



EUROPEAN CENTRAL BANK  
EUROSYSTEM

## Working Paper Series

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### Spillovers and Euroscepticism

No 1815 / June 2015



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ABSTRACT: During the crisis, support for the EU has declined noticeably in many European Union member states. While previous research on European public opinion has mainly focused on the impact of domestic country- and individual-level factors on public attitudes towards the EU, this paper argues that developments in other EU member states can also have a significant impact on domestic euroscepticism. Specifically, deteriorating economic and fiscal conditions in other member states can lead to concerns in domestic publics about possible negative spillovers on the domestic economy and the ability of the EU to deliver positive economic outcomes. This in turn may lead to rising euroscepticism at the domestic level. The analysis of a panel data set for the EU as a whole and the euro area countries lends support to these arguments by showing that higher unemployment rates and government debt levels in other European countries are systematically related to lower levels of trust in the EU domestically.

KEYWORDS: European Union, Euroscepticism, Spillovers, Debt, Unemployment.

JEL CLASSIFICATION: D72 (Political Processes), E02 (Institutions and the Macroeconomy), F15 (Economic Integration), H63 (Debt), J64 (Unemployment).

## **Non-Technical Summary**

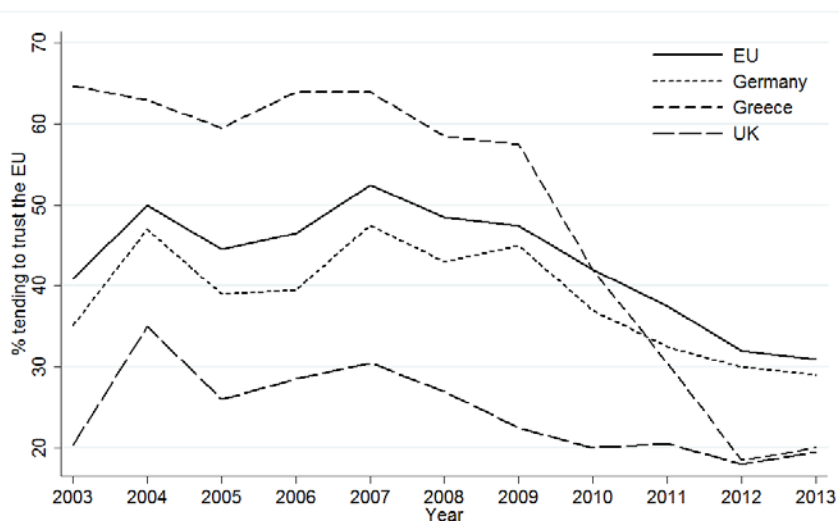
The financial and economic crisis has led to a notable rise in euroscepticism in many European Union member states. Recent research shows that a large part of the variation and the decline in support for the EU can be explained by factors such as domestic economic developments, national identities or trust in national governments. Yet, such domestic country- and individual-level factors do not seem to be the only explanatory factors behind rising levels of euroscepticism. For example, in some member states the domestic unemployment rate has declined and trust in the national government has remained relatively stable over the last decade, while trust in the EU has nevertheless deteriorated markedly. Consequently, by focusing exclusively on domestic factors, present scholarship may be missing important sources of euroscepticism.

This paper tackles this puzzle by arguing that economic developments in other EU member states can have an important impact on public support for the EU at the domestic level. In particular, deteriorating economic and fiscal conditions in other countries may cause concerns among domestic publics about possible negative spillovers to the domestic economy and the ability of the EU to deliver positive economic outcomes. This may in turn lead to lower trust in the EU and higher levels of euroscepticism domestically.

To test these arguments, we analyse the determinants of trust in the EU in a panel data set of 28 EU and 17 euro area member states between 2001 and 2013. The results show that higher unemployment rates and government debt levels in other member states are systematically related to lower levels of trust in the EU domestically, even after controlling for a wide range of domestic determinants of public support for the EU. This relationship is robust to various model respecifications and does not depend on the inclusion of particular countries in the sample. Thus, the analysis suggests that economic and fiscal outcomes in other EU member states can play an important role in shaping domestic attitudes towards the EU. This finding has significant implications, both for future research on the determinants of euroscepticism and for current debates on the degree of political union needed to make economic and fiscal union work.

## Introduction

The financial and economic crisis has led to a notable rise in euroscepticism in many European countries. As Figure 1 shows, trust in the EU declined to record low levels in member states as diverse as Germany, the United Kingdom or Greece. Recent research shows that a large part of the variation and the decline in support for the EU can be explained by factors such as domestic economic developments, national identities or trust in national governments (see, e.g., Hartevelde et al. 2013; Roth et al. 2013; Serricchio et al. 2013; Armingeon and Ceka 2014). Yet in some European countries, such domestic factors have been less successful in explaining rising levels of euroscepticism. For example, in Germany the domestic unemployment rate declined significantly and trust in the national government increased somewhat over the last decade, while trust in the EU deteriorated markedly. This suggests that a focus on domestic determinants of euroscepticism only may be too narrow and may in fact need to be complemented by external explanatory factors that shape domestic levels of support for the EU.



**Figure 1.** Trust in the EU at EU level, in Germany, in Greece, and in the United Kingdom, 2003-2013. Sources: European Commission Eurobarometer database.

This paper provides evidence for such European-wide spillovers and argues that developments in other EU member states can play an important role in shaping domestic public attitudes towards the EU. Specifically, we argue that economic developments in other EU member states can have a significant impact on domestic support for the EU. In particular, deteriorating economic and fiscal conditions in other countries may cause concerns among domestic publics about possible negative spillovers to the domestic economy and the ability of the EU to deliver positive economic outcomes. This may in turn lead to lower trust in the EU and higher levels of euroscepticism domestically.

To test these arguments, we rely on a panel data set of 28 EU and 17 euro area member states between 2001 and 2013. In line with previous research, we use the level of trust in the EU as a measure of diffuse public support for the EU (see, e.g., Armingeon and Ceka 2014). The results show that higher unemployment rates and government debt levels in other member states are systematically related to lower levels of trust in the EU domestically, even after controlling for a wide range of domestic determinants of public support for the EU. This relationship appears to be robust to various model respecifications and does not hinge on the inclusion of particular countries in the sample. Thus, the analysis suggests that economic and fiscal outcomes in other EU member states can play an important role in shaping domestic attitudes towards the EU.

The paper makes two important contributions. First, the findings directly contribute to the flourishing literature on the determinants of euroscepticism. While previous research has largely focused on the role of domestic country- or individual-level determinants of support for the EU such as domestic economic developments, economic interests, national identities, or trust in national institutions (Eichenberg and Dalton 1993; Gabel and Whitten 1997; Hooghe and Marks 2004; McLaren 2004; Hooghe et al. 2007; Harteveld et al. 2013; Roth et al. 2013; Armingeon and Ceka 2014), this paper shows that also economic developments in other EU member states can have an important impact on domestic support for or scepticism about the EU. In doing so, the paper helps to further improve our understanding of the factors that drive public attitudes towards the EU and suggests interesting directions for future research.

Second, the paper also has important policy implications by highlighting that economic and fiscal developments in economic and monetary unions can have significant spillovers into political processes and that these spillovers also extend across state borders. Consequently, the findings suggest that domestic political support for the EU may critically depend on the ability of the EU to prevent rising unemployment and debt levels across member states. In doing so, the results directly speak to current debates on the necessary degree of European integration to deliver prosperity and to ensure the legitimacy of the EU (see, e.g., Van Rompuy 2012), by showing that spillovers from economic developments in other member states are not only economic but also political.

The paper is structured as follows. Sections two and three discuss previous research on the determinants of euroscepticism and present our argument and hypotheses on the role of economic developments in other EU member states for domestic trust in the EU. The fourth section discusses the research design that is used to test our hypotheses. Sections five and six present the results of the statistical analysis and assess their robustness. The final section concludes and discusses the implications of the paper's findings.

### **Previous Research on the Determinants of Euroscepticism**

It has often been argued that the early years of European integration were characterised by a “permissive consensus” of the European public in favour of further integration (see e.g. Lindberg and Scheingold 1970). Yet, the last two decades and in particular the years of the crisis have seen increasing public mobilisation on European policy issues and rising euroscepticism in many European member states (Hooghe and Marks 2009; Serricchio et al. 2013). At the same time, the degree of public support for European integration has become increasingly important in shaping member state governments' incentives to oppose or promote the further transfer of policy-making responsibilities to the European level (Hooghe and Marks 2009). In particular, the financial crisis in the EU once more highlighted that domestic public opinion can have a critical impact on governments' policy positions

on European policy issues (Hobolt 2014). Thus, it is not surprising that over the past two decades an expanding literature has analysed the factors that shape public support for the EU.

While early research on public opinion towards the EU mainly aimed at explaining the determinants of “support for European integration” or “support for the EU” (see, e.g., Eichenberg and Dalton 1993; 2007; Gabel and Palmer 1995; Gabel and Whitten 1997; Carey 2002; Brinegar and Jolly 2005), more recent scholarship has often framed its research in terms of explaining the determinants of “euroscepticism” (see, e.g., McLaren 2007; Hobolt et al. 2011; Hakhverdian et al. 2013; Serricchio et al. 2013; Van Klingeren et al. 2013) or “trust in the EU” (Harteveld et al. 2013; Roth et al. 2013; Armingeon and Ceka 2014). Yet, as Armingeon and Ceka (2014) correctly note, trust in the EU constitutes a key indicator of diffuse support for the EU.<sup>3</sup> Moreover, as Hooghe (2007) argues, support for and scepticism about the EU are two sides of the same coin. Thus, in our analysis of the determinants of public support for the EU we follow these recent approaches by using trust in the EU as a measure of diffuse public support for the EU and by defining euroscepticism as a lack of trust in the EU. This definition encompasses the continuum of varieties of euroscepticism from ‘hard to ‘soft’, as analysed in the literature (Szczerbiak and Taggart 2008, Bertoincini and Chopin 2010, Vasilopoulou 2009). Indeed, both ‘hard’ opposition to European integration, which is characterised by a wish for withdrawal from the EU, and ‘soft’ opposition, which is characterised by the objection to specific EU policies, are expressions of a lack of trust in the EU.

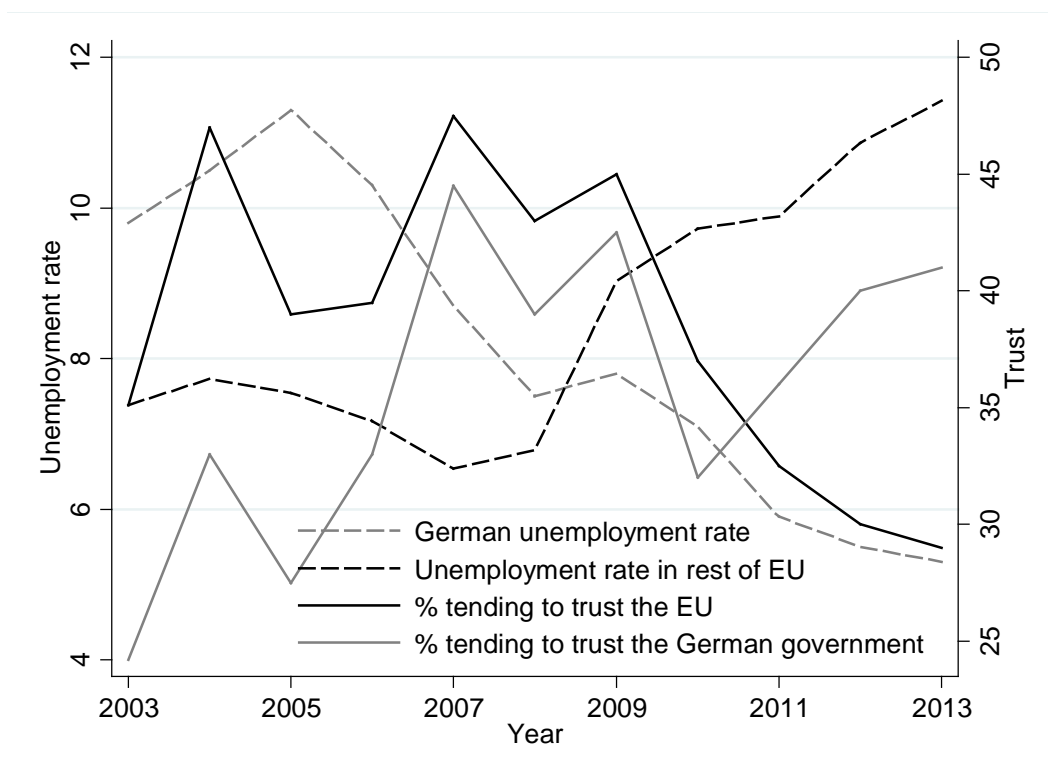
Previous research on the determinants of public support for the EU has provided important insights on the country-level and individual-level factors that help explaining the variation in euroscepticism across European countries and citizens. This scholarship shows that domestic economic factors, social identities, and domestic political contexts all have important impacts on public support for the EU. First, research on European public opinion demonstrates that domestic economic developments and

<sup>3</sup> The concept of diffuse institutional support was first introduced by Easton (1965) and can be defined as “allegiance, attachment or loyalty to governing institutions and policies” (Gabel 1998b: 17). In previous scholarship, the concept has been applied both by analyses of public support for the EU (see, e.g., Lindberg and Scheingold 1970; Armingeon and Ceka 2014) and research on eurosceptic party positions (see, e.g., Kopecky and Mudde 2002).

economic interests critically shape public attitudes towards the EU. In particular, this research shows that higher domestic unemployment rates and inflation rates are related to significantly lower levels of support for European integration or trust in European institutions (Eichenberg and Dalton 1993; 2007; Anderson and Kaltenthaler 1996; Roth et al. 2013; Gomez 2014). Similarly, this scholarship finds that individuals are more likely to express support for the EU if they evaluate the national economy and their personal economic situations more positively (Gabel and Whitten 1997; Carey 2002; Hooghe and Marks 2004). Moreover, this research also shows that support for the EU is significantly greater in countries that receive greater economic benefits from European integration through the internal market (Eichenberg and Dalton 1993; Gabel and Palmer 1995; Gabel and Whitten 1997) and among individuals who have higher levels of human capital and work in occupations that benefit from economic integration (Gabel and Palmer 1995; Gabel and Whitten 1997; Gabel 1998a; 1998b; Ehin 2001; Carey 2002; McLaren 2004; Hooghe and Marks 2004; Hooghe et al. 2007; Hakhverdian et al. 2013; Armingeon and Ceka 2014).

Second, recent research on euroscepticism highlights that besides economic developments and interests also social identities and domestic political contexts can be important drivers of citizens' support for the EU. This research shows that citizens who have an "exclusive" national identity, or fear to lose their national identity, are significantly more sceptical of the EU (Carey 2002; Hooghe and Marks 2004; 2005; McLaren 2004; 2007; De Vries and van Kersbergen 2007). Moreover, recent analyses find that citizens are likely to extrapolate from their domestic political contexts to the European level. Specifically, individuals are more likely to support or trust the EU, if they have greater trust in their national governments (Ehin 2001; De Vries and van Kersbergen 2007; Lubbers 2008; Harteveld et al. 2013; Armingeon and Ceka 2014), or if they are more satisfied with the way democracy works in their own countries (Anderson 1998; McLaren 2004; Christin 2005; De Vries and van Kersbergen 2007).





**Figure 2.** Unemployment in other European countries, German unemployment, trust in the German government, and German trust in the EU, 2003-2013. Sources: European Commission’s AMECO and Eurobarometer databases.

Altogether, previous scholarship has significantly improved our understanding of the determinants of euroscepticism by identifying the key domestic country- and individual-level factors that shape public support for the EU. These domestic factors, such as domestic economic outcomes, national identities or trust in national governments, certainly help explaining a large part of the variation in support for the EU across European member states and citizens. Yet, as the financial crisis in the EU has highlighted, a narrow focus on these domestic factors may ignore the potential role of developments and outcomes in other EU member states in shaping domestic attitudes towards the EU.<sup>4</sup> In particular, anecdotal evidence suggests that economic outcomes in other EU member states may have been an

<sup>4</sup> In line with this, recent research shows that international organisations and markets can significantly affect domestic public opinion towards national political institutions (Armingeon and Guthmann 2013).

important source of rising domestic levels of euroscepticism in some countries during the financial crisis, when developments in other member states may have had significant spillover effects on the domestic economy.

For example, as Figure 2 shows, German levels of trust in the EU significantly deteriorated with rising levels of unemployment in other EU member states. In contrast, the German domestic unemployment rate and trust in German governments have not been as clearly related to the level of trust in the EU. Rather, trust in the EU has even been positively correlated with Germany's unemployment rate and only weakly correlated with trust in the German government, which seems at odds with findings from the literature that better domestic economic conditions and greater trust in the national government lead to higher levels of support for the EU (Eichenberg and Dalton 1993; 2007; Anderson and Kaltenthaler 1996; Hartevelde et al. 2013; Roth et al. 2013; Armingeon and Ceka 2014; Gomez 2014). Thus, Figure 2 suggests that – if anything – German levels of trust in the EU over the past decade have not been driven by domestic developments but rather by economic developments in other European countries and their spillovers on domestic public opinion. Consequently, by focusing on domestic country- and individual-level factors present scholarship may miss an important source of euroscepticism. In fact, in the next section, we will argue that the above considerations do not only apply to Germany as a special case or just to the period of the crisis, but that economic outcomes in other European countries can indeed have an important impact on public support for the EU at the domestic level.

### **External Economic Developments, Spillovers and Domestic Euroscepticism**

How can economic developments in other EU member states influence the attitudes of domestic publics towards the EU? In this section, we discuss the various theoretical channels for this influence.

Clearly, one possible channel through which economic developments in other EU countries may affect domestic public opinion can be economic spillovers. That economic conditions in one country

can affect economic developments in other interlinked economies is both theoretically evident and empirically well substantiated in the economic literature. Apart from standard macroeconomic theory (Obstfeld and Rogoff 1996), an extensive literature has analysed economic spillovers in the EU, providing evidence of the importance of economic developments in other EU member states for domestic economic outcomes (see, e.g., Canova and Pappa 2007; Abad et al. 2010; Rueda-Cantuche et al. 2013). Moreover, previous research on euroscepticism shows that there is a strong link between domestic economic conditions and domestic support for the EU (Eichenberg and Dalton 1993; 2007; Anderson and Kaltenthaler 1996; Gabel and Whitten 1997; Carey 2002; Hooghe and Marks 2004). Economic developments in other member states can therefore indirectly impact domestic support for the EU via their spillovers on the domestic economy. This channel has not been isolated in the previous literature but has typically been captured there in two ways: first, as part of domestic economic conditions' direct impact on euroscepticism; and second as part of their impact on trust in national political institutions, which has in turn been shown to influence attitudes towards the EU (see, e.g., De Vries and van Kersbergen 2007; Harteveld et al. 2013; Armingeon and Ceka 2014).

In this paper we are, however, particularly interested in the direct impact of economic developments in other member states on domestic public opinion towards the EU. In other words, we are interested in how external economic developments can affect domestic public support for the EU independently of their eventual impact on the domestic economy and trust in domestic political institutions. We argue that this direct impact of external economic developments on domestic support for the EU can manifest itself in at least two ways. First, deteriorating economic and fiscal conditions in other EU member states can lead to *concerns* in domestic publics about possible negative spillovers on the domestic economy. This channel runs through *expectations*, which may be rational in an economic sense since there may indeed be real spillovers, as noted above. Yet, these expectations may also be irrational (e.g. related to fear) or ideological (e.g. related to political discourses). Second, domestic publics may *perceive* these deteriorating external conditions and possible spillovers as a lack of ability of the EU to deliver positive economic outcomes and to limit negative spillovers through its

governance and institutions. These perceptions in turn may lead to declining support for the EU. In the following, we will describe these two related mechanisms in more detail.

First, if economic and fiscal conditions in other EU member states are deteriorating, domestic publics may fear that these external developments may lead to negative spillovers on the domestic economy. The economies of the EU are closely interlinked and highly integrated. The internal market provides for the free movement of goods, services, capital and labour. The Schengen Agreement provides for the abolition of internal border controls. Many important policy areas such as competition, commercial or agricultural policy are exclusively or to a large extent regulated at the European level. And inside the euro area, economies are even more closely interlinked through the single currency, a single monetary policy and closer fiscal coordination.<sup>5</sup> As a consequence, over the past decades the EU has become the most deeply integrated region in the world, which implies a very high degree of actual or potential spillovers between European economies. Thus, in the context of the EU, it is rational for domestic publics to pay attention to economic and fiscal developments in other member states, since they can expect these developments to spill over into the domestic economy.

In particular, domestic publics may perceive that economic and fiscal developments in other member states could impact the domestic economy by affecting efficiency, stability, and equity (Padoa-Schioppa 1987). In terms of efficiency, poor economic developments in other EU member states can be perceived to have a direct impact on domestic economic outcomes. Deteriorating economic conditions in other EU countries can lead to lower exports and thereby lower domestic growth and employment, but also to increased competition in the domestic labour market due to labour mobility from poorly performing economies. In terms of stability, uncertainty and instabilities in other member states may lead to fears of destabilising effects on the domestic economy or financial sector (Piano and Pill 2014). Such fears may go beyond rational expectations. For example, as the crisis in the EU demonstrated, deteriorating public finances and financial instability in other countries may have

<sup>5</sup> In response to the crisis, European economic integration has been deepened even further by strengthening EU economic governance, by establishing a financial backstop in form of the European Stability Mechanism, and by setting up a banking union with a single supervisor and resolution regime for banks in the euro area.

contagion effects, may lead to significant reactions by investors and domestic publics in the form of capital outflows or banking instability, or may even affect the stability of the single currency. Finally, also in terms of equity, adverse developments in other member states may lead to fears among domestic publics. In particular, domestic citizens may fear that they have to support poorly performing member states through some kind of transfers or that their own welfare systems may be affected due to a rise in labour mobility from these countries. Thus, altogether, domestic publics are likely to perceive deteriorating economic and fiscal conditions in other EU member states as significant sources of possible negative spillovers to the domestic economy.<sup>6</sup> This, in turn, may lead to lower support for the EU among domestic publics because the EU is seen as the reason for the domestic economy being affected adversely by economic developments in other European countries.

Second, in addition to creating concerns about direct spillovers to the domestic economy, adverse economic developments in other member states may also make domestic publics concerned about the ability of the EU to ensure a stable macroeconomic environment for the Union as a whole. In particular, the EU may be seen as not being able to deliver on its general objectives and to defend and implement the common rules of the Treaty and the *acquis communautaire*. For example, the general objectives of the EU, as outlined in the Treaty, require the Union to aim inter alia at “full employment”, “balanced economic growth” and “price stability”. Moreover, the Stability and Growth Pact requires the EU to conduct fiscal surveillance, which aims at avoiding excessive deficits and preventing debt overhangs through corrective actions. Most importantly perhaps, prosperity – together with peace and democracy – has for a long time been a key element of the EU narrative: European integration – e.g. in the form of the creation of the internal market and the single currency – has been advocated as bringing economic benefits, notably in terms of growth and jobs (Committee for the

<sup>6</sup> As highlighted above, we are not focusing our analysis on whether economic spillovers in the EU produce real economic effects across economies (which has been shown to be the case), but rather whether domestic publics perceive that possible spillovers from external economic developments can have an impact on the domestic economy. The statistical analysis will therefore control for possible real economic spillover effects to the domestic economy by including a number of control variables that account for the state of the domestic economy. These variables will account for any indirect effects of external economic developments on domestic support for the EU through economic spill-overs on the domestic economy. Thus, the estimates of our measures of external economic developments (see the next section) should end up capturing exclusively the direct impact of perceived spill-overs on domestic support for the EU.

Study of EMU 1989; Jabko 1999). Consistent with this, Eurobarometer data show that the economic situation, unemployment and public finances have consistently been the three main concerns of European citizens at the EU level since the introduction of the relevant Eurobarometer question in 2011.<sup>7</sup> As a consequence, European publics are likely to expect the EU to be at least partly responsible and to command over the necessary policy instruments for ensuring stable economic and fiscal conditions in other EU member states.<sup>8</sup> For example, in the European debt crisis, the EU was widely perceived as having failed to effectively enforce its instruments of economic surveillance (see, e.g., Ioannou and Stracca 2014; Schuknecht et al. 2011).<sup>9</sup> Thus, deteriorating economic and fiscal conditions in other member states may lead to significant concerns in domestic publics about the ability of EU institutions and policies to deliver on their economic objectives and to implement the common rules of the Treaty. In other words, the EU's output legitimacy can be expected to rest not only on domestic economic outcomes but also on the broader European economic and fiscal performance.<sup>10</sup> Consequently, poor economic and fiscal conditions in other member states may lead to concerns among domestic publics about the EU's ability to effectively deal with these developments, which in turn may negatively impact levels of diffuse support for the EU.

Altogether, the discussion suggests that worse economic conditions in other member states should be related to higher levels of euroscepticism and lower support for the EU domestically. Thus, the next two sections will test the following hypothesis:

*H: Worse economic conditions in other EU countries decrease diffuse support for the EU domestically.*

<sup>7</sup> The precise wording of this question is “What do you think are the most pressing issues facing the EU at the moment?”. The only exception to this pattern was in 2011, when immigration was the third top concern at the EU level.

<sup>8</sup> As recent research shows, European citizens attribute significant levels of responsibility to the EU in the areas of economic and monetary policy (Hobolt and Tilley 2014).

<sup>9</sup> Also member state governments seem to have taken this view during the recent crisis. For example, Jamet (2010) shows that the position of the German government in the debates on the reform of the EU economic governance framework was motivated by the aim of restoring trust in the EU through a reinforcement of EU rules.

<sup>10</sup> On output legitimacy in the EU context, see Scharpf (1999).

## Research Design

To test this hypothesis, we analyse the relationship between domestic support for the EU and economic and fiscal developments in other member states for a panel data set of 28 EU member states and a subset of 17 euro area countries between 2001 and 2013.<sup>11</sup> The dependent variable of the analysis is the level of diffuse support for the EU in a given country and a given year. To measure diffuse support for the EU, we follow Armingeon and Ceka (2014) and rely on the Eurobarometer question which asks respondents whether they tend to trust or not to trust the European Union.<sup>12</sup> This question has been included on at least an annual basis in all Eurobarometer surveys since 2001 and has been used in a number of previous studies examining the sources of euroscepticism (see e.g. Hartevelde et al. 2013; Armingeon and Ceka 2014).<sup>13</sup> Using this question we construct a variable that measures the share of respondents who tend to trust the EU in a given member state and year.

The main independent variable of the analysis is the economic environment in other EU member states. To operationalise the economic environment in other EU countries, we rely on two different measures: the unemployment rate for economic conditions and the level of government debt for fiscal conditions in other member states. The unemployment rate is generally regarded as one of the most important indicators for the state of an economy, while the level of government debt is of particular importance in the EU and especially the euro area, where sound public finances are regarded as key for maintaining the stability of the monetary union. In line with this and the output legitimacy channel mentioned above, Eurobarometer data show that – besides the general economic situation – unemployment and public finances have consistently been the most important concerns of European

<sup>11</sup> Prior to 2001, Eurobarometer data for our dependent variable is not available on an annual basis.

<sup>12</sup> The exact wording of this question is: “I would like to ask you a question about how much trust you have in certain institutions. For each of the following institutions, please tell me if you tend to trust it or tend not to trust it.” One of these institutions is “The European Union” and respondents can choose from the response categories “Tend to trust”, “Tend not to trust”, and “Don’t know”.

<sup>13</sup> The Eurobarometer surveys are performed twice a year. If more than one Eurobarometer survey included this question in a given year, we rely on the average share of respondents who tend to trust the EU in that year. We proceed in the same way for other Eurobarometer questions that we use as control variables.

citizens at the EU level since the introduction of the relevant Eurobarometer question in 2011. Thus, the unemployment rates and debt levels of other EU member states seem to be well suited to capture those economic developments in other EU countries that domestic publics are likely to be most concerned about.<sup>14</sup>

While the previous section has presented possible channels of why citizens may be concerned about economic developments in other EU member states, it is theoretically largely unclear how *exactly* citizens will take into account the unemployment rates and debt levels in other countries. For example, citizens may pay most attention to the economic and fiscal conditions in the economically most important other countries, in the biggest other countries (in terms of population size), in countries that are more economically connected to their own economy, or in neighbouring countries. To ensure that the results are not driven by our assumptions about the way in which citizens take economic developments in other countries into account, the analyses employ a number of different theoretically inspired weighted averages of unemployment rates and debt levels in other countries.<sup>15</sup> Specifically, in the main estimations we will assume that citizens pay more attention to the unemployment rates and debt levels of larger economies, since economically more important member states are likely to receive more attention in the domestic media and political discourse. Thus, these models weight the unemployment rates and debt levels of other member states by the GDP of these countries. However, in a number of sensitivity checks we relax this assumption by employing several alternative weights that have been used in previous research on spatial policy dependence such as trade shares or geographical distance (see, e.g., Beck et al. 2006). As will be discussed below, the findings are fully robust in all cases, showing that the results do not depend on the exact choice of the weight for unemployment rates and debt levels in other countries.

<sup>14</sup> In particular, debt levels seem to be preferable to deficits for measuring domestic publics' concerns about fiscal developments in other countries, since the level of government debt is typically the primary measure used in the European media to assess the sustainability of debt in EU member states

<sup>15</sup> These weights aim at capturing the most important theoretically plausible ways in which domestic publics may take into account economic developments in other countries. See, e.g., Basinger and Hallerberg (2004) on the importance of using theoretically motivated weights in spatial analyses.



In order to make sure that the results for the main explanatory variables do not pick up the effects of other confounding factors, which may be correlated with both the main covariates and domestic trust in the EU, we include a number of control variables. First, we control for the domestic unemployment rate and the domestic debt level, since previous studies have found that domestic economic conditions are a critical determinant of support for or trust in the EU (see, e.g., Eichenberg and Dalton 1993; 2007; Anderson and Kaltenthaler 1996; Roth et al. 2013; Gomez 2014). Second, as an alternative measure of the general state of the domestic economy, we also include a country's GDP growth rate. Third, since previous scholarship has found that higher inflation rates are related to lower support for the EU (see, e.g., Eichenberg and Dalton 1993; 2007), we control for the change in consumer prices as measured by the HICP. All these domestic economic variables are likely to be correlated with the unemployment rates and debt levels in other member states or may even be impacted by spillovers from other countries, which makes them a necessary inclusion into the statistical model. Fourth, previous research has highlighted the crucial importance of citizens' attitudes towards their national governments in shaping their attitudes towards the EU (see, e.g., De Vries and van Kersbergen 2007; Hartevelde et al. 2013; Armingeon and Ceka 2014). In particular, this scholarship shows that individuals tend to extrapolate and to a large part only trust the EU to the extent that they trust their national political institutions. Thus, since our measures of external economic developments may be correlated with levels of trust in national political institutions, we use Eurobarometer data and control for the share of respondents who tend to trust their national government.<sup>16</sup> Fifth, previous studies have found that citizens with an exclusive national identity are significantly less likely to support the EU (Carey 2002; Hooghe and Marks 2004; 2005; McLaren 2004; 2007; De Vries and van Kersbergen 2007). Thus, as the degree of domestic nationalism may be influenced by fears of economic spillovers or migration from other countries, we make use of Eurobarometer data and add a variable measuring the share of respondents with an exclusive national identity.<sup>17</sup> Sixth, we include the level of GDP per

<sup>16</sup> The relevant Eurobarometer question is asked in the same way as the question on trust in the EU.

<sup>17</sup> In line with Hooghe and Marks (2004; 2005), we use the Eurobarometer question "In the near future, do you see yourself as [nationality] only, [nationality] and European, European and [nationality], or European only?". Since this question was only asked in nine of the Eurobarometer surveys during the period from 2001 to 2013, we linearly interpolated the values of this variable for the years with missing data.

capita and the population size to control for the level of development and the size of a country. Seventh, the European banking and debt crisis may have led to a fall in trust in European institutions. At the same time, the depth of the financial crisis is also likely to be correlated with economic and fiscal developments in other EU member states. Thus, to control for the financial effects of the banking and debt crisis, we include the European Central Bank's composite index of systemic stress which measures the level of financial stress in the euro area. Eighth, conditionality and reforms under EU-IMF financial assistance programmes during the crisis may have negatively impacted trust in the EU or even caused a stigma effect in programme countries (Armingeon and Guthmann 2013). Consequently, we also include a dummy variable for Greece, Ireland, Portugal, Cyprus and Spain during the years of their assistance programmes.<sup>18</sup>

Finally, we take the log of GDP per capita and the population size variable to reduce the impact of outliers. Concerning multicollinearity, the variables measuring unemployment in other countries and debt levels in other countries are very highly correlated with about  $r=.89$  so that their inclusion in the same regression model would lead to significant inefficiency. As a consequence, we examine the two variables in separate models. Moreover, also the domestic unemployment rate is relatively highly correlated with the trust in national government variable and the programme country variable ( $r=-.54$  and  $r=.51$  respectively), while the trust in national government variable is relatively highly correlated with the GDP per capita variable ( $r=.54$ ). All remaining correlations are below .5 with most of them being much lower. Table 1 reports summary statistics for all variables used in the empirical analysis.

<sup>18</sup> Data on unemployment rates, GDP, GDP growth, GDP per capita and population size are taken from the European Commission's AMECO database. The composite indicator of systemic stress comes from the European Central Bank and captures financial stress in the banking sector, the non-bank financial sector, the money markets, securities markets and foreign exchange markets (Holló et al. 2012). All other variables are constructed using Eurobarometer data from the European Commission's Eurobarometer database.

**Table 1.** Summary statistics.

Variable	Mean	SD	Min	Max	N
Trust in the EU	48.66	11.75	15	69.5	310
Unemployment (domestic)	8.44	4.04	1.9	27.3	310
Unemployment in other countries (GDP weighted) (EU)	8.39	1.06	6.51	11.42	310
Unemployment in other countries (GDP weighted) (EA)	8.92	1.13	6.81	13.10	183
Government debt (domestic)	56.88	31.61	3.69	175.06	310
Government debt in other countries (GDP weighted) (EU)	71.18	10.86	53.06	91.47	310
Government debt in other countries (GDP weighted) (EA)	78.04	10.60	59.04	101.83	183
Trust in national government	37.02	15.31	6.5	72.5	310
Exclusive national identity	43.36	9.29	22	70	310
Ln GDPPC	3.12	0.36	2.3	4.23	310
GDP growth	4.26	6.55	-19.09	31.58	310
Inflation rate	2.72	1.92	-1.71	15.25	310
Ln population size	9.04	1.44	5.99	11.32	310
Financial stress index	0.24	0.17	0.07	0.56	310
Programme country	0.05	0.21	0	1	310
Unemployment in other countries (pop. size weighted)	8.88	1.24	6.60	12.05	310
Unemployment in other countries (distance weighted)	8.41	1.68	5.90	11.40	310
Unemployment in other countries (trade share weighted)	8.23	1.34	6.18	15.68	303
Unemployment in other countries (unweighted)	8.44	1.71	5.94	11.36	310
Unemployment in other countries (periphery)	10.93	4.09	6.65	21.53	310
Unemployment in other countries (non-periphery)	7.88	1.48	4.99	9.93	310
Government debt in other countries (pop. size weighted)	69.39	10.15	50.58	89.12	310
Government debt in other countries (distance weighted)	56.52	9.04	41.47	74.94	310
Government debt in other countries (trade share weighted)	67.95	12.21	40.09	118.06	303
Government debt in other countries (unweighted)	56.88	9.17	41.40	75.09	310
Government debt in other countries (periphery)	90.74	18.14	66.69	137.10	310
Government debt in other countries (non-periphery)	48.93	8.11	34.55	65.95	310
Average trust in European Commission, EP and ECB	52.13	9.89	19.5	68.5	188
Positive image of the EU	79.59	9.43	43.5	94	280
Government deficit	-2.86	3.05	-14.70	3.96	280
Long-term interest rates	4.65	2.05	1.40	22.50	300
EU index	56.76	7.51	36.2	75.3	216
Most important issue: unemployment	41.61	18.26	4	78.5	280
Most important issue: national economy	32.53	13.93	4.5	74.5	280
Most important issue: immigration	9.72	9.02	0	48.5	280
My voice counts in the EU	33.71	11.97	11	65	237
Government effectiveness	1.25	0.60	-0.36	0.36	267
Banking crisis	0.33	0.47	0	1	310
Crisis (2008-2013)	0.53	0.50	0	1	310
Time trend	7.64	3.54	1	13	310

As the dependent variable is continuous and relatively normally distributed, the statistical analysis uses standard OLS models. Since the analysis relies on so-called spatial-x models, which regress the dependent on the weighted values of one of the explanatory variables in other countries, using spatial-OLS is preferable to more complex estimation techniques such as spatial maximum likelihood (Beck et al. 2006: 30; Plümper and Neumayer 2010: 439). To control for autocorrelation, all models include the lagged level of trust in the EU.<sup>19</sup> Moreover, to account for any unobserved heterogeneity across EU member states, all models include country-specific fixed effects. These unit-specific effects account for all stable or largely time-invariant differences across countries that have been found to influence support for European integration such as the length of EU membership (Anderson and Kaltenthaler 1996; Kaltenthaler and Anderson 2001), losses during the Second World War (Gabel and Palmer 1995; Gabel and Whitten 1997), dominant religions (Boomgaarden and Freire 2009), the quality of domestic political institutions (Christin 2005) and other cultural, historical, and institutional factors. Finally, all models use robust standard errors clustered by country to account for the non-independence of observations within the same country over time.

## **Discussion of Empirical Results**

Tables 2 and 3 report the estimation results. The models analysing the impact of unemployment rates in other member states are reported in Table 2, while the models examining the impact of government debt levels in other countries are reported in Table 3. Both Tables report results for two baseline models including only the GDP-weighted unemployment variables and GDP-weighted debt level variables respectively as well as for two models including the full set of control variables. Moreover,

<sup>19</sup> We do not lag the explanatory variables, as it seems theoretically most likely that domestic publics pay attention to contemporaneous economic developments in other countries rather than being concerned about economic conditions in earlier years. Moreover, while domestic publics are likely to be relatively well informed about current economic developments in other EU countries from the media, we believe that they are (to a large extent) unlikely to have a similar knowledge of economic conditions in these countries during previous years. Yet, we will later show that the results are fully robust to assuming lagged instead of contemporaneous effects.

both Tables report results for a full sample of all EU member states and a restricted sample, which only covers euro area countries.

**Table 2.** Trust in the EU and unemployment in other EU and euro area member states.

Variables	Model 1 EU sample, including unemployment only	Model 2 EU sample, including all controls	Model 3 Euro area sample, including unemployment only	Model 4 Euro area sample, including all controls
Lagged trust in EU	0.60*** (0.05)	0.43*** (0.07)	0.42*** (0.08)	0.32*** (0.07)
Unemployment (domestic)	-0.72*** (0.18)	-0.16 (0.14)	-1.37*** (0.17)	-0.78*** (0.24)
Unemployment in other countries	-2.04*** (0.32)	-2.69*** (0.35)	-2.44*** (0.41)	-2.41*** (0.30)
Trust in national government		0.32*** (0.04)		0.35*** (0.06)
Exclusive national identity		-0.19* (0.10)		-0.41** (0.16)
Ln GDPPC		0.92 (4.90)		-15.67 (11.26)
GDP growth		-0.01 (0.06)		0.18 (0.22)
Inflation rate		-0.65*** (0.17)		-1.42*** (0.33)
Ln population size		8.68 (8.74)		31.51 (32.74)
Financial stress index		1.32 (2.13)		2.59 (3.87)
Programme country		-7.06*** (2.15)		-3.36 (2.40)
Constant	41.76*** (5.01)	-32.21 (78.31)	60.15*** (8.35)	-170.94 (258.53)
Fixed effects	yes	yes	yes	yes
R-squared	0.69	0.79	0.76	0.85
Observations	285	285	171	171
Number of countries	28	28	17	17

Notes: The unemployment rate in other countries is weighted by GDP and refers to other EU countries in models 1 and 2 and to other euro area countries in models 3 and 4. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

As Table 2 shows, higher unemployment rates in other member states are negatively and significantly related to the domestic level of trust in the EU. This result is robust across both the baseline models and the models including the full set of control variables. Moreover and quite interestingly, the substantive size of the coefficient estimate of unemployment rates in other member states is substantively large and very similar across the full sample of EU member states and the restricted sample of euro area members. Specifically, according to the estimates in models 2 and 4, a 1 percentage point increase in the GDP-weighted average unemployment rate in other member states is related to a decrease in domestic levels of trust in the EU of 2.7 percentage points and 2.4 percentage points respectively. Thus, deteriorating economic outcomes in other European countries seem to influence domestic trust in the EU in a statistically and substantively significant way.

Table 3 repeats this analysis for assessing the relationship between debt levels in other member states and domestic trust in the EU. As in the case of unemployment rates in other countries, also higher debt levels in other member states are negatively and significantly related to levels of domestic trust in the EU. Moreover, again the results are robust across both the baseline and full models and both when analysing all EU countries and euro area members only. In addition, also in the case of debt levels in other countries, the coefficient estimates are substantive in size and relatively similar in both the full sample of all EU countries and the restricted sample of euro area member states. In particular, according to the estimates of models 2 and 4, a 1 percentage point increase in GDP-weighted average debt levels in other countries is related to a decrease of trust in the EU of about 0.3 percentage points. Consequently, also fiscal outcomes in other European countries seem to be statistically and substantively significantly related to domestic levels of trust in the EU. Altogether, the results reported in Tables 2 and 3 suggest that economic and fiscal developments in other member states can have an important impact on domestic support for the EU.

**Table 3.** Trust in the EU and government debt in other EU and euro area member states.

	Model 1	Model 2	Model 3	Model 4
Variables	EU sample, including debt only	EU sample, including all controls	Euro area sample, including debt only	Euro area sample, including all controls
Lagged trust in EU	0.53*** (0.05)	0.39*** (0.07)	0.51*** (0.06)	0.34*** (0.08)
Government debt (domestic)	-0.20*** (0.06)	-0.06 (0.06)	-0.22** (0.09)	-0.05 (0.07)
Government debt in other countries	-0.16*** (0.05)	-0.31*** (0.05)	-0.17* (0.08)	-0.30*** (0.08)
Trust in national government		0.29*** (0.05)		0.38*** (0.06)
Exclusive national identity		-0.17* (0.10)		-0.36** (0.13)
Ln GDPPC		9.75** (4.75)		-3.34 (8.62)
GDP growth		0.01 (0.06)		0.20 (0.21)
Inflation rate		-0.56*** (0.12)		-0.97*** (0.31)
Ln population size		15.80 (10.17)		33.33 (26.67)
Financial stress index		5.67*** (2.03)		6.62 (3.87)
Programme country		-5.00** (2.29)		-4.56 (2.63)
Constant	44.88*** (4.00)	-121.93 (92.83)	50.87*** (6.29)	-235.61 (217.25)
Fixed effects	yes	yes	yes	yes
R-squared	0.72	0.80	0.76	0.85
Observations	285	285	171	171
Number of countries	28	28	17	17

Notes: The government debt level in other countries is weighted by GDP and refers to other EU countries in models 1 and 2 and to other euro area countries in models 3 and 4. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

Turning to a discussion of the results for the control variables included in models 2 and 4, the estimates reported in both Tables 2 and 3 show that higher levels of trust in national governments are strongly and robustly related to higher levels of trust in the EU. Thus, the results corroborate the findings of earlier research that European citizens tend to extrapolate from their trust in national

governments to trust in the EU (Armingeon and Ceka 2014).<sup>20</sup> In line with previous scholarship (Hooghe and Marks 2004; McLaren 2004), the results also show that a greater share of citizens with an exclusive national identity is consistently related to lower levels of trust in the EU.<sup>21</sup> In addition, higher inflation rates are linked to lower levels of trust in the EU, lending support to the findings of previous research (Eichenberg and Dalton 1993; Anderson and Kaltenthaler 1996). Moreover, the results also suggest that trust in the EU is deteriorating considerably if countries are undergoing an EU-IMF financial assistance programme. Yet, this relationship is not robust in the euro area samples and deserves further analysis in future research (see also Armingeon and Ceka 2014).<sup>22</sup> As expected, the results show that domestic unemployment rates and debt levels are negatively related to levels of trust in the EU. Yet, with the exception of model 4 in Table 2, the coefficient estimates for the domestic unemployment and debt level variables lose their statistical significance after controlling for trust in the national government, since all three variables are highly correlated. Finally, according to the estimates in Tables 2 and 3, a country's GDP per capita, its growth rate, its population size and the degree of financial stress in the euro area are not robustly related to the level of trust in the EU.

## **Robustness**

In the following, we assess the sensitivity of these findings to alternative model specifications that address different sources for concern about their robustness.<sup>23</sup> First and as discussed above, we

<sup>20</sup> However, the strong relationship between trust in the national government and trust in the EU may also to some extent be an artefact of the Eurobarometer methodology, since both questions are part of the same item battery and the question about trust in the EU is asked almost directly after the question about trust in the national government.

<sup>21</sup> While trust in national governments is robustly related to trust in the EU across all robustness checks discussed in the next section, the relationship between the share of citizens with an exclusive national identity and trust in the EU is not always robust.

<sup>22</sup> In the euro area model in Table 2, the effect of the programme country dummy is partially picked up by the highly correlated domestic unemployment variable, while in the euro area model in Table 3 it is very close to conventional levels of statistical significance.

<sup>23</sup> For reasons of space, the results for the robustness check are reported in the web appendix. All robustness checks are based on the full models including all EU member states.



examine whether the results are driven by the choice of the weight for the unemployment rates and debt levels of other European countries. In the main estimations, these unemployment rates and debt levels of other member states were weighted by their GDP, assuming that domestic citizens pay more attention to economic and fiscal developments in larger economies. Yet, of course domestic publics may take the unemployment rates and debt levels of other countries into account in different ways. For example, domestic citizens may pay most attention to economic and fiscal outcomes in the biggest member states, in their country's main export markets, or in geographically closer countries, since developments in these countries may receive particular attention in the domestic media and political discourse. To account for these possibilities, we employ several sensitivity checks. First, we rely on average unemployment rates and debt levels weighted by population size, assuming that citizens pay more attention to developments in bigger countries. Second, we use average unemployment rates and debt levels weighted by trade shares, assuming that citizens care more about developments in countries that are more connected to the domestic economy and thus are more likely to be the source of economic spillovers. Third, we employ average unemployment rates and debt levels weighted by geographical distance, assuming that citizens pay more attention to neighbouring or culturally more similar countries. Fourth, we rely on average unweighted unemployment rates and debt levels across all member states, assuming that citizens pay equal attention to other countries. Fifth, we use average unweighted unemployment rates and debt levels across member states in the "periphery", assuming that citizens care most about developments in these potentially more vulnerable countries which have received particular attention during the crisis. And sixth, we use average unweighted unemployment rates and debt levels across "non-periphery" countries, assuming that citizens pay more attention to these less vulnerable countries, including the EU's "core" member states.<sup>24</sup> In all these cases, the unemployment rates and debt levels of other countries are significantly and robustly related to domestic trust in the EU, suggesting that the results do not depend on the exact choice of the weight for other countries.

<sup>24</sup> The group of "periphery" countries includes the Southern European countries Greece, Italy, Spain, Portugal and Cyprus (i.e. countries with an economic adjustment programme during the crisis), while the group of "non-periphery" countries includes all other member states. In the cases of weights for "periphery" and "non-periphery", the weights for the respective other group of countries are set to zero.

Second, although it seems theoretically most likely that the relationship between economic developments in other countries and domestic attitudes towards the EU is contemporaneous, it is important to ensure that the results are not sensitive to the exact lag structure of the explanatory variables. Thus, we introduce all economic variables, and in particular the unemployment rates and debt levels of other member states, with a 1-year lag into the models. Yet, the results are fully robust.

Third, to make sure that the results are not driven by the specific choice of the dependent variable, we use two alternative measures of diffuse support for the EU. First, instead of trust in the EU in general, we use Eurobarometer data on trust in the European Commission, the European Parliament and the European Central Bank to construct a variable that measures the average trust in these three institutions. Second, instead of using measures of trust, we rely on a Eurobarometer question that asks respondents whether the EU conjures a very positive, fairly positive, neutral, fairly negative or very negative image up for them.<sup>25</sup> Using this question, we construct a variable measuring the share of respondents who have a very positive, fairly positive or neutral image of the EU. Like in the case of trust in the EU, unemployment rates and debt levels in other member states are significantly and negatively related to average trust in European institutions and to the domestic image of the EU, showing that the results do not depend on the exact operationalization of the dependent variable.

Fourth, we control for a number of additional variables that are not included in the main models, since they measure very similar concepts as some of the other control variables or since their inclusion may significantly reduce the number of observations. In particular, we control for the share of respondents who state that immigration is one of the two most important issues facing their country at the moment; for the share of respondents stating that their voice counts in the EU; for the level of government effectiveness in a country; for a country's structural deficit as a share of GDP; for long-term interest rates on government bonds; for König and Ohr's (2013) EU index as a measure of member states' European economic integration; for a dummy variable capturing the incidence of a banking crisis in a

<sup>25</sup> To be precise, the wording of the question is "In general, does the European Union conjure up for you a very positive, fairly positive, neutral, fairly negative or very negative image?" and respondents were able to choose from the corresponding five response categories.

country; for a dummy variable for the crisis years, which takes on a value of 1 from 2008 on; for a time trend variable; and for a cubic time trend.<sup>26</sup> Interestingly, the share of respondents stating that their voice counts in the EU is strongly and positively related to trust in the EU, suggesting that besides output legitimacy also evaluations of input legitimacy significantly influence citizens' attitudes towards the EU. In addition, higher structural deficits are related to lower levels of trust in the EU. In contrast, all other additional control variables are not robustly related to trust in the EU. Yet, in all cases the results for the two main explanatory variables of interest are fully robust.

Fifth, to make sure that the results do not depend on the inclusion of particular countries in the sample, we conduct a country-wise jack-knife by excluding each country one at a time from the sample. Again, in all samples the coefficient estimates for the two explanatory variables of interest are very stable and robust.

Finally, we assess whether the findings are affected by the choice of the estimation procedure. In particular, instead of standard fixed effects models, we rely on random effects models as well as OLS models and fixed effects models with panel-corrected standard errors. Moreover, we employ an Arellano Bond estimator in order to make sure that the results are not affected by potential Nickell bias. Yet, in all cases the results remain qualitatively unchanged.

## **Conclusion**

This paper has argued that developments in other EU member states can have a significant impact on domestic euroscepticism. Specifically, deteriorating economic and fiscal conditions in other member states can lead to concerns in domestic publics about possible negative spillovers to the domestic economy and the ability of the EU to deliver positive economic outcomes. These concerns about the

<sup>26</sup> The measure of government effectiveness is taken from the World Bank's Governance Indicators (Kaufmann et al. 2004). The structural deficit data comes from the European Commission's AMECO database. The interest rate data is taken from the European Central Bank's Statistical Data Warehouse. The banking crisis variable comes from Laeven and Valencia (2012). The remaining variables were constructed using Eurobarometer data from the European Commission's Eurobarometer database.

domestic repercussions of economic and fiscal developments in other EU member states may in turn lead to greater scepticism about economic and monetary integration and higher levels of euroscepticism domestically. To test these claims, we rely on panel data on trust in the EU and economic and fiscal outcomes in 28 EU and 17 euro area member states and between 2001 and 2013. The results show that higher unemployment rates and government debt levels in other member states are systematically related to higher levels of euroscepticism domestically, thereby suggesting that economic and fiscal outcomes in other EU member states can play an important role in shaping domestic support for the EU.

These findings have several interesting implications. First, the results directly add to the literature on the determinants of public support for the EU. While previous research has mainly focused on the domestic country- and individual-level factors that affect public attitudes towards the EU, the findings show that also external developments in other EU member states can have an important impact on domestic euroscepticism. In doing so, the results help improving our understanding of the sources of public support for the EU. Moreover, they also highlight interesting avenues for future research, which could explore the impact of external developments in other policy areas on domestic euroscepticism or examine the factors that may condition the responsiveness of domestic publics to outcomes in other European countries.

Second, the paper also has important implications for the future of EU economic governance and for EU policy-makers who wish to strengthen public trust in the EU, which dropped significantly during the European banking and debt crisis. The findings highlight that economic and fiscal outcomes in economic and monetary unions can have significant spillovers into political processes and that these spillovers also extend across national borders. Thus, from a domestic political perspective the results suggest that ensuring stable domestic economic and fiscal conditions may not be sufficient for restoring pre-crisis levels of trust in the EU. Rather, the findings suggest that restoring trust in the EU will likely require a broader economic recovery and lower debt levels across the EU as a whole. Moreover, the results highlight that future political support for the EU may critically depend on the ability of EU institutions to prevent hikes in unemployment and debt across the EU. In particular, the

results suggest that national decision-makers participating in EU policy-making fora may have to pay greater attention to economic and fiscal developments in other EU member states. Such co-responsibility in turn raises the question of how to further integrate economic policy-making at the EU level and directly speaks to current debates on the degree of political union needed to make economic and fiscal union work.

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## Appendix: Robustness Checks

**Table A1.** Robustness checks using alternative weights for the unemployment rates of other countries.

Variables	Model 1 Unem. weighted by pop. size	Model 2 Unem. weighted by distance	Model 3 Unem. weighted by trade shares	Model 4 Unem. (unweighted average)	Model 5 Unem. in periphery (unw. average)	Model 6 Unem. in core countries (unw. average)
Lagged trust in EU	0.44*** (0.07)	0.46*** (0.07)	0.48*** (0.06)	0.45*** (0.07)	0.36*** (0.08)	0.49*** (0.06)
Unemployment (domestic)	-0.14 (0.15)	-0.05 (0.15)	-0.12 (0.18)	-0.06 (0.15)	-0.03 (0.15)	-0.17 (0.16)
Unemployment in other countries	-2.20*** (0.32)	-1.53*** (0.27)	-1.20*** (0.35)	-1.54*** (0.26)	-0.90*** (0.13)	-0.96*** (0.28)
Trust in national government	0.32*** (0.04)	0.32*** (0.04)	0.32*** (0.04)	0.32*** (0.04)	0.31*** (0.04)	0.33*** (0.04)
Exclusive national identity	-0.19* (0.10)	-0.17* (0.10)	-0.14 (0.11)	-0.17* (0.10)	-0.22** (0.10)	-0.16* (0.09)
Ln GDPPC	0.38 (4.89)	1.49 (4.92)	-8.99* (4.77)	2.07 (4.99)	10.12* (5.85)	-4.56 (4.75)
GDP Growth	-0.00 (0.06)	0.03 (0.06)	0.09 (0.07)	0.02 (0.06)	-0.02 (0.06)	0.07 (0.06)
Inflation rate	-0.57*** (0.17)	-0.54*** (0.17)	-0.46** (0.19)	-0.54*** (0.17)	-0.38*** (0.13)	-0.48** (0.20)
Ln population size	8.48 (9.06)	10.58 (8.95)	-4.87 (12.16)	10.87 (8.91)	12.48 (10.69)	3.18 (10.47)
Financial stress index	-0.70 (2.32)	1.93 (2.37)	3.58 (2.55)	1.90 (2.35)	0.80 (2.05)	3.30 (2.41)
Programme country	-7.17*** (2.18)	-7.19*** (2.02)	-5.80*** (2.09)	-7.25*** (2.04)	-7.01*** (2.26)	-6.63*** (1.94)
Constant	-31.96 (81.15)	-64.63 (81.03)	102.08 (107.13)	-68.53 (80.71)	-105.17 (98.37)	14.06 (93.19)
Fixed effects	yes	yes	yes	yes	yes	yes
R-squared	0.78	0.78	0.75	0.78	0.80	0.75
Observations	285	285	278	285	285	285
Number of countries	28	28	28	28	28	28

Notes: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A2.** Robustness checks using alternative weights for the debt levels of other countries.

Variables	Model 1 Debt weighted by pop. size	Model 2 Debt weighted by distance	Model 3 Debt weighted by trade shares	Model 4 Debt (unweighted average)	Model 5 Debt in periphery (unw. average)	Model 6 Debt in core countries (unw. average)
Lagged trust in EU	0.39*** (0.07)	0.38*** (0.07)	0.38*** (0.06)	0.38*** (0.07)	0.36*** (0.07)	0.38*** (0.07)
Government debt (domestic)	-0.05 (0.05)	-0.06 (0.05)	-0.07 (0.06)	-0.06 (0.05)	-0.05 (0.06)	-0.08 (0.05)
Government debt in other countries	-0.34*** (0.05)	-0.32*** (0.05)	-0.34*** (0.06)	-0.32*** (0.05)	-0.19*** (0.04)	-0.33*** (0.05)
Trust in national government	0.30*** (0.05)	0.30*** (0.05)	0.30*** (0.05)	0.30*** (0.05)	0.30*** (0.05)	0.30*** (0.05)
Exclusive national identity	-0.17* (0.10)	-0.16 (0.10)	-0.09 (0.11)	-0.16 (0.10)	-0.20* (0.11)	-0.16 (0.10)
Ln GDPPC	8.40* (4.81)	2.36 (5.02)	2.86 (5.07)	2.74 (5.03)	11.13** (5.41)	1.45 (4.97)
GDP Growth	-0.00 (0.05)	-0.00 (0.05)	0.05 (0.06)	-0.01 (0.05)	-0.00 (0.06)	-0.01 (0.05)
Inflation rate	-0.52*** (0.12)	-0.42*** (0.11)	-0.51*** (0.14)	-0.42*** (0.11)	-0.46*** (0.12)	-0.43*** (0.11)
Ln population size	12.39 (9.72)	1.86 (9.54)	26.42 (15.79)	0.96 (9.50)	18.68 (11.86)	-0.68 (9.41)
Financial stress index	3.88* (1.99)	3.13 (1.99)	6.23** (2.30)	3.02 (1.97)	1.78 (2.14)	3.37* (1.95)
Programme country	-5.48** (2.24)	-5.55** (2.24)	-3.14 (2.66)	-5.59** (2.20)	-5.48** (2.56)	-5.04** (2.18)
Constant	-85.72 (88.44)	23.21 (86.08)	-198.39 (142.73)	30.43 (85.92)	-154.17 (108.55)	48.45 (85.13)
Fixed effects	yes	yes	yes	yes	yes	yes
R-squared	0.81	0.81	0.79	0.81	0.80	0.81
Observations	285	285	278	285	285	285
Number of countries	28	28	28	28	28	28

Notes: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A3.** Robustness checks using 1-year lagged values of unemployment and debt.

Variables	Model 1 Unem. 1-year lagged	Model 2 Debt 1-year lagged
Lagged trust in EU	0.46*** (0.07)	0.37*** (0.07)
Unemployment (domestic)	0.08 (0.18)	
Unemployment in other countries	-3.79*** (0.47)	
Government debt (domestic)		-0.05 (0.05)
Government debt in other countries		-0.36*** (0.07)
Trust in national government	0.36*** (0.04)	0.33*** (0.04)
Exclusive national identity	-0.14 (0.11)	-0.17 (0.11)
Ln GDPPC	9.92** (4.63)	11.57** (4.95)
GDP Growth	-0.01 (0.05)	-0.05 (0.04)
Inflation rate	-0.18 (0.19)	-0.09 (0.20)
Ln population size	18.04* (10.44)	13.07 (12.55)
Financial stress index	-10.67*** (2.81)	-2.98 (2.26)
Programme country	-7.11*** (1.87)	-5.30** (2.19)
Constant	-142.02 (91.61)	-99.61 (110.38)
Fixed effects	yes	yes
R-squared	0.78	0.80
Observations	282	282
Number of countries	28	28

Notes: All economic explanatory variables (i.e. unemployment rates, debt levels, GDPPC, GDP growth, and inflation) are lagged by 1 year. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A4.** Robustness checks using alternative dependent variables.

Variables	Model 1	Model 2	Model 3	Model 4
	Unem. Image of the EU	Debt Image of the EU	Unem. Trust in EU inst.	Debt Trust in EU inst.
Lagged image of the EU	0.44*** (0.08)	0.40*** (0.09)		
Lagged trust in EU institutions			0.43*** (0.05)	0.40*** (0.06)
Unemployment (domestic)	-0.32** (0.12)		-0.36** (0.15)	
Unemployment in other countries	-1.57*** (0.21)		-1.57*** (0.26)	
Government debt (domestic)		-0.04 (0.05)		-0.03 (0.04)
Government debt in other countries		-0.19*** (0.04)		-0.19*** (0.04)
Trust in national government	0.14*** (0.04)	0.15*** (0.04)	0.21*** (0.05)	0.23*** (0.05)
Exclusive national identity	-0.00 (0.08)	0.01 (0.07)	-0.27*** (0.07)	-0.26*** (0.07)
Ln GDPPC	-5.18 (3.43)	3.05 (4.01)	-11.55*** (3.30)	-9.05** (3.34)
GDP Growth	0.02 (0.03)	0.04 (0.03)	0.19* (0.10)	0.20** (0.09)
Inflation rate	-0.65*** (0.14)	-0.50*** (0.10)	-0.89*** (0.26)	-0.57** (0.21)
Ln population size	-26.45** (9.89)	-16.80 (11.82)	18.82* (9.42)	20.50** (9.11)
Financial stress index	1.78 (1.94)	4.22* (2.16)	0.06 (1.81)	2.93 (1.70)
Programme country	-7.21*** (2.15)	-7.05*** (1.32)	-5.57*** (1.59)	-5.94*** (1.59)
Constant	311.67*** (94.42)	199.23 (118.05)	-85.22 (77.98)	-110.12 (80.08)
Fixed effects	yes	yes	yes	yes
R-squared	0.81	0.81	0.87	0.88
Observations	255	255	182	182
Number of countries	28	28	17	17

Notes: All economic explanatory variables (i.e. unemployment rates, debt levels, GDPPC, GDP growth, and inflation) are lagged by 1 year. Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A5.** Robustness checks controlling for additional variables.

Variables	Model 1 Control for structural deficit	Model 2 Control for interest rates	Model 3 Control for economic integration	Model 6 Control for importance of immi- gration	Model 7 Control for input legitimacy	Model 8 Control for gov. effect- iveness	Model 9 Control for banking crisis	Model 10 Control for financial and debt crisis	Model 11 Control for time trend	Model 12 Control for cubic time trend
Lagged trust in EU	0.33*** (0.08)	0.42*** (0.07)	0.37*** (0.08)	0.40*** (0.07)	0.26*** (0.07)	0.41*** (0.07)	0.42*** (0.07)	0.43*** (0.07)	0.44*** (0.07)	0.39*** (0.08)
Unemployment (domestic)	-0.19 (0.17)	-0.16 (0.16)	-0.19 (0.18)	-0.13 (0.13)	-0.18 (0.19)	-0.13 (0.16)	-0.12 (0.13)	-0.11 (0.15)	-0.20 (0.15)	-0.14 (0.14)
Unemployment in other countries	-2.78*** (0.35)	-2.73*** (0.34)	-2.87*** (0.41)	-2.69*** (0.36)	-3.06*** (0.35)	-2.90*** (0.37)	-2.44*** (0.44)	-2.29*** (0.47)	-2.95*** (0.56)	-1.89*** (0.49)
Trust in national government	0.35*** (0.05)	0.32*** (0.04)	0.32*** (0.05)	0.33*** (0.04)	0.26*** (0.05)	0.33*** (0.04)	0.32*** (0.04)	0.32*** (0.04)	0.32*** (0.04)	0.32*** (0.04)
Exclusive national identity	-0.19* (0.10)	-0.19* (0.10)	0.01 (0.13)	-0.13 (0.10)	0.01 (0.10)	-0.19* (0.11)	-0.21** (0.10)	-0.19* (0.10)	-0.18* (0.10)	-0.18 (0.12)
Ln GDPPC	-1.68 (4.80)	-0.62 (5.16)	-6.53 (5.26)	-2.55 (5.15)	-2.64 (5.58)	2.14 (4.99)	1.89 (4.93)	3.61 (4.84)	-2.92 (6.15)	-2.58 (6.77)
GDP Growth	0.00 (0.06)	0.00 (0.06)	-0.02 (0.06)	-0.01 (0.06)	-0.01 (0.05)	-0.01 (0.06)	0.02 (0.06)	-0.01 (0.06)	-0.02 (0.06)	-0.03 (0.06)
Inflation rate	-0.60*** (0.13)	-0.64*** (0.18)	-0.60*** (0.19)	-0.56*** (0.15)	-0.39** (0.14)	-0.68*** (0.18)	-0.69*** (0.16)	-0.60*** (0.17)	-0.66*** (0.17)	-0.47*** (0.14)
Ln population size	-15.87** (7.52)	5.56 (7.73)	-19.80 (15.84)	-0.43 (7.39)	-5.45 (15.19)	10.71 (11.05)	13.24 (8.77)	10.74 (8.62)	3.56 (11.35)	-5.56 (12.55)
Financial stress index	1.28 (1.80)	2.35 (2.01)	2.34 (2.39)	2.10 (2.31)	1.97 (2.19)	2.23 (2.32)	4.60 (3.52)	4.70 (2.98)	0.46 (2.70)	-1.05 (3.12)
Programme country	-7.64*** (1.73)	-6.21** (2.54)	-7.42*** (1.91)	-7.51*** (2.05)	-6.99*** (1.79)	-7.26*** (1.77)	-6.85*** (2.08)	-7.01*** (2.10)	-7.20*** (2.29)	-7.37*** (2.40)
Structural deficit	-0.56*** (0.16)									
Interest rates on government bonds		-0.24 (0.22)								
EU index of economic integration			-0.07 (0.13)							
Most important issue: immigration				0.07 (0.08)						
Voice counts in the EU					0.34*** (0.07)					
Government effectiveness						3.37				

						(2.28)				
Banking crisis dummy								-1.90		
								(1.37)		
Financial and debt crisis dummy									-1.85	
									(1.26)	
Time										0.21
										(0.36)
Time <sup>2</sup>										-0.26
										(0.24)
Time <sup>3</sup>										0.00
										(0.01)
Constant	201.44**	2.29	250.25*	58.73	100.87	-56.80	-77.86	-62.92	26.50	93.20
	(76.33)	(68.63)	(144.02)	(67.32)	(139.31)	(100.45)	(78.37)	(76.62)	(109.79)	(121.48)
Fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
R-squared	0.81	0.79	0.77	0.80	0.80	0.72	0.79	0.79	0.79	0.81
Observations	270	276	206	270	227	257	285	285	285	285
Number of countries	28	27	24	28	27	27	28	28	28	28

Notes: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.



**Table A6.** Robustness checks controlling for additional variables.

Variables	Model 1 Control for structural deficit	Model 2 Control for interest rates	Model 3 Control for economic integration	Model 6 Control for importance of immi- gration	Model 7 Control for input legitimacy	Model 8 Control for gov. effect- tiveness	Model 9 Control for banking crisis	Model 10 Control for financial and debt crisis	Model 11 Control for time trend	Model 12 Control for cubic time trend
Lagged trust in EU	0.27*** (0.07)	0.37*** (0.07)	0.34*** (0.09)	0.37*** (0.07)	0.24*** (0.08)	0.36*** (0.07)	0.39*** (0.07)	0.39*** (0.07)	0.40*** (0.07)	0.37*** (0.07)
Government debt (domestic)	-0.09* (0.05)	-0.06 (0.06)	-0.07 (0.05)	-0.04 (0.05)	-0.07 (0.05)	-0.08 (0.06)	-0.05 (0.06)	-0.06 (0.05)	-0.09 (0.06)	-0.10 (0.07)
Government debt in other countries	-0.30*** (0.05)	-0.32*** (0.06)	-0.35*** (0.07)	-0.32*** (0.05)	-0.33*** (0.06)	-0.33*** (0.05)	-0.31*** (0.06)	-0.42*** (0.08)	-0.46*** (0.07)	-0.46*** (0.09)
Trust in national government	0.31*** (0.05)	0.29*** (0.05)	0.30*** (0.05)	0.30*** (0.05)	0.24*** (0.06)	0.29*** (0.05)	0.29*** (0.05)	0.30*** (0.05)	0.30*** (0.04)	0.30*** (0.05)
Exclusive national identity	-0.18* (0.09)	-0.17 (0.10)	-0.00 (0.13)	-0.12 (0.11)	0.04 (0.10)	-0.14 (0.11)	-0.18 (0.11)	-0.17* (0.10)	-0.13 (0.11)	-0.17 (0.12)
Ln GDPPC	8.63* (4.47)	8.04 (4.96)	3.43 (5.59)	8.11 (5.11)	8.61 (6.03)	10.56** (4.84)	9.78** (4.73)	7.23 (4.45)	-5.40 (6.38)	-6.04 (7.15)
GDP Growth	0.03 (0.06)	0.02 (0.05)	0.01 (0.06)	0.01 (0.06)	0.03 (0.05)	0.02 (0.06)	0.02 (0.06)	0.00 (0.05)	-0.01 (0.05)	-0.04 (0.06)
Inflation rate	-0.52*** (0.12)	-0.56*** (0.13)	-0.55*** (0.11)	-0.50*** (0.11)	-0.32** (0.13)	-0.61*** (0.13)	-0.57*** (0.11)	-0.60*** (0.12)	-0.48*** (0.12)	-0.43*** (0.12)
Ln population size	-5.71 (8.05)	12.63 (9.32)	-1.93 (14.03)	11.02 (8.60)	9.09 (13.29)	16.46 (11.77)	16.71 (10.68)	13.65 (9.79)	-7.44 (14.04)	-7.83 (14.71)
Financial stress index	5.85*** (1.88)	6.92*** (1.90)	5.98** (2.28)	5.98** (2.24)	7.23*** (2.20)	8.20*** (2.09)	6.32* (3.42)	-0.10 (2.95)	3.32 (2.18)	-1.47 (3.03)
Programme country	-4.71** (2.20)	-3.90 (2.87)	-4.61** (2.18)	-5.74** (2.09)	-4.04* (2.21)	-3.58 (2.70)	-5.04** (2.35)	-4.97** (2.28)	-5.16** (2.00)	-5.35** (2.07)
Structural deficit	-0.63*** (0.17)									
Interest rates on government bonds		-0.26 (0.22)								
EU index of economic integration			0.09 (0.13)							
Most important issue: immigration				0.03 (0.08)						
Voice counts in the EU					0.30*** (0.07)					
Government effectiveness						3.40 (2.20)				
Banking crisis dummy							-0.45			

Financial and debt crisis dummy							(1.77)	3.83**		
Time								(1.58)	1.07**	-1.88
Time <sup>2</sup>									(0.45)	(1.85)
Time <sup>3</sup>										0.53
										(0.33)
										-0.03*
										(0.01)
Constant	81.20	-86.35	52.18	-75.05	-65.14	-132.67	-130.63	-87.18	137.01	151.56
	(75.76)	(84.81)	(127.59)	(78.31)	(122.71)	(106.52)	(96.37)	(88.13)	(138.95)	(151.32)
Fixed effects	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
R-squared	0.82	0.81	0.78	0.81	0.80	0.75	0.80	0.81	0.81	0.82
Observations	270	276	206	270	227	257	285	285	285	285
Number of countries	28	27	24	28	27	27	28	28	28	28

Notes: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A7.** Robustness checks excluding each country one at a time from the sample.

Excluded country	Coef. of unemployment in other countries	Coef. of government debt in other countries
Austria	-2.78*** (0.37)	-0.33*** (0.05)
Belgium	-2.70*** (0.37)	-0.32*** (0.05)
Bulgaria	-2.72*** (0.36)	-0.32*** (0.05)
Croatia	-2.72*** (0.35)	-0.32*** (0.05)
Cyprus	-2.63*** (0.34)	-0.32*** (0.05)
Czech Republic	-2.67*** (0.35)	-0.32*** (0.05)
Denmark	-2.85*** (0.35)	-0.36*** (0.04)
Estonia	-2.62*** (0.34)	-0.32*** (0.05)
Finland	-2.89*** (0.35)	-0.35*** (0.05)
France	-2.71*** (0.37)	-0.32*** (0.05)
Germany	-2.71*** (0.44)	-0.32*** (0.05)
Greece	-2.75*** (0.36)	-0.33*** (0.05)
Hungary	-2.67*** (0.35)	-0.32*** (0.05)
Ireland	-2.77*** (0.38)	-0.31*** (0.06)
Italy	-2.80*** (0.36)	-0.32*** (0.05)
Latvia	-2.69*** (0.36)	-0.32*** (0.05)
Lithuania	-2.68*** (0.35)	-0.32*** (0.05)
Luxembourg	-2.75*** (0.37)	-0.34*** (0.05)
Malta	-2.76*** (0.36)	-0.33*** (0.05)
Netherlands	-2.65*** (0.36)	-0.32*** (0.05)
Poland	-2.65*** (0.35)	-0.32*** (0.05)
Portugal	-2.81*** (0.36)	-0.34*** (0.05)
Romania	-2.70*** (0.36)	-0.32*** (0.05)
Slovakia	-2.73***	-0.33***

	(0.36)	(0.05)
Slovenia	-2.65***	-0.32***
	(0.34)	(0.05)
Spain	-2.74***	-0.32***
	(0.39)	(0.05)
Sweden	-2.61***	-0.32***
	(0.36)	(0.06)
United Kingdom	-2.86***	-0.32***
	(0.35)	(0.05)

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Notes: Robust standard errors in parentheses. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

**Table A8.** Robustness checks using alternative estimation procedures.

Variables	Model 1 Random effects	Model 2 Random effects	Model 3 OLS-FE with PCSE	Model 4 OLS-FE with PCSE	Model 5 Arellano- Bond	Model 6 Arellano- Bond
Lagged trust in EU	0.72*** (0.04)	0.72*** (0.04)	0.43*** (0.09)	0.39*** (0.09)	0.25*** (0.09)	0.22** (0.10)
Unemployment (domestic)	-0.15 (0.12)		-0.16 (0.18)		-0.43*** (0.16)	
Unemployment in other countries	-1.73*** (0.21)		-2.69*** (0.75)		-2.89*** (0.45)	
Government debt (domestic)		-0.01 (0.01)		-0.06 (0.04)		-0.03 (0.06)
Government debt in other countries		-0.18*** (0.02)		-0.31*** (0.08)		-0.38*** (0.06)
Trust in national government	0.13*** (0.03)	0.13*** (0.03)	0.32*** (0.05)	0.29*** (0.04)	0.37*** (0.05)	0.37*** (0.05)
Exclusive national identity	-0.09* (0.05)	-0.09* (0.05)	-0.19** (0.09)	-0.17** (0.08)	-0.17 (0.12)	-0.14 (0.11)
Ln GDPPC	-7.20*** (1.73)	-6.36*** (1.72)	0.92 (6.61)	9.75 (6.62)	-4.09 (5.05)	7.93 (5.61)
GDP Growth	0.07 (0.05)	0.09* (0.05)	-0.01 (0.08)	0.01 (0.08)	-0.03 (0.06)	-0.01 (0.05)
Inflation rate	-0.46*** (0.15)	-0.34*** (0.13)	-0.65** (0.26)	-0.56** (0.22)	-0.80*** (0.16)	-0.52*** (0.12)
Ln population size	-0.30 (0.27)	-0.23 (0.28)	8.68 (12.86)	15.80 (12.45)	23.08 (16.03)	33.37* (17.30)
Financial stress index	-1.12 (1.90)	1.92 (1.90)	1.32 (4.26)	5.67 (3.77)	3.56 (2.46)	7.36*** (2.61)
Programme country	-3.86* (2.14)	-3.33* (1.96)	-7.06*** (1.62)	-5.00*** (1.78)	-8.53*** (2.42)	-8.45*** (2.15)
Constant	53.90*** (8.68)	47.83*** (8.03)	-19.74 (92.23)	-98.27 (90.63)	-136.85 (141.82)	-268.67* (157.34)
R-squared	0.83	0.83	0.88	0.89	-	-
Observations	285	285	285	285	257	257
Number of countries	28	28	28	28	27	27

Notes: Robust standard errors in parentheses in Models 1, 2, 5, and 6. Panel-corrected standard errors in parentheses in Models 3 and 4. \*\*\* p<0.01, \*\* p<0.05, \* p<0.1.

### Acknowledgements

We would like to thank Johannes Lindner, Thierry Chopin, Gabriel Glöckler, participants of the 2014 Villa Mondragone Economic Seminar, an internal seminar at the ECB and the EUSA March 2015 Biennial conference for helpful comments, as well as Kris van de Velde and Shila Schoenhals for their research assistance.

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**ISSN** 1725-2806 (online)  
**ISBN** 978-92-899-1628-8  
**DOI** 10.2866/828779  
**EU catalogue number** QB-AR-15-055-EN-N