

Have euro area and EU economic governance worked? Just the facts

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Abstract

We test whether the two key EU and euro area economic governance pillars, the Stability and Growth Pact and the Lisbon Strategy, have had any impact on macroeconomic outcomes. We test this proposition on a panel of over 30 countries, some of which are non-EU (control group) using a program evaluation approach. The impact of the the EU economic governance pillars is evaluated based on both the performance before and after their application as well as against the control group. We find strong and robust evidence that neither the Stability and Growth Pact nor the Lisbon Strategy have had a significant beneficial impact on fiscal and economic performance outcomes. We conclude that a profound reform of these pillars is needed to make them work in the next decade.

Keywords: Stability and Growth Pact, Lisbon Strategy, euro area, European Union, governance, institutions.

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1 Introduction

In the aftermath of the global financial crisis euro area Member States have experienced unprecedented challenges to their public finances in particular, and their economic policies more generally. These challenges have exposed the weaknesses of the two pillars of EU and euro area economic governance, namely the fiscal framework of the Maastricht Treaty and the Stability and Growth Pact (SGP) on the one hand, and the Lisbon Strategy (LS) on the other. Looking forward, it is essential to strengthen both pillars of EU economic governance. Before we look forward, however, we must set the record straight on the performance of these economic governance pillars looking backward, in their first decade. This paper tries to answer this question: have the SGP and the LS worked against the objectives that they were created for?

One main contribution of this paper is to extend beyond the EU and use non-EU OECD countries as a control group in an econometric investigation of the effectiveness of the SGP, applying a difference-in-difference approach where the outcomes are compared both in terms of their own past, for the group of countries which have been subject to the "treatment" (the EU economic governance pillars), as well as the performance of the countries in the control group, also taking into account the influence of a set of control variables. This approach goes beyond most contributions so far on the SGP which typically focus on EMU or EU countries alone (e.g. Gali and Perotti 2003, Annett 2006, Golinelli and Momigliano 2009, Bernoth et al. 2009). Moreover, existing studies usually consider significantly shorter samples (among those that are most related to our paper, Annett ends in 2004, and Gali and Perotti in 2002). Instead, we use annual data spanning from 1980 and up to 2009, covering 36 countries. Finally, we test not only for the effect of the SGP on *average* fiscal behaviour, but also extend our analysis to other possible dimensions of its influence, such as the degree of pro-cyclicality of fiscal policy, its being subject to the political cycle, and its responsiveness to market discipline.¹

We also apply the same difference-in-difference approach vis-à-vis the non-EU OECD control group for the LS. In the case of the LS, our assessment comes at the time of conclusion of the original reform agenda and when the European Union is now ironing out the details of its successor strategy, Europe 2020. In this analysis, we also include a number of control variables that have come up in the literature on the political economy of structural reform. Unlike previous studies, we do not focus on reform *efforts* but rather on *outcomes* in terms of long term economic performance measures. To our knowledge, this type of exercise has not been performed before, at least in a systematic manner.

Our paper is related to several different strands of the fiscal policy literature, in particular to three of them. One is the *political economy of fiscal policy*. For example, it has been emphasised that fiscal profligacy may depend on the size and

¹However, we don't consider the complementarities between fiscal policy and structural reforms (as, for example, in Buti et al. 2009).

form of government (Buti and Pench 2004, Roubini and Sachs 1989), the design of electoral systems (Alesina and Tabellini 1990 and Persson and Svensson, 1989), the impact of partisan politics on fiscal policy (Lambertini 2000), the fragmentation of the budgetary process (Hallerberg 2004) and the politics of budget maximisation and fiscal illusion (Drazen 2004). Numerous reasons for the ‘deficit and debt biases’ have also been identified (for an overview see Schucknecht 2004; Drazen 2000 and Alesina and Perotti 1996) which range from the effects of the electoral cycle to excessively optimistic forecasts (Jonung and Larch 2006) and budget capture by pressure groups (Alesina and Drazen 1991). We include several political economy variables in our analysis.

A second strand of literature looks at *fiscal rules* and fiscal councils. Fiscal rules, defined as “*a permanent constraint on fiscal policy, expressed in terms of a summary indicator of fiscal performance*” (Kopits and Symansky 1998), are needed to deal with the problem of time inconsistency. The basic principle is “tying oneself to the mast” (Schelkle 2006), in order to avoid overspending over the business cycle. In this paper, we look at the SGP as a supra-national rule and do not focus, also for lack of data for our larger sample of countries, on *national* fiscal institutions such as in Debrun and Kumar (2007) and the possible interplay with the supranational rule.

Third, there is a significant literature on the SGP as such. We report on this literature, and its relation with our work, in a separate section (Section 2).

Our main result is that the SGP and the LS have not significantly improved the performance of EU Member States in terms of fiscal policy and long term economic performance. Our result for the SGP (no significant impact of the SGP on the average behaviour of the primary balance) lends itself to an optimistic interpretation, since the establishment of a monetary union could have, *per se*, led to a *weakening* of fiscal discipline and to larger deficits in absolute terms. Therefore, one possible reading of our finding is that the SGP was at least able to prevent this from happening. However, we find this possible interpretation too complacent since another key objective of the SGP is to prevent fiscal irresponsibility in EU Member States from spilling over to the single monetary policy. This would call for *more stringent* limits on fiscal policy in a monetary union than otherwise, and on this account our results indicate that the SGP has not delivered. Overall, our results strengthen the case for a ‘quantum leap’ in the reform of the EU and euro area economic governance.

The paper is organised as follows. Section 2 reviews some literature on the SGP. Section 3 describes the data, while Section 4 gives a preliminary look at the evidence. Section 5 looks at the role of the SGP and the Maastricht Treaty to constrain and influence fiscal behaviour. Section 6 runs a similar analysis for the LS. Section 7 concludes and presents some policy implications.

2 Literature review: the Stability and Growth Pact

There is already a copious literature on the SGP, to which for reasons of space we cannot do full justice. Here we briefly review a few of the issues that are most relevant for our analysis.

Buti, Eijffinger and Franco note (2003) that the Maastricht convergence criteria and, later, the SGP's 3% deficit limit appeared acceptable to enforce fiscal discipline at a time when public finances in a number of EU countries appeared to be on an unsustainable path. In 1992, the EU's average debt ratio was almost 60% of GDP; by 1997, it had climbed to almost 75%. While this ratio fell to 63% in 2003, von Hagen (2003) argues that this result cannot be directly attributed to the SGP and is subject to two qualifications. First, the increase in the average debt ratio from 1992-1997 was driven mainly by debt expansion in only five countries. Second, the decrease in the average debt ratio from 1997 to 2001 again saw small states outperform large states, achieving a reduction in their debt ratios of almost 20 percentage points (as against the average 5.3% reduction in large states' debt ratios). Annett (2006) uses these findings to refine the argument that the SGP is inherently more suited to small countries, suggesting that the SGP "*could be suited to a subgroup of countries that (i) are small and more likely to accept an external constraint; (ii) have the potential for macroeconomic volatility and so appreciate an external anchor; and (iii) rely on the commitment form of fiscal governance.*" Buiter (2005), writing on the same period, states more bluntly that as regards sustainability "*the SGP has made a contribution. . . only where its prescriptions were incentive-compatible for the target country, that is, aligned with that country's domestic policy objectives.*"

As noted by von Hagen (2003), since most European countries had sizeable fiscal expansions during the 1970s and 1980s, a period of consolidation could be expected in the 1990s irrespective of the Maastricht criteria or the SGP's strictures. Thus, we can interpret what Fatás and Mihov (2003) described as countries' 'consolidation fatigue' as an example of diminished incentive-compatibility. The ECB (2005) noted that, from 1999, fiscal consolidation stalled or went into reverse in most euro-area countries. Economic downturn in 2001 led to deterioration in public finances, putting an increasing number of Member States at risk of, or firmly in, excessive deficit positions. Troubles in France and Germany led to the 'suspension' of the SGP and its eventual reform in 2005, a development viewed with alarm by both the European Commission and the ECB.

More generally, Filipek and Schreiber (2010) state that until the onset of the global financial crisis, the SGP reforms appeared to be successful: countries were meeting their Medium-Term Objectives (MTOs) and most had balanced budgets or even surpluses. However, even after the 2005 reforms some problems persist. Buiter (2005) and Filipek and Schreiber agree that the SGP still does not provide the incentives for necessary restraint during upswings to create room for expansionary measures during downturns. Furthermore, von Hagen (2003) notes that the narrow

focus of the SGP on annual deficits may keep governments from adopting reform policies that might result in larger deficits initially before the desired growth and employment effects kick in.

The implementation of the SGP has obviously been followed and evaluated also by international institutions. The IMF (2010) emphasised how the crisis had exposed three long-standing weaknesses in the euro area’s fiscal framework. First, the SGP had failed to encourage the buildup of sufficient buffers in good times and lower debt to prudent levels, limiting room for manoeuvre in bad times. Second, fiscal surveillance’s narrow focus on procedural aspects and formal deficit limits, twinned with Council’s reluctance to use binding legal instruments to mandate policy corrections in EDP enforcement, aggravated structural flaws. Third, the euro area fiscal framework lacked centralized crisis management and resolution capacities. The IMF (2010) thus advocated a strengthening of economic governance of EMU with a focus on enforcing budgetary discipline.

Finally, other research has considered more closely the connection between the SGP and *national* fiscal institutions and rules. Although the econometric analysis in this paper does not delve into national fiscal frameworks (as does for example Debrun and Kumar 2007), it is worth considering this aspect of the SGP in terms of relevance for our conclusions.

From a ‘fiscal institutionalist’ perspective, the SGP should be more successfully combined with “commitment” member states because it strengthens their rules-based frameworks; while the legitimacy of delegation states’ ministers of finance is undermined by the SGP because they no longer have room for manoeuvre (Hallerberg 2004). However, country specific empirical evidence does not always fit this model (Hodson 2009). Moreover, factors such as the role of veto players in the budgetary process (e.g. German Bundesrat), or the degree of public spending decentralisation (Afonso and Hauptmeier 2009) also seem to affect fiscal outcomes.

3 Data

The empirical analysis in the paper is based on annual data from 36, mostly advanced, countries, a list of which is contained in *Table 1*. The sample includes 25 EU countries, 15 of which are in the euro area now, and 11 non-EU countries. Since most variables are not available for all countries, in the regression analyses the country sample will number between 30 and 34. The sample period is 1980 to 2009.

A number of macroeconomic variables have been obtained from ‘off the shelf’ sources: the government budget balance and debt as a share of GDP, income per capita, employment, the labour share of income and labour productivity from the European Commission AMECO database; the output gap, the primary and cyclically adjusted primary balance, the government share of income (total government disbursements as a share of GDP) and trade openness from the OECD Economic Outlook database; population and the PPP share of world GDP from the IMF World

Economic Outlook database; Research and Development expenditure, as a share of GDP, from the OECD STAN database; the Rule of Law indicator from the World Bank Governance Indicators database (available from 1996 onwards and updated to 2008; see Kaufmann et al. 2008); and a number of variables capturing the political business cycle and political institutions from the 2010 update of the Database of Political Institutions (see Beck et al. 2001). Finally, we also use OECD data on Employment Protection Legislation and Product Market Regulation, the latter interpolated to an annual frequency.

We also define dummy variables to capture the EU economic governance processes that we are interested in. As far as the Stability and Growth Pact is concerned, our baseline measure is a dummy variable *SGP* which takes values 1 if a country is in the euro area and 0 otherwise. The reason for this choice is that the Stability and Growth Pact is an essential feature of the monetary union and that a supranational fiscal rule is an important underpinning of the monetary union. It may also be argued that the fiscal limits set in the Maastricht Treaty and reinforced in the Stability and Growth Pact influenced country behaviour *even before* joining the euro, in the convergence process during the run-up to the single currency. We therefore also consider a variant of the dummy, *SGP_PRE*, which takes value 1 also in the two years preceding the euro accession. Moreover, we also compute a *MAASTRICHT* dummy taking value 1 from 1993 onwards for all EU countries (or from the moment they join the EU). Finally, we also consider the possibility that the nature of the Pact has changed after 2003, a year which, according to most observers, marked a significant weakening of the effective discipline that the Pact enforces. We therefore also defined *SGP_PRE03* as a dummy variable defined as the baseline SGP but only until 2003, and zero afterwards.

As far as the LS is concerned, the definition is more straightforward here, since it applies to all EU countries after 2000. We compute a dummy variable *LISBON* taking values 1 for all EU countries either from 2001 or from the year when they join the EU. We also consider the possibility that the LS is a cumulative process which applies with more strength, the longer since its first application. The variable *LISBON_YEARS* therefore computes, for each year, the number of years in which a certain country has been subject to the LS (this number is obviously zero for non-EU countries).

Table 2 reports the summary statistics for all variables used in this paper.

(Insert Table 1-2 here)

4 A first look at the evidence

We first look at basic summary statistics for the key variables that are interested depending on whether countries are, or are not, subject to the SGP and to the LS. The

data are reported in *Table 3*. Of course, this only represents a first, unconditional evidence as it treats all countries in the same way, irrespective of possible determinants, with the only difference of whether they are subject to the EU and euro area economic governance or not.

For fiscal variables, the data look clearly better for countries which (and when they) have been subject to the SGP. The average primary balance is +0.3% within the SGP, and -1.2% without it. Countries under the SGP have also experienced less variation, with a standard deviation of 3.3% (including both cross section and time series variation) against 4.4%. Results are similar for the other definitions of the EU fiscal rules that we propose (*MAASTRICHT*, *SGP_PRE*, *SGP_PRE03*). *Prima facie*, therefore, one is tempted to conclude that the SGP has been a success in increasing the average level as well as in reducing the standard deviation of the primary balance. We will see, however, that this conclusion does not survive in the conditional analysis, where we include other possible determinants of the primary balance.

(insert Table 3 here)

Concerning the LS, the unconditional results are less promising. Average per capita income growth, perhaps the best single yardstick of the LS (more discussion on this later), has been 1.2% on average in the countries subject to the Lisbon agenda, against 2.4% in other countries (including EU countries before 2000), with a higher standard deviation.

5 The Stability and Growth Pact and fiscal behaviour

5.1 Empirical model

We address the problem of evaluating the impact of the EU fiscal institutions (the SGP and Maastricht) in three sequential steps. First, we estimate a model of ex post fiscal behaviour over the full set of countries (both EU and not EU), similar to, for example, Gali and Perotti (2003). The model is specified on the primary balance, i.e. not cyclically adjusted. The choice of this left hand side variable - rather than the more common cyclically adjusted one - is motivated by our desire to study how the fiscal institutions have shaped not only the average behaviour of governments, but also their responsiveness to the business cycle, i.e. the degree of pro-cyclicality of fiscal policy.

This general model may be specified as a panel data model,

$$Primary_{it} = \alpha Primary_{i,t-1} + \beta x_{it} + \varepsilon_{it} \quad (1)$$

where i is the country, t the year, $Primary$ the primary balance, the x vector includes many possible determinants of fiscal behaviour, both of an economic and political/institutional nature. Note that in the x vector we include the output gap, which may give rise to a reverse causality problem; for this reason, the equation is estimated by instrumental variables using GMM.² The model also includes country fixed effects and time dummies, and a correction for the small sample is applied everywhere.

In a second step, we want to see whether the SGP - here a short-cut for the set of possible EU fiscal rules that we consider - matters for the *average* behaviour of fiscal policies,

$$Primary_{it} = \alpha Primary_{i,t-1} + \beta x_{it} + \gamma SGP_{it} + \varepsilon_{it} \quad (2)$$

If the SGP dummy is significant, then the behaviour of countries subject to these supra-national rule is systematically different from that of similar countries that are not subject to the rule. In proceeding in this way we are consistent with the literature on the econometrics of program evaluation (see Imbens and Wooldridge 2009 for a survey).

The third and final step is to analyse whether the rule affects the elasticity of fiscal policies to changes in the economic and institutional environment. We therefore extend the model in (2) to include interaction terms with a subset y of the x vector:

$$Primary_{it} = \alpha Primary_{i,t-1} + \beta x_{it} + \gamma SGP_{it} + \delta y_{it} SGP_{it} + \varepsilon_{it} \quad (3)$$

One key question, for example, is whether the SGP has made fiscal policies more or less pro-cyclical. That question would be addressed by looking at the interaction term between the output gap and the SGP dummies, which will be shown later. Note that since SGP_{it} is a binary dummy taking values zero and 1, the δ parameter can be interpreted as a marginal effect, in the sense of the marginal benefit of moving from a situation of no treatment ($SGP = 0$) to treatment ($SGP = 1$).

We should emphasise at this point that this analysis is *ex post* and it does not, therefore, aim at estimating an *ex ante* fiscal policy rule in the same way as papers based on real time variables do (Beetsma et al. 2009; Golinelli and Momigliano 2009; Cimadomo 2009). Another concern that one may have on our approach is that the decision to join the euro and the EU or euro area fiscal institutions may be an endogenous one, which may give rise to reverse causality since the treatment is not given exogenously. There is indeed some evidence that countries joining the euro have had, in the year preceding entry, a higher public debt to GDP ratio than countries which have not joined the euro. For example, the 11 countries which formed the euro area in 1999 had a combined debt to GDP ratio of 64.3%, against 47.1%

²One lag of the output gap is used as the instrument, which implies that the equation is exactly identified. There is no sign of weak instruments in this estimation. Note that in our case T is approximately the same size as N , which suggests that the Nickell (1981) bias should be, if anything, small; see Judson and Owen (1999).

in the remaining countries. Since having a higher debt increases incentives towards fiscal consolidation, our empirical approach may entail a small bias towards finding a positive effect for the fiscal rule variables. Note that this is only true for the conditions prevailing at the time of euro (or EU) entry. The effect of higher or lower debt *over the whole sample* is already captured in our model by the country fixed effect (see Imbens and Wooldridge 2009, in particular page 70); we also included the lagged debt to GDP ratio in the x_{it} vector.³

5.2 Results

The results of the estimation of equation (1) are reported in *Table 4*. A high debt to GDP in the previous year, higher trade openness and economic size all contribute to a better primary balance. By contrast, income per capita and the size of government are statistically insignificant. The result for economic size is interesting in the light of the consideration that larger countries typically have larger fiscal multipliers (Buti and Pench 2004); this may imply that they have less need of expansionary fiscal policies. The output gap is positive and significant, at around 0.3, indicating that average fiscal behaviour is *pro-cyclical*.⁴ We also test (second column) whether there is any indication of asymmetry between positive and negative output gap, and we find that the source of pro-cyclicality only comes from times in which the output gap is positive (good times). Due to the relatively large size of the standard errors, however, we are not able to conclude that the difference in the coefficients associated to positive and negative output gaps is statistically significant.⁵

In the third column, we add political variables taken from the Database of Political Institutions. We consider several variables capturing (i) the political cycle, (ii) the strength and cohesion of the government, (iii) political stability and (iv) a measure of fiscal centralization. We found that years in which legislative elections take place are strongly associated to a worse primary budget, by about 0.5% and highly statistically significant. Hence, there is strong evidence of a political business cycle in our sample of countries. Second, we find that the vote share of the government parties is associated to a better budget, indicating that stronger governments are better able to keep the fiscal house in order. Finally, a variable identifying countries where legislators are elected using a winner-take-all rule (Plurality) is also significant and positive, probably again indicating that countries with stronger governments are better able to manage public finances.⁶

In the next two columns, we analyse a shorter sample (1992-2009) and take out

³To deal with the problem of EMU entry endogeneity, Alesina, Ardagna and Galasso (2008) use instead an instrumental variable approach, where the instruments are the estimated probabilities of joining a monetary union.

⁴This result is very robust to changes in the instruments list.

⁵The Wald test is not reported for brevity.

⁶We do not include the Rule of Law indicator because it would reduce the sample size too much and because it is probably not very relevant to explain fiscal behaviour in rich countries.

2008 and 2009 from the baseline sample, i.e. the special conditions of the global financial crisis. Overall, results are similar to the baseline exercise.

The sixth column reports results for the cyclically adjusted balance. Not surprisingly, the output gap is now insignificant. Moreover, two of the three political variables now become insignificant.

(Insert Table 4 here)

Turning to equation (2), *Table 5* reports results for the different versions of the Stability and Growth Pact dummy. As can be seen, they are invariably insignificant, implying that the EU (euro area) fiscal rule is irrelevant to explain the *average* behaviour of the primary balance once the control variables are included. Later on, we will discuss the possible interpretations of this result; at this stage, we only recall that our procedure has, if anything, a small bias towards finding a significant effect, which implies that the "no effect" result is robust and possibly even conservative. We also test whether the SGP matters at least for countries which have a deficit to GDP ratio above 2%. One would expect that at least countries in this position should be pushed harder towards fiscal consolidation under the SGP than otherwise. What we find is, instead, the opposite: the SGP appears to have *reduced* countries' incentives to pursue a correction in the primary balance after being in an excessive deficit procedure, probably on account of the "bonus" represented by the low level of interest rates under EMU.

(Insert Table 5 here)

Furthermore, we report results for the estimation of equation (3) in *Table 6*. Starting from our baseline measure of the SGP (first column), it can be seen that the fiscal rule appear to have made countries *more* pro-cyclical and *more* subject to the political cycle than otherwise.⁷ This result is however not very robust to the definition of the SGP dummy and it could therefore be a phenomenon that is associated more to the euro area *per se* rather than to its fiscal infrastructure, though it is very difficult to distinguish the two interpretations based on our data. Our result stands in contrast with Gali and Perotti (2003), who found that pro-cyclicality was more muted after the adoption of the Maastricht Treaty. From the interaction term between size and the SGP, we also find no evidence that smaller countries have systematically benefited more from the SGP, contrary to what stated, for example, by von Hagen (2003) and Annett (2006).

Finally, we want to establish whether the Stability and Growth Pact has affected the role of *market discipline* which, as noted by many observers, seems to have operated in quite an inefficient way in EMU, with government bond spreads being first very small and not reactive to fiscal conditions, and then (from 2008 onwards) very

⁷Buti et al. (2004) find similar early evidence for the impact of the political business cycle under EMU.

large and exceptionally responsive. What we want to test here is not whether government bond spreads react to fiscal imbalances, as common in the literature, but rather the other way round, namely if, for given spreads, the primary balance reacts to market signals. In the last column of Table 6, therefore, we include an interaction term between the SGP and the previous year’s long-term government bond spread versus the United States Treasury bond yield, which represents a global benchmark for safe asset. There is surprisingly little literature on the disciplining role of the bond market on government behaviour. Lane (1993) sets out some general conditions for market discipline to be effective. de Haan and Sturm (2000) study government bond spreads in Europe and come to the conclusion that market discipline is not very effective.⁸ Our results indicate that market discipline - as measured by the influence of government bond spreads in the previous year on the current year’s primary balance - does not seem to matter much in the determination of primary balances more generally, and this has been so also under the SGP. We also added squared terms of these variables to capture possible non-linearities, but these were again statistically insignificant. Therefore, we conclude that if the SGP (and/or the euro) has had any effect, it is not through its influence on the working of market discipline.

(Insert Table 6 here)

6 The Lisbon Strategy and economic performance

After analysing fiscal behaviour and the EU fiscal rules, we now turn to structural economic performance and the role of the Lisbon Strategy (LS). We look at outcomes and do not consider reform efforts. This distinguishes our paper from other papers such as Duval and Elmeskov (2006) and Alesina, Ardagna and Galasso (2008), which have tried *inter alia* to establish a link between the intensity of structural reforms and the introduction of the euro. An important characteristic of the LS was precisely that it did not focus on a particular set of structural reforms to be implemented, leaving individual EU countries much freedom under the central coordinating procedures of the Broad Economic Policy Guidelines and the Employment Guidelines (the “Integrated Guidelines” post-2005) to pursue their own ways. The LS did however contain a number of quantitative objectives in terms of outcomes (Ioannou et al. 2008). From a methodological perspective, in trying to ascertain the marginal contribution of the LS, we need to control for a series of determinants that have been identified in the literature as potential determinants of reform effort and economic performance. The literature on the political economy of structural reform has emphasised, in particular, the degree of openness of economy (which makes it easier to convince stakeholders given the higher degree of external competition (IMF 2006); the size of the economy,

⁸Bulut (2009) also finds little evidence of market discipline for sovereign borrowers of developing countries.

with smaller countries being more open (Alesina and Wacziarg 1998) and more culturally homogenous, thereby allowing greater effectiveness of decision making; the degree of centralisation/devolution of decision making processes, with the former implying less resistance (Tompson 2009); the form of electoral rules, majoritarian versus proportional, with the latter implying less power sharing and more consensus (Boeri et al. 2006), but possibly also implying more sustainable solutions which reflect the interests of broad majorities (IMF 2004); the nature of the political system, with parliamentary based systems possibly being more flexible than presidential

As for the specific reasons behind the shortcomings of the LS in particular, the latest literature highlights several of the factors already identified by the Kok Report (2004) and the European Commission (2005) already back in the mid-2000s when the Lisbon Strategy underwent a reform in parallel to the SGP reform. In particular, as also explained by Ioannou et al. (2008), the reform of the LS did not achieve a sharper focus of the aims of the Strategy nor of the enhancement of the governance tools used to implement it.

Searching for a deeper cause, Ruta (2009), Collignon (2009) and Schout and Jordan (2008) all tend to attribute the failure of the Lisbon Strategy to political constraints. Ruta (2009) in particular emphasises that, because national governments retain competence in economic policy, spillover effects of reform are not fully internalized, which allows vested interests to lobby successfully in national capitals. Particularly relevant in energy in this regard have been the finance and services sectors which have been targets for liberalisation under the Lisbon Strategy.

Collignon (2009) finds the EU's disappointing performance to be the result of a collective action problem which emerges "*when autonomous governments seek to maximise collective utilities in isolated constituencies*" (p. 76). Schout and Jordan (2008) argue that much of the Lisbon Strategy relies on modes of "*networked governance*" whereby central bodies depend upon the cooperation and joint resource mobilization of policy actors outside their hierarchical control. The authors question whether national and subnational administrations have upgraded their co-ordinating capacities to make network-based modes function effectively. Koczor (2009) identifies objective and subjective factors influencing states' implementation of the Lisbon Strategy. Under the former heading, he includes the general level of development of a country and society's adaptability to the globalisation process. Under subjective factors, Koczor notes the importance of efficiency of governmental action, political will and the consensus for reform, the extent to which non-governmental entities (employer and employee organisations) work with the government to draft and implement the strategy, as well as the social acceptance of reform.

Wyplosz (2010), in line with the call by Ioannou et al. (2008) for a more explicit benchmarking, argues that the shift from pointed criticism to diplomatic peer pressure from the Commission undermined the process. Further, he notes that "*political leaders are not raised to encourage critical comments from each other. More importantly, perhaps, while even polished exercises of apparent mutual admiration could*

still exercise some pressure, political leaders never forget that they are accountable to domestic voters.”

Finally, Padoan (2009) sees an incomplete policy mix and a delay in capitalising on a changing international environment as the main reasons for failure. The persistent European deficit in R&D is, in his opinion, the result of a failure to promote the emergence and growth of innovative businesses in new sectors.

6.1 Empirical model

For the empirical model we follow a similar approach as in Section 4. Let z_{it} be an indicator of economic performance that is relevant for the LS. We first estimate a model

$$z_{it} = \alpha z_{i,t-1} + \beta x_{it} + \varepsilon_{it} \quad (4)$$

where the performance indicator is regressed on a vector of possible fundamental determinants x (possibly also timed $t - 1$ where reverse causality is a potential concern). Once we obtain a satisfactory parsimonious model for equation (4), we add the dummy variables capturing the LS:

$$z_{it} = \alpha z_{i,t-1} + \beta x_{it} + \gamma LISBON_{it} + \varepsilon_{it} \quad (5)$$

The coefficient γ captures the additional effect, coming on top of all other control variables, stemming from the fact a given country is subject to a supranational process, the LS. To simplify things, finding $\gamma > 0$ would imply that the LS has "worked" and that its success is visible in the data. Also in this case, as for the analysis of ex post fiscal behaviour, we emphasise the risk of selection bias, as it could well be that countries have structural weaknesses are precisely those who undertake a stronger reform effort, in the same way as patients who are more ill are more likely to take a certain medicine. In the case of the LS, this may be less of a concern since it applies indistinctly to the whole EU and the decision to join the EU (unlike, at least in part, the decision to join the euro area) largely reflects geographical and political determinants, not economic policy objectives.⁹ Furthermore, this is if anything a source of bias in the direction of finding $\gamma > 0$, rather than the other way round.

We take three indicators as best overall measures of performance in the light of the objectives of the LS: (i) per capita income growth, (ii) labour productivity growth, and (iii) employment growth. These measures accord well with the original aim of the LS, which was to make the EU "the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion".

⁹In addition, the point made earlier for the country fixed effects also applies to this part of the analysis.

6.2 Results

Table 7 reports the results for per capita income growth. In estimating equation (4) and retaining the significant variables, we find that a few variables are robustly associated to per capita income growth. First, initial conditions matter: the lagged per capita income *level* has a *negative* sign, suggesting some catching up process. Second, trade openness is associated to stronger per capita growth, as is a higher level of Employment Protection Legislation. Turning to the political and institutional variables, we find that Political Stability and Proportional Representation are associated to higher per capita growth. We conclude, therefore, that countries with lower income per capita, higher trade openness, more employment protection, more political stability and with a proportional political system tend to experience higher per capita income growth. We also tried a number of additional variables that turned out to be insignificant. First, we tried the World Bank Rule of Law indicator, as in Rodrik et al. (2004), but we found this variable insignificant, though correctly signed. It should be emphasised that there are two main differences between the analysis in this paper and Rodrik et al. (2004), which may explain the difference in results. First, we look at per capita income *growth* rather than levels. Second, our panel includes mostly rich countries, while the quality of institutions (such as the protection of property rights) are likely to explain the difference between poor and rich countries rather than the smaller differences among rich countries. Furthermore, economic size was also insignificant when included together with openness (though it was significant when included alone). Finally, we also tried several variables capturing the country's political institutions, finding all of them insignificant (apart from those reported in Table 7).¹⁰

(Table 7 here)

The second column of Table 7 reports the same equation when adding the Lisbon dummy, which is insignificant. Column (3) then reports the LISBON_YEARS dummy, which caters for the possibility that the LS has a cumulative, investment-like nature. Also this dummy variable is insignificant. The fourth to sixth columns present some robustness analysis, in particular (i) restricting the sample period to 1992-2009; (ii) taking out 2008 and 2009, the exceptional years of the global financial crisis; and (iii) excluding observations for very low income per capita. The results are practically unchanged, with the only exception of Proportional Representation that is not significant anymore in the 1992-2009 sample period. We conclude, therefore, that we find no evidence of an impact of the LS on per capita income growth.

Table 8 repeats the same exercise for labour productivity growth, another mainstay of the LS. Again, we find that lagged per capita income levels tend to have a negative impact on productivity growth, while again trade openness has a positive

¹⁰The OECD's Product Market Regulation is also insignificant, probably on account of the more limited data availability.

impact (though less robustly statistically significant than in the case of per capita income growth). We also find that a higher lagged wage share of income is significant, with a positive sign, indicating that a higher wage share of income fosters productivity growth. This may be due to the fact that a higher wage share of income makes capital more scarce and hence raises the marginal efficiency of capital, contributing to higher productivity growth. Once again, we tried a number of additional variables which turned out to be insignificant in the estimated equation. The Lisbon dummies are here mostly significant but negatively signed, indicating that being part of the LS has *reduced*, rather than increased labour productivity growth. One interpretation of this result is that the LS provided two mutually incompatible objectives, raising labour productivity but also expanding employment, and efforts directed at the latter objective may have weakened the first objective. The results are robust to changing the sample period and when excluding the global financial crisis.

(Table 8 here)

Finally, *Table 9* reports results for employment growth. In this case, we find labour force growth - a mainly demographic variable - strongly significant and positive, while the lagged employment share is negative, suggesting an error correction behaviour (countries with a higher employment share experiencing lower employment growth, and the other way round). There is also some evidence that the Vote Share of Government Parties (an indicator of the strength and stability of governments) exerts a positive impact. Rather surprisingly, we find the OECD measure of Employment Protection Legislation to be insignificant, possibly because it is correlated to the employment share in levels, but not necessarily to the *growth rate* of employment. Not surprisingly at this stage, we find the LS dummies insignificant everywhere, except in column (3) where the *LISBON_YEARS* dummy is *negatively* signed. Overall, our results converge to the strong conclusion that the LS had, at best, no impact on the variables that it was set to positively contribute to.

(Table 9 here)

7 Conclusions

This paper is an *ex post* analysis of whether two key EU and euro area economic institutions, the Stability and Growth Pact and the Lisbon Strategy, have achieved their goals, a decade or more after they were established. We have looked at a wide range of annual data coming from 36 countries, over the sample period from 1980 to 2010; we have considered a large set of possible control variables, as well as variables which could interact with the success (or lack thereof) of the EU economic institutions. Overall, our results indicate that so far economic governance in the EU and the euro area has had limited or no success. For the Lisbon Strategy, our

results are not likely to be found surprising.¹¹ Results are perhaps somewhat more surprising, but also more nuanced, for the Stability and Growth Pact.

An optimistic reading of our results is that finding no effect of the SGP on fiscal outcomes is an indicator of success, since it implies that this institution has prevented the establishment of the monetary union in Europe to adversely affect fiscal behaviour, a risk that was emphasised widely in the run-up to the euro. In this interpretation, our finding of no effect of the SGP on the average primary balance is largely a result of a "divine coincidence", whereby the positive effects of the SGP have counterbalanced the negative externalities of the common currency on countries' incentives towards fiscal prudence. Although there is, in our view, an element of truth in this interpretation, we consider that an appropriate set of fiscal rules in a monetary union should go beyond the 'no change' outcome, and impose greater fiscal discipline than otherwise, on account of the possible negative spillovers that fiscal profligacy in individual countries may have on the single monetary policy, as well as the possible reduction in market discipline for individual Member States brought about by the common currency. Our results indicate that the SGP has *not* delivered according to this stricter benchmark. The main policy implication stemming from our analysis is that substantial progress must be made on EU and euro area economic governance pillars in the next decade, if visible gains are to be obtained to the benefit of European citizens.

In terms of questions for future research, we find that the interaction between supra-national rules such as the Stability and Growth Pact and the Lisbon Strategy and national fiscal and economic institutions is a promising field of investigation, which we have not pursued here owing to data limitations but which merits further attention.

¹¹For example, Swedish prime minister Fredrik Reinfeldt wrote in June 2009 that "*Even if progress has been made it must be said that the Lisbon Agenda, with only a year remaining before it is to be evaluated, has been a failure.*"

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TABLE 1. List of countries

<i>EU</i>	<i>Non-EU</i>
Austria	Australia
Belgium	Canada
Bulgaria	Iceland
Cyprus	Japan
Czech Republic	Republic of Korea
Denmark	Mexico
Estonia	New Zealand
Finland	Norway
France	Switzerland
Germany	Turkey
Greece	USA
Hungary	
Ireland	
Italy	
Latvia	
Lithuania	
Luxembourg	
Netherlands	
Poland	
Portugal	
Romania	
Slovak Rep.	
Slovenia	
Spain	
UK	

TABLE 2. Summary statistics

	Full sample					1991-2010				
	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>	<i>Obs</i>	<i>Mean</i>	<i>Std. Dev.</i>	<i>Min</i>	<i>Max</i>
Public deficit	908	-0.85	4.08	-12.25	20.40	670	-0.50	3.96	-12.25	20.40
Primary balance	956	-0.92	4.31	-19.27	16.13	695	-1.02	4.70	-19.27	16.13
CAB	833	-0.54	3.14	-14.51	7.73	599	-0.45	3.29	-14.51	7.22
Public debt	835	52.84	31.85	3.79	193.49	614	52.90	33.35	3.79	193.49
Govt. bond spread vs. US	818	1.75	6.01	-8.40	94.55	578	1.75	6.60	-4.28	94.55
Real GDP weight	1070	1.89	3.96	0.02	23.79	698	1.74	3.83	0.02	23.79
Trade openness	964	72.07	37.45	14.01	222.08	697	76.85	37.89	14.01	222.08
Govt. share of income	857	44.37	8.76	17.08	70.93	605	44.10	8.02	19.79	70.93
Output gap	907	-0.47	2.72	-12.56	12.09	627	-0.52	2.72	-10.28	12.09
Output gap>0	907	0.80	1.40	0.00	12.09	627	0.76	1.39	0.00	12.09
Output gap<0	1327	-0.87	1.63	-12.56	0.00	703	-1.14	1.82	-10.28	0.00
Income per capita	1047	63.81	28.29	16.18	152.71	698	57.83	26.99	16.18	152.71
Rule of Law	468	1.14	0.70	-0.64	2.12	468	1.14	0.70	-0.64	2.12
Legislative Election Held	1192	0.27	0.45	0.00	1.00	664	0.27	0.44	0.00	1.00
Vote share of govt. parties	1279	45.48	22.28	0.00	100.00	666	46.11	13.56	0.00	96.80
Plurality	1157	0.50	0.50	0.00	1.00	661	0.47	0.50	0.00	1.00
Proportional representation	1111	0.86	0.35	0.00	1.00	661	0.89	0.31	0.00	1.00
SGP	1147	0.13	0.34	0.00	1.00	703	0.21	0.41	0.00	1.00
SGP_EXT	1147	0.16	0.36	0.00	1.00	703	0.25	0.44	0.00	1.00
MAASTRICHT	1147	0.26	0.44	0.00	1.00	703	0.42	0.49	0.00	1.00
SGP_PRE03	1147	0.05	0.22	0.00	1.00	703	0.08	0.27	0.00	1.00
Employment growth	905	0.01	0.03	-0.26	0.12	674	0.01	0.03	-0.26	0.12
Per capita income growth	964	0.02	0.04	-0.20	0.15	685	0.02	0.04	-0.20	0.15
Labour productivity growth	944	0.02	0.03	-0.31	0.16	677	0.02	0.03	-0.31	0.16
Labour force growth	913	0.01	0.02	-0.09	0.10	659	0.01	0.02	-0.09	0.10
Employment share of population	942	0.55	0.11	0.21	0.78	682	0.55	0.11	0.21	0.78
Wage share of income	931	57.88	7.15	37.65	84.59	676	56.34	7.17	37.65	76.24
Product Market Regulation	322	1.69	0.56	0.82	3.97	322	1.69	0.56	0.82	3.97
Employment Protection Legislation	632	2.11	1.01	0.21	4.19	480	2.04	0.94	0.21	3.85
LISBON	1147	0.17	0.37	0.00	1.00	703	0.27	0.44	0.00	1.00
LISBON_YEARS	1147	0.80	2.11	0.00	10.00	703	1.30	2.58	0.00	10.00

Sample period: annual data from 1980 to 2009. See text for further explanations on the sources and definitions of the data.

TABLE 3. Unconditional moments of the primary balance and per capita growth

	<i>Obs.</i>	<i>Mean</i>	<i>Std. dev.</i>
	Primary balance		
Full sample	956	-0.92	4.31
No SGP	806	-1.17	4.42
SGP	150	0.39	3.39
No SGP_PRE	778	-1.27	4.44
SGP_PRE	178	0.58	3.3
No MAASTRICHT	662	-1.41	4.56
MAASTRICHT	294	0.18	3.46
No SGP_PRE03	899	-1.12	4.33
SGP_PRE03	57	2.16	2.36
	Per capita growth		
Full sample	964	2.2	3.7
No Lisbon	774	2.4	3.5
Lisbon	190	1.2	4.4

Note: See text for the definition of the dummy variables. All data are in percentage points per year. The full sample goes from 1980 to 2009 (annual data).

TABLE 4. Fiscal behaviour

	(1)	(2)	(3)	(4)	(5)	(6)
				1992-2009	No crisis (1980- 2007)	CAB
Output gap>0		0.45*				
		(0.23)				
Output gap<0		0.19				
		(0.13)				
Primary balance (t-1)	0.72***	0.72***	0.69***	0.63***	0.66***	
	(0.044)	(0.045)	(0.039)	(0.052)	(0.037)	
Debt to GDP (t-1)	0.020***	0.020***	0.026***	0.036***	0.026***	0.022***
	(0.0076)	(0.0076)	(0.0065)	(0.011)	(0.0065)	(0.0051)
Trade openness (t-1)	0.034***	0.034***	0.031**	0.019	0.038***	0.030***
	(0.012)	(0.012)	(0.013)	(0.016)	(0.012)	(0.010)
Size (t-1)	0.86***	0.87***	0.79**	0.99**	0.98**	0.65**
	(0.31)	(0.31)	(0.34)	(0.47)	(0.40)	(0.29)
Income per capita (t-1)	-0.033	-0.035				
	(0.023)	(0.022)				
Government share of income (t-1)	0.047	0.052				
	(0.035)	(0.036)				
Output gap	0.30***		0.21***	0.27**	0.14**	0.067
	(0.079)		(0.075)	(0.11)	(0.068)	(0.057)
Legislative Election Held			-0.56***	-0.53***	-0.49***	-0.47***
			(0.15)	(0.19)	(0.15)	(0.12)
Vote Share of Government Parties			0.020**	0.024*	0.020*	0.010
			(0.010)	(0.014)	(0.011)	(0.0079)
Plurality			1.22*	0.33	1.09**	0.37
			(0.63)	(0.98)	(0.50)	(0.44)
Cyclically adjusted primary balance (t-1)						0.71***
						(0.032)
Output gap*Govt share of income (t-1)						

Observations	705	705	678	507	616	649
R-squared	0.678	0.674	0.659	0.584	0.681	0.665
Number of country	31	31	31	31	31	30
J test (P value)	.	.	.	.	.	.
<u>Kleibergen-Paap test for underidentification (P value)</u>	<u>0</u>	<u>1.4e-09</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The equation is estimated by instrumental variables (GMM), where the potentially endogenous variable is the output gap. The instrument is one lag of the output gap, hence the equation is exactly identified. The sample period is 1980-2009 unless otherwise specified. Time and country fixed effects are always included in the model.

TABLE 5. Introducing the SGP dummies

	(1)	(2)	(3)	(4)	(5)
Output gap	0.22*** (0.076)	0.21*** (0.075)	0.21*** (0.075)	0.22*** (0.077)	0.22*** (0.076)
Primary balance (t-1)	0.69*** (0.039)	0.69*** (0.039)	0.69*** (0.039)	0.69*** (0.039)	0.69*** (0.041)
Debt to GDP (t-1)	0.025*** (0.0064)	0.026*** (0.0065)	0.027*** (0.0066)	0.026*** (0.0065)	0.024*** (0.0064)
Size (t-1)	0.77** (0.34)	0.79** (0.34)	0.82** (0.34)	0.79** (0.34)	0.84** (0.34)
Trade openness (t-1)	0.032** (0.013)	0.032** (0.013)	0.030** (0.013)	0.032** (0.013)	0.028** (0.013)
Legislative Election Held	-0.55*** (0.15)	-0.56*** (0.15)	-0.55*** (0.15)	-0.56*** (0.15)	-0.56*** (0.15)
Vote Share of Government Parties	0.021** (0.010)	0.020** (0.010)	0.018* (0.010)	0.020* (0.010)	0.022** (0.010)
Plurality	1.28** (0.64)	1.26** (0.64)	1.03 (0.65)	1.24* (0.63)	1.48** (0.66)
SGP	-0.32 (0.33)				-0.10 (0.35)
SGP_PRE		-0.20 (0.33)			
MAASTRICHT			0.41 (0.32)		
SGP_PRE03				-0.17 (0.31)	
Deficit>2%(t-1)					0.33 (0.27)
Deficit>2%(t-1)*SGP					-1.00** (0.44)
Observations	678	678	678	678	678
R-squared	0.660	0.660	0.661	0.659	0.663

Number of country	31	31	31	31	31
J test (P value)	.	.	.	.	.
Kleibergen-Paap test for underidentification (P value)	0	0	0	0	0

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The equation is estimated by instrumental variables (GMM), where the potentially endogenous variable is the output gap. The instrument is one lag of the output gap, hence the equation is exactly identified. The sample period is 1980-2009 unless otherwise specified. Time and country fixed effects are always included in the model. For the definition of the dummy variables see text.

TABLE 6. Introducing interaction terms

	(1)	(2)	(3)	(4)	(5)	(6)
Output gap	0.23*** (0.076)	0.22*** (0.077)	0.29*** (0.096)	0.25*** (0.078)	0.26*** (0.081)	0.23*** (0.076)
Primary balance (t-1)	0.65*** (0.046)	0.65*** (0.047)	0.65*** (0.050)	0.65*** (0.047)	0.63*** (0.056)	0.65*** (0.046)
Debt to GDP (t-1)	0.027*** (0.0069)	0.028*** (0.0070)	0.027*** (0.0074)	0.027*** (0.0071)	0.022*** (0.0069)	0.027*** (0.0069)
Size (t-1)	0.95** (0.41)	0.97** (0.40)	0.87** (0.38)	0.87** (0.39)	0.74* (0.40)	1.00** (0.42)
Trade openness (t-1)	0.033** (0.013)	0.030** (0.014)	0.032** (0.013)	0.033** (0.013)	0.052*** (0.013)	0.033** (0.014)
Legislative Election Held	-0.44*** (0.16)	-0.46*** (0.16)	-0.46*** (0.16)	-0.51*** (0.16)	-0.31** (0.14)	-0.44*** (0.16)
Vote Share of Government Parties	0.021** (0.011)	0.021** (0.011)	0.020* (0.010)	0.023** (0.011)	0.015 (0.011)	0.021** (0.011)
Plurality	1.36** (0.66)	1.35** (0.66)	1.09* (0.65)	1.20* (0.64)	0.83 (0.62)	1.33** (0.67)
SGP	0.58 (0.85)				0.23 (0.78)	0.52 (0.91)
Output gap*SGP	0.23* (0.13)				0.23 (0.16)	0.23* (0.13)
Debt to GDP(t-1)*SGP	-0.0035 (0.0085)				0.0048 (0.0082)	-0.0041 (0.0083)
Legislative Election Held*SGP	-0.18** (0.075)				-0.22*** (0.079)	-0.18** (0.076)
SGP_PRE		0.42 (0.78)				
Output gap*SGP_PRE		0.16 (0.12)				
Debt to GDP(t-1)*SGP_PRE		-0.0031 (0.0083)				
Legislative Election Held*SGP_PRE		-0.11*				

			(0.056)			
MAASTRICHT				0.85		
				(0.77)		
Output gap*MAASTRICHT				-0.18		
				(0.13)		
Debt to GDP(t-1)*MAASTRICHT				-0.0040		
				(0.0098)		
Legislative Election Held*MAASTRICHT				-0.057		
				(0.050)		
SGP_PRE03					0.34	
					(0.70)	
Output gap*SGP_PRE03					-0.15	
					(0.16)	
Debt to GDP(t-1)*SGP_PRE03					-0.0031	
					(0.0067)	
Legislative Election Held*SGP_PRE03					-0.078	
					(0.089)	
Government bond spread vs. the USA, t-1						-0.022
						(0.046)
Government bond spread vs. the USA squared, t-1						0.00053
						(0.00041)
Government bond spread vs. the USA, t-1*SGP						0.47
						(0.83)
Government bond spread vs. the USA squared, t-1*SGP						0.18
						(0.65)
Size t-1*SGP						
						0.068
						(0.17)
Observations	695	695	695	695	632	695
R-squared	0.616	0.612	0.611	0.607	0.655	0.616
Number of country	34	34	34	34	33	34
J test (P value)	.	.	.	.	.	.
Kleibergen-Paap test for underidentification (P value)	0	0	0	0	0	0

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The equation is estimated by instrumental variables (GMM), where the potentially endogenous variable is the output gap. The instrument is one lag of the output gap, hence the equation is exactly identified. The sample period is 1980-2009 unless otherwise specified.

Time and country fixed effects are always included in the model.
For the definition of the dummy variables see text, Section 3.

TABLE 7. The Lisbon Strategy: per capita income growth

	(1)	(2)	(3)	(4)	(5)	(6)
Per capita income growth (t-1)	0.25*** (0.059)	0.25*** (0.059)	0.25*** (0.059)	0.17*** (0.065)	0.24*** (0.060)	0.25*** (0.059)
Income per capita (t-1)	-0.0012*** (0.00019)	-0.0012*** (0.00019)	-0.0012*** (0.00019)	-0.0013*** (0.00026)	-0.0011*** (0.00019)	-0.0012*** (0.00019)
Trade openness (t-1)	0.00072*** (0.00012)	0.00072*** (0.00012)	0.00072*** (0.00012)	0.00077*** (0.00014)	0.00078*** (0.00013)	0.00072*** (0.00012)
Employment Protection Legislation	0.0055** (0.0026)	0.0053** (0.0026)	0.0045* (0.0026)	0.0025 (0.0034)	0.0051* (0.0027)	0.0053** (0.0026)
Proportional Representation	0.029** (0.014)	0.029** (0.014)	0.029** (0.014)	0.0062 (0.0085)	0.030** (0.015)	0.029** (0.014)
Stability	-0.0096** (0.0039)	-0.0096** (0.0039)	-0.0096** (0.0039)	-0.011** (0.0043)	-0.0092** (0.0041)	-0.0096** (0.0039)
LISBON		-0.00081 (0.0031)		-0.0037 (0.0033)	-0.00024 (0.0032)	-0.00081 (0.0031)
LISBON_YEARS			-0.00070 (0.00064)			
Observations	610	610	610	469	581	610
R-squared	0.353	0.353	0.354	0.327	0.311	0.353
Number of country	28	28	28	28	28	28

Note: Pooled OLS with robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The sample period is 1980-2010 unless otherwise specified. Time and country fixed effects are always included in the model.

For the definition of the dummy variables see text, Section 3.

TABLE 8. The Lisbon Strategy: labour productivity growth

	(1)	(2)	(3)	(4)	(5)
Labour productivity growth (t-1)	0.20*** (0.052)	0.19*** (0.053)	0.19*** (0.052)	0.20*** (0.056)	0.20*** (0.057)
Income per capita (t-1)	-0.00087*** (0.00016)	-0.00080*** (0.00016)	-0.00084*** (0.00016)	-0.00091*** (0.00026)	-0.00056*** (0.00015)
Trade openness (t-1)	0.00021* (0.00013)	0.00023* (0.00013)	0.00022* (0.00013)	0.00023 (0.00014)	0.00026* (0.00015)
Wage share of income (t-1)	0.00092* (0.00047)	0.00099** (0.00047)	0.0010** (0.00047)	0.0014** (0.00067)	0.0014*** (0.00050)
LISBON		-0.0052* (0.0027)		-0.0064** (0.0032)	-0.0029 (0.0027)
LISBON_YEARS			-0.00097** (0.00045)		
Observations	865	865	865	657	757
R-squared	0.329	0.332	0.332	0.349	0.162
Number of country	37	37	37	37	37

Note: Pooled OLS with robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The sample period is 1980-2010 unless otherwise specified. Time and country fixed effects are always included in the model.

For the definition of the dummy variables see text, Section 3.

TABLE 9. The Lisbon Strategy: employment growth

	(1)	(2)	(3)	(4)	(5)
Employment growth (t-1)	0.27*** (0.10)	0.26*** (0.10)	0.26** (0.10)	0.24** (0.12)	0.27** (0.11)
Trade openness (t-1)	0.00026* (0.00013)	0.00027* (0.00014)	0.00027** (0.00014)	0.00023 (0.00018)	0.00020 (0.00016)
Labour force growth	0.55*** (0.13)	0.55*** (0.13)	0.54*** (0.13)	0.43*** (0.16)	0.52*** (0.13)
Employment Share (t-1)	-0.24*** (0.044)	-0.24*** (0.044)	-0.24*** (0.044)	-0.31*** (0.067)	-0.22*** (0.045)
Vote Share of Government Parties	0.00016* (0.000091)	0.00017* (0.000091)	0.00017* (0.000092)	0.00024** (0.00011)	0.00024** (0.00011)
LISBON		-0.0016 (0.0023)		0.00055 (0.0028)	-0.000073 (0.0023)
LISBON_YEARS			-0.00076* (0.00042)		
Observations	796	796	796	601	726
R-squared	0.493	0.493	0.495	0.469	0.439
Number of country	36	36	36	36	36

Note: Pooled OLS with robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1. The sample period is 1980-2010 unless otherwise specified. Time and country fixed effects are always included in the model.

For the definition of the dummy variables see text, Section 3.