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Fiscal Policy Stance Reaction to the Financial/Economic Crisis in the EMU: The Case of Slovenia

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Abstract: *The article evaluates the current economic crisis' impact on changes in the adoption of fiscal policy measures for 16 euro-area countries in the 2004–2012 period and compares those changes with fiscal policy measures introduced in Slovenia. In general, the results suggest that the adopted fiscal policy measures in most euro-area countries were more expansionary in the period before the current economic crisis started. The evaluation of the fiscal stance in Slovenia suggests expansionary and pro- cyclical fiscal behaviour during the 2005–2008 period, whereas the response of the fiscal authorities in Slovenia in 2011 and 2012 due to fiscal consolidation was more restrictive and pro-cyclical. Finally, we emphasize that inconsistent fiscal policy without structural reforms also being carried out may lead to a further deterioration of the fiscal position and macroeconomic situation of euro-area countries, including during a period of cyclical recovery.*

Keywords: fiscal stance, economic crisis, cyclical adjusted balance, output gap, EMU, Slovenia

JEL Classification: E62, H60

Introduction

The onset of the recent financial and economic crisis in 2008 forced most countries to adopt comprehensive discretionary fiscal measures aimed at stimulating aggregate demand as well as to strengthen competitiveness and potential growth in economies. Such fiscal measures caused a surge in public finance expenditure, a strong deterioration of the structural budget balance and an escalation of public debt (Van Riet, 2010; Obadić et al., 2014). This brought to the fore of economic-political activity the idea of introducing fiscal rules to curb government expenditure and strengthen the fiscal position of individual countries. For its greater transparency and credibility, fiscal

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policy based on fiscal rules is supposed to accelerate the consolidation of public debt, ensure the long-term sustainability of public finances and reduce the pro-cyclical tendency of fiscal policy.

Namely, in recent years we have seen an intensive discussion of whether the fiscal policy measures actually applied have helped stabilize macroeconomic conditions. The issue of the appropriateness of fiscal policy measures has been gaining ground, especially in the euro-area countries. Namely, under the national supervision of these countries fiscal policy is a window of opportunity within economic policy to provide active support to prevent macroeconomic imbalances at a time of economic crisis (Hauptmeier et al., 2010; Turrini, 2008). The aim of the study is to evaluate the impact of the financial and/or economic crisis on the fiscal policy behaviour of 16 euro-area countries in the 2004–2012 period and to compare the evaluation with the fiscal policy measures applied in Slovenia. The appropriateness and stance of the fiscal policy will be assessed based on a comparison of changes in the cyclically adjusted budget balance and output gap (European Commission, 2006).

The analysis aims to confirm the assumption that in most euro-area countries fiscal policy has on average become more restrictive and pro-cyclical during the economic crisis, which is in line with the fiscal austerity measures adopted by the European Commission. Moreover, we will attempt to confirm the assumption that the fiscal policy stance before the onset of the economic crisis was also pro-cyclical, bearing in mind that this is currently hindering the implementation of counter-crisis measures to stabilize macroeconomic conditions. This preliminary study on fiscal policy's orientation in the abovementioned period can provide some starting points for the introduction of fiscal rules and carrying out of structural reforms aimed at improving fiscal objectives in the medium term, which in turn can help improve macroeconomic stability and fiscal sustainability.

This contribution is structured as follows. First, empirical and theoretical studies in the field are presented. The third section describes the methodology and data used in the analysis of the fiscal policy positions. The fourth section empirically evaluates the fiscal policy stance in individual euro-area countries and presents a comparison with Slovenia. The last section summarizes the findings of the study.

Literature Review

Over the last decade the bulk of the literature has analyzed the characteristics of fiscal policy measures in countries at the time the European Monetary Union (hereinafter: the EMU) was created (Holm-Hadulla et al., 2010; Turrini, 2008; Galí & Perotti, 2003; Annet, 2006; Golinelli & Momigliano, 2006, 2008 etc.). In contrast to the abovementioned studies, we focused our interest on the fiscal policy stance in

EMU countries before and after the economic crisis started. Despite the generally accepted economic theoretical fact that a counter-cyclical economic policy (in our case fiscal policy) should be pursued depending on the economic cycle, empirical proof of a pro-cyclical fiscal policy stance can be found in the literature. For example, Alesina and Tabellini (2005), Talvi and Vegh (2005) and Manasse (2006) demonstrate in their studies that a pro-cyclical fiscal policy stance is characteristic of developing countries.

It stems from economic theory that during times of downward (or upward) economic trends a country must introduce measures to revive (dampen) its economy. In a phase of low economic growth or recession, countries should lead an expansionary fiscal policy by cutting taxes or increasing spending. In times of an upswing in an economy and/or prosperity, countries should introduce the opposite, i.e. restrictive fiscal policy measures such as increasing tax rates or cutting government expenditure (Cimadomo, 2005). The purpose of this contribution is to empirically analyze the orientation and stance of the fiscal policy in EMU countries before and after the outbreak of the economic and financial crisis.

Most empirical analyses in the literature evaluate the cyclicality of fiscal policy by comparing the dynamics of the cyclically adjusted budget balance, which determines the position and/or orientation of the fiscal policy, with the output gap as an indicator of the cyclical situation in the economy. In their study, Golinelli and Momigliano (2008) compare different empirical studies of the fiscal policy stance in euro-area countries. They concluded that the results of empirical studies may differ substantially due to the selected sample of countries and time period, data source and applied estimation methodology. Therefore, the question of fiscal policy behaviour is still largely unsettled. When comparing fiscal policy stances after the introduction of fiscal restrictions within the EU, some studies identify more neutral fiscal policy measures after a country enters the monetary union which indicates the steady i.e. constant running of the fiscal policy throughout the cycle (see Galí & Perotti, 2003; Annett, 2006; Wyplosz, 2006, etc.). This finding is consistent with the original formulation or purpose of the Stability and Growth Pact, namely that macroeconomic stability at both the national and international (supranational) levels is ensured by automatic stabilizers (Cimadomo, 2005).

In contrast to the abovementioned studies, our interest focuses on the fiscal policy stance in EMU countries before and after the start of the economic crisis. Moreover, we will establish and compare the differences between the fiscal policy position in Slovenia and in other euro-area countries. To our knowledge, such an empirical comparison has not yet been reported in the literature. Beside IMAD yearly publications there is lack of rigorous empirical evidence regarding the structural balance issues and pro-cyclical behaviour of fiscal policy for Slovenia. The analysis of the fiscal stance and/or cyclicality of the fiscal policy will be based on a comparison of changes in the cyclically adjusted balance and output gap in the period under scrutiny, which is a tool commonly used in the reviewed literature to evaluate a fiscal policy stance and its appropriateness. Despite the abundance of literature, there are different evaluations of the fiscal policy stance in EMU countries which brings into question whether the actual behaviour of fiscal authorities is consistent with the stabilization fiscal objectives in the medium term. With new empirical evidence, the article will contribute to a better understanding of this issue by relying on the latest data from the IMF database. The findings of the study can help answer the question of whether the fiscal stance in the past is the cause of today's fiscal imbalances and whether these imbalances could lead to the adoption of fiscal and other structural reforms.

Methodology and Data

The evaluation of the cyclical or counter-cyclical orientation of fiscal policy in this contribution will be based on the cyclically adjusted budget balance which is one of the key indicators for assessing fiscal policies in the euro area and the EU, especially for the achievement of medium-term stabilization fiscal objectives in the Stability and Growth Pact framework. The fiscal policy orientation analysis includes a comparison of the dynamics of the cyclically adjusted balance with an assessment of the output gap. The dynamics of the cyclically adjusted balance over several consecutive years reveals the orientation of the fiscal policy, i.e. the fiscal impulse. A comparison of trends in the cyclically adjusted balance and output gap as an indicator of fluctuations in the economic cycle facilitates the evaluation of a fiscal policy's orientation, i.e. the fiscal position of a country (European Commission, 2006; IMAD, 2011, 2012, 2013). We have to emphasize that the variability of fiscal policy stance evaluations depends strongly on the selected sample of countries, data source and the studied period as well as the methodology applied to determine the fiscal behaviour in individual countries. This calls for caution when interpreting the results of an evaluation of fiscal policy behaviour. Note that there is no methodology for estimating the structural budget balance that is able to resolve the drawbacks, which can cause some discrepancies.

Initially, the two key concepts of the fiscal policy behaviour analysis must be presented, namely the output gap and the cyclically adjusted balance. Based on a calculation of the potential output and output gap, as a difference between the actual and potential output, the position of an economy can be determined in terms of the economic cycle. In practice, both indicators are used to forecast economic trends and serve to guide economic policy-makers in a country (De Masi, 1997). The assessment of the output gap we use in our analysis is based on an assessment of potential output through the production function method which enables the cyclical and trend components of the actual output to be identified. The Hodrick-Prescott filter was used to smooth the total factor productivity[1] (WEO, 2008). The main shortcoming of the structural budget balance is related to the estimation of potential output, which is taken as reference path when estimating balance measures (for potential output estimation methods see Boije, 2004; Giorno et al.,1995, Bouthevillain et al., 2001 etc.).

According to Giorno et. al (1995) the production function approach for assessing the potential output and a corresponding output gap has a comparative advantage for estimating structural budget balance due to the direct connection between potential output and its long-term production factors. Although we have to consider the production method drawbacks related to bigger sample of input data requirements and measurement problem of the capital stock. Another methodological problem is due to the HP smoothing approach that is not able to handle the structural breaks in the economy, the estimated trend is less precise at the beginning and the end of the considered period, i.e. the end-point problem, and the definition of the smoothing parameter λ has implications on the estimation of potential output (see Boije, 2004, Bouthevillain et al., 2001, European Commission, 2013).

The structural or cyclically adjusted budget balance must be considered when determining if fiscal policy measures are restrictive or expansionary[2]. The analysis concentrates on this factor to determine the orientation of fiscal policy as the actual budget balance of a state includes cyclical (transitory or temporary) factors and also some structural (permanent) factors of its changes (Marinaş, 2009). Note that cyclically sensitive factors (most tax categories (social security contributions, income tax, VAT etc.) and unemployment benefits as the main expenditures category) are commonly cited as “automatic stabilisers” (Boije, 2004). For this reason, the structural or cyclically adjusted balance is a more appropriate indicator of a state’s fiscal position in terms of contents than the actual balance which is strongly influenced by cyclical and one-off factors (IMAD, 2013). Despite the caveats of the structural budget balance related to the calculation of potential output, the European Commission did not abandon the cyclically adjusted budget balance, but strived to understand the reasons of the shortcomings and tries to look ways to improve the accuracy of the indicator. The European Commission showed first steps also toward considering the fact that it is necessary to analyse the behaviour of individual tax bases in order to perform a more precisely estimation of budgetary elasticities as according to the ESCB (ECB) approach[3] (European Commission, 2009). Due to limitations in every methodological approach the estimates of structural balance should be considered as indicative rather as conclusive.

The output gap is calculated as the difference between the actual GDP (*Ya*) and potential GDP (*Yp*) (adapted from Marinaş, 2009, Mencinger & Aristovnik, 2013):

$$\Delta Y = Ya - Yp => Ya = Yp + \Delta Y \tag{1}$$

The actual output consists of a cyclical component and potential output. By analogy, the actual budget balance can be decomposed into:

$$ABB = SBB + CBB \tag{2}$$

where:
ABB – actual budget balance;
SBB – structural component of the budget balance representing the level of potential GDP (*Yp*); and
CBB – cyclical component of the budget balance referring to the output gap.

SBB and *ABB* are defined as the difference between budget revenues or taxes (*T*) and budget expenditure which also include transfers. The tax function includes those taxes that are independent of the revenue level (i.e. autonomous taxes – *n*) and taxes directly linked to the revenue level ($t \times Y$), where t stands for the marginal taxation rate. The following equations can thus be derived to present the actual balance (*ABB*) and structural balance (*SBB*):

$$\mathrm{ABB} = \mathrm{t} \times \mathrm{Ya} - (\mathrm{G} + \mathrm{TR} - \mathrm{n}) \tag{3}$$

$$\mathrm{SBB} = \mathrm{t} \times \mathrm{Yp} - (\mathrm{G} + \mathrm{TR} - \mathrm{n}) \tag{4}$$

The estimate of the structural balance (*SBB*) points to the expansionary or restrictive nature of fiscal policy measures. When a country implements restrictive fiscal measures the structural balance increases (SBB > 0), and vice versa (Marinaş, 2009). A fiscal policy is counter-cyclical if it is expansionary in the situation of a negative output gap, and restrictive when the actual growth in GDP exceeds the assessed potential level. A fiscal policy is pro-cyclical when, in the situation of a negative output gap, a country responds with restrictive measures and when the response to the positive output gap (the actual output is larger than the potential) is expansionary (IMAD, 2011, 2012, 2013).

In the empirical section of the study, we use the abovementioned methodology to assess the fiscal policy stance in euro-area countries before and after the start of the economic crisis. The homogenous selection of countries allows us to compare the fiscal behaviour between them regarding the compliance with the medium-term fiscal objectives in the Stability and Growth Pact. The objective of the empirical analysis was to confirm the assumption that, after the beginning of the economic and financial crisis, the fiscal policy behaviour was restrictive and pro-cyclical. For this purpose, we obtained data on the cyclically adjusted balance and output gap available from the IMF database. The data refer to the 2004–2012 period. The only exception is Estonia due to the lack of variables needed for the analysis. The evaluation of the production gap as a percentage of potential GDP and the cyclically adjusted balance is based on selected IMF methodology. We should emphasize that in order to fully address the fiscal behaviour issues we should apply more comprehensive empirical methods. Ilzetzki and Végh (2008) claim that fiscal behaviour may be biased due the existence of endogeneity problems in the data, i.e. a casual effects of fiscal policy on output. Despite limitations regarding the selected sample of countries, data source and the studied period the applied method is able to determine the fiscal behaviour in individual euro-area countries and makes the empirical study comparable with other basic references in this research area.

Empirical Results

The analysis of the cyclically adjusted balance enables additional information to be acquired on fiscal policy behaviour in the past. Moreover, it facilitates an ex-post evaluation of the fiscal policy orientation and a definition of the reasons for any past macroeconomic imbalances. Nevertheless, one must be careful when interpreting the evaluation of a fiscal position as a basis for implementing economic policies, mainly due to the variability of projections of potential growth and output gap which underpin the calculation of a cyclically adjusted balance. The evaluation of a structural balance is influenced by methodological changes and changed macroeconomic conditions at home and abroad which can lead to impartiality in the evaluation of a past fiscal policy (IMAD, 2011, 2012, 2013). Albeit the abovementioned limitation of the approach to determine the fiscal stance the preliminary empirical results can be representative for the individual countries in the euro-area. In the analysis, a small change in the cyclically adjusted or structural balance (between -0.1 and 0.1 of a percentage point) is defined as a neutral fiscal policy based on the evaluation in the study by Cimadomo (2005).

Table 1 presents the fiscal policy stance for euro-area countries (EMU-16)[4] in the 2004–2012 period. The table shows that most euro-area countries applied expansionary fiscal measures before the start of the economic and financial crisis. In the period before the economic crisis, most of the analyzed countries on average recorded a positive output gap, namely an average of 1.6% of the potential output. In this situation, from the theoretical point of view one would expect a restrictive fiscal policy that would result in a structural surplus. Despite the above, we established in the analysis that, during the five-year period before the onset of the economic crisis, the cyclically adjusted balance and/or structural deficit decreased on average by 0.23%, implying that most of the selected countries were implementing expansionary fiscal policy measures. A markedly expansionary fiscal policy stance was also recorded in Belgium, Greece, Ireland, Portugal and Slovenia (see Table 1) which also explains these countries' poorer fiscal position at the time of the strong economic downturn. On the other hand, restrictive and counter-cyclical fiscal behaviour was seen in Germany throughout the entire pre-crisis period under study which improved its starting fiscal position before the start of the crisis.

Our analysis of the fiscal policy behaviour shows that, on average, most countries were applying restrictive fiscal policy measures. Although during the economic recession the selected countries on average recorded a negative output gap equalling 1.7% of the potential output, these countries on average experienced an increase in their cyclically adjusted balance or structural surplus in the amount of 0.2%. This points to the introduction of restrictive fiscal measures in times of economic crisis which is a consequence of consolidation measures adopted at the EU level. Moreover, we established that in both periods under scrutiny (before and after the start of the economic crisis) pro-cyclical fiscal policy behaviour prevailed irrespective of the countries' fiscal position which indicates the inconsistent implementation of the fiscal policy.

Table 1: Fiscal policy behaviour in the euro-area countries

	Period before the crisis					Period after the crisis			
Country	2004	2005	2006	2007	2008	2009	2010	2011	2012
Austria	E.C.	N.(R)	E.P.	N.(E)	R.C.	E.C.	E.C.	R.P.	R.P.
Belgium	E.C.	R.P.	E.P.	E.P.	E.P.	E.C.	N.(R)	E.P.	R.P.
Cyprus	R.P.	R.P.	E.C.	R.C.	E.P.	E.C.	R.P.	R.P.	E.C.
Finland	E.P.	R.C.	R.C.	E.P.	E.P.	E.C.	E.C.	R.P.	N.(R)
France	R.P.	R.P.	R.C.	E.P.	N.(R)	E.C.	N.(R)	R.P.	R.P.
Germany	N.(R)	R.P.	R.C.	R.C.	R.C.	E.C.	E.C.	R.C.	R.C.
Greece	E.P.	R.C.	E.P.	E.P.	E.P.	E.P.	R.C.	R.P.	R.P.
Ireland	E.C.	E.P.	E.P.	E.P.	E.P.	R.P.	R.P.	R.P.	R.P.
Italy	R.C.	E.P.	R.C.	R.C.	E.P.	E.C.	R.P.	R.P.	R.P.
Luxembourg	E.C.	R.P.	R.C.	R.C.	R.C.	E.C.	E.C.	N.(E)	E.P.
Malta	R.P.	R.P.	R.P.	E.P.	E.P.	R.P.	E.P.	R.C.	E.C.
Netherlands	R.P.	R.P.	E.P.	E.P.	R.C.	E.C.	R.P.	R.P.	R.P.
Portugal	E.C.	E.C.	R.C.	E.P.	E.P.	E.C.	R.P.	R.P.	R.P.
Slovakia	E.C.	R.P.	E.C.	E.P.	R.C.	E.C.	E.C.	R.P.	E.C.
Slovenia	E.C.	E.P.	E.P.	E.P.	E.P.	E.C.	E.C.	R.P.	R.P.
Spain	N.(E)	E.P.	R.C.	R.C.	E.P.	E.C.	R.P.	R.P.	R.P.

Note:

E.P. – expansionary and pro-cyclical fiscal policy
R.P. – restrictive and pro-cyclical fiscal policy
R.C. – restrictive and counter-cyclical fiscal policy
E.C. – expansionary and counter-cyclical fiscal policy
N.(E, R) – neutral fiscal policy in the context of economic expansion (E) or economic recession (R)

Source: IMF, 2013, own calculations

In the second part of the analysis the studied period was divided into two sub-periods, namely the five years before the start and the four years after the start of the economic and financial crisis. The year 2009 was taken as the beginning of the economic and financial crisis, although a strong deterioration of economic conditions and thus also of public finances was already detected in the second half of 2008;

however, this is not reflected in the evaluation of the output gap. Consequently, the calculation of the countries' fiscal position in 2008 is biased because it fails to consider the lost revenue from the slower economic growth due to the economic and financial crisis (IMAD, 2013). To comparatively analyze fiscal orientations among the euro-area countries, each country was assigned a value for its fiscal position in a given year. The pursuit of a restrictive fiscal policy was assigned a value of 0, the implementation of expansionary fiscal measures a value of 1 and a neutral fiscal policy a value of 0.5. Pro- and counter-cyclical fiscal policy behaviour was evaluated similarly, namely counter-cyclical fiscal policy behaviour was assigned a value of 1, whereas pro-cyclical and neutral fiscal policy behaviour, irrespective of the position in the economic cycle, were assigned a value of 0.5. Based on the selected fiscal policy evaluation, we calculated the shares of specific fiscal policy behaviour for individual euro-area countries in individual periods. We distinguished between an expansionary and counter-cyclical fiscal policy.

Table 2: Descriptive statistics of the euro-area countries' fiscal policy behaviour before and after the start of the economic crisis

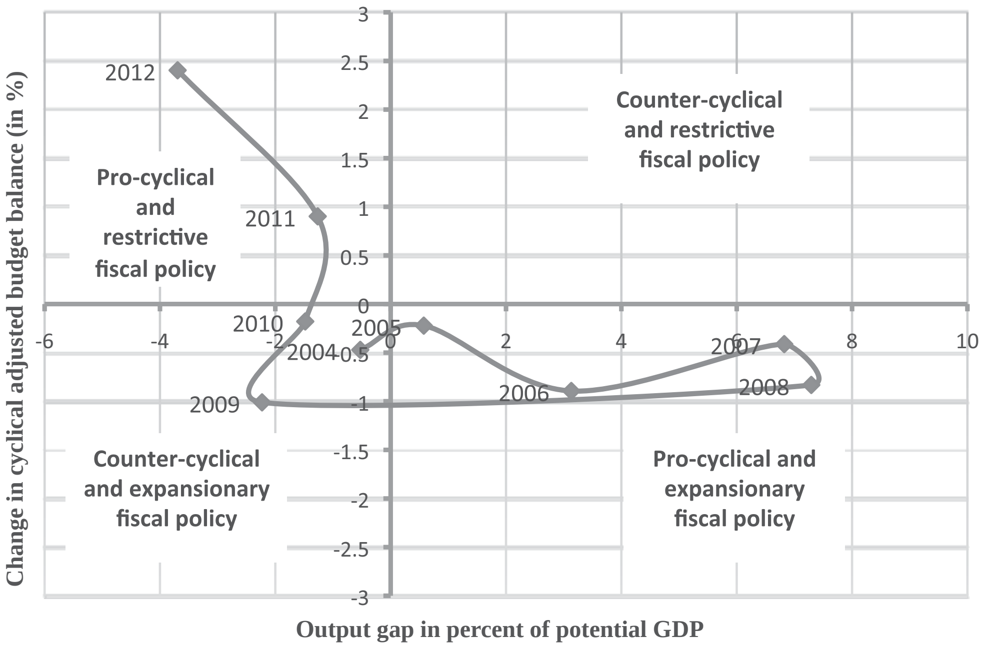
Country	Expansionary fiscal policy		Counter-cyclical fiscal policy	
	Period before the crisis	Period after the crisis	Period before the crisis	Period after the crisis
Austria	60.0	50.0	60.0	50.0
Belgium	80.0	87.5	20.0	37.5
Cyprus	40.0	50.0	40.0	50.0
Finland	60.0	62.5	40.0	62.5
France	30.0	37.5	30.0	37.5
Germany	10.0	50.0	70.0	100.0
Greece	80.0	25.0	20.0	25.0
Ireland	100.0	0.0	20.0	0.0
Italy	40.0	25.0	60.0	25.0
Luxembourg	20.0	87.5	80.0	62.5
Malta	40.0	50.0	0.0	50.0
Netherlands	40.0	25.0	20.0	25.0
Portugal	80.0	25.0	60.0	25.0
Slovakia	60.0	75.0	60.0	75.0
Slovenia	100.0	50.0	20.0	50.0
Spain	50.0	25.0	50.0	25.0
Average	**55.6**	**45.3**	**40.6**	**43.8**

Note:
Period before the crisis – the five-year period before the start of the economic crisis
Period after the crisis – the four-year period after the start of the economic crisis
We consider the start year of the economic crisis as 2009.

Source: IMF, 2013, own calculations

Table 2 presents calculated descriptive statistics concerning how long before and after the start of the economic crisis a country in the euro area implemented an expansionary and counter-cyclical fiscal policy. The data show that in nine countries the fiscal policy was less expansionary after the outburst of the economic and financial crisis. These data overlap with the fiscal austerity measures as most countries faced a relatively high budget deficit which prevented them from introducing fiscal incentives to revive the economy. In 2009, as a consequence of the start of the economic crisis, most euro-area countries, except Greece, Ireland and Malta, implemented an expansionary and counter-cyclical fiscal policy so as to stimulate aggregate demand. Based on the acquired data we established that the fiscal behaviour of nine countries after the start of the crisis was slightly more counter-cyclical. The basic descriptive analysis reveals that the fiscal policy stance in euro-area countries is restrictive and counter-cyclical on average, although these results cannot be confirmed statistically.

Figure 1. Fiscal policy behaviour in Slovenia



Source: IMF, 2013, own calculations

The third part of the study was dedicated to evaluating the fiscal policy behaviour in Slovenia and/or its fiscal position; namely, changes in its cyclically adjusted balance (i.e. fiscal impulse) and output gap were compared. A negative fiscal impulse means a decrease in the cyclically adjusted deficit in the current year compared to the year before, and vice versa. Figure 1 shows Slovenia's fiscal position between 2004 and 2012 where four quadrants can be determined based on changes in its cyclically adjusted balance and output gap. When the combination of both variables lies in the first and third quadrants the fiscal policy is counter-cyclical. When the combination of both variables lies in the second and fourth quadrants the fiscal policy is pro-cyclical. The different distances between individual points and the coordinate axis point to the intensity of the fiscal policy measures (IMAD, 2011, 2012, 2013).

Our analysis of the cyclical fiscal policy behaviour in Slovenia in the 2005–2008 period reveals the policy's expansionary and pro-cyclical nature which triggered a deterioration of the fiscal position before the onset of the economic and financial crisis. With some reservations about the evaluation of the cyclically adjusted balance and output gap, IMAD (2012, 2013) found that the downturn in the fiscal position was due to the measures adopted in 2007 and 2008, such as the growth in expenditure for investments, an increase in the volume of assets for social transfers and higher salaries due to the introduction of a new payroll system with the concurrent rise in the number of employees. Changes also occurred in revenues due to changes in taxation (increased tax relief as a consequence of a changed tax system, abolition of the tax on paid salaries and lower income tax rates), which resulted in less tax revenues. All of these adopted measures overlap with the election cycle (elections in 2008) which is another reason for the fiscal policy's pro-cyclical behaviour (Buti & Van den Nord, 2004a, 2004b; Von Hagen, 2003). The evaluation of both parameters should take into account that the downturn in the economy in 2008 should not be included in the evaluation of the output gap as that would lead to a biased evaluation of the fiscal position.

Based on the selected data for 2009 and 2010, we estimate that the fiscal policy in Slovenia was counter-cyclical and expansionary (despite the more neutral fiscal behaviour in 2010) which reflects the negative output gap as a consequence of the strong deterioration of economic activity and the expansionary fiscal policy measures. This led to an excessive budget deficit and some financial restrictions related to its financing, which caused a further increase in public debt in the long term. Cecchetti, Mohanty and Zampolli (2010) establish that a loss of confidence in countries' ability to repay the outstanding public debt, the subsequently higher risk premiums on the issue of government bonds together with the demographic factor of a rapidly ageing population bring about the unstable dynamics of public debt which is followed by an economic downturn. For this reason, we established that the fiscal policy stance in 2011 and 2012 was markedly restrictive and pro-cyclical which is an outcome of the adopted necessary consolidation measures aimed at improving the fiscal position. Namely, without any corrective measures being taken by countries these structural problems may lead to permanent fiscal deficits, even during a cyclical recovery. We found that, compared to other members of the euro area, the implementation of fiscal policy in Slovenia does not vary substantively (except for Germany), although Slovenia's markedly expansionary fiscal policy before the start of the economic crisis is somewhat more visible. In comparison with other empirical studies, the results support the procyclical and expansionary fiscal stance in developing (like Slovenia) and high-income euro-area countries (like Italy, Spain) during the period (see Ilzetzki & Végh, 2008). Thus, the preliminary empirical results can be indicative and representative regarding the fiscal behaviour of individual countries in the euro-area.

Conclusion

The study evaluates the impact of the financial and/or economic crisis on the fiscal policy behaviour of 16 euro-area countries in the 2004–2012 period and compares the results with the fiscal policy stance taken in Slovenia. The analysis of the fiscal position and/or cyclicality of the fiscal policy is based on a comparison of changes in the cyclically adjusted budget balance and the output gap in the period under scrutiny. The dynamics of the cyclically adjusted balance over several consecutive years reveals the orientation of the fiscal policy (i.e. the fiscal impulse). A comparison of trends in the cyclically adjusted balance and output gap as an indicator of fluctuations in the economic cycle enables an evaluation of a country's fiscal policy behaviour and/or fiscal position.

The results of the empirical analysis show that most euro-area countries were applying expansionary fiscal measures before the economic and financial crisis started. Distinctive expansionary fiscal policy behaviour was recorded in Belgium, Greece, Ireland, Portugal and Slovenia which also explains these countries' poorer fiscal position in the times of economic downfall. On the other hand, restrictive and counter-cyclical fiscal behaviour was seen in Germany throughout the entire pre-crisis period under study which improved its starting fiscal position before the start of the crisis. Our analysis of the fiscal policy behaviour shows that, on average, most countries implemented restrictive fiscal policy measures in the period of economic crisis (9 (out of 16) euro-area countries implemented a less expansionary fiscal policy after the economic and financial crisis started). These data overlap with the fiscal austerity measures as most countries encountered a relatively high budget deficit which prevented them from introducing fiscal incentives to revive the economy. In both periods (before and after the economic crisis started) a pro-cyclical fiscal policy prevails irrespective of a country's fiscal position which points to the inconsistent implementation of the fiscal policy. The basic descriptive analysis reveals that the fiscal policy stance in euro-area countries is restrictive and counter-cyclical on average, although these results cannot be confirmed statistically.

Our analysis of the cyclical fiscal policy behaviour in Slovenia in the 2005–2008 period reveals expansionary and pro-cyclical behaviour which triggered a deterioration of the fiscal position before the economic and financial crisis began. Based on the acquired data for 2009 and 2010, we assessed that the fiscal policy in Slovenia was counter-cyclical and expansionary (despite the more neutral fiscal behaviour in

2010) which is a reflection of the negative output gap as a consequence of the strong deterioration of economic activity and the expansionary fiscal policy measures. The fiscal policy behaviour in 2011 and 2012 was markedly restrictive and pro-cyclical due to the adopted consolidation measures needed to improve the fiscal position. Without any corrective measures in these countries, these structural problems may lead to permanent fiscal deficits, even during a cyclical recovery. We found that, compared to other euro-area countries, the implementation of the fiscal policy in Slovenia does not vary substantially (except for Germany), although Slovenia's expansionary fiscal policy before the start of the economic crisis is clearly distinctive. Albeit the abovementioned limitation of the approach to determine the fiscal stance the preliminary empirical results can be representative for the individual countries in the euro-area.

NOTES

[1] See De Masi (1997) for a detailed description of methodological approaches to calculating potential output.

[2] In accordance with the ESA 95 methodology, the cyclically adjusted balance is defined as a change in the budget balance due to the use of discretionary measures of fiscal policy where the influence of economic upturn factors is not considered. A structural deficit is defined as a cyclically adjusted budget balance without considering so-called temporary or one-off transactions (see IMAD, 2013).

[3] See Bouthevillain et al. (2001) for a detailed description of the ESCB's method and estimation of budget elasticities.

[4] Estonia is not included in the analysis due to a lack of data.

REFERENCES

Alesina, A., & Tabellini, G. (2005). Why is Fiscal Policy Often Procyclical? (NBER Working Paper No. 11600). Cambridge, MA: National Bureau of Economic Research.

Annett, A. (2006). Enforcement and the Stability and Growth Pact: How Fiscal Policy Did and Did Not Change under Europe's Fiscal Framework (IMF Working paper No. 116). Washington D.C.: IMF.

Boije, R. (2004). The General Government Structural Budget Balance. *Sveriges Riksbank Economic Review*, 1, 5–33.

Bouthevillain, C., Cour-Thimann, P., van der Dool, G., de Cos, P. H., Langenus, G., Mohr, M., Momigliano, S., & Tujula, M. (2001). Cyclically Adjusted Budget Balances: An Alternative Approach (ECB Working Paper No. 77). Frankfurt am Main: ECB.

Buti, M., & Van den Noord, P. (2004a). Fiscal Discretion and Elections in the Early Years of EMU. *Journal of Common Market Studies*, 42(4), 737–756.

Buti, M., & Van den Noord, P. (2004b). Fiscal Policy in EMU: Rules, Discretion and Political Incentives (Economic Papers No. 2006). Brussels: European Commission Directorate-General for Economic and Financial Affairs.

Cecchetti, S. G., Mohanty, M. S., & Zampolli, F. (2011). The Real Effects of Debt (BIS Working Papers No. 352). Basel: Bank for International Settlements.

Cimadomo, J. (2005). Has the Stability and Growth Pact Made Fiscal Policy More Pro-Cyclical? (La Lettre Du CEPII No. 247). Paris: CEPII Research Center.

De Masi, P. R. (1997). IMF Estimates of Potential Output: Theory and Practice (IMF Working Paper No. 177). Washington, D.C.: IMF.

European Commission (2006). *Public Finances in EMU – 2006*. Brussels: European Commission - DG ECFIN.

European Commission (2009, 2013). *Cyclical Adjustment of Budget Balances*. Brussels: European Commission - DG ECFIN.

Galí, J., & Perotti, R. (2003). Fiscal Policy and Monetary Integration in Europe. *Economic Policy*, 18(37), 533–572.

Giorno, C., Richardson P., Roseveare, D., & van den Noord, P. (1995). Estimating Potential Output, Output Gaps and Structural Budget Balances. *OECD Economic Studies*, 24(1), 168–209.

Golinelli, R., & Momigliano, S. (2006). Real-time Determinants of the Fiscal Policies in the Euro Area. *Journal of Policy Modeling*, 28(9), 943–964.

Golinelli, R., & Momigliano, S. (2008). The Cyclical Response of Fiscal Policies in the Euro Area – Why Do Results of Empirical Research Differ so Strongly? (Working Papers No. 654). Rome: Bank of Italy.

Hauptmeier, S., Fuentas, J. S., & Schuknecht, L. (2010). Towards Expenditures Rules and Fiscal Sanity in the Euro Area (Working Paper No. 1266). Frankfurt am Main: ECB.

Holm-Hadulla, F., Hauptmeier, S., & Rother, P. (2010). The Impact of Numerical Expenditure Rules on Budgetary Discipline over the Cycle (Working Paper No. 1169). Frankfurt am Main: ECB.

Ilzetzki, E., & Vegh, C. A. (2008). Procyclical Fiscal Policy in Developing Countries: Truth or Fiction? (NBER Working Paper No. 14191). Cambridge, MA: NBER - National Bureau of Economic Research.

IMF (2013). *World Economic Outlook Database, April 2013*. Washington, D.C.: IMF.

Manasse, P. (2006). Pro-Cyclical Fiscal Policy: Shocks, Rules and Institutions – A View from MARS (IMF Working Paper No. 27). Washington, D.C.: IMF.

Marinaş, M.-C. (2008). Fiscal Policy Stance in the Euro Area. *Theoretical and Applied Economics*, 2(1), 19–24.

Marinaş, M.-C. (2009). Why Is The Fiscal Policy Imposed By IMF Pro-Cyclic?. *The Journal of Faculty of Economics - Economic*, 2(1), 412–416.

Mencinger, J., & Aristovnik, A. (2013). Fiscal Policy Stance in the European Union: The Impact of the Euro. *Engineering Economics*, 24(1), 52–62.

Obadić, A., Šimurina, N., & Sonora, R. (2014). The effects of tax policy and labour market institutions on income inequality. *Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu*, 32(1), 121-140.

Talvi, E., & Vegh, C. (2005). Tax Base Variability and the Pro-cyclicality of Fiscal Policy in Developing Countries. *Journal of Development Economics*, 78, 156–190.

Turrini, A. (2008). Fiscal Policy and the Cycle in the Euro Area: The Role of Government Revenue and Expenditure. *European Economy - Economic Papers*, 323, 1–44.

IMAD (2011). *Economic Issues 2011*. Ljubljana: IMAD.

IMAD (2012). *Economic Issues 2012*. Ljubljana: IMAD.

IMAD (2013). *Economic Issues 2013*. Ljubljana: IMAD.

Van Riet, A. (Ed.) (2010). *Euro Area Fiscal Policies and the Crisis*. Frankfurt am Main: ECB.

Von Hagen, J. (2003). Fiscal Discipline and Growth in Euroland: Experiences with the Stability and Growth Pact (ZEI Working Paper No. B 06). Bonn: ZEI.

WEO (2008). *World Economic Outlook – Financial Stress, Downturns, and Recoveries*. Washington, D.C.: IMF.

Wyplosz, C. (2006). European Monetary Union: The Dark Sides of a Major Success. *Economic Policy*, 21, 207–261.