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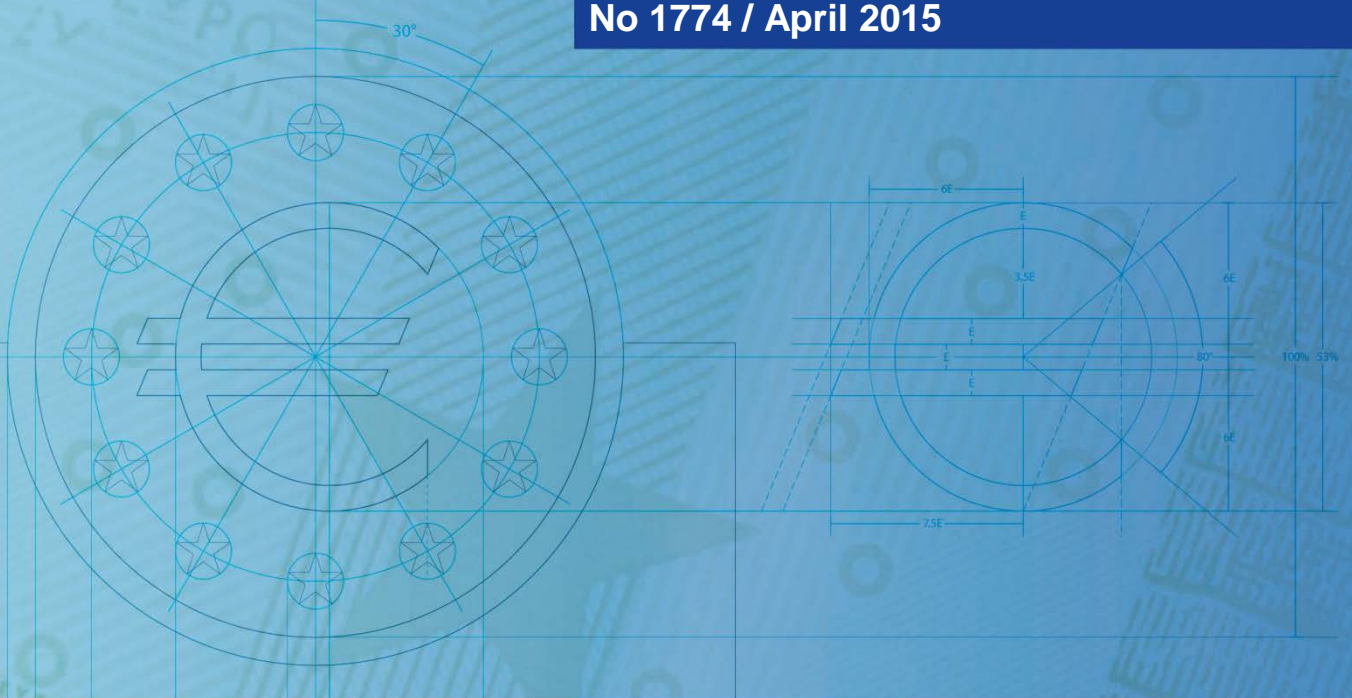
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Does fiscal austerity affect public opinion?

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Abstract

In this paper we explore the impact of fiscal austerity on three different dimensions of public opinion (overall life satisfaction and confidence, attitude towards national authorities, and European institutions). Based on a panel of 26 EU countries, we find that, overall, fiscal consolidation episodes tend to have little and inconsistent impact on our measures of public opinion once we include macro controls (real GDP growth, inflation, unemployment, and whether a country is in a EU/IMF program). Some of the circumstances under which consolidation is undertaken are significant in explaining the effect on public opinion, but also these effects are neither strong nor consistent throughout. We conclude that the effect of fiscal consolidation measures on public opinion mainly operates through their effect on the macroeconomy.

Keywords: Fiscal consolidation, primary balance, public opinion, trust, Euroscepticism.
JEL: H2, H3, H5, H6.

Non technical summary

Recent years have seen substantial fiscal consolidation in several euro area member states to address unsustainably high public debt levels. At the same time, protest campaigns and demonstrations in several countries suggest public discontent with painful reforms and fiscal austerity.

While these developments are reflected in academic literature empirically investigating the impact of fiscal tightening on *election outcomes*, so far little is known on the economic determinants of *public opinion* and in particular on the role that fiscal austerity plays in influencing it.

In our view this is an important field of investigation that goes beyond the effect that public opinion has on voter behaviour and hence the probability of incumbent governments to be re-elected into office and the impact of consolidations on that probability. Do people really become upset with their government because of its fiscal policy? Or are EU membership and European institutions the scapegoats for national economic developments and policies? Focusing on public opinion allows us to distinguish between such different types of implications.

In this paper we therefore consider the impact of fiscal austerity (based on measures of fiscal stance and fiscal consolidation episodes) on several dimensions of public opinion, in particular (i) life satisfaction and confidence, (ii) trust in national institutions, (iii) trust in Europe and European institutions.

Our main result is that fiscal austerity measures are mostly insignificant for the public opinion variables that we consider when we include macroeconomic controls. At the same time, there are a few exceptions. In particular, we find that fiscal consolidation episodes have a negative (but small) effect

on trust in the national parliament and in the European Commission, and a slight worsening of attitude towards Europe.

Some of the circumstances under which consolidation is undertaken are significant in explaining the effect on public opinion, but also these effects are neither strong nor consistent throughout. We conclude that the effect of fiscal consolidation measures on public opinion mainly operates through their effect on the macroeconomy.

1 Introduction

Recent years have seen substantial fiscal consolidation in several euro area member states to address unsustainably high public debt levels. At the same time, protest campaigns and demonstrations in several countries suggest public discontent with painful reforms and fiscal austerity. This is in line with findings by Ponticelli & Voth (2011) according to which fiscal consolidation is highly correlated with social unrest.

Public opinion matters, for at least two reasons. First, negative public opinion may jeopardise reforms and push governments to back-track, leading to risks for fiscal sustainability down the road. This may happen through elections (unpopular governments are voted out of office) but also through public pressure or the simple threat of losing elections down the road. Second, public opinion may matter on its own right. After all, one key objective of economic policy should be to make citizens confident, satisfied with their life and trustful, which in turn helps the smooth functioning of public authorities. Public opinion, therefore, is important beyond the role that it plays in influencing electoral outcomes.

So far, little is known on the economic determinants of public opinion and in particular on the role that fiscal austerity plays in influencing it. Several possible channels are conceivable at the theoretical level. Fiscal austerity may be regarded a negative shock to current spending, at least if consumers are not Ricardian, which may have a negative effect on confidence and life satisfaction. Such a loss in confidence and life satisfaction might also be reflected in less trust in governmental and European institutions. Alternatively, the public might perceive austerity as a necessary action to restore fiscal sustainability. Following this logic, trust in public institutions might increase, and uncertainty about future economic developments might decrease. Such a development could possibly also boost consumer confidence.

To fully understand the impact of austerity on public opinion, we need to go beyond these globally applicable hypotheses. The situation of EU countries is peculiar, as fiscal policy is decided and implemented at the national level, but influenced and constrained by rules prevailing at the European level, especially in the euro area.[1]

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[1] The situation of countries under EU/IMF programs is even more peculiar, as their fiscal policy is essentially determined in the programme negotiated between the country and the "troika" authorities

To do justice to these circumstances, we consider three dimensions of public opinion: people's overall life satisfaction, their attitude towards national authorities, and towards European institutions. Such a distinction would not be possible if we considered election results. Focusing on public opinion thus has an additional advantage: it allows us to draw more differentiated conclusions regarding the effect of austerity.

Our main result is that fiscal stance and fiscal consolidation measures are mostly insignificant for the public opinion variables that we consider, once macroeconomic controls are included. There are, however, a few interesting exceptions. In particular, we find that fiscal consolidation episodes have a negative, albeit small, effect on trust in the national parliament and in the European Commission, and a slight worsening of attitude towards Europe.

Given that we include macro controls, it should be made clear that our results reflect the *marginal* effect of fiscal stance and fiscal consolidation episodes on public opinion, i.e. the impact they have on top of the effect that they (may) have on economic growth and the unemployment rate. To the extent that fiscal austerity impinges on GDP growth and the unemployment rate (an issue on which we do not take a stance in this paper), it also thereby affects measures of life satisfaction, confidence and trust, as shown by our results.

To our knowledge, our work is among the first to focus on the effect of fiscal austerity on public opinion. The only studies that we are aware of that are partly related to this question include pioneering work by Stix (2013) based on face-to-face interviews with Austrian voters, a study by Hayo & Neumeier (2013) examining how personal attributes impact attitudes toward fiscal consolidation and preferences for alternative consolidation measures in Germany, and the work by Beetsma et al. (2015) quantifying the effect of fiscal measures on consumer confidence. Beyond these, our paper is related to recent literature on the impact of fiscal tightening on voter support. For instance, analysing a sample of 19 OECD countries from 1975 to 2008, Alesina, Carloni & Lecce (2012) find no evidence

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(the European Commission, the International Monetary Fund (IMF) and the European Central Bank (ECB).

that governments that quickly reduce budget deficits are systematically voted out of office. Similarly, Buti et al. (2010) analyse re-election chances for incumbent governments in 21 OECD countries from 1985 to 2003. They do not find these chances to be significantly affected by pro-market reforms per se. Rather, re-election chances depend on the type of reform and the policy environment.

Other related and more recent literature considers the effect of fiscal consolidations on inequality, which may be a driver of public opinion. Ball et al. (2013) and Woo et al. (2013) find that fiscal consolidations are normally followed by an increase in inequality. The nexus between rising inequality and public opinion is an interesting topic for future research, but we can say little on this in this paper since our focus is on country-level, aggregate data.

In addition to these closely related strands of literature, large fiscal consolidations have been the subject of a wide array of academic research with a focus mainly on their impact on economic growth (cf. Sims & Wolff 2013), but also on their distributional consequences (as the papers just cited and Jensen & Rutherford 2002) and their potential social implications (Vegh & Vuletin 2014). Other studies have focused on the financial market impact. For example, Born et al. (2015) look at the effect of government consumption reductions on sovereign spreads expressed in the same currency, finding the effect hinges on the level of fiscal stress. With low fiscal stress, sovereign spreads fall after spending cuts and the output multiplier is small. Above a certain level of fiscal stress, instead, spending cuts rather increase spreads and the output multiplier is large (and negative). More generally, impetus to this strand of research has been given by the identification of fiscal innovations through a narrative approach (Devries et al. 2011; Guajardo et al. 2014).

More recent research has focused on whether the growth impact of fiscal consolidation depends on how such consolidations are designed. Alesina, Favero & Giavazzi (2012) simulate multi-year fiscal plans and find that spending-based fiscal adjustments lead to less output losses than tax-based ones. Similarly, Alesina & Ardagna (2012) show that spending-based fiscal adjustments have caused smaller recessions than tax based ones. In fact, expansionary fiscal adjustments are possible if the adjustment is spending-based. At the same time, fiscal adjustments that are mostly based on the spending side are more

likely to be reversed.

While there is quite some evidence that spending-based adjustments are more growth-friendly than tax-based ones, we are not aware of any study that considers the impact of the design of fiscal adjustments on public opinion. Further to addressing the overall effect of fiscal consolidation on public opinion, we thus also investigate in how far it matters for public opinion whether consolidation is more spending or more tax based.

Intuitively, we might expect spending-based consolidations to have a less negative impact on public opinion than tax-based ones. For one, citizens might expect to be more or less uniformly hit by tax hikes, while spending cuts might only affect certain groups. This is consistent with the findings by Agnello & Sousa (2012) and Ball et al. (2013) that spending-based adjustments tend to have larger distributional effects than tax-based ones. Ultimately, potential differences in the impact of revenue- versus spending-based measures might, however, depend on their specific design, such as their progressivity (cf. IMF 2014). Furthermore, the impact of fiscal consolidation episodes might depend on the circumstances under which they happen and the political and economic factors driving them. In our paper, we therefore check whether consolidation follows high debt levels in the previous period (a proxy for consolidations that are made necessary by the need to maintain or restore fiscal sustainability) and whether citizens in the euro area react differently to austerity than those in non euro area countries (a proxy for the fact that fiscal policy decisions are influenced by external factors).

The paper is organised as follows. In Section 2 we describe the data. Section 3 presents the empirical model, and Section 4 the results. Section 5 concludes.

2   Data and descriptive statistics

We use yearly country level data for all EU Member States (excluding Malta). For data that is available at higher than yearly frequency we use the yearly mean.

The analysis in this paper is thus limited to country-level, aggregate data. We are aware that there is a host of relevant questions that focus on the distributional conse-

quences of fiscal policy and fiscal consolidation, including on the public opinion variables that we look at. For example, it may be useful to understand whether fiscal policy actions disproportionately affect different income groups, and this may be particularly relevant in comparing, say, revenue based and spending based consolidations. In order to carry out this type of analysis one would need matched data on income and public opinion that is not available in the Eurobarometer survey, though proxies can be found. While these are certainly worthwhile questions, we believe that the first order question should be to understand the aggregate impact of fiscal policy and fiscal consolidations, and for that analysis the aggregate country data are a natural starting point. Using country data also allows us to compare the Eurobarometer data with the consumer survey data, which is important for a cross validation.

Data availability restricts the time period of our analysis to range from 1973 to 2013. *Table 1* provides an overview on how the variables are constructed and defined and the data sources.

(Table 1 here)

Public opinion variables. We consider three dimensions of public opinion: life satisfaction and confidence, views towards the national elected representatives and the degree of Euroscepticism. We measure the first as the degree of consumer confidence as measured by the European Commission consumer survey and reported life satisfaction according to the Eurobarometer survey (see Table 1). The national dimension is covered by the net share of Eurobarometer respondents that indicate they tend to trust their national government/ national parliament (net trust). Finally, we proxy Euroscepticism by reported net trust in the European Commission, the European Central Bank and general attitude towards Europe (share of respondents saying that "EU membership is a good thing"), all according to the Eurobarometer survey.[2]

Fiscal stance measures. We assess a government's fiscal stance by the respective country's primary balance and its cyclically adjusted primary balance (CAB). The data

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[2]The Eurobarometer survey is conducted twice a year. Given that all other data is available only at annual frequency, we use the mean of the the two biannual waves for all variables that are based on Eurobarometer data.

stems from the European Commission's AMECO database.

Fiscal consolidation episodes. To identify periods of fiscal consolidation we introduce dummies following the approach suggested by Alesina & Ardagna (2012). In particular, the consolidation dummy assumes the value 1 for time periods in which either the CAB improves for 2 years in a row and the cumulative improvement is at least 2% of GDP or the CAB improves for 3 years in a row and the cumulative improvement is at least 3% of GDP.

We also distinguish between tax versus spending-based consolidation episodes as suggested by Alesina, Carloni & Lecce (2012): A consolidation is considered to be spending based if the change in public expenditure is less than its median across all years in which a large adjustment occurs. Likewise, it is considered to be tax-based if the change in public revenues is more than its median across all years in which a large adjustment occurs.

An important clarification to be noted in this context is that we look at headline measures of fiscal stance and consolidation, and we are not interested in measuring fiscal "shocks". We believe that consumers are unlikely to react in a different way to expected and unexpected changes in fiscal policy, and are not really in a position to appreciate what is new and what is not.

Macro controls. Following Stracca (2014) we include a set of standard macro controls: real GDP growth, CPI inflation, and the unemployment rate. This implies that in this paper we are looking at the effects of fiscal austerity that come on top of their influence on typical macroeconomic variables.

As both fiscal consolidation and public opinion might react to crises episodes, we also include dummies for banking and debt crises in EU countries as in Babecký et al. (2012).

In *Figures 1-3* we take a preliminary look at the data for three representative countries, i.e. Greece (programme country), Latvia (non euro area experiencing a large fiscal adjustment) and Germany (as a reference point). In *Table 2a* we report summary statistics for the variables used in the empirical analysis, and in *Table 2b* we look at the within and between variation in some of the dependent variables.

These descriptive statistics illustrate that the fiscal consolidation dummy is plausible (Figure 1), see e.g. Greece (2009-2012) and Latvia (2009-2012). In terms of the dependent variables, we observe that life satisfaction and consumer confidence are very correlated (Figure 2; see also Stracca 2014). Furthermore, it is interesting to note that net trust in national institutions is generally lower than trust in European institutions and in Europe (Figure 3 and Table 2). Confirming anecdotal evidence, trust especially in Europe and European institutions went down in the crisis period (Figure 3, see in particular Greece).

(Figures 1-3 here)

Table 3 reports correlations between the dependent variables and the fiscal stance and consolidation measures. We find that net trust variables are correlated between themselves and with life satisfaction and confidence; trust in the European Commission appears to be an exception; and programme countries are characterised by lower confidence and lower trust, in particular in the European institutions, less so in national institutions and overall attitude towards Europe. For the fiscal austerity measures, we find that the fiscal consolidation dummy is only loosely correlated with the primary balance and the CAB. This underlines the importance to look both at fiscal stance measures and fiscal consolidation episodes separately, as we do in this paper. Moreover, we find that fiscal consolidation episodes are more common with higher public debt, in EU/IMF programme countries, and are associated with larger reductions in spending than tax increases, as a share of GDP.

(Table 3 here)

3   Empirical model

Our baseline estimation is specified as follows:

$$y_{it} = \alpha_i + \beta_1 AUSTERITY_{it} + \beta_2 z_{it} + \beta_3 y_{i,t-1} + \lambda_t + \varepsilon_{it}, \qquad (1)$$

where y is one of the measures of public opinion (as described in Section 2), $AUSTERITY$ is either a measure of fiscal stance or a fiscal consolidation episode, z are the macro controls, α_i is the country specific constant and λ_t are time dummies.

As we use time dummies and country fixed effects, our approach effectively becomes a diff-in-diff approach. To account for potential heteroscedasticity, autocorrelation, and cross-sectional dependence, we use Driscoll-Kraay standard errors. The parameter of interest in this part of the analysis is β_1.

Dealing with the possibility of reverse causality. While we are interested in whether fiscal consolidation affects public opinion, we cannot exclude that causality runs the other way around. That is, governments' decisions to undertake consolidation might actually depend on public opinion. In other words, public opinion might drive government decisions on matters of fiscal policy, especially close to elections, but also more generally. For example, higher consumer confidence may foster voters' support for the government and in turn embolden the government into action, including on fiscal consolidation.

Ignoring this potential endogeneity problem would lead to biased and inconsistent estimates. While there is no way to entirely avoid this risk, we re-estimate equation (1) using instrumental variables (IV), in order to at least mitigate the risk of reverse causality.

We use the lagged austerity measures as instruments. As we include lags of the endogenous variables among the regressors, we can quite safely assume that current-year public opinion does not drive fiscal austerity in the previous year.[3] We find that the instrument is strong in all the specifications. With one excluded instrument and one potentially endogenous variable, the equation is exactly identified. We therefore cannot test the validity of the chosen instrument.

Interaction terms. As a second step in the analysis, we aim to assess whether public opinion reacts differently to fiscal consolidation episodes under varying circumstances. To this end, we run a second type of regression introducing interaction terms:

$$y_{it} = \alpha_i + \beta_1 AUSTERITY_{it} + \beta_2 z_{it} + \beta_3 y_{i,t-1} + \beta_4 AUSTERITY_{it} * x_{it} + \lambda_t + \varepsilon_{it}, \quad (2)$$

where x_{it} is a vector of variables that are interacted with the fiscal austerity measure (say, whether the country has a high public debt). In this case, the parameter of interest is β_4.

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[3]Note that with a sample period spanning 40 years the Hurwicz (Nickell) bias should be negligible.

4 Results

We now turn to describe the results. We present the results for equation (1), the baseline, in section 4.1; and the results for equation (2), containing the interaction terms, in section 4.2.

Overall, we find that fiscal stance and fiscal consolidation measures are mostly insignificant for the public opinion variables that we consider, once we introduce our macroeconomic controls. Including these controls implies that we are only looking at the marginal effect of fiscal stance and fiscal consolidation episodes, i.e. the effect they may have on top of the effect that they (may) have on economic growth and the unemployment rate, on which we do not take a stance in this paper.

There are, however, a few exceptions. In particular, we find that fiscal consolidation episodes have a negative (but small) effect on trust in the national parliament and in the European Commission, and a slight worsening of attitude towards Europe. The Cyclically Adjusted Balance, a measure of the fiscal stance, tends to have an insignificant effect, but in the very few cases in which the effect is statistically significant it is positive, e.g. for trust in the national parliament.

Turning to the control variables themselves, the coefficients of the macro control variables overall point into the expected direction. That is, trust and confidence are higher if the economy is doing well, the unemployment rate and inflation are low. In particular, we find that real GDP growth consistently positively and statistically significantly affects all our public opinion variables in most specifications. The unemployment rate is also statistically significant and negative for life satisfaction, confidence and trust in the national institutions (but not in European institutions). Inflation is mostly negative and significant for confidence, but not for the other variables.

It is also interesting that being in a programme independently reduces confidence, life satisfaction (though often not statistically significantly so) and trust in European institutions as well as a pro-European attitude, but it is actually *positive* for trust in national institutions. We find being a euro area country to be *negative* for most public opinion variables, in particular trust in national institutions. Finally, a high public debt to GDP reduces trust in European institutions and attitude towards Europe. Note that

because we include country fixed effects in the estimation, our results do not capture a possible effect of the overall quality of a country's institutions, that may be correlated with both the propensity to accumulate high debt and with trust.

4.1 Baseline estimates

Beginning with the OLS estimates of equation (1) and the cyclically adjusted primary balance (CAB)[4] as a measure of the fiscal stance (*Table 4a*), we find that the fiscal stance has little impact on any of our measures of public opinion, with the exception of a slight increase in trust in the ECB.

With respect to our control variables, we find that real GDP growth has a consistent positive and statistically significant effect on all public opinion variables, while the unemployment rate has a negative and significant impact on life satisfaction, confidence and trust in national, but not European, institutions. Inflation has quite a large negative effect on confidence, but is statistically insignificant for other variables.

Furthermore, we find that being a programme country has a negative effect on confidence and trust in European institutions and attitude towards Europe, but is actually positive for national institutions (though insignificant for trust in the national parliament). Somewhat surprisingly, we find that being a euro area country negatively impacts all our dependent variables (although the effect is insignificant for confidence and trust in the ECB). Finally, the lagged public debt to GDP ratio has a consistently negative effect on public opinion variables, though the coefficient is only significant for attitude towards Europe, trust in the ECB and the European Commission and in the national parliament. One could surmise that this result is driven by a third factor, such as the quality of the institutions in a given country, but we need to keep in mind that our model includes country fixed effects, so this explanation is not likely to be driving the results. The fact that the effect seems stronger for trust in European institutions and Europe suggests that "Europe" may be seen as more intruding and constraining in countries with a higher public debt that therefore need more fiscal adjustment, although this is clearly only a conjecture.

How do results differ once we consider fiscal consolidation episodes in place of the fiscal stance (*Table 4b*)? The difference is limited and the main messages of the baseline

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[4]Results using the primary balance are very similar and are not reported for brevity.

exercise remain unchanged, but there is some more evidence of a negative effect, which is statistically significant for the national parliament, the attitude towards Europe and trust in the European Commission. Still, the effects are not large in absolute terms. Results for the control variables are largely the same.

(Tables 4a-4b here)

As discussed in Section 3 above, we repeat the same estimation using instrumental variables (IV) for the fiscal stance (*Table 5a*) and the fiscal consolidation dummy (*Table 5b*), using a lag of the fiscal measure as instrument. The diagnostic statistics, in particular the F of the first stage regressions, confirm that instruments are strong (validity cannot be tested because the equations are exactly identified).

The results of this analysis are qualitatively the same and confirm that there is no significant endogeneity bias in the OLS estimates. There are some changes in the statistical significance that reflect the fact that standard errors are larger when using IV rather than OLS. In particular, the coefficients for trust in the national parliament and attitude towards the EU are now statistically insignificant, although they are also not much different from the OLS estimates in terms of size and sign. There are other minor differences (such as the fact that the effect of lagged public debt on trust in the national parliament is now insignificant) but overall the results are qualitatively the same for control variables as well.

(Table 5a-5b here)

4.2   Estimates with interaction terms

Finally, we include interaction terms between the fiscal variables and other characteristics (*Tables 6a – 6c*). Because results of the previous section seem to suggest that there are more significant results for the fiscal consolidation dummy we focus on this variable as our main fiscal austerity variable.

In particular we include interaction terms of the fiscal consolidation variable with the high debt country dummy (to test whether fiscal consolidation is better accepted when unsustainable debt needs to be corrected), with the euro area country dummy, and real GDP growth (to test for the additional effects of pro-cyclical fiscal consolidation). Moreover,

we include a dummy for revenue-based fiscal consolidations (see Table 1 for additional explanation). It should be noted that in this specification the coefficient associated with the fiscal consolidation dummy is the coefficient prevailing in (i) a low debt country, (ii) a non-euro area country, (iii) with zero real GDP growth and (iv) a spending-based consolidation. The interpretation is therefore not straightforward and should not directly be compared to the results in the previous section. The purpose of this part of the analysis is not to understand the baseline effect of fiscal consolidations but rather to find out under which conditions they may have a stronger or more attenuated effect on public opinion variables.

We uncover some interesting results for the interaction terms (*Table 6a*). In particular, we find that revenue-based fiscal consolidations are associated with quite substantial falls in confidence and trust in the national government, while making citizens marginally more pro-European. We also find that during fiscal consolidation episodes citizens are less pro-European in non-euro area countries, but more pro-European in euro area countries. Possibly, this reflects a fall in relative trust in national institutions. The results for the control variables are largely the same as in the previous estimations.

We once more repeat the same exercise, but this time, we additionally include dummies for periods of banking crises and debt crises, to test whether results are overly influenced by crisis times (*Table 6b*). Note that data for the crisis dummies are available only until 2010, and this is the reason why they are not included in the baseline specification.

When controlling for crisis episodes we find that banking and debt crises dummies are insignificant for all public opinion variables once including the macro controls (notably real GDP and unemployment) except trust in the ECB for high debt countries. It also eliminates the effect of the programme country dummy. However, this result is not very informative since this estimation ends in 2010 and there are not enough observations for programme countries.

Unlike in the previous estimation (*Table 6a*), we also find that the negative effect of revenue-based consolidations becomes statistically insignificant, while trust in the national government becomes positive and significant in a euro area country, and less significant (but still positive) for the attitude towards Europe.

Finally, we asses whether the current crisis is the main driver of our results and re-run our regression only for pre-crisis years (*Table 6c*). The main changes are that we now observe a negative impact of fiscal consolidations that take place in a euro area country on life satisfaction and a positive effect on a pro-European attitude if consolidation takes place in a high debt country.

(Tables 6a-6c here)

5   Conclusions

In this paper we have looked at the impact of fiscal austerity (based on measures of fiscal stance and fiscal consolidation episodes) on several dimensions of public opinion, in particular (i) life satisfaction and confidence, (ii) trust in national institutions, (iii) trust in Europe and European institutions. In our view this is an important field of investigation that goes beyond the effect that public opinion has on voter behaviour and hence the probability of incumbent governments to be re-elected into office and the impact of consolidations on that probability. Because we include macro controls in the estimation, we are not measuring the effect that goes through the effect of fiscal austerity measures on the business cycle (a question on which this paper has little to contribute), but rather any remaining effect that goes beyond it.

Our main result is that fiscal austerity measures are mostly insignificant for the public opinion variables that we consider when we include macroeconomic controls. At the same time, there are a few exceptions. In particular, we find that fiscal consolidation episodes have a negative (but small) effect on trust in the national parliament and in the European Commission, and a slight worsening of attitude towards Europe. Our measure of the fiscal stance, the Cyclically Adjusted Balance (CAB) mostly has an insignificant effect, but whenever it is significant it is almost always positive. In other words, we find no evidence that the level of a government's fiscal stance is associated with lower confidence, less life satisfaction, or lower trust in that government or any of the other institutions considered in our analysis.

As a side result, it is also interesting that being in a programme country indepen-

dently reduces confidence, life satisfaction (though often not statistically significantly so) and trust in European institutions as well as pro-Europe attitude. The coefficient on the programme country dummy is , however, *positive* for trust in national institutions, suggesting some form of rallying around the flag behaviour. Being a euro area country is found to be negative for most public opinion variables, in particular trust in national institutions. Finally, a high public debt to GDP is found to reduce trust in European institutions and attitude towards Europe.

Our analysis is a first step and it can be extended in several dimensions. Once time series are long enough, it would be interesting to follow-up on the "programme country effect" and test whether there is a different perception of consolidations that take place under an EU-IMF programme. Is trust in European institutions more affected if consolidation might be perceived to be "forced" upon a country? If so, this may have important policy implications. Future research should thus focus on whether fiscal adjustments spur less public upheaval if they are embedded in an appropriate narrative. That is, a sophisticated communication policy may achieve that the public better understands both the necessity and the medium to long term benefits of fiscal consolidations and thus better copes with such adjustments.

Another potentially useful extension would be to factor in the effect of asset prices, in particular house prices that are correlated both with consumer confidence and with a government's fiscal stance. Dealing with heterogeneity and going beyond country aggregates is another obvious direction, which the Eurobarometer data allow. For example, one could divide the population in each country in interesting subgroups (say, employed and not employed) and check if these characteristics are relevant conduits of the effect of fiscal austerity on public opinion.

The design of our study aims at capturing differences in public opinion that may be attributable to a government's fiscal stance or episodes of fiscal consolidation. This is different from directly investigating citizen's reactions to certain fiscal consolidation episodes. Such a qualitative analysis of fiscal consolidation episodes would lend itself to expand on our findings. For instance, future research could take into consideration

attributes of certain consolidation policies, such as their perceived fairness, which might impact the degree of discontent with or support for these policies.

This paper intended to give a first flavour of potential impacts of austerity on public opinion. In light of the issues raised above, there is still ample space for future research on this topic.

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Figure 1. Fiscal stance measures

1a. Greece
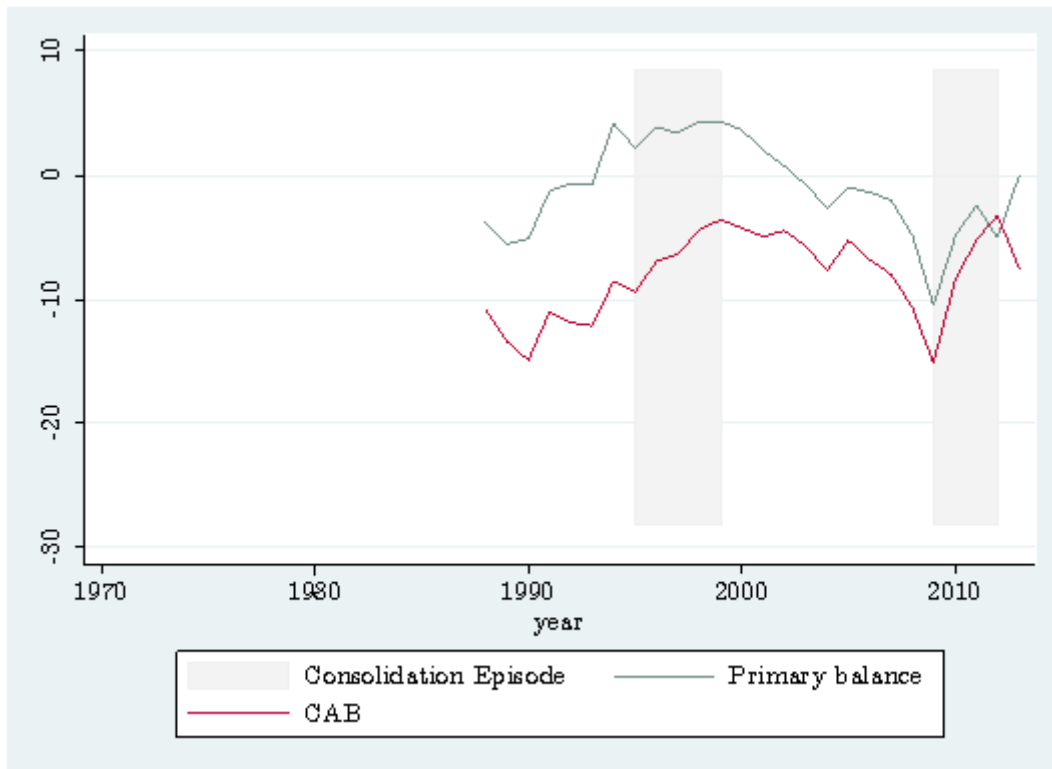
1b. Latvia
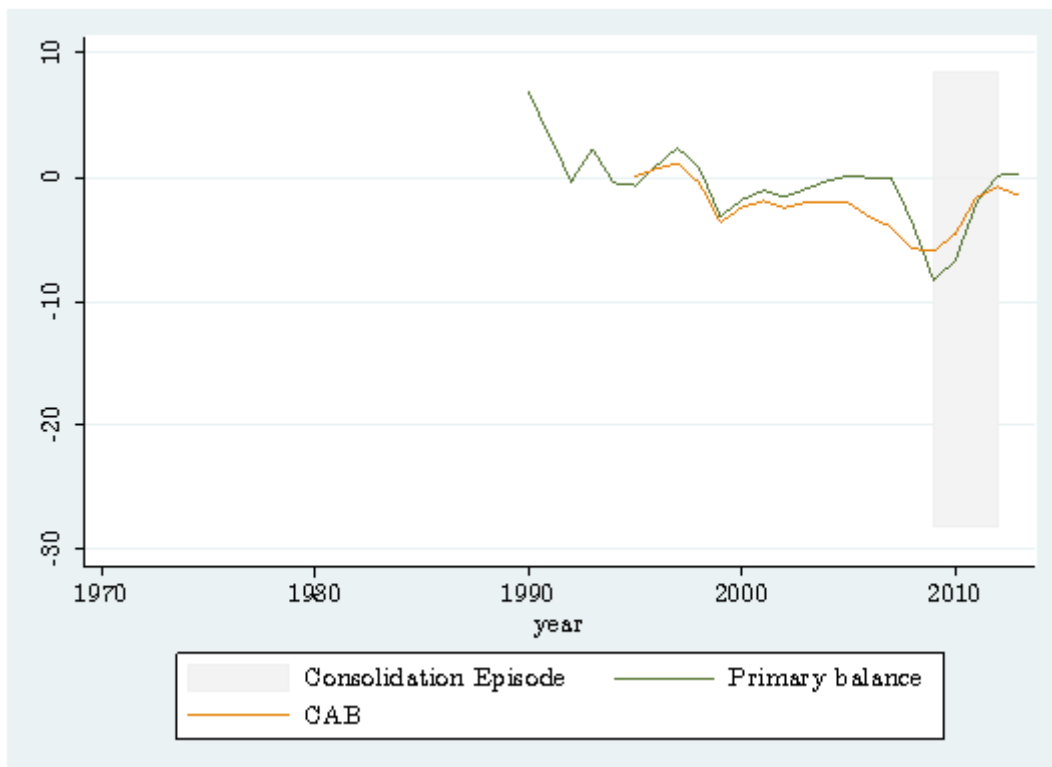
1c. Germany
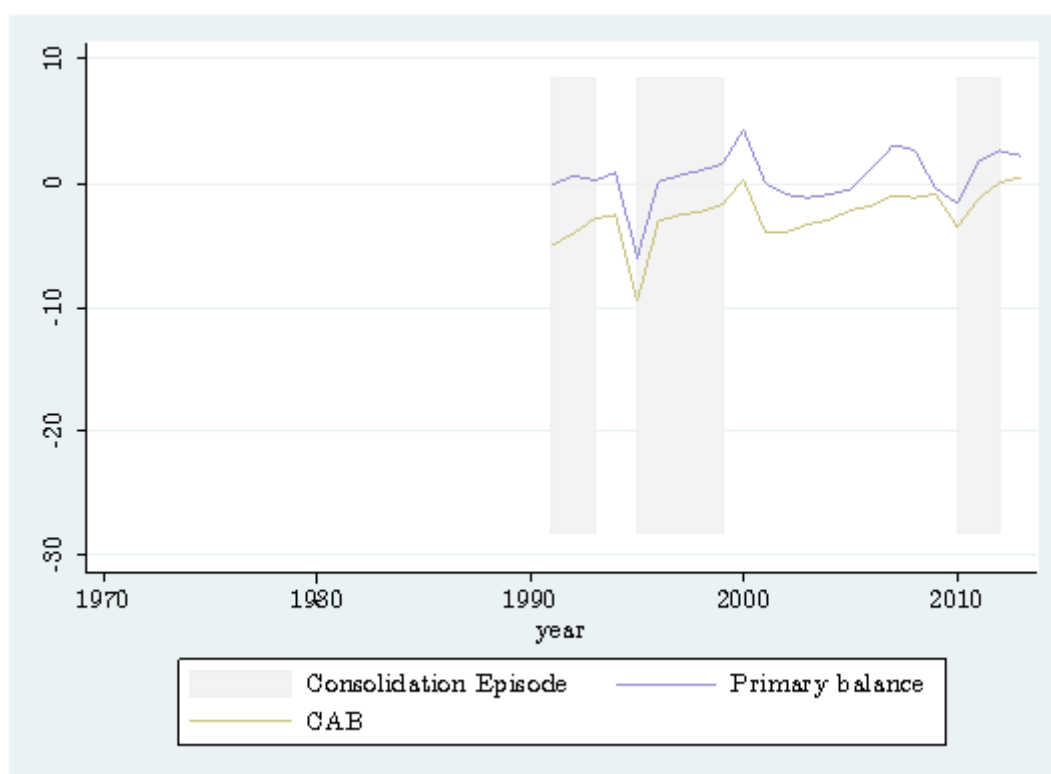
Notes: See Table 1 for the definition of the variables and the sources. CAB stands for Cyclically Adjusted Balance.

Figure 2. Life satisfaction and consumer confidence

2a. Greece
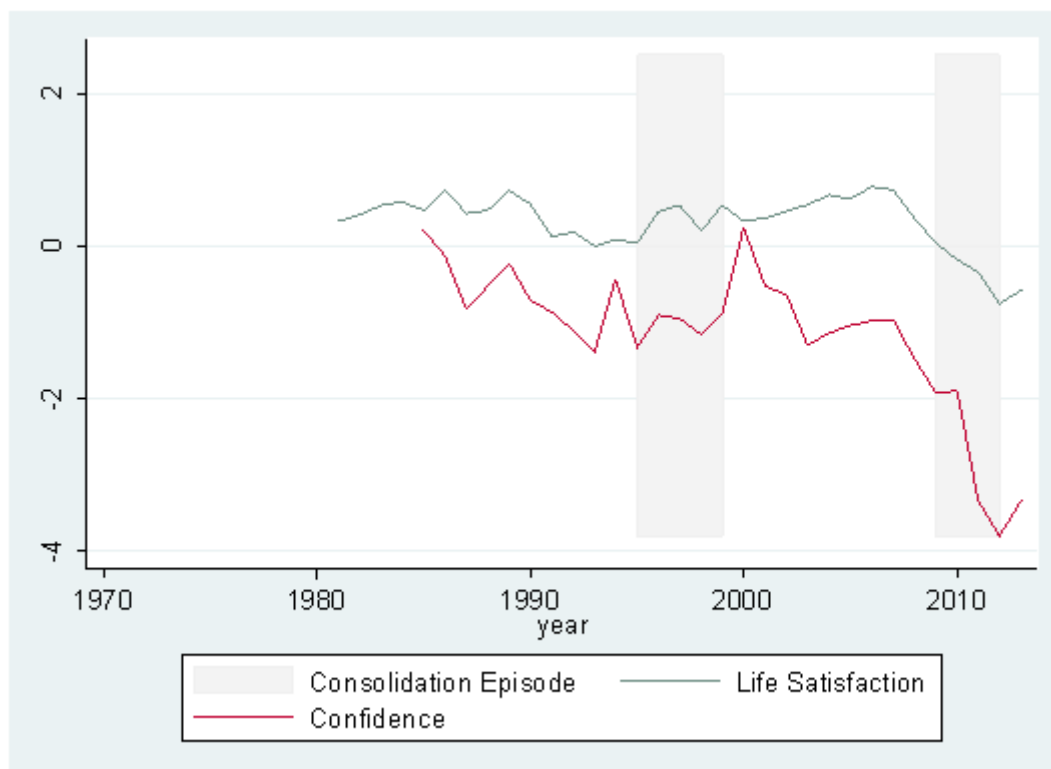
2b. Latvia
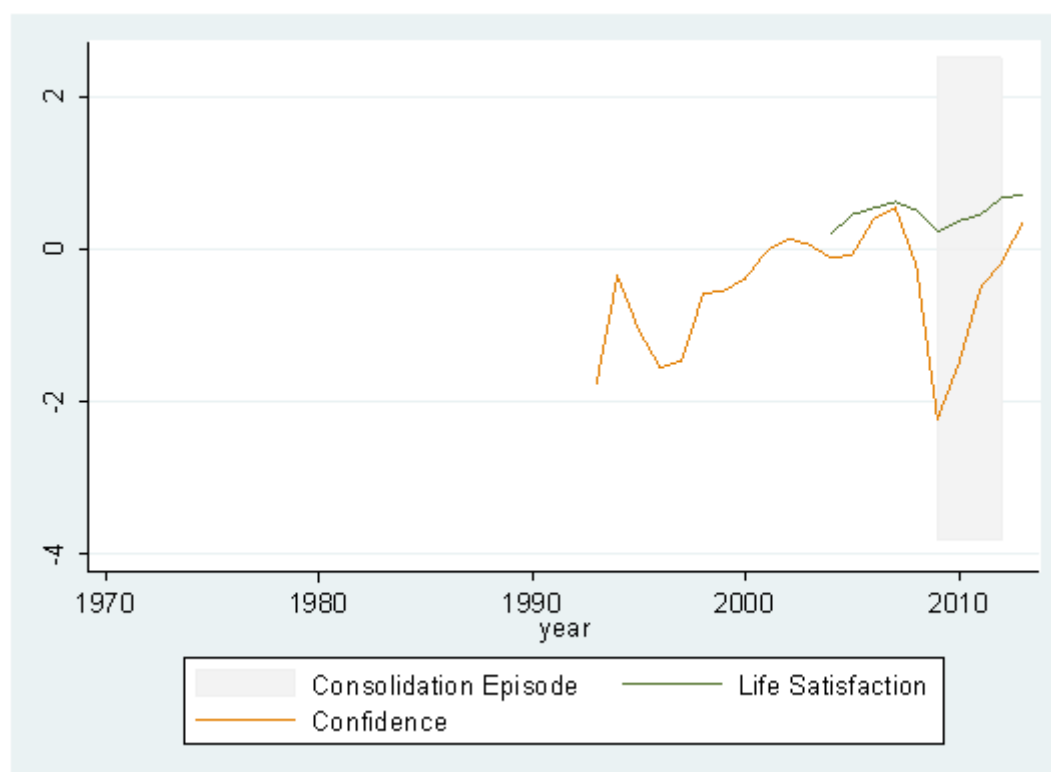
2c. Germany
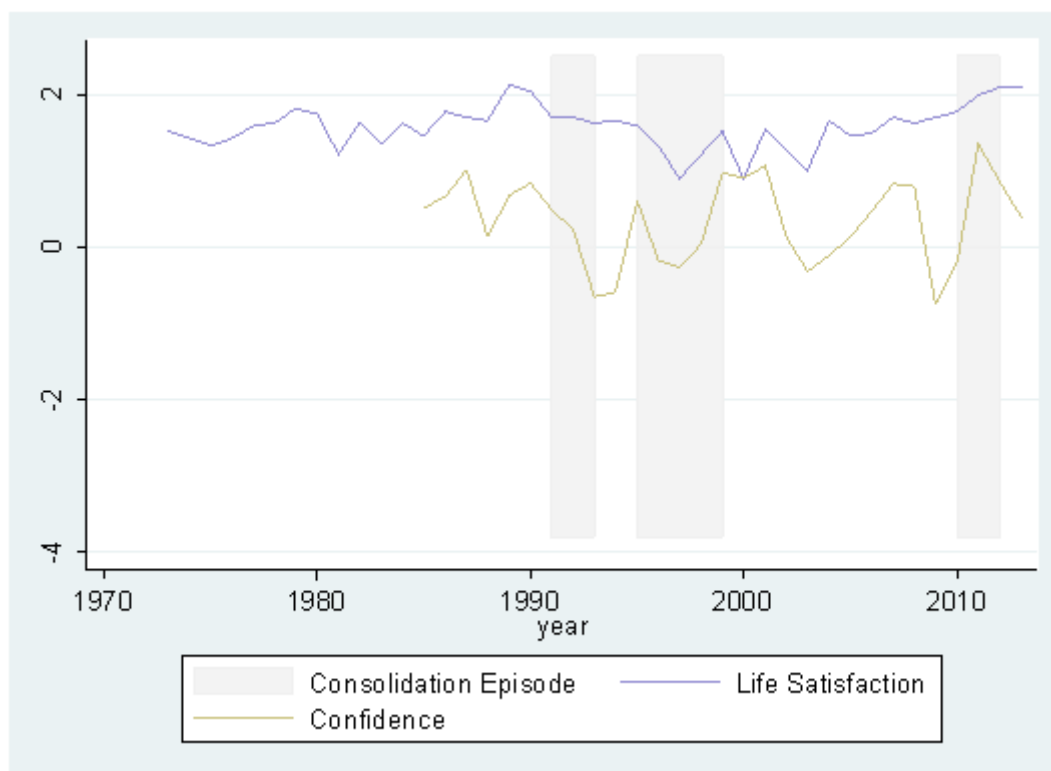
Notes: See Table 1 for the definition of the variables and the sources.

Figure 3. Net trust in national and European institutions

3a. Greece
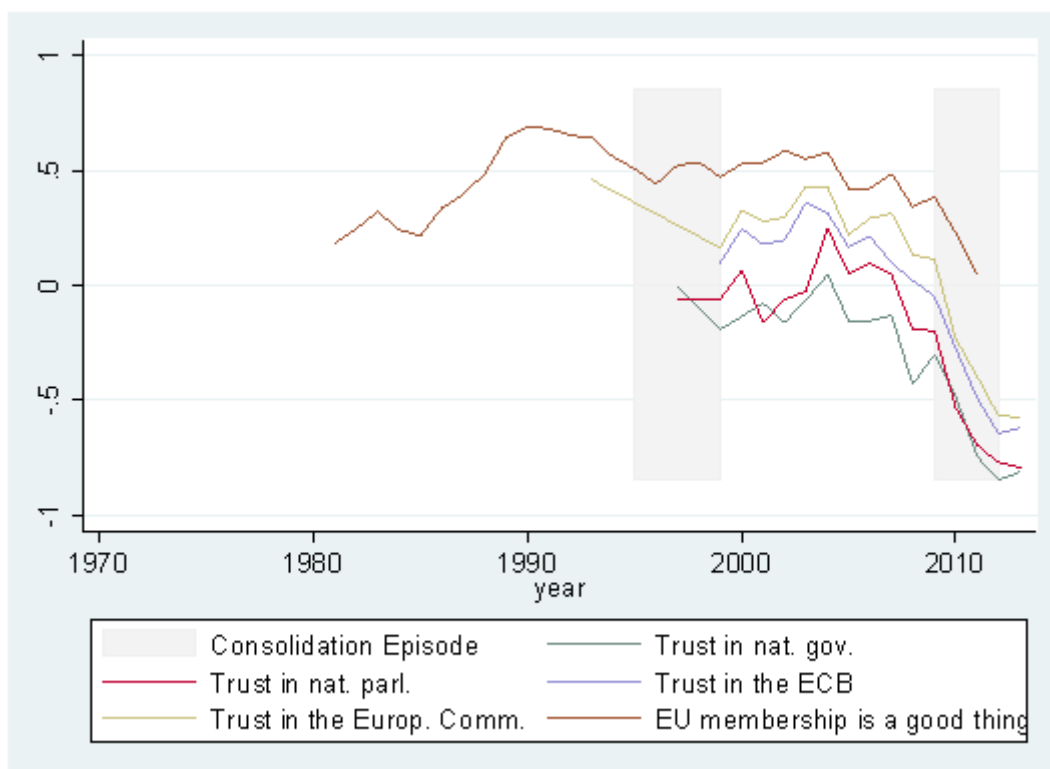
3b. Latvia
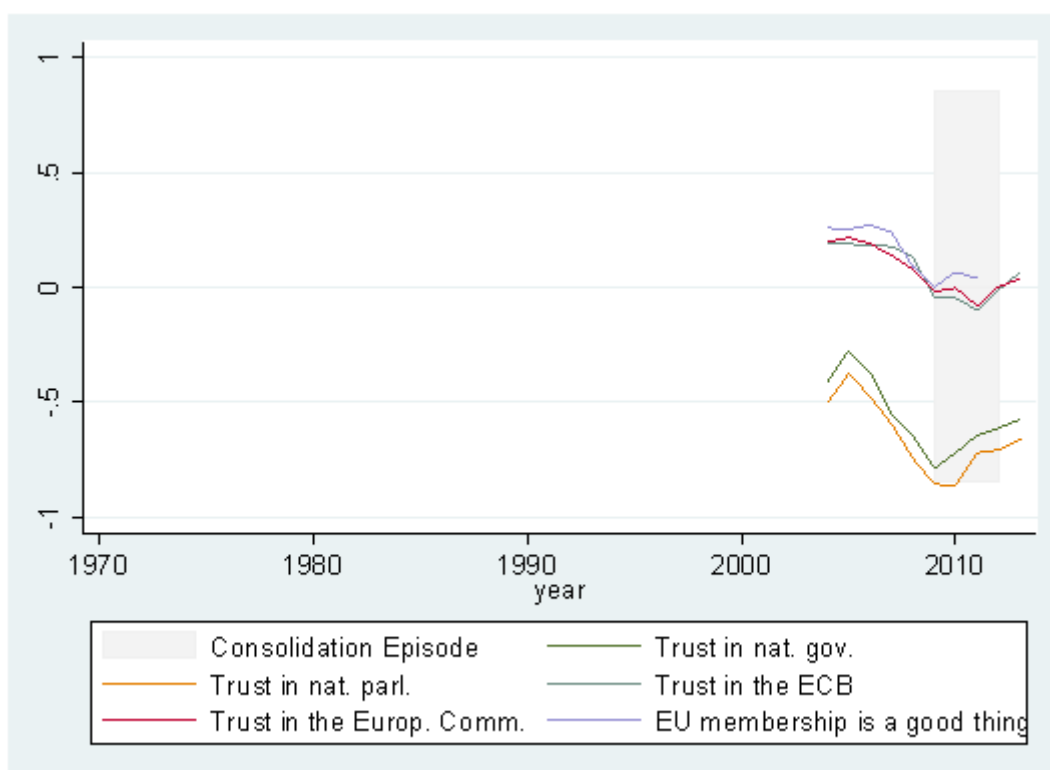
3c. Germany
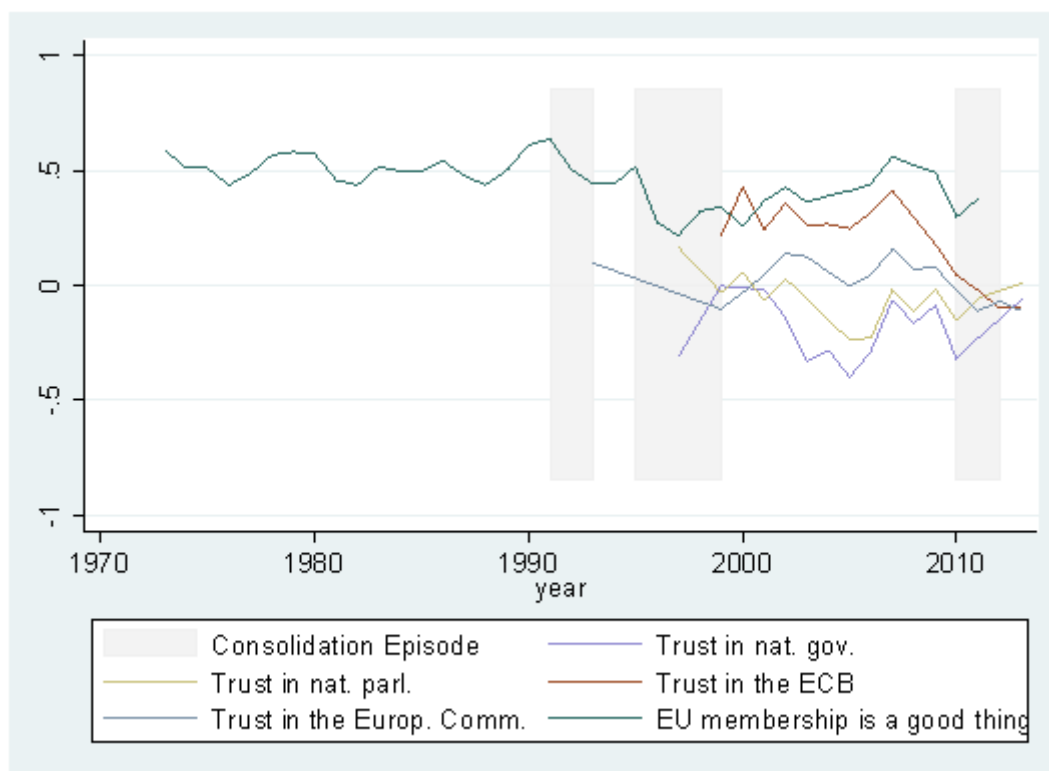
Notes: See Table 1 for the definition of the variables and the sources. The trust measures shown are net trust (difference from share of responses "tend to trust" and "do not tend to trust").

Table 1. Sources and definition of the data

Variable	Source and definition
Consumer confidence	European Commission consumer survey
Life satisfaction	European Commission Eurobarometer survey; logistic transformation of the share of answers *"Very"* and *"fairly"* and *"No"* and *"Not at all"* to the question *"On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the life you lead?"*
Net trust in the national government and in the national parliament	European Commission Eurobarometer survey; difference between the share of responses of *"tend to trust"* and *"tend not to trust"* respectively the national government and the national parliament (the question is: *"For each of the following institutions, please tell me if you tend to trust it or tend not to trust it"*)
Net trust in the ECB and in the European Commission	European Commission Eurobarometer survey; difference between the share of responses of *"tend to trust"* and *"tend not to trust"* respectively the ECB and the European Commission (the question is: *"For each of the following institutions, please tell me if you tend to trust it or tend not to trust it"*)
EU membership is a good thing (general attitude towards Europe)	European Commission Eurobarometer survey; difference between the share of responses of *"A good thing"* and *"Not a good thing"* to the question *"Generally speaking, do you think that (your country''s) membership of the European Community (Common Market) is …?"*
Fiscal stance measures: Primary balance to GDP, cyclically adjusted primary balance (CAB), public debt to GDP (Maastricht definition)	European Commission, AMECO database
Euro dummy	Takes value 1 if and when the country's currency is the euro and 0 otherwise
Program country dummy	Takes value 1 if in a given year the country is under a EU/IMF program and 0 otherwise
Fiscal consolidation dummy	Takes value 1 in a 2-year period in which the CAB improves in each year and the cumulative improvement is at least 2% of GDP for the primary balance, or in a 3-year period in which the CAB improves in each year and the cumulative improvement is at least 3% of GDP (Alesina and Ardagna 2012).
Spending versus revenue based	Spending based consolidation if the change in public expenditure is less than its median across all years in which a consolidation occurs; revenue based if the change in public revenues is more than its median across all years in which consolidation occurs; see Alesina, Carloni and

	Lecce (2012).
Real GDP, unemployment rate, consumer price index (CPI)	IMF World Economic Outlook (WEO) database Inflation is computed as the annual growth of the CPI
Banking and debt crisis dummies	Mars database (European Central Bank) The original database is available for a quarterly frequency from 1970 to 2010, with three binary variables capturing the episodes of banking, debt and currency crises. The variables take value 1 when a crisis occurred and 0 otherwise. The database has been assembled for an ECB working paper on banking, debt and currency crises (Babecky et al. 2012). The original quarterly database is converted into an annual database where a dummy previously coded as 1 takes the value of 0.25. Accordingly, the annual variable for a crisis period is only equal to 1 if a crisis has been identified for all four quarters. If for example a banking crisis has been identified only in two quarters for a respective year, the corresponding banking crisis variable takes the value of 0.5. The variable takes on the value of 0 if no banking crisis has occurred during any of the quarters within a year.

Note: Data have an annual frequency; for variables available at a higher frequency (including Eurobarometer survey data), data are annual averages. The sample period is 1973 to 2013.

Table 2a. Summary statistics

	Obs	Mean	St.dev	Min	Max
Life satisfaction	585	1.56	0.98	-0.90	3.89
Consumer confidence	566	-0.00	1.00	-3.80	2.50
Net trust in nat. gov.	335	-0.08	0.71	-0.85	5.03
Net trust in nat. parl.	350	-0.20	0.46	-2.96	2.36
Net trust in the ECB	360	0.20	0.22	-0.69	0.68
Net trust in EU Comm.	373	0.19	0.21	-0.57	0.54
EU membership is good	632	0.43	0.22	-0.25	0.86
Real GDP growth	852	2.15	3.72	-18.50	13.57
Unemployment rate	863	7.68	4.42	0.00	27.00
CPI inflation	921	8.86	20.33	-4.59	246.47
Primary balance	726	0.33	3.74	-28.21	11.62
Public debt to GDP	830	50.75	30.65	3.69	175.18
Public spending to GDP	921	42.87	6.58	24.21	75.36
Revenues to GDP	719	43.16	6.92	23.88	60.55
Govt. consumption to GDP	445	20.12	3.22	12.64	29.79
Fiscal consolidation	678	0.34	0.47	0.00	1.00
Expenditure-based consolidation	1195	0.11	0.32	0.00	1.00
Revenue-based consolidation	1195	0.13	0.33	0.00	1.00
Euro area country	1195	0.17	0.37	0.00	1.00
Program country	1195	0.01	0.10	0.00	1.00
Banking crisis dummy	1025	0.08	0.27	0.00	1.00
Debt crisis dummy	1025	0.01	0.06	0.00	1.00

Table 2b. Summary statistics for the dependent variables: Between and within variation

		Mean	St. dev	Min	Max	Obs.
Consumer confidence	overall	-1.2E-09	1.00	-3.80	2.50	N = 566
	between		0.79	-1.21	1.60	n = 26
	within		0.67	-2.65	1.88	T-bar = 21.77
Net trust in nat. gov.	overall	-0.07636	0.71	-0.85	5.03	N = 335
	between		0.60	-0.56	2.59	n = 26
	within		0.34	-2.18	2.37	T-bar = 12.88
Net trust in nat. parl.	overall	-0.19659	0.46	-2.96	2.36	N = 350
	between		0.27	-0.69	0.19	n = 26
	within		0.38	-2.78	2.53	T-bar = 13.46
Net trust in the ECB	overall	0.206353	0.22	-0.69	0.68	N = 335
	between		0.14	-0.16	0.46	n = 26
	within		0.17	-0.62	0.58	T-bar = 12.88
Net trust in the Comm.	overall	0.199933	0.21	-0.57	0.54	N = 347
	between		0.13	-0.19	0.37	n = 26
	within		0.16	-0.55	0.55	T-bar = 13.35
EU membership is good	overall	0.435389	0.22	-0.26	0.86	N = 586
	between		0.18	0.08	0.71	n = 26
	within		0.12	0.03	0.79	T = 22.54

Table 3. Correlation tables

3a. Dependent variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1)	1.00						
(2)	0.71***	1.00					
(3)	0.60***	0.54***	1.00				
(4)	0.68***	0.52***	0.82***	1.00			
(5)	0.28***	0.38***	0.55***	0.43***	1.00		
(6)	-0.17*	-0.01	0.27***	0.16*	0.75***	1.00	
(7)	0.09	0.16*	0.30***	0.22***	0.64***	0.68***	1.00

(1): Life satisfaction
(2): Consumer confidence
(3): Trust in the national government
(4): Trust in the national parliament
(5): Trust in the ECB
(6): Trust in the European Commission
(7): EU membership is a good thing

3b. Fiscal stance and consolidation measures

	(1)	(2)	(3)	(4)	(5)	(6)
(1)	1.00					
(2)	0.72***	1.00				
(3)	0.10**	-0.37***	1.00			
(4)	-0.01	-0.08*	0.27***	1.00		
(5)	-0.24***	-0.15***	-0.10**	-0.19***	1.00	
(6)	0.11**	0.05	0.06	0.07	0.26***	1.00

(1): Primary balance
(2): CAB
(3): Public debt to GDP, t-1
(4): Fiscal consolidation dummy
(5): Change in public spending to GDP
(6): Change in public revenue to GDP

Table 4a. Estimates with OLS, effect of the <u>Cyclically Adjusted Balance</u> on public opinion

	(1) Life satisfaction	(2) Confidence	(3) Trust nat. gov.	(4) Trust nat. parl.	(5) EU good	(6) Trust ECB	(7) Trust Comm.
Lagged dependent variable	0.542***	0.493***	0.305	0.484**	0.743***	0.544***	0.606***
	(0.056)	(0.053)	(0.184)	(0.193)	(0.031)	(0.074)	(0.052)
Cyclically Adjusted Balance (CAB)	-0.001	-0.008	0.002	0.005	0.000	0.003**	0.002
	(0.004)	(0.006)	(0.009)	(0.009)	(0.001)	(0.002)	(0.002)
Real GDP growth	0.013***	0.076***	0.012***	0.018***	0.005***	0.003**	0.003*
	(0.005)	(0.013)	(0.004)	(0.006)	(0.001)	(0.001)	(0.002)
Unemployment rate	-0.017***	-0.027***	-0.021***	-0.009	0.001	-0.000	-0.001
	(0.004)	(0.006)	(0.005)	(0.006)	(0.002)	(0.002)	(0.002)
CPI inflation	0.001	-0.020**	-0.001	-0.006	-0.001	-0.003	-0.001
	(0.008)	(0.008)	(0.012)	(0.008)	(0.001)	(0.003)	(0.003)
Program country	-0.145	-0.565***	0.083*	0.035	-0.064***	-0.129***	-0.156***
	(0.092)	(0.141)	(0.042)	(0.068)	(0.014)	(0.032)	(0.046)
Euro area country	-0.063*	-0.093	-0.167***	-0.138***	-0.032**	-0.020	-0.060***
	(0.035)	(0.063)	(0.046)	(0.030)	(0.014)	(0.020)	(0.016)
Public debt to GDP (std.), t-1	-0.022	-0.047	-0.061	-0.119*	-0.033***	-0.082***	-0.048**
	(0.020)	(0.048)	(0.045)	(0.057)	(0.009)	(0.020)	(0.017)
Observations	441	488	251	281	470	281	281
Number of countries	25	26	26	26	26	26	26

Note: Pooled OLS with Driscoll-Kraay standard errors, sample 1970 to 2013 (or longest available). Dependent variables are indicated in the columns. Country fixed effects and time dummies are always included (and not shown for brevity). See Table 1 for the definition of the variables.

Table 4b. Estimates with OLS, effect of fiscal consolidation episodes on public opinion

	(1) Life satisfaction	(2) Confidence	(3) Trust nat. gov.	(4) Trust nat. parl.	(5) EU good	(6) Trust ECB	(7) Trust Comm.
Lagged dependent variable	0.543***	0.496***	0.303	0.471**	0.734***	0.541***	0.603***
	(0.055)	(0.052)	(0.185)	(0.187)	(0.030)	(0.074)	(0.052)
Fiscal consolidation	0.007	-0.062	-0.042	-0.101**	-0.019***	-0.006	-0.029***
	(0.024)	(0.059)	(0.033)	(0.046)	(0.005)	(0.009)	(0.005)
Real GDP growth	0.013***	0.073***	0.011**	0.014**	0.005***	0.003**	0.002
	(0.005)	(0.013)	(0.005)	(0.005)	(0.001)	(0.001)	(0.002)
Unemployment rate	-0.017***	-0.027***	-0.024***	-0.014**	0.001	-0.001	-0.002
	(0.004)	(0.007)	(0.006)	(0.006)	(0.002)	(0.002)	(0.002)
CPI inflation	0.001	-0.021**	-0.003	-0.009	-0.001	-0.004	-0.002
	(0.008)	(0.008)	(0.012)	(0.009)	(0.001)	(0.003)	(0.003)
Programme country	-0.144	-0.585***	0.072	0.028	-0.065***	-0.120***	-0.157***
	(0.096)	(0.134)	(0.072)	(0.076)	(0.013)	(0.036)	(0.041)
Euro area country	-0.061*	-0.120	-0.179***	-0.165***	-0.037**	-0.027	-0.068***
	(0.035)	(0.080)	(0.036)	(0.029)	(0.014)	(0.021)	(0.015)
Public debt to GDP (std.), t-1	-0.024	-0.032	-0.042	-0.093*	-0.028***	-0.085***	-0.040**
	(0.021)	(0.042)	(0.032)	(0.050)	(0.008)	(0.025)	(0.017)
Observations	441	488	251	281	470	281	281
Number of countries	25	26	26	26	26	26	26

Note: Pooled OLS with Driscoll-Kraay standard errors, sample 1970 to 2013 (or longest available). Dependent variables are indicated in the columns. Country fixed effects and time dummies are always included (and not shown for brevity). See Table 1 for the definition of the variables.

Table 5a. Estimates with instrumental variables, effect of the Cyclically Adjusted Balance on public opinion

	(1) Life satisfaction	(2) Confidence	(3) Trust nat. gov.	(4) Trust nat. parl.	(5) EU good	(6) Trust ECB	(7) Trust Comm.
Lagged dependent variable	0.534***	0.502***	0.303	0.479***	0.732***	0.545***	0.608***
	(0.045)	(0.046)	(0.209)	(0.170)	(0.033)	(0.055)	(0.053)
Cyclically Adjusted Balance (CAB)	-0.001	-0.006	0.014	0.025*	0.002	0.005**	0.004
	(0.005)	(0.012)	(0.011)	(0.013)	(0.002)	(0.002)	(0.003)
Real GDP growth	0.013***	0.075***	0.012*	0.017**	0.005***	0.003	0.003**
	(0.004)	(0.011)	(0.006)	(0.007)	(0.001)	(0.002)	(0.002)
Unemployment rate	-0.018***	-0.027**	-0.019***	-0.006	0.002	0.000	-0.000
	(0.005)	(0.011)	(0.007)	(0.007)	(0.002)	(0.002)	(0.003)
CPI inflation	0.001	-0.027***	-0.000	-0.005	-0.002	-0.003	-0.001
	(0.006)	(0.010)	(0.011)	(0.010)	(0.002)	(0.003)	(0.003)
Programme country	-0.144	-0.576***	0.044	-0.026	-0.062**	-0.133***	-0.164***
	(0.088)	(0.203)	(0.126)	(0.151)	(0.031)	(0.036)	(0.056)
Euro area country	-0.067	-0.110	-0.145**	-0.108**	-0.033**	-0.018	-0.056**
	(0.045)	(0.075)	(0.063)	(0.051)	(0.013)	(0.026)	(0.028)
Public debt to GDP (std.), t-1	-0.015	-0.042	-0.043	-0.093	-0.035***	-0.080***	-0.044*
	(0.024)	(0.048)	(0.062)	(0.070)	(0.009)	(0.022)	(0.022)
Observations	434	481	251	281	463	281	281
R-squared	0.649	0.697	0.211	0.346	0.789	0.807	0.804
Number of country	25	26	26	26	26	26	26
F-stat first stage	73.4	74.9	33.0	36.5	97.5	39.1	39.4

Note: Pooled OLS with Driscoll-Kraay standard errors, sample 1970 to 2013 (or longest available). Dependent variables are indicated in the columns. Country fixed effects and time dummies are always included (and not shown for brevity). The excluded instrument is one lag of the CAB. See Table 1 for the definition of the variables.

Table 5b. Estimates with instrumental variables, effect of fiscal consolidation episodes on public opinion

	(1) Life satisfaction	(2) Confidence	(3) Trust nat. gov.	(4) Trust nat. parl.	(5) EU good	(6) Trust ECB	(7) Trust Comm.
Lagged dependent variable	0.534***	0.504***	0.300	0.466***	0.723***	0.546***	0.603***
	(0.045)	(0.046)	(0.209)	(0.171)	(0.034)	(0.055)	(0.050)
Fiscal consolidation	-0.054	-0.060	-0.117	-0.133	-0.021	0.010	-0.026
	(0.045)	(0.092)	(0.096)	(0.097)	(0.014)	(0.021)	(0.020)
Real GDP growth	0.012***	0.073***	0.008	0.012	0.005***	0.003	0.002
	(0.004)	(0.010)	(0.007)	(0.008)	(0.001)	(0.002)	(0.002)
Unemployment rate	-0.019***	-0.028**	-0.028***	-0.016**	0.001	-0.000	-0.002
	(0.005)	(0.011)	(0.009)	(0.008)	(0.002)	(0.003)	(0.003)
CPI inflation	0.001	-0.027***	-0.004	-0.010	-0.001	-0.003	-0.002
	(0.006)	(0.010)	(0.011)	(0.011)	(0.002)	(0.004)	(0.003)
Program country	-0.156*	-0.593***	0.042	0.021	-0.064**	-0.116***	-0.157***
	(0.091)	(0.210)	(0.109)	(0.117)	(0.028)	(0.038)	(0.050)
Euro area country	-0.076	-0.132	-0.194***	-0.171***	-0.039***	-0.024	-0.067**
	(0.047)	(0.081)	(0.069)	(0.061)	(0.013)	(0.025)	(0.027)
Public debt to GDP (std.), t-1	0.000	-0.027	-0.004	-0.083	-0.030***	-0.090***	-0.041*
	(0.029)	(0.051)	(0.077)	(0.073)	(0.009)	(0.024)	(0.024)
Observations	434	481	251	281	463	281	281
R-squared	0.643	0.697	0.214	0.367	0.794	0.803	0.812
Number of country	25	26	26	26	26	26	26
F-stat first stage	119	116	36.9	51.4	106	56.0	54.7

Note: Pooled OLS with Driscoll-Kraay standard errors, sample 1970 to 2013 (or longest available). Dependent variables are indicated in the columns. Country fixed effects and time dummies are always included (and not shown for brevity). The excluded instrument is one lag of the fiscal consolidation dummy. See Table 1 for the definition of the variables.

Table 6a. Estimates with OLS, effect of <u>fiscal consolidation episodes</u> on public opinion; <u>including interaction terms</u>

	(1) Life satisfaction	(2) Confidence	(3) Trust nat. gov.	(4) Trust nat. parl.	(5) EU good	(6) Trust ECB	(7) Trust Comm.
Lagged dependent variable	0.530***	0.488***	0.304	0.463**	0.729***	0.509***	0.569***
	(0.061)	(0.050)	(0.187)	(0.186)	(0.030)	(0.069)	(0.047)
Fiscal consolidation	0.046*	0.045	-0.014	0.009	-0.047***	0.019	-0.005
	(0.026)	(0.089)	(0.034)	(0.055)	(0.010)	(0.015)	(0.013)
Fiscal consolidation*High debt country	-0.002	-0.104	-0.031	0.060	0.026	-0.097**	-0.068**
	(0.062)	(0.090)	(0.037)	(0.090)	(0.019)	(0.043)	(0.031)
Fiscal consolidation*Euro area country	-0.085	-0.038	0.020	-0.174	0.025***	-0.003	0.000
	(0.051)	(0.064)	(0.028)	(0.135)	(0.009)	(0.012)	(0.013)
Fiscal consolidation*Real GDP growth	0.003	0.001	0.009**	0.005	0.003	-0.000	-0.001
	(0.006)	(0.019)	(0.004)	(0.003)	(0.002)	(0.002)	(0.001)
Revenue-based fiscal consolidation	-0.024	-0.123**	-0.060**	-0.041	0.014**	-0.013	-0.018
	(0.025)	(0.046)	(0.021)	(0.037)	(0.006)	(0.010)	(0.018)
High debt country	-0.018	-0.117	0.041	0.044	-0.005	0.054**	0.063**
	(0.046)	(0.086)	(0.055)	(0.052)	(0.019)	(0.019)	(0.028)
Real GDP growth	0.011*	0.071***	0.006	0.013**	0.004***	0.003*	0.003
	(0.006)	(0.009)	(0.005)	(0.006)	(0.001)	(0.002)	(0.002)
Unemployment rate	-0.019***	-0.030***	-0.024***	-0.014**	0.001	-0.001	-0.002
	(0.005)	(0.007)	(0.006)	(0.006)	(0.001)	(0.003)	(0.003)
CPI inflation	0.001	-0.021***	-0.001	-0.005	-0.001	-0.003	-0.002
	(0.009)	(0.007)	(0.011)	(0.007)	(0.001)	(0.003)	(0.003)
Program country	-0.115	-0.534***	0.073	0.046	-0.074***	-0.085***	-0.142***
	(0.092)	(0.150)	(0.049)	(0.070)	(0.011)	(0.028)	(0.033)
Euro area country	-0.038	-0.121	-0.203***	-0.109**	-0.043***	-0.028	-0.071***
	(0.044)	(0.077)	(0.044)	(0.048)	(0.014)	(0.019)	(0.016)
Public debt to GDP (std.), t-1	-0.021	0.014	-0.029	-0.108	-0.031***	-0.097***	-0.052***
	(0.023)	(0.039)	(0.031)	(0.068)	(0.010)	(0.022)	(0.015)
Observations	441	488	251	281	470	281	281
Number of countries	25	26	26	26	26	26	26

Note: Pooled OLS with Driscoll-Kraay standard errors, sample 1970 to 2013 (or longest available). Dependent variables are indicated in the columns. Country fixed effects and time dummies are always included (and not shown for brevity). See Table 1 for the definition of the variables.

Table 6b. Estimates with OLS, effect of fiscal consolidation episodes on public opinion; including interaction terms and controlling for banking and debt crises

	(1) Life satisfaction	(2) Confidence	(3) Trust nat. gov.	(4) Trust nat. parl.	(5) EU good	(6) Trust ECB	(7) Trust Comm.
Lagged Dependent Variable	0.471***	0.485***	0.370	0.509	0.724***	0.434***	0.537***
	(0.083)	(0.059)	(0.329)	(0.293)	(0.034)	(0.102)	(0.111)
Fiscal consolidation	0.028	0.003	-0.096**	-0.012	-0.049***	0.012	-0.027
	(0.021)	(0.087)	(0.030)	(0.117)	(0.012)	(0.025)	(0.020)
Fiscal consolidation*High debt country	-0.066	-0.102	-0.040	0.143	0.015	-0.060	0.005
	(0.062)	(0.120)	(0.129)	(0.184)	(0.023)	(0.056)	(0.044)
Fiscal consolidation*Euro area country	-0.118*	-0.032	0.078**	-0.207	0.023*	0.004	0.011
	(0.062)	(0.112)	(0.032)	(0.191)	(0.012)	(0.018)	(0.012)
Fiscal consolidation*Real GDP growth	0.006	-0.003	0.013	0.010	0.003	-0.002	-0.002
	(0.005)	(0.020)	(0.008)	(0.006)	(0.002)	(0.003)	(0.002)
Revenue-based fiscal consolidation	-0.012	-0.084	-0.042	-0.044	0.017**	-0.006	-0.000
	(0.022)	(0.050)	(0.039)	(0.089)	(0.008)	(0.017)	(0.027)
High debt country	0.014	-0.104	-0.006	0.075	0.002	0.065**	0.016
	(0.087)	(0.138)	(0.071)	(0.100)	(0.022)	(0.027)	(0.021)
Real GDP growth	0.006	0.063***	-0.001	0.006	0.003***	0.003*	0.002
	(0.006)	(0.010)	(0.003)	(0.006)	(0.001)	(0.002)	(0.002)
Unemployment rate	-0.024***	-0.030**	-0.027**	-0.020**	0.002	0.001	-0.002
	(0.007)	(0.012)	(0.009)	(0.007)	(0.001)	(0.002)	(0.002)
CPI inflation	-0.001	-0.015	-0.004	-0.006	-0.002*	-0.003	-0.003
	(0.011)	(0.011)	(0.014)	(0.008)	(0.001)	(0.003)	(0.004)
Program country	-0.025	-1.051	0.071	-0.264	-0.007	0.067	-0.149
	(0.129)	(0.660)	(0.321)	(0.463)	(0.043)	(0.082)	(0.113)
Euro area country	-0.026	-0.133	-0.221**	-0.162**	-0.041**	-0.018	-0.084**
	(0.048)	(0.088)	(0.090)	(0.070)	(0.016)	(0.019)	(0.028)
Public debt to GDP (std.), t-1	-0.015	0.019	0.003	-0.126	-0.034**	-0.142***	-0.068**
	(0.027)	(0.047)	(0.046)	(0.111)	(0.013)	(0.018)	(0.022)
Banking crisis	0.035	-0.096	-0.081	-0.078	-0.003	0.003	-0.008
	(0.055)	(0.074)	(0.053)	(0.062)	(0.015)	(0.011)	(0.017)
Debt crisis	-0.261	1.346	-0.161	0.198	-0.067	-0.229*	-0.232
	(0.164)	(0.803)	(0.414)	(0.586)	(0.055)	(0.109)	(0.132)
Observations	357	399	186	214	407	214	214
Number of groups	23	24	24	24	24	24	24

Note: Pooled OLS with Driscoll-Kraay standard errors, sample 1970 to 2013 (or longest available). Dependent variables are indicated in the columns. Country fixed effects, time dummies and one lag of the endogenous variable are always included (and not shown for brevity). See Table 1 for the definition of the variables.

Table 6c. Estimates with OLS, effect of fiscal consolidation episodes on public opinion in non-crisis times; including interaction terms

	(1) Life satisfaction	(2) Confidence	(3) Trust nat. gov.	(4) Trust nat. parl.	(5) EU good	(6) Trust ECB	(7) Trust Comm.
Lagged Dependent Variable	0.398***	0.435***	0.137	0.322	0.705***	0.348*	0.436**
	(0.073)	(0.059)	(0.268)	(0.195)	(0.042)	(0.152)	(0.169)
Fiscal consolidation	0.025	-0.263*	-0.148	0.179	-0.072***	0.060	-0.013
	(0.045)	(0.130)	(0.156)	(0.170)	(0.018)	(0.109)	(0.071)
Fiscal consolidation*High debt country	0.056	0.051	0.000	0.000	0.042*	0.000	0.000
	(0.057)	(0.126)	(0.000)	(0.000)	(0.021)	(0.000)	(0.000)
Fiscal consolidation*Euro area country	-0.139***	0.056	0.063	-0.393*	0.035**	0.008	0.009
	(0.030)	(0.128)	(0.068)	(0.190)	(0.015)	(0.053)	(0.041)
Fiscal consolidation*Real GDP growth	-0.000	0.073***	0.005	0.029	0.008**	-0.024	-0.009
	(0.015)	(0.020)	(0.056)	(0.037)	(0.003)	(0.019)	(0.012)
Revenue-based fiscal consolidation	-0.015	-0.064	-0.013	-0.183	0.015	-0.010	0.010
	(0.046)	(0.067)	(0.058)	(0.122)	(0.009)	(0.040)	(0.050)
High debt country	-0.062	-0.034	-0.240	0.001	-0.016	0.011	-0.020
	(0.075)	(0.161)	(0.125)	(0.106)	(0.022)	(0.033)	(0.025)
Real GDP growth	0.017	0.091***	0.006	0.018	0.005*	0.015***	0.006***
	(0.012)	(0.019)	(0.019)	(0.012)	(0.003)	(0.004)	(0.001)
Unemployment rate	-0.020**	-0.038***	-0.029***	0.022	0.002	0.003	0.000
	(0.009)	(0.012)	(0.005)	(0.014)	(0.002)	(0.004)	(0.004)
CPI inflation	-0.015	-0.019	0.034	-0.018	-0.002	0.003	0.001
	(0.011)	(0.013)	(0.062)	(0.035)	(0.001)	(0.006)	(0.005)
Program country	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Euro area country	0.021	-0.115	-0.176*	-0.054	-0.037*	-0.030	-0.107*
	(0.039)	(0.100)	(0.074)	(0.094)	(0.019)	(0.042)	(0.053)
Public debt to GDP (std.), t-1	-0.040	-0.051	0.058	-0.263***	-0.030*	-0.141***	-0.063*
	(0.029)	(0.076)	(0.059)	(0.035)	(0.016)	(0.016)	(0.027)
Observations	317	360	123	153	366	153	153
Number of groups	25	26	26	26	26	26	26

Note: Pooled OLS with Driscoll-Kraay standard errors, sample 1970 to 2013 (or longest available). Dependent variables are indicated in the columns. Country fixed effects and time dummies are always included (and not shown for brevity). See Table 1 for the definition of the variables.