EUROPEAN SOLIDARITY IN TIMES OF CRISES: HOW CONTEXTUAL DETERMINANTS SHAPE CITIZENS' SUPPORT FOR TRANSNATIONAL REDISTRIBUTION IN AND BEYOND THE EUROPEAN UNION

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~

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Brussels and Duisburg, in May 2024, Patrick Clasen.

Zusammenfassung

In dieser Dissertation geht es um europäische Solidarität, definiert als individuelle Bereitschaft, finanzielle Mittel mit Menschen in anderen europäischen Ländern zu teilen, die bedürftig sind. Die Forschungsfrage lautet: *Warum sind manche Menschen bereit, Umverteilung zwischen europäischen Ländern zu unterstützen?* Europäische Solidarität ist eine Ressource in kritischen Phasen. In Krisen sind Entscheidungsträger auf Rückhalt in der öffentlichen Meinung angewiesen, um den Kurs der Umverteilungspolitik auf europäischer Ebene neu zu bestimmen. In der Forschung müssen wir besser verstehen, wie Bürger europäische Politik wahrnehmen und wie die europäische Integration politische Einstellungen beeinflusst.

Die Dissertation befindet sich an der Schnittstelle von politischer Ökonomie, politischer Soziologie und politischer Psychologie. Sie besteht aus drei in Alleinautorenschaft verfassten Essays, die sich mit verschiedenen kontextuellen Determinanten europäischer Solidarität befassen. Essay 1 stützt sich auf Erkenntnisse aus der Literatur über Verdienstlichkeit (*deservingness*) und zeigt, dass Verantwortungszuschreibungen anderer Länder genauso wichtig sind wie für andere Menschen. Essay 2 stützt sich auf Cleavage-Theorie um zu zeigen, dass eine Kluft zwischen Zentrum und Peripherie in der EU Solidaritätseinstellungen strukturiert. Essay 3 beruft sich auf die konstruktivistische Nationalismusforschung, um die Auswirkungen von der EU-Mitgliedschaft eines Landes auf europäische Solidarität zu konzeptualisieren.

Methodisch wende ich modernste ökonometrische Analysen auf Querschnitts-erhebungsdaten an. Dabei berücksichtige ich hier ausdrücklich, dass europäische Politik für viele Bürger von begrenzter Relevanz ist, mit wichtigen Auswirkungen für die Analyse von Umfragedaten, die über die Frage der europäischen Solidarität hinausgehen.

Die Hauptergebnisse dieser Dissertation sind, dass (1) die EU-Mitgliedschaft die Bereitschaft zur europäischen Solidarität erhöht, dass (2) diese europäische Solidarität nicht jedem EU-Land in gleichem Maße zuteilwird, sondern unter anderem durch eine Kluft zwischen Zentrum und Peripherie strukturiert ist, und dass (3) dieser Unterschied unter anderem darauf zurückgeführt werden kann, dass Individuen anderen Ländern Krisenverantwortung zuschreiben. Diese Arbeit trägt somit zu unserem Verständnis der Rolle des Makrokontextes für die Bildung von Einstellungen zur europäischen Solidarität bei, und dazu, wie europäische Solidarität in der Folge von Krisen entstehen kann.

Abstract

This thesis is about European solidarity at the individual level, defined as the willingness to share financial resources with people in other European countries who are in need. The overarching research question is, *why are some individuals willing to support redistribution across European countries*? European solidarity is a key resource in critical junctures. In facing a crisis, policymakers rely on public opinion to make decisions that define the trajectory of redistributive policy at the European level. Academically, there is a need to understand how citizens make sense of European affairs, and how European integration affects individual political attitudes.

The dissertation is at the intersection of political economy, political sociology and political psychology. It is composed of three single-authored papers focusing on different determinants of European solidarity. Paper 1 draws insights from the deservingness literature and shows that responsibility attributions matter for other countries as they do for other individuals. Paper 2 draws from cleavage theory to demonstrate that a centre–periphery divide structures solidarity attitudes in Europe. Paper 3 applies insights from constructivist nationalism research to conceptualise the effect of a country's EU membership on individual European solidarity.

Methodologically, I use cross-sectional survey data and state-of-the-art econometric analysis. Unlike most current research, I acknowledge that many ordinary citizens do not take interest in European politics, which has important repercussions for the analysis of survey data beyond the issue of European solidarity.

The three main findings of this dissertation are, (1) EU membership makes individuals more willing to show European solidarity, (2), this European solidarity is not given to each EU country to the same extent, but rather, structures by a centre–periphery divide, among other factors, and (3), the difference in solidarity received can be attributed to deservingness perceptions and whether individuals think other citizens in other countries are responsible for the situation the country is in. This thesis thus contributes to our understanding on the role of contextual determinants for the formation of individual attitudes on European solidarity, and how European solidarity emerges in the face of crises.

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List of abbreviations

AIC	Akaike Information Criterion
EU	European Union
EVS	European Values Study
GDP	Gross Domestic Product
GNI	Gross National Income
ICC	Intra-Class Coefficient
IMR	Inverse Mills Ratio
LR	Likelihood-Ratio
MCAR	Missing Completely at Random
MNAR	Missing Not at Random
NGEU	NextGenerationEU
UK	United Kingdom
VIF	Variance Inflation Factor

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1 Introduction: European solidarity in times of crises

1.1 Solidarity as a resource

In 1950, the then-foreign minister of France Robert Schuman noted, '*L'Europe ne se fera pas d'un coup, ni dans une construction d'ensemble: elle se fera par des réalisations concrètes créant d'abord une solidarité de fait*.'[1] (European Commission, 2015) The term 'solidarity' has become a core value of European integration ever since, and the Schuman Declaration and its reference to solidarity is now celebrated as the founding stone of the European Union (EU). The term first found its way into the legal text of the EU treaties with the Maastricht Treaty of 1992. In the Treaty of Lisbon of 2009, 'solidarity' appears 17 times, notably referring to solidarity within societies as well as among EU member states.

However, in light of multiple crises in the 21st century, solidarity in the EU has appeared to be a resource in high demand, but often low in supply (Genschel and Hemerijck, 2018; see also Kaeding et al., 2022). EU countries were hit first by a financial crisis in the early 2010s, then by a refugee reception crisis in 2015, and then by the outbreak of the Covid-19 pandemic in 2020. In 2022, Russia launched a military invasion of Ukraine, invoking a sense of European solidarity with Ukraine. These crises differ in origin and nature, but they have in common that they pose an existential threat to the EU and their solutions surpass the capacity of any single country, thus requiring the solidarity of others.

In such crisis situations, calls for solidarity by EU institutions and member-state governments seem inevitable. In the financial crisis, financial markets raised doubts over the sustainability of public finances, and they increased interest rates in countries like Greece and Ireland, making it difficult for these countries to finance public expenses in capital markets. These countries called on financially more stable countries like Germany and the Netherlands to provide them with fiscal support. In the refugee reception crisis, EU countries faced an unprecedented increase in the number of asylum seekers which

[1] 'Europe will not be made all at once, or according to a single plan. It will be built through concrete achievements which first create a de facto solidarity.' (translation by European Commission, 2015).

resulted primarily from the conflicts in Syria and Afghanistan. Countries like Spain and Italy with an external border – where most asylum seekers arrived via Mediterranean migration routes – were obliged to accommodate them according to regulations in place but were quickly overwhelmed, so they called on the solidarity of countries without an external border, such as Germany and Sweden, to help accommodate these refugees. The Covid-19 pandemic put the health sectors of countries under immense pressure, and the imposed lockdown measures led to economic turmoil. Those countries with less fiscal capacity, like Italy, called on countries like Finland and Austria, which had stronger capabilities, to support a common European recovery programme. Finally, in response to the Russian invasion, Ukraine called on the EU to act in solidarity. Ukrainians asked for financial and military support, and found refuge in EU member states.

The response to these various calls for solidarity differed in scale and determination. How can we explain this? In this thesis, I strive to better understand European solidarity at the individual level. This solidarity is understood as the willingness to share financial resources with people in other European countries who are worse off or in need, through actions and funds mobilised by state institutions, including the EU. I aim to understand why some individuals are more willing than others to express solidarity with other Europeans. To be clear, while European solidarity is conceptually not necessarily linked to European integration, in practical terms it matters most in the context of the EU. This dissertation borrows insights from different sub-disciplines of political science. As European solidarity is about the redistribution of resources, I take insights from political economy about how individuals perceive their self-interest. From political sociology, I apply insights into how the structure of politics shapes individual attitudes, and from political psychology, I borrow insights into how constructs of identity shape the political behaviour of individuals.

The overarching research question is, *Why are some individuals willing to support redistribution across European countries*? A close reading of the extant literature reveals that the individual-level determinants of European solidarity cannot explain the full variance of European solidarity, and that context is often crucial for a greater understanding. For instance, we know that citizens with an exclusive national identity are less likely to express European solidarity (Verhaegen, 2018). But whereas the identity patterns of the public in Europe had arguably not changed much in the years prior to the

Covid-19 pandemic, we observed a remarkably different public opinion on European solidarity compared with the financial crisis. This strongly indicates that changes in the context – i.e., the determinants at the macro-level – rather than at the individual level, influence European solidarity. In this dissertation, I thus pay particular attention to the variance in citizens' attitudes towards European solidarity that is not explained by the individuals themselves, but rather by the contextual determinants beyond the individual level.

In seeking to understand the determinants of European solidarity, I do not debate whether solidarity and its implications are a desirable or even a necessary feature of society. One may argue that as long as citizens follow the law and pay their taxes institutionalised redistribution will continue to work. Even in the absence of solidarity, public institutions tend to be stable (Bonoli and Palier, 2000; Brooks and Manza, 2006).

Instead, I consider European solidarity as a curiosity whose existence requires an explanation. As scholars of evolutionary anthropology point out, humans have evolved in groups. These authors point out that prosocial attitudes of humans are parochial, i.e., limited to one's own group (see Bernhard et al., 2006). From this evolutionary perspective, it makes sense that humans help others in their group, because the wellbeing of one's own group assured one's survival. A rich body of literature attests that human brains are still hardwired to these evolutionary logics, and that political debates are about the same basic needs as those of our prehistoric ancestors (Petersen, 2015). Of course, humans do not live in small groups anymore. In modern politics, the nation-state is the primary orientation of group-thinking in politics (Herb, 1999).

Not even the most cosmopolitan ideas of European integration aim to abolish national identities altogether, and the proponents of nation-states are keen to defend dominant role of nation-states in politics. There are theories to explain this recent emergence of European solidarity. The French sociologist Émile Durkheim suggested that, as societies became industrialised, they shed their 'mechanical solidarity', i.e., a solidarity based on family ties in favour of 'organic solidarity', or in other words, a solidarity based on the interdependence of members of a society (Durkheim, 1922). While this may be a possible explanation for European solidarity which has appeared in a Europe more deeply integrated than ever, Durkheim himself admitted in his later writings that mechanical solidarity remained an important source for the cohesion of societies (Fish, 2002). Are

Europeans extending the scope of their solidarity to other Europeans, or are they just acknowledging their interdependence with them? This remains a puzzle.

Why should we care about citizens' European solidarity? Given the prominence of European solidarity in the self-conception of the EU, and the need to match the demand for European solidarity in crises with supply, it is up to social science research to understand better the social phenomenon of European solidarity. How ordinary citizens think about European solidarity matters both for practitioners and for academics, given that in democratic societies, state actors, politicians, and political parties require at least some kind of backing from the public. While some authors argue that the policy–opinion nexus in the EU is less pronounced than in nation-states (e.g. Hooghe, 2003), more recent research reveals that there is often a high level of elite-mass opinion congruence, notably concerning European solidarity (Pareschi et al., 2023). This finding suggests that public opinion is an important resource in EU decision-making as well. Conceptually, among theories of European integration, postfunctionalism posits that negative public opinion towards further integration constrains EU decision-making (Hooghe and Marks, 2009). Hence we need to understand how the EU public perceives EU politics in general, and European solidarity at times of crisis in particular.

European solidarity does not matter under all circumstances but it is a key resource for the trajectory of EU policy at critical junctures. Underlying the idea of critical junctures is that institutions are relatively stable, but are still malleable to fundamental change over short periods (for a more in-depth discussion, see Collier and Collier, 2002). When facing a crisis, policy-makers have to make decisions that define the trajectory of a public policy or an institution for an extended period of time, and they can use the public mood as a resource in the political arena (Haverland et al., 2018). To illustrate this, one can think of the EU's response to the Covid-19 pandemic. When EU decision-makers faced the economic shock of lockdown policies in 2020, they established a 750-billion-euro recovery programme financed by issuing common European debt – a set of policies unthinkable just some months before (Crespy et al., 2024) to successfully push for policy change. It is difficult to imagine how the EU could have agreed on such a common investment programme for responding to the Covid-19 pandemic if ordinary citizens had resisted such an approach more strongly.

On the contrary, we now know that indeed, the willingness to help other countries was much more pronounced than, for instance, in the case of the economic and financial crisis (Katsanidou et al., 2022). What has changed since the two crises that public opinion has become much more positive towards solidarity? One may think that the citizenry has changed its attitude towards European solidarity. But the variance in how the EU public responded to different crises in the last two decades highlights that this may not be due to the changes of the citizens' values and beliefs alone, but may also be shaped by the differences in the crises, their context, and how the EU responded to them. Solidarity thus needs to be seen together with the crises that European countries are facing. Explaining who and under what conditions citizens are willing to express solidarity is therefore of key interest to practitioners. Such insight can help us better understand why, in some cases, EU countries may find it possible to help each other, whereas in other situations, they do not.

Academically, we need to understand how citizens make sense of European affairs, and how European integration affects individual political attitudes. As mentioned, current theoretical accounts of European integration must conceptualise the role of public opinion. As the EU is increasingly involved in matters of the welfare state (Hassenteufel and Palier, 2016), scholars of social policies and welfare attitudes should take an interest in the study of European solidarity. So far, a 'methodological nationalism' – the idea that the nation-state is the natural context in which redistribution ought to happen (Greer et al., 2020) – still dominates this branch of literature. Lastly, given the increasing diversity of Western societies, the research results produced here may be transferable to many national contexts, given that European solidarity is essentially a solidarity in a culturally and ethnically diverse setting (Kuhn et al., 2018).

Methodologically, scholars are too optimistic about the level of attention that everyday citizens pay to European affairs as well as being too optimistic about their capacity to make reasoned judgement on such issues (Stoeckel et al., 2023). In this thesis, I question the assumption of a well-informed citizenry and acknowledge instead that European solidarity is a topic of limited real-life relevance for many Europeans. Hence, I expect that citizens are strongly influenced by cues, use heuristics, and often do not hold crystallised attitudes on European politics. Throughout this dissertation, I discuss 'issue salience' as both a conceptual and empirical challenge in answering the research question,

and I propose state-of-the-art analysis techniques to deal with those individuals who could not give a qualitative answer.

This dissertation is comprised of three standalone, single-authored papers. In Paper 1, I introduce the idea of 'deservingness perceptions' to the literature on European solidarity. I demonstrate that citizens in richer countries which have a stronger welfare state, when asked if they are willing to help, consider whether other countries are responsible for their own economic situation. In Paper 2, I introduce the idea of a 'centre–periphery divide' among EU countries that structures the solidarity attitudes of individuals. Indeed, I find that citizens in centre countries are more likely to help other centre countries than to help peripheral countries, and vice versa. In Paper 3, I argue that the exposure to EU symbols – essentially micro-dosing Europeanism – makes people more concerned about other Europeans. I show that a country's accession to the EU does not immediately affect its citizens' empathy with other Europeans, but that over time, they become more empathic towards other Europeans.

The remainder of this introductory chapter is structured as follows: in the next section, I discuss the term 'solidarity' and review the current body of literature on the determinants of European solidarity. In the third section, I summarise the three papers that make up this thesis. Following that, I situate the dissertation in the existing body of research. In the final section of this chapter, I highlight the contributions of the thesis, discuss its limitations, and present an outlook for future research.

1.2 Definition and theoretical framework

1.2.1 European solidarity as willingness to help people in other European countries

I understand European solidarity as an individual's willingness to share financial resources with people in other European countries who are worse off or in need, through actions and funds mobilised by state institutions, including the EU. This definition is based on the definition of solidarity proposed by Stjernø (2005: 2) and is common among scholars of European solidarity (see Brändle and Eisele, 2019; Kuhn and Kamm, 2019; Reinl, 2020; Bremer et al., 2023; Afonso and Negash, 2024). As this definition indicates, I understand European solidarity as an individual-level attitude. My understanding of

solidarity is thus distinct from other branches of the literature that address solidarity in EU public policy (see Trein, 2020; Neergaard, 2020; Grimmel, 2021; Kaeding et al., 2022), in discourse (see Closa and Maatsch, 2014; Wallaschek, 2020) and in law (see Sangiovanni, 2013; De Witte, 2015).

Below, I situate this definition in the broader academic debate about European solidarity. By understanding European solidarity as an attitude, this thesis stands in contrast to some authors, especially those concerned with political solidarity, who argue that solidarity is only meaningful if it is put into action (e.g. Kolers, 2012; Sangiovanni, 2015). Declaring solidarity with an oppressed minority, for instance, may be deemed as no solidarity at all if no concrete actions follow. Some scholars debate whether institutionalised forms of solidarity – such as support for the welfare state – can be considered solidarity, or whether this constitutes 'quasi-solidarity'[2] (Bayertz, 2002: 37). This term suggests that merely paying one's taxes and abiding by the law is not solidarity, as the provision does not happen voluntarily, and the state has the power to force citizens to pay their contribution.[3] The modern welfare state, as well as the mechanisms for redistribution organised by the EU, only requires compliance by citizens. Redistributive welfare policies can persist due to institutional inertia alone (Bonoli and Palier, 2000; Brooks and Manza, 2006). However, as already elaborated, I do not consider public opinion per se to be relevant at all times, but only at critical junctures. Hence, I do not expect citizens to go beyond institutionalised solidarity to express European solidarity. Of course, this does not mean that I ignore the methodological challenge of distinguishing 'real solidarity' from 'cheap talk', i.e., from people's tendency to express solidarity when it is non-binding, cost free, and is unverifiable (Goerres and Prinzen, 2012a).

A further point I want to stress is that the definition employed here highlights the sharing of financial resources. European solidarity can come in other forms, but there remains an open research question about how these different forms of solidarity relate to each other. In an EU context, the provision of financial resources is particularly controversial, because member states have some (perceived) flexibility on how to use the

[2] *Quasi-Solidarität* in the German original version.

[3] Why citizens pay their taxes and what determines tax morale is the subject of another research branch (see Traxler, 2010).

funding, and the potential for the misuse of EU funding causes intense debates in some countries (Pierret and Howarth, 2023). The ‘moral hazard’ – the concern that the provision of financial resources incentivises irresponsible actions – matters less when solidarity concerns the provision of other goods, for example, the accommodation of refugees or the provision of medical equipment. Early empirical research shows that, for instance, the determinants of medical solidarity were not the same as for financial solidarity in the Covid-19 pandemic (Heermann et al., 2023). Arguably, individuals who are asked to help another country may consider that that country would not use the financial help provided to the best extent possible, particularly if the individuals deemed that the country was responsible for the crisis it was in. This concern is plausibly less relevant when material help is offered. This question requires more research and goes beyond the scope of this dissertation.

Furthermore, the definition of solidarity emphasises that its target are people in other European countries. Some authors make the distinction between member-state solidarity and transnational solidarity, where the former describes the willingness to support financial transfers between countries and the latter describes support of other EU citizens directly (Ciornei and Recchi, 2017; Baute et al., 2019a). In opposition to this understanding, I assume here that the motivation for solidarity always lies in the desire to help other humans, rather than helping abstract entities such as countries. Note that this assumption does not mean that the course of delivery of financial support, whether through the member state or directly, is irrelevant. Indeed, there is evidence that citizens tend to prefer support being provided by domestic or EU institutions rather than provided by those institutions of the recipient countries. I will come back to this point in the following section.

In this regard, I also want to stress one last point. The terms ‘European’ and ‘EU’ are not interchangeable. As already mentioned, European solidarity is most prominent and most relevant within the EU, but this does not imply that European solidarity is limited to the EU. Also, European solidarity is neither conceptually nor institutionally linked to European integration. Rather, how the EU is related to European solidarity is a research question that I will address in Chapter 4 of the dissertation.

1.2.2 Theoretical framework: Contextual determinants of European solidarity

Having explained my understanding of European solidarity and having situated it in the academic discourse on solidarity, I turn now to the theoretical framework of the determinants of European solidarity. Research on European solidarity has gained a lot of traction in recent years, arguably because of the increased attention in politics on issues of redistribution across the EU. Many accounts of European solidarity draw from insights of research on the welfare state on the one hand and research on EU public opinion on the other hand. I first discuss the underlying conceptual model of European solidarity that this thesis adheres to, before discussing the current state of the literature.

Clusters of European solidarity determinants

Conceptually, the literature on determinants of European solidarity and the willingness to support redistribution on a European level can be divided into four broad clusters. A first cluster of the literature concerns the individual-level determinants of the willingness to express European solidarity. A second cluster focuses on the role of policy attributes for the willingness to support redistribution within Europe. A third cluster is concerned with recipient attributes for the willingness to show solidarity. Finally, a fourth cluster concentrates on the role of the macro-context in which individuals find themselves.

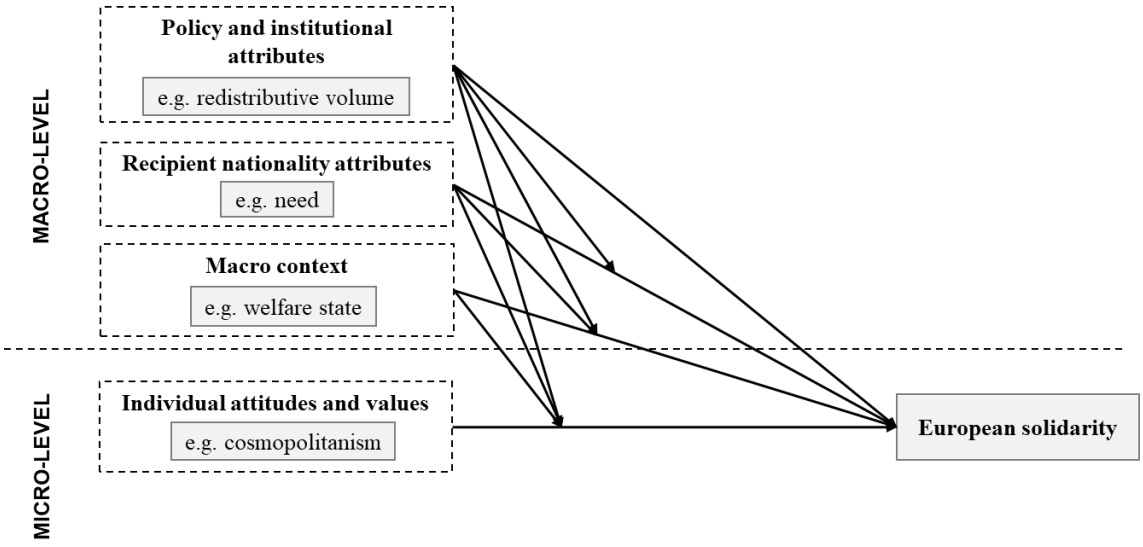

Figure 1-1. A schematic overview of the determinants of citizens' European solidarity.

Figure 1-1 provides a schematic overview of the conceptual model of the formation of citizens' European solidarity. The arrows show the causal relationships between different

determinants (or clusters of determinants) and European solidarity. The horizontal dotted line marks the distinction between determinants at the micro level and those at the macro level. The figure highlights that there is a range of determinants that directly affect European solidarity beyond the individual citizen. Citizens' European solidarity is to some extent explained by how those factors interact with each other, as well as with individual-level determinants.

To illustrate, citizens' willingness to express solidarity with another EU country may depend on their own political ideology. Left-wing citizens in general tend to be more supportive of European solidarity. There is thus a clear link between solidarity and the political ideology within the individual. However, other factors may be external to the individual. For instance, regarding the redistributive volume of a policy, the larger the redistributive programme, the less likely individuals are to support it. Also, the greater the need of the recipient country, the more likely individuals are to show solidarity. The size of the welfare state of the citizen's country may also affect citizens' European solidarity: in more extensive welfare states, citizens have a tendency to show more European solidarity. These factors are not due to characteristics of the individual but are situated at the macro level. Further, it is conceptually possible that these factors interact with one another. For instance, it might be argued that the greater the need of a recipient country, the more likely it is that citizens of other countries might support it with a more generous redistribution. Or, in a country with a more generous welfare state, the redistributive volume of a programme may increase the resistance of its citizens to European solidarity more than in those countries with a less generous welfare state, as citizens in these countries may perceive the programme as a threat to their own national welfare state.

Existing research has focused mostly on attitudes at the individual level, with scholars only recently starting to pay attention to determinants at the macro level and to their mediating function in structuring European solidarity. What the conceptual model used here highlights is that it does not suffice to investigate the determinants at the individual level alone, because a large part of the variance may be due to how individuals respond to factors at the macro level. In this thesis, I will thus pay particular attention to the role of macro-level factors.

The following section reviews the literature to demonstrate which causal relationships can already be considered as being established, and where the research gaps are that I intend to address in this dissertation.

Individual-level determinants

At the time of writing, much attention has been given to the individual determinants of European solidarity. A key question in the literature is whether self-interest or value orientations are the primary drivers of European solidarity (Verhaegen, 2018). Scholars of political economy tend to argue that citizens are most concerned about their personal outcomes. They thus evaluate European solidarity based on how individuals stand to profit from it. Social psychology scholars focus instead on how humans make sense of the social environment. For instance, they highlight the role of a shared identity between the donors and recipients of solidarity.

How much can self-interest explain European solidarity? Evidence shows that support for redistribution in general is, in part at least, the result of self-interest calculations, although even proponents of political economy acknowledge that it is not exclusively explained by these calculations (Alesina and La Ferrara, 2005; see also Kumlin et al., 2021). However, the effect of self-interest on European solidarity is found to be much smaller than it is for redistribution at the national level. Research finds that measures of self-interest – such as occupation or income – are rather weak determinants of European solidarity. Kuhn and Stoeckel (2014) find that an individual's personal financial situation does not explain support for deeper economic cooperation among EU member states. Daniele and Geys (2015) find that individual income does not explain support for the introduction of Eurobonds. Mariotto and Pellegata (2023) show that economically insecure individuals reject notions of European solidarity in richer countries, even if there are no conditions attached to that solidarity. But the results are too nuanced to speak of a general effect of self-interest. While the measurement of self-interest remains crude in comparison with research on national-level solidarity, we can note that individual self-interest plays only a minor role.

Arguably, we can explain the limited effect of individual self-interest on European solidarity by citizens' lack of information and their weak interest in assessing their personal outcomes of redistributive schemes at a European level. EU politics is a low-

information environment (Banducci et al., 2017: 581). Discourse on European solidarity often revolves around redistribution across member states, according to which some countries are 'net payers to' and others are 'net recipients of' EU funds (Mause, 2019). As Stoeckel et al. (2023) show in the case of the United Kingdom (UK), citizens have large misperceptions about the EU, notably concerning the EU budget. For instance, even citizens supportive of EU integration overestimate the budget share that the EU spends for administrative purposes. This finding hints that citizens' knowledge about the EU in general is limited. It does not mean that citizens evaluate their willingness to express solidarity with other EU countries regardless of self-interest calculations. However, these self-interest calculations are found to be sociotropic rather than egocentric. In other words, when citizens evaluate their stance vis-à-vis European solidarity, they consider how their country benefits from it, rather than how much they benefit from it individually (Vasilopoulou and Talving, 2020).[4] This point demonstrates well why it is important to consider determinants of European solidarity beyond the individual level, and how macro-level determinants may affect citizens' evaluations of European solidarity. I come back to this point later.

A more promising avenue of research concerns the role of identity. Social psychology researchers notably refer to theories of group identity by Tajfel and Turner (2004). The basic idea of these theories is that individuals categorise themselves as belonging to social groups and derive their identity from group memberships. As being in a group brings certain obligations towards other group members, individuals who identify as part of a group are expected to express more solidarity.

For European solidarity, this implies that citizens with a European identity are expected to be more willing to express European solidarity, and those citizens with an exclusive national identity are less likely to be willing to express European solidarity.

[4] The idea of sociotropic self-interest is not limited to European solidarity. For instance, some extent of the voting decision is due to economic considerations, but what researchers have found is that sociotropic rather than egocentric considerations matter, i.e., citizens make their vote dependent on how the economy as a whole is going, rather than how their personal economic expectations are (Lewis-Beck and Stegmaier, 2000). The debate is still ongoing whether this should be seen as a sign of altruism or whether voters use the national economic performance as a proxy for their own situation (Lewis-Beck and Stegmaier, 2013).

Verhaegen (2018) shows that a European identity increases the willingness to show European solidarity, even when controlling for other determinants. Moreover, she shows that a European identity has a stronger effect on a willingness to show European solidarity than economic considerations. In the same vein, Ciornei and Recchi (2017) find that a European identity is among the strongest predictors of EU solidarity. Other scholars have focused on the effect of an exclusive national identity rather than on a European identity. The methodological advantage of such an operationalisation is that national identities are often better defined and more relevant for most citizens. These studies show that those citizens with an exclusive national identity are less likely to express European solidarity (Kanthak and Spies, 2018; Kuhn and Kamm, 2019), thus underlining the relevance of identity for European solidarity. The effect of identity is not limited to European solidarity. It has also been shown to be a predictor of supportive attitudes towards the EU and its policies. For instance, an exclusive national identity is negatively associated with support for the introduction of the Euro (Allam and Goerres, 2011), although other research suggests that the strength of identity as a predictor for support for the Euro weakened during the financial crisis (Hobolt and Wratil, 2015).

A dichotomisation of identity into a European identity and a national identity may however over-simplify the complex nature of identity (Risse, 2015). What it means to be European is not universally defined. Whereas some may think of a shared cultural and religious heritage, others may have a more value-oriented notion in mind (Calligaro, 2021). Hence, some authors suggest that it is rather the cosmopolitan orientation of individuals, of which a European identity is part, that explains solidarity with other Europeans, rather than European identity alone (Beck and Grande, 2007; Pichler, 2009; Kuhn et al., 2018). Cosmopolitan individuals are outward looking and open to other cultures, and they value the interconnectedness with other political communities. They see themselves as citizens of the world and adopt supranational identities. They put less meaning on the limits of national borders, and this leads them to share more concern with others outside their own community (Inglehart and Norris, 2016; Kuhn et al., 2018). Evidence shows that cosmopolitanism is indeed a powerful determinant of European solidarity (Kuhn et al., 2018; Medrano et al., 2019).

Related to the question of cosmopolitanism is the issue of transnational experiences, as encounters with people abroad widen citizens' horizons. Individuals who have had

transnational experiences – for instance, work–travel abroad, or marrying someone from another country – are more willing to show European solidarity (Van Mol et al., 2015; Ciornei and Recchi, 2017). Although the effect of town twinning on political attitudes remains an under-researched subject, Tausendpfund and Schäfer (2018) find that indeed, individuals who become involved in town-twinning projects in Europe become more supportive of the EU. It may thus be plausible to assume that town-twinning also increases citizens' willingness to express European solidarity. On the contrary, the evidence of a positive effect of Erasmus+ and other student-exchange programmes on the support for the EU, or for the formation of a European identity, is mixed as best (e.g. Kuhn, 2012). Frequently, scholars point to a ceiling effect: individuals who decide to participate in an exchange programme are already in favour of the EU and identify as European. It is unclear if these programmes have a positive effect on European solidarity.

Another prominent factor of the support for redistribution in general is political ideology. The demand for redistribution is often understood to be an intrinsic part of left-wing political ideology (Jæger, 2013), although this effect is more coherent in Western European countries than in post-Communist countries (Piurko et al., 2011). The effect of political ideology on European solidarity is however more nuanced. Some authors find that left-leaning individuals are more supportive of European solidarity policies (Daniele and Geys, 2015; Katsanidou et al., 2022; Bremer et al., 2023). On the contrary, Kleider and Stoeckel (2019) show that this relationship is not clear cut. Citizens who indicate support for redistribution at the national level and who come from a low social class are less willing to support international redistribution. However, citizens who favour redistribution at the national level, but who come from a high social class, are *more* willing to support international redistribution. A possible explanation is that lower-class individuals who favour redistribution see international redistribution to be at odds with domestic redistribution. For those citizens who are against redistribution in the national arena, class has no differential effect. Other studies find that the effect of political ideology on European solidarity, on a left–right ideology scale, is concave (Vasilopoulou and Talving, 2020). In other words, strongly left-leaning or strongly right-leaning individuals are less supportive of European solidarity than those citizens in the centre. This is in line with the finding that individuals with a centrist political view tend to favour European integration more than those on the left or those on the right (Aspinwall, 2002).

While dedicated studies on the effects of socio-economic factors are missing, factors such as education, gender, and age are commonly included in quantitative analyses on European solidarity. Citizens with a higher formal education are more willing to express European solidarity, given their tendency to be more pro-European and more open-minded (Hakhverdian et al., 2013), as well as to have higher personal incomes (Kuhn and Kamm, 2019). There is no clear effect of gender on European solidarity. Some studies find that women are as likely to express European solidarity as men (Bechtel et al., 2014; Nicoli et al., 2020), while other studies find women to be less willing to express European solidarity than men (Kuhn and Kamm, 2019). These findings are remarkable, given that in welfare studies, women tend to be more prosocial than men (e.g. Guillaud, 2013).

Overall, research on the individual-level determinants of European solidarity is already well advanced, and we have a good understanding of how, for instance, a European identity affects an individual's willingness to express European solidarity. More recent studies have turned to determining how context affects attitudes to solidarity, and how macro-level determinants interact with these individual-level determinants.

Policy determinants

Another cluster of the literature on European solidarity is concerned with the attributes of policies and institutions and their effect on the support for redistribution. Recent studies are interested in how the modalities of a redistributive policy affect solidarity attitudes. This research is notably driven by the popularity of survey experiments (Mutz and Kim, 2020). These experiments allow researchers to manipulate characteristics of a policy and to estimate the marginal effect of the change of this characteristic on the willingness to support the policy.

As concerns European solidarity, Bremer et al. (2023) conducted an experiment as part of a larger survey in five EU countries in which they asked respondents to evaluate EU policy packages in response to the Covid-19 pandemic crisis. Survey respondents were presented with pairs of policy proposals that varied in scope, in the amount of risk-sharing, and in their governance. Respondents were asked to indicate which policy proposal they preferred. Among other things, the results indicate that respondents favour those policies that are designed to be long-term rather than one-off exercises. In a similar study, Kuhn et al. (2020) test the policy attributes of an EU-wide unemployment

insurance scheme and find, among other things, that the generosity; the conditionalities; the amount of cross-national redistribution; the governance of the instrument, and the level of taxation affect how respondents react to the policy (Burgoon et al., 2022, and Baute et al., 2022, use the same survey experiment). The authors find that some of these effects depend on the political ideology of respondents. For instance, the generosity of the policy has a positive effect among left-wing respondents and a negative effect among right-wing respondents for the support of the policy. This highlights that individuals' solidarity attitudes are not set in stone, but that their support for a policy also hinges on how they perceive its design.

Another relevant determinant of European solidarity in this context is trust in political institutions. If citizens distrust the institutions that administer solidarity, they are less likely to be willing to express solidarity (Habibov et al., 2018). The positive effect of trust in the EU on European solidarity is well documented (Russo, 2023; Biten et al., 2023; Larsen, 2023).[5] The choice of the implementing institution can thus mediate the willingness to support European solidarity. For instance, studies have found that citizens tend to prefer the implementation of redistributive programmes by the Council at the EU level – i.e., by member states – rather than by the Commission, as they believe they have more influence on their own national government than on EU institutions (McEvoy, 2016).

The design of a policy and how citizens relate to institutions thus has important implications for their European solidarity. This highlights that it is not enough just to identify who is willing to express European solidarity. Rather, it is the policy design and the institutional environment that are important factors for citizens when thinking about European solidarity.

Recipient attribute determinants

We can now turn to how the attributes of recipients influence European solidarity attitudes. Gerhards et al. (2019) introduce the idea of 'territorial spaces of solidarity' and

[5] Why citizens trust or do not trust the EU is also an issue of academic interest. Researchers have identified different logics of trust. Citizens who identify as European, who evaluate the performance of EU institutions positively and those who trust the national political institutions tend to trust the EU more (see Harteveld et al., 2013)

suggest that there is a European solidarity space. In other words, European solidarity is not just international solidarity, but is a particular social phenomenon limited to the EU. This does not however imply that all members of the EU are treated equally. In fact, studies show that some countries receive more help than others (Afonso and Negash, 2024).

We know that deservingness plays a key role in explaining solidarity. One of the most influential contributions in this regard comes from van Oorschot (2000). Van Oorschot identifies five criteria that people use in assessing the deservingness of other people: control, attitude, reciprocity, identity, and need (ibid.: 36). Control refers to the level of control somebody in need has over their situation. Individuals who have no control over their situation are perceived to be more deserving than those individuals who have some control. Attitude refers to the attitude a potential recipient has towards the provision of help. Recipients who show gratitude for the support they receive are deemed more deserving than those recipients who do not show gratitude. Reciprocity refers to the giving behaviour of the recipient. Those recipients who have shown a willingness to help in the past, or those who can be expected to help in the future, are deemed to be more deserving than those recipients who show no reciprocity. Identity refers to the degree of shared identity that recipients and donors have. Those recipients who share the same identity as a donor are deemed more deserving. Finally, need refers to the need of the recipient. Those recipients in dire need are more deserving than those recipients who are comparably better off. Research shows that these deservingness criteria are cross-culturally relevant (Van Oorschot, 2006) and may be explained by the evolution of the human species (Petersen et al., 2011; Petersen et al., 2012).

Concerning European solidarity, it is only recently that researchers have taken an interest in the role of deservingness, so much remains to be answered. A primary research goal is to understand whether individuals use the criteria outlined above not just to assess the deservingness of individuals in a context of the welfare state, but also to assess the deservingness of other European countries. Among the first studies in this area, Heermann et al. (2023) use a factorial survey experiment to test how the attributes of a hypothetical country affect respondents' willingness to help that country, both financially and in supplying medical equipment. The authors find that less wealthy countries; countries that have shown responsible behaviour in the past; countries that can be expected to show

good administrative capacities going forward; countries that have acted reciprocally, and countries that have adhered to community norms can expect more help from the citizens of other countries. This suggests that indeed citizens use similar criteria for assessing the deservingness of other countries as they do for assessing other individuals. However, Heermann et al. (2023) rely on a survey conducted in Germany, and it remains unclear whether these findings are also applicable to other countries. It also remains unclear how macro contexts such as welfare state socialisation or the national wealth affect deservingness attributions. Furthermore, a methodological issue of factorial survey experiments is that they are provided with the relevant information. It is also unclear whether the findings are thus externally valid, i.e., whether citizens consider the deservingness of other countries if they are not primed accordingly.

Another area that has not been explored enough is the question of EU membership of a recipient country. The state of the literature does not allow us to conclude whether it matters to citizens if a country is a member of the EU. Afonso and Negash (2024) show that non-EU countries receive much less solidarity from citizens of EU countries. However, their study does not allow us to conclude that this is due either to an ethnic conceptualisation of 'European-ness' or to European integration as a political mechanism. Oana and Truchlewski (2023) argue that the EU contributes to the bonding and bounding of European solidarity, and they find that EU countries receive more solidarity. Methodologically however, they compare solidarity attitudes between EU countries and Peru. While they do find evidence for their proposition, here too the data do not allow us to conclude that EU membership matters, rather than an ethnic conceptualisation of Europeanness. In turn, the previously mentioned study by Heermann et al. (2023) tests experimentally whether respondents in Germany care if their support goes to another German region, to another EU country, or to a non-EU country. The authors find that respondents are more willing to provide support to another German region, but EU membership of the recipient country does not affect the level of financial support.

Thus, there is still a lot to explore in this cluster of the literature. What these findings show however is that citizens do think about who is on the receiving end of European solidarity, even if they are not primed. Future studies will be needed to further our understanding of the factors citizens take into account when asked to help another country.

Macro-level determinants

Finally, research shows that attitudes towards European solidarity depend on the citizens' macro context – the attributes of the country in which a citizen lives. As mentioned before, the national-level wealth of a country is an important predictor of European solidarity, as it provides a heuristic for evaluating sociotropic self-interest. In richer countries, individuals tend to be less willing to support forms of European solidarity (Vasilopoulou and Talving, 2020; Mariotto and Pellegata, 2023). Citizens evaluate the sociotropic effect of a policy, i.e., the effect of a policy for their own national community (Bechtel and Liesch, 2020). In other words, they do not think about what would be in their individual self-interest, but what is in the interest of their country overall. One may argue that this sociotropic self-interest evaluation is just a replacement for egocentric concerns on a policy that is often framed in macro-economic conditions. At the same time, sociotropic considerations have been shown to be relevant in experimental settings even when the personal costs are known (ibid.). In any case, it is well documented that citizens in richer countries perceive European solidarity differently from citizens in poorer countries.

The welfare state may be a further macro-economic context that affects European solidarity attitudes, although our understanding of this effect remains limited. Generally speaking, institutional theories suggest that the institutions of the welfare state shape the attitudes of citizens towards welfare states. Solidaristic attitudes are fostered in countries with advanced welfare states (Larsen, 2008; Goerres and Tepe, 2012; Neundorf and Soroka, 2018). In countries where welfare involves extensive means-testing, institutions create an 'othering' of welfare-seekers and thereby undermine citizens' willingness to support redistribution. After all, citizens are made to believe that welfare-seekers are somewhat different from themselves. But how do welfare-state institutions affect European solidarity attitudes? Institutional theories might lead us to believe that citizens in more extensive welfare states are more prone to show European solidarity, while evidence shows that the determinants of European solidarity are comparable to those of national solidarity (Ignácz, 2021).

At the same time, we know that citizens perceive European integration as a threat to the national welfare state. In countries with a well-functioning welfare state, citizens tend

to be less supportive of the EU, in particular those citizens who are most dependent on the welfare state support the EU the least. Where citizens are dissatisfied with the level of protection provided by the welfare state, they partly blame the EU (Beaudonnet, 2015; Baute et al., 2019b; Baute and Meuleman, 2020). Thus, on the one hand, we may suspect that an extensive welfare state makes citizens more solidaristic, while on the other hand, we can expect that citizens see European solidarity as incompatible with national solidarity and prefer to protect the status quo they know. Hence, the role of the welfare state in shaping European solidarity remains a puzzle and requires more research.

Finally, as the notion of a European 'solidarity space' (Gerhards et al., 2019) suggests, solidarity in the EU is supposed to be of a particular strength. As I have already shown, there is limited evidence to show that the EU membership of a recipient country in need increases the propensity that citizens of other countries are willing to help. But are citizens of EU countries more likely to show solidarity with other countries than citizens of non-EU countries? This has never been tested empirically, and the potential causal mechanism remains unexplored. We know that the introduction of the Euro decreased the share of citizens in Euro countries who exclusively identify with their nation (Negri et al., 2021). We also know that the EU's regional policy has a negative effect on the share of Eurosceptic voters (Rodríguez-Pose and Dijkstra, 2021), although other studies draw less optimistic conclusions in this regard (López-Bazo, 2022). Hence, whether the EU and its policies have a positive effect on attitudes towards support for the EU in general, and specifically towards the support for European solidarity, requires more research.

To summarise, while the past two decades of research on European solidarity have provided many insights into the determinants of citizens' European solidarity, many questions remain unanswered. As I have made clear, whereas our understanding of the individual-level determinants has progressed substantially, the effect of macro-level determinants remains underexplored. Specifically, I have highlighted that there are research gaps concerning the role of deservingness, and concerning EU membership, the welfare state, and the relational nature between countries. I now turn to the original contributions of this thesis.

1.3 Extended summaries

This section presents extended summaries of the three papers that comprise the dissertation. Paper 1 combines insights about our understanding of European solidarity with insights from the welfare state literature, notably the deservingness literature. Paper 2 contributes to the research on European solidarity by introducing insights about European integration, notably ideas of a state-building perspective of the EU. Lastly, Paper 3 brings in insights on nationalism from the literature to explain why EU citizens are more concerned about the wellbeing of other Europeans than non-EU citizens.

Table 1-1 provides an overview of the papers' titles, status of publication, research questions, techniques of data analysis, data, sample, and the countries covered. All three papers have been written as single authorship papers. Paper 1 and Paper 2 have been adjusted slightly from their published versions to align with the thesis format, while the original articles can be found in the thesis appendix. Paper 3 has undergone modest modifications from its initial submission to the Journal of Common Market Studies.

Table 1-1. Overview of the papers comprising the dissertation.

	Paper 1	**Paper 2**	**Paper 3**
Title	Treating nations like people: How responsibility attributions shape citizens' fiscal solidarity with other EU countries	Solidarity on a divided continent: Perceptions of 'centre' and 'periphery' determine European citizens' willingness to help other EU countries	European solidarity beyond the EU: The effect of EU membership on citizens' empathy with other Europeans
Status of publication	Published in *Journal of European Social Policy*	Published in *European Union Politics*	Submitted to *Journal of Common Market Studies*
Research question	Do responsibility attributions matter for European solidarity?	Does a centre–periphery divide structure the willingness to help other EU countries?	Does EU membership of a country increase its citizens' empathy for other Europeans?
Technique of data analysis	Multiple logistic regression with	Heckman probit selection multi-level regression	(1) Multi-level linear regression with country-fixed effects and (2) Quasi-

	Paper 1	Paper 2	Paper 3
	cluster-robust standard errors		experimental approach, using coarsened exact matching and multiple linear regression
Data	REScEU[6]	Solidarity in Europe[7]	European Values Study (EVS) trend file[8]
Sample	15,149 respondents in 10 EU countries in 2019*	269,782 country ratings by 39,203 respondents in 13 EU countries in 2020 and 2021†	159,367 respondents in 46 European countries in 1999, 2008 and 2017‡

Notes: *Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Spain, Sweden; †Denmark, Finland, France, Germany, Greece, Hungary, Italy, Lithuania, Netherlands, Poland, Romania, Spain, Sweden; ‡EU-27, Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Georgia, UK, Iceland, Kosovo, Moldova, Montenegro, North Macedonia, Northern Cyprus, Norway, Russia, Serbia, Switzerland, Turkey, Ukraine

1.3.1 Paper 1: Treating nations like people: How responsibility attributions shape citizens' fiscal solidarity with other EU countries

As the literature review highlighted, we do not yet understand the role of deservingness for European solidarity well. In this paper, I argue that individuals apply similar deservingness heuristics to countries as they do to other individuals. More concretely, this paper zooms in on the responsibility of other countries in an economic crisis, and how perceptions of the responsibility of other countries affect whether citizens are willing to express European fiscal solidarity with other EU countries.

On first reflection, the assumption that citizens can assess the responsibility of other countries for their economic situation seems too optimistic, as citizens' familiarity with other countries is limited at best (Lahusen, 2021). However, citizens do not need an in-

[6] Donati, N., et al. (2021). "European Solidarity at a Crossroads. Citizen views on the future of the European Union. REScEU Working Paper." from www.euvisions.eu.
[7] Hemerijck, A., et al. (2020). SiE survey dataset on solidarity in Europe (2020); and Hemerijck, A., et al. (2021). SiE survey dataset on solidarity in Europe (2021).
[8] EVS (2022): EVS Trend File 1981-2017: Integrated Dataset (EVS1981-2017). GESIS Data Archive, Cologne. ZA7503 Data file Version 3.0.0, doi:10.4232/1.14021.

depth understanding of the economic and fiscal situation of other countries. Rather, citizens use heuristics (Petersen, 2015), including stereotypes (Hjorth, 2016), to judge the deservingness of other countries. Without spending much mental energy, citizens can rely on the cues they receive from political elites or from the media to assess the deservingness of other countries.

Because responsibility attributions are stereotyped, I expect that their relevance depends on the citizens' macro context. In rich countries, discourse tends to put the blame for the economic difficulties of other countries on the shoulders of the respective government. In poorer countries, discourse tends to shift away the fault of the country and its administration to larger economic contexts and to sheer bad luck (Wallaschek, 2020). Hence, citizens tend to adopt their respective views depending on the wealth of their country. I further hypothesise that the welfare state regime shapes the discourse about such matters, thereby influencing individual attitudes about European fiscal solidarity. Institutional theory suggests that individual attitudes about redistribution are influenced by welfare state institutions (Larsen, 2008). In more extensive welfare states, individuals are less likely to consider the responsibility of potential recipient countries of European solidarity. Finally, I expect that when forming their European solidarity attitudes individuals with a cosmopolitan European identity use responsibility attributions less than those without a cosmopolitan European identity.

The data set surveyed 15,149 individuals aged 18–70 in ten EU member states in 2019. The dependent variable, European fiscal solidarity, is based on a survey item in which respondents are asked to express support for a common EU fund that would help member states in a crisis. I use logistic regression to predict the probability of a respondent agreeing to the statement. The key independent variable is based on a survey item in which respondents are asked to express their agreement or disagreement with the statement that weaker member states have mismanaged their economy and their public finances during the crisis. To consider the hypothesised interaction effects, the model includes variables to measure respondents' cosmopolitan European identity, the Gross National Income (GNI) of the respondents' country, as well as the welfare state effectiveness. I also include socio-economic control variables: gender, age, income, and formal education. To account for the clustering of respondents within countries, I use cluster-robust standard errors.

One issue with the data was the high share of 'Don't know' responses for key variables. For instance, about one in six respondents was not able to indicate whether they think that weaker member states have mismanaged their economy. A common approach to this issue is to use listwise deletion, but this is problematic (Pepinsky, 2018). 'Don't know' responses do not constitute a measurement error but reflect that some respondents do not have an opinion. Certain demographics are more likely than others to opt for a 'Don't know' response. I thus opted to use single random-sampling imputation for selected variables. This imputation method replaces missing values with values drawn randomly from the sample, essentially introducing white noise (Kroh, 2006; see also Goerres et al., 2022).

The results show that the effect of responsibility attributions is more nuanced than previously thought. Responsibility attributions only become meaningful once interaction effects with the macro-level variables are introduced. In other words, responsibility attributions matter, but only so in richer countries and in countries with a stronger welfare state. In poorer countries and in countries with a weaker welfare state, responsibility attributions do not meaningfully affect European solidarity attitudes. Whereas cosmopolitan Europeans were found to be much more willing to express European solidarity, I did not find an interaction effect with responsibility attributions.

In summary, Paper 1 concludes that individuals are capable of making responsibility attributions of other countries. The evidence suggests that these responsibility attributions are indeed strongly influenced by cues and are dependent on the macro-economic context. This paper thus contributes to our understanding of the effect of deservingness on European solidarity attitudes. More generally, this underlines the importance of recipient country attributes and the macro context in which citizens find themselves.

1.3.2 Paper 2: Solidarity on a divided continent: Perceptions of 'centre' and 'periphery' determine European citizens' willingness to help other EU countries

This paper contributes to an emerging field of literature that is interested in the role of recipient country attributes for individuals' willingness to express solidarity. The novelty of the paper is that I use a centre–periphery perspective to explain attitudes towards European solidarity, borrowing from cleavage theory by Lipset and Rokkan (1967). The

centre–periphery divide in their work is the result of a state-building process of modern nation-states that have expanded from the centre to an ethnically, linguistically, or politically different periphery.

I apply this perspective to the EU, which started as an international organisation of tightly defined political competences of six countries that has expanded over time to the EU of today, with far-reaching competences and 27 member states. Paper 2 defines a country as peripheral that either joined the EU in 2004 or later, or that was subject to an economic adjustment programme during the financial crisis of 2010. All other countries constitute the centre.

I expect that this division of countries into a powerful centre and a less powerful periphery leads to solidarities within the two distinct groups. In other words, I expect that citizens in the centre countries are more likely to show solidarity with other centre countries, and conversely, that citizens in peripheral countries are more likely to show solidarity with other peripheral countries. As this division is about power, I expect that citizens' evaluation of their country's influence also affects their solidarity. In other words, the more influential citizens think their country is, the more willing they are to express solidarity with other countries. I expect this effect to be mediated by the centre–periphery divide. Lastly, I also formulate expectations concerning the salience of European solidarity. Specifically, I expect that citizens are more likely to have a solidarity opinion about centre countries than about peripheral countries. This paper is the first paper on European solidarity to do this.

Empirically, I use the *Solidarity in Europe* survey by the European University Institute and YouGov (Hemerijck et al., 2020; Hemerijck et al., 2021). They survey respondents in 13 EU countries each year. In the survey waves of 2020 and 2021, respondents were asked to indicate whether they thought their country should help another specified country in a crisis. To be able to investigate all expectations – including the salience of European solidarity – I opted to apply a Heckman probit selection model (Heckman, 1979). This model first estimates the propensity of respondents to have an opinion. This first model then creates a selection parameter that is introduced in a second model to estimate the qualitative opinion of respondents. For instance, citizens tend to be more familiar with neighbouring countries, thus they are more likely to hold an opinion about these countries.

This increases the share of country ratings with neighbouring countries vis-à-vis non-neighbouring countries in the dataset, introducing a potential selection bias. By using this two-step approach of first modelling the selection and only then modelling the outcome, the Heckman model eliminates this potential for endogeneity.

The results are largely in line with expectations. The centre–periphery divide structures citizens' attitudes about helping other countries in the EU. Citizens in centre countries are indeed more likely to express solidarity with other centre countries than with peripheral countries. In turn, the solidarity that citizens in peripheral countries show towards centre countries is not significantly lower than towards peripheral countries. In essence, the effect is due to citizens in centre countries perceiving peripheral countries as less deserving of solidarity. Furthermore, I find that the effect of sociotropic political efficacy is greater in centre countries than in peripheral countries. In other words, citizens in centre countries who think that their country is not influential are less likely to express solidarity than citizens in peripheral countries. The analysis also shows that the use of a selection model is sensible. For instance, men are more likely to express an opinion than women, but not more or less likely to show solidarity. If the selection bias had been ignored, the analysis would have falsely shown an effect of gender on solidarity.

The findings of Paper 2 highlight that, while we may argue that there is such a thing as a European solidarity space, it does not imply that every EU country receives the same level of solidarity. Rather, as the analysis shows, centre respondents are less likely to show solidarity with countries in the periphery. It suggests that, in the mind of citizens of the centre countries, peripheral countries remain EU countries of a second order, and that these countries are less deserving of solidarity than EU countries that have been in the EU for longer.

1.3.3 Paper 3: European solidarity beyond the EU: The effect of EU membership on individuals' empathy with other Europeans

In this paper, I borrow from the literature on the constructivist ideas of nationalism (Anderson, 1983; Gellner, 2006), and on banal nationalism (Billig, 1995), to argue that EU membership of one's country makes citizens more empathic with other Europeans. In other words, EU membership increases citizen's concern for the living conditions of other Europeans. Empathy is used here due to practical considerations – there are no surveys

of the necessary geographical and temporal spread that tap into European solidarity – but empathy can be best understood as a necessary condition for solidarity (Thijssen, 2012).

While the nation-building efforts of the EU are limited, citizens are exposed to the political arena at the European level through exposure to European symbols, such as the European flag at the entrance of administrative buildings (Cram, 2009; Cram, 2012). The argument is that through such everyday encounters, the EU essentially 'micro-doses' Europeanism. Based on this argument, I develop the hypotheses that, first, EU citizens show more empathy towards other Europeans than they do to non-EU citizens, and second, that this effect happens progressively over time. The longer citizens are in the EU, the more empathic they become towards other Europeans.

Empirically, I triangulate the results of two empirical approaches that are both based on the EVS trend data file. In 1999, 2008, and 2017, 159,367 respondents from virtually all European countries were asked to express how much empathy they felt towards other Europeans. I use this survey item as my dependent variable. Among the surveyed countries, some had been in the EU since before the first survey wave, some had joined between the survey waves, and some had never joined the EU. This provided a large variance at the macro level which I used in two different ways. First, I conceptualised EU membership as a dichotomous variable. Second, I measured it in years of EU membership from when the Maastricht Treaty (1993) came into force.

I ran a multi-level regression with country-years as the second level of the data structure and country-fixed effects, meaning that the results were only due to the cross-temporal variance. I found that the effect of ten years of EU membership was twice as large as the difference between left-wing individuals and right-wing individuals.

Because I could not exclude the possibility that this effect stemmed from methodological differences in the way people treated the survey question over the years, I used the individual migration data to conceptualise exposure to EU membership, not as a macro variable, but as an individual variable. To make the most use of the data, I applied coarsened exact matching (Iacus et al., 2012). This quasi-experimental research design is used where the assignment of a treatment is not random. In this paper, I conceptualised living in an EU country as the treatment. Respondents of the same socio-economic background, but whose country of residence differed, were matched. I then compared

whether respondents from non-EU countries who moved to an EU country were systematically more empathic towards other Europeans than their control group, who remained in their country of origin. Because respondents were matched by a range of factors, we can speak of a causal effect. That being said, treated and control respondents also differed in their migration history – by definition, either the treated or the control respondents had moved to another country. Controlling for this, the second approach corroborated the finding that living in an EU country has a positive effect on empathy with other Europeans.

In sum, this paper makes three contributions to the literature. First, there can be European solidarity beyond the EU. Second, accession into the EU is not a pivotal moment for the empathy that citizens show towards other Europeans. Third, over time, EU membership gradually increases empathy towards other Europeans.

1.4 Integration of the thesis into the literature

In the previous sections, I elaborated how European solidarity can be understood, and what the existing literature can tell us about the determinants of European solidarity. I have highlighted where the research gaps are and have briefly summarised the content of the three individual papers that constitute this dissertation. I now discuss in more detail how these papers fit into the existing literature.

The three papers all contribute to the body of literature on citizens' European solidarity. In broad terms, this literature is situated at the intersection of research into EU public opinion on the one hand and research into preferences for redistribution on the other hand. The research field is populated by political scientists, sociologists, social psychologists and political economists. The three papers use key concepts from different research branches of these sub-disciplines, notably the deservingness literature (Paper 1), European integration theories (Paper 2), and nationalism and identity research (Paper 3). Figure 1-2 provides an overview of how the key concepts used in this thesis can be situated in the sub-disciplines of political science.

Paper 1 combines insights from the literature on social policy and, more specifically, from deservingness, and applies these insights to the question of European solidarity. It also draws on research on cosmopolitanism and identity. The proposed causal mechanism

in this paper relies on heuristics. The role of (sociotropic) self-interest is also acknowledged. The paper and its findings are thus not just relevant to scholars interested in European solidarity, but are also relevant to researchers interested in the welfare state and in the determinants of support for redistribution in general. For scholars of the welfare state, the finding that welfare states affect how citizens think about European fiscal solidarity, and how they think of the responsibility of other countries, is highly relevant. This paper shows that welfare state institutions do not just matter for national level solidarity, but they also have externalities that go beyond the national context.

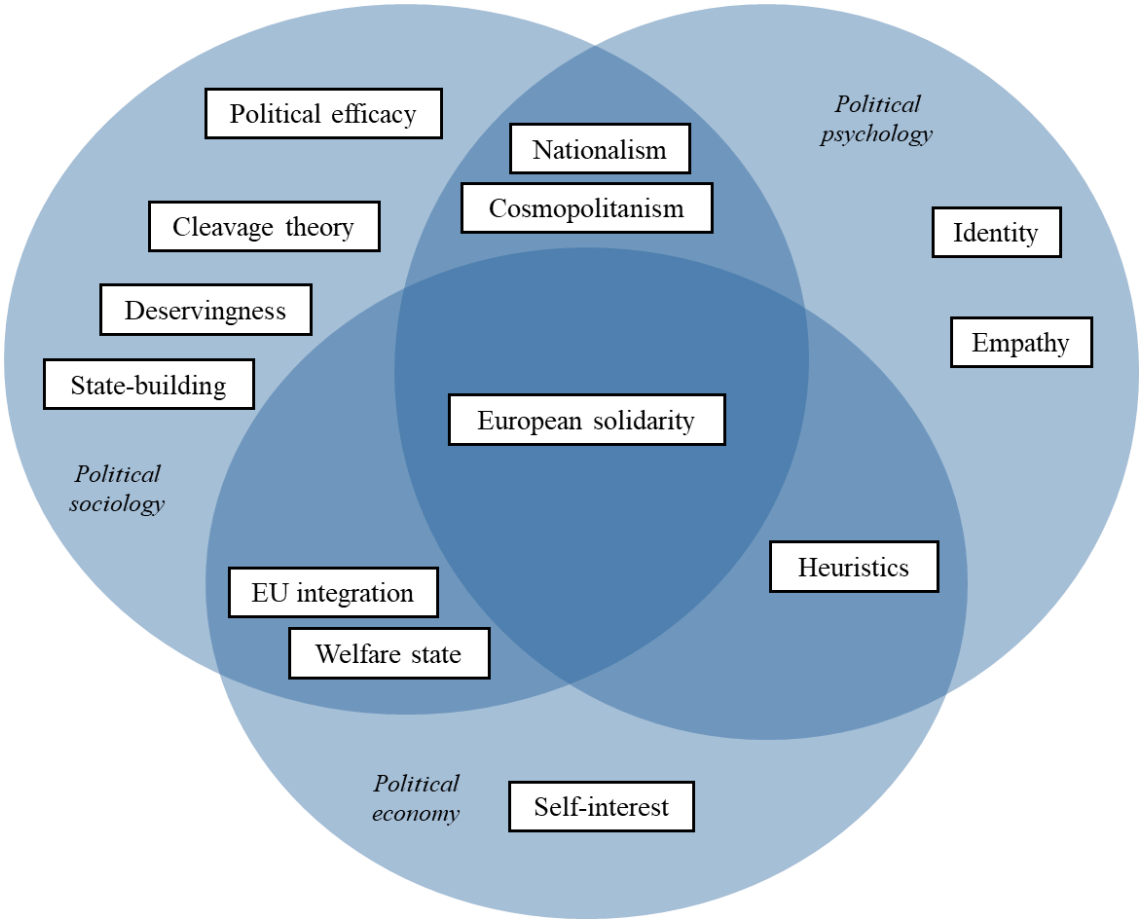

Figure 1-2. A Venn diagram of key concepts of the thesis and their location in the sub-disciplines of political science.

Paper 2 contributes both to the literature on recipient country attributes and to the macro context of citizens. It combines these two factors to analyse the role of the relational nature of solidarity. It also reapplies the old theory of cleavages to the relatively new question of European solidarity. In doing so, it also makes use of the literature on state-building and its effect on citizens' political attitudes, as well as on the role of

political efficacy. It also relies on the concept of identity formation, on self-interest, and on the use of heuristics. The paper contributes to the literature on EU public opinion at large, while advancing our understanding of the effect of European integration on individual citizens. Paper 2 is thus of interest to scholars of European integration theories as well.

Paper 3 contributes to the literature on European integration and EU public opinion, and it borrows insights from the literature on identity formation and nationalism. In this paper, I assess how socialisation in an EU country affects individuals' empathy towards other Europeans. I thus also rely on the literature on state-building and on European integration. The paper shows that EU membership of a country indeed makes its citizens more empathic with other Europeans. There is thus good reason to speak of European solidarity as a special kind of international solidarity.

All three papers also bring methodological innovation to the field and are thus of interest to researchers who have an interest in applying state-of-the-art econometric analyses. I take seriously the fact that European solidarity is not something that most citizens care deeply about. Whereas most published studies in the field of EU public opinion ignore this, the papers of this dissertation use alternative approaches to deal with this problem. In Paper 1, I apply single random imputation to replace missing values with randomly drawn values. In Paper 2, I use a Heckman selection model and compare its results with the results of a model that ignores the selection bias of survey responses. In this comparison, it becomes clear that results of a standard regression model produce biased results. For instance, the analysis shows that gender has no substantive effect on citizens' attitude to solidarity, but it does have an effect on their propensity to have an opinion. It is likely that this selection effect goes beyond European solidarity attitudes and may be observed in other questions on EU politics, as this is a political issue that is of low salience among most ordinary citizens. In Paper 3, I use a logistic regression model to estimate why respondents choose to give a 'Don't know' answer and find that the general interest in the survey (as perceived by the interviewer) explains part of the variance of the ability to respond.

1.5 Contributions of this dissertation

I will now draw final conclusions from this dissertation, which has set out to answer the question, *Why are some individuals willing to support redistribution across European countries*? The dissertation has advanced our understanding of the determinants of European solidarity on several frontiers. In going beyond the role of individual-level determinants, I show that citizens essentially make sense of a multi-level game with other countries, with supranational institutions, and with their own countries. These factors thus all contribute to how citizens think about European solidarity. Trying to understand European solidarity only at the individual level can therefore not be enough. The three main findings of this dissertation are: (1) EU membership increases citizens' willingness to express European solidarity; (2), this European solidarity is not given to each European country to the same extent, but rather, there is a centre–periphery divide among EU countries that structures solidarity attitudes, and (3), the difference in solidarity by recipient countries may be explained by perceptions of the recipient countries' deservingness. To fully understand the solidarity response of European citizens to a crisis, we need to understand the context.

Paper 1 focused on the role of responsibility attributions for the formation of European solidarity. The findings imply that, as a general concept, deservingness is important when it comes to attitudes of European solidarity. Paper 2 contributes to the role of macro conditions and to the attributes of the recipient country. It demonstrates that the two factors cannot be understood in isolation but must be analysed together. More concretely, the paper introduces the idea that solidarity attitudes in the EU are structured by a centre–periphery divide. Paper 3 is the first paper that assesses the effect of EU membership of a citizen's country on their willingness to express European solidarity. This is a key assumption of many studies on the subject. Paper 3's findings provide support for this argument, although not unconditionally. Instead, citizens become progressively more empathic towards other Europeans the longer they reside in the EU.

Theoretically, this thesis shows the importance of the context in which individuals find themselves. It does not suffice to ask about individual factors, but it is important to account for how these individual determinants interact with other factors that lie beyond the individual citizen. Propositions that attribute a large share of explanatory factors to individuals themselves are not wrong in themselves, but they may underestimate the

moderating role that factors external to the individual play. This thesis underlines the acute importance of taking such factors into consideration.

Methodologically, this thesis has made use of state-of-the-art econometric approaches. First, I have demonstrated the importance of macro-contextual factors and how these interact with individual-level factors. As Paper 1 shows, the role of responsibility attributions depends heavily on the welfare state and on the national income of the respondent's country. Single-country studies on European solidarity cannot show these interactions, and thus they draw an incomplete picture of the relationship between explanatory factors and European solidarity. Moreover, further contextual factors – such as the attributes of the recipient country – shape how individuals think about European solidarity. Arguably, these factors matter, even when not primed by the researcher, as citizens may have different countries in mind when faced with a question about European solidarity.

Second, the thesis demonstrates the importance of accounting for the salience among ordinary citizens when trying to estimate European solidarity. I show that respondents in large-scale surveys self-select themselves when faced with questions about European solidarity. Those individuals who respond to such survey questions are different from those individuals who choose to indicate that they 'Don't know'. Surveys that force respondents to make a choice (and do not provide a 'Don't know' option), may probe attitudes where there are none. This is particularly common in experimental designs. Researchers need to correct this bias using appropriate statistical tools, or they need to acknowledge it when drawing conclusions. There are different options at researchers' disposal to account for this issue. In Paper 1, I have used imputation, a statistical technique that replaces 'Don't know' responses with values randomly drawn from the distribution of responses. In Paper 2, I have used a Heckman selection probit model to explicitly estimate what affects the propensity of respondents to answer and how this confounds the estimation of the opinion. Issue salience is not limited to European solidarity, although limited knowledge of it, and interest in it, has been documented for many political issues, notably when it comes to the EU.

For practitioners interested in fostering citizens' European solidarity, the results of this thesis prescribe possible actions. I have highlighted the importance of European solidarity in times of crises, and how these crises affect European solidarity. It is important to stress

that crises do not produce these different solidarity responses automatically. Rather, citizens are cued by discourse. For instance, a narrative that distinguishes between those who are responsible for their bad luck, and those who are not, reduces the chances of European solidarity, because citizens respond to these responsibility attributions and replicate them. Second, the EU and those policymakers who are interested in defending the EU should work towards overcoming the structural inequalities that persist in the EU today. Overcoming the present inequalities will increase the chance of citizens showing solidarity with other countries. Third, the EU can be more proactive in creating European solidarity, and it should explore further avenues to foster a sense of commonality.

An important assumption that I have made, but that I could not test, concerns the role of cueing. Cueing effects play a central role in explaining the proposed relationships in all three papers. In Paper 1, I assume that citizens are cued by discourse about the deservingness and responsibility of other countries. In Paper 2, I assume that citizens are cued by the fault lines between EU countries in EU decision-making. In Paper 3, I assume that citizens are cued by their exposure to EU symbols. While the findings generally support the expected relationships, critics may argue that I cannot test the causal mechanism by making recourse to cues. Indeed, no suitable proxies for cues were available in the datasets. Future research may test this mechanism, for instance by using novel experimental designs.

In Paper 3, I assume that empathy with other Europeans has a positive effect on European solidarity. I made use of a survey item measuring empathy for practical reasons of data availability and measurement validity, arguing that empathy is a necessary condition of solidarity. While this relationship is grounded in conceptual considerations and backed by previous research (see also Quandt and Lomazzi, 2023), the supposed relationship between empathy and solidarity remains empirically untested. Future research may thus explore the exact role of empathy in European solidarity.

Methodologically, the analysis relies on large-N surveys. While commonly used, there are drawbacks to such an approach. First, there is the concern that, when asking in surveys about respondents' behaviour on redistributive issues, the responses that the researchers receive are mere 'cheap talk' (Goerres and Prinzen, 2012a: 518). Even if the papers acknowledge this limitation and, in the case of Paper 1, account for it by testing the robustness of the results with an alternative dependent variable that makes potential

personal costs explicit (providing support for the validity of the findings), the limitation remains. While this leads to an overestimation of the general willingness to show solidarity, this does not mean that the discovered relationships are biased.

Furthermore, the cross-sectional surveys used provide observational data. As a consequence, all conclusions should be understood as correlational in nature. Nevertheless, the evidence hints strongly at causal relationships. For instance, it can be excluded that the relationship of the centre–periphery divide and European solidarity is inverse, i.e., that solidarity causes the centre–periphery divide, because the two factors are at different conceptual levels. It is implausible to think that individual attitudes would shape a divide at the macro level. While some authors argue that the matching technique used in Paper 3 produced causal effects (Iacus et al., 2012), given that potential confounders are accounted for, critics note that matching on observational data does not allow unobserved confounders to be accounted for (Black et al., 2020).

With large-N studies also come problems of data quality. Studies show that comprehension of survey questions, in particular concerning low salience issues, can be limited among certain sub-demographics (Holbrook et al., 2006). Another general issue of large-N studies concerns sampling. Even if researchers and commercial survey companies have developed techniques and econometric approaches to ensure the representativeness of findings, the issue of non-response remains a persuasive one (Groves, 2006; Chen and Haziza, 2019).

Future research should pay more attention to the effect of the locality of individual citizens on their willingness to show European solidarity. In discussing the role of the macro context of individuals, I focused on nation-states, but citizens find themselves in regional localities as well; nested within nation-states. For instance, individuals in border regions are believed to be more supportive of European integration, although recent findings caution against such a proposition (Nasr and Rieger, 2023). Border citizens are arguably more exposed to the benefits of European integration since the abolition of border controls is one of the most prominent achievements of the EU. Border citizens interact more often with people from other countries and may also have closer cross-border ties. At the same time, research demonstrates that borders are heterogeneous (Topaloglou et al., 2005). In Paper 2, I find that citizens are generally more willing to express solidarity with neighbouring countries. It would be worthwhile to investigate

whether this finding also translates into an increased sense of European solidarity, or whether the connection remains local.

Another promising avenue of research is to shift the research interest from the general public to political elites. As highlighted before, there is a body of literature that diagnoses the EU with an 'elite-mass incongruence' (Müller et al., 2012; De Wilde and Trenz, 2012). In other words, political elites tend to be more in favour of European integration than ordinary citizens. Can the same be said about European solidarity? Do elites think differently about European solidarity? Evidence shows that the general public holds strong misperceptions about the EU (Stoeckel et al., 2023), so there is reason to believe that these misperceptions may affect the public's stand on the issue. Elites tend to be better informed (Goldberg et al., 2021b), so we may find a difference here. More insights into the reasoning and the general attitudes of the political elites vis-à-vis European solidarity may also inform the attitude of ordinary citizens, or vice versa. Indeed, as I have argued in this thesis, it is often considered that citizens' attitudes are influenced by cues received from national elites, political parties, and media discourse (e.g. Dür and Schlipphak, 2021). Also, at the beginning, the dissertation argued that the general public's stance at critical junctures can be a decisive resource. How the attitudes of the public and of the elites interact is poorly understood. More research could shed light on this matter.

A further interest of the study of European solidarity is how much relevance respondents attach to European solidarity when voting. Understanding voting behaviour is at the heart of political science. Are individuals who are willing to express European solidarity more likely to vote for certain parties or for certain candidates than others? Some studies suggest that this may be the case, namely that there was a higher probability that the more solidaristic citizens voted for parties of the centre-left in the European elections of 2019 (Pellegata and Visconti, 2022), although we need more research to understand this relationship better. For instance, does it diminish or increase the chances of re-election of sitting heads of government if they support forms of European solidarity that are too generous?

Finally, on a methodological note, the research on attitudes towards European solidarity requires more heterogeneous approaches. As I stressed before, studies based on quantitative analyses dominate the research on European solidarity. Qualitative accounts of European solidarity are rare. Research projects employing these methods are underway

but are not yet well connected to existing research (i.e. Heinelt and Egner, 2021). In other fields, the use of qualitative approaches, such as focus groups, has provided new insights (Goerres and Prinzen, 2012b; Gaskell et al., 2020). Such an approach would be suited to explore citizens' thought processes about European solidarity, which in turn may then inform the future research agenda.

At the time of finishing this thesis, in May 2024, Russia's military invasion of Ukraine is still on-going. The EU institutions have just adopted a European Pact on Asylum and Migration, heralded by many as the extreme tightening of the EU's external borders, but also introducing a legally binding solidarity mechanism, according to which all member states either must take a share of refugees, or provide a financial contribution to cover the costs. The Covid-19 pandemic seems to be in the past, and no restrictive measures are in force in any of the EU countries. Despite pressure on public finances caused by the high level of inflation in 2022 and 2023, financial institutions in the EU seem robust, and the EU has adopted a reform of the Stability and Growth Pact. What the next European crisis will look like remains impossible to predict. Citizens' European solidarity, and the general public's response to these crises impacted how these policies turned out.

The findings in this thesis cannot inform us about what the future holds. It does however further our understanding of what determines citizens' response to crises does however contribute to our understanding of how a European response may look like, depending on what the crisis will look like, and what the EU may do to foster a solidaristic response. I have demonstrated that Europeans' attitudes towards helping other countries is not entirely intrinsic, i.e. dependent on processes inside the individual. Instead, the structure of the EU, its capacity to instil European solidarity within people, and the nature of the crisis management, have considerable effect on how the European will respond.

2 Treating nations like people: How responsibility attributions shape citizens' fiscal solidarity with other EU countries[9]

Abstract

Scholars have so far not paid sufficient attention to the role of attributed responsibility of countries when they need to explain variations of European fiscal solidarity. Do citizens consider the responsibility of other countries when expressing solidarity with them? This paper advances the argument that individuals apply similar heuristics to countries as to other individuals. When expressing solidarity with another country, individuals rely on cues about deservingness. The role of responsibility attributions is tested in this paper using logistic regression on survey data from ten EU countries. Results show that citizens in rich welfare states reduce their solidarity for other countries if they deem them responsible for their own crises. This suggests that rich welfare states hinder the development of solidarity beyond their national boundaries. This research contributes to our understanding of the role of deservingness attributions in European solidarity, as well as to our understanding of the role of the welfare state in solidarity.

Keywords: European Union, solidarity, redistribution, deservingness, logistic regression

[9] The original source of the article is: Clasen, P. (2024b). "Treating nations like people: How responsibility attributions shape citizens' fiscal solidarity with other EU countries." Journal of European social policy 34(3): 309-322. DOI: 10.1177/09589287241229669.

2.1 Introduction

Social policy scholars have dedicated much attention to the importance of the perceptions of deservingness and their effect in shaping individuals' attitudes towards the welfare state and the support of social policies (e.g. van Oorschot, 2000; Buss, 2019; Reeskens and Van der Meer, 2019). As van Oorschot (2000: 38) points out, among issues of reciprocity and identity, 'Why are you needy?' is one of the most important questions ordinary citizens ask when having to decide whether to help somebody in need.

Little is known about whether Europeans ask the same question when asked to help other countries in Europe. Do responsibility attributions matter for European solidarity? In an international context, people would have to estimate the responsibility of countries, rather than the responsibility of individuals. To assume that citizens have the mental capacity and the interest to do this seems like an overly optimistic claim, given that most citizens' familiarity with other countries is limited at best (see Lahusen, 2021).

Recent crises in Europe tell a different story. During the eurozone crisis, the general willingness to express solidarity with fellow European countries was arguably at an all-time low since the beginning of European integration (see also Reinl, 2020). Public discourse, notable in creditor countries, focused on the wrongdoings of public administrations in debtor countries (Chalániová, 2013; Genschel and Jachtenfuchs, 2021). In the early 2020s, during the Covid-19 pandemic crisis, citizens' willingness to support each other in European solidarity had increased remarkably. EU leaders agreed on the adoption of NextGenerationEU, a 750 billion Euro instrument funded by common EU borrowing (Ferrera et al., 2021). The two crises differ in many aspects, but one important feature of the pandemic politics was the comparably low intensity of discussions of moral hazard (see Ignácz, 2021; Tesche, 2022).

This paper argues that individuals develop responsibility attributions of other EU countries based on cues and stereotypes, and they rely on these attributions when asked to express European fiscal solidarity. Citizens do not need a profound understanding of macroeconomic interrelations. Rather, they apply similar deservingness heuristics (Petersen, 2015) to other countries as to other individuals. In this article, European fiscal solidarity refers to an individual's 'preparedness to share financial resources' with people in other European countries who are worse off or in need, through actions and funds

mobilised by state institutions, including the EU (see Stjernø, 2005: 2; for a more in-depth discussion, see Reinl, 2022). While the term 'fiscal solidarity' is also used in federalism research (see, for instance, Duff and Treichel, 2014), solidarity here is understood to be an individual-level attitude.

Based on survey data collected from ten EU countries in 2019 by REScEU[10] (Donati et al., 2021), the analysis shows that in economically strong countries, as well as in countries with a strong welfare state, citizens consider the responsibility of potential recipient countries when they are asked to help them financially. Even if the data are from before the outbreak of the Covid-19 pandemic, the findings indicate that citizens evaluate the degree to which another country may be responsible for its situation, and they express their solidarity accordingly – just as they would when they are asked to help individuals.

The article is organised as follows: the next section presents the paper's argument and situates it within the existing literature. The subsequent section describes the research methodology and presents the empirical analysis. The final section provides the article's conclusions.

2.2 Responsibility attributions as a shaping factor of European solidarity attitudes

The argument of the paper is that citizens attribute responsibility to other countries in need of solidarity, and that these attributions inform those citizens' willingness to express European solidarity. Citizens who believe that other countries are to blame for their own crisis are less likely to express solidarity than those who do not believe that other countries are to blame. Since the information to assess responsibility is complex, and the salience of EU topics is low (Hutter and Kriesi, 2019), citizens rely on cues when forming responsibility attributions. As with societal groups, citizens use heuristics to assess whether potential recipient countries deserve their solidarity. By using these 'judgmental shortcuts' (Petersen, 2015: 45), citizens avoid the mental burden of evaluating complex information. Essentially, they judge other countries just as they would judge other individuals.

[10] REScEU stands for 'Reconciling Economic and Social Europe': the role of idea, values and politics.

Figure 2-1 provides a schematic overview of the theoretical model. As the figure shows, this article advances a model that suggests a heterogeneous effect of attributed responsibility. Because of the relevance of cues for the formation of responsibility attributions, we can expect that the macro-context moderates the effect on European solidarity. In countries with a high level of national income, and in those countries with a less extensive welfare state, costs and deservingness are cued, making responsibility attributions particularly relevant for citizens. Furthermore, a strong cosmopolitan European identity may trump responsibility attributions. For citizens who hold cosmopolitan values – notably the concern for the wellbeing of other Europeans – responsibility attributions are of less relevance because of their attitudinal character. The assumptions of this model will be elaborated in more detail below.

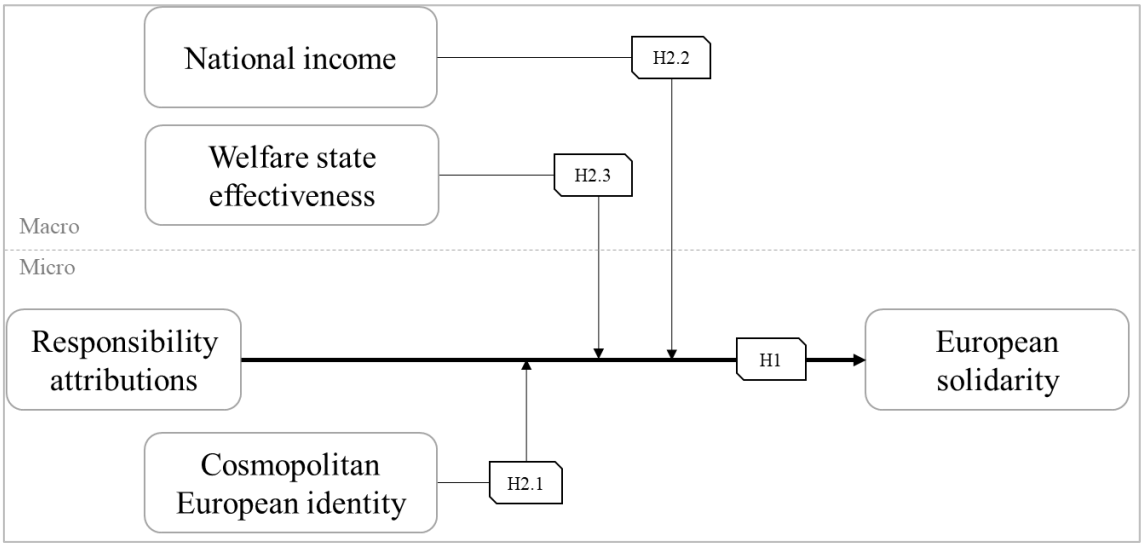

Figure 2-1. A schematic overview of the proposed relationship between responsibility attributions and European solidarity.

The argument of this paper brings together two lines of research. The first line of research is on attitudes to European solidarity and EU fiscal policy. In broad terms, this line of research has identified ideological considerations (Kleider and Stoeckel, 2019; Pellegata and Visconti, 2022), values (Kuhn et al., 2018; Medrano et al., 2019), and social identity (Kanthak and Spies, 2018; Nicoli et al., 2020) as more effective predictors than self-interest (Bechtel et al., 2017; Armingeon, 2020; Mariotto and Pellegata, 2023).

The aim of this paper is to contribute to this research by borrowing insights from a second line of research, on deservingness and social policy attitudes. According to Petersen (2015), humans use the heuristics of small-scale societies and apply them to

today's political questions of redistribution. The deservingness heuristic is a universal automatism that stems from evolutionary processes (ibid.). These deservingness attributions are shown to moderate individuals' support for the welfare state in general (Van Oorschot, 2006) or their support for specific measures of the welfare state (Buss, 2019).

Van Oorschot (2000) identifies five deservingness criteria that people use to gauge the deservingness of others: Control, need, gratitude, identity, and reciprocity. Our understanding of the role of these deservingness criteria beyond the role of identity for the willingness to help other EU countries is, so far, limited. Reinl and Katsanidou (2023) show that citizens are more willing to support those countries that have shown solidarity in the past, and (Afonso and Negash, 2024) have shown that the need of a recipient country also influences the willingness to express solidarity. These findings suggest that citizens do evaluate the deservingness of other countries, and that they consider what happens to the money they contribute. This paper focuses on the issue of control and, more specifically, on the effect of responsibility attributions on European fiscal solidarity.

Having established how the argument of the paper is connected to current research, we can now turn to it in more detail and formulate hypotheses that are derived from the argument. Unlike national-level solidarity, European solidarity has little direct impact on individuals' lives. Few citizens, even if interested in politics, can give a consistent assessment of matters such as the structure of public expenditure or the social conditions of other countries, even at times of high salience (see Baglioni and Hurrelmann, 2016). However, in line with Petersen (2015), ordinary citizens use heuristics such as stereotypes (Hjorth, 2016) to judge the responsibility of other countries, even in the absence of detailed knowledge of their macroeconomic conditions. One notable influence of stereotypes are the cues from political elites (Sierp and Karner, 2017) and from the media (Rothmund et al., 2017). During the eurozone crisis, much of the public debate in many creditor countries was about whether countries in acute fiscal need are deserving (Chalániová, 2013; see also Wallaschek, 2020). In these countries, the concern was one of moral hazard: If debtor countries would not take responsibility for the situation they were in and implement structural reforms, there would be a danger of permanent dependency and redistribution (for a more extensive discussion, see Matthijs and McNamara, 2015).

Responsibility attributions are stereotyped, and as such, they are vague. They apply to a given nationality, rather than distinguishing between decision-makers of a country on the one hand and its ordinary citizens on the other hand. For instance, the eurozone crisis led to lasting tensions between Greek and German citizens, with surveys showing that Greeks accused Germans of being unsympathetic to their economic difficulties (Stokes et al., 2017), while surveys in Germany showed that German citizens mistrusted Greeks and their commitment to fiscal discipline (Connolly, 2015). In the mental representations of other countries underlying these opinions, potential recipient countries of European solidarity form a homogeneous group. Taking these considerations into account, the main hypothesis is:

> *H1***:** Individuals who think that other countries are to blame for their own economic disadvantage are less likely to express European fiscal solidarity than individuals who do not think so.

This effect of responsibility attributions is heterogeneous. Citizens with a cosmopolitan European identity (Pichler, 2009; Kuhn et al., 2018) are expected to treat responsibility attributions differently. Cosmopolitans are outward looking, open to other cultures, and they value the interconnectedness with other political communities. They see themselves as citizens of the world and feel connected to supranational identities. They put less meaning on the limits of national borders, which leads them to share more concern with others outside their own community (Inglehart and Norris, 2016; Kuhn et al., 2018). Cosmopolitans identify more strongly with Europe and have a more open definition of Europe (Pichler, 2009). Policy-makers with a cosmopolitan social identity have been shown to be more likely to oblige to international law (Bayram, 2017). Finally, cosmopolitans have been shown to be more willing to contribute to means of international redistribution (Paxton and Knack, 2012; Kuhn et al., 2018; Medrano et al., 2019).

While those with a stronger cosmopolitan European identity are not more or less likely than others to think that other countries are at own fault for being in a crisis, their concern for the welfare of others outside their own community overrides these responsibility attributions. Consequently, even if cosmopolitan Europeans think that other EU countries are at fault, they do not reduce their willingness to express European fiscal solidarity as severely as those individuals who value less the wellbeing of people outside their community. In contrast, those with less cosmopolitan values use the responsibility

attribution as a mechanism to justify their unwillingness to express European fiscal solidarity.

Since responsibility attributions depend on cues, differences in the national context – namely economic wealth and the extent of the welfare state – influence the relationship between responsibility attributions and European fiscal solidarity. Responsibility attributions become relevant when the costs of European fiscal solidarity are salient. In economically stronger countries, the contributions to the EU budget and the potentials of moral hazard are a politicised issue. In these countries, citizens expect to be at the giving end of a solidarity scheme (Kleider and Stoeckel, 2019; Vasilopoulou and Talving, 2020). In poorer countries, citizens are cued to perceive European solidarity to be in their sociotropic self-interest. Even when citizens in these countries consider that another country may be at fault for their crisis, they still consider it to be in their interest to support European solidarity.

Finally, national welfare institutions shape the way citizens think about solidarity and about the concepts of deservingness, neediness, and belonging (Larsen, 2008; Jordan, 2013). Responsibility attributions are primed when the welfare state is organised on a more selective basis. This highlights the 'otherness' of recipients and invites debate about their deservingness, which then 'spills over' to European solidarity attitudes. In addition, a less generous welfare state cues the scarcity of fiscal resources of the state, which makes citizens less willing to express solidarity with those in other countries.

Hence, the model in Figure 2-1 suggests that in less extensive, more selective welfare states citizens make more use of responsibility attributions. While some studies show that citizens perceive European integration as a threat to the welfare state (Beaudonnet, 2015; see also Ferrera, 2005); Baute et al. (2019b) find that high levels of support for the principles of the welfare state have a positive effect on attitudes to social Europe, including attitudes to European solidarity, as suggested here as well.

The following hypotheses on the mediating role of the cosmopolitan concern for the wellbeing of others outside of one's community and of the macro-context are derived:

> *H2a***:** The weaker the cosmopolitan concern for the wellbeing of others outside of one's community of an individual is, the higher is the marginal effect of responsibility attributions on European fiscal solidarity.

> *H2b***:** The higher the national income of a country is, the higher is the marginal effect of responsibility attributions on an individual's European fiscal solidarity.
>
> *H2c***:** The less extensive the national welfare system of a country **is**, the higher is the marginal effect of responsibility attributions on an individual's European fiscal solidarity.

2.3 Methodology, data, and preliminary analysis

The empirical analysis uses REScEU's 2019 survey data from 10 EU member states[11] with a total of 15,149 respondents, aged 18-70. (Donati et al., 2021). The survey is particularly useful for its inclusion of an item for the attributed responsibility of crisis countries that will be used as an independent variable. The survey used quota sampling for gender, age, education, and region of residence. Participants had previously joined the conducting company's online panel and were interviewed using the CAWI methodology. In total, the sample includes 15,149 individual respondents. The next section presents the relevant variables included in the analysis and gives some preliminary insights, before turning to more advanced regression analyses.

Dependent variable

As the goal of this research is to identify whether there is an effect of responsibility attributions on European fiscal solidarity, the dependent variable is the willingness to express European fiscal solidarity. The following survey item captures the concept:

> To what extent do you agree or disagree with the following statement: All EU Member States, including (COUNTRY), should contribute to a common EU fund to help any other Member State facing potentially severe economic and financial difficulties in times of crisis.

Respondents answer on a fully labelled 4-point Likert scale, or they indicate that they 'don't know'. Figure 2-2 presents the distribution of the dependent variable for all countries of the sample (%DK = 'don't know'). The lowest level of solidarity is found in Finland, with 47% of respondents indicating strong or some agreement. The highest level

[11] Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Spain and Sweden.

of solidarity is found in Greece, where 82% of respondents either strongly or somewhat agree.

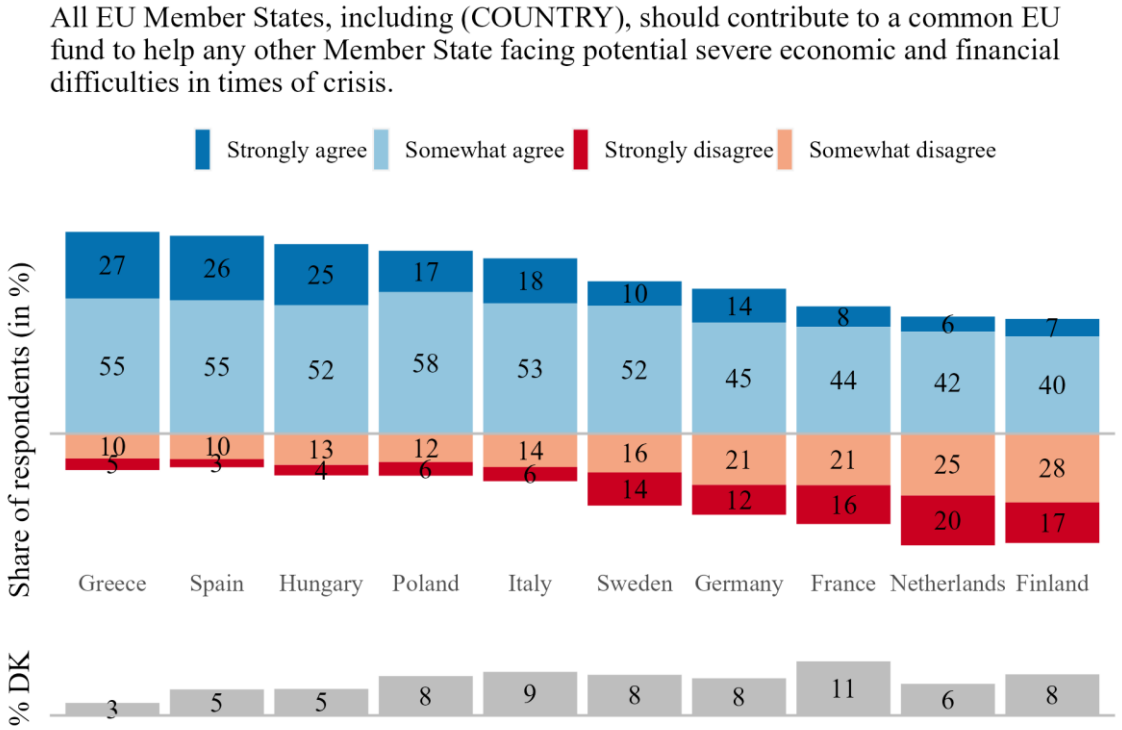

Figure 2-2. Level of support for a common EU fund and share of respondents who indicate that they don't know, by country.

For further analysis, the response scale has been recoded to a binary variable where 1 indicates that individuals 'strongly' or 'somewhat' agree, and 0 means the individuals at least 'somewhat' disagreed. Subsequently, logistic regression is applied. The loss of information by this operation is limited. The advantage of this recoding is that it allows the threshold of the qualitative difference between agreement and disagreement to be estimated more precisely.

As a robustness check, the same models are run using an alternative dependent variable, based on a follow-up question in the survey. Respondents are asked if they would be willing to support a 1% increase in their income tax for the purpose of this common fund. For the alternative specification, only those respondents who agree with the creation of a common EU fund in the first question, as well as those who respond affirmatively to this second question, are considered as expressing solidarity. This

alternative specification ensures that the solidarity measured here is more than just 'cheap talk'.

Independent variables

Let us now turn to the independent variables. This section first introduces the individual-level variables and then two macro-level variables. Table 2-3 in the chapter appendix provides an overview of all concepts and related variables, Table 2-4 in the chapter appendix provides an overview of variables by country. The key independent variable, the 'attributed responsibility' of recipients, is captured with the following item:

> During the crisis some member states have done better than others (e.g. in terms of unemployment, poverty, or growth rates). Please indicate to what extent you agree with the following statement: The weaker member states have mismanaged their economy and public finances.

Respondents answer on a fully labelled scale from 1 to 4, where 1 signifies strong agreement and 4 means strong disagreement, or they indicate that they 'don't know'. The variable has also been recoded as a binary variable of agreement (1) and disagreement (0).

The wording of the survey items, however, has its own limitations, as it remains vague concerning which countries are supposed to be weaker and in what sense. Nevertheless, this item is the most appropriate approximation of the concept of responsibility attribution.

Figure 2-3 depicts the distribution of responses to this item for all sampled countries. Countries in which the overall level of European solidarity is highest tend to be those where agreement to this statement is lowest, although Greece and – to a lesser extent – France, constitute exemptions in this relationship. This is a promising first finding in relation to hypothesis *H1*. The proportion of respondents who strongly agree or somewhat agree ranges from 56% (France) to 74% (Finland). In Greece, where the crisis affected people the most, the 'don't know' answers are at their lowest. In countries where the crisis had less of an impact – such as Germany or the Netherlands, or in non-eurozone countries like Poland and Sweden – the 'don't know' answers are quite frequent. This suggests that 'don't know' responses are an indicator of less-crystallised attitudes. In the context of EU public opinion research, this is unsurprising, given that many citizens are indifferent or

ambivalent to EU politics (Stoeckel, 2013). This may also explain why the share of 'don't know' responses is very high in France (21%).

Methodologically, the 'don't know' responses cannot be treated as randomly missing, since the appearance of their answers is not random, therefore simple random imputation for certain variables is applied in the regression analysis (see section 2.6.2 for a more detailed description).

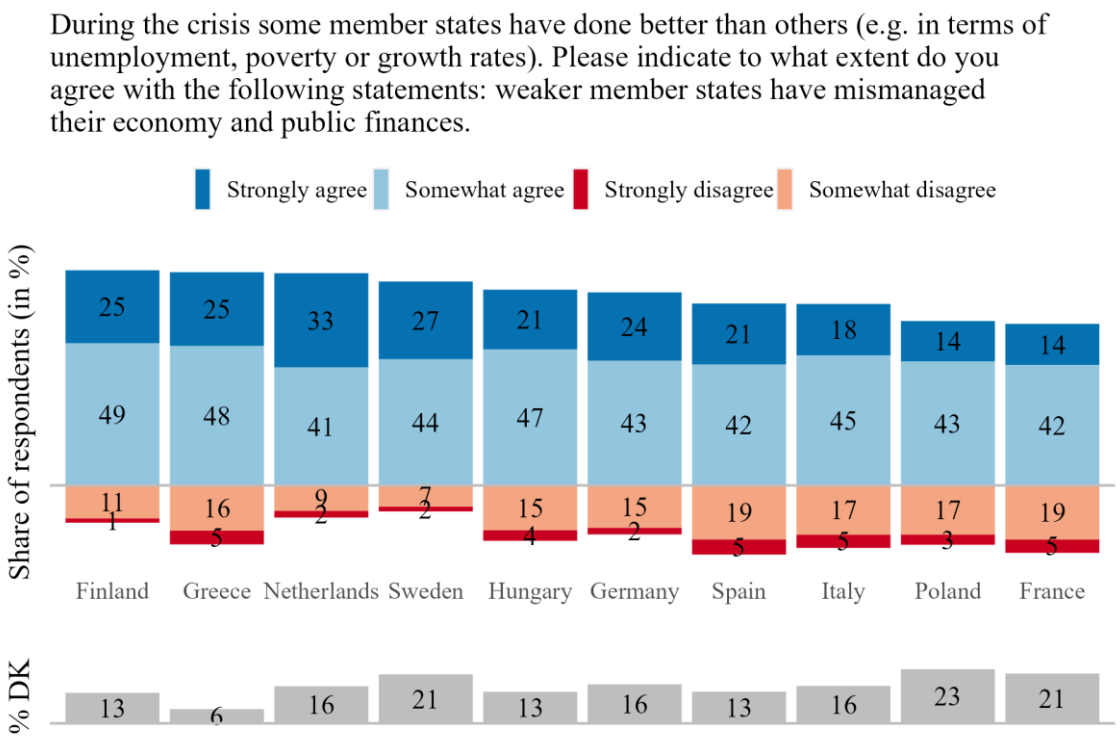

Figure 2-3. Level of agreement that weaker member states mismanaged their economy and share of respondents who indicate that they don't know, by country.

Cosmopolitan European identities are captured by a combination of three survey items. In line with De Vries (2018) and Kuhn et al. (2018), cosmopolitanism is operationalised using measurements of openness towards other cultures, and the concern for the wellbeing of others outside one's own community, specifically in other EU countries. In addition, a measurement of the identification of respondents with the EU is also included.

Openness towards other cultures is captured by a survey item that asks whether respondents believe that cultural life is enriched by people coming from other countries. Respondents answer on an end-labelled scale of 0 to 10, where 0 stands for the belief that

cultural life is enriched, and 10 stands for the belief that culture life is undermined. Respondents can refuse to answer and indicate that they don't know.

The concern for the wellbeing of others outside their own country can only be captured indirectly. In one survey question, respondents are asked:

> The European Union does various things to support citizens' rights, but some say that it could do more. Which of the following things would enhance your feeling of being a European citizen?

Seven options are provided. Respondents choosing the option of a Europeanised social protection system are assumed to be concerned about the wellbeing of others outside their community. While other options also refer to a Europeanised social protection, these options are either less concrete, or they make the personal benefits of such a scheme more salient. This is not a perfect measurement item, in particular because it may be argued that it introduces endogeneity. However, this item provides the best approximation of the concept of concern for others outside one's community available in the dataset.

Finally, respondents are asked whether they are proud to be European citizens. They answer on a fully labelled scale from 1 to 4, where 1 signifies strong agreement and 4 means strong disagreement, or they indicate that they don't know. The variable has been recoded as a binary variable measuring agreement (1) and disagreement (0).

These three responses are used to reflect the degree of cosmopolitanism and are kept as individual variables. While this is not the most elegant solution, the creation of a 'cosmopolitanism index' brings its own theoretical and econometric challenges. In addition, the theoretical assumptions suggest that it is the cosmopolitan concern for the wellbeing of others outside one's community that mediates the effect of responsibility attribution, which requires this variable to be included individually in any case.

Macro-level data

As theory includes expectations about the impact of the macro-context on individual attitudes, it is necessary to include such variables in the analysis. Given that the number of countries included in the study is limited to ten, it is necessary to keep the number of macro-level predictor variables to a strict minimum to avoid unreliable estimations.

The economic situation is captured by the GNI per capita in 2019, a common measure for capturing the standard of living in a country. This variable has been rescaled so that

the highest value in the sample (Netherlands) is 1 and the lowest value (Greece) is 0. Data are from Eurostat.

The welfare state's effectiveness is measured by calculating the ratio of people at risk of relative poverty (defined as having less than 50% of the national median income) before and after taxation and transfers. While this measure cannot capture the entire complexity of the welfare state, it avoids the complexities of welfare state typologies and considers the role of taxation in welfare distribution. Data are from the Organisation for Economic Co-Operation and Development.

Individual-level control variables

Demographics as well as political ideology are included in the analysis to control for potential confounding effects. Political ideology is measured in the form of a self-placement on a partially labelled scale from 0 to 10, where 0 indicates ‘Left’ and 10 indicates ‘Right’. For income, respondents are asked how comfortable they can live on their present income. They answer on a 4-point fully labelled scale. Education is measured in terms of formal educational degree. Responses are grouped in three categories: ‘Tertiary’, ‘Up to upper secondary’, and ‘Lower secondary’. As specification tests revealed that the effect of age is not linear, respondents were grouped in three age categories in the regression models: 18–34, 35–54, 55–70. Finally, gender is also included as a control variable.

2.4 Regression analysis

Table 2-1 presents the results of the logistic regression analysis. Because the exploratory data analysis revealed that there is some variation between countries, cluster-robust standard errors are applied. Model 1 to Model 3 are models with main effects only. Model 1 includes the attributed responsibility variable as well as socio-economic controls. Model 2 extends Model 1 by including the variables for cosmopolitan European identity, and Model 3 further adds the country level variables. Model 4 to Model 6 include one interaction effect each. Likelihood-Ratio tests provide evidence that the inclusion of the interaction between attributed responsibility and GNI, as well as between attributed responsibility and welfare state effectiveness, improve the model, whereas the interaction effect between attributed responsibility and concern for others does not improve the

model. Finally, Model 7 includes all three interaction effects. Consecutive Likelihood-Ratio tests indicate that this model improves compared to Models 4, 5 and 6. Further descriptions and the robustness checks are shown in the section 2.6.1. Table 2-6 in the chapter appendix also shows the complete regression table for the alternative specification of the dependent variable, with no fundamentally different results.

Interpretation of results

The central argument of the paper is that responsibility attributions matter for the European solidarity of citizens (*H1*). Unlike the results that the preliminary analysis suggests, the regression analysis does not support such an all-encompassing statement. The effect of responsibility attributions is heterogeneous and depends on other factors. In the models with no interaction effect, the coefficient of the corresponding variable is statistically not significant. Only after interaction effects are introduced does the variable become significant and socially meaningful.

Table 2-1. Logistic regression with cluster-robust standard errors for European fiscal solidarity, imputed data.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Attributed responsibility	-0.23 (0.19)	-0.33 (0.14)	-0.26 (0.16)	-0.27 (0.15)	0.36 (0.22)	2.76 (0.69)*	2.38 (0.64)*
Openness towards other cultures		-0.11 (0.02)*	-0.10 (0.01)*	-0.10 (0.01)*	-0.10 (0.01)*	-0.10 (0.02)*	-0.10 (0.02)*
Proud to be European citizen		1.22 (0.10)*	1.12 (0.09)*	1.12 (0.09)*	1.12 (0.09)*	1.12 (0.09)*	1.12 (0.09)*
Concern for others		0.30 (0.04)*	0.34 (0.04)*	0.32 (0.15)	0.33 (0.04)*	0.34 (0.04)*	0.27 (0.16)
GNI per capita			-0.88 (0.17)*	-0.88 (0.17)*	-0.09 (0.22)	-0.88 (0.17)*	-0.33 (0.21)
Welfare state effectiveness			-0.05 (0.00)*	-0.05 (0.00)*	-0.05 (0.00)*	-0.02 (0.01)	-0.02 (0.01)*
Attributed responsibility × Concern for others				0.02 (0.17)			0.08 (0.17)

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Attributed responsibility × GNI					-1.01 (0.26)*		-0.70 (0.21)*
Attributed responsibility × Welfare state effectiveness						-0.04 (0.01)*	-0.03 (0.01)*
Gender (1: Woman)	-0.13 (0.03)*	-0.19 (0.04)*	-0.20 (0.04)*	-0.20 (0.04)*	-0.20 (0.04)*	-0.20 (0.04)*	-0.21 (0.04)*
Political self-placement	-0.16 (0.02)*	-0.08 (0.03)*	-0.09 (0.02)*	-0.09 (0.02)*	-0.09 (0.02)*	-0.09 (0.02)*	-0.09 (0.02)*
AIC	12321.23	11373.00	10928.87	10930.74	10891.47	10880.13	10871.74
Log Likelihood	-6149.62	-5672.50	-5448.43	-5448.37	-5428.74	-5423.06	-5416.87
McFadden R^2	0.03	0.11	0.14	0.14	0.15	0.15	0.15
N	12294	12294	12294	12294	12294	12294	12294
No. imputations	5	5	5	5	5	5	5

Note: *p < 0.01. Displayed coefficients are log-odds with standard errors in brackets. Population weights are included. Age, income, and formal education are not shown as the coefficients are not significant for any of the models. Intercept is not shown.

Figure 2-4 visualises the results of the full regression model for the three interaction effects. Further, Figure 2-4 provides an overview of the estimated average marginal effects of attributed responsibility at relevant values for the moderator variables.

While citizens with a stronger cosmopolitan European identity are more likely to express European fiscal solidarity, the effect of a cosmopolitan European identity is largely independent of responsibility attributions, unlike theorised (*H2a*).

Figure 2-4 shows that the average marginal effect of attributed responsibility is statistically significant and negative at about -5.1 percentage points for those who do not express concern for others, and that it is statistically non-significant for those who do have concern for others. But the formal tests reveal that there is no meaningful interaction between responsibility attributions and a concern for others outside one's community.

The interaction term is not significant, and its inclusion does not improve the model fit, as the Likelihood-Ratio test comparing Model 4 with Model 3 shows. A visual inspection Figure 2-4C also does not allow us to conclude that there is an interaction effect.

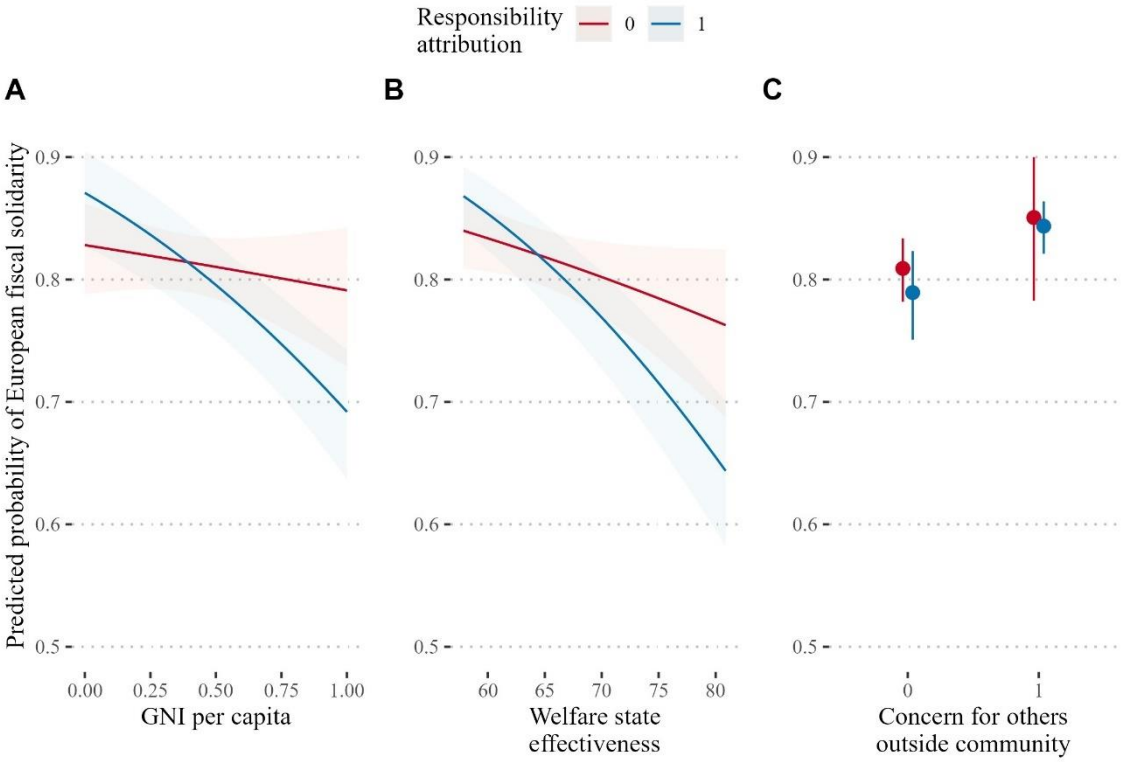

Figure 2-4. Interaction effects of responsibility attributions. Predicted probability of European fiscal solidarity with 0.99 confidence intervals, based on Model 7.

The analysis suggests that responsibility attributions are more relevant in countries with a higher income than in countries with a lower income (*H2b*). Figure 2-4A shows how the predicted probability of European fiscal solidarity changes as a function of national GNI per capita and responsibility attributions. Among individuals in economically less affluent countries, the effect of responsibility attributions on solidarity attitudes is non-existent. However, in richer countries, individuals who think that weaker countries have mismanaged their economies are much less likely to express solidarity than those individuals who do not think so.

Table 2-2 shows that the average marginal effect of responsibility attributions is approximately 3.8 percentage points in the poorest tercile, about -1.4 percentage points in those that are in the middle tercile, and -12 percentage points in the richest tercile. These findings indicate that the economic position of one's own country in Europe cues

deservingness. Citizens in richer countries are less likely to express solidarity with other countries who – in their minds – are poorer due to weaker economic management. In poorer countries as well, many citizens also think that weaker countries have mismanaged their economies. But, unlike citizens in richer countries, these citizens are not cued to consider responsibility attributions. Even if citizens think that weaker countries are at fault, they do not lessen their willingness to express solidarity, because they consider that their own country ultimately benefits from European solidarity. The main effect of the GNI variable becomes insignificant once the interaction is introduced to the model. This suggests that the importance of responsibility attributions is a key difference between citizens of poorer and citizens of richer countries in the EU.

Table 2-2. Average marginal effects of attributed responsibility in relation to moderator variables, based on model 7.

Moderator variable		Average marginal effect
Concern for others	Yes	-0.0173 (0.0239)
	No	-0.0508 (0.0092)
GNI per capita	High	-0.1199 (0.0124)
	Medium	-0.0139 (0.011)
	Low	0.0384 (0.0175)
Welfare state effectiveness	High	-0.1117 (0.0138)
	Medium	-0.0422 (0.0098)
	Low	0.0503 (0.0149)

Note: Standard errors are in brackets. Groups for 'GNI per capita' and 'Welfare state effectiveness' are respective terciles of the distribution.

Finally, the analysis provides no support for the argument that weak welfare states prime citizens to consider the responsibility of other Europeans more strongly (*H2c*). Regardless of whether citizens think that weaker member states have mismanaged their economies, their willingness to express solidarity with other EU countries goes down as a function of the effectiveness of the welfare state. In other words, the more extensive the welfare state, the less likely citizens are to express solidarity with other countries. Rather than having a socialisation effect, the solidarity that welfare states create seems to come

at the expense of solidarity with outsiders. With regard to responsibility attributions, there is an interaction with the welfare state, but in the opposite direction to hypothesis *H2c*.

In the more extensive welfare states, attributed responsibility influences citizens' solidarity more strongly. This finding is also supported by the average marginal effects presented in Figure 2-4: In countries with a highly effective welfare state, the effect is measured at about -11.2 percentage points. In less effective welfare states, contrary to expectations, the effect of attributed responsibility is positive at about 5 percentage points. It seems that citizens perceive European integration – especially policy integration that requires the pooling of fiscal resources – as a threat to the national welfare system. This suggests that citizens perceive European solidarity to be in direct competition with the available resources for national welfare policies. Where the welfare state is more effective, citizens seem to feel that they have more to lose, and they therefore lessen their solidarity accordingly. To highlight just two cases, in Germany, a high-income country with one of the more effective welfare states among the sampled countries, the estimated marginal effect of responsibility attributions is -11.5 percentage points, compared with 7.1 percentage points in Greece, the poorest country in the sample with one of the least effective welfare states in the sample.

These findings imply that the solidarity of the welfare state has a destructive effect on solidarity with other countries, particularly with the emphasis on the un-deservingness of those other countries. Among citizens in countries with a strong welfare state, responsibility attributions have an important influence on European solidarity.

2.5 Conclusions

This paper has made the argument that deservingness shapes citizens' fiscal solidarity with other EU countries. Despite the complexity of public accounts, citizens can judge the responsibility of other countries towards their economic situation based on the heuristics they would also apply to other humans. Empirical analysis provides evidence that citizens use these responsibility attributions to inform their willingness to express European fiscal solidarity with other EU countries. The analysis shows that attributed responsibility is a key difference between those citizens in rich countries with a strong welfare state and those in poorer countries with a weaker welfare state.

One caveat is that the analysis of cross-sectional survey data allows for correlational conclusions, but not for causal inference. Based on the data here, a reverse causal effect cannot be excluded. To justify their unwillingness to express European solidarity, citizens may consequently be less willing to express the belief that others are deserving. Furthermore, it should be noted that the Covid-19 pandemic crisis affected attitudes of European solidarity by making the interdependencies in Europe salient. This critical juncture for European solidarity likely affects citizens' attitudes, and has led, inter alia, to a further crystallisation of attitudes.

This paper highlights the relevance of deservingness in a European context. Citizens ask whether other countries are deserving of their support, and they come up with the answers to these questions. Based on these insights, research should dedicate more attention to issues of deservingness. Furthermore, research should strive to better understand what informs citizens' mental representations of other countries and their relevant deservingness attributes. Finally, the role of the national welfare state in shaping European solidarity attitudes requires more research.

2.6 Chapter appendix

2.6.1 Additional robustness checks

For the non-category and non-dichotomous variables, the assumption of linearity between their values and the log(odds) of the dependent variable has been inspected. Because this assumption was violated for numerical transformations of the income variable and the education variable, the category variables have been kept instead. Since the linearity assumption also did not hold for the age variable in years, the age variable has been transformed to three categories.

A potential issue of the analysis is that the welfare state effectiveness and the national income of a country may be related. Indeed, GNI per capita and the welfare state effectiveness are moderately correlated (r=0.20). Richer countries tend to have more effective welfare states. It should be highlighted that the measure of welfare state effectiveness compares the share of citizens threatened by poverty relative to the national median income. Problems of multicollinearity were investigated and no anomalies were identified.

To test whether the sociotropic concern is correctly positioned at the national level rather than at the regional level, I have run multi-level logistic regressions with three levels (individual, region, country) and included regional GNI data. Neither when replacing the national GNI data nor when keeping both variables in the model, does the coefficient of the regional GNI data become significant. This lends support to the argument that the sociotropic self-interest is in fact a heuristic according to which individuals see themselves as either benefiting or paying – based on their nationality – rather than representing an actual concern for the wellbeing of a broader community.

2.6.2 Imputation of missing values

Encoding the 'don't know' values as missing, and applying listwise deletion, is unsatisfactory, as it reduces the sample size from an initial 15,149 respondents to 10,078 in the model that includes all independent and control variables. More importantly, the occurrence of 'don't know' answers is not completely random. There are theoretical reasons to believe that these answers do not constitute a measurement error. Rather, the survey item correctly measures that some respondents do not have an opinion. While it cannot be excluded that the data are 'Missing Not at Random' (MNAR) – that is, the likelihood of missingness depends on the answer to the very question – such effects are usually observed for survey items of social desirability or high sensitivity (i.e. income). While there are no analytical tools to verify this assumption, the relevant survey items do not touch on issues associated with social desirability. At the same time, the occurrence of 'don't know' answers is found to be associated with gender, age, income, and education. To classify the missingness as 'Missing Completely at Random' (MCAR) would thus also constitute an inappropriate handling of the data.

Simple random-sampling imputation for selected variables is the most appropriate approach. It replaces missing values – the 'don't know' answers – with randomly imputed values drawn from the distribution of known values of the given variable. Considering the country-level differences, respondents draw their random value from the distribution of known values for their country. The rationale is that, if respondents without an opinion were forced to make a decision, their decision would effectively be a random choice (Kroh, 2006). Essentially, this procedure introduces white noise.

Data for the dependent variable, as well as for the responsibility attribution variable and the 'Proud to be a European citizen' variable, are imputed. For all other variables, there are either no missing values (gender, age) or the missingness of values is plausibly MNAR (income, political self-placement, immigration stance). The regression results of the data without imputation are shown in Table 2-5.

Table 2-3. Overview of concepts and variables.

Concept	Operationalisation	Min–Max/ Categories		Mean/ Perc.	Std. Dev.
European fiscal solidarity	Agreement to create a 'common EU fund to help any other Member State facing potential severe economic and financial difficulties in times of crisis'	0	1	0.71	0.455
Attributed responsibility	Agreement to statement: '[…] The weaker member states have mismanaged their economy and public finances.'	0	1	0.79	0.409
Cosmopolitan European identity:					
Openness towards other cultures	Belief that 'cultural life is enriched by people coming from other countries'	0	10	5.28	3.098
Concern for others outside community	Support for a 'more harmonised European social protection system, based on common principles and standards'	0	1	0.20	0.402
European identity	Stated pride 'to be European citizen'	0	1	0.72	0.446
Gender	Stated gender (1: female)	0	1	0.5	0.5
Age	Stated age, in three categories	18–34		0.27	
		35–54		0.43	
		55–70		0.19	
Political ideology	Self-placement on a 11-point left–right scale	0	10	5.12	2.546
Income	Stated feeling about present household income	Living comfortably		0.25	
		Coping		0.47	
		Finding it difficult		0.18	
		Finding it very difficult		0.10	

Concept	Operationalisation	Min–Max/ Categories		Mean/ Perc.	Std. Dev.
Education	Formal educational degree, in three categories		Tertiary	0.33	
			Up to upper secondary	0.47	
			Lower secondary	0.19	
National income	GNI per capita in 2019, recoded to range between 0 and 1	0	1	0.52	0.363
Welfare state effectiveness	Ratio of the share of people under risk of relative poverty *before* taxation and transfers and *after* taxation and transfers	58	81	68	7.3

Note: The 'don't know' responses are not shown.

Table 2-4. Overview of variable means and shares by country.

	FI	FR	DE	HE	HU	IT	NL	PL	ES	SE
European fiscal solidarity (1: Yes)	0.51	0.59	0.64	0.85	0.82	0.79	0.51	0.81	0.86	0.68
Responsibility attributions (1: Yes)	0.85	0.71	0.80	0.78	0.78	0.74	0.87	0.74	0.72	0.89
Pride to be European citizen (1: Yes)	0.73	0.63	0.64	0.74	0.85	0.65	0.60	0.83	0.81	0.75
Concern for others (1: Yes)	0.21	0.22	0.21	0.21	0.20	0.18	0.18	0.21	0.21	0.21
Openness towards other cultures	5.06	5.09	4.99	5.38	5.01	5.17	5.53	4.64	4.84	5.09
National income (rescaled)	0.71	0.69	0.94	0.000	0.09	0.50	1.00	0.04	0.40	0.90
Welfare state effectiveness	80.9	77.2	69.5	61.2	72.7	57.9	70.2	65.6	58.2	64.6
Political self-placement	5.16	5.06	4.80	5.14	5.08	5.09	5.31	5.19	4.42	5.38
Gender (1: woman)	0.49	0.51	0.49	0.46	0.51	0.50	0.52	0.51	0.50	0.50
Age										
18-34	0.28	0.29	0.30	0.32	0.23	0.24	0.23	0.30	0.24	0.24

	FI	FR	DE	HE	HU	IT	NL	PL	ES	SE
35-54	0.38	0.41	0.41	0.54	0.42	0.45	0.43	0.40	0.47	0.43
55-70	0.34	0.31	0.29	0.14	0.36	0.31	0.35	0.30	0.29	0.33
Education										
Tertiary	0.41	0.34	0.27	0.44	0.25	0.18	0.36	0.30	0.35	0.43
Upper secondary	0.48	0.45	0.55	0.52	0.55	0.45	0.34	0.65	0.26	0.49
Up to lower secondary	0.12	0.21	0.18	0.03	0.20	0.37	0.30	0.06	0.40	0.09
Income										
Living comfortably on present income	0.15	0.12	0.18	0.09	0.12	0.17	0.35	0.16	0.16	0.30
Coping on present income	0.52	0.55	0.55	0.34	0.53	0.44	0.43	0.54	0.54	0.47
Finding it difficult on present income	0.23	0.23	0.19	0.40	0.25	0.26	0.18	0.21	0.21	0.16
Finding it very difficult on present income	0.10	0.10	0.08	0.17	0.11	0.13	0.04	0.09	0.09	0.07

Table 2-5. Logistic regression with cluster-robust standard errors for European fiscal solidarity, without imputed data.

	M 1	M 2	M 3	M 4	M 5	M 6	M 7
Attributed responsibility	-0.25 (0.21)	-0.41 (0.15)*	-0.36 (0.19)	-0.38 (0.17)	0.35 (0.22)	3.48 (0.38)*	3.09 (0.39)*
Gender (1: Woman)	-0.12 (0.02)*	-0.18 (0.05)*	-0.19 (0.05)*	-0.19 (0.05)*	-0.20 (0.05)*	-0.20 (0.04)*	-0.20 (0.04)*
Political self-placement	-0.16 (0.02)*	-0.08 (0.04)	-0.09 (0.03)*	-0.09 (0.03)*	-0.09 (0.02)*	-0.09 (0.02)*	-0.09 (0.02)*
Immigration stance		-0.10 (0.02)*	-0.09 (0.02)*	-0.09 (0.02)*	-0.09 (0.02)*	-0.09 (0.02)*	-0.09 (0.02)*
Proud to be European citizen		1.39 (0.09)*	1.32 (0.10)*	1.32 (0.10)*	1.31 (0.10)*	1.31 (0.10)*	1.31 (0.10)*

	M 1	M 2	M 3	M 4	M 5	M 6	M 7
Concern for others		0.27 (0.05)*	0.30 (0.04)*	0.24 (0.15)	0.30 (0.05)*	0.30 (0.05)*	0.17 (0.15)
GNI per capita in 2019			-0.87 (0.20)*	-0.87 (0.20)*	0.02 (0.20)	-0.87 (0.20)*	-0.31 (0.18)
Welfare state effectiveness			-0.05 (0.00)*	-0.05 (0.00)*	-0.05 (0.00)*	-0.01 (0.00)	-0.02 (0.00)*
Attributed responsibility × Concern for others				0.09 (0.16)			0.16 (0.16)
Attributed responsibility × GNI per capita					-1.14 (0.24)*		-0.72 (0.13)*
Attributed responsibility × Welfare state effectiveness						-0.06 (0.01)*	-0.04 (0.01)*
AIC	10571.61	8737.85	8376.16	8378.17	8350.99	8330.17	8328.96
Log Likelihood	-5274.81	-4354.93	-4172.08	-4172.09	-4158.50	-4148.08	-4145.48
Adjusted McFadden R^2	0.036	0.130	0.169	0.169	0.172	0.173	0.175
Num. obs.	10837	10078	10078	10078	10078	10078	10078

Note: *p < 0.01. Displayed coefficients are log-odds with standard errors in brackets. Population weights included. Age, income, and formal education are not shown as the coefficients are non-significant for either of the models. Intercept is not shown.

Table 2-6. Logistic regression with cluster-robust standard errors for European fiscal solidarity, alternative specification, without imputed data.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Attributed responsibility	-0.14 (0.13)	-0.24 (0.11)	-0.22 (0.12)	-0.14 (0.13)	1.13 (0.23)*	1.73 (0.39)*	2.01 (0.39)*
Gender (1: Woman)	-0.31 (0.05)*	-0.38 (0.03)*	-0.40 (0.03)*	-0.40 (0.03)*	-0.40 (0.03)*	-0.40 (0.03)*	-0.41 (0.03)*

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Education (Ref.: tertiary)							
Upper secondary	-0.17 (0.12)	-0.07 (0.12)	-0.08 (0.08)	-0.08 (0.08)	-0.08 (0.08)	-0.08 (0.08)	-0.08 (0.08)
Up to lower secondary	-0.12 (0.04)*	0.04 (0.05)	-0.04 (0.08)	-0.04 (0.08)	-0.04 (0.09)	-0.04 (0.09)	-0.04 (0.09)
Income (Ref.: Living comfortably on present income)							
Coping on present income	-0.30 (0.10)*	-0.30 (0.10)*	-0.37 (0.08)*	-0.37 (0.08)*	-0.38 (0.08)*	-0.38 (0.08)*	-0.38 (0.08)*
Difficult on present income	-0.42 (0.16)*	-0.29 (0.15)	-0.41 (0.11)*	-0.41 (0.11)*	-0.41 (0.11)*	-0.41 (0.11)*	-0.41 (0.11)*
Very difficult on present income	-0.45 (0.11)*	-0.22 (0.10)	-0.38 (0.08)*	-0.37 (0.08)*	-0.38 (0.08)*	-0.38 (0.08)*	-0.38 (0.08)*
Political self-placement	-0.13 (0.02)*	-0.06 (0.02)*	-0.07 (0.01)*	-0.07 (0.01)*	-0.07 (0.01)*	-0.07 (0.01)*	-0.07 (0.01)*
Immigration stance		-0.09 (0.01)*	-0.09 (0.01)*	-0.09 (0.01)*	-0.09 (0.01)*	-0.09 (0.01)*	-0.09 (0.01)*
Proud to be European citizen		1.29 (0.10)*	1.21 (0.10)*	1.22 (0.11)*	1.21 (0.10)*	1.21 (0.10)*	1.21 (0.10)*
Concern for others		0.20 (0.05)*	0.24 (0.05)*	0.50 (0.05)*	0.23 (0.05)*	0.24 (0.05)*	0.46 (0.05)*
GNI per capita in 2019			-1.48 (0.38)*	-1.49 (0.38)*	-0.43 (0.38)	-1.47 (0.38)*	-0.67 (0.40)
Welfare state effectiveness			-1.61 (0.63)	-1.64 (0.64)	-1.66 (0.65)	0.53 (0.43)	-0.43 (0.58)
Responsibility attribution × Concern for others				-0.35 (0.10)*			-0.30 (0.11)*
Responsibility attribution × GNI per capita					-1.35 (0.27)*		-1.04 (0.27)*
Responsibility attribution ×						-2.95 (0.58)*	-1.69 (0.63)*

	Model 1	**Model 2**	**Model 3**	**Model 4**	**Model 5**	**Model 6**	**Model 7**
Welfare state effectiveness							
AIC	11463	9980	9816	9807	9801	9802	9790
Log Likelihood	-5721	-4976	-4892	-4886	-4883	-4884	-4876
Adjusted McFadden R^2	0.032	0.100	0.117	0.118	0.119	0.119	0.121
Num. obs.	10078	10078	10078	10078	10078	10078	10078

Note: *p < 0.01. Displayed coefficients are log-odds with standard errors in brackets. Population weights included. Age is not shown as the coefficients are non-significant for either of the models. Intercept is not shown.

3 Solidarity on a divided continent. Perceptions of ‘Centre’ and ‘Periphery’ determine European citizens’ willingness to help other EU countries[12]

Abstract

This article argues that citizens structure their fiscal solidarity with other EU countries along a ‘centre–periphery’ divide. This claim is empirically investigated using a Heckman probit selection model on two surveys in 2020 and 2021 among citizens of 13 European countries, which allows to account for differences in the familiarity of the issue and other countries. The results show that individuals in centre countries are more likely to express solidarity with other centre countries than with periphery countries, and vice versa. More broadly, the findings show that citizens perceive a power hierarchy among EU member states, and that there is a spatial relational dimension to European fiscal solidarity. These results underscore the challenges facing the EU in achieving greater fiscal solidarity. They also highlight the need to address the structural inequalities between member states.

Keywords: European Union, solidarity, centre–periphery divide

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3.1 Introduction

If an EU country were to experience a crisis that required financial resources beyond its means, would citizens of other EU countries be willing to express solidarity? Based on existing research, well-informed experts would answer that the country in need could hope for the support of, for instance, those citizens who identify with Europe (Verhaegen, 2018) or those who have a cosmopolitan outlook on the world (Kuhn et al., 2018). They may also argue that the willingness to express solidarity depends on the policy design of the support for the country in need (Burgoon et al., 2022), and what kind of crisis the country was in (Katsanidou et al., 2022).

Research on European solidarity is only beginning to explore the role of the spatial dimension to European solidarity. We know that people have greater trust in other countries that are culturally, linguistically or geographically close (Klingemann and Weldon, 2013), and we know that individuals apply deservingness heuristics not just on other individuals, but on other countries as well (Haverland et al., 2022; Heermann et al., 2023). This article contributes to the latter literature on the role of country attributes and argues that the characteristics of the country in need, as well as the relationship between a citizen's country and the recipient country, both play a crucial role in determining a citizen’s willingness to demonstrate fiscal solidarity. Specifically, it is hypothesised that the existence of a centre–periphery divide within the EU separates countries and affects citizens' attitudes towards aiding other nations.

The empirical analysis is based on a pooled dataset of two surveys of 13 EU countries by the European University Institute and YouGov (Hemerijck et al., 2020; Hemerijck et al., 2021). Respondents are asked to express their willingness to financially help a specified country in crisis. This information then provides the opportunity to estimate the specific recipient country’s variance in European solidarity. By using a Heckman-style probit selection model (Heckman, 1979), the analysis considers the concern that European solidarity is an issue with limited real-life relevance for most ordinary citizens. This is the first time that the salience of European solidarity has been explicitly modelled. The use of a selection model suggests that an exclusive national identity affects the substance of opinions about solidarity less than previously thought. It also suggests that

gender does not directly affect the substance of solidarity opinion at all, although men are much more likely than women to respond to the survey item.

My findings show that citizens, when asked to express fiscal solidarity, indeed distinguish between countries of the centre and countries of the periphery. Citizens of the centre countries are more likely to express solidarity with other countries of the centre than of the periphery, and vice versa. While this divide works in both directions, it is notably the peripheral countries that are subject to a handicap among citizens in centre countries. This effect remains, even when controlling for geographic and cultural proximity, economic performance, and whether countries are in the eurozone. Further, an individual's sociotropic political efficacy – that is, the belief that one's country has a say in the EU – explains some variance in the attitudes towards European fiscal solidarity. The centre–periphery divide mediates this belief as well.

3.2 The sociotropic nature of European fiscal solidarity

Extant research has so far mostly focused on individual-level attitudes to explain the variations in European fiscal solidarity: not without reason. Ample evidence suggests that an important proportion of this variance can be attributed to individual-level factors, including (sociotropic) notions of self-interest (Bobzien and Kalleitner, 2021; Mariotto and Pellegata, 2023); identity (Kuhn et al., 2018; Nicoli et al., 2020), and political beliefs (Medrano et al., 2019).

An important assumption of this article is that attitudes towards European fiscal solidarity are based strongly on sociotropic orientation. Citizens perceive European solidarity as the solidarity of one country – or a community of countries, such as the EU – with another country in need. Much of the information needed to assess the individual costs of European fiscal solidarity is not available or costly (i.e., citizens need to engage to be informed), and benefits are rarely framed in individual terms. Public discourse often frames European solidarity in macro terms, i.e., about countries' EU budget net balance. In citizens' mental representations, the subjects and objects of European fiscal solidarity are not individual humans, but nation-states.

We already know that part of the variance of European solidarity is not explained by attributes of the individual, but by the relational dimension of redistribution across

Europe. Studies show that the macro context – i.e., factors attributed to one's country – explain a non-trivial part of the variance. For instance, countries in which citizens expect to be contributing to European fiscal solidarity are less willing to show solidarity (Vasilopoulou and Talving, 2020). Furthermore, research indicates that national welfare institutions and other contextual factors, including a country's level of national debt, can shape individuals' attitudes towards expressing European solidarity (Daniele and Geys, 2015; Baute et al., 2019b).

This article contributes to a better understanding of the relevance of the attributes of recipient countries for European fiscal solidarity and highlights the relational nature of solidarity attitudes. Notably based on deservingness criteria developed in the welfare state literature (van Oorschot, 2000), this branch of literature shows how citizens assess the deservingness of other EU countries based on similar criteria as if they were asked to help other individuals. For instance, research has shown that citizens are more willing to express solidarity with countries that have shown reciprocal behaviour (Reinl and Katsanidou, 2023; Afonso and Negash, 2024), with countries that are in more dire need (Haverland et al., 2022; Afonso and Negash, 2024), that are closer in terms of identity (Afonso and Negash, 2024) and that share norms of a political community (Heermann et al., 2023).

European fiscal solidarity is understood here as the "preparedness to share financial resources" (Stjernø, 2005: 2) with people in other European countries who are worse off, or who are in need, through actions and funds mobilised by state institutions, including the EU. As such, European fiscal solidarity is not *supra*national, but *trans*national. It does not refer to an abstract EU-wide scheme. EU policies like NextGenerationEU (NGEU), the 750 billion Euro investment programme adopted by the EU in response to the Covid-19 pandemic, benefit all EU countries in principle but have uneven redistributive effects. It is assumed that citizens are aware that some countries benefit more than others and that their evaluation of such EU-wide policies is influenced by their willingness to help those countries that benefit most. The argument is not to deny the existence of a European solidarity space – the idea that Europeans are more willing to show solidarity with each other than with 'outsiders' (Gerhards et al., 2019) – but to underscore that, within Europe, the attributes of the recipient country play a role. While there is international solidarity beyond the EU, this article exclusively focuses on solidarity within the EU.

3.3 A dual centre–periphery divide

My central claim here is that a centre–periphery divide clusters geographically and politically close countries, and it structures the relationship of citizens' solidarity with other countries accordingly. The basic terminology of the centre–periphery divide is borrowed from cleavage theory, in which Lipset and Rokkan (1967) seek to explain how political interests merge into societal groups and create stable party systems. The centre–periphery cleavage emerges in the context of nation-building. As nations grow in territory, their power is distributed in an increasingly asymmetric way, both spatially as well as in the sense of group membership. Throughout the process of nation-building, power remains at the centre – again, both as a geographical idea as with regard to a culturally or otherwise dominant social or ethnic group – that exerts control over the periphery, which is geographically or culturally distant from the centre (see also Treib, 2021).

Based on this idea, the argument of this article is that citizens make sense of EU politics as if the EU is a nation-state in the making. As some have pointed out, European integration can be understood as a process of state-building (Genschel and Jachtenfuchs, 2016; Ignácz, 2021). What started in the 1950s as an international organisation of tightly defined thematic competences developed over the years into a governance system *sui generis*. The EU has taken over competences or is involved in policies associated with core state competences, such as customs and borders, currency, and judicial oversight. At the same time, the organisation has grown from a community of six countries to a union of 27 countries. It should be stressed that the terminology of centre and periphery also appears in the literature about differentiated integration (see, for instance, Schimmelfennig et al., 2015), but this constitutes a different concept. In this article, the understanding of the centre–periphery divide is about influence of countries in EU politics, i.e. centre countries are countries that have a more favourable position in EU decision-making than peripheral countries. In the context of differentiated integration, centre countries are those countries who are deeper integrated (e.g. being part of the Economic and Monetary Union). These two different understandings do not necessarily intersect, and some centre countries in the sense used here may be considered as peripheral countries in the sense of differentiated integration. For instance, Denmark is deemed a centre country in this article, but may be considered a peripheral country given

its opt-outs in several EU policies (for a discussion on different EU polity visions, see Fabbrini (2015)).

The understanding of the divide here is ‘thin’ in comparison to the macro-sociological understanding of the cleavage proposed by Lipset and Rokkan (1967). The centre–periphery divide proposed here is best understood as a heuristic. The argument is that citizens recognise the division among countries of the EU and use it to inform their attitude towards fiscal solidarity with other countries. They rely on such cues because they often lack the knowledge and interest necessary to have an informed opinion on EU politics. Cues provided by national politics (Brosius et al., 2020) or by domestic political actors (Sanders and Toka, 2013; Pannico, 2020) have been shown to be influential when evaluating EU policies (see also below). As EU politics remains a low-information environment, and citizens’ involvement is still limited, citizens rely on these cues from influential actors to form an opinion (Rapeli, 2014), saving themselves time and mental energy.

Studies of the coalition-making in the Council of the EU highlight that negotiations among countries in the EU are complex and coalitions change frequently. However, there are studies that do identify a structure along the fault lines of centre and periphery (Naurin and Lindahl, 2008; Plechanovová, 2011; Kaeding and Laatsit, 2011), among other factors. This is particularly the case when it comes to redistributive policies (Zimmer et al., 2005). The negotiations for NGEU, which saw a coalition of frugal countries on the one side and a coalition of the peripheral ‘Friends of Cohesion’ on the other side, is a case in point (De La Porte and Jensen, 2021).

The centre–periphery divide essentially combines of two divides – an East–West divide and a North–South divide. These divides differ in their origins, but both contribute to a power dynamic between member states of the EU, that is, between an economically and politically powerful ‘centre’ in the north-western part of Europe and an economically and politically less powerful ‘periphery’ in the south and the east of Europe. It should be stressed that this geographical constellation of the divide is not a theoretical concept, but of a descriptive nature. The two divides are outlined in the following paragraphs. Because the interest of this article is in the effect of being “in the periphery” rather than the exact

composition of the different peripheries, in the empirical part, the two peripheral groups will be merged.

The East–West divide stems from the late arrival of Eastern and Central European countries, including Cyprus and Malta, to the EU. With the 'big bang enlargement' of 2004 and 2007, the EU integrated 12 additional member states: its most ambitious enlargement to date (Epstein and Jacoby, 2014). The then-15 members of the European Community laid down, specifically for these candidate countries, 'the Copenhagen criteria', a set of political, economic, and legal conditions which the acceding countries needed to fulfil prior to joining the EU. Rather than a compromise between legal traditions of two parties, this procedure of accession was one-sided: either the candidate countries fulfilled these conditions, or they could not join. This power asymmetry at the time of accession suggests that benefits are distributed unevenly between those countries who are already members and who can define terms of accession on the one side, and the joining country on the other side. The big bang enlargement differs from previous enlargement waves, as the EU itself was much more deeply integrated at the time of accession (notably in fiscal terms, through the adoption of the common currency), the much greater income division between existing and acceding member states, and the general geopolitical context. Divisions between East and West are still seen today at a political level, as well as at the level of individual attitudes (Anghel, 2020).

The North–South divide became apparent during the European debt crisis in the 2010s. Interpretations differ as to the origins of such a divide. Whereas some argue that the divide came from differences in political institutions that affected the vulnerability of national economies, others argue that the monetary union had an uneven effect on countries in the centre and at the periphery (see Pérez, 2019: 990). The European debt crisis deepened the divide in two ways. First, by increasing the material divide, since the economies of crisis countries contracted much more than those of creditor countries, and still lag behind, even today. Second, the crisis management of EU institutions – driven primarily by creditor countries' interests (Beramendi and Stegmueller, 2020), as well as by the prominent use of stereotypes in the media (Chalániová, 2013) depicting other nationalities at the peak of the crisis – further exacerbated this divide (see also Hooghe and Marks, 2018).

While these two divides differ in their origins, they affect individual attitudes in similar ways. Regardless of the underlying reasons for the divide, the division is identified by ordinary citizens through the reception of cues, as outlined above. Citizens perceive whether their country is politically aligned with other countries and adjust their solidarity accordingly. Consequently, they form solidarity attitudes that are more affirmative towards states that are perceived to be on the same side of the divide as their own country.

> *H1a*: Citizens in centre countries are more likely to express solidarity with other centre countries than with peripheral countries.
>
> *H1b*: Citizens in peripheral countries are more likely to express solidarity with other peripheral countries than with centre countries.

The effect of the centre–periphery divide should be seen in a larger context of identification patterns of individuals. While a European identity is found to have a positive effect on European solidarity (Nicoli et al., 2020), research begins to acknowledge the complexities of European identification. As Reese and Lauenstein (2014) discuss, citizens of European countries evaluate each other based on the degree to which they represent the 'ideal European'. Mummendey and Wenzel (1999) suggest that members of a group tend to project characteristics of their group on the superordinate group category. In other words, Europeans assess the 'Europeanness' of other nationalities based on how similar the nationality is with their own nationality. Consequently, ideas of the ideal European differ between countries: Danes may consider that Swedes resemble the ideal European more than the Portuguese do. Conversely, the Portuguese may consider that the Spanish resemble the ideal European more than the Danes do (see also Bianchi et al., 2010).

Hence, citizens of geographically and culturally close countries can be expected to be more likely to show solidarity with each other than with countries that are geographically or culturally more distant, even in the absence of a centre–periphery divide (Deutschmann et al., 2018). However, these are two different mechanisms. Solidarity – as generated by the centre–periphery divide – comes from an uneven distribution of power within the EU. This uneven distribution of power results in a set of shared political expectations and interests within the country groups on either side of the divide, as well as in a polarisation of the groups. This contributes to citizens' understanding as belonging to a political group.

Because the divide is based on economic and political power, countries of the centre are richer than peripheral countries. The socio-economic divide between EU countries and the centre–periphery divide overlap, and, arguably, mutually reinforce each other. Being in the centre allows countries to push more successfully for EU policies that ensure their interests, and economic success increases a country's influence in the EU (see Tallberg, 2008). Since there is strong evidence that utilitarian considerations are also relevant for the formation of EU public opinion (Foster and Frieden, 2017; Foster and Frieden, 2021), it is important to distinguish the centre–periphery divide from such considerations. While the centre–periphery divide is based on identification and group alignment, explanations based on macro-economic conditions relate to mechanisms of self-interest and deservingness of others. As outlined, the centre–periphery divide expects that citizens in rich centre countries show more solidarity among themselves than with outsiders in the periphery (and vice versa, that citizens in poorer peripheral countries show more solidarity among themselves). On the contrary, models based on macro-economic conditions would expect that poorer countries receive more solidarity because they are more deserving (Heermann et al., 2023) and that people in richer countries give less solidarity because it is less in their self-interest (Vasilopoulou and Talving, 2020). The centre–periphery divide provides thus a distinct and supplementary explanation that considers the relationship between two countries, which alternative models cannot account for.

An important assumption of the centre–periphery divide is that citizens perceive the influence their country has in the EU. The belief that one's country can shape EU decisions is labelled here as 'sociotropic political efficacy'. Craig et al. (1990) refer to internal political efficacy as the belief that one is competent to participate in politics, and external political efficacy as the belief that institutions are responsive to one's demands. Political efficacy has been shown to be associated with a more positive attitude towards the EU (McEvoy, 2016). As Hechter (1987) would argue, group solidarity – such as the solidarity within the EU – requires some level of formal control. When citizens believe that their countries can exert some control, they are more likely to be willing to express solidarity. Citizens who think that their country does not have influence over policy outcomes are less likely to express solidarity with other countries as a result of their general disenchantment with EU integration. The centre–periphery divide suggests that

this applies notably to citizens of peripheral countries, which are, by the nature of their disadvantaged position in EU politics, less influential in EU politics.

> *H2a*: Individuals who consider their country not to be influential are less likely to express solidarity with other EU countries than individuals who consider their country to be influential.
>
> *H2b*: The marginal effect of sociotropic political efficacy on citizens' willingness to express solidarity with other EU countries is greater in centre countries than in periphery countries.

3.4 Citizens' interest in EU politics and familiarity with other countries

Many citizens do not hold strong attitudes on European solidarity, and the attitude strength concerning some countries may be weaker than for others. For instance, in the survey used here among French respondents for the empirical analysis, only 63% were able to indicate whether they thought that their country should help the country of Latvia in the case of a major crisis. As outlined, due to the multi-layered design of European fiscal solidarity policies, as well as a framing which rarely revolves around individual costs and benefits, most citizens do not relate to such policies at the personal level (Armingeon, 2020). Some citizens do not hold an opinion about solidarity, and they lack the motivation to form an opinion. As already highlighted, EU politics is of low salience, and consequently, citizens' knowledge of it is limited (Rapeli, 2014). It is overly optimistic to assume that all EU citizens are capable of, and interested in, making assessments about their willingness to express solidarity with any other given European country.

Furthermore, citizens are not equally familiar with other EU countries, and many citizens do not know whether another country is a member of the EU. For instance, Eurobarometer surveys regularly ask respondents whether they think Switzerland is a member of the EU, and a significant proportion of the respondents respond affirmatively (European Commission, 2020). In a specific crisis, the salience of a recipient country and its relevant attributes may be high due to increased media coverage (e.g., Greece during the European debt crisis of 2009/2010). However, it is unlikely that respondents have readily stored assessments of all countries. It is also for this reason that the theoretical

model does not suggest that eurozone membership has any effect on citizens' attitudes, because it cannot be assumed that citizens know with enough certainty which countries form part of the eurozone, nor the exact implications of interdependence of a shared currency.

The centre–periphery divide does not only give structure to the content of citizens' opinions, but it also identifies which countries are more likely to be present in citizens' minds. Since the centre countries are the dominant actors within the EU, and as such receive more attention, they should be more present in citizens' minds:

> *H3*: Citizens, both at the centre and at the periphery, are more likely to have a crystallised solidarity attitude of countries at the centre than on countries at the periphery.

Few studies assess the relationship of ordinary citizens with other countries (for an exception, see Klingemann and Weldon, 2013), and there is no systematic research on which attributes of a country increase the probability that a citizen is familiar enough to express whether they would be willing to help this country financially. Those surveys that have been carried out focus on public opinion in the US. One survey conducted by YouGov found that US citizens have more favourable views on countries that are culturally, linguistically and geographically close, whereas many respondents have never heard of smaller countries that are geographically distant (Smith, 2020). Since it is uncertain how these findings might translate to EU citizens, and how a general view of another country is related to a familiarity with it and to the willingness to help it, no hypotheses will be formulated in this regard.

We know more about the individual attributes that define the salience of EU politics. Existing research suggests that motivation drives knowledge about the EU. Those with an intrinsic interest in European politics know more about it (Karp et al., 2003; Rapeli, 2014). Identifying as a European can be expected to have a positive effect on an individual's interest in EU politics, as can their political efficacy. Furthermore, satisfaction with national-level democracy has also been found to be positively associated with interest in EU politics (Karp et al., 2003; Rapeli, 2014). The empirical analysis will consider these factors.

3.5 Methodology and data

The empirical analysis relies on the pooled data from two surveys conducted by the research project *Solidarity in Europe* by the European University Institute and YouGov. Random samples were drawn from the more than 800,000 international members of the YouGov panel in April 2020 and April 2021, in 13 member states of the EU[13] as well as the UK with a respective sample size of about either 1000 or 2000 per country. For the purposes of this article, respondents from the UK are excluded from the analysis. The country sample includes member states that reflect the theoretical diversity relevant to the topic. The pooled dataset contains 39,203 individual respondents.

The theoretical model makes assumptions both about the salience of solidarity as well as the substantive opinions about solidarity with other countries. Importantly, the set of variables explaining the salience of solidarity differs from the set of variables that explain the substance of the opinions. Satisfaction with national democracy, for instance, can be expected to increase the probability of expressing an opinion about solidarity, although there are no theoretical reasons to assume that this affects the direction of the opinion. Ignoring this in the empirical analysis would lead to what Certo et al. (2016: 2640) label ‘sample-induced endogeneity’.

To correct for the sample selection bias, the analysis is based on a Heckman probit model with sample selection (Heckman, 1979; van De Ven and van Praag, 1981). This kind of model first estimates the propensity of an individual to have an opinion and then uses these outputs to create a selection parameter to be included in the outcome model. Unlike a multinominal model – which could include ‘Don’t know’ as one of the response options – a Heckman selection model allows for a different set of predictor variables to be chosen for the selection equation than for the outcome equation. From a theoretical point of view, a Heckman model better represents the assumption that citizens go through a two-step thought process when confronted with a survey question: First, respondents reflect whether they have an answer to the question. Second, if that reflection brings an affirmative response, the respondent answers the question.

[13] Denmark, Finland, France, Germany, Sweden, Greece, Hungary, Italy, Lithuania, Netherlands, Poland, Romania, and Spain.

As each respondent indicated their willingness to show solidarity for up to nine countries, and as individual respondents' attributes are expected to play an important role, a multi-level model is used that accounts for the clustered nature of the data. The basic unit is the country rating, clustered within individuals. Exploratory data analysis reveals that the variance explained at the level of the individual is very high. In an empty model, the $ICC_{individual}$ (Intra-Class Coefficient of the individual level) is 0.804. In contrast, the variance explained at the level of the respondent's country is trivial ($ICC_{country}$ = 0.02). The results of a simple two-level hierarchical model are presented here. As a robustness check, a three-level model has also been performed, with no substantial differences in the findings.

3.5.1 Operationalisation of variables

Dependent variable

The dependent variable is the individual European fiscal solidarity. The survey includes the following item:

> 'Imagine a country suffered some kind of major crisis, and was looking for help from others. Do you think [country] should or should not be willing to offer financial help to each of the following countries?'

Respondents are asked to answer this question for a list of nine countries. The list consists of a random draw of all 27 EU member states, as well as the UK and seven non-European countries. Respondents can answer 'Should be willing to help', 'Should not be willing to help', or 'Don't know'. Since the dataset is reduced to EU countries only, the number of country items per respondent varies between two and nine (with a mean of 6.88 countries per respondent).

Solidarity is a multidimensional attitude that cannot be captured with a single survey item. The survey item used here asks about bilateral, financial support in case of an unspecified crisis. It is important to note that the results may not translate to other forms of solidarity. For instance, Heermann et al. (2023) show that individuals tend to be more conditional for giving financial support compared to support in goods. It is also important to note that the wording emphasises the giving part of solidarity, which may lead respondents to think less of their country's self-interest. Finally, the type of crisis affects

the willingness to help another country, as does the policy design of the instrument (Cicchi et al., 2020; Beetsma et al., 2022; Burgoon et al., 2022; Katsanidou et al., 2022). Nevertheless, the survey item is a useful operationalisation of the concept of European solidarity.

Overall, about 22% of the responses were 'Don't know'. There is significant variance between country pairs. Of Greek respondents asked about Cyprus, only about 7% opted for a 'Don't know' response. At the other extreme, about 37% of French respondents opted for the 'Don't know' response when asked about Latvia. Overall, of those respondents with an opinion, about 63% express an affirmative opinion. The highest level of solidarity is measured among Spanish respondents for Portugal, at about 86%. The lowest level is found among Greek respondents for Germany, at about 33%. Table 3-4 and Table 3-5 in the chapter appendix provide an overview of all dyadic relationships.

Independent variables

The cornerstone of this article is the argument that the centre–periphery divide between countries shapes the attitudes of citizens. Based on the theoretical reasoning for the empirical analysis outlined in the previous section, EU countries are categorised as shown in Table 3-1.

Table 3-1. Countries arranged by the centre–periphery divide.

Country group	Country
Centre	Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxembourg, Netherlands, Sweden
Periphery	Bulgaria, Croatia, Cyprus, Czechia, Estonia, Greece, Hungary, Ireland, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain

Any classification of countries has its challenges (for a good discussion on the challenges of classification, see Gräbner and Hafele (2020)). Some countries, such as Italy and Ireland, constitute fringe cases. For these countries, arguments could be made to assign them to the other group. For instance, Italy did not require any financial assistance during the European debt crisis, although it struggled fiscally, and its economic model resembles that of other countries of the Southern periphery. Ireland, in turn, did require financial assistance during the European debt crisis, but it rebounded quickly and

did not have to endure the drastic reform conditions that Greece, Portugal or Spain had to go through. Some countries may be particularly influential on either side of the divide, for instance, Germany, Hungary and Greece. As a robustness check, the analysis was performed changing the group categorisation of Ireland and Italy respectively and excluding influential countries, without any substantial changes in the findings. As a further robustness check, the two peripheries are treated as distinct country groups. The results of these additional analyses can be found in Table 3-7 in the chapter appendix.

It is further necessary to include factors that may confound the effect of the divide. First, dummy variables that capture whether a country is a member of the eurozone – both for the respondent's country and for the recipient country – are included. Second, the centre–periphery divide is closely related to economic development, with the centre being richer and the periphery poorer. The inclusion of the national Gross Domestic Product (GDP) per capita in 2020 (data from Eurostat) ensures that the country group variable is not just an imperfect measurement of national income. This variable has been rescaled so that the highest value in the sample (Luxembourg) is 1 and the lowest value (Bulgaria) is 0. Table 3-2 presents the bivariate correlations of macro level attributes of recipient countries. The correlation between the GDP and the country group is very high. It should be noted that the bivariate correlations among the 13 respondents' countries are not substantially different.

Finally, the centre–periphery divide clusters countries that are geographically and culturally close. To disentangle the effect of the divide from the effect of these factors, a dummy variable that measures whether two countries share a common border is introduced. Further, the Social Connectedness Index measures the intensity of social connections on Facebook between two locations (here, between countries) (Bailey et al., 2018; see also Afonso and Negash, 2024). This variable does not provide an ideal fit with the theoretical concept of cultural proximity and is influenced, inter alia, by large diaspora communities. But it is, to the best of the author's knowledge, the only measure with complete data for the countries under investigation. As a robustness test, the analysis was confirmed using a measure of cultural distance (Kaasa et al., 2016), although this has missing values for four EU countries. The inclusion of this alternative variable leads to substantively similar results.

Table 3-2. Bivariate correlation of macro variables.

	Country group	Euro as currency	Social connectedness	Shared border	GDP per capita	Population size
Country group	-	-0.210	-0.010	-0.119	-0.844	-0.320
Euro as currency	-	-	0.059	-0.032	0.250	0.094
Social connectedness	-	-	-	0.156	0.062	-0.085
Shared border	-	-	-	-	0.078	0.132
GDP per capita	-	-	-	-	-	0.052
Population size	-	-	-	-	-	-

Note: Country group (1) = Periphery; The table shows the bivariate correlation for all 27 EU member states. Correlations for sampled countries (i.e., 13 EU member states) are slightly different.

Further, individual-level variables are included. It is hypothesised that the centre–periphery divide has an indirect effect on European fiscal solidarity through sociotropic political efficacy. The survey includes the following item:

> ‘Please tell us how far you agree or disagree with the following statement?
> [Country] is influential in European affairs.’

Respondents answer on a fully labelled four-point Likert scale (‘Strongly agree’, ‘Somewhat agree’, ‘Somewhat disagree’, ‘Strongly disagree’) or ‘Don’t know’. Influence here can be understood either as a comparison with other countries – in the sense intended for the purposes here – or as a comparison with EU institutions. Such an interpretation by respondents may rather reflect Eurosceptic attitudes than a perception of a power hierarchy. This second interpretation may explain why, even in centre countries, a large share of respondents believes that their country is not influential. Among citizens in centre countries, 64% of respondents agree that their country is influential, compared to 39% of respondents in the periphery.

Identity is included as a control variable. It is likely to influence the probability of expressing European solidarity and is likely to be correlated with the sociotropic political

efficacy of an individual. Respondents can indicate that they identify as ‘European’, ‘national only’, ‘European and national’, ‘national and European’, or as ‘none of these’.

In addition, socioeconomic variables are included – namely gender, age, subjective income, and political ideology (seven-point scale recoded to three categories ‘Left’, ‘Centre’, ‘Right’). Unfortunately, the survey does not include variables to measure formal education, which is a shortcoming of the data. That being said, it is unlikely that the omission of the education variable leads to biased results as concerns the key variables of interest, given that the centre–periphery divide is a variable on the macro level. Since the dataset contains two survey waves, a dummy variable for the survey year is also included.

Operationalisation of variables of the selection model

The dependent variable of the selection model is based on the same survey item as the dependent variable of the outcome model. However, respondents are encoded as having expressed an opinion (1) or as having used the ‘Don’t know’ answer option (0).

For the independent variables of the selection model, all independent variables of the outcome model are included. Given that previous studies found external political efficacy and satisfaction with national democracy as determinants of knowledge about the EU, such variables are also included in the model. In the relevant survey item for political efficacy, respondents are presented with the following statement: ‘People like me have a voice in the European Union’. They either answer on a four-point Likert scale, or answer that they don’t know. Concerning their satisfaction with national democracy, respondents are asked to evaluate how satisfied they are with the way in which democracy works in their own country on an end-labelled scale from 0 (‘Extremely dissatisfied’) to 10 (‘Extremely satisfied’). To avoid concerns regarding the linearity assumption, the variable has been recoded to three categories: low, medium, and high satisfaction. At the macro level, the population size of the country is included, in addition to the macro variables of the outcome model.

3.5.2 Regression analysis

Table 3-3 shows the estimated average marginal effects based on the complete model, including the two interaction effects. The model has been constructed using stepwise extension, including the interaction terms, one by one. Table 3-6 in the chapter appendix

shows the underlying probit coefficients of all models performed. To test whether the inclusion of the interaction terms improves the models, Likelihood-Ratio (LR) tests have been performed. The tests show that the full model presented in Table 3-3 provides a better fit than the smaller models.

Table 3-3. Average marginal effect of the multi-level probit selection model.

	Selection model	**Outcome model**
Country group of respondent's country (1: Periphery)	**0.013 (0.005)***	**0.061 (0.007)***
Country group of recipient country (1: Periphery)		
Centre × Periphery	**-0.026 (0.002)***	**-0.065 (0.003)***
Periphery × Periphery	**-0.017 (0.002)***	**0.019 (0.003)***
Sociotropic political efficacy (Ref: Agree)		
Disagree × Centre	0.006 (0.003)	**-0.099 (0.005)***
Disagree × Periphery	-0.004 (0.003)	**-0.065 (0.005)***
Subjective income (Ref: Better off)		
Neither better nor worse off	**-0.020 (0.003)***	-0.003 (0.004)
Worse off	**-0.019 (0.004)***	**-0.016 (0.004)***
Political self-placement (Ref: Centre)		
Left	-0.002 (0.003)	**0.015 (0.004)***
Right	0.010 (0.004)	**-0.045 (0.005)***
Age (Ref: 18–24)		
25–34	-0.006 (0.005)	-0.003 (0.007)
35–44	-0.012 (0.005)	-0.007 (0.007)
45–54	-0.008 (0.005)	-0.006 (0.006)
55+	-0.014 (0.004)	**-0.017 (0.006)***
Gender (1: Male)	**0.036 (0.003)***	-0.005 (0.003)
Identity (Ref.: Exclusive European)		
Exclusive national	-0.014 (0.006)	**-0.077 (0.008)***
Predominant European	0.007 (0.008)	0.009 (0.011)
Predominant national	0.000 (0.006)	0.010 (0.008)
Shared border (1: Yes)	**0.022 (0.001)***	**0.041 (0.002)***
Social connectedness (No. of Facebook connections)	**0.000 (0.000)***	**0.000 (0.000)***
GDP per capita of respondent's country (0-1: Min.-Max.)	0.023 (0.014)	**0.137 (0.018)***
GDP per capita of recipient country (0-1: Min.-Max.)	-0.004 (0.004)	**-0.065 (0.005)***
Respondent's country has the euro (1: Yes)	0.003 (0.003)	0.004 (0.004)

	Selection model	Outcome model
Recipient country has the euro (1: Yes)	0.001 (0.001)	**0.019 (0.001)***
Year (1: 2021)	0.001 (0.002)	0.000 (0.003)
Population size of recipient country (in Mio.)	**0.000 (0.000)***	-
Political efficacy (Ref: Agree)		
Disagree	-0.004 (0.003)	-
Satisfaction with democracy (Ref: High satisfaction)		
Low satisfaction	-0.008 (0.004)	-
Medium satisfaction	**-0.014 (0.00)***	-
Inverse Mills Ratio	**-1.83 (0.02)***	
AIC	201,196	
Log Likelihood	-100,566	
Num. obs.	269,782	
Num. groups (Individuals)	39,203	
Var: Individuals (Intercept)	2.78	

Note: Standard errors in parentheses. Coefficients of 'Don't know' responses and Constant omitted. Statistically significant coefficients in bold; *p < 0.01

The analysis provides strong support for the argument that citizens are more likely to show solidarity with countries in their own group (*H1a* and *H1b*). Figure 3-1A shows the estimated marginal effect of the interaction between the country groups for the respondent's country and the recipient country. The *x* axis denotes the country group of the respondent country. The graph shows the point estimates and the 99% confidence intervals for the respective country groups of the recipient country. Citizens in the centre countries are more likely to express solidarity with other central countries than with peripheral countries. The inverse applies for citizens in peripheral countries, although to a much lesser extent. In fact, the solidarity for centre countries does not differ at all between respondents at the centre and at the periphery. The interaction effect stems solely from the difference of solidarity for peripheral countries. While citizens in the centre countries show less solidarity for this group of countries, those at the periphery show more solidarity. This suggests that the centre–periphery divide is driven mostly by a handicap of the peripheral countries among citizens in the centre. In other words, the results suggest that citizens in the centre countries have a two-class Europe in mind, according to which some countries 'deserve' less solidarity because of their peripheral position.

This effect shows even when controlling for a wide range of variables with a confounding effect. The model considers the effect of both a shared border and cultural proximity, which are positive and statistically significant. Citizens are more willing to express solidarity with countries in their own country's neighbourhood as well as with those with which they share cultural traits. The GDP per capita of both the respondents' and the recipient countries, as well as whether either the respondent's or the recipient country is in the eurozone, has also been controlled for.

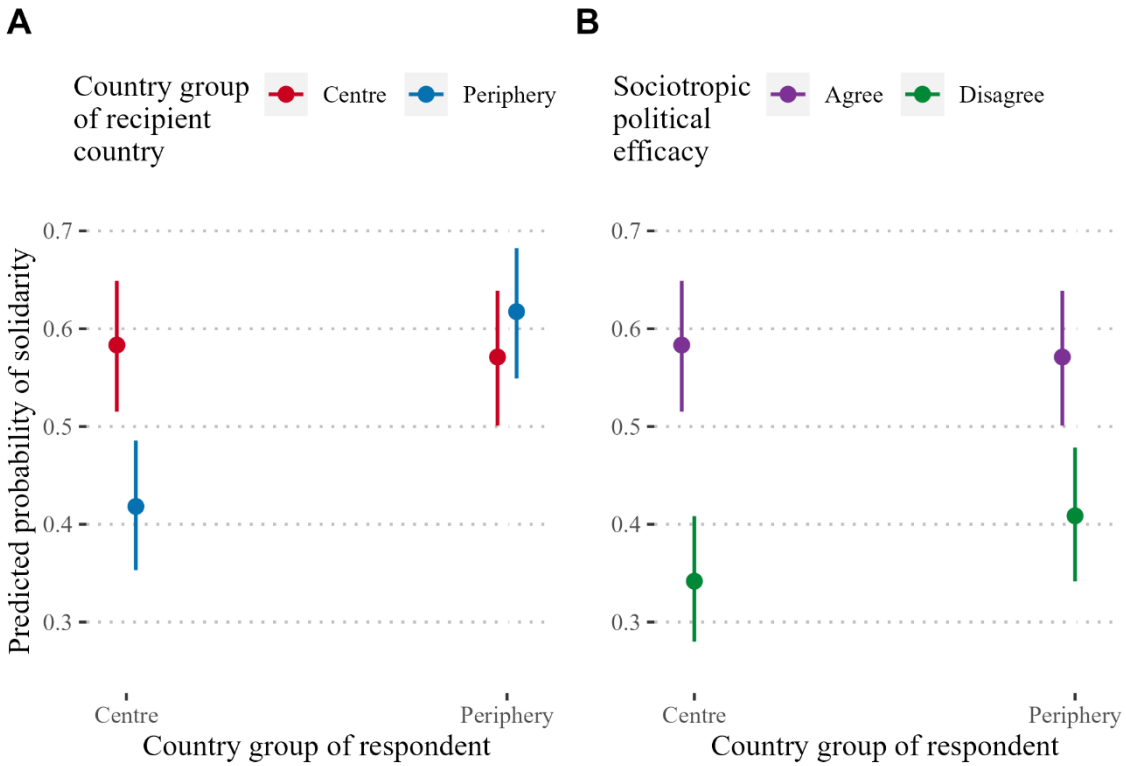

Figure 3-1. Estimated marginal effects based on the outcome model. 99% Confidence intervals.

The theoretical model suggests further that citizens who consider their countries to be influential in the EU are more likely to express solidarity with other EU countries (*H2a* and *H2b*). This effect was expected to be particularly strong in centre countries. The empirical analysis lends support for these hypotheses. The coefficient has the expected sign and is statistically significant across all models. All else being equal, citizens who believe that their country is influential in the EU are on average 8.7% more likely to express solidarity with other countries. The statistically significant interaction term suggests that this effect is stronger in centre countries than in peripheral countries. As mentioned before, LR tests confirm that the inclusion of the interaction term improves

the model. Figure 3-1B shows what this means in terms of the predicted probability of solidarity with other countries. The *x* axis denotes the country group of the respondent's country. In peripheral countries, the effect of sociotropic political efficacy is significant, but modest in size in comparison. Whereas among respondents from the centre countries, those who do not think their country is influential are 9.9% less likely to express solidarity. Among citizens from the peripheral countries, this effect is reduced to 6.5%: still a very strong effect. As Table 3-3 shows, no other individual-level variable has such a large effect on solidarity.

The Inverse Mills Ratio (IMR) is negative and statistically significant, which is evidence for a selection bias. The findings of the selection model approach do indeed differ from previous studies. The model suggests that those with an exclusive national identity are less likely to show solidarity, as expected, however, difference between the remaining identities are non-significant. This is surprising, given that previous research has emphasised the relevance of European identity for European solidarity (e.g. Kuhn and Kamm, 2019). Second, the effect of gender is not significant. Men are just as likely as women to express solidarity with other countries. Again, some studies (e.g. Katsanidou et al., 2022) report that men are more likely to express European solidarity. In both cases, these divergent findings can be explained by the inclusion of the selection parameter. Both gender and an exclusive national identity show significant effects in the selection model (although in the latter case only at $p < 0.05$). Women, and those with an exclusive national identity, are less likely to give a response to the survey question. Running the probit regression without the selection parameter increases the effect size of an exclusive national identity by about 15 percent and shows a statistically significant positive effect of male gender. This contrasts with the reported findings of the probit model with sample selection (see the chapter appendix).

H3 stipulates that citizens are more likely to have an opinion about solidarity with a centre country than with a periphery country, regardless of whether they are from the centre or the periphery. Empirical results support this claim. Across all models, the respondents' likelihood to express an opinion about countries of the periphery is lower than for centre countries. While the interaction term of the country groups is statistically significant, it is socially not meaningful. Even when taking into account the interaction

effect, the estimated marginal mean of the propensity to have an opinion about solidarity differs by 0.9% between respondents at the centre and respondents at the periphery.

Lastly, citizens who consider themselves to be better off are more likely to express an opinion. As mentioned, the effect of gender is also statistically significant and has the largest effect among all variables in the model: men are 3.6% more likely to express an opinion than women. It should however be noted that the models could not control for the effect of formal education.

3.5.3 Robustness tests

As previously noted, several robustness checks were performed. Table 3-7 in the chapter appendix provides an overview of the regression outputs of all alternative model specifications. The regression analysis has been performed excluding countries (either as the respondent country or the recipient country) that could be deemed as influential cases (see above). None of these models differs in substance from the original model. Given their fringe status, Ireland and Italy have been re-categorised to the opposing category. The findings are largely robust to this re-categorisation. One difference is that, when Italy is categorised as a peripheral country, the differential treatment of peripheral countries among respondents in peripheral countries becomes statistically significant at $p < 0.01$. Furthermore, the dichotomous country group variables have been replaced by a numeric variable that captures the years a given country has been in the EU. The idea is that the centre–periphery is notably based on the time of accession of a country, so it can be conceptualised as a continuous variable as well. The analysis replicates the finding of a 'groupness effect' of the country groups. Citizens in newer member states are more likely to express solidarity with other newer EU countries, and vice versa. In contrast, this model does not replicate the interaction effect with sociotropic political efficacy. Further, it has been investigated how a conceptualisation of countries into two peripheries rather than one affects the results. This specification provides evidence for a between-periphery solidarity. In other words, respondents in the Southern periphery are more likely to help an Eastern country than a centre country, and respondents in the Eastern periphery are more likely to help a Southern country than a centre country. This supports the argument that there is a shared understanding of being in the periphery among these countries,

which is further corroborated by the finding that the interaction term between the respective peripheral groups and the sociotropic political efficacy is almost identical.

Next, the multi-level model has also been run to include a third level in the data structure at the level of the respondents' country. Again, this does not affect the substance of the results. One potential issue with the findings is the high correlation of the GDP variables with the country group variables, because centre countries tend to be richer than peripheral countries (see Table 3-2). Selection models are particularly vulnerable to multicollinearity problems, because multicollinearity may lead to misspecification for these models (Lennox et al., 2012). Specification tests indicate that the variance inflation factor (VIF) values fall within acceptable limits, with the highest VIF recorded for the GDP variable of the respondent's country at 4.79. As a further robustness test, the models were run without the GDP variables. The most notable difference is that the main effect of the country group of the respondent's country becomes statistically significant and negative, compared to a non-significant effect in the original model. This was expected, as centre countries tend to be the richer countries. Without the GDP variable, the model attributes part of the variance – explained by economic income of a country – to the country group. As for the remaining variables, differences are trivial. Most importantly, both interaction effects are nearly identical compared with the original specification of the model.

Lastly, the outcome model was also run without the selection parameter. While the central hypotheses of this article are also supported by this model, many of the coefficients – notably concerning gender and European identity – are biased upwards. Beyond gender and identity, omitting the selection parameter leads to statistically negative effects of subjective income and age. These disappear once the selection bias has been accounted for. Further, the effect of the country group of the respondent, the effect of the GDP variable and the effect of a shared border on the solidarity attitudes would be larger.

These additional analyses underline the robustness of the empirical findings. There is strong evidence that citizens perceive a centre–periphery divide in EU politics, and that they structure their fiscal solidarity with other EU countries accordingly. Moreover, the analysis shows that sociotropic political efficacy is an important determinant of these

solidarity attitudes. Finally, it needs to be emphasised that not taking the selection bias into account leads to coefficients that may be inflated.

3.6 Conclusions

The article outlined the argument that there is a spatial dimension to European solidarity, and that a centre–periphery divide polarises European citizens. The findings provide evidence for a structuring effect of the centre–periphery divide. Citizens are more likely to show solidarity with countries that are on the same side of the centre–periphery divide as their own country. This is particularly true for citizens of the centre countries, who are much less likely to show solidarity with peripheral countries than with central countries. In other words, peripheral countries are handicapped when it comes to receiving European solidarity. One possible explanation is that peripheral countries are considered less deserving in the centre. Future research should expand on this. In terms of policy, these results underscore the challenges facing the EU in achieving greater fiscal solidarity. They also highlight the need to address the structural inequalities between rich, 'old' member states and poorer, 'new' countries.

Furthermore, this article shows that EU citizens gauge how influential their country is within the EU and adjust their solidarity accordingly. The more influential they believe their country is, the more likely they are to be willing to show solidarity, particularly with countries in the centre. No other individual determinant had a stronger effect on solidarity.

Finally, by explicitly modelling the propensity of citizens to have an opinion, a selection bias has been corrected that was not considered in previous research. The analysis shows that an exclusive national identity is less relevant for European fiscal solidarity, and gender is not relevant at all. These results are in contradiction to previous findings and suggest that a selection model is a choice worth considering when dealing more generally with EU attitudes.

One challenge to the arguments proposed here is that the centre–periphery divide is merely shorthand for the economic income of countries. Indeed, centre countries tend to be richer and peripheral countries tend to be poorer. Citizens may view certain countries as rich or poor, rather than having the more sophisticated concepts of centre and periphery in mind, as proposed in this article. Both conceptually and in terms of data, the two

concepts are closely connected. However, the fact that respondents have a level of identification with their country group – they express more solidarity with countries in their group than with those not in their group – is difficult to explain based solely on macro-economic terms.

Future research needs to be done to understand the intricacies of the centre–periphery divide. While I have suggested here that the divide stems from an economic and political imbalance, it is unclear how far this divide turns into a cultural divide. While this article provides evidence for the existence of such a divide, the exact mechanism, and the mental representations that citizens have of centre and periphery, remain undiscovered, and should be the subject of future research. Combining a centre–periphery perspective and the deservingness literature promises to be a productive way forward.

3.7 Chapter appendix

Table 3-4. Share of 'Don't know' responses by respondent country and recipient country.

	Respondent country													
Recipient country	**Denmark**	**Finland**	**France**	**Germany**	**Greece**	**Hungary**	**Italy**	**Lithuania**	**Netherlands**	**Poland**	**Romania**	**Spain**	**Sweden**	**Overall**
Austria	0.2	0.21	0.31	0.16	0.12	0.16	0.23	0.21	0.17	0.24	0.19	0.22	0.23	0.20
Belgium	0.2	0.24	0.25	0.2	0.13	0.2	0.23	0.18	0.14	0.24	0.19	0.2	0.23	0.20
Bulgaria	0.27	0.27	0.35	0.26	0.14	0.24	0.28	0.26	0.22	0.26	0.19	0.25	0.25	0.25
Croatia	0.26	0.25	0.31	0.24	0.18	0.18	0.26	0.21	0.24	0.29	0.22	0.26	0.27	0.24
Cyprus	0.25	0.22	0.34	0.27	0.07	0.24	0.27	0.25	0.29	0.31	0.22	0.26	0.26	0.25
Czechia	0.26	0.25	0.33	0.25	0.21	0.18	0.28	0.21	0.24	0.24	0.22	0.26	0.28	0.25
Estonia	0.22	0.17	0.36	0.25	0.21	0.25	0.27	0.13	0.24	0.32	0.24	0.26	0.21	0.24
Finland	0.2	-	0.28	0.23	0.18	0.25	0.24	0.16	0.22	0.28	0.22	0.21	0.16	0.22
France	0.18	0.2	-	0.18	0.1	0.17	0.18	0.21	0.15	0.21	0.15	0.14	0.2	0.17
Germany	0.15	0.2	0.24	-	0.08	0.19	0.17	0.15	0.15	0.22	0.17	0.17	0.21	0.18
Greece	0.23	0.22	0.3	0.2	-	0.2	0.21	0.19	0.16	0.27	0.19	0.2	0.23	0.22
Hungary	0.24	0.24	0.33	0.23	0.18	-	0.24	0.23	0.25	0.25	0.18	0.22	0.26	0.24
Ireland	0.2	0.2	0.3	0.21	0.19	0.21	0.23	0.21	0.21	0.27	0.18	0.22	0.24	0.22
Italy	0.2	0.2	0.26	0.21	0.13	0.2	-	0.17	0.19	0.23	0.15	0.18	0.2	0.19
Latvia	0.24	0.22	0.37	0.22	0.18	0.24	0.25	0.13	0.24	0.24	0.22	0.25	0.24	0.23
Lithuania	0.24	0.22	0.32	0.25	0.23	0.22	0.26	-	0.25	0.24	0.27	0.25	0.23	0.25

	Respondent country													
Recipient country	**Denmark**	**Fin-land**	**France**	**Ger-many**	**Greece**	**Hun-gary**	**Italy**	**Lithua-nia**	**Nether-lands**	**Po-land**	**Ro-mania**	**Spain**	**Swe-den**	**Over-all**
Luxembourg	0.22	0.19	0.24	0.22	0.15	0.22	0.21	0.24	0.17	0.24	0.2	0.2	0.23	0.21
Malta	0.24	0.23	0.34	0.25	0.18	0.21	0.24	0.23	0.24	0.32	0.22	0.21	0.28	0.25
Netherlands	0.17	0.2	0.29	0.19	0.15	0.23	0.22	0.2	-	0.24	0.23	0.21	0.21	0.21
Poland	0.22	0.22	0.3	0.22	0.15	0.2	0.23	0.15	0.21	-	0.2	0.23	0.23	0.21
Portugal	0.23	0.21	0.27	0.22	0.13	0.23	0.2	0.22	0.2	0.28	0.16	0.16	0.24	0.21
Romania	0.25	0.24	0.31	0.24	0.17	0.18	0.23	0.22	0.23	0.25	-	0.24	0.23	0.23
Slovakia	0.28	0.21	0.34	0.24	0.2	0.17	0.28	0.19	0.26	0.24	0.19	0.27	0.24	0.24
Slovenia	0.25	0.23	0.33	0.26	0.18	0.2	0.24	0.23	0.24	0.26	0.24	0.26	0.25	0.24
Spain	0.19	0.18	0.28	0.21	0.12	0.22	0.18	0.19	0.21	0.26	0.16	-	0.22	0.20
Sweden	0.16	0.14	0.31	0.19	0.16	0.2	0.21	0.18	0.19	0.26	0.19	0.2	-	0.20
Denmark	-	0.15	0.29	0.2	0.18	0.22	0.23	0.19	0.18	0.28	0.21	0.2	0.15	0.21
Overall	0.22	0.21	0.31	0.22	0.16	0.21	0.23	0.20	0.21	0.26	0.20	0.22	0.23	0.22

Table 3-5. Share of affirmative responses among respondents with an opinion.

	Respondent country													
Recipient country	**Denmark**	**Fin-land**	**France**	**Ger-many**	**Greece**	**Hun-gary**	**Italy**	**Lithua-nia**	**Nether-lands**	**Po-land**	**Ro-mania**	**Spain**	**Swe-den**	**Over-all**
Austria	0.81	0.61	0.53	0.82	0.49	0.64	0.59	0.66	0.76	0.65	0.62	0.67	0.66	0.65
Belgium	0.8	0.61	0.67	0.75	0.41	0.49	0.66	0.67	0.82	0.69	0.67	0.65	0.65	0.66
Bulgaria	0.6	0.43	0.48	0.59	0.61	0.55	0.64	0.71	0.4	0.73	0.78	0.71	0.48	0.59
Croatia	0.66	0.51	0.48	0.64	0.57	0.67	0.73	0.68	0.59	0.75	0.69	0.71	0.57	0.63
Cyprus	0.63	0.41	0.45	0.62	0.85	0.39	0.66	0.57	0.45	0.66	0.66	0.72	0.53	0.58
Czechia	0.64	0.49	0.48	0.65	0.56	0.6	0.64	0.77	0.53	0.79	0.72	0.73	0.56	0.63
Estonia	0.69	0.75	0.46	0.69	0.6	0.48	0.64	0.84	0.56	0.76	0.68	0.7	0.65	0.65
Finland	0.82	-	0.57	0.76	0.42	0.46	0.62	0.72	0.7	0.69	0.64	0.64	0.77	0.65
France	0.73	0.49	-	0.75	0.65	0.45	0.57	0.68	0.62	0.6	0.58	0.73	0.61	0.62
Germany	0.76	0.54	0.59	-	0.33	0.47	0.51	0.69	0.79	0.6	0.6	0.64	0.61	0.59
Greece	0.65	0.38	0.57	0.62	-	0.56	0.79	0.54	0.46	0.64	0.72	0.79	0.56	0.61
Hungary	0.54	0.37	0.44	0.51	0.5	-	0.55	0.62	0.44	0.68	0.6	0.7	0.41	0.53
Ireland	0.74	0.57	0.55	0.71	0.6	0.46	0.65	0.7	0.68	0.68	0.61	0.71	0.63	0.64
Italy	0.7	0.42	0.69	0.72	0.73	0.59	-	0.65	0.55	0.73	0.7	0.78	0.6	0.66
Latvia	0.69	0.6	0.45	0.68	0.57	0.5	0.68	0.84	0.52	0.72	0.67	0.7	0.65	0.64
Lithuania	0.64	0.59	0.47	0.64	0.57	0.48	0.65	-	0.53	0.76	0.67	0.72	0.63	0.61
Luxembourg	0.7	0.45	0.47	0.7	0.42	0.42	0.54	0.62	0.74	0.56	0.61	0.63	0.53	0.57
Malta	0.67	0.38	0.49	0.63	0.6	0.46	0.57	0.59	0.53	0.66	0.6	0.71	0.52	0.57

	Respondent country													
Recipient country	**Denmark**	**Fin-land**	**France**	**Ger-many**	**Greece**	**Hun-gary**	**Italy**	**Lithua-nia**	**Nether-lands**	**Po-land**	**Ro-mania**	**Spain**	**Swe-den**	**Over-all**
Netherlands	0.79	0.55	0.55	0.77	0.55	0.48	0.53	0.64	-	0.63	0.58	0.6	0.6	0.61
Poland	0.61	0.41	0.45	0.56	0.55	0.66	0.65	0.76	0.5	-	0.71	0.72	0.51	0.59
Portugal	0.7	0.55	0.63	0.73	0.71	0.44	0.72	0.62	0.63	0.68	0.65	0.86	0.59	0.65
Romania	0.58	0.42	0.43	0.54	0.63	0.49	0.63	0.59	0.45	0.7	-	0.69	0.48	0.55
Slovakia	0.62	0.5	0.47	0.63	0.58	0.61	0.65	0.66	0.52	0.75	0.71	0.72	0.54	0.61
Slovenia	0.61	0.51	0.46	0.61	0.59	0.6	0.67	0.7	0.5	0.73	0.7	0.72	0.54	0.61
Spain	0.74	0.49	0.67	0.76	0.71	0.51	0.77	0.68	0.65	0.7	0.71	-	0.59	0.67
Sweden	0.78	0.68	0.55	0.75	0.53	0.46	0.58	0.68	0.71	0.64	0.57	0.66	-	0.63
Denmark	-	0.7	0.54	0.78	0.49	0.51	0.6	0.69	0.73	0.66	0.57	0.68	0.76	0.64
Overall	0.69	0.52	0.52	0.68	0.57	0.52	0.63	0.68	0.59	0.69	0.65	0.70	0.59	0.63

Table 3-6. Probit model with sample selection, multi-level model.

	Model 1 (only main effects)	Model 2 (interaction effect: country group)	Model 3 (interaction effect: sociotropic political efficacy)	Model 4 (both interaction effects)
Outcome model				
Sociotropic political efficacy (Ref: Agree)				
Disagree	**-0.53***	**-0.54***	**-0.61***	**-0.62***
	(0.02)	**(0.02)**	**(0.03)**	**(0.03)**
Subjective income (Ref: Better off)				
Neither better nor worse off	-0.02	-0.02	-0.02	-0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Worse off	**-0.11***	**-0.11***	**-0.11***	**-0.11***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**
Political self-placement (Ref: Centre)				
Left	**0.09***	**0.09***	**0.09***	**0.09***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**
Right	**-0.29***	**-0.30***	**-0.28***	**-0.29***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**
Age (Ref: 18–24)				
25–34	-0.02	-0.02	-0.02	-0.02

	Model 1 (only main effects)	Model 2 (interaction effect: country group)	Model 3 (interaction effect: sociotropic political efficacy)	Model 4 (both interaction effects)
	(0.04)	(0.04)	(0.04)	(0.04)
35–44	-0.04	-0.04	-0.04	-0.04
	(0.04)	(0.04)	(0.04)	(0.04)
45–54	-0.04	-0.04	-0.04	-0.04
	(0.04)	(0.04)	(0.04)	(0.04)
55+	**-0.11***	**-0.11***	**-0.11***	**-0.11***
	(0.04)	**(0.04)**	**(0.04)**	**(0.04)**
Gender (1: Male)	-0.04	-0.04	-0.03	-0.03
	(0.02)	(0.02)	(0.02)	(0.02)
Identity (Ref.: Exclusive European)				
Predominant European	0.06	0.06	0.06	0.06
	(0.07)	(0.07)	(0.07)	(0.07)
Predominant national	0.06	0.06	0.06	0.06
	(0.05)	(0.05)	(0.05)	(0.05)
Exclusive national	**-0.49***	**-0.49***	**-0.48***	**-0.48***
	(0.05)	**(0.05)**	**(0.05)**	**(0.05)**
Country group of respondent's country (1: Periphery)	**0.41***	0.09	**0.29***	-0.03
	(0.04)	(0.05)	**(0.05)**	(0.05)

	Model 1 (only main effects)	Model 2 (interaction effect: country group)	Model 3 (interaction effect: sociotropic political efficacy)	Model 4 (both interaction effects)
Country group of recipient country (1: Periphery)	**-0.19***	**-0.42***	**-0.19***	**-0.42***
	(0.01)	**(0.02)**	**(0.01)**	**(0.02)**
Shared border (1: Yes)	**0.37***	**0.27***	**0.37***	**0.27***
	(0.01)	**(0.01)**	**(0.01)**	**(0.01)**
Social connectedness	**0.00***	**0.00***	**0.00***	**0.00***
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**
GDP per capita of respondent's country	**0.93***	**0.93***	**0.88***	**0.88***
	(0.12)	**(0.12)**	**(0.12)**	**(0.12)**
GDP per capita of recipient country	**-0.40***	**-0.42***	**-0.40***	**-0.42***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**
Respondent's country has the euro (1: Yes)	0.03	0.03	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
Recipient country has the euro (1: Yes)	**0.13***	**0.13***	**0.13***	**0.13***
	(0.01)	**(0.01)**	**(0.01)**	**(0.01)**
Year (1: 2021)	0.00	0.00	0.00	0.00
	(0.02)	(0.02)	(0.02)	(0.02)
Interaction effect Country group		**0.54***		**0.54***
		(0.02)		**(0.02)**
			0.20*	**0.21***

	Model 1 (only main effects)	Model 2 (interaction effect: country group)	Model 3 (interaction effect: sociotropic political efficacy)	Model 4 (both interaction effects)
Interaction effect Country group × Sociotropic political efficacy			**(0.04)**	**(0.04)**
Selection model				
Sociotropic political efficacy (Ref: Agree)				
Disagree	0.04	0.04	0.07	0.07
	(0.04)	(0.04)	(0.04)	(0.04)
Political efficacy (Ref: Agree)				
Disagree	-0.05	-0.05	-0.05	-0.05
	(0.04)	(0.04)	(0.04)	(0.04)
Satisfaction with democracy (Ref: High satisfaction)				
Low satisfaction	-0.10	-0.10	-0.10	-0.10
	(0.06)	(0.06)	(0.06)	(0.06)
Medium satisfaction	**-0.18***	**-0.18***	**-0.19***	**-0.19***
	(0.05)	**(0.05)**	**(0.05)**	**(0.05)**
Subjective income (Ref: Better off)				
Neither better nor worse off	**-0.26***	**-0.26***	**-0.26***	**-0.26***
	(0.04)	**(0.04)**	**(0.04)**	**(0.04)**
Worse off	**-0.24***	**-0.24***	**-0.24***	**-0.24***

	Model 1 (only main effects)	Model 2 (interaction effect: country group)	Model 3 (interaction effect: sociotropic political efficacy)	Model 4 (both interaction effects)
	(0.04)	**(0.04)**	**(0.04)**	**(0.04)**
Political self-placement (Ref: Centre)				
Left	-0.02	-0.02	-0.02	-0.02
	(0.04)	(0.04)	(0.04)	(0.04)
Right	**0.13***	**0.13***	**0.13***	**0.13***
	(0.05)	**(0.05)**	**(0.05)**	**(0.05)**
Age (Ref: 18–24)				
25–34	-0.09	-0.09	-0.09	-0.09
	(0.06)	(0.06)	(0.06)	(0.06)
35–44	-0.16	-0.16	-0.16	-0.16
	(0.06)	(0.06)	(0.06)	(0.06)
45–54	-0.11	-0.11	-0.11	-0.11
	(0.06)	(0.06)	(0.06)	(0.06)
55+	**-0.18***	**-0.18***	**-0.18***	**-0.18***
	(0.06)	**(0.06)**	**(0.06)**	**(0.06)**
Gender (1: Male)	**0.46***	**0.46***	**0.45***	**0.46***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**
Identity (Ref.: Exclusive European)				
Predominant European	0.09	0.09	0.09	0.09

	Model 1 (only main effects)	Model 2 (interaction effect: country group)	Model 3 (interaction effect: sociotropic political efficacy)	Model 4 (both interaction effects)
	(0.10)	(0.10)	(0.10)	(0.10)
Predominant national	0.00	0.00	0.00	0.00
	(0.08)	(0.08)	(0.08)	(0.08)
Exclusive national	-0.18	-0.18	-0.18	-0.18
	(0.08)	(0.08)	(0.08)	(0.08)
Country group of respondent's country (1: Periphery)	0.17	0.09	**0.22***	0.13
	(0.07)	(0.07)	**(0.08)**	(0.08)
Country group of recipient country (1: Periphery)	**-0.30***	**-0.35***	**-0.30***	**-0.35***
	(0.02)	**(0.03)**	**(0.02)**	**(0.03)**
Shared border (1: Yes)	**0.32***	**0.29***	**0.32***	**0.29***
	(0.02)	**(0.02)**	**(0.02)**	**(0.02)**
Social connectedness	**0.00***	**0.00***	**0.00***	**0.00***
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**
GDP per capita of respondent's country	0.29	0.29	0.31	0.31
	(0.18)	(0.18)	(0.18)	(0.18)
GDP per capita of recipient country	-0.05	-0.05	-0.05	-0.05
	(0.05)	(0.05)	(0.05)	(0.05)
Respondent's country has the euro (1: Yes)	0.03	0.03	0.03	0.03
	(0.03)	(0.03)	(0.03)	(0.03)

	Model 1 (only main effects)	Model 2 (interaction effect: country group)	Model 3 (interaction effect: sociotropic political efficacy)	Model 4 (both interaction effects)
Recipient country has the euro (1: Yes)	0.02	0.02	0.02	0.02
	(0.01)	(0.01)	(0.01)	(0.01)
Population size of recipient country	**0.01***	**0.01***	**0.01***	**0.01***
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**
Year (1: 2021)	0.02	0.02	0.02	0.02
	(0.03)	(0.03)	(0.03)	(0.03)
Interaction effect Country group		**0.13***		**0.13***
		(0.02)		**(0.02)**
Interaction effect Country group × Sociotropic political efficacy			-0.08	-0.08
			(0.07)	(0.07)
IMR	**-1.79 (0.02)***	**-1.82 (0.02)***	**-1.80 (0.02)***	**-1.82 (0.02)***
Summary statistics (outcome model)				
AIC	202481	201180	202456	201152
Log Likelihood	-101212	-100560	-101197	-100544
Num. obs.	269782	269782	269782	269782
Num. groups: id	39203	39203	39203	39203
Var: id (Intercept)	2.72	2.78	2.72	2.77

Note: Standard errors in parentheses. Coefficients of ‘Don’t know’ responses and Constant omitted. Statistically significant coefficients in bold; *p < 0.01

Table 3-7. Regression models of alternative specifications.

	M1: Original	M2: w/o Germany	M3: w/o Greece	M4: w/o Hungary	M5: Italy as periphery	M6: Ireland as centre	M7: 3-level model	M8: w/o selection parameter	M9: w/o GDP variable	M10: Member-ship in years	M11: Two peri-pheries
Country group of respondent (1: Periphery)	-0.03	-0.02	0.01	-0.06	**0.14***	-0.03	-0.01	0.04	**-0.34***	-	-
	(0.05)	(0.05)	(0.05)	(0.05)	**(0.05)**	(0.05)	(0.34)	(0.06)	**(0.03)**		
Country group of recipient country (1: Periphery)	**-0.42***	**-0.41***	**-0.40***	**-0.39***	**-0.51***	**-0.42***	**-0.42***	**-0.58***	**-0.24***	-	-
	(0.02)	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.01)**		
Sociotropic political efficacy (Ref: Agree)	**-0.62***	**-0.59***	**-0.62***	**-0.64***	**-0.75***	**-0.62***	**-0.66***	**-0.54***	**-0.65***	**-0.48***	**-0.75***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.05)**	**(0.03)**
Interaction effect Country group	**0.54***	**0.49***	**0.52***	**0.54***	**0.77***	**0.54***	**0.54***	**0.55***	**0.53***	-	-
	(0.02)	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**		
Interaction effect Country group × Sociotropic political efficacy	**0.21***	**0.19***	**0.21***	**0.22***	**0.36***	**0.21***	**0.27***	**0.15***	**0.24***	-	-
	(0.04)	**(0.05)**	**(0.05)**	**(0.05)**	**(0.04)**	**(0.04)**	**(0.04)**	**(0.05)**	**(0.04)**		
Years of EU membership of respondent's country	-	-	-	-	-	-	-	-	-	**-0.00***	-
										(0.00)	
Years of EU membership of recipient country	-	-	-	-	-	-	-	-	-	**-0.01***	-
										(0.00)	
	-	-	-	-	-	-	-	-	-	**0.00***	-

	M1: Original	**M2: w/o Germany**	**M3: w/o Greece**	**M4: w/o Hungary**	**M5: Italy as periphery**	**M6: Ireland as centre**	**M7: 3-level model**	**M8: w/o selection parameter**	**M9: w/o GDP variable**	**M10: Member-ship in years**	**M11: Two peri-pheries**
Interaction effect years of EU membership										**(0.00)**	
Interaction effect Years of EU membership × Sociotropic political efficacy	-	-	-	-	-	-	-	-	-	-0.00 (0.00)	-
Country group of respondent (Ref.: Centre)											
Eastern periphery	-	-	-	-	-	-	-	-	-	-	**0.24*** **(0.07)**
Southern periphery	-	-	-	-	-	-	-	-	-	-	**0.16*** **(0.06)**
Country group of recipient country (Ref.: Centre)											
Eastern periphery	-	-	-	-	-	-	-	-	-	-	**-0.43*** **(0.02)**
Southern periphery	-	-	-	-	-	-	-	-	-	-	**-0.19*** **(0.02)**
Interaction effect Country group											

	M1: Original	M2: w/o Germany	M3: w/o Greece	M4: w/o Hungary	M5: Italy as periphery	M6: Ireland as centre	M7: 3-level model	M8: w/o selection parameter	M9: w/o GDP variable	M10: Member-ship in years	M11: Two peri-pheries
Eastern periphery × Eastern periphery	-	-	-	-	-	-	-	-	-	-	**0.80***
											(0.02)
Southern periphery × Eastern periphery	-	-	-	-	-	-	-	-	-	-	**0.75***
											(0.02)
Eastern periphery × Southern periphery	-	-	-	-	-	-	-	-	-	-	**0.32***
											(0.03)
Southern periphery × Southern periphery	-	-	-	-	-	-	-	-	-	-	**0.95***
											(0.03)
Interaction effect Country group × Sociotropic political efficacy											
Disagree × Eastern periphery	-	-	-	-	-	-	-	-	-	-	**0.37***
											(0.05)
Disagree × Southern periphery	-	-	-	-	-	-	-	-	-	-	**0.35***
											(0.05)
Subjective income (Ref: Better off)											
Neither better nor worse off	-0.02	-0.02	-0.02	-0.02	-0.01	-0.02	-0.01	**-0.15***	-0.02	-0.02	-0.01
	(0.02)	(0.03)	(0.03)	(0.02)	(0.02)	(0.02)	(0.02)	**(0.03)**	(0.02)	(0.02)	(0.02)
Worse off	**-0.11***	**-0.11***	**-0.11***	**-0.09***	**-0.10***	**-0.11***	**-0.08***	**-0.23***	**-0.11***	**-0.11***	**-0.10***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**

	M1: Original	M2: w/o Germany	M3: w/o Greece	M4: w/o Hungary	M5: Italy as periphery	M6: Ireland as centre	M7: 3-level model	M8: w/o selection parameter	M9: w/o GDP variable	M10: Member-ship in years	M11: Two peri-pheries
Political self-placement (Ref: Centre)											
Left	**0.09***	**0.09***	**0.08***	**0.11***	**0.11***	**0.09***	**0.10***	**0.07**	**0.09***	**0.10***	**0.11***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**
Right	**-0.29***	**-0.28***	**-0.30***	**-0.29***	**-0.26***	**-0.29***	**-0.24***	**-0.23***	**-0.30***	**-0.31***	**-0.26***
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**
Age (Ref: 18–24)											
25–34	-0.02	-0.02	-0.02	-0.01	-0.01	-0.02	-0.02	-0.08	-0.02	-0.01	-0.01
	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
35–44	-0.04	-0.04	-0.05	-0.05	-0.05	-0.04	-0.04	**-0.14***	-0.05	-0.04	-0.04
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	**(0.05)**	(0.04)	(0.04)	(0.04)
45–54	-0.04	-0.03	-0.03	-0.03	-0.05	-0.04	-0.05	-0.11	-0.04	-0.04	-0.05
	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.04)	(0.05)	(0.04)	(0.04)	(0.04)
55+	**-0.11***	**-0.11***	**-0.11***	**-0.10**	**-0.10***	**-0.11***	**-0.10***	**-0.20***	**-0.10***	**-0.11***	**-0.10***
	(0.04)	**(0.04)**	**(0.04)**	**(0.04)**	**(0.04)**	**(0.04)**	**(0.04)**	**(0.04)**	**(0.04)**	**(0.04)**	**(0.04)**
Gender (1: Male)	-0.03	-0.04	-0.05	-0.04	-0.03	-0.03	-0.03	**0.22***	-0.04	-0.04	-0.03
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	**(0.02)**	(0.02)	(0.02)	(0.02)
Identity (Ref.: Exclusive European)											
	0.06	0.07	0.08	0.07	0.06	0.06	0.05	0.11	0.07	0.07	0.05

	M1: Original	M2: w/o Germany	M3: w/o Greece	M4: w/o Hungary	M5: Italy as periphery	M6: Ireland as centre	M7: 3-level model	M8: w/o selection parameter	M9: w/o GDP variable	M10: Member-ship in years	M11: Two peri-pheries
Predominant European	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.07)	(0.08)	(0.07)	(0.07)	(0.07)
Predominant national	0.06	0.07	0.08	0.07	0.07	0.06	0.06	0.04	0.07	0.08	0.07
	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.05)	(0.06)	(0.05)	(0.05)	(0.05)
Exclusive national	**-0.48***	**-0.49***	**-0.47***	**-0.48***	**-0.47***	**-0.48***	**-0.48***	**-0.55***	**-0.46***	**-0.49***	**-0.48***
	(0.05)	**(0.05)**	**(0.05)**	**(0.05)**	**(0.05)**	**(0.05)**	**(0.05)**	**(0.06)**	**(0.05)**	**(0.05)**	**(0.05)**
Shared border (1: Yes)	**0.27***	**0.29***	**0.27***	**0.28***	**0.25***	**0.27***	**0.27***	**0.37***	**0.28***	**0.32***	**0.26***
	(0.01)	**(0.02)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**
Social connectedness	**0.00***	**0.00***	**0.00***	**0.00***	**0.00***	**0.00***	**0.00***	**0.00***	**0.00***	**0.00***	**0.00***
	(0.00)	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**	**(0.00)**
GDP per capita of respondent's country	**0.88***	**0.83***	**0.89***	**0.62***	**1.90***	**0.88***	**0.99**	**0.94***	-	-0.07	**1.91***
	(0.12)	**(0.13)**	**(0.12)**	**(0.12)**	**(0.13)**	**(0.12)**	**(0.87)**	**(0.13)**		(0.07)	**(0.14)**
GDP per capita of recipient country	**-0.42***	**-0.46***	**-0.38***	**-0.41***	**-0.29***	**-0.42***	**-0.42***	**-0.55***	-	**-0.12***	-0.03
	(0.03)	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**	**(0.03)**		**(0.02)**	(0.03)
Respondent's country has the euro (1: Yes)	0.02	0.02	0.04	**-0.08***	-0.03	0.02	0.02	0.04	-0.05	**-0.09***	-0.04
	(0.02)	(0.02)	(0.02)	**(0.02)**	(0.02)	(0.02)	(0.16)	(0.03)	(0.02)	**(0.03)**	(0.03)
Recipient country has the euro (1: Yes)	**0.13***	**0.11***	**0.12***	**0.10***	**0.13***	**0.13***	**0.12***	**0.13***	**0.11***	**0.11***	**0.06***
	(0.01)	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**	**(0.01)**
Year (1: 2021)	0.00	-0.00	-0.00	-0.00	0.00	0.00	0.00	0.01	0.00	-0.00	0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)

	M1: Original	M2: w/o Germany	M3: w/o Greece	M4: w/o Hungary	M5: Italy as periphery	M6: Ireland as centre	M7: 3-level model	M8: w/o selection parameter	M9: w/o GDP variable	M10: Member-ship in years	M11: Two peri-pheries
IMR	**-1.82***	**-1.82***	**-1.85***	**-1.86***	**-1.84***	**-1.82***	**-1.82***	-	**-1.83***	**-1.82***	**-1.86***
	(0.02)	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**	**(0.02)**		**(0.02)**	**(0.02)**	**(0.02)**
AIC	201152	173038	181796	182464	199542	201152	200613	221320	201423	202350	198652
Log Likelihood	-100544	-86487	-90866	-91200	-99739	-100544	-100273	-110629	-100681	-101143	-99287
Num. obs.	269782	231671	246078	245298	269782	269782	269782	269782	269782	269782	269782
Num. groups: id	39203	35012	37181	37073	39203	39203	39203	39203	39203	39203	39203
Var: id (Intercept)	2.77	2.86	2.83	2.72	2.80	2.77	2.71	4.36	2.78	2.76	2.83
Num. groups: country	-	-	-	-	-	-	13	-	-	-	-
Var: country (Intercept)	-	-	-	-	-	-	0.07	-	-	-	-

Note: Probit coefficients are shown. M8 is a standard probit regression model, all other models are the outcome model of a probit selection model. Standard errors in parentheses. Coefficients of 'Don't know' responses and Constant omitted. Statistically significant coefficients in bold; *p < 0.01

4 European solidarity beyond the EU: The effect of EU membership on citizens' empathy with other Europeans

Abstract

This study posits that EU membership makes citizens more empathic towards other Europeans, drawing from arguments of the constructivist school on nationalism and on banal nationalism. Utilizing EVS data, two approaches are employed. Initially, the article employs multi-level regression with country-fixed effects to track empathy towards Europeans since 1999. Then, respondents who live in different countries but who share the same country of origin are matched to infer the effect of living in the EU. Ten years of residency in the EU are found to have a positive effect on empathy with Europeans that is twice as large as the difference between left- and right-wing individuals. The article makes three contributions: first, there is European solidarity beyond the EU; second, accession of a country into the EU is not pivotal for its citizens' concerns for other Europeans, and third, EU membership increases empathy towards other Europeans over time.

Keywords: European Union, identity, political psychology, quantitative, solidarity

4.1 Introduction

Russia's military invasion of Ukraine in February 2022 created a moment for rallying around the EU flag (Steiner et al., 2023) and for concerted European support for Ukraine. EU countries have accommodated millions of Ukrainian refugees and supported Ukraine financially as well as with military equipment, and in December 2023, the European Council granted Ukraine EU-candidate status, ending a long period of widespread enlargement fatigue.

Ukraine is not (yet) a member of the EU, but the EU response to Russia's invasion shows that Ukrainians are part of a community of European solidarity (see also Börzel, 2023). This is surprising, given that political community is considered a key factor for solidarity (Hechter, 1987), and that most studies on European solidarity are based on the assumption that European solidarity only matters within the EU – a political community to which Ukraine is an outsider. Solidarity has been a central value of European integration since the Schuman Declaration of 1950, and it has been an important rhetorical tool for actors in the EU policy arena, often used opportunistically (Wallaschek, 2020; Grimmel, 2021). However, the EU's assertive appropriation of European solidarity conceals that there can be European solidarity beyond the EU. This raises the question about how much of European solidarity is really created by the EU, and by what means.

Based on the understanding that European solidarity goes beyond the EU, this paper advances the argument that a country's membership of the EU increases its citizens' empathy with other Europeans. Using insights into national identity from the constructivist school (e.g. Anderson, 1983; Gellner, 2006) and in the literature on 'banal nationalism' (Billig, 1995), it is argued that the exposure to symbols of European integration in everyday life makes people think of Europe as a relevant level of political community.

Empirically, the analysis revolves around a survey item in the trend data file of the EVS that asks citizens to indicate their empathy with other Europeans. The dataset covers individual respondents in 45 European countries at three time points: 1999, 2008, and 2017. While this data do not allow the direct effect of EU symbols on individuals to be tested, it contains sufficient variation in the macro context to estimate the effect of a country's EU membership on individuals' empathy with other Europeans. I analyse this

data using two approaches. First a multi-level regression analysis with country-fixed effects is used to analyse the evolution over time of empathy with other Europeans. In the second approach, information about respondents' migration history is leveraged to match those respondents who live in an EU country with those respondents from the same country of origin but who live in a non-EU country. This allows the analysis to focus on individuals' experiences of the EU. The first approach shows that accession to the EU of a country is not a pivotal moment for its citizens' empathy. Instead, both approaches show that individuals gradually become more empathic the longer they stay in an EU country. Ten years of residency in the EU have a positive effect on empathy with Europeans that is twice as large as the difference between left- and right-wing individuals.

The paper's findings suggest that solidarity in the EU is not due to happenstance, but created, at least to some extent, by European integration itself. This paper makes three contributions to the literature: first, there can be European solidarity beyond the EU; second, accession into the EU is not a pivotal moment for citizens' empathy towards other Europeans, and third, EU membership increases individuals' empathy with other Europeans over time.

4.2 The role of empathy for European solidarity

This paper argues that EU membership of a country has a positive effect on citizens' empathy towards other Europeans. This paper follows Decety et al. (2016), who define empathy as the 'ability to perceive and be sensitive to the emotional states of others, coupled with a motivation to care for their wellbeing' (ibid.: 1). In political science, there is a growing body of literature acknowledging the role of empathy in determining pro-social behaviour such as in the context of welfare policies and international relations. Van Oorschot (2002) identifies empathy as a widely shared motive to pay for welfare policies. Wagaman and Segal (2014) show that empathy affects attitudes on government intervention for people in need. More recently, Feldman et al. (2020) find that empathic ability can increase support for social welfare policies. In international relations, Bayram and Holmes (2020) demonstrate that empathy facilitates international helping behaviour and explains an individual's willingness to support foreign aid. More generally, Hudson et al. (2019) show that emotions affect donating behaviour.

Empathy is best understood as a necessary, but not as a sufficient, precondition for compassionate forms of solidarity (see also Miller, 2017). While feeling empathy with other Europeans may not necessarily lead an individual to act in solidarity, the absence of empathy makes solidarity impossible. In the existing literature, European solidarity is often implicitly or explicitly conceptualised as a form of organic solidarity in the Durkheimian sense (e.g. Ciornei and Recchi, 2017; Ignácz, 2021). In this thinking, European solidarity is based on the interdependence of nation-states created by European integration. According to this logic, an employee of a German car producer might be willing to help another European country in an economic crisis because he or she knows that his or her job depends on the economic situation in this country. In contrast, this paper assumes that there can be a mechanical solidarity based on a common sense of 'European-ness'. In the typology of solidarities by Thijssen (2012), 'compassionate solidarity' is a form of mechanical solidarity that is nurtured by a subjective communality. He notes that this communality is driven by collective representations (ibid.: 461–462). According to this logic, somebody who is exposed to the European insignia on his or her passport and incorporates this European-ness in his identity creation become more willing to help others who are identified as Europeans as well. It is therefore worthwhile investigating the determinants of empathy towards other Europeans for the broader literature on European solidarity.

Research on European solidarity has focused almost entirely on understanding the attitudes of *EU citizens* rather than *Europeans*. In broad terms, this research has identified (sociotropic) notions of self-interest (Bobzien and Kalleitner, 2021; Mariotto and Pellegata, 2023); identity (Kuhn et al., 2018; Nicoli et al., 2020), and political beliefs (Medrano et al., 2019) to be among the most relevant determinants for European solidarity. Others have explored the importance of the macro-economic context of individuals, such as the wealth of an individual's country (Vasilopoulou and Talving, 2020; Reinl et al., 2023). More recently, scholars have also started to look into the effect of the attributes of a recipient country and have integrated the role of deservingness (Afonso and Negash, 2024; Heermann et al., 2023; Clasen, 2024b). In this line of research, scholars often assume that transnational solidarity in Europe becomes meaningful only in the context of the EU. These authors either anchor European solidarity explicitly within the EU (e.g. Ciornei and Recchi, 2017; Mariotto and Pellegata, 2023),

or they operationalise it as support for specific policy proposals that promote redistribution within the EU (e.g. Gerhards et al., 2019).

Such studies ignore the fact that European solidarity can be found outside the EU as well, as the European solidarity with Ukraine, mentioned in the beginning, shows. Even non-EU countries like the UK and Norway are among the principal supporters of Ukraine. While helping Ukraine may also be driven by other motivations – for instance, self-interested security concerns – such support goes to show that the EU does not have a monopoly on European solidarity.

The central assumption of this paper is thus that European solidarity is not limited to the EU. Rather, it argues that EU membership makes it more probable that citizens are willing to show empathy with other Europeans. Recent empirical studies have started to investigate the role of the EU in European solidarity, but the findings remain inconclusive (Gerhards et al., 2019; Heermann et al., 2023). While Oana and Truchlewski (2023) argue that the EU is involved in the 'bonding and bounding' of solidarity, and they find evidence that solidarity among European countries is stronger than between EU and non-European countries, their research design cannot convincingly attribute this solidarity to European integration rather than to more ethnic notions of European-ness. This paper will contribute to this line of research.

4.3 The effect of EU membership on empathy with Europeans

Based on the concept of compassionate solidarity outlined above, and on the insights on nationalism borrowed from the constructivist school, this paper argues that exposure to the symbols of EU membership extends the boundaries of citizens' pro-social attitudes by 'micro-dosing' Europeanism.

In drawing from the constructivist literature on nationalism, this paper does not attempt to define the EU as a nation-state. Rather, we can gain insights by drawing a parallel between the societal transformations that accompanied the penetration of everyday life by the nation-state and the European integration project. The constructivist literature (Anderson, 1983; Gellner, 2006) highlights that political identities are not primordial. As Anderson put it, the nation is "an imagined political community" (Anderson, 1983: 6) because individuals share it with people they never interact with. The constructivist

school stands in contrast to the primordial school (for instance, see Geertz, 1973), which views national identities as natural, and ineffable, i.e. that individuals necessarily feel the attachment to a national group (Eller and Coughlan, 1993).

Europeanism differs from nationalism only in the way it is imagined. Being in the EU, citizens may come to believe that they are connected to other Europeans beyond the borders of their nation, and that they owe them some form of solidarity. These imagined ties may constitute the basis for forms of redistribution within the EU, such as through a European unemployment reinsurance scheme that do not necessarily mimic the type of welfare that exists in modern nation-states. But being in the EU may provide individuals with ideas of being European and with obligations towards other Europeans.

Whether the EU is an imagined community capable of creating the cohesion we see today in national communities must be answered based on empirical data. Research shows that schooling (Rutten et al., 2010), welfare provision (Larsen, 2013), and shared narratives and common symbols (Fox, 2006; Brans et al., 2017) all contribute to the creation of a sense of cohesion and collective identity. Notably, there is rich evidence that welfare regimes socialise citizens to support the level of welfare provided by the regime (e.g. Goerres and Tepe, 2012). There is reason to believe that this research applies at the European level, given that a common European identity is one of the most consistent predictors of European solidarity attitudes (Ciornei and Recchi, 2017; Verhaegen, 2018; Nicoli et al., 2020). However, the EU does not pursue a state-building policy, and the EU's role in social policy and education is limited. Its education-exchange programme Erasmus+ is one of its most popular programmes, but evidence on whether it fosters a sense of European identity is mixed (e.g. Kuhn, 2012). Other exchange programmes, such as town-twinning project, which are often initiated at the local level, have been shown to increase participating citizens' support of the EU (Tausendpfund and Schäfer, 2018). Concerning the EU's role in welfare policy, the EU budget is arguably too small to have any meaningful impact on citizens' solidarity attitudes (Miró et al., 2024). Furthermore, the structure of its budget and the political discourse revolving around the net beneficiary and the net recipient countries may actually contribute to an 'othering' effect that pitches Europeans against Europeans, rather than fostering solidarity (Becker et al., 2017).

However, the mere existence of the EU provides cues in the form of symbols that citizens frequently encounter. Citizens associate these symbols with a political entity that provides a group membership at the European level. As Hechter (1987) notes, the boundedness of social groups and the potential means of cohesion that go along with a group make solidarity possible to begin with. The integrative power of group symbols and rituals for forms of mechanical solidarity is also underlined in Thijssen (2012).

It is thus theorised that European integration and its symbols expose citizens to the idea that Europe is a relevant group category. Being in an EU country, citizens constantly see European symbols, and this creates what has been coined 'banal Europeanism' (Foret and Trino, 2022). Identification with the EU is fostered through 'low-level engagement', such as seeing the EU flag at the site of an administrative building or a logo at the site of an EU-funded project. These symbols remind citizens of their involvement in a larger EU system (Cram, 2009; Cram, 2012). When citizens are exposed to the symbols of European integration in their everyday routines, they gradually come to internalise the European level as one of several political levels of community; this in turn expands their pro-social boundaries. To be clear, the expectation is not that individuals living in EU countries become more empathic per se, but that their pro-social boundaries are expanding to the EU level, making it more likely that they will show concern for the living conditions of other Europeans. The first hypothesis is proposed:

> *H1***:** Citizens in EU countries on average express more empathy with other Europeans than non-EU citizens.

Essentially, through exposing its citizens to its symbols, the EU 'micro-doses' Europeanism. While it is not possible to directly test the causal mechanism of the effect of EU symbols towards empathy with the data available, this micro-dosing implies that the effect of EU membership on individuals' empathy with other Europeans is gradual rather than immediate. The micro-dosing assumption suggests that the effect of EU membership is progressive, as citizens are more and more exposed to the cues of their country's EU membership in their everyday lives and through exposure to the cues in the news. This idea is also supported by previous studies with a similar interest. For instance, Klingemann and Weldon (2013) find that the more years two countries have of common EU membership, the more the citizens of those countries trust one another. The second hypothesis is proposed:

> *H2***:** The longer citizens live in an EU country, the more empathic they are with other Europeans on average.

4.4 Methodology and data

To measure attitudes towards European solidarity, survey researchers often use support for existing or hypothetical policies like Eurobonds or EU-wide reinsurance schemes as operationalisations (e.g. Nicoli et al., 2020; Goldberg et al., 2021a). Such survey questions have low face validity in non-EU countries because these EU policies have little relevance in non-EU countries, nor can we randomly assign respondents' exposure to EU membership and see how that would change their solidarity. As outlined, empathy with other Europeans can be understood as a necessary condition for solidarity and is more easily measured in a way that is comparable between EU countries and non-EU countries.

The empirical analysis is based on an analysis of three EVS waves of 1999 (conducted 1999–2001), 2008 (conducted 2008–2010) and 2017 (conducted 2017–2021). The dataset includes 45 European countries. Some countries were divided into relevant subregions that I will treat as separate contexts. This is the case for Germany (Germany-East and Germany-West), the UK (Great Britain and Northern Ireland), Belgium (French-speaking and Dutch-speaking) and Switzerland (French-speaking, German-speaking, and Italian-speaking). Figure 4-4 in the chapter appendix gives an overview of the country-years included in the dataset. The major advantage of this dataset is that it comprises both EU countries and non-EU countries. This is necessary to estimate the effect of EU membership on empathy with Europeans. In total, about 160,000 individuals are included in the dataset. The EVS used random sampling to target the resident population of 18 years and older, relying primarily on face-to-face interviews. On average, there were about 1500 individuals per national sample. In some countries, certain demographics were deliberately oversampled (e.g., Eastern Germans in the German sample).

Dependent variable

The dependent variable of empathy was based on the following survey item:

> Please indicate to what extent you feel concerned about the living conditions of: - Europeans.

Respondents answered on a 5-point, fully-labelled scale: ‘Not at all’, ‘Not so much’, ‘To a certain extent’, ‘Much’, and ‘Very much’. Respondents could also reply ‘Don’t know’. Multiple linear regression was applied. Since the prevalence of ‘Don’t know’ responses was low (2.3% for the overall sample), and the potential for introducing bias was therefore limited, listwise deletion was applied. Unlike survey items in which respondents are asked for their support for a specific policy (e.g., Eurobonds) – for which a high share of ‘Don’t know’ responses is common (e.g. Kanthak and Spies, 2018) – a question tapping into a value-driven attitude seems to be easier to reply to. To explore the issue further, a logistic regression model was performed to see if the prevalence of ‘Don’t know’ responses could be explained. Indeed, as Table 4-3 in the chapter appendix shows, women, respondents with lower education, those with a lower income, and respondents from earlier generations are more likely to respond ‘Don’t know’. In addition, those respondents who were less interested in the survey in general (as rated by the interviewer) were also more likely to respond ‘Don’t know’. This suggests that the frequency of ‘Don’t know’ responses is not specific to the survey item, but that it is the respondents’ general attitude towards the interview.

Figure 4-1 presents the decomposition of variance of empathy with other Europeans at the macro level. There is wide country variance in empathy with other Europeans, both between countries as well as within countries. Panel A shows a scatter plot that demonstrates the relationship between the number of years a country has been in the EU and the aggregate empathy with other Europeans. Panel B shows that there was a general upward trend in empathy with Europeans over time, from below 2.5 in 1999 to 2.7 in 2017. Panel C compares the level of empathy between EU member countries and non-member countries towards other Europeans. Where applicable, the grey lines in the plot show the evolution of empathy with other European countries before and after accession to the EU. Finally, Panel D shows cross-sectional variance and plots the relationship between a country’s GDP per capita and empathy with other Europeans. This visual representation already highlights that, if EU accession has had an effect on empathy with other Europeans, the effect was rather limited, given the small differences in the means between EU countries and non-EU countries in Panel C. On the contrary, it seems that there is a progressive effect, as in Panel A.

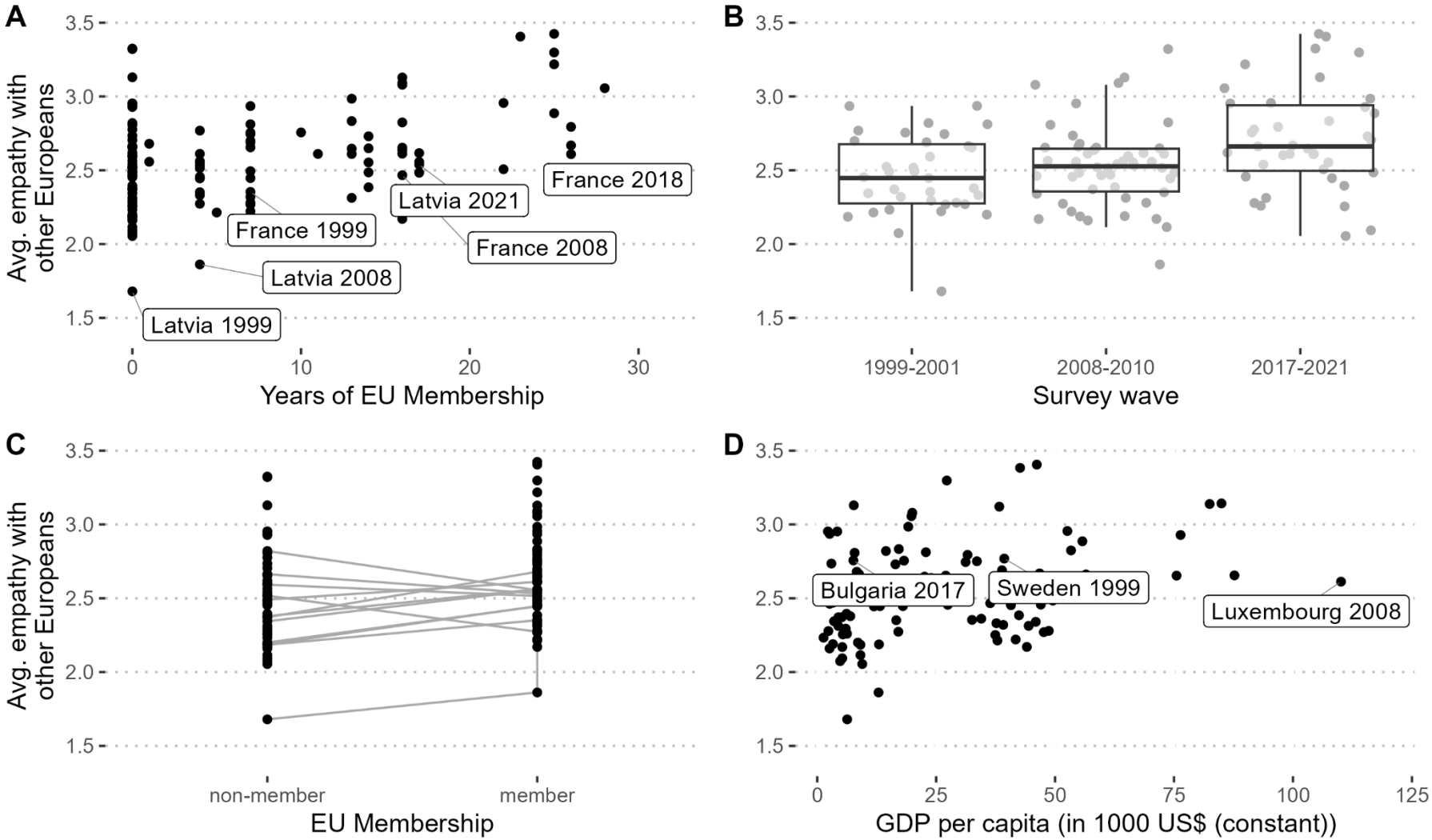

Figure 4-1. Bivariate relationship of selected variables and mean empathy with other Europeans on the country-year level.

Figure 4-4 in the chapter appendix shows the aggregate empathy for all countries included in the sample for all survey waves. Austrians in 2017 show the highest overall level of empathy with Europeans (3.4). The country has seen a remarkable increase in empathy with Europeans, up from 2.3 both in 1999 and 2008. The lowest overall level of empathy with Europeans was measured for Latvia in 1999 (1.7), although in subsequent survey waves – after its EU accession in 2004 – empathy towards Europeans increased to 1.9 in 2008 and to 2.5 in 2021. As these visual representations make clear, empathy with other Europeans does not hinge solely on the EU membership of a country. Rather, there is large variance between nation-states beyond EU membership.

Independent variables

The key independent variable was a country's EU membership, with two different operationalisations. First, membership was included as a dummy variable to estimate the difference between EU citizens and non-EU citizens. In a second step, membership was measured in the membership years since the Maastricht Treaty came into force in 1993. This treaty marked a relevant shift in European integration, as it formally founded the EU, and it created the constitutional possibilities for highly visible policies such as Schengen and the euro. Using EU membership as a metric variable allowed the estimation of a progressive effect of EU membership on individual empathy towards other Europeans.

The principal interest of this paper is how a change in EU membership status affects empathy towards other Europeans. As already mentioned, to account for the heterogeneity between countries, country-fixed effects were included. For the cross-time heterogeneity within countries not explained by EU membership, and which may confound the estimation, a variable measuring the change in GDP per capita of a country since 1999 was included as a control variable. National income is known to have an effect on European solidarity attitudes (Vasilopoulou and Talving, 2020; Mariotto and Pellegata, 2023), and national income is positively associated with EU membership (Campos et al., 2019). It is therefore possible that EU membership may have an indirect effect on the concern for the living conditions of other Europeans via GDP per capita, which is why it is important to control for this. Furthermore, to account for the fact that the EU has evolved between the time points of measurement, two dummy variables were

included that capture whether a country is part of the Eurozone and whether a country is part of Schengen at any given time. Finally, to account for the fact that EU countries are generally better integrated into global markets than non-EU countries, and as this may make citizens more outward-looking, the KOF globalisation index (Haelg, 2020), which measures a country's exposure to globalisation, was also included.

At the individual level, political ideology was included (based on an item in which respondents are asked to place themselves on a left-right-scale from 0 to 10) as well as whether respondents have a foreign nationality. The models take into account formal education, individual income, gender, and birth cohort.

4.4.1 Multi-level regression with country-fixed effects

In the first part of the empirical analysis, a multi-level regression that uses the dummy variable of EU membership was estimated. In the second part of the analysis, the variable measuring EU membership in years was used instead. The ICC of an empty hierarchical regression model shows that a relevant share of the variance is due to the country-year ($ICC_{country\text{-}year} = 0.09$). This is why a multi-level model that clusters individuals in country-years was used. Country-fixed effects were included to fully account for the variance on this third level.

Results

Table 4-4 in the chapter appendix shows the regression results of the three regression models using EU membership as a dichotomous variable. These models are based on the analysis of the complete respondent data of the EVS trend file. Model A1 includes individual-level controls and the dummy variable of EU membership, as well as country-fixed effects. Model A2 further includes the change of GDP per capita within a country and adds dummy variables for country membership of the Eurozone and Schengen. Finally, Model A3 includes dummy variables for the survey wave. The coefficient of EU membership is positive, as expected, but is only statistically significant at $p < 0.05$ in Model A1. The coefficient is not significant statistically once the macro-level controls are included. Residents in EU countries tend to be more empathic to other Europeans than residents in non-EU countries, but we cannot attribute this difference to their country being a member of the EU. These models thus *do not* provide evidence that EU membership – understood as a dichotomous variable – has a positive effect on citizens'

empathy towards other Europeans. This implies that the moment of accession to the EU is not a pivotal moment for a country's residents regarding their empathy towards other Europeans. This analysis thus does not provide support for *H1*.

Table 4-1. Multi-level linear regression with country-fixed effects with EU membership measured in years.

	Model 1	Model 2	Model 3
Micro level			
Political ideology (Ref.: Centre)			
Left	0.082 (0.007)*	0.081 (0.007)*	0.081 (0.007)*
Right	-0.018 (0.007)	-0.019 (0.007)	-0.019 (0.007)
No Answer/Don't know	-0.131 (0.007)*	-0.132 (0.007)*	-0.132 (0.007)*
Citizenship of resident country (1: Yes)	-0.153 (0.013)*	-0.176 (0.014)*	-0.176 (0.014)*
Macro level			
EU membership in years	0.021 (0.004)*	0.027 (0.006)*	0.023 (0.009)*
Growth in GDP per capita since 1999		0.060 (0.139)	0.001 (0.142)
Euro (1: Yes)		-0.138 (0.088)	-0.078 (0.093)
Schengen (1: Yes)		-0.006 (0.087)	0.051 (0.091)
Globalisation Index		-0.004 (0.010)	-0.000 (0.012)
Survey wave (Ref.: 1999–2001)			
2008–2010			-0.082 (0.112)
2017–2021			0.007 (0.168)
Country-fixed effects	✓	✓	✓
AIC	442792	436642	436649
Log Likelihood	-221326	-218249	-218250
Num. obs.	159367	157332	157332
Num. groups: countrywave	122	120	120
Var: countrywave (Intercept)	0.040	0.041	0.040

	Model 1	Model 2	Model 3
Micro level			
Var: Residual	0.937	0.934	0.934

Note: Standard errors in brackets. Coefficients of the intercept, cohort, education, gender, and income omitted. No GDP data for Kosovo and Northern Cyprus. *p < 0.01

Now we turn to the question of whether there is an effect over time of EU membership on empathy with other Europeans. Table 4-1 shows the results. Again, Model 1 includes individual-level controls and the key dependent variable of EU membership measured in years, as well as country-fixed effects. Model 2 further includes the change of GDP per capita within a country and adds dummy variables for country membership to the Eurozone and Schengen. Finally, Model 3 includes dummy variables for the survey wave. Note that the inclusion of the dummies for the survey wave does not improve the model fit, as indicated by the Akaike Information Criterion (AIC).

Across all model specifications, the coefficient for EU membership as measured in years is positive and statistically significant at $p < 0.01$.

Figure 4-2, based on Model 2, shows the estimated marginal means of the EU membership variable. It shows a non-negligible increase in empathy with other Europeans as the duration of countries' EU membership increases. Ten years of EU membership increases citizens' empathy with other Europeans by 0.23 points on the 5-point scale. In comparison, the difference between an individual with a left political ideology and one with a right political ideology is a mere 0.1 points. The effect of ten years of EU membership is thus twice as large as the effect of political ideology.

Note that this difference cannot be attributed to the between-country differences, nor to the increase in GDP, as these factors are accounted for in the analysis. It is also noteworthy that the inclusion of survey wave dummies does not improve the model fit, and that the effects of the survey waves are not statistically significant. While this analysis does not provide any direct evidence for the hypothesised mechanism of the exposure of EU symbols, it strongly supports *H2* concerning a positive effect of EU membership on individuals' empathy towards other Europeans.

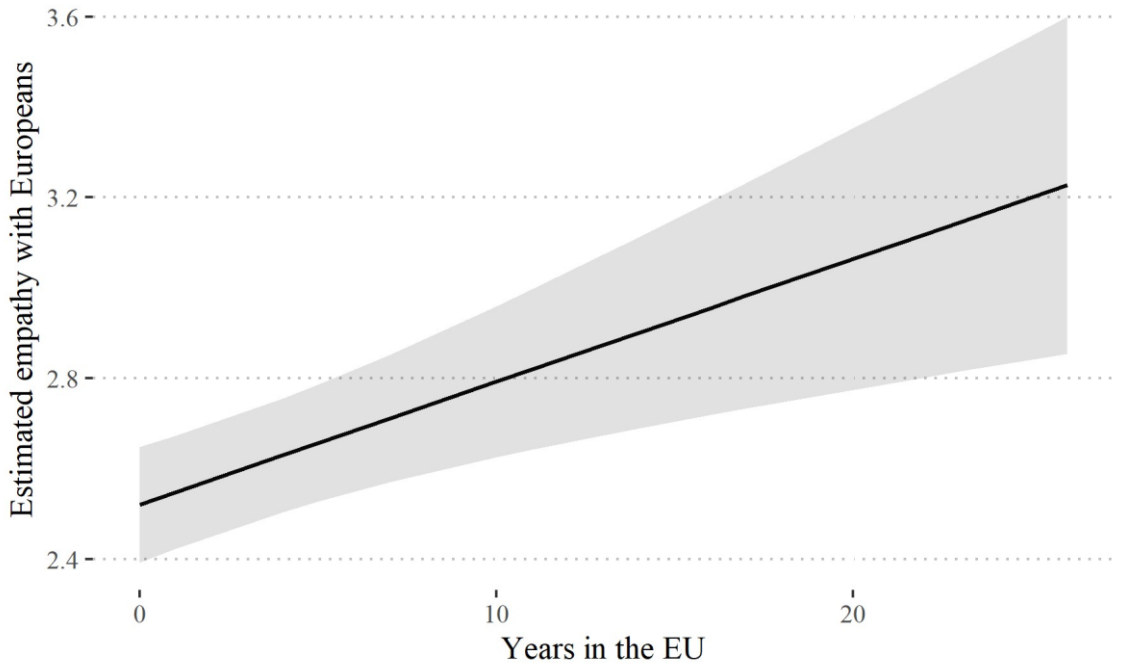

Figure 4-2. EU citizens become gradually more empathic with other Europeans the longer their country has been in the EU. 99% confidence interval. Based on Model 2.

Robustness checks of regression analysis

The description of a series of robustness tests was conducted to ensure the soundness of these results can be found in the chapter appendix. These robustness tests support the idea that EU membership reinforces empathy with other Europeans, rather than making individuals more empathic in general or increasing their empathy towards outsiders of the nation-state. Furthermore, the robustness tests also demonstrate a high level of homogeneity of the effect across societal groups and across countries.

However, this analysis makes two assumptions whose robustness cannot be assessed directly. First, it is difficult to control for the temporal validity of the survey item used as the dependent variable. It is indeed possible that respondents interpret the question differently in later periods than in earlier periods. A second concern is that EU membership is conceptualised as a macro variable, not as an individual variable. This is relevant, because theoretically, it is argued that citizens become more empathic as they are increasingly exposed to the EU. This places the mechanism at the individual level. To mitigate these concerns, the matching approach presented in the next section allows the analysis of individuals' experiences in the EU.

4.4.2 Analysis after exact matching

For the two survey waves in 2008 and 2017, the dataset contains information about the migration history of individuals. Respondents indicated whether they were born in another country, and if so, in which country, and in what year they migrated. Of the roughly 125,000 respondents who were interviewed in the two survey waves, about 9,500 respondents had been born in another country and migrated. This allowed a move away from EU membership as a macro variable to conceptualising it as an individual-level variable instead. To illustrate what this means in practical terms, a Swiss citizen who moved to France in 2008 had nine years of EU membership in 2017, compared to 0 years for a Swiss citizen who remained in Switzerland, and a French citizen who was born before 1992 and who had always lived in France had 24 years of EU membership.

The individual migration data is leveraged by applying exact matching. Matching is a statistical technique used to estimate the treatment effect of variables of interest in settings where treatment is not randomly assigned. In the context of this paper, 'treatment' is the individual's exposure to the EU. In this quasi-experimental design, respondents were matched based on socio-economic variables that have been shown to affect empathy towards other Europeans in the previous analysis. These include gender, household income, formal education level, and political ideology. Although birth year did not have a significant effect on empathy towards other Europeans, respondents were also matched on whether they were born before or after 1990, the idea being that generations born before 1990 might have a different conceptualisation of Europe. Furthermore, respondents were also matched by survey wave to exclude any period effect. Last, and most importantly, respondents were matched based on their country of origin. Numeric variables were coarsened, i.e., they were recoded into categorical variables (Iacus et al., 2012). This was the case for political ideology (three categories: 'Left', 'Centre', 'Right') and income (three categories: 'High', 'Medium', 'Low'). Respondents were matched on a total of seven variables. To make this clear, the following example illustrates how the matching worked. The two women respondents described here were matched: both were born before 1990 in Ukraine; both had obtained a medium level of education; both held a centrist political ideology; both had low income; both were interviewed in the same year; one woman stayed in Ukraine, and the other moved to Estonia in 1980. The latter

individual had thus spent some years in the EU at the time of the interview, whereas the former had spent no time in the EU.

By matching those 'treated' individuals – i.e., who lived in an EU country – and assigning weights to account for different selection assignment group sizes, it ensured that the samples of treated and untreated respondents were perfectly balanced, i.e., both groups share the same observed characteristics and only differ regarding their EU membership status. This means that, in principle, the conclusions that can be drawn are of a causal nature. The most important downside is that this approach does not yield control units for every treated unit in the sample, and this reduces the exploitability of results (Black et al., 2020). Essentially, the fact that not all treated individuals were matched with control individuals implies that the results are not representative of the general population. The data are thus of a comparable quality as those of a randomised experiment with a convenience sample (Iacus et al., 2012). Of the 72,429 'treated respondents' – i.e., those living in an EU country – in the baseline sample, 17,846 respondents (25%) were matched for a total sample size of 35,482. The largest hurdle for matching is the country of origin. First, there were 75 countries of origin with fewer than ten respondents – such as Greenland or Djibouti – of which none could be matched. Second, for smaller EU countries like Luxembourg, Malta and Cyprus, there were no respondents who moved to a non-EU country. Again, in these cases no match was possible. On the other hand, of the individuals from larger countries such as Ukraine or Germany, more than 75% could be matched.

Results

After exact matching, a simple comparison of the means can be interpreted as the causal effect of the treatment. Those who have been treated with living in an EU country are indeed 0.3 points on the 5-point scale more empathic than those who do not live in an EU country. This difference in means is statistically significant at $p < 0.01$. Figure 4-3 shows how the distribution of responses is affected. As expected, treated respondents are less likely to say they have no empathy at all or 'Not so much', and are more likely to say they feel 'Much' empathy or feel empathy 'To a certain extent'. Somewhat curiously, respondents who are treated are not significantly more likely to express that they have 'Very much' empathy with other Europeans than the control respondents.

Table 4-2. Multivariate linear regression after exact matching.

	Model 4	Model 5
EU membership (in years)	0.023 (0.001)*	0.015 (0.002)*
Migrated (1: Yes)		0.117 (0.021)*
Age (in years)		0.001 (0.000)*
Gender (1: Male)		-0.012 (0.011)
Education (Ref.: Low)		
Middle		0.068 (0.016)*
Upper		0.199 (0.019)*
Missing		0.570 (0.197)*
Income (Ref.: High)		
Middle		-0.018 (0.018)
Low		-0.042 (0.016)
No answer/Don’t know		0.093 (0.023)*
Political Ideology (Ref.: Centre)		
Left		0.124 (0.018)*
Right		-0.025 (0.022)
No answer/Don’t know		-0.090 (0.013)*
Survey wave (1: 2017–2021)		0.126 (0.015)*
Country of residence dummies	No	Yes
Country of origin dummies	No	Yes
Adj. R^2	0.029	0.160
Num. obs.	34477	34477

Note: * $p < 0.01$

One caveat is that, by design, treated respondents and control respondents differ not only in EU membership of their country of residence, but also by the fact that either the treated or the control respondents have migrated. Overall, treated respondents are slightly more likely to have migrated than respondents in the control group. To distinguish the effect of EU membership from the effect of migration, multivariate linear regression is applied in the next step. Here, EU membership is specified as a continuous variable measured in years.

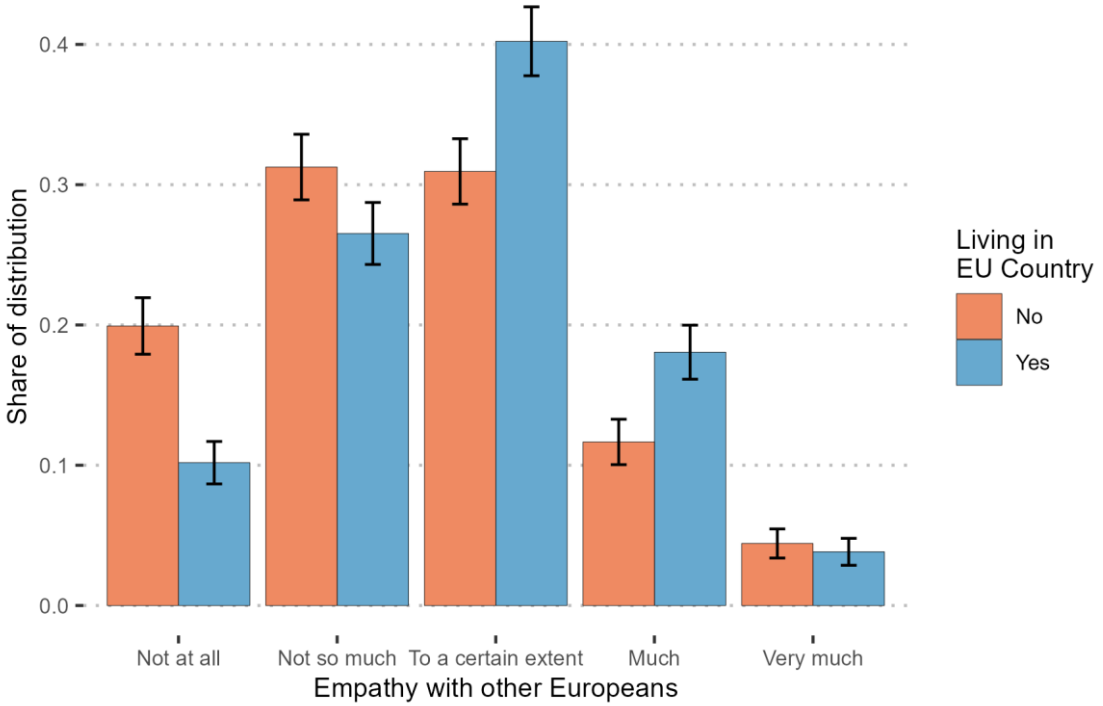

Figure 4-3. Empathy with other Europeans among respondents treated with EU membership and control respondents. 99% confidence intervals.

Table 4-2 shows the regression models. Model 4 is a simple bivariate regression without any controls, Model 5 includes all controls that were used for the matching procedure, as well as whether a respondent had migrated. In both models, the coefficient of EU membership is positive and statistically significant at $p < 0.01$. This means that the individual amount of time spent in an EU country has a non-negligible effect on an individual's empathy with other Europeans. While this does not prove the theoretical argument that exposure to EU symbols makes people more willing to help other Europeans, it is nevertheless a strong indication that individuals' experiences of the EU affect their empathy towards other Europeans. Furthermore, the models indeed show that migration has a positive and statistically significant effect on empathy with other Europeans. Plausibly, citizens may also become more familiar with the EU over time, and the collective crisis experience since the later 2000s may have contributed to a heightened sense of empathy towards Europeans.

Robustness checks of matching exercise

Several robustness tests were conducted. First, the homogeneity of this effect was investigated. Respondents in the 2017 survey wave were overall more empathic than

those in the 2008 survey wave, as indicated by the coefficient of the survey wave variable. The model was rerun with a product term variable for EU membership and survey wave. This interaction term is indeed statistically significant, as Table 4-8 in the chapter appendix shows. The effect is slightly stronger in 2017–2021 than in the previous survey wave. Second, it was tested whether excluding respondents of non-European origin – defined as coming from a country not surveyed in the EVS – alters the results. This is not the case. Finally, a jackknife test was done in which each country-year was excluded one at a time to investigate the heterogeneity of the results. The point estimates of EU membership of this exercise are plotted in Figure 4-5 in the chapter appendix. While there is some variation, there is no overall pattern where a certain cluster of countries has a consistent effect. The coefficient always remains positive and statistically significant at $p < 0.01$.

4.5 Conclusions

This article makes the argument that European solidarity is not confined to the EU, but that it exists outside the EU as well. Rather than defining European solidarity as a phenomenon limited to the EU, it is argued that EU membership has a positive effect on individuals' solidarity with other Europeans. It is suggested that the EU does this by 'micro-dosing' Europeanism through the exposure to symbols of EU membership. Using two empirical approaches with data from the EVS, this article presents robust evidence for the argument that EU membership makes individual citizens more empathic with other Europeans. The results show that the effect of living in an EU country for ten years is about twice as great as the difference between individuals with a left or a right political ideology. In summary, this paper makes three contributions to the literature. First, there can be European solidarity beyond the EU. Second, accession into the EU is not a pivotal moment for citizens' empathy towards other Europeans. Third, over time, EU membership gradually increases empathy towards other Europeans.

It should be emphasised that empathy and solidarity are closely related, but that empathy cannot be translated one-to-one to solidarity attitudes. Empathy, as expressed in the survey item, is for free, whereas solidarity is not. This is relevant, since previous studies have shown that material self-interest is an important predictor of solidarity (e.g.

Vasilopoulou and Talving, 2020). In addition, the data do not allow us to conclude that solidarity is indeed due to individuals' exposure to EU symbols.

One concern that could not be taken into account is that the data provides only a limited number of time points. The findings here suggest that the moment of accession to the EU is not a pivotal moment for citizens. This means that future research does not need to combine data from EU and non-EU countries. Surveys such as the Eurobarometer may contain useful survey questions over a longer period to replicate the findings here. Experimental approaches may analyse the theorised effect of EU symbols on citizens' European solidarity in greater detail.

The article closes an important gap in the literature and provides evidence that solidarity in the EU is not due to happenstance, but that it is created – at least to some extent – by European integration itself. The analysis also suggests that the EU could do more to create European solidarity. A major avenue for nation-building is the provision of welfare, to the extent that the EU relies on solidarity among its citizens. In associating EU symbols with formative life experiences, it may be possible for the EU to increase the solidarity that citizens show with other Europeans. This is an encouraging finding for the future of EU integration.

4.6 Chapter appendix

Figure 4-4. Empathy with other Europeans by country and year.

Table 4-3. Multi-level logistic regression model estimating propensity to indicate 'Don't know' when asked for empathy with Europeans.

	Model DK1	Model DK2
Gender (Ref: Female)	0.09 (0.02)*	0.08 (0.02)*
Age in years	-0.00 (0.00)*	-0.00 (0.00)*
Income (Ref: Income decile 7-10)		
5-6	0.03 (0.03)	0.02 (0.03)
1-4	0.13 (0.02)*	0.11 (0.02)*
No answer/Don't know	0.19 (0.03)*	0.16 (0.03)*
Education (Ref: Lower)		
Middle	-0.24 (0.02)*	-0.23 (0.02)*
Upper	-0.46 (0.02)*	-0.43 (0.02)*
Missing	-0.05 (0.08)	-0.06 (0.08)
Interest in the survey (Ref.: Not very interested)		
Somewhat interested		-0.26 (0.03)*
Very interested		-0.34 (0.03)*
AIC	110697.20	110532.83
Log Likelihood	-55338.60	-55254.41
Num. obs.	136152	136152
Num. groups: countrywave	105	105
Var: countrywave (Intercept)	0.60	0.59

Note: Displayed coefficients are log-odds with standard errors in brackets. Interest in the survey has not been measured in all countries in all survey waves. Missing values have been excluded in both models to allow comparability of coefficients. *p < 0.01

Table 4-4. Multi-level regression with country-fixed effects with EU membership as dummy variable.

	Model A1	Model A2	Model A3
EU Membership (1: Yes)	0.18 (0.08)	0.02 (0.13)	0.09 (0.12)
Political ideology (Ref.: Centre)	0.08 (0.01)*	0.08 (0.01)*	0.08 (0.01)*
Left	-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)
Right	-0.13 (0.01)*	-0.13 (0.01)*	-0.13 (0.01)*
No Answer/Don't know	-0.15 (0.01)*	-0.18 (0.01)*	-0.18 (0.01)*
Citizenship of country (1: Yes)		0.10 (0.10)	-0.15 (0.11)
Growth in GDP per capita since 1999		0.11 (0.08)	0.04 (0.08)
Euro (1: Yes)		0.06 (0.11)	0.04 (0.11)
Schengen (1: Yes)	0.18 (0.08)	0.02 (0.13)	0.09 (0.12)
Country-fixed Effects	✓	✓	✓
Survey Wave Fixed Effects	✗	✗	✓
AIC	442808.88	436645.80	436640.65
Log Likelihood	-221334.44	-218251.90	-218247.32
Num. obs.	159367	157332	157332
Num. groups: countrywave	122	120	120
Var: countrywave (Intercept)	0.05	0.05	0.04
Var: Residual	0.94	0.93	0.93

Note: Standard errors in brackets. Coefficients of the intercept, cohort, education, gender, and income omitted. No GDP data for Kosovo. *p < 0.01

Robustness tests for the multi-level regression analyses

All relevant specification tests have been performed and no anomalies have been detected. To ensure the robustness of the findings, a series of tests has been done. As a first step, the regressions have been re-run using logistic regression models that estimates the propensity of having *no* empathy with other Europeans. The rationale of this approach is twofold. Empirically, it allows to support the robustness of the results of the linear modelling used on ordinal data. Theoretically, given that empathy is considered a necessary condition for solidarity, it could be argued that more empathy does not necessarily entail more solidarity, but the absence of empathy implies the absence of solidarity. In turn, citizens who have at least some empathy with other Europeans are open to the possibility of European solidarity. As Table 4-5 shows, all results presented in the paper are robust. The longer a respondent has been in the EU, the less likely he or she is to express no empathy with other Europeans.

Table 4-5. Multi-level logistic regression with country-fixed effects estimating propensity to have no empathy with Europeans.

	Model A4	**Model A5**	**Model A6**
EU membership in years	-0.04 (0.01)*	-0.05 (0.01)*	-0.04 (0.02)*
Political ideology (Ref.: Centre)			
Left	0.00 (0.02)	0.00 (0.02)	0.01 (0.02)
Right	0.15 (0.02)*	0.15 (0.02)*	0.15 (0.02)*
No Answer/Don’t know	0.37 (0.02)*	0.38 (0.02)*	0.38 (0.02)*
Citizenship of country (1: Yes)	0.20 (0.04)*	0.27 (0.04)*	0.27 (0.04)*
Growth in GDP per capita since 1999		-0.07 (0.14)	-0.08 (0.19)
Euro (1: Yes)		0.25 (0.16)	0.10 (0.16)
Schengen (1: Yes)		0.07 (0.15)	-0.09 (0.16)
Survey wave (Ref.: 1999-2001)			
2008-2010			0.25 (0.17)
2017-2021			0.09 (0.26)
Country-fixed effects	✓	✓	✓
AIC	130679.40	128842.99	128841.07

	Model A4	Model A5	Model A6
Log Likelihood	-65270.70	-64351.49	-64348.54
Num. obs.	159367	157332	157332
Num. groups: countrywave	122	120	120
Var: countrywave (Intercept)	0.13	0.13	0.12

Note: Standard errors in brackets. Coefficients of intercept, cohort, education, gender, and income omitted. No GDP data for Kosovo and Northern Cyprus. *p < 0.01

It has further been investigated whether EU membership increases respondents' empathy with humans worldwide, using an adjacent question in the survey battery in which respondents are asked to express the concern they feel for the living conditions of humankind (in the survey wave of 1999 and 2008) and humans globally (in the survey wave of 2017) respectively. The same set of analyses have been re-run, replacing the dependent variable. As Table 4-6 shows, EU membership does not influence empathy with humans globally. The insignificance of EU membership on global-level empathy provides further evidence that the European integration effect is limited to making the EU level more salient as a level of political solidarity, rather than extending or deepening the underlying pro-social values behind it. This speaks also to the theoretical argument that the effect of EU membership is driven by the exposure to EU symbols.

Table 4-6. Multi-level linear regression, empathy with humans globally as DV.

	Model A7	Model A8	Model A9
EU membership in years	0.005 (0.004)	0.015 (0.006)	0.018 (0.009)
Political ideology (Ref.: Centre)			
Left	0.144 (0.008)*	0.145 (0.008)*	0.145 (0.008)*
Right	-0.034 (0.008)*	-0.035 (0.008)*	-0.035 (0.008)*
No Answer/Don't know	-0.140 (0.007)*	-0.142 (0.007)*	-0.142 (0.007)*
Citizenship of country (1: Yes)	-0.127 (0.014)*	-0.147 (0.015)*	-0.147 (0.015)*
Growth in GDP per capita since 1999		0.001 (0.080)	0.081 (0.110)
Euro (1: Yes)		-0.134 (0.090)	-0.052 (0.094)
Schengen (1: Yes)		-0.163 (0.088)	-0.072 (0.093)

	Model A7	Model A8	Model A9
Survey wave (Ref.: 1999-2001)			
2008-2010			-0.209 (0.098)
2017-2021			-0.188 (0.149)
Country-fixed effects	✓	✓	✓
AIC	461841.602	455525.770	455529.894
Log Likelihood	-230850.801	-227691.885	-227691.947
Num. obs.	159155	157128	157128
Num. groups: countrywave	122	120	120
Var: countrywave (Intercept)	0.046	0.044	0.042
Var: Residual	1.061	1.058	1.058

Note: Standard errors in brackets. Coefficients of the intercept, cohort, education, gender, and income omitted. No GDP data for Kosovo and Northern Cyprus. *p < 0.01

As a further robustness test, an additive index is constructed measuring the latent empathy of an individual based on the responses to questions in an adjacent survey battery in which respondents are asked to express their empathy for the "unemployed", "sick and disabled", "elderly" and "immigrants". This additive index ranges from 4 to 20 and is included as an independent variable to the models to investigate whether this puts in question the robustness of previous findings. As Table 4-7 shows, the coefficient of the index is positive and statistically significant at $p < 0.01$ for all model specifications, as expected. The introduction of the index reduces the effect strength of EU membership years on empathy with Europeans by about one third, but the coefficients of EU membership remain statistically significant, even though in model 3 only so at the level of $p < 0.05$. It should however be stressed that this potentially introduces endogeneity to the model, which is why the empathy index is not included in the main analysis.

Table 4-7. Multi-level linear regression, including an empathy index.

	Model A10	Model A11	Model A12
EU membership in years	0.015 (0.003)*	0.019 (0.005)*	0.017 (0.007)
Political ideology (Ref.: Centre)			
Left	0.041 (0.007)*	0.040 (0.007)*	0.040 (0.007)*
Right	-0.020 (0.007)*	-0.021 (0.007)*	-0.021 (0.007)*
No Answer/Don't know	-0.090 (0.006)*	-0.090 (0.006)*	-0.090 (0.006)*
Citizenship of country (1: Yes)	-0.185 (0.013)*	-0.199 (0.013)*	-0.199 (0.013)*
Empathy index	0.141 (0.001)*	0.142 (0.001)*	0.142 (0.001)*
Growth in GDP per capita since 1999		-0.013 (0.066)	-0.009 (0.093)
Euro (1: Yes)		-0.094 (0.075)	-0.047 (0.081)
Schengen (1: Yes)		0.040 (0.073)	0.081 (0.079)
Survey wave (Ref.: 1999-2001)			
2008-2010			-0.071 (0.084)
2017-2021			-0.025 (0.127)
Country-fixed effects	✓	✓	✓
AIC	414257.962	408270.275	408279.131
Log Likelihood	-207057.981	-204063.138	-204065.565
Num. obs.	156384	154384	154384
Num. groups: countrywave	121	119	119
Var: countrywave (Intercept)	0.029	0.030	0.030
Var: Residual	0.824	0.820	0.820

Note: Standard errors in brackets. Coefficients of the intercept, cohort, education, gender, and income omitted. No GDP data for Kosovo and Northern Cyprus. No data for the empathy index for Slovakia in 2008. *p < 0.01

Finally, one may argue that the effect presented here is just the grand mean that hides a very heterogeneous social reality. It may well be that EU membership affects some individuals, whereas others are unaffected; and it may be that EU membership has a

positive effect in some country contexts, but none in others. For instance, individuals with weaker ties to national communities may be more susceptible to the exposure of EU membership. To empirically account for these concerns, it has been tested whether there are interaction effects present between the variable measuring years of EU membership on the one hand and the variables of the political self-placement variable and the citizenship variable respectively. The idea is that left individuals and those without the citizenship of the country they live in are less attached to the country and may therefore be more willing to accept a European level. Note that both factors have a strong positive main effect on empathy with other Europeans. Table 4-8 shows the results of these regression models. While the interaction terms for political ideology and national citizenship are statistically significant and in the expected direction, there substantial effect is negligible as the effect of EU membership years remains substantially the same. As concerns the interaction between a country's GDP and EU membership, there is no statistically significant interaction term.

Table 4-8. Multilevel linear regression model, including interaction effects.

	Model 3	**Model A13**	**Model A14**	**Model A15**
EU membership in years	0.023 (0.009)*	0.028 (0.009)*	0.023 (0.009)*	0.003 (0.023)
Political ideology (Ref.: Centre)				
Left	0.081 (0.007)*	0.081 (0.007)*	0.020 (0.010)	0.081 (0.007)*
Right	-0.019 (0.007)	-0.019 (0.007)*	0.015 (0.010)	-0.019 (0.007)
EU m. in years × Left pol. ideology			0.007 (0.001)*	
EU m. in years × Right pol. ideology			-0.005 (0.001)*	
Citizenship of country (1: Yes)	-0.176 (0.014)*	-0.123 (0.020)*	-0.177 (0.014)*	-0.176 (0.014)*
EU m. in years × citizenship		-0.006 (0.002)*		
Growth in GDP per capita since 1999	0.001 (0.142)	-0.002 (0.142)	0.010 (0.142)	-0.110 (0.187)

	Model 3	Model A13	Model A14	Model A15
EU m. in years × Growth				0.012 (0.013)
Globalisation index	-0.000 (0.012)	-0.000 (0.012)	-0.000 (0.012)	-0.000 (0.012)
Euro (1: Yes)	-0.078 (0.093)	-0.080 (0.093)	-0.076 (0.093)	-0.103 (0.097)
Schengen (1: Yes)	0.051 (0.091)	0.052 (0.091)	0.055 (0.091)	0.029 (0.094)
Survey wave (Ref.: 1999-2001)				
2008-2010	-0.082 (0.112)	-0.081 (0.112)	-0.087 (0.112)	0.005 (0.147)
2017-2021	0.007 (0.168)	0.009 (0.167)	0.002 (0.167)	0.122 (0.209)
Country-fixed effects	✓	✓	✓	✓
AIC	436648.560	436648.798	436548.913	436656.613
Log Likelihood	-218250.280	-218249.399	-218197.456	-218253.307
Num. obs.	157332	157332	157332	157332
Num. groups: countrywave	120	120	120	120
Var: countrywave (Intercept)	0.040	0.040	0.040	0.040
Var: Residual	0.934	0.934	0.934	0.934

Note: Standard errors in brackets. Coefficients of the intercept, cohort, education, gender, and income omitted. No GDP data for Kosovo and Norther Cyprus. *p < 0.01

Robustness tests for exact matching approach

Table 4-9. Multivariate regression after exact matching, including interaction term.

	Model 5
EU Membership (in years)	0.009 (0.003)*
Migrated (1: Yes)	0.106 (0.016)*
Age (in years)	0.002 (0.000)*
Gender (1: Male)	-0.005 (0.011)
Education (Ref.: Low)	
Middle	0.056 (0.016)*
Upper	0.179 (0.019)*
Missing	0.683 (0.190)*
Income (Ref.: High)	
Middle	-0.031 (0.018)
Low	-0.056 (0.016)*
No answer/Don’t know	0.094 (0.023)*
Political Ideology (Ref.: Centre)	
Left	0.113 (0.024)*
Right	-0.028 (0.022)
No answer/Don’t know	-0.070 (0.012)*
Survey wave (1: 2017-2021)	0.110 (0.021)*
Interaction	
EU M. in years × Survey wave 2017-2021	0.007 (0.002)*
Country of residence dummies	✓
Country of origin dummies	✓
Adj. R^2	0.156
Num. obs.	34945

Note: p < 0.01

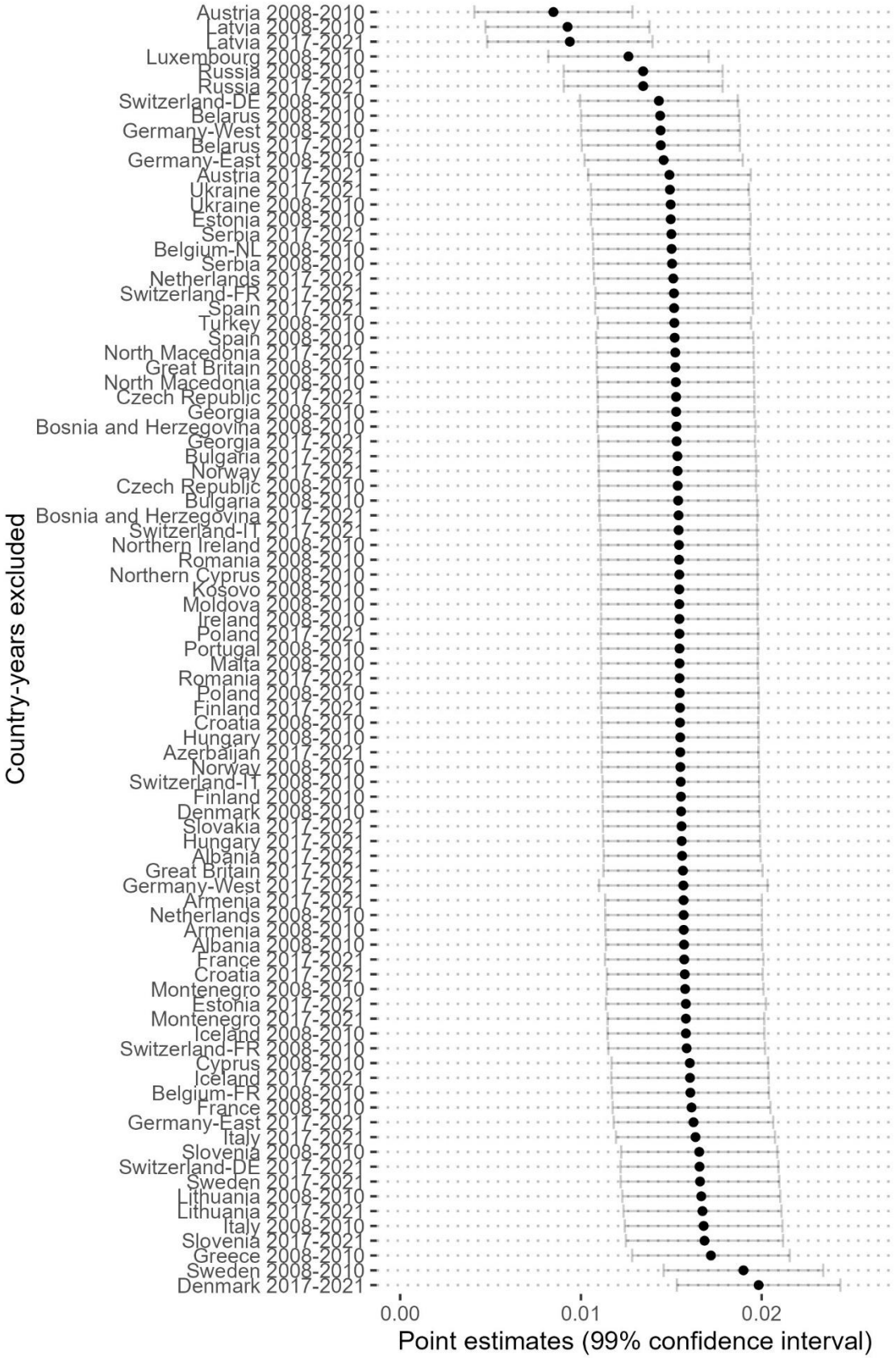

Figure 4-5. Effect of EU membership variable after excluding named country-years from the dataset using a jackknife-test.

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6 Appendix

Clasen, P. (2024b). "Treating nations like people: How responsibility attributions shape citizens' fiscal solidarity with other EU countries." Journal of European social policy 34(3): 309-322. DOI: 10.1177/09589287241229669

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Article

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Abstract

Scholars have so far not paid sufficient attention to the role of attributed responsibility of countries when they need to explain variations of European fiscal solidarity. Do citizens consider the responsibility of other countries when expressing solidarity with them? This article advances the argument that individuals apply similar heuristics to countries as to other individuals. When expressing solidarity with another country, individuals rely on cues about deservingness. The role of responsibility attributions is tested in this article using logistic regression on survey data from 10 EU countries. Results show that citizens in rich welfare states reduce their solidarity for other countries if they deem them responsible for their own crises. This suggests that rich welfare states hinder the development of solidarity beyond their national boundaries. This research contributes to our understanding of the role of deservingness attributions in European solidarity, as well as to our understanding of the role of the welfare state in solidarity.

Keywords

European union, solidarity, redistribution, deservingness, logistic regression

Introduction

Social policy scholars have dedicated much attention to the importance of the perceptions of deservingness and their effect in shaping individuals' attitudes towards the welfare state and the support of social policies (e.g. Buss, 2019; Reeskens and Van der Meer, 2019; Van Oorschot, 2000). As Van Oorschot (2000: 38) points out, among issues of reciprocity and identity, 'Why are you needy?' is one of the most important questions ordinary citizens ask when having to decide whether to help somebody in need.

Little is known about whether Europeans ask the same question when asked to help other countries in Europe. Do responsibility attributions matter for European solidarity? In an international context, people would have to estimate the responsibility of countries, rather than the responsibility of individuals.

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To assume that citizens have the mental capacity and the interest to do this seems like an overly optimistic claim, given that most citizens' familiarity with other countries is limited at best (see Lahusen, 2021).

Recent crises in Europe tell a different story. During the eurozone crisis, the general willingness to express solidarity with fellow European countries was arguably at an all-time low since the beginning of European integration (see also Reinl, 2020). Public discourse, notable in creditor countries, focused on the wrongdoings of public administrations in debtor countries (Chalániová, 2013; Genschel and Jachtenfuchs, 2021). In the early 2020s, during the COVID-19 pandemic crisis, citizens' willingness to support each other in European solidarity had increased remarkably. EU leaders agreed on the adoption of NextGenerationEU, a €750 billion instrument funded by common European Union (EU) borrowing (Ferrera et al., 2021). The two crises differ in many aspects, but one important feature of the pandemic politics was the comparably low intensity of discussions of moral hazard (see Ignácz, 2021; Tesche, 2022).

This article argues that individuals develop responsibility attributions of other EU countries based on cues and stereotypes, and they rely on these attributions when asked to express European fiscal solidarity. Citizens do not need a profound understanding of macroeconomic interrelations. Rather, they apply similar deservingness heuristics (Petersen, 2015) to other countries as to other individuals. In this article, European fiscal solidarity refers to an individual's 'preparedness to share financial resources' with people in other European countries who are worse off or in need, through actions and funds mobilized by state institutions, including the EU (see Stjernø, 2005: 2; for a more in-depth discussion, see Reinl, 2022). While the term 'fiscal solidarity' is also used in federalism research (see, for instance, Duff and Treichel, 2014), solidarity here is understood to be an individual-level attitude.

Based on survey data collected from 10 EU countries in 2019 by RESCEU[1] (Donati et al., 2021), the analysis shows that in economically strong countries, as well as in countries with a strong welfare state, citizens consider the responsibility of potential recipient countries when they are asked to help them financially. Even if the data are from before the outbreak of the COVID-19 pandemic, the findings indicate that citizens evaluate the degree to which another country may be responsible for its situation, and they express their solidarity accordingly – just as they would when they are asked to help individuals.

The article is organized as follows: the next section presents the article's argument and situates it within the existing literature. The subsequent section describes the research methodology and presents the empirical analysis. The final section provides the article's conclusions.

Responsibility attributions as a shaping factor of European solidarity attitudes

The argument of the article is that citizens attribute responsibility to other countries in need of solidarity, and that these attributions inform those citizens' willingness to express European solidarity. Citizens who believe that other countries are to blame for their own crisis are less likely to express solidarity than those who do not believe that other countries are to blame. Since the information to assess responsibility is complex, and the salience of EU topics is low (Hutter and Kriesi, 2019), citizens rely on cues when forming responsibility attributions. As with societal groups, citizens use heuristics to assess whether potential recipient countries deserve their solidarity. By using these 'judgmental shortcuts' (Petersen, 2015: 45), citizens avoid the mental burden of evaluating complex information. Essentially, they judge other countries just as they would judge other individuals.

Figure 1 provides a schematic overview of the theoretical model. As the figure shows, this article advances a model that suggests a heterogeneous effect of attributed responsibility. Because of the relevance of cues for the formation of responsibility attributions, we can expect that the macro-context moderates the effect on European solidarity. In countries with a high level of national income, and in those countries with a less extensive welfare state, costs and deservingness are cued, making responsibility

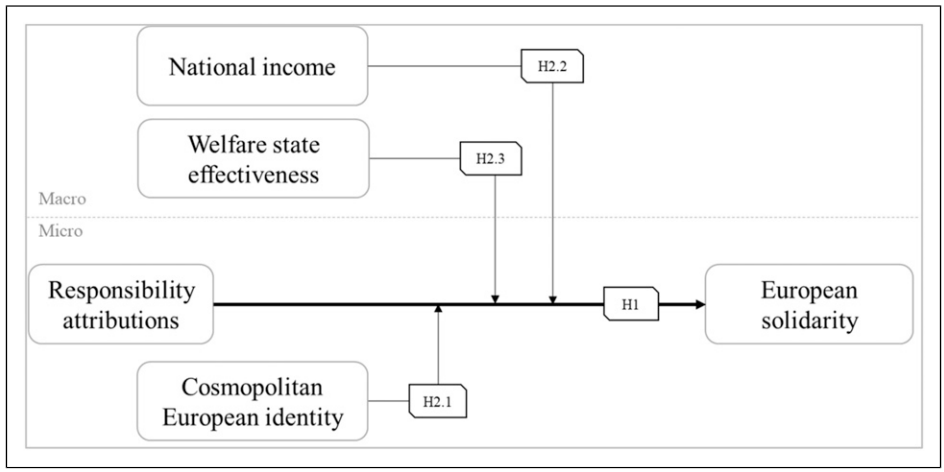

Figure 1. A schematic overview of the proposed relationship between responsibility attributions and European solidarity.

attributions particularly relevant for citizens. Furthermore, a strong cosmopolitan European identity may trump responsibility attributions. For citizens who hold cosmopolitan values – notably the concern for the wellbeing of other Europeans – responsibility attributions are of less relevance because of their attitudinal character. The assumptions of this model will be elaborated in more detail below.

The argument of this article brings together two lines of research. The first line of research is on attitudes to European solidarity and EU fiscal policy. In broad terms, this line of research has identified ideological considerations (Kleider and Stoeckel, 2019; Pellegata and Visconti, 2022), values (Kuhn et al., 2018; Medrano et al., 2019), and social identity (Kanthak and Spies, 2018; Nicoli et al., 2020) as more effective predictors than self-interest (Armingeon, 2020; Bechtel et al., 2017; Mariotto and Pellegata, 2023).

The aim of this article is to contribute to this research by borrowing insights from a second line of research, on deservingness and social policy attitudes. According to Petersen (2015), humans use the heuristics of small-scale societies and apply them to today's political questions of redistribution. The deservingness heuristic is a universal automatism that stems from evolutionary processes (Petersen, 2015). These deservingness attributions are shown to moderate individuals' support for the welfare state in general (Van Oorschot, 2006) or their support for specific measures of the welfare state (Buss, 2019).

Van Oorschot (2000) identifies five deservingness criteria that people use to gauge the deservingness of others: control, need, gratitude, identity and reciprocity. Our understanding of the role of these deservingness criteria beyond the role of identity for the willingness to help other EU countries is, so far, limited. Reinl and Katsanidou (2023) show that citizens are more willing to support those countries that have shown solidarity in the past, and Afonso and Negash (2023) have shown that the need of a recipient country also influences the willingness to express solidarity. These findings suggest that citizens do evaluate the deservingness of other countries, and that they consider what happens to the money they contribute. This article focuses on the issue of control and, more specifically, on the effect of responsibility attributions on European fiscal solidarity.

Having established how the argument of the article is connected to current research, we can now turn to it in more detail and formulate hypotheses that are derived from the argument. Unlike national-level solidarity, European solidarity has little direct impact on individuals' lives. Few citizens, even if interested in politics, can give a consistent assessment of matters such as the structure of public expenditure or

the social conditions of other countries, even at times of high salience (see Baglioni and Hurrelmann, 2016). However, in line with Petersen (2015), ordinary citizens use heuristics such as stereotypes (Hjorth, 2016) to judge the responsibility of other countries, even in the absence of detailed knowledge of their macroeconomic conditions. One notable influence of stereotypes are the cues from political elites (Sierp and Karner, 2017) and from the media (Rothmund et al., 2017). During the eurozone crisis, much of the public debate in many creditor countries was about whether countries in acute fiscal need are deserving (Chalániová, 2013; see also Wallaschek, 2020). In these countries, the concern was one of moral hazard: if debtor countries would not take responsibility for the situation they were in and implement structural reforms, there would be a danger of permanent dependency and redistribution (for a more extensive discussion, see Matthijs and McNamara, 2015).

Responsibility attributions are stereotyped, and as such, they are vague. They apply to a given nationality, rather than distinguishing between decision-makers of a country on the one hand and its ordinary citizens on the other hand. For instance, the eurozone crisis led to lasting tensions between Greek and German citizens, with surveys showing that Greeks accused Germans of being unsympathetic to their economic difficulties (Stokes et al., 2017), while surveys in Germany showed that German citizens mistrusted Greeks and their commitment to fiscal discipline (Connolly, 2015). In the mental representations of other countries underlying these opinions, potential recipient countries of European solidarity form a homogeneous group. Taking these considerations into account, the main hypothesis is:

> **H1:** Individuals who think that other countries are to blame for their own economic disadvantage are less likely to express European fiscal solidarity than individuals who do not think so.

This effect of responsibility attributions is heterogeneous. Citizens with a cosmopolitan European identity (Kuhn et al., 2018; Pichler, 2009) are expected to treat responsibility attributions differently. Cosmopolitans are outward looking, open to other cultures, and they value the interconnectedness with other political communities. They see themselves as citizens of the world and feel connected to supranational identities. They put less meaning on the limits of national borders, which leads them to share more concern with others outside their own community (Inglehart and Norris, 2016; Kuhn et al., 2018). Cosmopolitans identify more strongly with Europe and have a more open definition of Europe (Pichler, 2009). Policymakers with a cosmopolitan social identity have been shown to be more likely to oblige by international law (Bayram, 2017). Finally, cosmopolitans have been shown to be more willing to contribute to means of international redistribution (Kuhn et al., 2018; Medrano et al., 2019; Paxton and Knack, 2012).

While those with a stronger cosmopolitan European identity are not more or less likely than others to think that other countries are at their own fault for being in a crisis, their concern for the welfare of others outside their own community overrides these responsibility attributions. Consequently, even if cosmopolitan Europeans think that other EU countries are at fault, they do not reduce their willingness to express European fiscal solidarity as severely as those individuals who value less the wellbeing of people outside their community. In contrast, those with less cosmopolitan values use the responsibility attribution as a mechanism to justify their unwillingness to express European fiscal solidarity.

Since responsibility attributions depend on cues, differences in the national context – namely economic wealth and the extent of the welfare state – influence the relationship between responsibility attributions and European fiscal solidarity. Responsibility attributions become relevant when the costs of European fiscal solidarity are salient. In economically stronger countries, the contributions to the EU budget and the potentials of moral hazard are a politicized issue. In these countries, citizens expect to be at the giving end of a solidarity scheme (Kleider and Stoeckel, 2019; Vasilopoulou and Talving, 2020). In poorer countries, citizens are cued to perceive European solidarity to be in their sociotropic self-interest. Even when citizens in these countries consider that another country may be at fault for their crisis, they still consider it to be in their interest to support European solidarity.

Finally, national welfare institutions shape the way citizens think about solidarity and about the concepts of deservingness, neediness and belonging (Jordan, 2013; Larsen, 2008). Responsibility attributions are primed when the welfare state is organized on a more selective basis. This highlights the 'otherness' of recipients and invites debate about their deservingness, which then 'spills over' to European solidarity attitudes. In addition, a less generous welfare state cues the scarcity of fiscal resources of the state, which makes citizens less willing to express solidarity with those in other countries.

Hence, the model in Figure 1 suggests that in less extensive, more selective welfare states citizens make more use of responsibility attributions. While some studies show that citizens perceive European integration as a threat to the welfare state (Beaudonnet, 2015; see also Ferrera, 2005), Baute et al. (2019) find that high levels of support for the principles of the welfare state have a positive effect on attitudes to social Europe, including attitudes to European solidarity, as suggested here as well.

The following hypotheses on the mediating role of the cosmopolitan concern for the wellbeing of others outside of one's community and of the macro-context are derived:

H2.1: The weaker the cosmopolitan concern for the wellbeing of others outside of one's community of an individual is, the higher is the marginal effect of responsibility attributions on European fiscal solidarity.

H2.2: The higher the national income of a country is, the higher is the marginal effect of responsibility attributions on an individual's European fiscal solidarity.

H2.3: The less extensive the national welfare system of a country is, the higher is the marginal effect of responsibility attributions on an individual's European fiscal solidarity.

Methodology, data, and preliminary analysis

The empirical analysis uses REScEU's 2019 survey data from 10 EU member states[2] with a total of 15,149 respondents, aged 18–70 (Donati et al., 2021). The survey is particularly useful for its inclusion of an item for the attributed responsibility of crisis countries that will be used as an independent variable. The survey used quota sampling for gender, age, education, and region of residence. Participants had previously joined the conducting company's online panel and were interviewed using the CAWI methodology. In total, the sample includes 15,149 individual respondents. The next section presents the relevant variables included in the analysis and gives some preliminary insights, before turning to more advanced regression analyses.

Dependent variable

As the goal of this research is to identify whether there is an effect of responsibility attributions on European fiscal solidarity, the dependent variable is the willingness to express European fiscal solidarity. The following survey item captures the concept:

> To what extent do you agree or disagree with the following statement: All EU Member States, including [COUNTRY], should contribute to a common EU fund to help any other Member State facing potentially severe economic and financial difficulties in times of crisis.

Respondents answer on a fully labelled four-point Likert scale, or they indicate that they 'don't know'. Figure 2 presents the distribution of the dependent variable for all countries of the sample (%DK = 'don't know'). The lowest level of solidarity is found in Finland, with 47% of respondents indicating strong or some agreement. The highest level of solidarity is found in Greece, where 82% of respondents either strongly or somewhat agree.

For further analysis, the response scale has been recoded to a binary variable where 1 indicates that individuals 'strongly' or 'somewhat' agree, and 0 means that individuals at least 'somewhat' disagreed. Subsequently, logistic regression is applied. The loss of information by this operation is limited. The advantage of this recoding is that it allows the threshold of the qualitative difference between agreement and disagreement to be estimated more precisely.

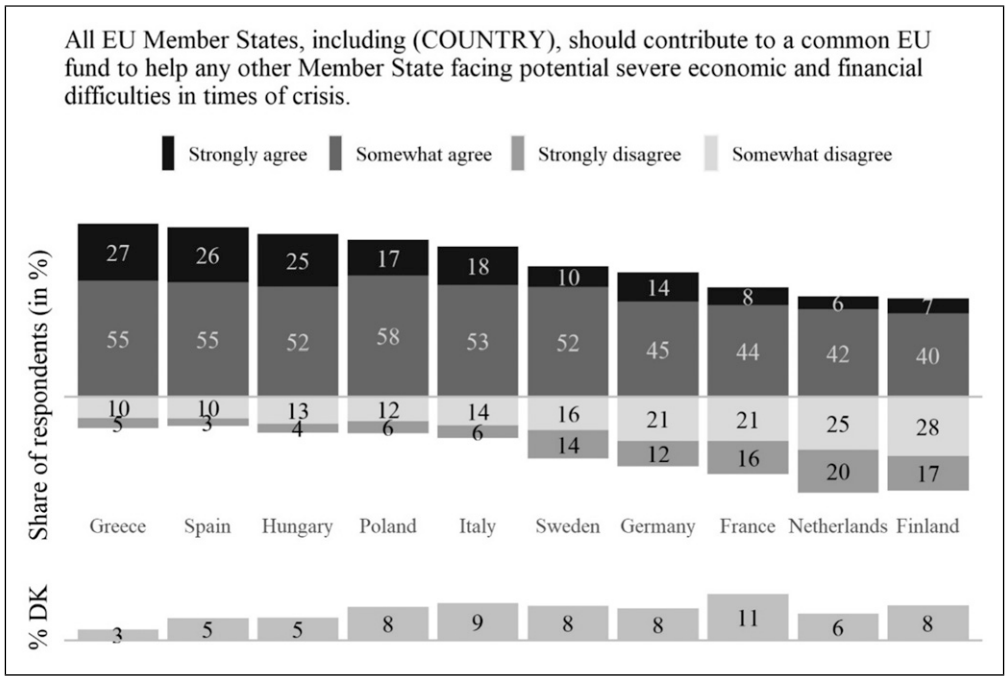

Figure 2. Level of support for a common EU fund and share of respondents who indicate that they don't know, by country.

As a robustness check, the same models are run using an alternative dependent variable, based on a follow-up question in the survey. Respondents are asked if they would be willing to support a 1% increase in their income tax for the purpose of this common fund. For the alternative specification, only those respondents who agree with the creation of a common EU fund in the first question, as well as those who respond affirmatively to this second question, are considered as expressing solidarity. This alternative specification ensures that the solidarity measured here is more than just 'cheap talk'.

Independent variables

Let us now turn to the independent variables. This section first introduces the individual-level variables and then two macro-level variables. Table A1 in the Online Appendix provides an overview of all concepts and related variables, Table A2 in the Online Appendix provides an overview of variables by country. The key independent variable, the 'attributed responsibility' of recipients, is captured with the following item:

> During the crisis some member states have done better than others (e.g. in terms of unemployment, poverty, or growth rates). Please indicate to what extent you agree with the following statement: The weaker member states have mismanaged their economy and public finances.

Respondents answer on a fully labelled scale from 1 to 4, where 1 signifies strong agreement and 4 means strong disagreement, or they indicate that they 'don't know'. The variable has also been recoded as a binary variable of agreement (1) and disagreement (0).

The wording of the survey items, however, has its own limitations, as it remains vague concerning which countries are supposed to be weaker and in what sense. Nevertheless, this item is the most appropriate approximation of the concept of responsibility attribution.

Figure 3 depicts the distribution of responses to this item for all sampled countries. Countries in

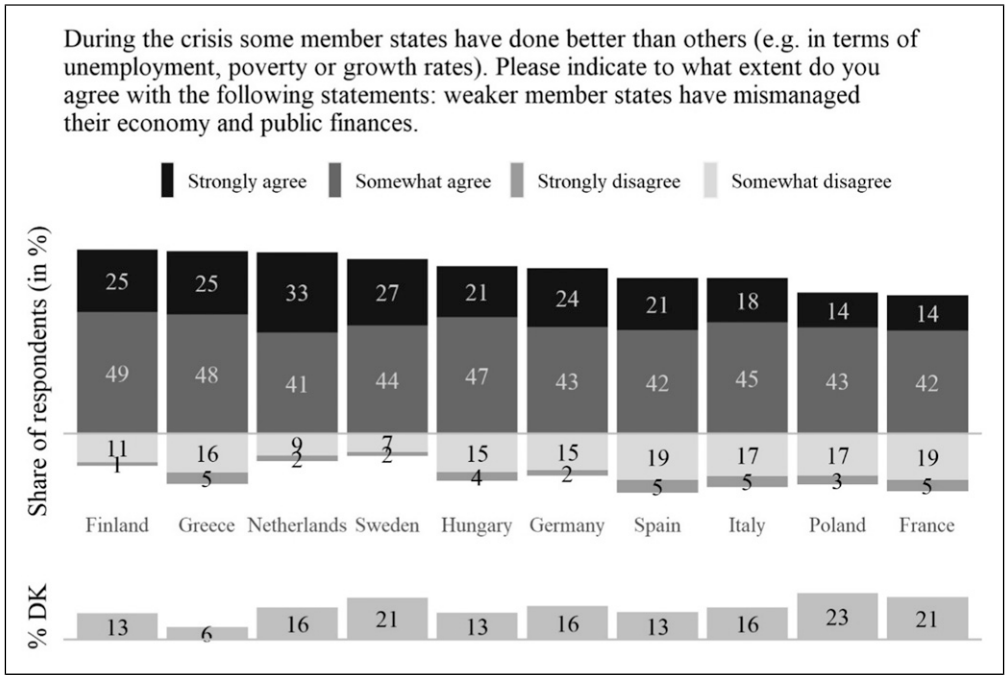

Figure 3. Level of agreement that weaker member states mismanaged their economy and share of respondents who indicate that they don't know, by country.

which the overall level of European solidarity is highest tend to be those where agreement to this statement is lowest, although Greece and – to a lesser extent – France, constitute exemptions in this relationship. This is a promising first finding in relation to hypothesis H1. The proportion of respondents who strongly agree or somewhat agree ranges from 56% (France) to 74% (Finland). In Greece, where the crisis affected people the most, the 'don't know' answers are at their lowest. In countries where the crisis had less of an impact – such as Germany or the Netherlands, or in non-eurozone countries like Poland and Sweden – the 'don't know' answers are quite frequent. This suggests that 'don't know' responses are an indicator of less-crystallized attitudes. In the context of EU public opinion research, this is unsurprising, given that many citizens are indifferent or ambivalent to EU politics (Stoeckel, 2013). This may also explain why the share of 'don't know' responses is very high in France (21%).

Methodologically, the 'don't know' responses cannot be treated as randomly missing, since the appearance of their answers is not random, therefore simple random imputation for certain variables is applied in the regression analysis (see Online Appendix A2 for a more detailed description).

Cosmopolitan European identities are captured by a combination of three survey items. In line with De Vries (2018) and Kuhn et al. (2018), cosmopolitanism is operationalized using measurements of openness towards other cultures, and the concern for the wellbeing of others outside one's own community, specifically in other EU countries. In addition, a measurement of the identification of respondents with the EU is also included.

Openness towards other cultures is captured by a survey item that asks whether respondents believe that cultural life is enriched by people coming from other countries. Respondents answer on an end-labelled scale of 0 to 10, where 0 stands for the belief that cultural life is enriched, and 10 stands for the belief that culture life is undermined. Respondents can refuse to answer and indicate that they don't know.

The concern for the wellbeing of others outside their own country can only be captured indirectly. In one survey question, respondents are asked:

> The European Union does various things to support citizens' rights, but some say that it could do more. Which of the following things would enhance your feeling of being a European citizen?

Seven options are provided. Respondents choosing the option of a Europeanized social protection system are assumed to be concerned about the wellbeing of others outside their community. While other options also refer to a Europeanized social protection, these options are either less concrete, or they make the personal benefits of such a scheme more salient. This is not a perfect measurement item, in particular because it may be argued that it introduces endogeneity. However, this item provides the best approximation of the concept of concern for others outside one's community available in the dataset.

Finally, respondents are asked whether they are proud to be European citizens. They answer on a fully labelled scale from 1 to 4, where 1 signifies strong agreement and 4 means strong disagreement, or they indicate that they don't know. The variable has been recoded as a binary variable measuring agreement (1) and disagreement (0).

These three responses are used to reflect the degree of cosmopolitanism and are kept as individual variables. While this is not the most elegant solution, the creation of a 'cosmopolitanism index' brings its own theoretical and econometric challenges. In addition, the theoretical assumptions suggest that it is the cosmopolitan concern for the wellbeing of others outside one's community that mediates the effect of responsibility attribution, which requires this variable to be included individually in any case.

Macro-level data. As the theory includes expectations about the impact of the macro-context on individual attitudes, it is necessary to include such variables in the analysis. Given that the number of countries included in the study is limited to 10, it is necessary to keep the number of macro-level predictor variables to a strict minimum to avoid unreliable estimations.

The economic situation is captured by the Gross National Income (GNI) per capita in 2019, a common measure for capturing the standard of living in a country. This variable has been rescaled so that the highest value in the sample (Netherlands) is 1 and the lowest value (Greece) is 0. Data are from Eurostat.

The welfare state's effectiveness is measured by calculating the ratio of people at risk of relative poverty (defined as having less than 50% of the national median income) before and after taxation and transfers. While this measure cannot capture the entire complexity of the welfare state, it avoids the complexities of welfare state typologies and considers the role of taxation in welfare distribution. Data are from the OECD.

Individual-level control variables. Demographics as well as political ideology are included in the analysis to control for potential confounding effects. Political ideology is measured in the form of a self-placement on a partially labelled scale from 0 to 10, where 0 indicates 'Left' and 10 indicates 'Right'. For income, respondents are asked how comfortably they can live on their present income. They answer on a 4-point fully labelled scale. Education is measured in terms of formal educational degree. Responses are grouped in three categories: 'Tertiary', 'Up to upper secondary', and 'Lower secondary'. As specification tests revealed that the effect of age is not linear, respondents were grouped in three age categories in the regression models: 18–34, 35–54, 55–70. Finally, gender is also included as a control variable.

Regression analysis

Table 1 presents the results of the logistic regression analysis. Because the exploratory data analysis revealed that there is some variation between countries, cluster-robust standard errors are applied. Model 1 to Model 3 are models with main effects only. Model 1 includes the attributed responsibility variable as well as socio-economic controls. Model 2 extends Model 1 by including the variables for cosmopolitan European identity, and Model 3 further adds the country

Table 1. Logistic regression with cluster-robust standard errors for European fiscal solidarity, imputed data.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Attributed responsibility	−0.23	−0.33	−0.26	−0.27	0.36	2.76	2.38
	(0.19)	(0.14)	(0.16)	(0.15)	(0.22)	(0.69)*	(0.64)*
Openness towards other cultures		−0.11	−0.10	−0.10	−0.10	−0.10	−0.10
		(0.02)*	(0.01)*	(0.01)*	(0.01)*	(0.02)*	(0.02)*
Proud to be european citizen		1.22	1.12	1.12	1.12	1.12	1.12
		(0.10)*	(0.09)*	(0.09)*	(0.09)*	(0.09)*	(0.09)*
Concern for others		0.30	0.34	0.32 (0.15)	0.33	0.34	0.27 (0.16)
		(0.04)*	(0.04)*		(0.04)*	(0.04)*	
GNI per capita			−0.88	−0.88	−0.09	−0.88	−0.33
			(0.17)*	(0.17)*	(0.22)	(0.17)*	(0.21)
Welfare state effectiveness			−0.05	−0.05	−0.05	−0.02	−0.02
			(0.00)*	(0.00)*	(0.00)*	(0.01)	(0.01)*
Attributed responsibility x concern for others				0.02 (0.17)			0.08 (0.17)
Attributed responsibility x GNI					−1.01		−0.70
					(0.26)*		(0.21)*
Attributed responsibility x welfare state effectiveness						−0.04	−0.03
						(0.01)*	(0.01)*
Gender (1: Woman)	−0.13	−0.19	−0.20	−0.20	−0.20	−0.20	−0.21
	(0.03)*	(0.04)*	(0.04)*	(0.04)*	(0.04)*	(0.04)*	(0.04)*
Political self-placement	−0.16	−0.08	−0.09	−0.09	−0.09	−0.09	−0.09
	(0.02)*	(0.03)*	(0.02)*	(0.02)*	(0.02)*	(0.02)*	(0.02)*
AIC	12321.23	11373.00	10928.87	10930.74	10891.47	10880.13	10871.74
Log likelihood	−6149.62	−5672.50	−5448.43	−5448.37	−5428.74	−5423.06	−5416.87
McFadden R^2	0.03	0.11	0.14	0.14	0.15	0.15	0.15
N	12294	12294	12294	12294	12294	12294	12294
No. imputations	5	5	5	5	5	5	5

Note: *$P < .01$. Displayed coefficients are log-odds with standard errors in brackets. Population weights are included. Age, income, and formal education are not shown as the coefficients are not significant for any of the models. Intercept is not shown.

level variables. Model 4 to Model 6 include one interaction effect each. Likelihood-Ratio tests provide evidence that the inclusion of the interaction between attributed responsibility and GNI, as well as between attributed responsibility and welfare state effectiveness, improve the model, whereas the interaction effect between attributed responsibility and concern for others does not improve the model. Finally, Model 7 includes all three interaction effects. Consecutive Likelihood-Ratio tests indicate that this model improves compared to Models 4, 5 and 6. Further descriptions and the robustness checks are shown in the Online Appendix. Table A4 in the Online Appendix also shows the complete regression table for the alternative specification of the dependent variable, with no fundamentally different results.

Interpretation of results

The central argument of the article is that responsibility attributions matter for the European solidarity of citizens (H1). Unlike the results that the preliminary analysis suggests, the regression analysis does not support such an all-encompassing statement. The effect of responsibility attributions is heterogeneous and depends on other factors. In the models with no interaction effect, the coefficient of the corresponding variable is statistically not significant. Only

after interaction effects are introduced does the variable become significant and socially meaningful.

Figure 4 visualizes the results of the full regression model for the three interaction effects. Further, Table 2 provides an overview of the estimated average marginal effects of attributed responsibility at relevant values for the moderator variables.

While citizens with a stronger cosmopolitan European identity are more likely to express European fiscal solidarity, the effect of a cosmopolitan European identity is largely independent of responsibility attributions, unlike theorized (H2.1). Table 2 shows that the average marginal effect of attributed responsibility is statistically significant and negative at about −5.1 percentage points for those who do not express concern for others, and that it is statistically non-significant for those who do have concern for others. But the formal tests reveal that there is no meaningful interaction between responsibility attributions and a concern for others outside one's community. The interaction term is not significant, and its inclusion does not improve the model fit, as the Likelihood-Ratio test comparing Model 4 with Model 3 shows. A visual inspection of Figure 4(c) also does not allow us to conclude that there is an interaction effect.

The analysis suggests that responsibility attributions are more relevant in countries with a higher income than in countries with a lower income (H2.2). Figure 4(a) shows how the predicted probability of European fiscal solidarity changes as a function of national GNI per capita and responsibility attributions. Among individuals in economically less affluent countries, the effect of responsibility attributions on solidarity attitudes is non-existent. However, in richer countries, individuals who think that weaker countries have mismanaged their

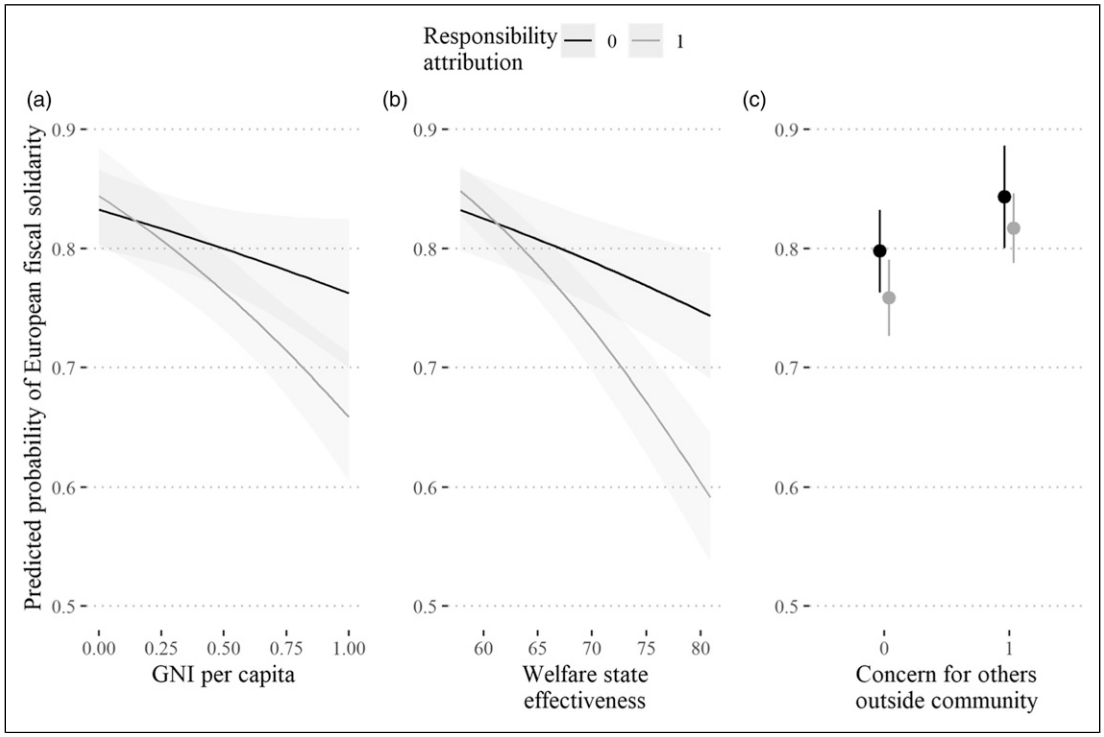

Figure 4. Interaction effects of responsibility attributions. Predicted probability of European fiscal solidarity with 0.99 confidence intervals, based on Model 7. (a) shows the interaction effect with the GNI per capita, (b) shows the interaction effect with the welfare state effectiveness and (c) shows the interaction effect with the concern for others outside of one's community.

Table 2. Average marginal effects of attributed responsibility in relation to moderator variables, based on model 7.

Moderator variable		Average marginal effect
Concern for others	Yes	−0.0173 (0.0239)
	No	−0.0508 (0.0092)
GNI per capita	High	−0.1199 (0.0124)
	Medium	−0.0139 (0.011)
	Low	−0.0384 (0.0175)
Welfare state effectiveness	High	−0.1117 (0.0138)
	Medium	−0.0422 (0.0098)
	Low	0.0503 (0.0149)

Note: Standard errors are in brackets. Groups for 'GNI per capita' and 'welfare state effectiveness' are respective terciles of the distribution.

economies are much less likely to express solidarity than those individuals who do not think so. Table 2 shows that the average marginal effect of responsibility attributions is approximately 3.8 percentage points in the poorest tercile, about −1.4 percentage points in those that are in the middle tercile, and −12 percentage points in the richest tercile. These findings indicate that the economic position of one's own country in Europe cues deservingness. Citizens in richer countries are less likely to express solidarity with other countries who – in their minds – are poorer due to weaker economic management. In poorer countries as well, many citizens also think that weaker countries have mismanaged their economies. But, unlike citizens in richer countries, these citizens are not cued to consider responsibility attributions. Even if citizens think that weaker countries are at fault, they do not lessen their willingness to express solidarity, because they consider that their own country ultimately benefits from European solidarity. The main effect of the GNI variable becomes insignificant once the interaction is introduced to the model. This suggests that the importance of responsibility attributions is a key difference between citizens of poorer and citizens of richer countries in the EU.

Finally, the analysis provides no support for the argument that weak welfare states prime citizens to consider the responsibility of other Europeans more strongly (H2.3). Regardless of whether citizens think that weaker member states have mismanaged their economies, their willingness to express solidarity with other EU countries goes down as a function of the effectiveness of the welfare state. In other words, the more extensive the welfare state, the less likely citizens are to express solidarity with other countries. Rather than having a socialization effect, the solidarity that welfare states create seems to come at the expense of solidarity with outsiders. With regard to responsibility attributions, there is an interaction with the welfare state, but in the opposite direction to hypothesis H2.3.

In the more extensive welfare states, attributed responsibility influences citizens' solidarity more strongly. This finding is also supported by the average marginal effects presented in Table 2: in countries with a highly effective welfare state, the effect is measured at about −11.2 percentage points. In less effective welfare states, contrary to expectations, the effect of attributed responsibility is positive at about 5 percentage points. It seems that citizens perceive European integration – especially policy integration that requires the pooling of fiscal resources – as a threat to the national welfare system. This suggests that citizens perceive European solidarity to be in direct competition with the available resources for national welfare policies. Where the welfare state is more effective, citizens seem to feel that they have more to lose, and they therefore lessen their solidarity accordingly. To highlight just two cases, in Germany, a high-income country with one of the more effective welfare states among the sampled countries, the estimated marginal effect of responsibility attributions is −11.5 percentage points, compared with 7.1 percentage points in Greece, the poorest country in the sample with one of the least effective welfare states in the sample.

These findings imply that the solidarity of the welfare state has a destructive effect on solidarity with other countries, particularly with the emphasis on the un-deservingness of those other countries. Among citizens in countries with a strong welfare state, responsibility attributions have an important influence on European solidarity.

Conclusions

This article has made the argument that deservingness shapes citizens' fiscal solidarity with other EU countries. Despite the complexity of public accounts,

citizens can judge the responsibility of other countries towards their economic situation based on the heuristics they would also apply to other humans. Empirical analysis provides evidence that citizens use these responsibility attributions to inform their willingness to express European fiscal solidarity with other EU countries. The analysis shows that attributed responsibility is a key difference between those citizens in rich countries with a strong welfare state and those in poorer countries with a weaker welfare state.

One caveat is that the analysis of cross-sectional survey data allows for correlational conclusions, but not for causal inference. Based on the data here, a reverse causal effect cannot be excluded. To justify their unwillingness to express European solidarity, citizens may consequently be less willing to express the belief that others are deserving. Furthermore, it should be noted that the COVID-19 pandemic crisis affected attitudes of European solidarity by making the interdependencies in Europe salient. This critical juncture for European solidarity likely affects citizens' attitudes, and has led, inter alia, to a further crystallization of attitudes.

This article highlights the relevance of deservingness in a European context. Citizens ask whether other countries are deserving of their support, and they come up with the answers to these questions. Based on these insights, research should dedicate more attention to issues of deservingness. Furthermore, research should strive to better understand what informs citizens' mental representations of other countries and their relevant deservingness attributes. Finally, the role of the national welfare state in shaping European solidarity attitudes requires more research.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. REScEU stands for 'Reconciling Economic and Social Europe': the role of idea, values and politics.
2. Finland, France, Germany, Greece, Hungary, Italy, Netherlands, Poland, Spain and Sweden.

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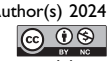

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Solidarity on a divided continent: Perceptions of 'centre' and 'periphery' determine European citizens' willingness to help other EU countries

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Abstract

This article argues that citizens structure their fiscal solidarity with other European Union countries along a 'centre–periphery' divide. This claim is empirically investigated using a Heckman probit selection model on two surveys in 2020 and 2021 among citizens of 13 European countries, which allows to account for differences in the familiarity of the issue and other countries. The results show that individuals in centre countries are more likely to express solidarity with other centre countries than with periphery countries, and vice versa. More broadly, the findings show that citizens perceive a power hierarchy among European Union member states, and that there is a spatial relational dimension to European fiscal solidarity. These results underscore the challenges facing the European Union in achieving greater fiscal solidarity. They also highlight the need to address the structural inequalities between member states.

Keywords

Centre–periphery divide, European Union, solidarity

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Data Availability Statement included at the end of the article

Introduction

If a European Union (EU) country was to experience a crisis that required financial resources beyond its means, would citizens of other EU countries be willing to express solidarity? Based on existing research, well-informed experts would answer that the country in need could hope for the support of, for instance, those citizens who identify with Europe (Verhaegen, 2018) or those who have a cosmopolitan outlook on the world (Kuhn et al., 2018). They may also argue that the willingness to express solidarity depends on the policy design of the support for the country in need (Burgoon et al., 2022), and what kind of crisis the country was in Katsanidou et al. (2022).

Research on European solidarity is only beginning to explore the role of the spatial dimension to European solidarity. We know that people have greater trust in other countries that are culturally, linguistically or geographically close (Klingemann and Weldon, 2013), and we know that individuals apply deservingness heuristics not just to other individuals but to other countries (Haverland et al., 2022; Heermann et al., 2023). This article contributes to the latter literature on the role of country attributes and argues that the characteristics of the country in need, as well as the relationship between a citizen's country and the recipient country, both play a crucial role in determining a citizen's willingness to demonstrate fiscal solidarity. Specifically, it is hypothesised that the existence of a centre–periphery divide within the EU separates countries and affects citizens' attitudes towards aiding other nations.

The empirical analysis is based on a pooled dataset of two surveys of 13 EU countries by the European University Institute and YouGov (Hemerijck et al., 2020, 2021). Respondents are asked to express their willingness to financially help a specified country in crisis. This information then provides the opportunity to estimate the specific recipient country's variance in European solidarity. By using a Heckman-style probit selection model (Heckman, 1979), the analysis considers the concern that European solidarity is an issue with limited real-life relevance for most ordinary citizens. This is the first time that the salience of European solidarity has been explicitly modelled. The use of a selection model suggests that an exclusive national identity affects the substance of opinions about solidarity less than previously thought. It also suggests that gender does not directly affect the substance of solidarity opinion at all, although men are much more likely than women to respond to the survey item.

My findings show that citizens, when asked to express fiscal solidarity, indeed distinguish between countries of the centre and countries of the periphery. Citizens of the centre countries are more likely to express solidarity with other countries of the centre than of the periphery, and vice versa. While this divide works in both directions, it is notably the peripheral countries that are subject to a handicap among citizens in centre countries. This effect remains, even when controlling for geographic and cultural proximity, economic performance, and whether countries are in the eurozone. Further, an individual's sociotropic political efficacy – that is, the belief that one's country has a say in the EU – explains some variance in the attitudes towards European fiscal solidarity. The centre–periphery divide mediates this belief as well.

The sociotropic nature of European fiscal solidarity

Extant research has so far mostly focused on individual-level attitudes to explain the variations in European fiscal solidarity: not without reason. Ample evidence suggests that an important proportion of this variance can be attributed to individual-level factors, including (sociotropic) notions of self-interest (Bobzien and Kalleitner, 2021; Mariotto and Pellegata, 2023), identity (Kuhn et al., 2018; Nicoli et al., 2020) and political beliefs (Medrano et al., 2019).

An important assumption of this article is that attitudes towards European fiscal solidarity are based strongly on sociotropic orientation. Citizens perceive European solidarity as the solidarity of one country – or a community of countries, such as the EU – with another country in need. Much of the information needed to assess the individual costs of European fiscal solidarity is not available or costly (i.e. citizens need to engage to be informed), and benefits are rarely framed in individual terms. Public discourse often frames European solidarity in macro terms, that is, about countries' EU budget net balance. In citizens' mental representations, the subjects and objects of European fiscal solidarity are not individual humans, but nation-states.

We already know that part of the variance of European solidarity is not explained by attributes of the individual but by the relational dimension of redistribution across Europe. Studies show that the macro context – that is, factors attributed to one's country – explain a non-trivial part of the variance. For instance, countries in which citizens expect to be contributing to European fiscal solidarity are less willing to show solidarity (Vasilopoulou and Talving, 2020). Furthermore, research indicates that national welfare institutions and other contextual factors, including a country's level of national debt, can shape individuals' attitudes towards expressing European solidarity (Baute et al., 2019; Daniele and Geys, 2015).

This article contributes to a better understanding of the relevance of the attributes of recipient countries for European fiscal solidarity and highlights the relational nature of solidarity attitudes. Notably based on deservingness criteria developed in the welfare state literature (Van Oorschot, 2000), this branch of literature shows how citizens assess the deservingness of other EU countries based on similar criteria as if they were asked to help other individuals. For instance, research has shown that citizens are more willing to express solidarity with countries that have shown reciprocal behaviour (Afonso and Negash, 2024; Reinl and Katsanidou, 2023), with countries that are in more dire need (Afonso and Negash, 2024; Haverland et al., 2022), that are closer in terms of identity (Afonso and Negash, 2024) and that share norms of a political community (Heermann et al., 2023).

European fiscal solidarity is understood here as the 'preparedness to share financial resources' (Stjernø, 2005: 2) with people in other European countries who are worse off, or who are in need, through actions and funds mobilised by state institutions, including the EU. As such, European fiscal solidarity is not *supra*national, but *trans*national. It does not refer to an abstract EU-wide scheme. European Union policies like NextGenerationEU (NGEU), the 750 billion Euro investment programme adopted by the EU in response to the Covid-19 pandemic, benefit all EU countries in principle but

have uneven redistributive effects. It is assumed that citizens are aware that some countries benefit more than others and that their evaluation of such EU-wide policies is influenced by their willingness to help those countries that benefit most. The argument is not to deny the existence of a European solidarity space – the idea that Europeans are more willing to show solidarity with each other than with 'outsiders' (Gerhards et al., 2019) – but to underscore that, within Europe, the attributes of the recipient country play a role. While there is international solidarity beyond the EU, this article exclusively focuses on solidarity within the EU.

A dual centre–periphery divide

My central claim here is that a centre–periphery divide clusters geographically and politically close countries, and it structures the relationship of citizens' solidarity with other countries accordingly. The basic terminology of the centre–periphery divide is borrowed from cleavage theory, in which Lipset and Rokkan (1967) seek to explain how political interests merge into societal groups and create stable party systems. The centre–periphery cleavage emerges in the context of nation-building. As nations grow in territory, their power is distributed in an increasingly asymmetric way, both spatially and in the sense of group membership. Throughout the process of nation-building, power remains at the centre – again, both as a geographical idea as with regard to a culturally or otherwise dominant social or ethnic group – that exerts control over the periphery, which is geographically or culturally distant from the centre (see also Treib, 2021).

Based on this idea, the argument of this article is that citizens make sense of EU politics as if the EU is a nation-state in the making. As some have pointed out, European integration can be understood as a process of state-building (Genschel and Jachtenfuchs, 2016; Ignácz, 2021). What started in the 1950s as an international organisation of tightly defined thematic competences developed over the years into a governance system *sui generis*. The EU has taken over competences or is involved in policies associated with core state competences, such as customs and borders, currency and judicial oversight. At the same time, the organisation has grown from a community of six countries to a union of 27 countries. It should be stressed that the terminology of centre and periphery also appears in the literature about differentiated integration (see, for instance, Schimmelfennig et al., 2015), but this constitutes a different concept. In this article, the understanding of the centre-periphery divide is about influence of countries in EU politics, that is, centre countries are countries that have a more favourable position in EU decision-making than peripheral countries. In the context of differentiated integration, centre countries are those countries who are deeper integrated (e.g. being part of the Economic and Monetary Union). These two different understandings do not necessarily intersect, and some centre countries in the sense used here may be considered as peripheral countries in the sense of differentiated integration. For instance, Denmark is deemed a centre country in this article, but may be considered a peripheral country given its opt-outs in several EU policies (for a discussion on different EU polity visions, see Fabbrini, 2015).

The understanding of the divide here is 'thin' in comparison to the macro-sociological understanding of the cleavage proposed by Lipset and Rokkan (1967). The centre–periphery

divide proposed here is best understood as a heuristic. The argument is that citizens recognise the division among countries of the EU and use it to inform their attitude towards fiscal solidarity with other countries. They rely on such cues because they often lack the knowledge and interest necessary to have an informed opinion on EU politics. Cues provided by national politics (Brosius et al., 2020) or by domestic political actors (Pannico, 2020; Sanders and Toka, 2013) have been shown to be influential when evaluating EU policies (see also below). As EU politics remains a low-information environment, and citizens' involvement is still limited, citizens rely on these cues from influential actors to form an opinion (Rapeli, 2014), saving themselves time and mental energy.

Studies of the coalition-making in the Council of the EU highlight that negotiations among countries in the EU are complex and coalitions change frequently. However, there are studies that do identify a structure along the fault lines of centre and periphery (Kaeding and Laatsit, 2011; Naurin and Lindahl, 2008; Plechanovová, 2011), among other factors. This is particularly the case when it comes to redistributive policies (Zimmer et al., 2005). The negotiations for NGEU, which saw a coalition of frugal countries on the one side and a coalition of the peripheral 'Friends of Cohesion' on the other side, are a case in point (De La Porte and Jensen, 2021).

The centre–periphery divide essentially combines two divides – an East–West divide and a North–South divide. These divides differ in their origins, but both contribute to a power dynamic between member states of the EU, that is, between an economically and politically powerful 'centre' in the north-western part of Europe and an economically and politically less powerful 'periphery' in the south and the east of Europe. It should be stressed that this geographical constellation of the divide is not a theoretical concept, but of a descriptive nature. The two divides are outlined in the following paragraphs. Because the interest of this article is in the effect of being 'in the periphery' rather than the exact composition of the different peripheries, in the empirical part, the two peripheral groups will be merged.

The East–West divide stems from the late arrival of Eastern and Central European countries, including Cyprus and Malta, to the EU. With the 'big bang enlargement' of 2004 and 2007, the EU integrated 12 additional member states; its most ambitious enlargement to date (Epstein and Jacoby, 2014). The then-15 members of the European Community laid down, specifically for these candidate countries, 'the Copenhagen criteria', a set of political, economic and legal conditions which the acceding countries needed to fulfil prior to joining the EU (Dudley, 2020). Rather than a compromise between legal traditions of two parties, this procedure of accession was one-sided: either the candidate countries fulfilled these conditions or they could not join. This power asymmetry at the time of accession suggests that benefits are distributed unevenly between those countries who are already members and who can define terms of accession on the one side, and the joining country on the other side. The big bang enlargement differs from previous enlargement waves, as the EU itself was much more deeply integrated at the time of accession (notably in fiscal terms, through the adoption of the common currency), the much greater income division between existing and acceding member states, and the general geopolitical context. Divisions between East and West are still seen today at a political level, as well as at the level of individual attitudes (Anghel, 2020).

The North–South divide became apparent during the European debt crisis in the 2010s. Interpretations differ as to the origins of such a divide. Whereas some argue that the divide came from differences in political institutions that affected the vulnerability of national economies, others argue that the monetary union had an uneven effect on countries in the centre and at the periphery (see Pérez, 2019: 990). The European debt crisis deepened the divide in two ways. First, by increasing the material divide, since the economies of crisis countries contracted much more than those of creditor countries, and still lag behind, even today. Second, the crisis management of EU institutions – driven primarily by creditor countries' interests (Beramendi and Stegmueller, 2020), as well as by the prominent use of stereotypes in the media (Chalániová, 2013) depicting other nationalities at the peak of the crisis – further exacerbated this divide (see also Hooghe and Marks, 2018).

While these two divides differ in their origins, they affect individual attitudes in similar ways. Regardless of the underlying reasons for the divide, the division is identified by ordinary citizens through the reception of cues, as outlined above. Citizens perceive whether their country is politically aligned with other countries and adjust their solidarity accordingly. Consequently, they form solidarity attitudes that are more affirmative towards states that are perceived to be on the same side of the divide as their own country.

H1a: Citizens in centre countries are more likely to express solidarity with other centre countries than with peripheral countries.
H1b: Citizens in peripheral countries are more likely to express solidarity with other peripheral countries than with centre countries.

The effect of the centre–periphery divide should be seen in a larger context of identification patterns of individuals. While a European identity is found to have a positive effect on European solidarity (Nicoli et al., 2020), research begins to acknowledge the complexities of European identification. As Reese and Lauenstein (2014) discuss, citizens of European countries evaluate each other based on the degree to which they represent the 'ideal European'. Mummendey and Wenzel (1999) suggest that members of a group tend to project characteristics of their group on the superordinate group category. In other words, Europeans assess the 'Europeanness' of other nationalities based on how similar the nationality is with their own nationality. Consequently, ideas of the ideal European differ between countries: Danes may consider that Swedes resemble the ideal European more than the Portuguese do. Conversely, the Portuguese may consider that the Spanish resemble the ideal European more than the Danes do (see also Bianchi et al., 2010).

Hence, citizens of geographically and culturally close countries can be expected to be more likely to show solidarity with each other than with countries that are geographically or culturally more distant, even in the absence of a centre–periphery divide (Deutschmann et al., 2018). However, these are two different mechanisms. Solidarity – as generated by the centre–periphery divide – comes from an uneven distribution of power within the EU. This uneven distribution of power results in a set of shared political expectations and

interests within the country groups on either side of the divide, as well as in a polarisation of the groups. This contributes to citizens' understanding as belonging to a political group.

Because the divide is based on economic and political power, countries of the centre are richer than peripheral countries (Börzel and Langbein, 2019). The socio-economic divide between EU countries and the centre-periphery divide overlap, and, arguably, mutually reinforce each other. Being in the centre allows countries to push more successfully for EU policies that ensure their interests, and economic success increases a country's influence in the EU (see Tallberg, 2008). Since there is strong evidence that utilitarian considerations are also relevant for the formation of EU public opinion (Foster and Frieden, 2017, 2021), it is important to distinguish the centre-periphery divide from such considerations. While the centre-periphery divide is based on identification and group alignment, explanations based on macro-economic conditions relate to mechanisms of self-interest and deservingness of others. As outlined, the centre-periphery divide expects that citizens in rich centre countries show more solidarity among themselves than with outsiders in the periphery (and vice versa, that citizens in poorer peripheral countries show more solidarity among themselves). On the contrary, models based on macro-economic conditions would expect that poorer countries receive more solidarity because they are more deserving (Heermann et al., 2023) and that people in richer countries give less solidarity because it is less in their self-interest (Vasilopoulou and Talving, 2020). The centre-periphery divide provides thus a distinct and supplementary explanation that considers the relationship between two countries, which alternative models cannot account for.

An important assumption of the centre-periphery divide is that citizens perceive the influence their country has in the EU. The belief that one's country can shape EU decisions is labelled here as 'sociotropic political efficacy'. Craig et al. (1990) refer to internal political efficacy as the belief that one is competent to participate in politics, and external political efficacy as the belief that institutions are responsive to one's demands. Political efficacy has been shown to be associated with a more positive attitude towards the EU (McEvoy, 2016). As Hechter (1987) would argue, group solidarity – such as the solidarity within the EU – requires some level of formal control. When citizens believe that their countries can exert some control, they are more likely to be willing to express solidarity. Citizens who think that their country does not have influence over policy outcomes are less likely to express solidarity with other countries as a result of their general disenchantment with EU integration. The centre–periphery divide suggests that this applies notably to citizens of peripheral countries, which are, by the nature of their disadvantaged position in EU politics, less influential in EU politics.

H2a: Individuals who consider their country not to be influential are less likely to express solidarity with other EU countries than individuals who consider their country to be influential.

H2b: The marginal effect of sociotropic political efficacy on citizens' willingness to express solidarity with other EU countries is greater in centre countries than in periphery countries.

Citizens' interest in EU politics and familiarity with other countries

Many citizens do not hold strong attitudes on European solidarity, and the attitude strength concerning some countries may be weaker than for others. For instance, in the survey used here among French respondents for the empirical analysis, only 63% were able to indicate whether they thought that their country should help the country of Latvia in the case of a major crisis. As outlined, due to the multi-layered design of European fiscal solidarity policies, as well as a framing which rarely revolves around individual costs and benefits, most citizens do not relate to such policies at the personal level (Armingeon, 2020). Some citizens do not hold an opinion about solidarity, and they lack the motivation to form an opinion. As already highlighted, EU politics is of low salience, and consequently, citizens' knowledge of it is limited (Rapeli, 2014). It is overly optimistic to assume that all EU citizens are capable of, and interested in, making assessments about their willingness to express solidarity with any other given European country.

Furthermore, citizens are not equally familiar with other EU countries, and many citizens do not know whether another country is a member of the EU. For instance, Eurobarometer surveys regularly ask respondents whether they think Switzerland is a member of the EU, and a significant proportion of the respondents respond affirmatively (European Commission, 2020). In a specific crisis, the salience of a recipient country and its relevant attributes may be high due to increased media coverage (e.g. Greece during the European debt crisis of 2009/2010). However, it is unlikely that respondents have readily stored assessments of all countries. It is also for this reason that the theoretical model does not suggest that eurozone membership has any effect on citizens' attitudes, because it cannot be assumed that citizens know with enough certainty which countries form part of the eurozone, nor the exact implications of interdependence of a shared currency.

The centre–periphery divide does not only give structure to the content of citizens' opinions but it also identifies which countries are more likely to be present in citizens' minds. Since the centre countries are the dominant actors within the EU, and as such receive more attention, they should be more present in citizens' minds:

H3: Citizens, both at the centre and at the periphery, are more likely to have a crystallised solidarity attitude towards countries at the centre than countries at the periphery.

Few studies assess the relationship of ordinary citizens with other countries (for an exception, see Klingemann and Weldon, 2013), and there is no systematic research on which attributes of a country increase the probability that a citizen is familiar enough to express whether they would be willing to help this country financially. Those

surveys that have been carried out focus on public opinion in the US. One survey conducted by YouGov found that US citizens have more favourable views on countries that are culturally, linguistically and geographically close, whereas many respondents have never heard of smaller countries that are geographically distant (Smith, 2020). Since it is uncertain how these findings might translate to EU citizens, and how a general view of another country is related to a familiarity with it and to the willingness to help it, no hypotheses will be formulated in this regard.

We know more about the individual attributes that define the salience of EU politics. Existing research suggests that motivation drives knowledge about the EU. Those with an intrinsic interest in European politics know more about it (Karp et al., 2003; Rapeli, 2014). Identifying as a European can be expected to have a positive effect on an individual's interest in EU politics, as can their political efficacy. Furthermore, satisfaction with national-level democracy has also been found to be positively associated with interest in EU politics (Karp et al., 2003; Rapeli, 2014). The empirical analysis will consider these factors.

Methodology and data

The empirical analysis relies on the pooled data from two surveys conducted by the research project *Solidarity in Europe* by the European University Institute and YouGov. Random samples were drawn from the more than 800,000 international members of the YouGov panel in April 2020 and April 2021, in 13 member states of the EU[1] as well as the United Kingdom (UK) with a respective sample size of about either 1000 or 2000 per country. For the purposes of this article, respondents from the UK are excluded from the analysis. The country sample includes member states that reflect the theoretical diversity relevant to the topic. The pooled dataset contains 39,203 individual respondents.

The theoretical model makes assumptions both about the salience of solidarity and the substantive opinions about solidarity with other countries. Importantly, the set of variables explaining the salience of solidarity differs from the set of variables that explain the substance of the opinions. Satisfaction with national democracy, for instance, can be expected to increase the probability of expressing an opinion about solidarity, although there are no theoretical reasons to assume that this affects the direction of the opinion. Ignoring this in the empirical analysis would lead to what Certo et al. (2016: 2640) label 'sample-induced endogeneity'.

To correct for the sample selection bias, the analysis is based on a Heckman probit model with sample selection (Heckman, 1979; Van De Ven and Van Praag, 1981). This kind of model first estimates the propensity of an individual to have an opinion and then uses these outputs to create a selection parameter to be included in the outcome model. Unlike a multinominal model – which could include 'Don't know' as one of the response options – a Heckman selection model allows for a different set of predictor variables to be chosen for the selection equation than for the outcome equation. From a theoretical point of view, a Heckman model better represents the assumption that citizens go through a two-step thought process when confronted with a survey

question: First, respondents reflect whether they have an answer to the question. Second, if that reflection brings an affirmative response, the respondent answers the question.

As each respondent indicated their willingness to show solidarity for up to nine countries, and as individual respondents' attributes are expected to play an important role, a multi-level model is used that accounts for the clustered nature of the data. The basic unit is the country rating, clustered within individuals. Exploratory data analysis reveals that the variance explained at the level of the individual is very high. In an empty model, the $ICC_{individual}$ is 0.804. In contrast, the variance explained at the level of the respondent's country is trivial ($ICC_{country} = 0.02$). The results of a simple two-level hierarchical model are presented here. As a robustness check, a three-level model has also been performed, with no substantial differences in the findings.

Operationalisation of variables

Dependent variable

The dependent variable is the individual European fiscal solidarity. The survey includes the following item:

> 'Imagine a country suffered some kind of major crisis, and was looking for help from others. Do you think [country] should or should not be willing to offer financial help to each of the following countries?'

Respondents are asked to answer this question for a list of nine countries. The list consists of a random draw of all 27 EU member states, as well as the UK and seven non-European countries. Respondents can answer 'Should be willing to help', 'Should not be willing to help', or 'Don't know'. Since the dataset is reduced to EU countries only, the number of country items per respondent varies between two and nine (with a mean of 6.88 countries per respondent).

Solidarity is a multidimensional attitude that cannot be captured with a single survey item. The survey item used here asks about bilateral, financial support in case of an unspecified crisis. It is important to note that the results may not translate to other forms of solidarity. For instance, Heermann et al. (2023) show that individuals tend to be more conditional for giving financial support compared to support in goods. It is also important to note that the wording emphasises the giving part of solidarity, which may lead respondents to think less of their country's self-interest. Finally, the type of crisis affects the willingness to help another country, as does the policy design of the instrument (Beetsma et al., 2022; Burgoon et al., 2022; Cicchi et al., 2020; Katsanidou et al., 2022). Nevertheless, the survey item is a useful operationalisation of the concept of European solidarity.

Overall, about 22% of the responses were 'Don't know'. There is significant variance between country pairs. Of Greek respondents asked about Cyprus, only about 7% opted for a 'Don't know' response. At the other extreme, about 37% of French respondents opted for the 'Don't know' response when asked about Latvia. Overall, of those

respondents with an opinion, about 63% express an affirmative opinion. The highest level of solidarity is measured among Spanish respondents for Portugal, at about 86%. The lowest level is found among Greek respondents for Germany, at about 33%. The Online appendix provides an overview of all dyadic relationships.

Independent variables

The cornerstone of this article is the argument that the centre–periphery divide between countries shapes the attitudes of citizens. Based on the theoretical reasoning for the empirical analysis outlined in the previous section, EU countries are categorised as shown in Table 1.

Any classification of countries has its challenges (for a good discussion on the challenges of classification, see Gräbner and Hafele, 2020). Some countries, such as Italy and Ireland, constitute fringe cases. For these countries, arguments could be made to assign them to the other group. For instance, Italy did not require any financial assistance during the European debt crisis, although it struggled fiscally, and its economic model resembles that of other countries of the Southern periphery. Ireland, in turn, did require financial assistance during the European debt crisis, but it rebounded quickly and did not have to endure the drastic reform conditions that Greece, Portugal or Spain had to go through. Some countries may be particularly influential on either side of the divide, for instance, Germany, Hungary and Greece. As a robustness check, the analysis was performed changing the group categorisation of Ireland and Italy, respectively, and excluding influential countries, without any substantial changes in the findings. As a further robustness check, the two peripheries are treated as distinct country groups. The results of these additional analyses can be found in the Online appendix.

It is further necessary to include factors that may confound the effect of the divide. First, dummy variables that capture whether a country is a member of the eurozone – both for the respondent's country and for the recipient country – are included. Second, the centre–periphery divide is closely related to economic development, with the centre being richer and the periphery poorer. The inclusion of the national GDP per capita in 2020 (data from Eurostat) ensures that the country group variable is not just an imperfect measurement of national income. This variable has been rescaled so that the highest value in the sample (Luxembourg) is 1 and the lowest value (Bulgaria) is 0. Table 2 presents the bivariate correlations of macro level attributes of recipient countries. As Table 2 shows, the correlation between the GDP and the country group is very

Table 1. Countries arranged by the centre–periphery divide.

Country group	Country
Centre	Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxembourg, Netherlands, Sweden
Periphery	Bulgaria, Croatia, Cyprus, Czechia, Estonia, Greece, Hungary, Ireland, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, Slovenia, Spain

Table 2. Bivariate correlation of macro variables.

	Country group	Euro as currency	Social connectedness	Shared border	GDP per capita	Population size
Country group	—	−0.21	−0.01	−0.12	−0.84	−0.32
Euro as currency	—	—	0.06	−0.03	0.25	0.09
Social connectedness	—	—	—	0.16	0.06	−0.09
Shared border	—	—	—	—	0.08	0.13
GDP per capita	—	—	—	—	—	0.05
Population size	—	—	—	—	—	—

Note: Country group (1) = Periphery; The table shows the bivariate correlation for all 27 EU member states. Correlations for sampled countries (i.e. 13 EU member states) are slightly different.

high. It should be noted that the bivariate correlations among the 13 respondents' countries are not substantially different.

Finally, the centre–periphery divide clusters countries that are geographically and culturally close. To disentangle the effect of the divide from the effect of these factors, a dummy variable that measures whether two countries share a common border is introduced. Further, the Social Connectedness Index measures the intensity of social connections on Facebook between two locations (here, between countries) (Bailey et al., 2018; see also Afonso and Negash, 2024). This variable does not provide an ideal fit with the theoretical concept of cultural proximity and is influenced, inter alia, by large diaspora communities. But it is, to the best of the author's knowledge, the only measure with complete data for the countries under investigation. As a robustness test, the analysis was confirmed using a measure of cultural distance (Kaasa et al., 2016), although this has missing values for four EU countries. The inclusion of this alternative variable leads to substantively similar results.

Further, individual-level variables are included. It is hypothesised that the centre–periphery divide has an indirect effect on European fiscal solidarity through sociotropic political efficacy. The survey includes the following item:

> 'Please tell us how far you agree or disagree with the following statement? [Country] is influential in European affairs.'

Respondents answer on a fully labelled four-point Likert scale ('Strongly agree', 'Somewhat agree', 'Somewhat disagree', 'Strongly disagree') or 'Don't know'. Influence here can be understood either as a comparison with other countries – in the sense intended for the purposes here – or as a comparison with EU institutions. Such an interpretation by respondents may rather reflect Eurosceptic attitudes than a perception of a power hierarchy. This second interpretation may explain why, even in centre countries, a large share of respondents believes that their country is not influential. Among

citizens in centre countries, 64% of respondents agree that their country is influential, compared to 39% of respondents in the periphery.

Identity is included as a control variable. It is likely to influence the probability of expressing European solidarity and is likely to be correlated with the sociotropic political efficacy of an individual. Respondents can indicate that they identify as 'European', 'national only', 'European and national', 'national and European' or as 'none of these'.

In addition, socioeconomic variables are included – namely gender, age, subjective income and political ideology (seven-point scale recoded to three categories 'Left', 'Centre', 'Right'). Unfortunately, the survey does not include variables to measure formal education, which is a shortcoming of the data. That being said, it is unlikely that the omission of the education variable leads to biased results as concerns the key variables of interest, given that the centre-periphery divide is a variable on the macro level. Since the dataset contains two survey waves, a dummy variable for the survey year is also included.

Operationalisation of variables of the selection model

The dependent variable of the selection model is based on the same survey item as the dependent variable of the outcome model. However, respondents are encoded as having expressed an opinion (1) or as having used the 'Don't know' answer option (0).

For the independent variables of the selection model, all independent variables of the outcome model are included. Given that previous studies found external political efficacy and satisfaction with national democracy as determinants of knowledge about the EU, such variables are also included in the model. In the relevant survey item for political efficacy, respondents are presented with the following statement: 'People like me have a voice in the European Union'. They either answer on a four-point Likert scale or answer that they don't know. Concerning their satisfaction with national democracy, respondents are asked to evaluate how satisfied they are with the way in which democracy works in their own country on an end-labelled scale from 0 ('Extremely dissatisfied') to 10 ('Extremely satisfied'). To avoid concerns regarding the linearity assumption, the variable has been recoded to three categories: low, medium and high satisfaction. At the macro level, the population size of the country is included, in addition to the macro variables of the outcome model.

Regression analysis

Table 3 shows the estimated average marginal effects based on the complete model, including the two interaction effects. The model has been constructed using stepwise extension, including the interaction terms, one by one. The Online appendix includes information about the underlying probit coefficients of all models performed. To test whether the inclusion of the interaction terms improves the models, Likelihood-Ratio (LR) tests have been performed. The tests show that the full model presented in Table 3 provides a better fit than the smaller models.

Table 3. Average estimated marginal effect of the multi-level probit selection model.

	Selection model	Outcome model
Country group of respondent's country (1: Periphery)	**0.01***	**0.06***
	(0.01)	**(0.01)**
Country group of recipient country (1: Periphery)		
Centre × Periphery	**−0.03***	**−0.07***
	(0.00)	**(0.00)**
Periphery × Periphery	**−0.02***	**0.02***
	(0.00)	**(0.00)**
Sociotropic political efficacy (Ref: Agree)		
Disagree × Centre	0.01	**−0.10***
	(0.00)	**(0.01)**
Disagree × Periphery	−0.00	**−0.07***
	(0.00)	**(0.01)**
Subjective income (Ref: Better off)		
Neither better nor worse off	**−0.02***	−0.00
	(0.00)	(0.00)
Worse off	**−0.02***	**−0.02***
	(0.00)	**(0.00)**
Political self-placement (Ref: Centre)		
Left	−0.00	**0.02***
	(0.00)	**(0.00)**
Right	0.01	**−0.05***
	(0.00)	**(0.01)**
Age (Ref: 18–24)		
25–34	−0.01	−0.00
	(0.00)	(0.01)
35–44	−0.01	−0.01
	(0.00)	(0.01)
45–54	−0.01	−0.01
	(0.00)	(0.01)
55 +	−0.01	**−0.02***
	(0.00)	**(0.01)**
Gender (1: Male)	**0.04***	−0.01
	(0.00)	(0.00)
Identity (Ref.: Exclusive European)		
Exclusive national	−0.01	**−0.08***
	(0.01)	**(0.01)**
Predominant European	0.01	0.01
	(0.01)	(0.01)
Predominant national	0.00	0.01
	(0.01)	(0.01)
Shared border (1: Yes)	**0.02***	**0.04***
	(0.00)	**(0.00)**

(continued)

Table 3. Continued.

	Selection model	Outcome model
Social connectedness (No. of Facebook connections)	**0.00***	**0.00***
	(**0.00**)	(**0.00**)
GDP per capita of respondent's country (0-1: Min.-Max.)	0.02	**0.14***
	(0.01)	(**0.02**)
GDP per capita of recipient country (0-1: Min.-Max.)	−0.00	**−0.07***
	(0.00)	(**0.01**)
Respondent's country has the euro (1: Yes)	0.00	0.00
	(0.00)	(0.00)
Recipient country has the euro (1: Yes)	0.00	**0.02***
	(0.00)	(**0.00**)
Year (1: 2021)	0.00	0.00
	(0.00)	(0.00)
Population size of recipient country (in Mio.)	**0.00***	—
	(**0.00**)	
Political efficacy (Ref: Agree)		
Disagree	−0.00	—
	(0.00)	
Satisfaction with democracy (Ref: High satisfaction)		
Low satisfaction	−0.01	—
	(0.00)	
Medium satisfaction	**−0.01***	—
	(**0.00**)	
Inverse Mills Ratio	**−1.82***	
	(**0.02**)	
Summary statistics (outcome model)		
AIC	201,152	
Log Likelihood	−100,544	
Num. obs.	269,782	
Num. groups (Individuals)	39,203	
Var: Individuals (Intercept)	2.78	

Note: Standard errors in parentheses. Coefficients of 'Don't know' responses and Constant omitted. Statistically significant coefficients in bold; *$p < 0.01$.

The analysis provides strong support for the argument that citizens are more likely to show solidarity with countries in their own group (*H1a* and *H1b*). Figure 1(a) shows the estimated marginal effect of the interaction between the country groups for the respondent's country and the recipient country. The *x*-axis denotes the country group of the respondent country. The graph shows the point estimates and the 99% confidence intervals for the respective country groups of the recipient country. Citizens in the centre countries are more likely to express solidarity with other central countries than with peripheral countries. The inverse applies for citizens in peripheral countries, although to a much lesser extent. In fact, the solidarity for centre countries does not differ at all

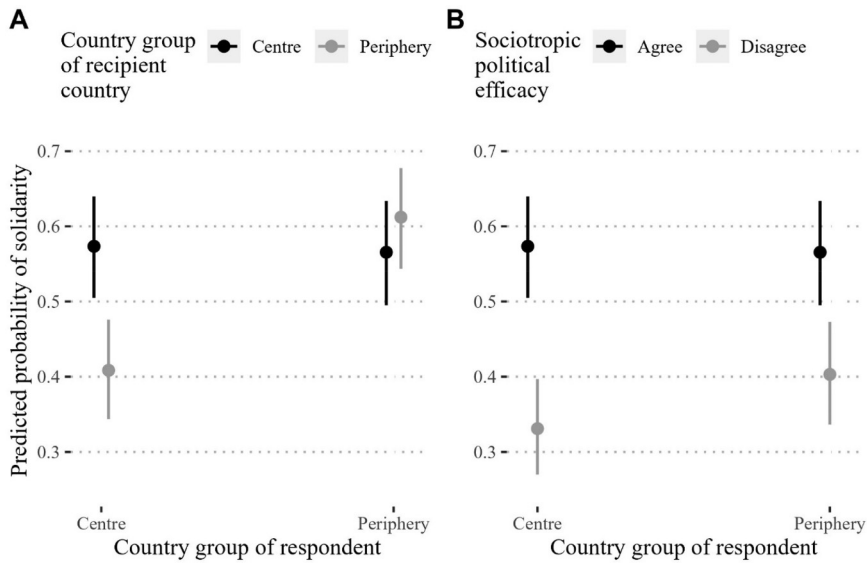

Figure 1. Estimated marginal effects based on the outcome model. 99% confidence intervals.

between respondents at the centre and at the periphery. The interaction effect stems solely from the difference of solidarity for peripheral countries. While citizens in the centre countries show less solidarity for this group of countries, those at the periphery show more solidarity. This suggests that the centre–periphery divide is driven mostly by a handicap of the peripheral countries among citizens in the centre. In other words, the results suggest that citizens in the centre countries have a two-class Europe in mind, according to which some countries 'deserve' less solidarity because of their peripheral position.

This effect shows even when controlling for a wide range of variables with a confounding effect. The model considers the effect of both a shared border and cultural proximity, which are positive and statistically significant. Citizens are more willing to express solidarity with countries in their own country's neighbourhood as well as with those with which they share cultural traits. The GDP per capita of both the respondents' and the recipient countries, as well as whether either the respondent's or the recipient country is in the eurozone, has also been controlled for.

The theoretical model suggests further that citizens who consider their countries to be influential in the EU are more likely to express solidarity with other EU countries (*H2a* and *H2b*). This effect was expected to be particularly strong in centre countries. The empirical analysis lends support for these hypotheses. The coefficient has the expected sign and is statistically significant across all models. All else being equal, citizens who believe that their country is influential in the EU are on average 8.7% more likely to express solidarity with other countries. The statistically significant interaction term suggests that this effect is stronger in centre countries than in peripheral countries. As

mentioned before, LR tests confirm that the inclusion of the interaction term improves the model. Figure 1(b) shows what this means in terms of the predicted probability of solidarity with other countries. The *x*-axis denotes the country group of the respondent's country. In peripheral countries, the effect of sociotropic political efficacy is significant, but modest in size in comparison. Whereas among respondents from the centre countries, those who do not think their country is influential are 9.9% less likely to express solidarity. Among citizens from the peripheral countries, this effect is reduced to 6.5%: still a very strong effect. As Table 3 shows, no other individual-level variable has such a large effect on solidarity.

The Inverse Mills Ratio is negative and statistically significant, which is evidence for a selection bias. The findings of the selection model approach do indeed differ from previous studies. The model suggests that those with an exclusive national identity are less likely to show solidarity, as expected, however, difference between the remaining identities is non-significant. This is surprising, given that previous research has emphasised the relevance of European identity for European solidarity (e.g. Kuhn and Kamm, 2019). Second, the effect of gender is not significant. Men are just as likely as women to express solidarity with other countries. Again, some studies (e.g. Katsanidou et al., 2022) report that men are more likely to express European solidarity. In both cases, these divergent findings can be explained by the inclusion of the selection parameter. Both gender and an exclusive national identity show significant effects in the selection model (although in the latter case only at $p < 0.05$). Women, and those with an exclusive national identity, are less likely to give a response to the survey question. Running the probit regression without the selection parameter increases the effect size of an exclusive national identity by about 15% and shows a statistically significant positive effect of male gender. This contrasts with the reported findings of the probit model with sample selection (see the Online appendix).

H3 stipulates that citizens are more likely to have an opinion about solidarity with a centre country than with a periphery country, regardless of whether they are from the centre or the periphery. Empirical results support this claim. Across all models, the respondents' likelihood to express an opinion about countries of the periphery is lower than for centre countries. While the interaction term of the country groups is statistically significant, it is socially not meaningful. Even when taking into account the interaction effect, the estimated marginal mean of the propensity to has an opinion about solidarity differs by 0.9% between respondents at the centre and respondents at the periphery.

Lastly, citizens who consider themselves to be better off are more likely to express an opinion. As mentioned, the effect of gender is also statistically significant and has the largest effect among all variables in the model: men are 3.6% more likely to express an opinion than women. It should however be noted that the models could not control for the effect of formal education.

Robustness tests

As previously noted, several robustness checks were performed. Material included in the Online appendix provides an overview of the regression outputs of all alternative model

specifications. The regression analysis has been performed excluding countries (either as the respondent country or the recipient country) that could be deemed as influential cases (see above). None of these models differs in substance from the original model. Given their fringe status, Ireland and Italy have been re-categorised to the opposing category. The findings are largely robust to this re-categorisation. One difference is that, when Italy is categorised as a peripheral country, the differential treatment of peripheral countries among respondents in peripheral countries becomes statistically significant at $p < 0.01$. Furthermore, the dichotomous country group variables have been replaced by a numeric variable that captures the years a given country has been in the EU. The idea is that the centre–periphery is notably based on the time of accession of a country, so it can be conceptualised as a continuous variable as well. The analysis replicates the finding of a 'groupness effect' of the country groups. Citizens in newer member states are more likely to express solidarity with other newer EU countries, and vice versa. In contrast, this model does not replicate the interaction effect with sociotropic political efficacy. Further, it has been investigated how a conceptualisation of countries into two peripheries rather than one affects the results. This specification provides evidence for a between-periphery solidarity. In other words, respondents in the Southern periphery are more likely to help an Eastern country than a centre country, and respondents in the Eastern periphery are more likely to help a Southern country than a centre country. This supports the argument that there is a shared understanding of being in the periphery among these countries, which is further corroborated by the finding that the interaction term between the respective peripheral groups and the sociotropic political efficacy is almost identical.

Next, the multi-level model has also been run to include a third level in the data structure at the level of the respondents' country. Again, this does not affect the substance of the results. One potential issue with the findings is the high correlation of the GDP variables with the country group variables, because centre countries tend to be richer than peripheral countries (see Table 2). Selection models are particularly vulnerable to multicollinearity problems, because multicollinearity may lead to misspecification for these models (Lennox et al., 2012). Specification tests indicate that the variance inflation factor (VIF) values fall within acceptable limits, with the highest VIF recorded for the GDP variable of the respondent's country at 4.79. As a further robustness test, the models were run without the GDP variables. The most notable difference is that the main effect of the country group of the respondent's country becomes statistically significant and negative, compared to a non-significant effect in the original model. This was expected, as centre countries tend to be the richer countries. Without the GDP variable, the model attributes part of the variance – explained by economic income of a country – to the country group. As for the remaining variables, differences are trivial. Most importantly, both interaction effects are nearly identical compared with the original specification of the model.

Lastly, the outcome model was also run without the selection parameter. While the central hypotheses of this article are also supported by this model, many of the coefficients – notably concerning gender and European identity – are biased upwards. Beyond gender and identity, omitting the selection parameter leads to statistically

negative effects of subjective income and age. These disappear once the selection bias has been accounted for. Further, the effect of the country group of the respondent, the effect of the GDP variable and the effect of a shared border on the solidarity attitudes would be larger.

These additional analyses underline the robustness of the empirical findings. There is strong evidence that citizens perceive a centre–periphery divide in EU politics, and that they structure their fiscal solidarity with other EU countries accordingly. Moreover, the analysis shows that sociotropic political efficacy is an important determinant of these solidarity attitudes. Finally, it needs to be emphasised that not taking the selection bias into account leads to coefficients that may be inflated.

Conclusions

The article outlined the argument that there is a spatial dimension to European solidarity, and that a centre–periphery divide polarises European citizens. The findings provide evidence for a structuring effect of the centre–periphery divide. Citizens are more likely to show solidarity with countries that are on the same side of the centre–periphery divide as their own country. This is particularly true for citizens of the centre countries, who are much less likely to show solidarity with peripheral countries than with central countries. In other words, peripheral countries are handicapped when it comes to receiving European solidarity. One possible explanation is that peripheral countries are considered less deserving in the centre. Future research should expand on this. In terms of policy, these results underscore the challenges facing the EU in achieving greater fiscal solidarity. They also highlight the need to address the structural inequalities between rich, 'old' member states and poorer, 'new' countries.

Furthermore, this article shows that EU citizens gauge how influential their country is within the EU and adjust their solidarity accordingly. The more influential they believe their country is, the more likely they are to be willing to show solidarity, particularly with countries in the centre. No other individual determinant had a stronger effect on solidarity.

Finally, by explicitly modelling the propensity of citizens to have an opinion, a selection bias has been corrected that was not considered in previous research. The analysis shows that an exclusive national identity is less relevant for European fiscal solidarity, and gender is not relevant at all. These results are in contradiction to previous findings and suggest that a selection model is a choice worth considering when dealing more generally with EU attitudes.

One challenge to the arguments proposed here is that the centre–periphery divide is merely shorthand for the economic income of countries. Indeed, centre countries tend to be richer and peripheral countries tend to be poorer. Citizens may view certain countries as rich or poor, rather than having the more sophisticated concepts of centre and periphery in mind, as proposed in this article. Both conceptually and in terms of data, the two concepts are closely connected. However, the fact that respondents have a level of identification with their country group – they express more solidarity with countries in their group than with those not in their group – is difficult to explain based solely on macroeconomic terms.

Future research needs to be done to understand the intricacies of the centre–periphery divide. While I have suggested here that the divide stems from an economic and political imbalance, it is unclear how far this divide turns into a cultural divide. While this article provides evidence for the existence of such a divide, the exact mechanism, and the mental representations that citizens have of centre and periphery, remain undiscovered, and should be the subject of future research. Combining a centre-periphery perspective and the deservingness literature promises to be a productive way forward.

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Data availability statement

The data that support the findings of this study are available in the supporting information of this article. It is also available at GESIS: https://doi.org/10.7802/2509

Supplemental material

Supplemental material for this article is available online.

Note

1. Denmark, Finland, France, Germany, Sweden, Greece, Hungary, Italy, Lithuania, Netherlands, Poland, Romania and Spain.

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