has indirect effects on the MS. The scrutiny that comes with the procedure can shape perceptions about country's borrowing creditworthiness on the financial markets (Gaspar and Amaglobel 2019), thus potentially limiting its options in financing future deficits.

Since the supranational fiscal rules should demonstrate integrity, their effectiveness has often been assessed. In so doing, an acceptable representation of these rules has been sought and various seminal works relied on the EDP and the EMU membership indicators (Reuter 2019; Ioannou and Stracca 2014; Frankel and Schreger 2013; Bergman et al. 2013). Concerning the latter, the commonly held assumption is that the preparation for the Eurozone membership can significantly influence adherence to the supranational rules. The rationale behind it has its footing in what is commonly known as EU conditionality. This phenomenon tends to highlight the EU's leveraging power paradox (Coman 2017). The EU's position towards countries wanting to accede the EU is perceived as strong: the Union dictates the terms of the accession as it is offering the ultimate prize, which is the EU membership. For the MS, contrariwise, the conditionality mechanism is weak as no incentives to comply with the accession demands persist.

The same reasoning can therefore be applied to the EMU. There, the EU disposes of greater leverage since the non-EMU countries are obliged to adopt the Euro and abide by the accession (Maastricht) criteria (except for Denmark and the UK who had been granted opt-out clauses). Yet, better fiscal prudence due to the preparation for the euro adoption or, more narrowly, the participation in the Exchange Rate Mechanism II (ERM II)[4] has fallen short of the initial expectations. One group of authors (Bergman et al. 2013) found that the Eurozone membership has no additional effects on primary balance (i.e. ex-post euro adoption), while others obtained similar results by adding that the effects of the EMU membership on primary balance are attainable only before the introduction of the euro (i.e. ex-ante), but not thereafter (Ioannou and Stracca 2014). The latter finding likewise confirms the presence of the conditionality phenomenon.

This power paradox goes hand in hand with considerable disparities in levels of deficit and public debt between the EMU and Non-EMU countries. The statistics show that in the pre-crises period most of the older EMU members were already in the constant breach of the

SGP provisions. Table 1 shows consolidated fiscal deficit and public debt per country group in the 2007-2017 period. The selected time-frame best captures the movements in governments' public finances while aligning the fiscal consolidation processes with the new requirements stemming from the 'packs'. The distinction between Eurozone (EMU-19) and non-Eurozone (non-EMU-8) countries has been made as significant differences in deficit and debt levels between the two groups are expected. This separation is also convenient from the perspective of the Eurozone's enlargement, as well as the deepening of the integration. Moreover, the EU-28 group reflects the composition of the Union prior Brexit and it will be used as the main reference, while the EU-27 excludes the UK. All the data have been collected from the AMECO database and are weighted according to the MS' GDP in the total EU-28 GDP.

Table 1: Public debt and fiscal deficit per country group in period 2007-2017 (percentage of GDP)

Fiscal deficit											
Country group	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU-28	-0.86	-2.48	-6.62	-6.39	-4.56	-4.24	-3.31	-2.96	-2.38	-1.67	-1.22
EU-27[1]	-0.49	-2.01	-6.05	-5.89	-4.07	-3.53	-2.93	-2.48	-1.98	-1.44	-1.06
EMU-19	-0.65	-2.16	-6.26	-6.18	-4.23	-3.64	-3.04	-2.56	-2.08	-1.54	-1.12
Non-EMU-8[1]	0.56	-1.00	-4.58	-3.97	-3.01	-2.81	-2.25	-1.94	-1.32	-0.77	-0.70
Public debt[2]											
Country group	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EU-28	57.96	62.30	72.59	78.44	81.32	85.19	87.10	87.80	86.27	85.41	83.51
EU-27[1]	61.32	64.51	73.97	78.91	81.33	85.30	87.37	87.89	85.86	84.86	82.97
EMU-19	64.94	68.57	78.37	84.05	86.77	91.39	93.64	94.19	92.10	91.03	89.27
Non-EMU-8[1]	36.00	37.61	42.62	44.86	46.16	46.63	47.95	48.12	46.79	46.23	44.56

Notes: 1) The UK has been excluded due to the Brexit 2) For consolidation purposes, the public debt figures exclude intergovernmental loans approbated during the crises (periods 2009-2016);

Source: Author's creation based on AMECO data

As visible from Table 1, the biggest shock happened in 2009 after the financial crisis broke out. Deficit levels witnessed a significant surge, surpassing an average of 6.5 per cent of the GDP at the EU-28 level. The Eurozone countries experienced particularly high deficits, while the non-EMU-8 countries performed better by reaching an average deficit of 4.58 per cent of GDP. The economic recovery started the following year and the non-EMU-8 countries reached the Maastricht benchmark already in 2011. The EMU-19, however, approached the critical 3 per cent of GDP two years after and officially satisfied the provision only in 2014 with an average deficit of 2.56 per cent of GDP. The trend captured from the EU-28 figures coincided with the one of the EMU-19 throughout most of the analysed period. Public debt also started to expand in the advent of the financial crisis. The subsequent sovereign debt crisis propelled the debt even further, and some groups of countries reached critical levels. The most indebted group was the one sharing the same currency (EMU-19). The Eurozone's public debt peaked in 2014 reaching 94.19 per cent of GDP. At the same time, the Non-EMU-8 experienced the same trend, but significantly below the Maastricht's 60 per cent of GDP throughout the whole period. Although mild, the decrease in public debt levels is visible for all groups from 2015 onwards.

Fiscal Rules in National Frameworks

Domestic fiscal rules are complementary to and support compliance with the EU fiscal rules (Pench et al. 2019). When addressing their use, the relative position of the supranational legal acts gathers momentum. The regulations that came with the two 'packs' reinforcing the SGP were immediately applicable at the national level thus limiting fiscal diversity of the MS and ensuring full alignment with the EU rules. Relevant directives and intergovernmental agreements such as the Fiscal Compact, however, required transposition and were the main source of potential discrepancies as they allowed for a fairly high degree of freedom in implementation. This has created additional layers of complexity with regard to consistency between the national and the EU level, and has arguably weakened the effectiveness of the domestic rules (Pench et al. 2019; Deroose et al. 2018).

In particular, the only 'Six-Pack' directive on the requirements for budgetary frameworks of the MS has been presented with a relatively large scope. It calls for, amongst other things,[5] the set-up of medium-term budgetary frameworks (including the MTO), arrangements for independent monitoring and analysis, and country-specific numerical fiscal rules that effectively promote compliance with the obligations deriving from the TFEU and the previously defined MTO (EUR-Lex 2011). The subsequent Fiscal compact, on the other hand, obliged the MS to transpose the rules under the preventive arm (i.e. the debt brake) into their national laws, thus failing to account for the interpretative changes in the Pact's implementation or the flexibility additions (Pench et al. 2019). Equally, the introduced balance budget rule supplemented the existing national rules or even propelled the introduction of the new ones so as to ensure compliance.

The formulation of diverse and rather lax national rules that transpired as a result of the transposition, have also been characterised by countries' aptitude towards cherry-picking between different rules (European Fiscal Board 2019). One example of such a behaviour has to do with the expenditure benchmark being used alongside the structural deficit (encompassed in MTO). Such a condition permits the MS to choose more favourable measures for themselves when formulating domestic rules, which bolsters uneven application of the rules across the MS. Largely, this pick and choose attitude stems from the SGP reforms throughout the years and has a purpose of adapting the fiscal rules to different economic circumstances. The to and fro between the tightening (during the crises) and the loosening of the rules (in the good times), however, incentivised the procyclicality of domestic fiscal policies and has undermined the supranational framework (Beetsma et al. 2018).

Furthermore, the legislative packages 'Six-Pack', 'Two-Pack' and Fiscal Compact called for the establishment of the national independent fiscal institutions (IFIs) to monitor the compliance with fiscal rules. Depending on the role they play, these bodies can be set up as Independent Fiscal Authorities or Fiscal Councils (Jankovics and Sherwood 2017). The former are responsible for setting up the annual budgetary and debt targets, taxation and public expenditure while the latter influence fiscal policy by providing independent analysis, forecasts and advice. Even though the IFIs do not possess any sanctioning powers, which could additionally motivate the MS in maintaining fiscal prudence, their unbiased and realistic macroeconomic and budgetary forecasts can considerably improve the effectiveness of fiscal planning and consequently boost commitment to budgetary discipline, provided they are well designed by the governments (Jankovics and Sherwood 2017). IFIs' views could hence potentially lead to a timely correction of the imbalances, avoiding arguably stricter proceedings or the EDP.

The new economic governance boosted the enactment of the domestic fiscal rules by roughly 65 per cent, jumping from 68 implemented rules prior 'Six-Pack' to 112 in 2017 at the EU-28 level (see Table 2). The EMU countries employed a considerably larger number of rules than the Non-EMU countries. This flourishing of fiscal rules is due to a shift from the pre-crises period wildly criticised for the continuous accumulation of public debt amongst the Eurozone countries (Baxa and Paulus 2016) and thus the SGP breaches, to a period after the two crises defined by the tightened and relatively improved fiscal frameworks. Moreover, the table includes the IFI count due to the useful role they play in the budgetary processes and their rapid spread throughout the EU in the recent years (Jankovics and Sherwood 2017). It is visible that the tendency of establishing a secondary IFI in order to divide tasks according to the EU legislation, lies predominantly with the EMU countries (i.e. more than 40 per cent of the Eurozone countries have two IFIs, while the Non-EMU have only one or, in case of Poland, none).

Table 2: Number of fiscal rules (FR) and independent fiscal institutions (IFI) per MS

EMU countries																				
	BE	DE	EE	IE	GR	ES	FR	IT	CY	LV	LT	LU	MT	NL	AT	PT	SI	SK	FI	Σ
FR prior 'Six-Pack'	4	4	3	2	-	3	2	4	1	-	4	2	-	2	2	3	2	4	5	47
FR post 'Six-Pack'	5	1	3	5	3	3	1	9	3	4	6	4	2	9	5	10	2	3	8	86
FR in force (2017)	4	5	3	4	2	3	3	7	3	3	5	3	2	5	4	7	1	5	9	78
IFIs	2	1	1	1	2	1	1	1	1	1	1	2	1	2	2	1	2	2	2	27
Non-EMU countries																				
	BG	CZ	DK	HR	HU	PL	RO	SE	UK											Σ
FR prior 'Six-Pack'	4	-	1	2	2	5	2	3	2											21
FR post 'Six-Pack'	18	3	4	1	4	5	3	0	2											40
FR in force (2017)	9	3	3	1	3	4	5	3	3											34
IFIs	1	1	1	1	1	-	1	1	1											8

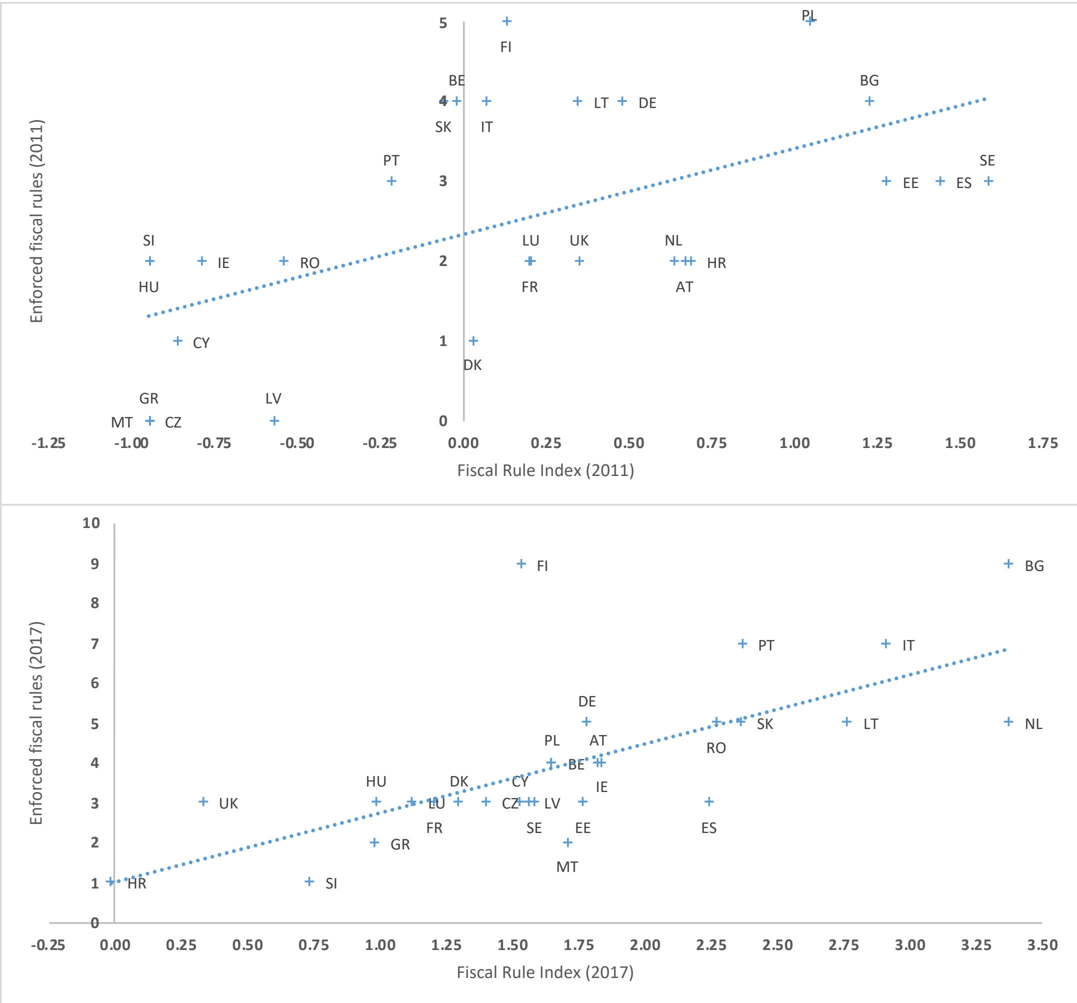
Notes: 1) Fiscal rules post 'Six-Pack' refers to the period 2011-2017 where some rules could have had a limited duration, but have been counted nonetheless. 2) No shaded fields – IFIs established before 'Six-Pack'; Light-grey shaded fields - at least one IFI created before 'Six-Pack'; Dark-grey shaded fields – IFIs established or reformed after 'Six-Pack';

Source: Author's creation based on the European Commission's dataset on FRI (for fiscal rules) and the data from Jankovics and Sharewood (2017) for IFIs

The quantity of the enforced fiscal rules, however, tells very little about their underlying quality. The European Commission has therefore developed several indices to assess the quality of the fiscal rules and the ever-changing national fiscal frameworks. In this article, a special emphasis has been put on the Fiscal Rule Index (FRI) which takes into account four fiscal rules at all government levels in every MS: budget-balanced, expenditure, debt and revenue rule. These rules are measured through a set of sub-indices, the so-called

Fiscal rule strength indices (FRSI), which are ultimately summated so as to construct the FRI. In particular, the FRSI (defined on a scale of 0 to 10) account for the percentage of the government spending per government level (general, central, regional, local or social security), legal base, binding character, correction mechanisms, resilience to shocks and bodies monitoring compliance, and the correction mechanism (European Commission 2019b). The computed FRI can obtain both positive and negative values where higher figures represent a robust quality of the implemented fiscal rules.

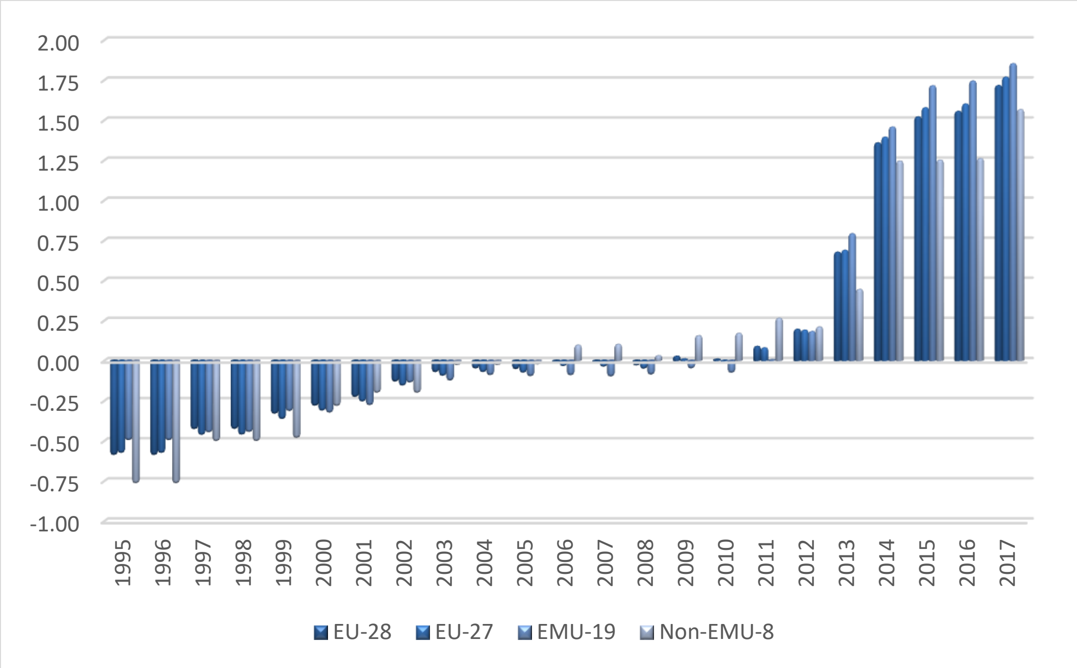
Figure 1: FRI and number of domestic fiscal rules (2011 and 2017)



Source: Author's creation based on the European Commission's dataset on FRI

Since a higher (lower) number of implemented rules does not necessarily suppose a greater (lesser) quality, a trade-off between the two indicators is shown in Figure 1 for all 28 countries in the years 2011 and 2017 or before and after the regulatory overhaul. It is worthwhile noting that all MS, except Croatia, have moved from the left to the right quadrant when contrasting the two years. This indicates that, besides the increased quantity of the national rules in 2017, their quality improved significantly as well. The majority of the MS is concentrated in the middle graph with two to four enforced fiscal rules per country and a FRI that ranges between 1.00 and 2.00 units.

Figure 2: Average FRI per country group in period 1995-2017



Source: Author's creation based on AMECO data

In addition to the aforesaid quantity-quality trade-off, it is also important to show the evolution of the FRI with an expanded timeframe. Hence, Figure 2 displays the arithmetic means of the FRI per country group in the period 1995-2017. The visualisation indicates that there has been an overall positive development in quality of the EU fiscal systems, both individual and consolidated. This corroborates previously mentioned assumptions on the majority of the fiscal rules being introduced after the two crises (and after the regulatory revamp). It also shows that the EMU countries made significant enhancements in enforcing their fiscal structures during and after the overhaul (in 2017, the FRI was 1.86).

Empirical Analysis: Estimating the EFU's Sustainability

The empirical part of the article explores the link between the enacted fiscal rules and the public policy in the member countries constituting a fiscal union. In particular, it attempts to determine whether the implementation and the adherence to the fiscal rules at both national and supranational level has an impact on the fiscal stance of the EFU. The assessment has been conducted at the aggregate level as opposed to the country level (see next section). To differentiate between the two levels of fiscal rules, the analysis relies on the previously introduced notions of the FRI for the domestic and the EDP and the EMU membership indicators for the supranational rules. The impact of the EU rules stemming from the preventive arm of the Pact have not been considered due to their auxiliary character and limited availability of data concerning the SDP.

The employed econometric approach is close to Marneffe et al. (2011) and Bergman et al. (2013) who also look at the impact of fiscal rules on public finances. Other conventional scholarship (Wawro 2002; Frankel and Schreger 2013; Bun and Sarafidis 2013; Baltagi 2013; Arellano and Bond 1991) has likewise been tracked and the following dynamic panel regression has been estimated:

$$Y_{i,t} = \beta_1 + \beta_2 Y_{i,t-1} + \beta_3 X_{i,t} + Z'_{i,t}\beta_4 + \varepsilon_{i,t} \qquad \text{(Equation 1)}$$

$$\varepsilon_{i,t} = \mu_i + \lambda_t + \nu_{i,t}\,, \quad \nu_{i,t} \sim iid\ (0, \sigma_\nu^2) \qquad \text{(Equation 2)}$$

where $Y_{i,t}$ embodies the dependent variable (cyclically adjusted primary balance (CAPB), primary balance, fiscal deficit or total expenditures), $Y_{i,t-1}$ is the lagged dependent variable, $X_{i,t}$ represents the independent variable (FRI), $Z'_{i,t}$ is the vector of control (lagged FRI, lagged public debt and lagged output gap) and dummy variables for the Eurozone membership and the EDP scrutiny, and $\varepsilon_{i,t}$ is the error term. The precedence has been however given to the budgetary variables in cyclically adjusted terms (for example cyclically adjusted primary balance) over the actual ones (for example fiscal deficit, primary balance or total expenditures) as they enable direct control over public policy (Bergman et al. 2013). The macroeconomic and fiscal variable explanations are available in Annex 1.

The independent variable or the FRI represents the quality of the national fiscal rules which aim at aiding the MS in complying with the rules introduced at the EU level and maintaining fiscal prudence. A positive (negative) impact on the dependent variables is expected should the FRI increase (decrease). Moreover, to isolate and to account for the effects of the supranational fiscal rules, the econometric model supposes a distinction between the EMU and the non-EMU countries, as well as the countries covered by the EDP within the analysed timeframe. The following dummy variables have therefore been introduced:

$$D_{EURO} = \begin{cases} 1, & \text{if a MS} \in \text{of EMU in time } t \\ 0, & \text{otherwise} \end{cases} \qquad D_{EDP} = \begin{cases} 1, & \text{if a MS} \in \text{of EDP in time } t \\ 0, & \text{otherwise} \end{cases}$$

The EDP dummy is a more straightforward indicator as it divides the panel countries between disobeying and complying in relation to the deficit and debt caps in a given year. With the euro dummy, on the other hand, it has been assumed that the Non-EMU countries are more motivated to abide by the supranational fiscal rules as they approach the adoption of the Euro and thus the ERM II mechanism (as discussed in the previous section). Even though the opt-out countries such as Denmark and the UK (who ultimately departed from the EU) were not expected to join the euro, they were still a part of a fiscal union based on common rules in the given point in time and have been therefore included in the assessment.

All the annual data have been collected from the AMECO and the EC databases for 28 MS in the period 1995-2017. The selected time frame best captures the economic contractions that occurred in the past and the consequent regulatory responses, which affect all variables. These crucial changes in historical values together with a relatively wide time-span and a higher number of case countries justify the employed dynamic assessment. Additionally, the initial regression model contained a third dummy variable so as to differentiate between the years of the traditional SGP and the new economic governance (i.e. the 'packs'), but it was not statistically significant in any of the scenarios and it has therefore been dropped. Even without this distinction, certain overall effects of the strengthened governance on fiscal indicators have been captured and are explained hereunder.

Table 3 shows the results of the unbalanced dynamic panel by employing the Generalised Method of Moments (GMM). The employed first-difference estimation looks at the short run adjustment (i.e. output stabilisation as a fiscal policy objective). It reports the Arellano-Bond one-step estimates with country and period fixed effects (see Equation 2) so as to account for heterogeneity across the MS (country-specific effects that are constant over time and correlated with explanatory variables) and time-specific events that affect all the states. Robust standard errors are also reported (in parentheses) for each estimate. The Sargan test of over-identifying restrictions has been computed and it is displayed as J-statistics.

Table 3: Dynamic panel estimate of the FRI effect on fiscal stance of the EFU's constituencies

Variable	CAPB		Primary balance		Fiscal deficit		Total expenditures	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
$DV_{(t-1)}$	0.568*** (0.039)	0.560*** (0.041)	0.559*** (0.037)	0.550*** (0.039)	0.598*** (0.039)	0.594*** (0.040)	0.608*** (0.037)	0.592*** (0.042)
$FRI_{(t-1)}$	0.399* (0.235)	0.385 (0.237)	0.144 (0.243)	0.180 (0.244)	0.146 (0.249)	0.168 (0.254)	-0.514* (0.269)	-0.531* (0.273)
Public $debt_{(t-1)}$	0.031*** (0.009)	0.029*** (0.010)	0.042*** (0.009)	0.047*** (0.009)	0.026*** (0.009)	0.028*** (0.010)		-0.010 (0.011)
Output $gap_{(t-1)}$		-0.028 (0.042)		0.060 (0.041)		0.027 (0.039)		-0.061 (0.053)
$D_{EURO(t-1)}$			1.087* (0.619)	0.979 (0.621)	1.010 (0.620)	0.958 (0.620)		
$D_{EURO(t-2)}$			-1.033* (0.595)	-0.924 (0.594)	-1.365** (0.623)	-1.315** (0.625)	1.221** (0.513)	1.085** (0.518)
$D_{EURO(t-1)}*FRI_{(t-1)}$					0.319 (0.243)	0.306 (0.246)		
$D_{EDP(t-1)}$	-0.690* (0.393)	-0.712* (0.392)	-0.738* (0.386)	-0.730* (0.385)	-0.717* (0.393)	-0.709* (0.394)	0.886* (0.475)	0.908* (0.482)
$D_{EDP(t-2)}$	0.829* (0.443)	0.822* (0.447)	0.968** (0.462)	0.986** (0.456)	0.948** (0.472)	0.958** (0.471)	-1.161** (0.535)	-1.145** (0.536)
$D_{EDP(t-1)}*FRI_{(t-1)}$							-0.800*** (0.280)	-0.812*** (0.283)
$D_{EDP(t-2)}*FRI_{(t-1)}$	-0.426** (0.208)	-0.414* (0.211)	-0.467** (0.216)	-0.493** (0.214)	-0.438** (0.219)	-0.447** (0.220)	1.145*** (0.309)	1.142*** (0.306)
J-stat (probability)	0.133	0.120	0.397	0.371	0.319	0.303	0.141	0.071
Observations	544	544	544	544	544	544	546	544

Notes: *** significant at 1%; ** significant at 5%; * significant at 10%.

Source: Author's creation

The Sargan test retrieved solid results for all dependent variables used in the model,[6] indicating a relatively high probability of utilising valid instruments in the regressions run. Lagged dependent variable and lagged public debt are always statistically significant at conventional levels for all dependent variables, meaning that the previous year's budgetary balance and the levels of expenditure and debt influence budgetary decisions in the subsequent period. These results are similar to the earlier empirical findings in the scholarship.

Lagged FRI returned statistical significance for the CAPB and the total expenditures, but not for the primary balance and the fiscal deficit. The positive coefficient obtained for the CAPB indicates that an increase in FRI will result in lower deficits or, depending, higher surpluses. Moreover, the total expenditures' negative parameter represents a decrease in expenditures, which is likely to materialise in a severer fiscal environment (also measured with the FRI's progression). Largely, the employment of the lagged FRI suggests that these positive outcomes require at least one year to have an effect on the abovementioned fiscal indicators.

Additional effects can be noted when accounting for the EDP scrutiny as the individual lagged and two-period lagged dummies proved to be statistically significant for all dependent variables. With the introduction of the second lag, the parameters obtained tend to change from negative to positive for the CAPB, primary balance and fiscal deficit, and from positive to negative for the total expenditures. This illustrates that the consolidation efforts will initially worsen the fiscal stance of the MS (period t-1) before actually starting to improve (period t-2). A possible explanation for the unfavourable estimates in t-1 could be found in the reversed effects of fiscal consolidation or in a longer waiting period for certain actions to give results. The consolidation processes extensively hinge on the fiscal multipliers (i.e. a measure of the short-term impact of discretionary fiscal policy on output), which were sizeable during the sovereign debt crisis (Blot, Cochard, Creel, Ducoudré et al. 2014; Batini, Eyraud, Forni and Weber 2014). By accounting poorly for multipliers' effects, and due to the synchronised consolidation cycle of the MS, the position of the fiscal indicators deteriorates.

Similar inferences can be made when analysing the interaction between the EDP and the FRI. The used term captures the effects of the supranational fiscal rules and, at the same time, apprehends for the policy changes in the national fiscal systems. Whereas these variables have manifested positive properties on fiscal indicators from an isolated perspective, the interaction (denoted by a negative coefficient for all dependent variables) shows that the fiscal consolidation processes in the MS and the simultaneous EDP scrutiny, do not yield desired budgetary improvements within the first two years. The only exception relates to the total expenditures variable, which portrays an instant restrictive behaviour in the first year. For example, a reaction to the introduced cuts in government spending (as part of the consolidation process). These effects are due to the policy changes that, pressured by the arguably lengthy EDP surveillance,[7] bring about potential (quality) reforms to the existing or introduce new fiscal rules, thus increasing the FRI, but worsening the budgetary performance at the same time (at least in the initial two years).

With the second dummy, a distinction between the EMU and the Non-EMU countries has been made. The results show that the Eurozone membership has an additional effect on the primary balance, fiscal deficit and total expenditures, but proves to be insignificant for the CAPB. In the first year of the membership (period t-1), the only significant variable was the primary balance showing the improved budgetary performance. The positive effect, however, did not persist in the second year (period t-2). The retrieved significant coefficients (negative for the primary balance and fiscal deficit, and positive for total expenditures) reveal that the fiscal stance of the MS started to deteriorate after the first year of the Eurozone membership as deficits (surpluses) and total expenditures started to increase (decrease). The interaction term between the EMU membership and the FRI, on the other hand, did not result statistically significant for any of the budgetary variables.

Nevertheless, these arguably less favourable effects of the EMU membership do not come across as a complete surprise as they are consistent with the earlier scholarship. It has been found that the positive effects on the primary balance are attainable only before the introduction of the euro (Ioannou and Stracca 2014) and are expectantly still tangible in the first year of the membership. Reasons for this performance vary and may be explained through the (de)synchronisation of business cycle cycles,[8] which occurred repeatedly during the sampled period. As the synchronisation appears to be stronger among the countries sharing the same currency (De Grauwe and Ji 2017), the negative spillovers on growth thus get amplified (Blot et al. 2014), making the countries unable to reduce the negative excesses. Another possible cause is the constant rise of debt levels in the MS in past years and therefore a persistent breach of the SGP benchmark that has not been adequately monitored (for example the arguably ineffective EDP or the absence of the European semester prior to the 'Six-Pack').

The Impact of Fiscal Rules on Public Finances in Selected EU Countries

The methodological approach from the previous section revealed that the latest dynamics in the European economic governance can have certain benevolent effects on public policy of the member countries constituting a fiscal union at an aggregate level. What remained unclear, however, is whether similar effects can be captured on a state level. The motive for such a valuation has its footing in the heterogeneous character of the MS, which, in part, stems from the diversity of the fiscal rules introduced in the national legislations. To tackle this issue, a complementary analysis evaluating the direct impact of the fiscal rules on public finances in certain groups of countries has been carried out. Opposite findings are expected when differentiating between the country groups with greater and poorer quality of the domestic fiscal rules while considering the (non)adherence to the EU rules.

The first step in the analysis was to define the opposing country groups with respect to the number of the enforced fiscal rules and their underlying quality or the FRI, based on the data from 2017 (see Figure 1). By looking at the two aforesaid measures, Italy, The Netherlands, Lithuania and Bulgaria (Group A) have been identified as countries with a higher quality of the rules, while Greece, Hungary, Slovenia and Croatia (Group B)[9], show fiscal rules of a lesser quality. Countries in the Group A have the FRI ranging from 2.75 to 3.5, whereas the Group B shows FRI variations between -0.01 and 1.

For the two above-mentioned groups, the direct impact on fiscal stance has been estimated by employing the already familiar dynamic method presented in the previous section. The fundamental idea was to approximate the model characteristics used for estimating the EFU's sustainability (see Table 3) to achieve better comparability (global versus country group approach) and to maintain methodological consistency. The results of such a testing are shown in Table 4. Only the estimates regarding the fiscal rules (FRI, EDP and EMU membership) in model one have been discussed in the text for both groups. The remaining two models presented in the table provide evidence of additional examination when accounting for the EDP scrutiny (model two) and the Eurozone membership (model three) individually. Furthermore, the testing was limited to the CAPB as dependent variable since this fiscal indicator corrects for the influence of the economic cycle and thus better reflects the underlying budgetary position (European Central Bank 2012).

Table 4: The effect of fiscal rules on cyclically adjusted primary balance in selected MS

	Group A			Group B		
Variable	(1)	(2)	(3)	(1)	(2)	(3)
$CAPB_{(t-1)}$	-0.197** (0.079)	-0.184** (0.080)	-0.174** (0.071)	-0.567 (0.918)	-0.031 (0.241)	-0.086 (0.316)
$FRI_{(t-1)}$	0.550* (0.278)	0.523 (0.417)	0.237 (0.370)	-3.362 (6.177)	-0.523 (1.588)	-0.323 (2.115)
Public $debt_{(t-1)}$	0.102 (0.085)	0.089 (0.101)	0.067 (0.070)	0.662 (1.076)	0.391* (0.195)	0.379* (0.188)
Output $gap_{(t-1)}$	0.036 (0.089)	0.026 (0.070)	-0.143 (0.173)	0.874 (2.085)	0.303 (0.388)	0.392 (0.279)
D_{EURO}	-2.052 (2.511)		-5.105 (3.114)	37.740 (87.618)		6.232 (16.458)
$D_{EURO(t-1)}$			1.806 (2.009)			-3.826 (6.670)
$D_{EURO(t-1)}*FRI_{(t-1)}$	-0.271		-1.630 (1.121)	2.227		-0.601

	Group A			Group B		
	(0.772)			(6.687)		(5.445)
D_{EDP}	-1.676*** (0.394)	-1.869*** (0.650)		-9.693 (20.309)	-1.351 (2.960)	
$D_{EDP(t-1)}$	2.904** (1.406)	2.884** (1.091)		0.052 (5.818)	-3.713* (1.926)	
$D_{EDP(t-1)}$*$FRI_{(t-1)}$	-1.738 (1.173)	-1.687** (0.799)		1.712 (12.493)	-1.579 (3.186)	
J-stat (probability)	0.217	0.549	0.104	0.877	0.050	0.033
Observations	78	78	78	69	69	69

Notes: *** significant at 1%; ** significant at 5%; * significant at 10%.

Source: Author's creation

The employed first-difference, Arellano-Bond one-step estimates of the two unbalanced dynamic panels provided in Table 4 demonstrate that the lagged FRI is statistically significant for the Group A countries. The positive coefficient indicates that the increase in FRI will improve the CAPB by manifesting lower deficits or, depending, higher surpluses. The positive outcome, denoted by the FRI's lag, requires at least one year to affect the abovementioned fiscal indicator. The adherence to the supranational rules initially worsens the budgetary balance before it starts to improve in the second year. The interaction term between the FRI and the EDP did not result significant and neither did the Eurozone membership (isolated or interacted). These findings are also in line with the ones from the global approach. Group B countries, inversely, show that all variables on fiscal rules are statistically insignificant. This outcome was consistent with the initial expectations: lenient fiscal frameworks, defined by a weak FRI and reduced compliance with the supranational rules, have limited or no effects on public finances.

CONCLUDING REMARKS

This paper attempted to answer the pressing question on whether the revised SGP has managed to meet the initial expectations in providing a solid framework for fiscal prudence in the MS and thus position itself as the corner stone of the EFU. The employed empirical work estimated the combined effects of the adherence to the supranational and the enacted complementary domestic fiscal rules on several budgetary variables. The assessment has been carried out at both, the EFU and the country level. In particular, the analysis finds that high-quality domestic rules (denoted by a greater FRI) improve the budgetary position of the EFU and of the respective states. The estimated effects are attainable with a one year deferral from the introduction of the fiscal rule(s) in the member countries. Additionally, compliance with the EU rules, measured with the EDP scrutiny, has likewise revealed relatively benevolent effects on all fiscal variables both individually and at the consolidated level. Contrariwise, countries with weaker domestic rules and restricted compliance with the supranational ones show the absence of significant effects on their fiscal stances. This outcome, nevertheless, might be compensated when in a sustainable fiscal union as the MS with arguably superior fiscal systems offset the potentially poorer budgetary performances of those with feebler fiscal rules.

Although these moderately optimistic results come from isolated factors, it was interesting to find that in the cases where the FRI and the EDP indicator were used together (i.e. the interaction term), no positive effects materialised, hence highlighting the limits of the EU fiscal setting. This possibly stems from major domestic policy changes that might trigger the FRI increase while being under the EDP surveillance, which initially worsens the budgetary performance. Additionally, the majority of MS often chooses compliance with the EU rules over the possibly tighter requirements implied by a strict reading of domestic rules (Deroose et al. 2018). On the other hand, and as far as the effects of the EMU membership on the compliance with the supranational criteria are concerned, the analysis reveals that the said indicator seems to have a positive effect on the budgetary variables prior to the Euro adoption, but not thereafter. This finding is in line with the earlier empirical evidence in the literature.

Other limitations persist as the piloted assessment has not accounted for the synchronisation of business cycles, inflation or specific political developments that influence public finances of the MS. It would be henceforth motivating to accommodate these in the future research. Moreover, it is difficult to distinguish if the positive effects on the fiscal variables have been solely the Pact's merit or has this been due to the positive economic circumstances that transpired in the years after the two crises. With these boundaries in place, determining whether the SGP has delivered so far remains challenging. Nonetheless, the revamped Pact can make the EFU fairly sustainable and any further step towards a deeper EMU could commence with the simplification of the current rules. By streamlining the EU fiscal framework, the national fiscal systems may consequently attain more clarity and become easier to implement.

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ENDNOTES

[1] Monetary-fiscal dichotomy refers to the existence and the near independence of the central bank (monetary) and the government (fiscal) in a polity (see Bonam and Lukkezen 2019). In the EU context, there is no European government and thus, one common monetary policy is constantly being coordinated with 19 domestic fiscal policies.

[2] Thirion's (2017) classification of different building blocks of a fiscal union entail: rules and coordination, (sharing sovereignty), crisis management mechanisms, banking union with common deposit insurance and/or fiscal backstop, fiscal insurance (unemployment insurance, rainy-day funds etc.) and joint debt issuance.

[3] The Fiscal compact is a part of the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union (TSCG). It is an intergovernmental agreement, not the EU law. Out of the 25 Contracting Parties to the TSCG, the Eurozone countries plus Bulgaria, Denmark and Romania are formally bound by the Fiscal Compact (European Commission 2019c).

[4] ERM II is one of the five criteria a MS needs to fulfil in order to join the EMU. It requires that the MS ties its national currency to Euro and proves stability for minimum two years while maintaining the other criteria stable. The other criteria include having government budget deficit under three per cent of GDP, government public debt under 60 per cent of GDP, inflation under 1.5 per cent in relation to the HICP inflation rates in the 3 EU member states with the lowest HICP inflation, and long-term interest rates under two per cent.

[5] The directive also defines the set-up of systems of budgetary accounting and statistical reporting, rules and procedures for forecasting of budgetary planning, procedural rules underpinning the budget process at all stages, mechanisms and rules that regulate fiscal relationships between public authorities across sub-sectors of general government (EUR-Lex 2011).

[6] Only estimates from the model one are discussed in the text. Model two is displayed to provide evidence on the statistical insignificance of the lagged output gap variable. Furthermore, as the effects of FRI on the fiscal stance of the MS are being examined, the lagged FRI is always included in the model (significant or not) for better comparability.

[7] The EDP stretches on average over two years as the MS have a relatively slower reaction in correcting the imbalances, thus possibly failing to show positive results in t-1 and t-2.

[8] A business cycle is synchronous when the cyclical component of two countries moves in the same direction at the same time, or when the two output gap values are equal (Gächter, Ried and Ritzberger-Grünwald 2012).

[9] In the country-specific analysis the UK has been excluded from the selection due to Brexit as opposed to the analysis performed at the aggregate level.

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