

## (When) Does Austerity Work? On the Conditional Link between Fiscal Austerity and Debt Sustainability

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### Abstract

The Eurozone crisis has given a new impetus to academic and policy debates about the merits and ills of fiscal consolidation policies (austerity). Fuelled by the huge contraction experienced by some ‘bailout countries’, and especially Greece, a new consensus seems to have emerged, that “austerity doesn’t work”. Yet, many Eurozone countries have seen a relatively fruitful implementation of fiscal consolidation programmes, with fiscal pressures being successfully curtailed and the adverse growth effects of austerity being very short-lived. The literature has only recently shifted its attention to the qualitative characteristics of fiscal consolidation to explain variations in economic performance (growth) across countries in the course of austerity. Still, attention to political-institutional and structural-economic factors is generally lacking. This paper makes a contribution in this direction, by showing that two domestic-context parameters – trade openness and quality of government – exert significant influence on the impact that austerity has on growth and debt-sustainability. Factoring-in these parameters allows us to contextualise a number of ‘stylised facts’ of the Eurozone crisis, including the huge recession and large snowball effect for Greece, the relatively painless fiscal consolidation in parts of the Eurozone north, and the surprising decline in nominal interest rates seen in some of the most agile Eurozone countries.

**Keywords:** Austerity, growth, debt sustainability, quality of government.

### 1. Introduction

The Eurozone crisis has given a new impetus to academic and policy debates about the merits and ills of fiscal expansion and contraction. Fuelled by the huge contraction experienced in Greece and, less so, in other ‘bailout’ countries, and later by the awkward admittance by the IMF that their initial projections about the fiscal multiplier and thus of the effects of austerity were way off the mark (Blanchard and Leigh, 2013a), numerous contributions emerged arguing the case that “austerity doesn’t work”. Although not representing, even remotely, a fundamental shift of

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mainstream economic thinking on the topic, the “austerity trap” idea has undoubtedly gained currency well beyond its traditional Keynesian and heterodox-economics ‘home’. The essence of this renewed austerity debate has its roots in two rather simple premises. On the one hand, that primary surpluses (and, in this sense, fiscal consolidation<sup>1</sup>) are necessary for a reduction in debt (at least in terms of levels). On the other hand, that fiscal consolidation deprives the economy of some of its key growth drivers (fiscal stimulation, in the case of reductions in government spending; and/or private consumption, in the case of increases in taxation), thus putting further pressures on public debt (at least in share-of-GDP terms).

It is thus no accident that the size of the ‘fiscal multiplier’ has become a central feature in this debate. A multiplier of less than unity implies a less-than-proportionate loss of GDP with fiscal consolidation and thus justifies austerity policies despite their obvious social and economic costs; inversely, an above-unity multiplier suggests directly that austerity is ‘self-defeating’, as the fiscal effort reduces GDP by more than the savings achieved in terms of debt (the so-called “snowball effect”). Analytically, the size of the multiplier depends on specific assumptions about how economic agents respond to (changes in) government spending and taxation and how fast prices and wages adjust to changing demand and supply conditions in the economy. In a Keynesian world, with significant price and wage stickiness and adaptive expectations, fiscal multipliers are large and typically well above unity. In turn, in a neoclassical world, where prices adjust instantaneously and economic agents are rational and fully-informed, changes in government spending are immediately discounted in the economy and thus multipliers tend to be closer to zero<sup>2</sup>.

Despite the centrality of this issue, even prior to the crisis, the empirical evidence on the size of the multiplier is largely considered to be inconclusive, as estimates across studies range from well below 1 to above 3 (Chinn, 2013). Recent contributions in the literature have sought to explain this variation (Auerbach and Gorodnichenko, 2013) and a number of factors that influence the size of the multiplier have been proposed theoretically or identified empirically – from a country’s position in the business cycle and the overall level of its public debt to the role of market confidence and the macro-monetary policy environment (see, *inter alia*, Christiano et al, 2011; Corsetti et al, 2012a; Bachmann and Sims, 2012;

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<sup>1</sup> By fiscal consolidation we mean the curtailment of excessive budget deficits and government debts to sustainable levels. A primary surplus is a positive balance in the government primary account, i.e., its budget position excluding expenditures for interest paid on its debt.

<sup>2</sup> See Chinn (2013) for an accessible exposition and discussion.

Ilzetzki et al, 2013). However, the literature stops short of offering an explicit treatment of the fiscal multiplier as an endogenous aggregate<sup>3</sup>. As a result, much of the policy debate and analysis on the issue of austerity and the austerity-growth relationship continues to treat the multiplier as strictly exogenous.

This paper aims at contributing in the direction of the development of a more explicit debate about the endogeneity of the fiscal multiplier and of the factors influencing debt dynamics more generally, including the level of interest faced by indebted governments. Its aim is to add to the existing literature by moving beyond the macro-monetary ('systemic') factors that have been the subject of recent relevant studies and considering instead the role of idiosyncratic (country-specific) factors, which can account for the conditions under which austerity may be self-defeating or recovery-promoting even within the same macro-monetary context. Our attention is with two sets of factors. On the one hand, factors related to economic structure: we look at trade openness as an overarching indicator of this. On the other hand, factors related to government and institutional quality aspects such as budgetary effectiveness, state/administrative capacity, consensus/coalition-building capabilities and government credibility - summarised under the broad heading of 'quality of government' (see Rothstein, 2011, and especially Rothstein and Teorell, 2012).

We begin with a review of the recent literature on debt dynamics and fiscal multipliers, highlighting the main findings and the main points of contention (section 2). In section 3 we turn to the empirical evidence and revisit the 'empirical regularity' concerning the negative relationship between austerity and growth. The evidence we present goes against simple arguments holding that austerity is invariably and universally recessionary. Instead, we show a rather sizeable heterogeneity among EU countries in the intensity (and direction) of the growth-austerity relationship. Following, in section 4 we consider two main factors accounting for this heterogeneity (trade openness and quality of government) and go on to show that these factors play an important role for the identified 'empirical regularity' of recessionary austerity. The paper concludes with some implications for policy and for the wider debate about the relationship between fiscal consolidation and debt sustainability.

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<sup>3</sup> See Roeger and in't Veld (2009), Pal Szekely et al (2011), and Eyraud and Weber (2013) for partial exceptions to this.

## 2. Debt sustainability, growth and austerity

Prior to the sovereign debt crisis in Europe, the debate on debt dynamics and fiscal consolidation was framed largely around two theoretical schools of thought. On the one hand, the Keynesian tradition which saw fiscal expansion as growth-inducing, owing to the premise of price- and wage-stickiness. Drawing on the well-known 'fiscal multiplier', the prediction was essentially that 'borrowing for the future' works, as it allows governments to mobilise resources – through fiscal expansion, including for consumption – thus pushing the economy closer to full employment statically and to a higher growth equilibrium in a dynamic sense. On the other hand, the monetarist and neo-classical tradition predicted that fiscal activism is largely ineffective, as – perfectly informed – individuals anticipate future tax hikes in response to any present fiscal expansion and thus adjust their investment and consumption decisions downwards in a way that cancels the stimulus to the economy instigated by government spending (the so-called Ricardian Equivalence).

Almost concurrently with the eruption of the crisis, the controversial work of Reinhart and Rogoff (2009 and 2010) came to offer a synthesis between the two views, claiming that a historical limit to fiscal expansion exists, estimated at around 90% of GDP. This work seemed to justify the mainstream concern with fiscal discipline and consolidation, especially for highly indebted countries such as Greece – and the USA – but it was soon discredited owing to revelations about data manipulation and blunt errors of analysis (Herndon et al, 2014; Dube, 2013; Kimball and Wang, 2013). Building on this, a number of papers sought to re-examine the presumed hump-shaped relationship between national debt and GDP growth. In their study of twelve Eurozone countries covering the period since the 1970s, Checherita and Rother (2010) find that GDP growth is non-linearly related to the debt-to-GDP ratio, with the point of inflection at around 90-100% of GDP (and perhaps even lower), thus providing evidence consistent with the Reinhart-Rogoff argument. Baum et al (2012) provide further evidence for this, while the study by Egert (2012) brings the threshold point much lower, to between 20-60% of GDP. Against this background, Panizza and Presbitero (2012 and 2013) provide both primary and meta-evidence showing that the finding of a negative (linear) or a hump-shaped debt-growth relationship is not particularly robust or indeed stable across samples and periods, suggesting also the possibility of temporal shifts in this relationship.

Evidence of a temporal shift in the growth-debt relationship has in fact been provided in the study of Baum et al (2012), who find that the threshold level beyond which debt may be hindering growth increased

substantially during the crisis. This finding is consistent with results in a broader literature concerning the size of the fiscal multiplier and its variation across periods of expansion and slack. This growing literature provides strong empirical evidence that the size of the fiscal multiplier declines (tends to zero) in periods of economic expansion but rises substantially in recessions, with estimates for the multiplier ranging between 1.5 and 3.5 (see Christiano et al, 2011; Cotarelli and Jaramillo, 2012; and especially Auerbach and Gorodnichenko, 2010 and 2013 and references within) – thus going well above the ‘average’ estimates of between 0.5 and 1.5 found in the traditional literature (see Chinn, 2013). Some studies in the literature link this counter-cyclical behaviour of the fiscal multiplier to monetary policy aggregates. For example, Christiano et al (2011) show that the multiplier is larger when the policy space for monetary accommodation is limited (near-zero interest rates), which is typically in times of negative growth; while Corsetti et al (2012a) find that fiscal expansion has negligible effects during normal times and with flexible exchange rates, but that the multiplier effect rises in times of crisis and in cases when exchange rates are fixed.

In turn, other studies focus more on the role of ‘market confidence’ and consumer/investor behaviour. For example, Bachmann and Sims (2012) argue that consumer and business confidence influences positively the size of the multiplier but almost exclusively so in times of recession. Eggertsson and Krugman (2012) also find that in time of crisis the fiscal multiplier (and thus the contractionary effect of fiscal consolidation) is larger, owing to the fact that with higher credit constraints (illiquidity) consumption and investment decisions become more responsive to current, than future, incomes or demand. The issue of ‘confidence’ has also been raised by earlier studies in relation not to the business cycle but to the level of debt (Giavazzi and Pagano, 1990; Alesina and Perotti, 1995). These studies find that in highly-indebted countries fiscal consolidation improves market expectations and stimulates investment, thus reducing the adverse multiplier effect. Recent evidence suggesting that fiscal multipliers are small in high-debt contexts has been provided by Ilzetzki et al (2013).

This debate about the size and determinants of the fiscal multiplier obtained a new centrality when the IMF admitted that their estimates for the multiplier effect of fiscal consolidation were overly optimistic, if not unfounded, following the publication of the study by Blanchard and Leigh (2013a). The study provided compelling evidence showing that the fiscal multiplier increased sizably during the early part of the crisis while forecasts of the multiplier were increasingly inaccurate at the same period. The political salience of this admission was paramount, given the immense difficulties facing Greece at the time, as the country was experiencing an

unprecedented economic contraction seemingly as a direct result of the pervasive austerity measures that it was forced to implement under its Macroeconomic Adjustment Programme(s). This then led to an explosion of academic and public literature making the case that austerity is “self-defeating”, at least in the short-run, as it reduces the “denominator” (GDP) faster than the “numerator” (debt). Amongst them, the ‘early’ warning by Eurozone expert Daniel Gros (2011), the ‘insider’s’ account of the development of the Eurozone crisis by former ECB Executive Member Lorenzo Bini Smaghi (Smaghi, 2013), highly influential op-eds by Nobel Laureate Paul Krugman (e.g., Krugman, 2012a, 2013a, 2013b), Mark Blyth’s meticulous historical treatment of the ‘idea’ of austerity (Blyth, 2013), the forward-thinking collection of short contributions in Corsetti (2012a), the more heterodox contributions in the 2012 special issue of the Cambridge Journal of Economics (King et al, 2012 – see especially Boyer, 2012), and a broad range of influential blog-posts (Frank, 2010; Best, 2011; Reich, 2012; Thomas and Jolly, 2012; Corsetti, 2012b; Alesina and Giavazzi, 2012; De Grauwe and Liu, 2012; Van Reenen, 2012, Collignon, 2013; Attali, 2014) and more research-oriented pieces (Torres, 2012; Voth, 2012; Holland and Portes, 2012; Eyraud and Weber, 2013).

Generally speaking, there are two strands of debate emerging from these contributions. On the one hand, a debate pointing to the ills of the ‘austerity trap’ and arguing, even from within the mainstream (Krugman, 2013b), for a policy shift towards an orchestrated fiscal stimulus. On the other hand, a debate in the more research-oriented literature, seeking to identify the specific conditions under which fiscal consolidation becomes particularly painful or ‘self-defeating’. The latter relates not only to the literature outlined above, concerning the role of monetary policy and the business cycle, but also to questions about the timing and composition of fiscal consolidation measures.<sup>4</sup> Although both strands have a tractable grounding in economic theory, to a large extent they both draw their motivation from the empirics of the crisis and in particular their reading of the empirical relationship between austerity and growth. In the next section we take a closer look at the empirical validity of this relationship.

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<sup>4</sup> For example, Mineshima et al (2014) show that spending cuts are more recessionary than revenue-raising measures – although arguments to the contrary are also available in the literature. See also Alesina and Giavazzi (2012), Buti and Pench (2012), and Blanchard and Leigh (2013b) for public discussions of similar issues.

### 3. Revisiting the ‘empirical relationship’ between austerity and growth

One of the most influential and ‘graphical’ illustrations of the “austerity doesn’t work” argument has been offered by Financial Times chief economics commentator Martin Wolf in one of his numerous public commentaries (Wolf, 2012). The commentary presented an unconditional correlation between forecasted GDP growth and the extent of structural fiscal tightening as percent of potential GDP (data taken from the April 2013 edition of the IMF World Economic Outlook) for 15 Eurozone countries during the period 2008-2012. The correlation suggested that fiscal tightening by one percentage point of GDP corresponded to a decline in GDP per capita growth of 1.5 percentage points, thus offering strong support to the anti-austerity camp. A similar graph, on which Martin Wolf drew, was presented by Krugman (2012b), producing a multiplier estimate of 1.25% (for the EU countries). Despite the extensive publicity that the two commentaries achieved, overall there has been little scrutiny on the evidence presented and some important observations have largely gone unnoticed – relating in particular to the robustness of the relationship across alternative measures and the country heterogeneity around the obtained universal trend.

To illustrate this, we report in Figure 1 four interesting variants of the analysis presented originally by Martin Wolf. Panel A reproduces Wolf’s analysis, replacing however the growth forecast for 2008-2012, used in the original graph, with the actual growth for the same period (data from Eurostat and measured in PPPs). Panel B does the same but this time excluding Greece, which is a clear outlier. Panel C reinstates Greece but replaces the IMF measure of fiscal tightening with a measure of the overall size of primary-deficit reduction<sup>5</sup>; while panel D replicates this but for the full population of Eurozone and euro-pegged countries. The results are particularly interesting. In panel A, the fitted regression line is in fact steeper than that originally produced by Martin Wolf, corresponding here to an elasticity of -2.2%. If interpreted in causal terms, this would seem to confirm the claim that austerity hinders growth. Despite this, the graphs in the other three panels of Figure 1 cast doubt on this conclusion. As is shown in panel B, the significance of the growth–austerity relationship vanishes when one single country – Greece, which is by far the main

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<sup>5</sup> This is measured by the distance between the 2012 primary deficit (which is for all countries the period minimum) and the largest primary deficit recorded in 2008-2011. The result obtained is *identical* when we use alternatively the change in the structural deficit (for 2008-2012) as measured by the European Commission under the EDP procedure (Eurostat table gov\_dd\_edpt1).

outlier – is removed from the sample: the slope of the regression line drops to -0.6% and the corresponding R-squared becomes eight times smaller! It thus appears that, even on Martin Wolf's evidence, Greece aside, austerity is not recessionary.

More importantly, perhaps, panel C shows that the same conclusion is reached when looking not at the ex-ante fiscal tightening commitments, as in panel A, but at the actual change in the primary deficit (this time irrespective of whether Greece is included or not). In this case, the growth-austerity elasticity drops to 0.1% and the fit of the regression drops by another 900%. Not only that, but the relationship vanishes completely when the relationship is tested not on the EZ sample but on the full population of EU countries with a euro-peg (panel D).<sup>6</sup>

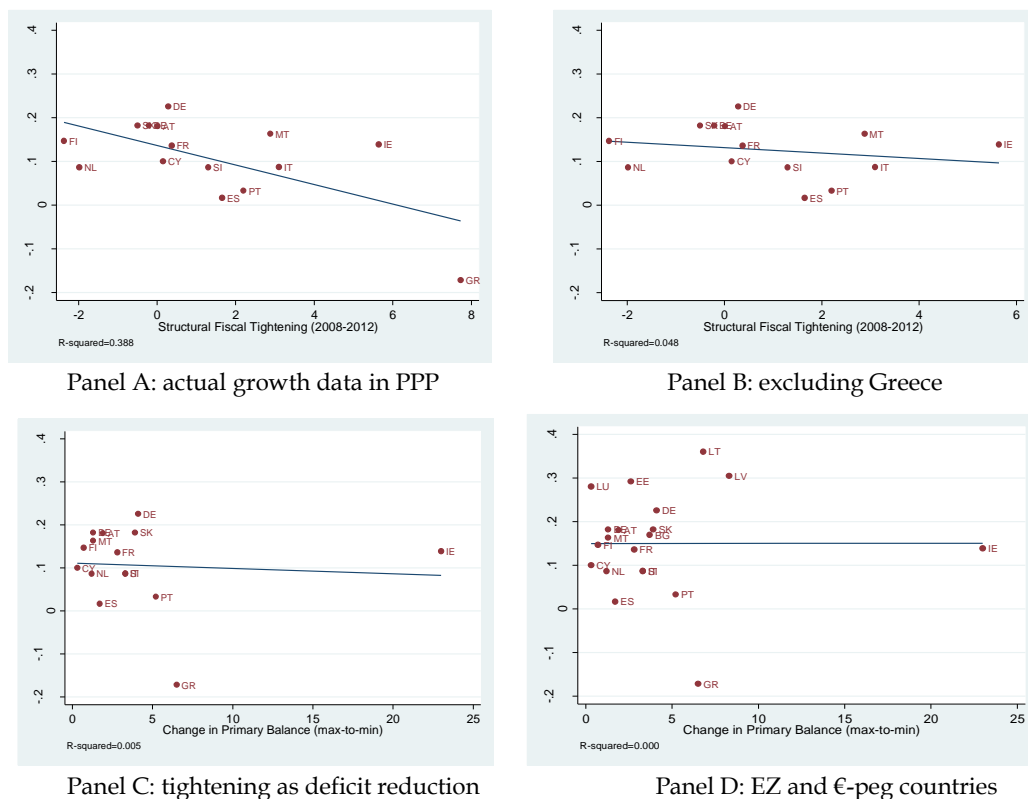
Irrespective of measure and sample, however, in all cases there are notable country differences in the growth-austerity relationship. For example, even in panel A, where the relationship is statistically significant, countries such as Greece, Spain and the Netherlands come out with a disproportionately high cost (in growth terms) in relation to fiscal tightening, while countries such as Ireland, Germany and Malta experience proportionately less contraction, relative to the average sample values, for every unit of fiscal tightening. The differences are much more pronounced when the austerity effort is measured in terms of actual changes in the primary deficit (bottom part of Figure 1). As can be seen there, many of the 'EZ north' countries, which maintained a significant growth record, cumulatively, during the period, had deficit-reduction rates comparable to, or in excess of, those of Spain which had overall stagnant growth. At the extreme stand the three Baltic states, including the latest Eurozone-entrant Estonia, which saw very positive rates of growth concurrently to a substantial fiscal adjustment.

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<sup>6</sup> This includes the Baltic countries plus Bulgaria. Panel D also includes Luxemburg, which was absent from Wolf's sample. Note also that the result is *identical* when the sample is extended to include all EU countries, irrespective of exchange rate regime (not shown, but available upon request), as well as when the two main outliers – Greece and Ireland – are removed from the analysis.



FIGURE 1

*Revisiting the austerity – growth nexus*

Source: Author's elaboration of data derived from Eurostat and Wolf (2012).

These observations reinforce the point, made in the recent literature, that the growth cost of fiscal consolidation is not constant or purely exogenous – and that the effectiveness of fiscal adjustment may instead depend on contextual/environmental factors. As noted earlier, one strand of literature shows that such factors include the overall slack in the economy, the exchange rate regime, the state of public finances, the room for monetary expansion, and the severity of credit constraints. The performance of the 'EZ south' countries, as depicted in Figure 1, is at least in part consistent with these predictions. Greece and Spain, for example, faced huge liquidity problems during the crisis in an environment of non-accommodating monetary policy, fixed exchange rates and general economic slack. Thus, for these countries the contractionary impact of austerity has been naturally larger. This, however, does not explain the difference between Greece and Spain or indeed why other countries, facing the same macro-monetary conditions, have performed so differently – including high-debt

countries such as Belgium and Italy, small countries such as Malta and the Baltics, and high-deficit countries such as Ireland. It would appear that, besides the general environmental parameters, country-specific factors play an important role in the empirics of the austerity-growth relationship.

#### **4. Debt sustainability, openness and quality of government**

The analysis of the previous section has demonstrated the notable variation that exists across countries in Europe in terms of their experience of the austerity - growth relationship. As has been discussed previously, the negative sign of this relationship is central in the idea of the 'austerity trap': the more negative this relationship is, the larger the 'snowball effect' and thus the less likely that austerity will lead to a decline in the debt-to-GDP ratio (and thus to debt sustainability). The observed country variation suggests in turn that the intensity of this relationship is, at least to an extent, influenced by country-specific factors. In what follows we focus on two such factors, that have rather curiously attracted little attention in the literature but which are, we argue, of particular importance not only during the period of fiscal adjustment but also prospectively for the restoration of long-run growth and competitiveness in the post-crisis period: the extent of economic openness and the quality of the domestic institutions (quality of government).

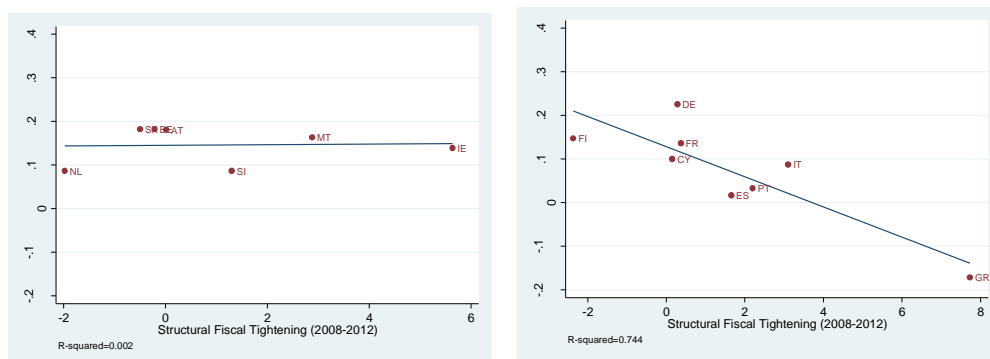
##### **4.1. The impact of openness**

Economic openness can have a bearing on economic growth and fiscal sustainability in two ways. On the one hand, open economies are typically characterised by smaller fiscal multipliers, owing to the fact that with openness the benefits from government spending and fiscal expansion 'leak-out' from the domestic economy to the rest of the world (the trading partners); while the costs of fiscal contraction are somewhat neutralized by external demand. On the other hand, open economies are more likely to benefit disproportionately from some key austerity policies, such as internal devaluation (reduction in unit labour costs through lowering wages) or fiscal devaluation (reduction in unit labour costs via a shift of taxation from payroll to consumption taxes). The larger the export base and/or import share of a country, the larger will be the absolute contribution of such austerity/devaluation policies to restoring current account imbalances and stimulating growth. In both cases (leakages/multiplier and devaluation/price-competitiveness), we would expect the relationship between austerity and growth (and debt

sustainability) to be less negative for countries with greater economic openness.<sup>7</sup>

FIGURE 2

*The growth–austerity relationship for open and closed economies*



Panel A: High-openness group

Panel B: Low-openness group

*Notes:* Author's calculations; data from Wolf (2012) and the OECD International Trade database.

In Figure 2 we examine how this variable affects the relationship between austerity and growth in the Eurozone countries (corresponding to panel A of Fig.1), by splitting these countries into two groups of 'high' (above-median) and 'low' (below-median) trade openness (share of imports-plus-exports to GDP). The results are particularly informative. In the high-openness group the relationship between austerity and growth turns out to be totally insignificant and clearly non-negative. As is clear from the graph, in this group of countries, presumably owing to their ability to capitalise on the export-enhancing effect of internal devaluation, austerity has not been devastatingly recessionary.<sup>8</sup> In contrast, as is shown in panel

<sup>7</sup> In the 'fiscal leakages' argument the main factor would be the share of imports to GDP. In turn, in the 'internal devaluation' argument the main factor would be the share of exports to GDP. Trade openness measures the combination of these two factors (imports plus exports as a share of GDP).

<sup>8</sup> When we extend the sample to the full body of euro-pegged countries, the relationship becomes significantly positive (austerity contributing positively to growth), owing mainly to the influence of Latvia and Lithuania, which are clearly exceptional in terms of their growth performance given the size of their fiscal consolidation effort. Both of these countries experienced a very steep recession in 2009, which was however exceptionally short-lived and they returned to fast rates of growth immediately after the implementation of austerity.

B, in the more closed economies the relationship between austerity and growth is clearly negative and very significant statistically. For this group of countries, one percentage point of fiscal consolidation is associated with a drop of GDP growth of 3.5 percentage points. This value is over twice as high as those reported by Wolf (2012) and Krugman (2012b) which, as discussed earlier, exerted a significant influence on the emergence of the ‘austerity doesn’t work’ narrative. It seems that for these rather closed economies austerity has indeed been recessionary.

#### 4.2. Quality of government

The role that the quality of institutions and government can have on growth in the long-run is of course well recognised in the economics literature (Rodrik, 2000; Acemoglu et al, 2004; Acemoglu and Robinson, 2012). The political science literature offers further insights to this, highlighting in particular the role of the ‘quality of government’, relating to factors such as good governance institutions, strong state and administrative capacities, capabilities concerning policy design and implementation, transparency in decision-making and credibility of policy, conducive ‘reform technologies’, control of corruption, and so forth (Rothstein, 2003 and 2011).<sup>9</sup> We argue here that these parameters do not only affect the long-run growth and overall wealth of a country (including its long-term debt sustainability) but can also impact on the way in which fiscal policy – and in particular the implementation of austerity policies – affects growth and debt sustainability in the short-run.

Effective (high-quality) governments have the ability to design appropriate fiscal measures and implement them in a timely and consensual fashion, through coalition-building and the adoption of non-adversarial policy discourses that justify and legitimise the policy. In such environments, policy exerts a sense of confidence, both domestically and abroad, that raises its credibility thus easing possible concerns about policy reversals and (public or party-political) reform resistances. With attention paid to the structural parameters of the economy (e.g., tax base, energy dependence, export capacities, growth drivers, propensities to import, etc) and the distribution of burdens across social/income groups, effective governments can ensure that the adverse effects of austerity are minimised and the expected gains materialise as fully as possible. In contrast, governments that lack the administrative and implementation capacities to

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<sup>9</sup> The reference to ‘good institutions’ by Acemoglu et al (2004) is similar, with emphasis especially on the enforcement of property rights and the control of corruption and rent-appropriation.

pursue such goals are inevitably led to less appropriate, less credible, more widely contested, and ultimately less effective fiscal measures. One aspect of this concerns, quite naturally, the content of policy – especially fiscal policy. For example, Eyraud and Weber (2013) and Mineshima et al (2014) show that the balance between revenue- and expenditure-based measures affects significantly the debt-reduction achieved by any given level of fiscal consolidation effort. In turn, de Mooij and Keen (2012) argue that fiscal consolidation programmes that pursue a strategy of ‘fiscal devaluation’, i.e., shifting the revenue-base from taxing production to taxing consumption, contribute not only to export growth but also overall to more effective debt-reduction. Our view of government and institutional quality here goes well beyond these aspects: it concerns the overall effectiveness by which fiscal austerity is designed, communicated and implemented and in this sense it subsumes within it issues of ‘optimal taxation’ and of the appropriate composition of expenditure cuts.

The intuition for our line of argument is that the primary balance affects debt dynamics (the debt-to-GDP ratio) not only directly, by adding (deficits) or subtracting (surpluses) from the overall level of debt, but also through its impact on two key intermediating variables: the interest rate charged on government debt (bond-rate) and the growth rate attained in the economy. Primary surpluses (as the outcome of fiscal tightening) contribute to lowering both of these parameters<sup>10</sup>. As a result, the overall effect of fiscal consolidation on debt will depend on the balance between these two influences: the interest-saving and growth-dampening effects of fiscal consolidation. It is the relative size of these two parameters that determines whether austerity works or not.

### **4.3. Quality of government and debt-sustainability**

As noted already, the literature treats these two parameters largely as exogenous. Our hypothesis here is that both of these parameters are a function of a country’s quality of government, as defined above. Let us start with the case of bond-rates. Governments that carry low policy credibility or are perceived to be less effective (and thus less likely to control their deficits in the future), will face a higher risk premium (and

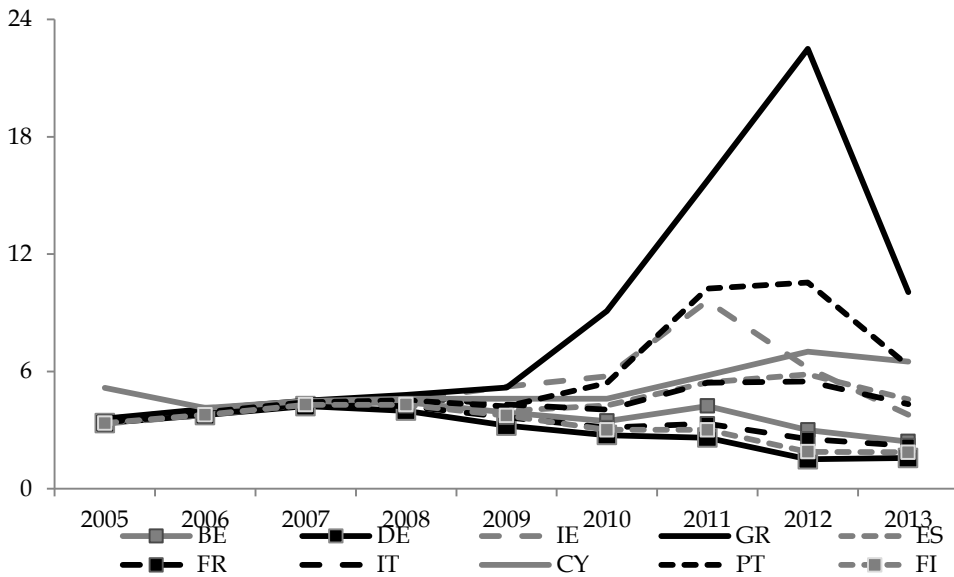
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<sup>10</sup> The assumption that bond-rates will decline with fiscal consolidation is directly derived from a simple consideration of investor behaviour: declining deficits signal a reduction of default risk thus driving interest rates down. The assumption that growth rates also decline with fiscal consolidation (tightening) is also directly derived from the Keynesian multiplier: unless the ‘textbook’ conditions of instantaneously adjusting prices and full and costless information apply, an economy’s rate of growth will unavoidably depend on its government’s fiscal balance, i.e., whether it implements fiscal expansion or contraction.

thus higher bond-rates) for any given fiscal position. The difference will be more pronounced in times of crisis, when markets are more sensitive to risk, whereas it will tend to become almost indistinguishable when global risks are near-zero (or when markets are oblivious to risk). At the extreme, with extremely high systemic risks, the risk associated to high quality governments may in fact go down, thus pushing overall bond rates for these countries below their pre-crisis levels. Given, however, that interest rate adjustments are more accentuated for governments with low policy credibility, once such countries succeed in their attempts for fiscal consolidation, they will experience larger interest-savings than those experienced by governments of higher quality. As is shown in Figure 3, both of these predictions are true: in the early phase of the crisis bond rates actually declined for Germany, Finland and other 'northern' countries; while in the second phase of the crisis, after the implementation of the austerity measures, the decline was significantly faster for the 'bailout' countries (Ireland, Portugal and Greece).

FIGURE 3

*Long-term government bond rates for selected Eurozone countries*

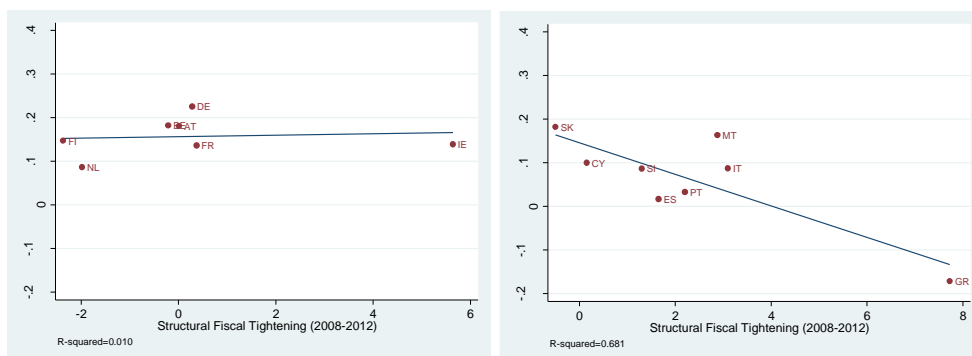


*Notes:* Long-term bond rates as defined in the EMU criterion. Author's processing of data provided from Eurostat (series irt\_lt\_mcby). The series covers data for central government bond yields on the secondary market, gross of tax, with a residual maturity of around 10 years. For further details see [http://epp.eurostat.ec.europa.eu/cache/ITY\\_SDDS/en/irt\\_lt\\_mcby\\_esms.htm](http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/en/irt_lt_mcby_esms.htm).

Consider next the case of growth. Assuming that there is a relation between growth and the fiscal stance, at least in the short-run, it is straightforward to expect that government quality will also have a bearing on the growth-inducing capacity of fiscal policy. More effective governments will be, by definition, able to attain higher growth rates for any given level of fiscal expansion (a larger multiplier) and lower growth penalties for any given level of fiscal contraction (a smaller multiplier). As a result, 'low quality' governments will find it more difficult to fend off the recessionary effects of austerity and, by implication, to avoid a situation whereby the snowball effect dominates the fiscal effort. In contrast, for 'high quality' governments the negative growth effect will not only be smaller but it will also tend to decline further as systemic risk rises, owing to the declining interest rates (as discussed above) which will act as a stimulant to growth. At some theoretical value of government quality, fiscal austerity will not only contribute to debt-reduction but it may also have an overall positive effect on growth! Although this is seemingly counter-intuitive at first, it is nevertheless consistent with our earlier empirical observations, in relation to Figure 1, concerning the cases of countries such as Estonia and Germany, where (limited-scale) fiscal consolidation was successfully combined with non-increasing interest rates and significantly positive rates of output growth.

FIGURE 4

*The growth-austerity relationship for high- and low- quality of government*



Panel A: High QoG group

Panel B: Low QoG group

Notes: Author's calculations; data from Wolf (2012) and Teorell et al (2013).

Figure 4 demonstrates how this effect is directly linked to the ‘quality of government’. Drawing again on the Eurozone sample (panel A in Figure 1), in Figure 4 we split our group of countries into two groups of high- and low- quality of government.<sup>11</sup> As is evident from the graphs, quality of government has a significant influence on the austerity–growth relationship. For the ‘high’ group, the relationship is clearly non-negative and indeed marginally positive. Instead, for ‘low’ quality of government countries, the relationship is devastatingly negative, with an estimated elasticity of -3.6%. From the data it is clear that it is in these low quality-of-government cases that austerity “hasn’t worked”. We discuss the implications of these findings in the concluding section.

## 5. Conclusions

Fiscal austerity in response to the Eurozone debt crisis has led to an unprecedented recession in parts of the Eurozone south, raising concerns – and a general consensus in public discourse – that “austerity doesn’t work”. This contradicts common notions in the academic literature, about the recessionary effects of over-indebtedness, but also a number of stylised facts emanating from the experience of a range of Eurozone countries which saw a successful curtailment of their debt levels with minimal, or even positive, effects on their rates of growth. Indeed, a closer inspection of the empirics of the austerity–growth relationship in Europe during the crisis (section 3) reveals a range of cases where fiscal consolidation was attained concurrently with positive growth rates (Germany, Estonia, Malta, Austria, Slovakia, Slovenia, etc), as well as a great variability in the intensity of the austerity–recession relationship even in cases where this relationship has been negative – with Greece being by far the most devastating example. The existing literature on the topic, as reviewed in section 2, identifies a range of factors – albeit ones that fall mainly outside the direct control of day-to-day policy – that may account for this variability through their influence on the size of the fiscal multiplier: including the exchange rate regime, the size of the public debt and the overall market sentiment (crisis). Although a limited number of contributions have looked also at more qualitative factors on which policy may have more direct control (e.g., the composition of expenditure cuts and other fiscal measures), generally there is little attention in the literature – and very limited appreciation of this in public and policy debates – on

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<sup>11</sup> We use the quality of government indicators produced by the Quality of Government Institute of the University of Gothenburg (Teorell et al, 2013), taking as the cut-off point the mean sample value of a joint indicator measuring ‘government effectiveness’, ‘regulatory quality’ and ‘control of corruption’.



the importance that policy effectiveness (quality of governance) and domestic structural-economic factors have for shaping the size of the fiscal multiplier and the market responses to systemic and idiosyncratic risk. Lack of attention to these country-specific factors acts in a way to fuel the general disagreement about the ills and merits of austerity and, ultimately, the unproductive debate about who is to blame for the deep recession that has plagued (parts of) the Eurozone south (the “wrong recipe” versus “impotent governments” debate).

This paper sought to re-frame this discussion by revisiting the growth – austerity – debt-sustainability relationship under the prism of trade openness and overall policy effectiveness / quality of government. Factoring-in these parameters allows us to explain a number of the stylised facts observed during the crisis, including the devastating recession and sizeable snowball effect in Greece; the much more modest recession in countries like Spain, Portugal and Ireland; the ‘success stories’ in parts of the Eurozone north; and even the surprising experience of declining or even negative nominal interest rates in the most agile of the Eurozone economies. Both of these parameters are of course ‘slow-moving’, in the sense that they cannot be altered instantaneously or by administrative and political decisions alone. Moreover, our treatment of these parameters here does not allow policy-making to identify the concrete policy actions that would be necessary to produce less devastating fiscal consolidation programmes and less recessionary austerity. For example, our analysis does not allow us to make specific claims about the relative importance of the broader institutional context (institutional rigidities, e.g., in the labour market, and reform resistances, e.g., strike action by unions) versus factors that are more directly linked to policy design and implementation (composition, timing and sequencing of fiscal consolidation measures; extent of and balance between internal and fiscal devaluation; the role of signalling and policy credibility; etc). Nor does it provide any directions as to how to enhance trade openness and strengthen a country’s export base. Nevertheless, our analysis demonstrates rather clearly that such factors, broadly grouped into the categories of ‘economic structure’ and ‘quality of government’, do play a role. It thus hopefully makes a contribution to shifting the austerity debate beyond the – largely counter-productive – discussion of whether austerity works, towards the realisation that country-specific conditions and capabilities are key for the effectiveness of any austerity programme (and, for that matter, also for any fiscal policy, including fiscal expansion).

The message that derives from our analysis is not an unequivocal ‘yes’ or ‘no’ on the question as to whether austerity works. Rather, our message is that austerity works in particular cases, e.g., where policy (in terms of

design, implementation and credibility) is sufficiently effective, but that it can have devastating effects in other cases, where quality of government and the economic base are significantly weaker. In this respect, when concerning the countries in the Eurozone that seem to have been locked into an 'austerity trap', the lesson drawn from our analysis is not that this has been the outcome of a "wrong recipe", but rather the outcome of a potentially good recipe being applied in environments that were not suited, or capable, to execute the recipe correctly. In countries of weak economic base, institutional capacities and policy effectiveness, austerity leads to worse economic outcomes and little gains in terms of debt-sustainability.

There is a fundamental paradox in this realisation. On a simple reading of the analysis presented here, it would seem that fiscal consolidation (and discipline) can only work in open economies and high quality-of-government countries. A seemingly obvious – but ultimately erroneous – conclusion would then be that fiscal austerity should not be applied to less extrovert economies with weaker institutional capacities and lower quality of government. And that, moreover, such countries should be allowed to 'inflate their way' out of any fiscal problems – presumably with the support, via fiscal transfers, of more extrovert and institutionally stronger countries. This would of course create an immense moral hazard problem: it would introduce strong adverse incentives for public administrations, incentivising them to become less effective so as to fend-off external pressures for fiscal consolidation and justify the prolongation of fiscal laxity. Rather than being an argument in favour of the latter, the policy lesson that emanates from our analysis is that, for such countries, the design of austerity and fiscal consolidation measures needs to pay more attention to improving government quality and modernising the economic structure at the same time with – or even prior to – the implementation of fiscal consolidation measures.

Proponents of the bailout packages devised by the Eurozone to deal with the debt crisis in the 'south' may argue that this was indeed a consideration, as is reflected in the huge efforts devoted to the setting up of country-specific Task Force teams and the insistence on structural reforms (including for market liberalisation / economic restructuring and for the modernisation of the public administration). Critics may counter-propose that this effort was only subsidiary and that, instead, most of the effort – and pressure – has been in the direction of imposing a fast and front-loaded programme of fiscal austerity which was in this sense bound to produce more economic plight than the one it sought to address. There may be of course truth in both of these views. Moving forward, the lesson deriving from this analysis is that fiscal consolidation can work (and,

indeed, in many cases has worked); but that this requires a ‘qualitative jump’, a shift of attention from the question of whether to implement austerity to the question of how to implement it. Calls for such a shift are increasingly gaining currency both in the academic literature (Alesina and Giavazzi, 2012; Corsetti, 2012b) and in the public policy discourse. It is hoped that the analysis of this paper has made a distinctive contribution to this.

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