

UNDERSTANDING SOCIOECONOMIC PERCEPTIONS AND EXPECTATIONS FOR EUROPEAN SOCIAL POLICY

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Introduction

The European Union (EU) can be traced back to the late 1950s with the establishment of the European Economic Community, which aimed to promote economic integration among European countries. Following the Maastricht Treaty, the EU was formally established and began to extend its scope to the social policy domain, including the implementation of the European Structural and Investment Funds. One of the EU's primary objectives is to combat inequality and poverty and to foster social cohesion within the EU. This issue has become increasingly prominent in political discourse in the context of the diverse challenges and crises the EU has been confronted with over the last decades. These include e.g. a growing scepticism about the EU among member states, which is particularly evident in the case of the Brexit referendum, refugee crises, climate change, the COVID-19 pandemic, and Russia's invasion of Ukraine, which has reinforced the energy crisis and inflation in Europe.

Despite the EU's intervention in social policy, there persists substantial disparities between member states in terms of citizens' income and living conditions. For instance, citizens in Central and Northern European countries have, on average, higher disposable incomes than those in Southern and Eastern countries. In 2022, the median income was highest in Luxembourg, approximately 3.5 times that of Bulgaria. Moreover, the proportion of the population at risk of poverty or social exclusion varies considerably across the member states. This ranged from 12% in the Czechia to 34% in Romania in 2022.

Against this background, it becomes pertinent to pose the following questions: To what extent do Europeans expect that inequalities in income and living conditions should be addressed at the EU level? In particular, do they expect the EU to intervene more directly in social policy-making, rather than merely setting objectives and establishing overarching frameworks and funds to assist member states? In light of these questions, my dissertation studies the perspective of Europeans regarding their expectations for European social policy. This dissertation examines the extent to which the expectations of Europeans are shaped by their perceptions of their national and personal socioeconomic conditions. Moreover, the dissertation investigates how Europeans form their perceptions. This approach provides a more profound comprehension of the significant role of socioeconomic perceptions in influencing expectations for European social policy.

In this dissertation, I analyse two dimensions of expectations for European social policy: attitudes towards income inequality within the EU in general and towards specific EU-level policy measures designed to tackle inequality and poverty across European countries. I employ the term ‘expectations for European social policy’ as an overarching concept, as it addresses potential expectations of Europeans regarding the future advancement of social policy-making of the EU, which are embedded in both of their attitudes. In particular, both a negative attitude towards EU inequality and support for EU social policies would indicate that individuals expect the EU to play a more active role in addressing inequality and poverty. In addition, individuals may be less supportive of specific policy measures, yet still express a strong aversion to inequality in general. Therefore, the analysis of both types of attitudes among Europeans provides a more comprehensive understanding of their expectations for European social policy.

This dissertation addresses the role of socioeconomic perceptions in analysing expectations for European social policy in the context of what I term the ‘subjective core of economic self-interest’. In a long-standing tradition, economic self-interest has been considered an important theoretical explanation for public attitudes towards European integration (Anderson & Reichert, 1995; Gabel, 1998). This dissertation adheres to the economic self-interest explanation in this context, which posits that individuals shape their support (opposition) based on their positive (negative) assessments of the EU’s influence on their country and themselves. In addition, individuals form these assessments according to their perceptions of national and personal socioeconomic conditions. For instance, those with a positive perception of their national context are more likely to be concerned about the EU having a negative impact on their country, including the national social security system, and thus also their own living conditions. Consequently, they are less likely to support the EU’s intervention in social policy. In light of these considerations, economic self-interest is based on the underlying assumption that rather than the objective context, it is individuals’ perceptions and assessments of it that directly shape their attitudes. In this dissertation, I define this fundamental assumption as the ‘subjective core’ of economic self-interest.

The subjective core of economic self-interest has not yet been adequately addressed in research on attitudes towards the EU’s intervention in social policy. The majority of scholars have employed economic self-interest to explain how attitudes are associated with objective factors of individual socioeconomic status and the national context (e.g. Beaudonnet, 2013; Burgoon, 2009; Gerhards et al., 2016). A few studies (e.g. Baute & Meuleman, 2020) have examined the relationship between attitudes and individual concerns about the EU’s influence on national security. However, there remains a gap in the literature with regard to research that

explicitly addresses the extent to which perceptions of individual and national socioeconomic conditions shape attitudes towards the EU's intervention in social policy. The influence of perceptions is of particular importance, as individuals tend to perceive national and their personal socioeconomic conditions in significant contrasts to the objective reality (e.g. Bussolo et al., 2021; Evan & Kelley, 2004). This discrepancy is also referred to as the 'mis'-perception of individuals in certain contexts (e.g. Bublitz, 2022). This dissertation aims to highlight the subjective core of economic self-interest by studying the socioeconomic perceptions and attitudes towards both EU inequality and EU social policies as proxies of expectations for European social policy. In this context, the dissertation makes a further contribution by including a study of Europeans' general attitudes towards inequality within the EU.

Furthermore, this dissertation broadens the scope of research that has linked socioeconomic perceptions to attitudes towards national inequality by shifting the focus to inequality at the EU level. Previous studies have identified three main types of socioeconomic perceptions that play a role: perceptions of the national context, such as the extent of inequality or unemployment (e.g. Bussolo et al., 2021; Kunovich, 2012); perceptions of personal current conditions, such as relative income position (e.g. Bublitz, 2022); and perceptions of personal future conditions, such as job insecurity (e.g. Marx, 2014). The dissertation aims to examine the underlying mechanisms of the formation of the three types of socioeconomic perceptions and to establish a link between these perceptions and expectations for European social policy.

My thesis is structured as follows. Chapter 1 introduces an overarching framework that outlines the research topic and research gaps, as well as the research goals and empirical strategy. This dissertation is based on a synthesis of four empirical studies that have been published or are under review. The empirical studies are included as Chapters 2 to 5 of this dissertation. Each of the empirical chapters addresses specific research questions and is dedicated to the analysis of either the formation of a type of socioeconomic perceptions among Europeans or the influence of these perceptions on their expectations for European social policy. The concluding chapter, Chapter 6, presents a summary of the main findings and contributions, including a discussion of potential avenues for future research.

Chapter 1

Theoretical framework

This dissertation examines the formation of socioeconomic perceptions among Europeans and the influence of these perceptions on their expectations for European social policy. This chapter presents the theoretical framework that guides the dissertation. The first section provides an overview of inequality across European countries and the EU's efforts to foster European convergence in economic and social terms. Having established the context, the second section narrows the focus to Europeans' expectations for European social policy. I review previous literature analysing the individual- and country-level drivers of attitudes towards the EU's intervention in social policy. One main research gap is identified, namely the lack of attention paid to the subjective core of economic self-interest, which refers to socioeconomic perceptions that shape attitudes. To elaborate on the relevance of this subjective core, I discuss in the third section another research field that linked attitudes towards national inequality to different socioeconomic perceptions. These include perceptions of the national context and perceptions of personal current and future conditions. Hereby, I address another research gap on the formation of specific perceptions. Subsequently, the fourth section summarises the two research gaps identified in the previous sections and outlines this dissertation's research goals in addressing the research gaps with empirical analyses. This section also provides a conceptual framework for the empirical studies and a discussion of the specific research questions of each study. The last section presents the empirical strategy for analysing the research questions, including a description of the datasets and methods.

1.1 Inequality, European integration and the EU's intervention in social policy

The issue of inequality beyond national borders has become increasingly pertinent in European politics, given that the EU comprises member states with diverse economic and institutional backgrounds. Although the EU was initially established with the objective of facilitating economic integration among European countries, it has expanded its scope to encompass social policy since the Maastricht Treaty in 1992 (Leibfried, 2015). The global financial crisis of 2007/08 and the subsequent European debt crisis have led to a further intensification of economic disparities between European countries. Since then, the EU's intervention in social

policy has been significantly expanded. Political debates on fostering solidarity and cohesion within the EU have gained further importance due to major crises in the last decades, including refugee crises, climate change and the recent COVID-19 pandemic. Against this background, the EU has set objectives to address inequality between member states, specifically targeting poverty and social exclusion as part of the Europe 2020 strategy and 2030 targets.¹ To achieve these goals, the European Structural and Investment Funds have been implemented, such as the European Social Fund and the Cohesion Fund.

Indeed, there has been an overall increase in economic convergence within the EU over the past two decades (Eurofound, 2023). However, significant disparities between countries persist. For instance, statistics from Eurostat (2023a) demonstrated distinct country and regional differences in terms of national median income (adjusted for purchasing power standards), which is generally higher in Central Europe and Nordic countries, and lower in Southern and Eastern Europe. In 2022, the median income was the highest in Luxembourg, at 1.8 times the EU average and more than three times the lowest in Bulgaria and Slovakia. Furthermore, the Gini coefficient was highest in Bulgaria (38.4) and lowest in Slovakia (21.2) in 2022, whereas the EU average was 29.6. This further indicates substantial country differences in income distribution and the level of inequality.

In conclusion, it appears that the EU's intervention in social policy to date has had a limited impact on reducing disparities between countries regarding individual incomes, which deserves specific attention in both political and academic contexts. Recent crises, such as the COVID-19 pandemic, have had considerable negative consequences on national economies and labour market outcomes. These have influenced different countries in different degrees, leading to a stagnation of economic convergence within the EU, particularly in 2020 (Eurofound, 2023). Although there has been a relatively robust recovery in 2021 and also in early 2022, since then, member states have been facing further substantial uncertainties, including a severe energy crisis and inflation as a result of Russia's invasion of Ukraine. Alongside these developments, a considerable proportion of the EU population continues to experience unfavourable living conditions. By 2022, one fifth of the population remained at risk of poverty or social exclusion, with rates ranging from 12% in Czechia up to 34% in Romania. This means that individuals either have an equivalised disposable income below 60% of the national median, or experience severe material and social deprivation or live in a household with very low work intensity, as

¹ The EU has set a goal of reducing the number of Europeans at risk of poverty or social exclusion (AROPE) by at least 15 million by 2023. The AROPE rate has been designated as the primary indicator for monitoring the target outlined in the 2020 strategy and the 2030 targets regarding poverty and social exclusion.

defined by the EU (Eurostat, 2023b). This prompts the question of the extent to which the EU should intervene (more) socially to combat inequality among member states and improve the living conditions of all EU citizens at risk of poverty and social exclusion, in particular in the context of multiple crises the EU and EU citizens are confronted with.

To date, social policy primarily has been primarily the domain of national authorities. The intervention of the EU in social policy has not extended beyond the setting of objectives, the allocation of funds and the establishment of overarching frameworks to assist member states in achieving specific goals. For instance, the EU has settled on a framework on adequate minimum wages for all member states by the end of 2022, which targets in-work poverty specifically. Of course, it remains unclear whether a more direct social policy-making approach by the EU, such as the introduction of an EU-wide minimum wage, would indeed be more effective in addressing inequality and poverty. Meanwhile, another crucial question arises: to what extent would Europeans expect social policy at a supranational level of the EU?

From the perspective of Europeans, their views on European integration are shaped by the extent to which such integration affects their country and themselves (Gabel, 1998; Gabel & Whitten, 1997). In this context, Hooghe and Marks (2018) adopted a cleavage perspective and proposed a new, transnational cleavage between ‘winners’ and ‘losers’ of EU integration (Anderson & Reichert, 1995). As European integration and the EU’s intervention in social policy continue to expand over time, Euroscepticism (Leruth et al., 2018) has become more widespread among member states. The Brexit referendum provides a case in point. Given the challenges that the EU is facing, a comprehensive understanding of Europeans’ opinion is particularly relevant for promoting and legitimising further integration processes within the EU. In light of the EU’s current objectives to combat poverty and social exclusion, it is important to focus on how Europeans shape their expectations regarding the EU’s role in social policy-making, and the conditions under which they would support social policy at the EU level.

This dissertation aims to provide further insight into the mechanisms underlying expectations for European social policy. In particular, I examine the expectations of Europeans with regard to their attitudes towards inequality within the EU in general and potential specific social policy measures at the EU level. I emphasise the subjective core of economic self-interest that explains attitudes, which has been largely overlooked in previous research. This is to say that individuals’ attitudes depend on their subjective assessments of national and personal socioeconomic conditions in the context of the EU’s intervention in social policy. It is therefore of particular importance to consider how individuals may perceive these socioeconomic

conditions in different ways and the extent to which their perceptions may not match with the objective conditions. Among others, the following questions are crucial: How do individuals assess the extent of inequality, poverty and social exclusion in their country and how much are they aware of the disparities between European countries? Would these assessments affect their perceptions of their own socioeconomic conditions? How do individuals perceive their future conditions and what are the consequences of recent crises, such as the pandemic and Russia's invasion of Ukraine, on their perceptions?

To address these issues, I combine two different research fields in this dissertation: research on public attitudes towards EU (social) integration and research on socioeconomic perceptions and attitudes towards national inequality. This dissertation is guided by the following two overarching questions: 1) How do Europeans form their perceptions of different national and personal current and personal future socioeconomic conditions? 2) What is the role of these perceptions in shaping their expectations for European social policy?

1.2 Public expectations for European social policy

The study of attitudes towards EU integration in general can be traced back to the late 1990s (e.g. Anderson & Reichert, 1995; Gabel, 1998). Since then, scholars have conducted a substantial body of research to analyse attitudes towards the economic dimensions of EU integration, in terms of e.g. fiscal solidarity and transfers within the EU (e.g. Beaudonnet, 2015; Bechtel et al., 2014; Kleider & Stoeckel, 2019; Verhaegen, 2018). However, a detailed discussion of these studies is beyond the scope of this dissertation. The main reason for this is that the arguments in favour of the economic and social dimensions of European integration could be based on reasoning that is very different or even contradictory. For instance, some individuals may be in favour of the EU intervening more strongly to address inequality and poverty. Simultaneously, they may oppose or be reluctant to increase fiscal transfers within the EU, due to the concern that their country may have to contribute more financially. Consequently, this section primarily discusses existing literature on attitudes towards the EU's intervention in the social policy domain, which has gained increasing attention among scholars in recent years.

Previous literature has predominantly relied on three theoretical approaches to explain support for the EU's intervention in social policy. These include identity-driven motivations, ideological orientations and, last but not least, the classic economic self-interest. In particular, scholars have employed economic self-interest to study the influence of objective factors of both individual socioeconomic status and contextual factors. Accordingly, after a discussion of

identity and ideology as crucial individual-level drivers, this section discusses the individual and contextual levels of economic self-interest separately. I refer to some relevant studies on multiple occasions to respectively introduce the different theoretical approaches and, in particular, the different dimensions of economic self-interest. Despite the focus of the previous studies on the role of objective factors in shaping attitudes, a subjective core of economic self-interest can be deduced by reviewing these studies. Consequently, it becomes evident that there is a research gap regarding the subjective core of economic self-interest, which underlies support for the EU's intervention in social policy at both the individual and contextual level.

European identity

The integration process within the EU has led to the development of a new, important type of collective political identity, namely European identity (Polyakova & Fligstein, 2016; T. Kuhn, 2019; Risse, 2010). Similar to local or national identity, European identity determines citizens' willingness to share resources with others, or in this case, with their fellow citizens from other member states. In the field of welfare deservingness literature, identity is included as one of the five dimensions within the deservingness criteria (van Oorschot, 2000).² In this dimension, individuals who are perceived as closer to the collective identity of the in-group (i.e., the 'us') are considered to be more entitled to social protection. This notion of identity is expected to hold true also at the EU level, influencing Europeans' attitudes towards the EU's intervention in social policy.

It is possible for individuals to hold multiple collective political identities. Consequently, they may feel attached to various entities simultaneously, including their local region, their nation and Europe (Nicoli et al., 2020; Steenvoorden & Wright, 2019). In the context of attitudes studies, the extent to which individuals feel attached to Europe in comparison to their local and national attachments is a crucial factor. In line with these insights, Gerhards et al. (2016) demonstrated that individuals who identify themselves as at least partially Europeans are more in favour of a Europeanised welfare state than those with solely a national identity. Moreover, some studies indicated that the more pronounced the European identity compared to the national identity, the stronger the support for a joint social policy-making by the EU (Mau, 2005) and the establishment of EU-level social insurance (Nicoli et al., 2020). Furthermore, Baute and Meuleman (2020) found that individuals with a stronger emotional attachment to

² In the context of conditional welfare, the author identified five dimensions of the deservingness criteria from the perspective of the public: 'control', 'need', 'identity', 'attitude' and 'reciprocity' (van Oorschot, 2000, p. 36).

Europe are more in favour of an EU-wide minimum income benefit. Overall, previous studies revealed that European identity plays a significant role in shaping attitudes towards the EU's intervention in social policy.

Ideology

Ideological orientations have also been considered as important drivers of attitudes towards the EU's intervention in social policy. Individuals with a left-leaning political ideology tend to support the concept of a welfare state and governmental redistribution in general (Jaeger, 2006, 2008). In this regard, the EU's intervention in social policy shares somewhat similar goals with national welfare states (Vandenbroucke, 2013). Therefore, support for national social protection among politically left-leaning individuals may be translated into support for social protection across the whole EU. In this context, Burgoon (2009) provided empirical evidence confirming that politically left-leaning ideology results in stronger support for an EU priority objective to fight poverty and social exclusion. Moreover, empirical studies found that individuals with a left-leaning ideology are more inclined to extend access to their country's social benefits to fellow citizens from other EU member states (e.g. Gerhards & Lengfeld, 2013, 2015). Additionally, those who self-identify as politically left-wing tend to be more in favour of a Europeanised welfare state or social policy (Baute & Meuleman, 2020; Gerhards et al., 2016).

In addition to political ideology, other ideological motivations that well reflect individuals' attitudes towards the welfare state should also play a role in shaping attitudes towards the EU's intervention in social policy. However, studies to date have mostly concentrated on attitudes towards EU redistribution in terms of fiscal transfers between countries, and how these attitudes are associated with support for national redistribution (Kleider & Stoeckel, 2019; T. Kuhn et al., 2018; Verhaegen, 2018) and other ideological motivations, such as egalitarianism and altruism (Bechtel et al., 2014; Ciornei & Recchi, 2017). Among a few studies that focused on attitudes towards EU intervention in the social policy domain, empirical evidence indicates stronger support for an EU-wide social policy among Europeans with egalitarian values (Baute & Meuleman, 2020; Roosma & van Oorschot, 2021).

To sum up, previous studies empirically confirmed the influence of individuals' ideological orientations on their attitudes. The studies provided strong and consistent evidence that attitudes towards the EU's intervention in social policy are associated with both political left-leaning ideology and egalitarianism positively.

Economic self-interest: Individual socioeconomic status

Considering economic self-interest as a fundamental driver of public support for the EU and its role for European integration could be traced back to the 1990s. Following debates and scepticism of the Maastricht Treaty during this time, support for the EU has fluctuated across different countries. Scholars linked the Eurosceptic views to a logic of economic self-interest among Europeans (Anderson & Reichert, 1995; Gabel, 1998; Gabel & Whitten, 1997): Euroscepticism arises when individuals have hardly or less benefited from integration within the EU, or they even regard the integration as a threat to their personal living conditions. In contrast, they exhibit support for EU integration when benefiting from it. Against this background, ‘winners’ and ‘losers’ of EU integration could be distinguished from each other, determined by individuals’ socioeconomic status (Anderson & Reichert, 1995; Brinegar et al., 2004). Relying on the economic self-interest logic, more recent empirical studies confirmed that individuals with a lower socioeconomic status, e.g. those with a lower education or income, or those who are welfare dependent, are less in favour of EU integration (e.g. Baute et al., 2018; Beaudonnet, 2015). In particular, Baute et al. (2018) found that lower-status groups are generally more concerned about EU integration having a negative influence on their country, resulting in e.g. the loss of social security, which may affect themselves directly.

The potential influence of the EU on national social security is a key factor in understanding individuals’ attitudes towards the EU’s intervention in social policy. In this sense, individuals with a lower socioeconomic status should be less in favour of the EU’s intervention. However, previous studies did not provide strong empirical evidence confirming this assumption. Conversely, the studies demonstrated that an individual’s socioeconomic status has no substantial influence on their support for, for instance, a European welfare state (Gerhards et al., 2016) and an EU priority objective to combat poverty and social exclusion (Burgoon, 2009). Indeed, Mau (2005) showed stronger support for a joint European decision-making in health and social welfare among individuals in the highest income quartile. Nevertheless, in line with other studies, the author found that other socioeconomic characteristics, including education and occupation, have no influence on the attitudes.

On first sight, the findings appear to suggest that the economic self-interest rationale for studying public support for EU integration does not extend to the analysis of support for the EU’s intervention in social policy. However, a second, contradictory explanation may be at play, offsetting the impact of the first one regarding the influence of socioeconomic status on support: Lower-status groups, in particular those facing social and economic risks, are likely to

favour any social assistance at the national or supranational level as ‘imperfect substitutes’ (Burgoon, 2009, p. 433) that could improve their living conditions. Therefore, lower-status groups should be more supportive of the EU’s intervention in social policy. It is notable that this assumption, though challenging the first economic self-interest explanation that assumes less support among lower-status groups, also relies on economic self-interest, namely that individuals support something from which they could potentially benefit. This is corroborated by recent studies (Baute & Meuleman, 2020; Roosma & van Oorschot, 2021), which showed that individuals with a lower socioeconomic status are indeed more in favour of an EU income benefit that would guarantee a minimum standard of living for all poor people in the EU.

In summary, previous literature reveals two economic self-interest explanations that correspond to two different attitudes of individuals towards the EU’s intervention in social policy. On the one hand, lower-status groups could be particularly concerned about the intervention having a negative impact on their country regarding national authority and social security, which further impacts themselves negatively. On the other hand, they may actually strongly applaud the aim of the EU to combat inequality and to improve the living conditions of the poor and other vulnerable groups. This, in turn, suggests that Europeans have a good understanding of the multi-dimensionality of the EU’s intervention in social policy, which needs to be thoroughly considered when analysing public attitudes towards it.

Economic self-interest: Contextual factors

In addition to the potential negative and positive influences of individual socioeconomic status on attitudes towards the EU’s intervention in social policy, economic self-interest also results in country-specific differences regarding the attitudes. In particular, both the reasoning of economic self-interest mentioned above can be extended to the country-level. First, individuals may have concerns about EU integration influencing their country, including national social security system, negatively. Therefore, public concern would be particularly pronounced in countries with good and robust economic and social welfare conditions, as national competences are likely to be transferred to the EU level (Baute et al., 2018; Ray, 2004). Second, according to economic self-interest, individuals may applaud social assistance at both the national and EU levels as ‘imperfect substitutes’ (Burgoon, 2009). In this context, individuals are more likely to support social assistance from the EU when they live in countries with low incomes or less generous welfare provisions, which makes them feel overall less socially secure at the national level. In conclusion, the two reasoning of economic self-interest appear to supplement each other for shaping country-specific differences in individuals’ attitudes. Both

arguments predict stronger support for the EU's intervention in social policy in countries with poor economic and welfare conditions.

Previous studies provided strong empirical evidence confirming the general assumption regarding a negative contextual impact. Moreover, the contextual impact remains consistent across different dimensions of the EU's intervention in social policy. Mau (2005) found that individuals in Mediterranean countries were more strongly in favour of a joint decision-making of the EU in social welfare than individuals in Continental countries, whereas support was weakest in Scandinavian countries. In line with this finding, Beaudonnet (2013) demonstrated that the lower the national welfare efficiency, the stronger the support for an EU welfare decision-making. Instead of focusing on the responsibility of the EU for welfare, Gerhards et al. (2016) investigated attitudes towards a potential European welfare state that would provide a uniform social welfare system and fight unemployment and poverty across the EU. Including three countries, i.e., Germany, Poland and Spain, the authors showed that support was highest in Poland and lowest in Germany. Similarly, scholars found that individuals from countries with less generous welfare provision were more in favour of an EU priority objective to fight poverty and social exclusion (Burgoon, 2009) and of a specific policy measure like an EU-wide minimum income benefit (Baute & Meuleman, 2020). In particular, Baute and Meuleman (2020) found that the negative association between support and national welfare generosity could be fully explained by individuals' concerns about the EU's influence on national social security. This finding in turn explicitly confirms one of the two elaborated economic self-interest explanations for contextual impact on the attitudes.

Empirical studies reveal that national economic conditions also influence attitudes towards the EU's intervention in social policy. For instance, support has been found to be stronger in countries that receive more structural funds from the EU (Burgoon, 2009), as well as in net beneficiary countries from the EU and in countries with a higher public finance deficit (Beaudonnet, 2013). Moreover, standard indicators of national economic conditions, such as GDP and unemployment rate, also relate to support for the EU's intervention in social policy negatively (Beaudonnet, 2013; Burgoon, 2009; Roosma & van Oorschot, 2021). Notably, some studies showed that individuals from countries with a lower GDP or a higher unemployment rate are less in favour of fiscal solidarity at the EU level (e.g. Kleider & Stoeckel, 2019; T. Kuhn et al., 2018). This seems to be at odds with studies indicating a negative impact of national economic conditions. However, more importantly, it indicates that individuals are reluctant to provide financial assistance to other member states when their country is experiencing economic difficulties already. In this sense, it is in fact consistent with the finding that

individuals in countries with worse economic conditions tend to support the EU's intervention in social policy more strongly, expecting to gain social assistance from the EU.

Subjective core of economic self-interest

Previous literature has employed economic self-interest to explain attitudes towards the EU's intervention in social policy across individual socioeconomic status and contextual factors on national socioeconomic conditions. Nevertheless, the arguments employed to elaborate on the association between attitudes and these objective factors, along with the empirical findings, have made it evident that the role of economic self-interest is characterised by a subjective core.

At the individual level, previous research demonstrated no substantial differences in the attitudes according to individuals' socioeconomic status. As previously outlined, this suggests the existence of two contradictory mechanisms driven by economic self-interest. On the one hand, individuals with a lower socioeconomic status tend to be more concerned about the potential negative influence of the EU on their country and themselves. Consequently, they are more reluctant to support the EU's intervention in social policy. On the other hand, those with a lower socioeconomic status are or consider themselves to be in greater need of social protection, which leads to their stronger support for the EU's intervention in social policy in order to gain additional social assistance from the EU.

At the country level, economic self-interest primarily shapes differences in the attitudes across economic and institutional contexts, which has been empirically well supported. The rationale is that public concern about the EU's negative influence on the national social security system would be particularly strong in countries with more favourable economic and welfare conditions. Consequently, support for the EU's intervention in social policy would be weaker in these countries. In contrast, support would be particularly strong in countries with less favourable socioeconomic conditions, as their citizens tend to feel less socially secure nationally and would therefore, applaud social assistance from the EU.

To sum up, the role of economic self-interest in influencing attitudes both within and across countries relies on individuals' subjective assessments of how the EU's intervention would impact their national social security system, and whether their country and themselves could benefit from it. Moreover, individuals make these assessments based on their perceptions of the national economic and institutional context. This, in turn, reveals a subjective core of economic self-interest as a key factor in explaining attitudes towards the EU's intervention in social policy. In particular, this subjective core posits that attitudes are shaped more directly by individuals'

perceptions of their national and personal socioeconomic conditions and their assessment of the EU's influence on their country and themselves, rather than the objective context itself.

Although embedded in their economic self-interest approach, the subjective core of economic self-interest has been seldom addressed directly in previous empirical studies. Only a few studies confirmed the theoretical assumption that individuals exhibit lower support for the EU's intervention in social policy when they have stronger concerns about the EU having a negative influence on national social security (Baute & Meuleman, 2020; Mau, 2005). Nevertheless, these studies neglected the manner in which individuals shape their concern based on their perceptions of the national context. In contrast, several studies included perceptions of national economic and welfare conditions to analyse attitudes towards the EU's intervention in social policy. Beaudonnet (2013) found that individuals exhibited stronger support when they perceived their country's economic situation to be worse than that of other European countries. Additionally, individuals tend to be more supportive of an EU social policy when perceiving worse national welfare performances (Baute & Meuleman, 2020; Roosma & van Oorschot, 2021). However, these studies did not elaborate on the rationale behind including perceptions in addition to objective national conditions for analysing attitudes. Furthermore, the role of perceptions of personal socioeconomic conditions in shaping attitudes remains unexplored.

In conclusion, a research gap has been identified regarding the influence of individual perceptions of national and personal socioeconomic conditions on attitudes towards the EU's intervention in social policy. This dissertation aims to address this research gap, highlighting the subjective core of economic self-interest that I have deduced from previous research to explain attitudes.

1.3 Socioeconomic perceptions and attitudes towards inequality

A review of the literature on public opinion regarding the EU's intervention in social policy in the previous section revealed a critical research gap in this field. The subjective core of economic self-interest and, in particular, the role of socioeconomic perceptions in shaping attitudes has been largely overlooked. To further elaborate on the specific perceptions that may play a role, this section introduces another field of research that has linked different types of socioeconomic perceptions with attitudes towards inequality at the national level.

In this section, I first discuss two strands of literature that addressed perceptions of national context and of personal socioeconomic conditions, respectively. For both literature strands, an important starting point is that individuals tend to perceive their society and surrounding context

to diverge from the actual conditions. This mismatch between the actual context and the perceptions of it is often referred to as the ‘mis’-perception of individuals, in particular in the context of e.g. the extent of national inequality or personal relative income position. I present a more detailed discussion of this point in the following. In addition, there exists a number of studies that focused on perceptions of personal future socioeconomic conditions, often within the context of either subjective social mobility or subjective socioeconomic insecurity, depending on the research field. I discuss these studies to highlight the role of perceptions regarding personal future conditions in the analysis of individuals’ attitudes and other subjective indicators. Finally, I elaborate on the mechanisms that may explain the formation of different socioeconomic perceptions and potential misperceptions.

From the existing literature, I identify three main types of socioeconomic perceptions that shape attitudes. These are perceptions of the national context, personal current conditions and perceptions of personal future conditions. This dissertation builds on this to study each of the three perception types and to investigate to what extent the influence of these socioeconomic perceptions on attitudes could be extended also to the supranational level of the EU.

Perceptions of national context

Empirical studies have identified significant discrepancies between the objective national context and individual perceptions of it. Addressing these discrepancies, previous studies demonstrated that the perceived, rather than the actual, national inequality plays a crucial role in explaining demand for national redistribution (e.g. Bussolo et al., 2021; Gimpelson & Treisman, 2018). These studies relied heavily on the traditional economic self-interest approach, which links demand for redistribution to the extent of inequality. The majority-voting equilibrium theorem (Romer, 1975) or the median-voter theorem (Meltzer & Richard, 1981) posit that high levels of pre-tax income inequality promote redistributive policies through the preferences of the median voter. The underlying assumption is that inequality shapes individuals’ beliefs about the fairness of the current income distribution in their society, as individuals calculate their costs and benefits from the inequality. In this regard, preferences for redistribution are driven entirely by economic self-interest. The higher the national inequality, the less the median voter considers themselves to benefit from inequality, and therefore the more strongly the demand for redistribution. Accordingly, attitudes towards redistribution ought to be directly associated with the extent of national inequality. However, this relationship is based on the strong assumption that individuals’ perceptions of inequality correspond to the actual extent, which is often not the case. Instead, individuals tend to largely ‘mis’-perceive the

extent of inequality across different economic and institutional contexts, and independently of how inequality and perceptions of it are measured (e.g. Chambers et al., 2014; Kenworthy & McCall, 2008; Norton & Ariely, 2011).

Indeed, previous literature demonstrated a lack of clear empirical evidence showing a strong positive relationship between support for redistribution and the extent of inequality (e.g. Kenworthy & McCall, 2008). Gimpelson and Treisman (2018) showed that support was to some extent associated with the actual extent of inequality, but the association was much stronger for the perceived inequality. This indicates significant individual-level variation in perceptions of inequality, which should be accounted for when investigating attitudes towards national inequality and redistribution. In this context, a growing number of studies linked the attitudes to the perceived national inequality, confirming a strong positive relationship between support for redistribution and the perceived inequality (e.g. Bussolo et al., 2021; Choi, 2019; Engelhardt & Wagener, 2018; A. Kuhn, 2019; Page & Goldstein, 2016).

In addition to the extent of inequality, people also constantly misperceive other indicators reflecting the socioeconomic conditions of their country, such as the inflation rate, the growth of GDP, and the level of unemployment and poverty (e.g. Arin et al., 2021; Fullone et al., 2008; Kunovich, 2012). Individuals, particularly those with a lower socioeconomic status, tend to hold relatively pessimistic views of their country, substantially overestimating e.g. the national unemployment and poverty rates. Moreover, there are cross-country differences in the extent of these misperceptions. In general, overestimation of the national unemployment rate is lower in Scandinavian countries and much higher in Eastern Europe (Cardoso et al., 2016; Papacostas, 2008). In the case of Poland, Kunovich (2012) additionally discovered that individuals who overestimated the unemployment rate in their country were more in favour of governmental intervention in employment. Accordingly, it is crucial to investigate more thoroughly the extent to which specific socioeconomic perceptions and misperceptions among individuals influence their attitudes towards inequality and redistribution across different countries.

Perceptions of personal conditions

As previously discussed, there are significant discrepancies between objective national socioeconomic conditions and individual perceptions of them. Consequently, individuals may also hold perceptions of their own position within society that diverge substantially from the actual context. Supporting this assumption, G. Evans and Mellon (2016) demonstrated that individuals' perceptions of national inequality played an important role in shaping their

subjective class identity. In particular, the authors found that a majority of British individuals perceived a relatively high level of inequality in their society. As a result, they are more likely to identify themselves as the working class, despite holding a middle-class occupation. D’Hooge et al. (2018) found a more general pattern across European countries: Individuals, regardless of their objective social class, tend to self-identify as the middle class. In a similar vein, other cross-country studies employed a different subjective measure of social status, asking individuals to rank themselves on a social hierarchy or ladder from bottom to top. These studies provided relatively consistent evidence that both high-status and low-status individuals tend to place themselves in the middle (M. Evans & Kelley, 2004; Kelley & M. Evans, 1995; Oesch & Vigna, 2023). Hence, previous studies empirically confirmed a significant discrepancy between individuals’ objective social class or position and their perceptions of it. Consequently, it is the perceived, rather than the objective social class of voters, that primarily determines their political preferences (D’Hooge et al., 2018).

Another strand of literature concentrated on one specific aspect of individuals’ socioeconomic conditions, namely their objective income and how they perceive their relative income position in national income distribution. The concept of misperceptions is commonly employed in this context, defined as the discrepancy between the actual and perceived income position. In line with the findings from the studies analysing subjective social status, Cruces et al. (2013) found a similar tendency among individuals in Buenos Aires, Argentina, regarding how they misperceive their own income position: Individuals with higher incomes tend to underestimate their income position, while those with lower incomes tend to overestimate it. This tendency of misperceptions has also been identified in other countries, including Denmark (Hvidberg et al., 2023), Germany (Engelhardt & Wagener, 2018; D. Fehr et al., 2022), Spain (Fernández-Albertos & Kuo, 2018) and Sweden (Karadja et al., 2017). Moreover, a few studies conducted cross-national analyses, confirming the existence of income misperceptions across countries (Bublitz, 2022; Hoy & Mager, 2021).

Based on economic self-interest, lower-income individuals tend to have greater concern about inequality and support redistribution more strongly because they perceive themselves as potential beneficiaries of redistribution. However, systematic misperceptions among individuals that those with higher (lower) incomes tend to underestimate (overestimate) their relative income could substantially mitigate the negative relationship between income and attitudes. A number of recent studies conducted survey experiments to address these income misperceptions. These studies demonstrated that informing individuals about their misperceptions change their attitudes towards inequality and redistribution at the national level

(e.g. Bublitz, 2022; Cruces et al., 2013; Engelhardt & Wagener, 2018). Their findings indicated some heterogeneity across countries regarding the effect of the information on inequality attitudes (for a meta-analysis, see Ciani et al., 2021). Overall, individuals exhibit greater concern about inequality and stronger support for redistribution when they are informed about their overestimation of their income position, i.e., when they learn that they rank lower than they initially thought. In contrast, individuals who learn that they have underestimated their position tend to express less concern about inequality and less support for redistribution.

In conclusion, previous research reveals that individuals tend to perceive their personal circumstances in relation to those of others in their country in a manner that differs substantially from the actual context. This is evident in their perceptions of their social class, social position and income position. Consequently, public attitudes towards inequality and redistribution are strongly associated with perceptions of individual socioeconomic status, rather than the objective status. Against this background, scholars should investigate more thoroughly what role perceptions of personal socioeconomic conditions play for different subjective indicators of individuals. Furthermore, it is crucial to account for misperceptions of individuals regarding their relative income position when analysing the role of economic self-interest in shaping attitudes. With this in mind, this dissertation analyses in particular how Europeans' perceptions and misperceptions of their income position within the EU influence their attitudes towards inequality and social policies at the EU level.

Perceptions of personal future conditions

Individuals' perceptions of their future socioeconomic conditions also play a role in explaining their attitudes. An important starting point is that individuals' socioeconomic conditions may change substantially over time. Therefore, it is not just the current circumstances that shape individuals' attitudes towards national inequality and redistribution; expectations of their future conditions or social mobility also play a role. Benabou and Ok (2001) formalised the 'prospects of upward mobility (POUM)' hypothesis, using changes in individuals' position on the income ladder as an indicator of social mobility. The authors noted that poor individuals who, however, expect their future income to be higher than average tend to oppose redistribution. In this regard, there should be a negative relationship between support for redistribution and perceptions of upward mobility in terms of a higher future income. Correspondently, individuals who perceive a risk of downward mobility in their future tend to support redistribution more strongly. Moreover, the POUM hypothesis addresses that an optimistic view of poor individuals

regarding their prospects of upward mobility reduces the influence of their current income and their support.

Testing the POUM hypothesis, more recent studies provided empirical evidence confirming the negative influence of a perceived higher future income on support for redistribution (Alesina & Angeletos, 2005; Checchi & Filippin, 2004; Cojocaru, 2014). Instead of focusing on future income, some other studies investigated how perceptions regarding other aspects of future socioeconomic conditions relate to the attitudes. For instance, Rainer and Siedler (2008) found that individuals' perceptions of their occupational mobility were also important determinants of their support for redistribution, as perceptions of upward mobility weakened their support. Additionally, Alesina and La Ferrara (2005) showed less support among individuals who expected an improvement in their standard of living in the future.

Another strand of literature focused on the subjective vulnerability of individuals who perceive risks of downward mobility for their future, often referred to as subjective or perceived socioeconomic insecurity (e.g. Akaeda & Schöneck, 2022; Mau et al., 2012). Since the global financial crisis in 2007/08, scholars have demonstrated a widespread prevalence of subjective socioeconomic insecurity, particularly in economically hard-hit countries (Chung & van Oorschot, 2011; Lübke & Erlinghagen 2014; van Oorschot & Chung, 2015). In addition, individuals with a lower socioeconomic status tend to exhibit higher subjective insecurity. The subjective feelings of insecurity have gained particular relevance due to their significant negative outcomes at the individual level. These include impacts on subjective well-being (Fernandez-Urbano & Kulic, 2020), institutional trust (Delhey et al., 2023) and specific political preferences such as welfare chauvinism (Duman, 2023).

Previous studies have seldom linked attitudes towards redistribution to perceived insecurity regarding personal future socioeconomic conditions directly. Instead, most studies analysed the role of factors such as lower income, precarious employment and unemployment, which could be interpreted as indicators of objective socioeconomic insecurities or risks (e.g. Burgoon & Dekker, 2010; Naumann et al., 2016; Pahontu, 2022). Marx (2014) is one of the few studies to address the subjective dimension of insecurity. It demonstrated that, across 11 Western European countries, individuals who felt insecure about their job were more supportive of the government in reducing income differences within their country. In contrast, Ahrens (2024) found no clear evidence linking individuals' welfare preferences to their objective or perceived risks regarding their own employment in a recent study in Switzerland.

To sum up, previous literature has addressed individuals' perceptions of their future socioeconomic conditions in different ways. In particular, these perceptions have been interpreted either as expected prospects of upward mobility or as feelings of insecurity. Regardless of the interpretation, the perceptions play a role in shaping inequality attitudes and other subjective outcomes of individuals.

Formation of (mis-)perceptions

As discussed, previous literature linked attitudes towards inequality and redistribution to different socioeconomic perceptions, while addressing substantial mismatches between the objective conditions and perceptions of them. To this end, studies have identified differences regarding patterns of (mis-)perceptions alongside individuals' own socioeconomic status. In summary, lower-status groups tend to more strongly overestimate national indicators such as the extent of inequality, unemployment and poverty, holding more pessimistic views on national socioeconomic conditions. Meanwhile, these groups seem to be overly optimistic about their personal socioeconomic conditions, overestimating, for instance, their income position and social position. In contrast, higher-status groups tend to underestimate their positions, being relatively pessimistic about their personal conditions.

A few studies took a step further to investigate the underlying mechanisms that shape perceptions. Bussolo et al. (2021) developed a concise model that links the demand for redistribution to perceptions of inequality. Additionally, the model estimates how perceptions are formed. Overall, the authors argued that perceptions of national inequality depend on the information acquired by individuals while exposed to the specific socioeconomic context of their country, but not exclusively. More importantly, individuals process and interpret their acquired information on national conditions in very different ways, depending on their ideology and sociodemographic characteristics. Consequently, the national context, as well as individual ideology and socio-demographics, jointly determine individual perceptions of national inequality. In this regard, as the authors noted, individuals do not simply perceive national conditions incorrectly; rather, they perceive and interpret the national context differently. Individuals' perceptions of the national context, in turn, also play a role in shaping their perceptions of their own social status (G. Evans & Mellon, 2016).

In addition, there is a long-standing tradition in cognitive psychology to investigate how individuals form their perceptions, addressing different cognitive processes of individuals that underlie their subjective assessments. Among others, Kahneman and Tversky demonstrated in

a series of papers in the 1970s that individuals make assessments on complex issues by employing cognitive shortcuts, or ‘judgmental heuristics’ as they called, i.e., ‘availability’ (Tversky & Kahneman, 1973), ‘adjustment and anchoring’ (Tversky & Kahneman, 1974) and ‘representativeness’ (Kahneman & Tversky, 1973). In simple words, individuals rely on specific cases they recall in different ways to make more general predictions about a larger group or even the entire society. The use of judgmental heuristics may result in systematic cognitive biases among individuals with regard to their perceptions of the society and their own position within it.

Several more recent studies indeed relied on the premise of judgmental heuristics and their consequence of cognitive biases to explicitly explain how biased perceptions or misperceptions of personal social and economic statuses are formed. M. Evans and Kelley (2004) argued that individuals build a general image for the whole society based on the circumstances of their near surroundings, i.e. their friends and family, or as the authors termed it, their ‘reference groups’. The authors addressed the homogeneity of reference groups concerning their socioeconomic status. This leads to a common perception of the society’s stratification that the majority of people stand in the middle, with few at the top and the bottom. As a result, both rich and poor individuals tend to position themselves somewhere in the middle of the social hierarchy. In a similar vein, Cruces et al. (2013) argued that individuals apply their information on the income distribution of their reference groups (or in this case, their neighbourhood) to assess the income distribution of the entire population in their society. Accordingly, they form biased perceptions on the national income distribution. In particular, those with rich reference groups underestimate the actual extent of inequality, and consequently, their own income rank in the national distribution. In contrast, those with poor reference groups overestimate the actual extent of inequality and their own income position. Hvidberg et al. (2023) demonstrated that individuals additionally misperceive the incomes of different reference groups. Rich individuals tend to overestimate and poor ones tend to underestimate the incomes of others, which in turn leads to misperceptions of their own income position.³

³ All of the studies discussed (i.e., Cruces et al., 2013; M. Evans & Kelley, 2004; Hvidberg et al., 2023) employed the concept of ‘reference groups’ to study misperceptions. It should be noted that ‘reference groups’ was originally discussed in the context of social comparisons and relative deprivation among individuals (Festinger, 1954; Runciman, 1966; Stouffer et al., 1949). However, this was not specifically addressed in studies on misperceptions of personal socioeconomic conditions. Instead, scholars employed ‘reference groups’ to primarily convey the idea that individuals consciously or unconsciously use specific groups they are more familiar with, mostly their near surroundings, as a reference to make assessments about a larger group. In this sense, ‘reference groups’ align more closely with the logics of ‘judgmental heuristics’ (e.g. Tversky & Kahneman, 1974).

Previous studies on perceptions of personal future socioeconomic conditions have often limited their scope to identifying differences in these perceptions according to individuals' current socioeconomic circumstances. In general, lower-status and, in some contexts, also middle-status groups are found to hold more pessimistic views about their future conditions (e.g. Burzan & Kohrs, 2013; Lengfeld & Hirschle, 2009). The underlying assumption is that individuals' current socioeconomic status serves as a strong predictor of their future situation. On the other hand, a number of studies analysed perceptions of personal future conditions in terms of subjective socioeconomic insecurity. Putting individual-level determinants on the side, these studies stressed that (changing) contextual factors play an important role in shaping subjective insecurity (e.g. Akaeda & Schöneck, 2022; Lübke & Erlinghagen, 2014; van Oorschot & Chung, 2015). However, there lacks analysis investigating the underlying mechanisms that shape perceptions of personal future socioeconomic conditions at the individual level.

To wrap up, although addressing significant discrepancies between objective socioeconomic conditions and perceptions of them, few studies have investigated the formation of these perceptions in depth. The studies discussed above have shed light on the formation of perceptions in specific areas, including perceptions of national inequality and of personal social and income position. Further analyses are therefore required to gain a comprehensive understanding of how individuals form (mis-)perceptions of various national and personal socioeconomic conditions, including personal future conditions. Against this background, this dissertation adds to the literature by conducting analyses particularly on how individuals form their perceptions of their own income positions and their future socioeconomic circumstances. This further contributes to the existing bodies of literature on socioeconomic perceptions and attitudes towards inequality at both the national and the EU level.

1.4 Research goals and overview of empirical chapters

One of the primary research objectives of this dissertation is to shed more light on the underlying mechanisms of economic self-interest that explain Europeans' expectations for European social policy. The objective is not to achieve a comprehensive understanding of how Europeans would expect a 'social Europe' (Martinsen & Vollaard, 2014) as a whole. Instead, this dissertation concentrates on their expectations regarding future social policy-making within the EU specifically. To this end, the dissertation examines the general assessment of inequality

within the EU and the support for specific potential policy measures that would combat inequality between member states, as well as poverty and social exclusion within the EU.

This dissertation emphasises the subjective core of economic self-interest by focusing on the role of perceptions of both national and personal socioeconomic conditions in shaping attitudes. In this context, the dissertation establishes a strong connection to the research field that linked socioeconomic perceptions to attitudes towards national inequality. I investigate the extent to which the influence of these perceptions on attitudes could be extended to the EU level. Furthermore, I develop a second research objective, namely to analyse the formation of specific socioeconomic perceptions, including perceptions of national as well as their personal current and future conditions. In the following paragraphs, I elaborate on the two main research gaps that this dissertation aims to address through empirical analyses. Subsequently, I propose a conceptual framework to outline the empirical chapters.

Research gaps

In a long-standing tradition, economic self-interest has been considered as a crucial approach to explain individual- and country-level differences in the support for the EU's intervention in social policy. However, as discussed in Section 1.2, most previous studies did not explicitly address the subjective core of economic self-interest, namely that individuals form their attitudes based on their subjective assessments regarding the EU's potential influence on their country and themselves. Moreover, these assessments may vary considerably, depending on how individuals perceive the socioeconomic conditions of their country and of themselves. To date, few studies have analysed the different socioeconomic perceptions among individuals and how they influence Europeans' attitudes towards the EU's intervention in social policy.

On the other hand, Section 1.3 elaborated on another field of research that addressed the socioeconomic perceptions and potential misperceptions among individuals in analysing attitudes towards inequality and redistribution at the national level. This research field has demonstrated that individuals tend to perceive the same national context in markedly disparate ways. In addition, individuals tend to perceive their own socioeconomic circumstances in a manner that is significantly different from the actual context, and they systematically misperceive their position in society. Consequently, attitudes are strongly associated with socioeconomic perceptions, including perceptions of national context as well as personal current and future socioeconomic conditions. Furthermore, informing individuals about their

income misperceptions has been found to alter their attitudes. The findings prompt the question of the extent to which socioeconomic perceptions may influence attitudes also at the EU level.

Finally, a small number of studies have concentrated on the formation of different socioeconomic perceptions among individuals and the sources of their potential misperceptions. As discussed at the end of Section 1.3, a few studies investigated how individuals misperceive inequality and consequently misperceive their own social or income position in their country. Bussolo et al. (2021) was the first to propose a framework that sets aside the discussion of misperceptions. In contrast, this framework emphasises that individuals perceive national inequality differently, depending on their personal characteristics such as ideology. This prompts the question of whether this framework could be extended to explain the formation of perceptions of national context beyond just the extent of inequality, which might be an empirical question eventually. Overall, there still lacks analyses on the formation of different socioeconomic perceptions at both the national and individual level.

In conclusion, two main aspects require further in-depth investigation. *First*, how do individuals perceive their national and personal socioeconomic conditions, and more importantly, how do they form these perceptions and potential misperceptions? *Second*, to what extent do these socioeconomic perceptions, in addition to the objective context, influence attitudes towards inequality and social policies at the EU level? In both aspects, it is crucial to not only study the general patterns that emerge across individual groups and countries, but also to identify potential group- and country-specific differences.

This dissertation addresses both research gaps with empirical analyses. In particular, it focuses on one typical type in each of the three areas of socioeconomic perceptions: perceptions of the national context in terms of unemployment and the living conditions of the unemployed; perceptions of personal current conditions in terms of relative income positions; and finally, perceptions of personal future conditions in terms of subjective socioeconomic insecurity. I study how Europeans form these specific socioeconomic perceptions. Furthermore, I investigate the influence of the former two types of perceptions, in particular, on attitudes towards inequality and social policies at the EU level. This approach enables a more thorough understanding of the economic self-interest explanation for Europeans' expectations for European social policy by addressing its subjective core. With regard to the third perception type, namely subjective socioeconomic insecurity, I concentrate on the potential consequences of recent crises, including the COVID-19 pandemic. This analysis offers valuable insights into how individuals perceive their future socioeconomic conditions in times of crisis, which is

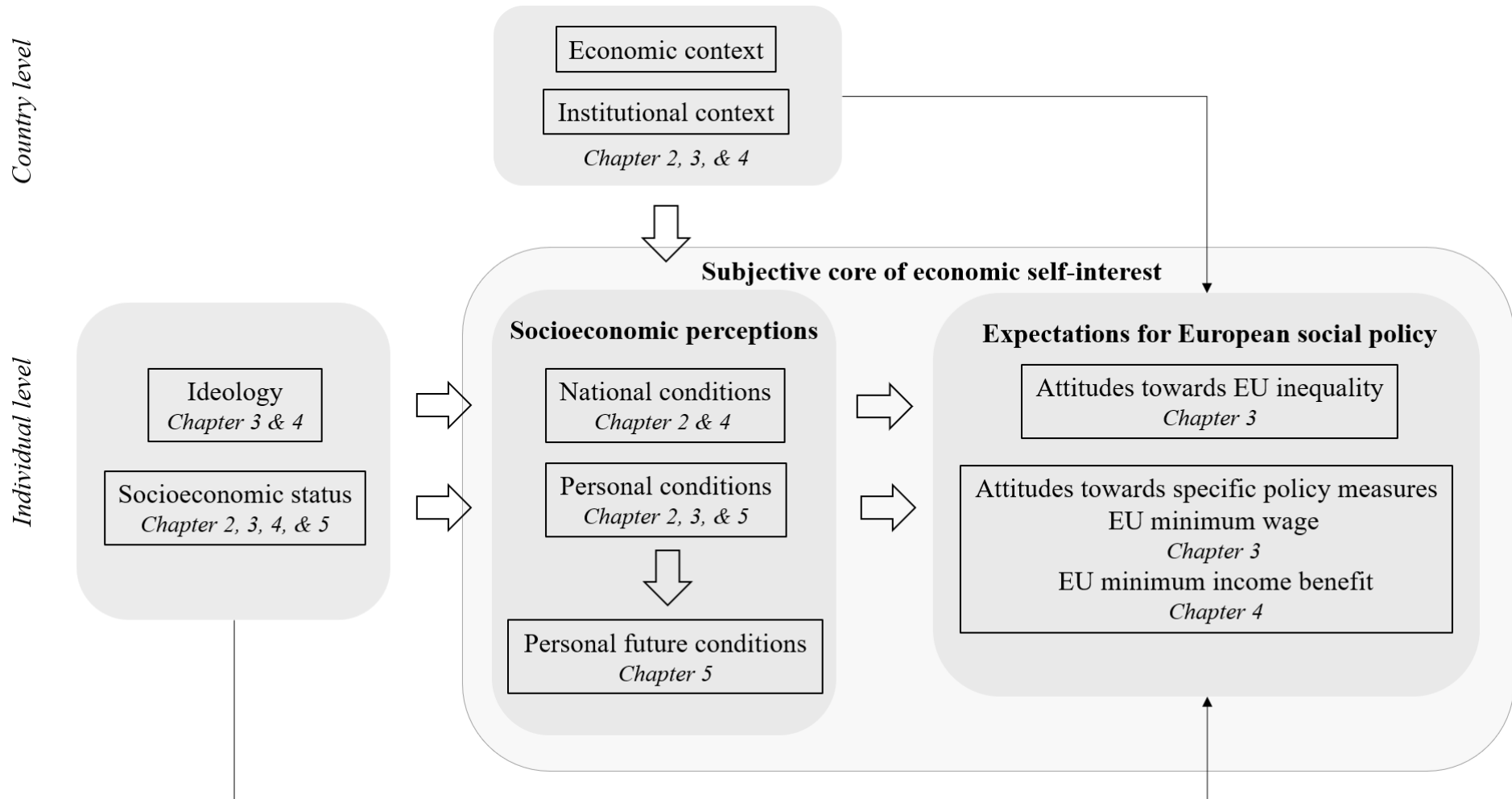
particularly relevant to future debates on the EU's intervention in social policy, given the current challenges the EU is facing.

Conceptual framework of empirical chapters

Figure 1.1 presents the conceptual framework of this dissertation's empirical analyses. With four empirical chapters (Chapters 2–5), I investigate two main aspects that have been neglected in previous research: 1) how Europeans form their socioeconomic perceptions; and 2) the extent to which their perceptions influence their expectations for European social policy in two dimensions, namely attitudes toward EU inequality and specific EU policy measures. In particular, the second aspect addresses the subjective core of economic self-interest in shaping attitudes. Chapters 2 and 5 focus on the formation of perceptions regarding personal current and future socioeconomic conditions, respectively. Chapter 3 builds upon the analysis of Chapter 2 and investigates how perceptions of personal current conditions shape attitudes towards EU inequality in general and a specific policy measure of an EU minimum wage. In contrast, Chapter 4 addresses the formation of perceptions of national conditions and analyses the influence of these perceptions on attitudes towards an EU minimum income benefit.

Each empirical chapter focuses on specific research question(s). Some of the studies examine the interplay between individual- and country-level determinants, as well as between economic interest and ideology in shaping attitudes. Figure 1.1 also illustrates the scope of each chapter. For the analysis of attitudes towards EU inequality and social policy measures, I additionally consider other relevant determinants (e.g. European identity). These are not included in the figure since they are not the focus of this dissertation.

Figure 1.1 Conceptual framework on socioeconomic perceptions and expectations for European social policy



Chapter 2 is concerned with the formation of perceptions regarding personal current socioeconomic conditions. The chapter analyses how Europeans position themselves within the EU according to their income, and to what extent they compare their own income to that of their fellow citizens from other countries. Building on existing literature on (mis-)perceptions of personal rank in the national income distribution (e.g. Cruces et al., 2013; Hvidberg et al., 2023), this study is the first to investigate income perceptions and misperceptions at a cross-national level of the EU. In this sense, the study explores the extent to which Europeans are able to rank themselves within the EU. This provides insight into whether Europeans indeed have a perspective on inequality beyond the national frame of reference (e.g. Delhey & Kohler, 2006; Lahusen & Kiess, 2019). As shown in Figure 1.1, Chapter 2 investigates the role of both the individual- and country-level determinants in shaping perceptions. The underlying theoretical assumption is that individuals estimate their own EU income position by anchoring on their perceptions of their national position. In addition, they estimate the difference between both positions according to how they perceive their country's economic situation within the EU. Accordingly, misperceptions could stem from two sources: First, individuals extrapolate their misperceptions of their national income position to the EU level. Second, they rank their country incorrectly in the EU. In summary, Chapter 2 addresses the following research question:

- *How Europeans perceive their own income position within the EU in comparison to their fellow citizens from other member states?*

Building on the analyses of the second chapter, Chapter 3 investigates how Europeans' perceptions of their EU income position influence their expectations for European social policy, with a particular focus on two specific attitudes. These are attitudes towards income inequality within the EU in general and towards a potential policy measure of an EU-wide minimum wage, as illustrated on the right side of Figure 1.1. This specific policy measure is particularly relevant since it would target inequality, in particular in-work poverty across member states. Chapter 3 contributes to the existing literature by stressing the subjective core of economic self-interest that shapes attitudes. Other relevant determinants, such as individuals' ideology and socioeconomic status, are additionally considered in the empirical analyses (see also Figure 1.1). Theoretically, this chapter builds on previous research on relative income positions and attitudes towards income inequality (Meltzer & Richard, 1981; Clark & D'Ambrosio, 2015; E. Fehr & Schmidt, 1999), as well as studies addressing the role of income misperceptions within the national context (e.g. Bublitz, 2022; Cruces et al., 2013; Karadja et al., 2017). The chapter analyses how misperceptions of personal EU income position influence the relationship

between income and attitudes towards inequality at the EU level. In particular, Chapter 3 focuses on the following research questions:

- *How do Europeans' relative income positions in the EU shape their attitudes towards EU income inequality and an EU-wide minimum wage?*
- *What role do income misperceptions play for analysing these attitudes? And to what extent does informing individuals about their misperceptions change their attitudes?*

Chapter 4 focuses on the attitudes of Europeans towards another specific policy measure at the EU level that would guarantee a minimum standard of living for all people in the EU. The objective of this policy measure is to tackle poverty and inequality within the EU in general. As illustrated in Figure 1.1, this chapter highlights the subjective core of economic self-interest by analysing how perceptions of national socioeconomic conditions, in contrast to the focus on personal conditions in Chapter 3, relate to the attitudes among Europeans. Chapter 4 explicitly addresses the role of perceptions in addition to objective national context, which is lacking in previous literature (e.g. Baute & Meuleman, 2020; Roosma & van Oorschot, 2021). The focus of this chapter is on unemployment perceptions, i.e., perceptions of the national unemployment rate and the living conditions of unemployed individuals within the country. This chapter adapts the theoretical framework proposed by Bussolo et al. (2021), which emphasises the influence of the perceived national context on demand for national redistribution and the interplay between economic self-interest and ideology. In this chapter, the framework is extended to the EU level, where ideology plays a twofold role. First, perceptions of the national context differ depending on individual characteristics including ideology. Second, ideology influences the relationship between perceptions of the national context and attitudes towards an EU-wide social policy. In this context, this chapter analyses how ideology influences the role of unemployment perceptions in shaping attitudes. Furthermore, the chapter tests whether the role of unemployment perceptions differs across objective national contexts. The following research questions are addressed in Chapter 4:

- *How do Europeans' unemployment perceptions influence their attitudes towards an EU-wide social policy across different economic and institutional contexts?*
- *To what extent do individuals' ideological motivations influence the role of unemployment perceptions in shaping their attitudes?*
- *Do contextual factors also influence the relationship between unemployment perceptions and attitudes towards the policy measure?*

In Chapter 5, the research focus shifts to the formation of socioeconomic perceptions. In contrast to Chapter 2, which analyses individuals' perceptions of their current socioeconomic conditions, Chapter 5 examines perceptions of their future conditions (see also Figure 1.1). This chapter studies the subjective insecurity regarding personal future socioeconomic conditions, also referred to as subjective socioeconomic insecurity, in the context of crises. The chapter thus connects to the existing literature in this field, which has gained increasing relevance since the global financial crisis in 2007/08 (e.g. Akaeda & Schöneck 2022; Lübke & Erlinghagen, 2014). In contrast to previous studies, Chapter 5 focuses on two more recent crises: the COVID-19 pandemic and the Russian invasion of Ukraine. The latter resulted in a severe energy crisis and inflation in Europe. This chapter examines the extent to which these crises have intensified subjective socioeconomic insecurity. Furthermore, the chapter emphasises the interplay between individuals' initial social status at the onset of the crises and their personal crisis experiences and perceptions during the crises. In addition to objective factors, this chapter investigates the extent to which subjective insecurity regarding personal future socioeconomic conditions is influenced by perceptions of economic affectedness due to a crisis and perceptions of personal social status at the beginning of a crisis. To this end, Chapter 5 addresses the following research questions:

- *To what extent was subjective socioeconomic insecurity from 2020 to 2022 driven by individuals' social status at the onset of a crisis, personal crisis experiences and their perceptions of economic affectedness during crises?*
- *Does subjective social status play a more crucial role than objective status in shaping subjective insecurity in times of crisis?*

1.5 Empirical strategy: Data and methodology

Empirically, this dissertation relies on quantitative survey research and includes in three out of its four empirical chapters a country-comparative perspective. The aim is to investigate both general patterns and potential differences across economic and institutional contexts regarding Europeans' socioeconomic perceptions and their expectations for European social policy. For this purpose, the empirical chapters conduct their own or make use of existing 'cross-national surveys' (Lynn et al., 2006) for data analysis. Moreover, the own conducted surveys included experiments and a panel design for 'causal inference' (Gangl, 2010; Morgan & Winship, 2014). In consideration of the specific research questions addressed and the nature of the data included in the empirical chapters, this dissertation employs a variety of methods for data analysis. These

include ordinary least squares (OLS) regressions, multilevel modelling, experimental analysis and panel analysis with fixed-effects models. This section presents the data and methodology employed in each of the empirical chapters (Chapters 2–5).

Data

Table 1.1 provides an overview of the different main and additional data employed in this dissertation to examine the research questions of the respective empirical chapters. The main data were derived from three distinct sources: survey data from the SOECBIAS/COVREF database and the European Social Survey (ESS), and country-level data from Eurostat. In particular, the SOECBIAS/COVREF data were collected in two research projects at the University of Hamburg. The projects conducted their own tailor-made surveys to study socioeconomic perceptions and attitudes towards inequality and social policy at the EU level. These include a survey experiment conducted in four EU member states (Germany, Italy, Poland and Sweden) in 2020 and a longitudinal survey with four panel waves in Germany from 2020 to 2022. Additionally, a pre-test was conducted in Germany in 2019 with a question-order experiment. Furthermore, additional income data from the EU Statistics on Income and Living Conditions (EU-SILC) were employed to calculate national and EU income distributions in percentiles for the survey experiment in 2020.

As displayed in Table 1.1, Chapters 2, 3 and 5 make use of the SOECBIAS/COVREF data within different subsets. Additionally, Chapter 5 utilises data from Eurobarometer surveys in Germany from 2004 to 2023. In contrast, Chapter 4 analyses data from the ESS 2016 (the 8th round), which contains data for 18 EU countries. Chapter 4 combines these survey data with existing contextual-level data from Eurostat to investigate socioeconomic perceptions and attitudes towards social policy at the EU level across countries with different economic and welfare conditions. In the following paragraphs, I provide a detailed discussion of the data and the main survey questions used for data analysis.

Table 1.1 Overview of the data included in this dissertation’s empirical chapters

	Data source	Data type	Year	Country	Sample size of raw data (if applicable)	Place in dissertation
Main data	SOCBIAS/COVREF data	Cross-sectional data <i>Survey experiment</i>	2020	DE, IT, PL, & SE	N= 6181 <i>1535 (DE), 1532 (IT), 1561 (PL), 1553 (SE)</i>	Chapters 2 & 3
		Panel data <i>Four panel waves</i>	2020 – 2022	DE	N= 4769 (+ 423) <i>Waves 1–4: 1535, 1304, 1034, 896; fresh samples: 203 (w3), 220 (w4)</i>	Chapter 5
	European Social Survey	Cross-sectional data	2016	18 EU countries	N= 35450 <i>Varied from 1270 (PT) to 2852 (DE)</i>	Chapter 4
	Eurostat data	Country-level data	2016	18 EU countries	/	Chapter 4
Additional data	SOCBIAS/COVREF data: Pre-test	Cross-sectional data <i>Question-order experiment</i>	2019	DE	N= 2022	Chapter 2
	EU statistics on income and living conditions (EU-SILC)	Cross-sectional data <i>To calculate nat. & EU income distributions (percentiles)</i>	2017/ 2018	DE, IT, PL, SE, & EU28	/	Chapters 2 & 3
	Eurobarometer surveys	Cross-sectional data	2004 – 2023	DE	N= 63630 <i>Ca.1000/survey (West), ca.500/survey (East)</i>	Chapter 5

SOECBIAS/COVREF data

The first set of the SOECBIAS/COVREF data, also referred to as the ‘SOECBIAS data set’ (Beblo et al., 2023a), was collected within the research project SOCEBIAS at the University of Hamburg. The project focused on socioeconomic analyses of perceptions of (re-)distribution in Europe. With this project, we conducted an online survey in four EU member states, i.e., Germany, Italy, Poland and Sweden. We chose these four countries to represent member states with different economic and institutional contexts. The survey is featured by a randomised experiment, providing a subsample of respondents in each country with information about their actual income positions. Respondents were drawn from online access panels using quota sampling alongside gender, age, education and income, implemented by YouGov Deutschland.⁴ Data collection took place from 6 March to 31 March 2020. A total of 6,181 respondents participated, including 1,535 in Germany, 1,532 in Italy, 1,561 in Poland and 1,553 in Sweden. Respondents took in median 13 minutes to complete the survey. Prior to the cross-national survey, we conducted an additional survey in Germany in November 2019 to pre-test our questions on income positions with a question-order experiment. Also implemented by YouGov Deutschland, the pre-test obtained a sample of 2,022 respondents.

The surveys were designed to analyse the formation of (mis-)perceptions of income positions and their influences on attitudes toward EU inequality and social policy, which corresponds to the research questions addressed in Chapters 2 and 3. In particular, respondents were asked to report their annual net household income from the previous year. Subsequently, we measured perceptions of national and EU income positions by asking respondents to estimate the percentage of their country’s and the EU’s population that had a yearly net household income that was lower than theirs, respectively. Respondents were explicitly asked to make estimations according to the income they had just reported. As stated in the previous section, Chapter 2 postulates that individuals estimate the difference between their national and EU income positions based on their perceptions of their country’s economic situation within the EU. Guided by this assumption, respondents were subsequently asked to rank their country’s economic situation in comparison to the EU average.

Chapter 2 employs these data to test whether and how individuals’ perceptions of their personal EU income position are associated with their perceptions of their personal national income position and their country’s economic situation. In addition, this chapter uses data from

⁴ As a commercial survey company, YouGov Deutschland maintains a large pool of panellists and invites them via emails to participate in different surveys.

the question order experiment in the pre-test. In the experiment, one randomly selected half of respondents were asked to estimate their national income position before estimating their EU position, while the other half estimated first their EU income position and then their national position. The data enable further analysis on whether individuals indeed form their EU income perceptions based on their perceptions at the national level.

Chapter 3 exclusively utilises data from the cross-national survey, including the survey experiment on income misperceptions, to analyse income positions and attitudes towards EU inequality and social policy. This chapter aims to address a causal link between income perceptions and attitudes. In particular, the chapter tests the extent to which informing respondents about their misperceptions influences their attitudes. To this end, following the survey questions on income perceptions, we informed a randomised group of respondents about their actual EU income position, while the control group did not receive any information. The respondents' actual national and EU income positions were calculated based on their reported income and income data from the EU statistics on income and living conditions (EU-SILC).⁵ After the treatment, all respondents were asked about their attitudes towards national and EU income differences and an EU-wide minimum wage, respectively.

The survey also addresses several common issues encountered in survey research with regard to questions on income and complex designs. The measurement of income may vary considerably depending on factors such as the definition of income or the interests of researchers (Warner & Hoffmeyer-Zlotnik, 2003). In our study, we opted for disposable household yearly income because of our research interest in attitudes towards income inequality, for which all incomes within the household are relevant. Prior to the income question, respondents were asked to select their income sources from a list of income types. The aim was to remind them of all types of income that their household might have had, which should reduce the complexity for respondents to report their income. Moreover, we enhanced the reliability of our measures on income and income perceptions, as well as the treatment, by adapting a design similar to previous research on national income misperceptions (e.g. Karadja et al., 2017; Bublitz, 2022). Furthermore, we introduced follow-up questions to reduce the non-response rate in questions on income and income positions. Should respondents have selected "Don't know" initially, they were asked to make a fair guess.

⁵ In its empirical analysis, Chapter 2 employs the same EU-SILC data to calculate respondents' actual income positions and the misperceptions of their income positions.

In addition to the cross-national survey, the SOECBIAS data set contains a follow-up survey in Germany with a panel design, conducted three months afterwards, between 23 June and 12 July 2020. The panel data were extended with two further panel waves, collected within the research project COVREF at the University of Hamburg, with a focus on subjective evaluations of economic affectedness and social comparisons during the COVID-19 pandemic (Lohmann et al., 2024). In total, the four panel waves in Germany constitute the second set of the SOECBIAS/COVREF data. The third panel wave took place in 2021, from 12 April to 28 April, and the last wave took place from 15 July to 19 August 2022. Among the 1,535 German respondents in the original sample of the first wave, 1,304 (85.0%) participated in wave 2, 1,034 (67.5%) participated in wave 3 and 896 (58.4%) participated in the last wave. In the third and fourth waves, fresh samples of 203 and 220 respondents, respectively, were additionally drawn. The median completion duration for each wave was approximately 13 minutes.

In designing the panel surveys, the research focus shifted to socioeconomic perceptions and evaluations during crises. In this context, we included a number of crisis-related questions in each wave starting with the second panel wave. Among others, respondents were asked to respectively assess their risk in the next year to 1) ‘lose their job because of layoffs or company closure’; 2) ‘have difficulties paying current expenses, such as rent, utilities or loan repayments’; 3) ‘have to drastically lower their standard of living’. Chapter 5 uses these items about perceptions of personal future socioeconomic conditions to measure subjective job and economic insecurity. In addition to reporting objective changes in income and employment, respondents were also asked in each wave since wave 2 to assess the economic affectedness of themselves and other people in Germany, respectively. In contrast, different objective and subjective measures of social status were included in wave 1. Chapter 5 utilises these data to investigate how subjective socioeconomic insecurity during crises is influenced by individuals’ social status at the onset of a crisis, as well as their objective crisis experiences and perceptions of economic affectedness during a crisis. The panel design of the surveys enables the capture of changes in subjective insecurity over time. In addition, Chapter 5 conducts panel analysis to establish a causal relationship between these changes and individuals’ social status.

One limitation of the SOECBIAS/COVREF data is that the data were drawn from non-probability samples through online access panels, although quota sampling to some extent enhances the representativeness of the sample. Non-probability samples are often criticised in the social sciences when compared to probability-based samples (for a review, see Cornesse et al., 2020). In a meta-analysis, Cornesse and Bosnjak (2018) demonstrated that probability-based samples were overall more representative. Nevertheless, the use of non-probability

samples should be less problematic when studies focus on (causal) relationships between factors, as opposed to the generalisation of descriptive statistics (Kohler & Post, 2023). The three empirical chapters include analyses of either the experimental or panel data within the SOECBIAS/COVREF data for causal inference, which substantially improves the internal validity of their findings. Nevertheless, it is important to be cautious about the generalisation of findings derived from non-probability samples.

European Social Survey

The European Social Survey (ESS) is an academically driven cross-national survey that aims to measure attitudes, beliefs and behaviours among Europeans. Established in 2001, the survey conducts face-to-face interviews every two years with cross-sectional, probability-based samples, obtaining representative samples in more than 30 countries. In 2016, the 8th round of the survey (ESS8) included a survey question about attitudes towards social policy at the EU level for the first time in its ‘rotating modules’ (European Social Survey Round 8 Data, 2016). However, only 18 of the EU countries participated in ESS8. The data collection took place between August 2016 and December 2017. The sample size in each of the 18 countries varied from 1,270 in Portugal up to 2,852 in Germany.⁶

The survey question that ESS8 included to measure attitudes towards an EU-level social policy focuses on the proposal of an EU-wide minimum income benefit scheme for all poor people. Respondents were asked on a scale of 1 (‘strongly against’) to 4 (‘strongly in favour’) whether they were against or in favour of this scheme, which contains the following three main features: 1) ‘The purpose is to guarantee a minimum standard of living for all poor people in the European Union’; 2) ‘The level of social benefit people receive will be adjusted to reflect the cost of living in their country’; 3) ‘The scheme would require richer European Union countries to pay more into such a scheme than poorer European Union countries’.

ESS8 contained two items measuring perceptions of the national unemployment rate and the standard of living for unemployed persons, respectively. Respondents were asked to first estimate how many in every 100 working age people in their country are unemployed and looking for work, and then assess the standard of living of people who are unemployed in their country. To measure individual ideology, ESS8 asked respondents to state how much they agreed or disagreed with the following three statements, respectively: 1) ‘Large differences in

⁶ Further information about the survey and the data can be found on the ESS’s official website (<https://www.europeansocialsurvey.org/>).

people's incomes are acceptable to properly reward differences in talents and efforts;' 2) 'For a society to be fair, differences in people's standard of living should be small;' 3) 'The government should take measures to reduce differences in income levels.' In Chapter 4, egalitarianism is operationalised as a latent variable based on the three items and considered as the main indicator of ideology. Using these data, Chapter 4 analyses the relationship between unemployment perceptions and attitudes towards an EU-wide minimum income benefit scheme across 18 European countries, and how ideology influences the role of the perceptions.

Eurostat data

As the statistical office of the EU, Eurostat aims to provide high-quality statistics and data on Europe at both the country- and regional levels. The Eurostat data contain various statistical themes with 11 main categories, such as 'national economy and finance' and 'population and social conditions'.⁷

Chapter 4 additionally utilises Eurostat's country-level data from 2016 to measure the economic and welfare conditions of the 18 European countries that participated in ESS8. The included indicators are as follows: gross domestic product per capita (GDP, *nama_10_pc*), unemployment rate (*une_rt_a*), at-risk-of-poverty rates before and after social transfers (*ilc_li10*, *ilc_li03*), and net expenditure on social protection benefits as the percentage of GDP (*spr_net_ben*). Moreover, the national welfare efficiency is measured based on the at-risk-of-poverty rates before and after social transfers. Chapter 4 combines the contextual data with the individual-level data from ESS8 to test the influence of national economic and welfare conditions on Europeans' attitudes towards an EU-wide minimum income benefit scheme. Furthermore, this chapter uses these data to investigate the extent to which national conditions also influence the role of unemployment perceptions in shaping attitudes.

Eurobarometer surveys

Eurobarometer, initiated in 1974 by the European Commission, is a regular monitoring tool that tracks public opinion on EU-related issues and social topics across Europe. The Standard Eurobarometer is conducted on a biannual basis, in the spring and autumn, in all EU member states, as well as in some additional countries and territories. The Special Eurobarometer is additionally surveyed, predominantly in EU member states, as in-depth thematic studies with

⁷ For more detailed information on the Eurostat data, see the official website (<https://ec.europa.eu/eurostat/>).

specific topics such as climate change and social exclusion.⁸ Both the Standard and Special Eurobarometer surveys conduct face-to-face interviews with a cross-sectional probability sample in each country or territory for each survey, thus ensuring representativeness. In Germany, the sample size for each survey is approximately 1,000 respondents for West Germany and 500 for East Germany.

Since 1995, Eurobarometer has included questions on general expectations for the next year in the standard surveys and some special surveys with the same wording. Specifically, respondents were asked whether they expected the financial situation of their household and their personal job situation to be better, worse or the same over the next twelve months. In Chapter 5, I consider these items as additional measures of subjective socioeconomic insecurity. Each of the Eurobarometer surveys also asked about respondents' education level and occupation. In addition, in each of the surveys since 2012, respondents were asked how they perceived their own social class. Chapter 5 uses the Eurobarometer data in Germany from 2004 to 2023 for additional analysis. The objective is to identify a general trend in subjective socioeconomic insecurity among Germans across different status groups over the last two decades and to validate the main results using the SOECBIAS/COVREF data.

Methodology

This dissertation employs a variety of methods for data analysis, depending on the specific research questions and the nature of the data included in the empirical chapters. In Chapters 2 and 3, the SOECBIAS/COVREF data are analysed using OLS regression models with robust standard errors. Chapter 2 employs the cross-national, non-experimental data to study the formation of EU income perceptions in each of the four participating countries: Germany, Italy, Poland and Sweden. In an additional analysis, this chapter makes use of the question order experiment from the pre-test in Germany, comparing perceptions of national and EU income positions in two randomised groups with contradictory question orders. The inclusion of an analysis with experimental survey data contributes to the study's internal validity (Shadish et al., 2002), and in this case, supports the mechanism outlined in Chapter 2 that individuals form their EU income perceptions based on their national perceptions.

⁸ In addition to the standard and special surveys, Eurobarometer carries out some ad-hoc thematic surveys ('Flash Eurobarometer') and also qualitative studies. Since 2007, the European Parliament has also conducted its own Eurobarometer series ('Parlemeter'). More details on Eurobarometer and its data can be found on the official website (<https://europa.eu/eurobarometer/>). Data from Standard, Special and Flash Eurobarometer can also be accessed via the GESIS Data Catalogue.

Chapter 3 does not analyse the pre-test data; instead, it concentrates on the cross-national data set, including the experimental data with the information treatment, which enhances the internal validity of the results. For experimental analysis, the treatment group, which was informed about misperceptions of the own EU income position, is compared with the control group, which received no information. This tests the extent to which informing about the misperceptions affects attitudes towards EU inequality and social policy, thereby enabling the investigation of the causal relationship between income perceptions and the attitudes. Overall, Chapter 3 conducts analyses on the pooled sample with country dummies, as well as on each country separately to identify general patterns and potential country differences.

Chapter 4 uses a different set of data, combining individual-level survey data from ESS8 with country-level data from Eurostat. In this chapter, I apply multilevel modelling to account for contextual impacts on Europeans' attitudes towards an EU-wide social policy. Therefore, the chapter contains a country-comparative perspective, testing not only the individual-level relationships across countries but also the role of contextual factors in shaping attitudes and how they further influence relationships at the individual level. In addition to random intercept models, random slope models and two-step modelling are employed to test the cross-level interactions, i.e., how the contextual factors influence the role of individuals' unemployment perceptions in shaping their attitudes.

In contrast to random intercept models, random slope models permit variations at the cluster level for coefficient estimates of the lower-level covariates (Heisig & Schaeffer, 2019). Consequently, random slope models are more suitable for the analysis of cross-level interactions, particularly when a large, randomly selected sample is available at the cluster level. However, if the sample at the cluster level is small, including random slopes may result in biased estimates of the parameters for the contextual factors (Bryan & Jenkins, 2016). In comparison to random intercept and random slope models, two-step modelling offers a more straightforward approach for the estimation of cross-level interactions. The approach begins with a first-step to estimate regressions for each cluster separately, and in a second step, coefficient estimates obtained from the first-step regressions are regressed on the cluster-level indicators (Achen, 2005). In the analysis of Chapter 4, a total of 18 EU countries participated in ESS8, which resulted in a relatively small sample size at the cluster level and a much larger number of individuals per cluster. In light of this, I compare the results from all three models, namely random intercept models, random slope models and two-step modelling, in order to draw robust conclusions regarding the cross-level interactions.

Chapter 5 represents the sole empirical study of this dissertation that focuses on the circumstances of a single country over a longer time period. In this chapter, the primary analysis employs the four-wave panel data from Germany, extracted from the SOECBIAS/COVREF data. One of the key objectives of this chapter is to analyse the extent to which individuals' objective and subjective social status at the onset of a crisis influences their subjective socioeconomic insecurity in the subsequent period. In this context, social status remains consistent over time, and thus, I conduct analysis primarily with pooled OLS models with clustered robust standard errors. Nevertheless, fixed effects models are additionally estimated to test the interaction effect between social status and time period. This panel analysis validates the OLS results regarding how subjective insecurity changes differently among different status groups over time, linking subjective insecurity to social status causally (Shadish et al., 2002). Moreover, Chapter 5 employs a descriptive analysis of Eurobarometer data in order to gain a more comprehensive understanding of subjective socioeconomic insecurity among individuals with varying social statuses over the past two decades. This approach also facilitates the generalisation of the chapter's main results over a longer time span.

In conclusion, the methodology employed in the empirical chapters of my dissertation can be characterised as follows. *First*, three of the four empirical chapters, namely Chapters 2, 3 and 4, adopt a country-comparative approach. In particular, Chapter 4 seeks to derive more generalised findings by conducting multilevel analyses for 18 European countries. In contrast, Chapters 2 and 3 focus on four countries that represent the diverse economic and institutional contexts within the EU. This also, to some extent, enhances the external validity of the results. *Secondly*, each of the first two chapters, either presented as an additional analysis (Chapter 2) or integrated into the main analysis (Chapter 3), employ a survey experiment to test a causal relationship. This in turn enhances the internal validity of the results. *Finally*, as the only empirical study of a single country, Chapter 5 is dedicated to analysing individual changes over time. Panel analysis with fixed-effects models is additionally conducted for causal inference, thereby enhancing the internal validity of the results. In contrast to the previous chapters, this chapter does not focus on the generalisation of findings across countries. Instead, it analyses additional data from Eurobarometer to generalise findings across longer time periods.

Chapter 2

Where do I stand in the EU? Income comparisons and perceptions

Abstract

We investigate how EU citizens perceive their income position in the EU based on new large-scale surveys in Germany, Italy, Poland, and Sweden. We find that misperceptions of EU income positions result primarily from respondents' incomplete information about their national position and their perceived ranking of their country within the EU. Relative to their actual position, low-income respondents tend to place themselves higher and higher-income respondents lower in both the national and EU income distribution. We conclude that Europeans have a perspective on inequality that goes beyond the national frame of reference, underscoring the importance of cross-national measures of inequality.

This chapter is based on a manuscript that is submitted to *Economics and Politics* on 21 April 2024:

Sattler-Bublitz, E., Jäger, J., Wang, H., Beblo, M., & Lohmann H. Where do I stand in the EU? Income comparisons and perceptions. *Under review*.

2.1 Introduction

The European Union consists of member states with diverse economic backgrounds. For instance, a Swedish citizen has a three times higher median income than a Polish citizen and a six times higher median income than a Bulgarian citizen. However, much of the research on Europe defines inequality still in national terms, disregarding the substantial economic differences among EU citizens. Focusing solely on the national level would also be at odds with analyses of EU priorities that aim to combat cross-national inequalities by fostering social cohesion.

The process of European integration holds not only political significance but also the potential to influence the frame of reference among EU citizens. Europeans may increasingly broaden their perspective on inequality from the national to the cross-national level of the EU and perceive themselves beyond national borders as members of a larger European society. Against this background, our paper focuses on such European perspectives. It examines how EU citizens perceive their own income position within the EU compared to their fellow citizens from other member states. Are, for instance, Swedish citizens aware of their higher and Polish citizens aware of their lower cross-national income positions? The extent to which Europeans are able to place themselves in the EU is an important indicator of the extent to which they have a perspective on inequality beyond the national framework. At the policy level, this insight informs us about the importance of cross-national measures of inequality.

Our analysis concentrates on the formation of EU income perceptions. We test what we call the ‘location mechanism’, which assumes that Europeans estimate their own EU position by anchoring on their perceived national position. In addition, they estimate the difference between both positions based on how they rank their country in the EU. EU income misperceptions, in turn, may result from two interrelated sources: (1) Europeans extrapolate a misperceived national position to the EU level. (2) Europeans rank their country incorrectly in the EU, resulting in a misperceived difference between national and EU income position, and consequently, a misperceived EU income rank.

We conducted surveys in March 2020 in four EU member states with very different economic and historical backgrounds (Germany, Italy, Poland and Sweden). The cross-national heterogeneity allows us to investigate whether Europeans from richer and poorer member states perceive income inequality within the EU differently. Respondents reported their perceived national and EU income positions as well as their ranking of their country within the EU. In our operationalisation, we use a well-established measure of income perceptions and extend it to the cross-national level of the EU. This makes our study comparable to others in the field and allows

for a proper comparison of income perceptions at the national and the EU level.

Our paper builds on the growing empirical literature on misperceptions of inequality. One strand of this literature documents misperceptions of national indicators, such as the extent of income, wealth, and educational inequality or of social mobility (e.g. Osberg & Smeeding, 2006; Norton & Ariely, 2011; Kuziemko et al., 2015; Hauser & Norton 2017; Alesina et al., 2018; Gimpelson & Treismann, 2018; Trump, 2018; Lergtporer et al., 2020; Bussolo et al., 2021). A strand to which our paper connects more strongly focuses on respondents' misperceptions of their personal rank in the income distribution (e.g. Cruces et al., 2013; Karadja et al., 2017; Ciani et al., 2021). The researchers find that typically less than one-third of respondents correctly estimate their national income position. Overall, low-income individuals overestimate their income position, while higher-income individuals underestimate it, revealing an inverted S-shaped misperception of their national income position. These findings are evident in diverse countries such as Argentina, Brazil, Denmark, France, Germany, Russia, Spain, Sweden, UK, and the US (e.g. Cruces et al., 2013; Karadja et al., 2017; Engelhardt & Wagener, 2018; Fernández-Albertos & Kuo, 2018; Bublitz, 2022; Hvidberg et al., 2023). We extend this literature by analysing how Europeans form their income perceptions at the cross-national level of the EU.

Our empirical results provide strong evidence for our theoretical predictions. The perceived national position is a strong predictor of the perceived EU position, suggesting that EU citizens base their cross-national estimates on their national positions. Furthermore, EU citizens infer the difference between both positions based on how they rank their country against the EU average. The majority of respondents in Germany and Sweden correctly rank their country's economic situation better than the EU average and, in line with that, report a higher EU than national income position. In turn, the majority of Polish respondents correctly and Italian respondents incorrectly rank their country lower than the EU average and, following through with this logic, estimate a lower EU than national income position. Therefore, respondents in Germany, Sweden and Poland are well aware of the difference between their national and EU income position. EU income misperceptions among them show a pattern of extrapolating a misperceived national position to the EU level. In contrast, Italians are overly pessimistic about their position in the EU. The misperceptions relate both to their national misperceptions and their incorrect ranking of their country. Because of the systematic link between national and EU income misperceptions, we find in all four countries that poorer respondents place themselves higher and richer respondents place themselves lower in both the national and cross-national income distribution, relative to their actual positions.

Our most important contributions are as follows: First, our unique cross-national data from member states with different economic backgrounds make it possible to measure income perceptions in the supranational framework of the EU. Furthermore, we carefully elicit respondents' EU income perceptions with rich cross-country data, thereby increasing the external validity compared to previous studies that focus on individual countries. Second, our analyses reveal that Europeans can correctly apply information about cross-national economic differences to perceptions of their own income position. This finding is far from trivial, given the cognitive biases demonstrated in many studies in behavioural economics and cognitive psychology (e.g. Kahnemann & Tversky, 1972, 1979; Simon, 1972; Tversky & Kahnemann, 1974; Kahnemann et al., 1982). To our knowledge, D. Fehr et al. (2022) and Sattler-Bublitz et al. (2024) are the only two studies that make a conceptual shift to the cross-country level and analyse both national and cross-national income perceptions. However, both studies concentrate on investigating the consequences of these perceptions on attitudes towards inequality, not the origins of the misperceptions. In contrast, our study analyses potential sources of income misperceptions. We therefore provide important insights into mechanisms that may drive cross-national income perceptions. Third, our results imply that Europeans have a perspective on inequality that goes beyond the national frame of reference: Most Europeans are just as capable of placing themselves within the EU as they are in their own country. A question-order experiment from additional data provides further evidence that they derive their EU position from their national position, and not the other way around. This adds to the literature on European reference groups (e.g. Delhey & Kohler, 2006; Goedemé & Rottiers, 2011; Lahusen & Kiess, 2019; Lahusen, 2021). Fourth, such a cross-national perspective might also have important policy implications, as it contributes to recurrent debates of whether or not to adopt cross-national measures of inequality and poverty (Fahey, 2007; Whelan & Maître, 2009). The fact that Europeans have a perspective on inequality within the EU suggests a wider use of such cross-national concepts of inequality that grasp the economic differences between EU citizens.

Our paper proceeds as follows: Section 2.2 presents our theoretical framework. Section 2.3 gives a summary of the data collection and the survey. In Section 2.4, we analyse the formation of EU income perceptions: Section 2.4.1 focuses on perceived and actual income positions at the EU and national level, Section 2.4.2 discusses the perceived difference between EU and national income positions. In Section 2.4.3, we analyse EU income misperceptions. Section 2.5 concludes.

2.2 Theoretical framework: How EU income perceptions are formed

The literature on cognitive biases shows that when faced with complex decision-making problems, people employ so-called ‘heuristics’, e.g., rules of thumb or educated guesses (Kahneman et al., 1982). With these mental shortcuts, individuals may not simply get things wrong but make systematic errors when aiming to solve complex problems based on limited information. In this section, we discuss how Europeans deal with one of these complex problems when estimating their own income position within the EU. To this end, we first report the only two studies we know of to date that aim to explain in more detail how individuals form their perceptions of personal income positions. Cruces et al. (2013) analyse perceptions of national income positions, whereas Hvidberg et al. (2023) concentrate on perceptions of income positions in various reference groups. We then present our own theoretical framework that extends the current literature on income perceptions by explaining how individuals perceive their own income position at the cross-country level of the EU.

Perception of national income position: Cruces et al. (2013) conduct a pioneer study on income perceptions and show that individuals estimate their own national income position with reference to the close surroundings they observe. For a sample of individuals in Greater Buenos Aires in Argentina, they find that individuals base their perceptions much more on their income rank within their neighbourhood than on their national rank. Furthermore, individuals with lower income tend to overestimate their national income position (i.e., perceive a higher than actual position) whereas individuals with higher income tend to underestimate it (i.e., perceive a lower than actual position). The authors explain this pattern with a ‘reference group mechanism’: Lower-income individuals have poorer reference groups and therefore believe they are richer at the national level than they actually are. Higher-income individuals, in turn, have richer reference groups and therefore believe they are poorer at the national level.⁹

Perception of income position in reference groups: Hvidberg et al. (2023) analyse income perceptions within different reference groups (age, education, gender, neighbourhood, and sector) for a representative sample in Denmark. They find that respondents systematically misperceive their own income position, not only at the national level but also within each reference

⁹ Hoy and Mager (2021) find a similar pattern of misperceptions for a cross-country sample of ten different countries but interpret the pattern in misperceptions with a ‘median bias’. However, and in contrast to Cruces et al. (2013), they do not test their mechanism, as they do not link misperceptions of personal income positions to potential misperceptions of median income. The same holds for D. Fehr et al. (2022) who attribute the pattern to a ‘middle-class bias’, i.e., individuals leaning towards placing themselves in the middle class, but without further testing this assumption.

group. In line with the findings on national income perceptions, individuals with lower income tend to overestimate and those with higher income tend to underestimate also their positions in their reference groups. Different from Cruces et al.'s (2013) interpretation of a reference group mechanism, Hvidberg et al. (2023) explain their result with a 'centre-bias mechanism': Richer individuals overestimate and poorer individuals underestimate the incomes of others (median income and the income of the top 5%) in their reference groups. Therefore, both believe to be closer to others' incomes than they actually are. These misperceptions, in turn, predict the direction of misperceptions of personal income positions: richer individuals underestimate and poorer individuals overestimate their actual position.

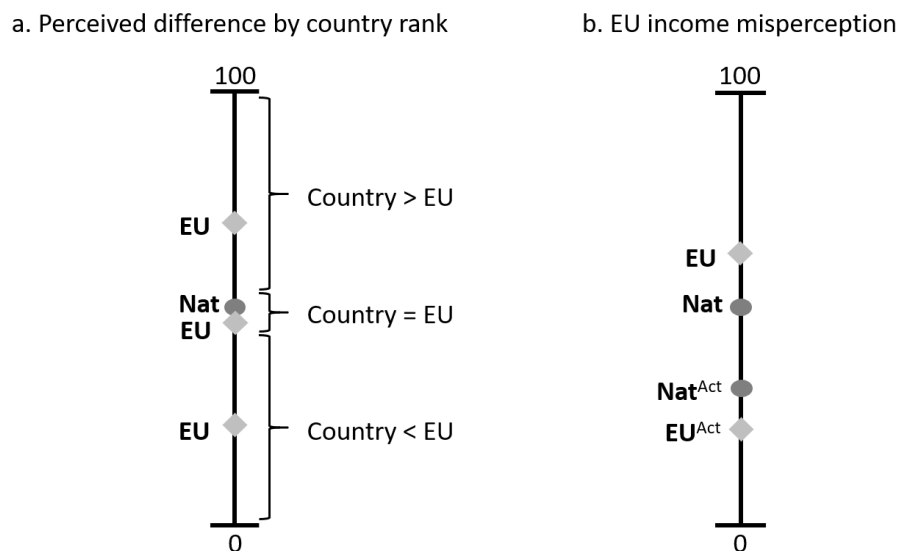
Perception of EU income position: Both reported studies provide helpful albeit slightly different explanations for the origins of income misperceptions within reference groups and at the national level. However, what has been lacking in the literature to date are investigations into potential income misperceptions that go beyond the local and national frame.¹⁰ Our paper addresses this research gap by shifting the perspective from the national to the cross-national level of the EU. We propose the following 'location mechanism' for the formation of EU income perceptions: Europeans estimate their position in the EU according to how they locate themselves at the national level and how they place their country in relation to member states within the EU. In particular, we assume that citizens anchor on their perceived national income position to estimate their income position in the EU. They estimate their EU position as lower, close to or higher than their national position, depending on how they rank their country against the EU average. Due to the systematic relationship between the perceived EU position, national position and country ranking, we can predict the direction and potential size of their income misperceptions at the EU level. We illustrate the location mechanism and the resulting EU income misperceptions graphically with Figure 2.1.

The vertical lines in Figure 2.1 depict an income distribution that is evenly divided into percentiles, ranging from zero (at the bottom) to 100 (at the top). Taking individual i 's perceived national position (Nat) as the starting point, we hypothesize in Figure 2.1a that individual i perceives an EU position (EU) that is (1) above the national position, when she ranks her country higher than the EU average (Country > EU), (2) close to it, when she ranks her country similar to the EU average (Country = EU), and (3) below it, when she ranks her country lower than the EU

¹⁰ D. Fehr et al. (2022) and Sattler-Bublitz et al. (2024) analysed income perceptions at the cross-national level. However, neither of them addresses the mechanisms that explain the emergence of national and cross-national income perceptions and their relationship to each other.

average (Country < EU). We acknowledge that this may not be the case if the shapes of income distributions in individual i 's country and within the EU are very different. For example, a rich person from a poor country with very high income inequality may have, and indeed perceive, a higher actual income position within the EU than within her own country. While such a special case would be interesting to investigate, we choose to focus on the more general patterns across EU member states. Moreover, our sample of countries does not include countries with very high levels of inequality (see Section 2.3.1 for a detailed description of our sample of countries). Accordingly, in most cases, as long as individual i knows the rank of her country, she should infer a correct difference between national and EU income position at the personal level from her correct ranking of her country at the cross-country level.

Figure 2.1 Illustration of the location mechanism to explain the formation of EU income perceptions



Notes: The figure displays the predictions of the location mechanism how EU income perceptions are formed. Figure 2.1a shows how individuals estimate the difference between EU and national income position (ranging from 0–100 percentiles), based on their perceived country ranking. Figure 2.1b depicts the income misperceptions at EU level due to wrongly locating themselves at national level and their country within the EU.

Based on this inference process, we can predict the conditions under which individual i misperceives her own EU income position. Figure 2.1b illustrates the scenario in which individual i estimates an EU position (EU) that is above her perceived national position (Nat). Following the reasoning from Figure 2.1a, the higher placement within the EU most likely stems from ranking her country higher than the EU average. However, this estimate is incorrect, because Figure 2.1b depicts a situation where individual i lives in a poorer country than the EU average, revealed by an actual position within the EU (EU^{Act}) that is lower than in her country

(Nat^{Act}). The scenario also shows that individual i perceives a national position that is higher than her actual national position ($\text{Nat} > \text{Nat}^{\text{Act}}$) and thus overestimates her own national income position. Shifting now to the EU level, we observe that individual i misperceives her EU position in the same way as her national position: She perceives a higher than actual position and therefore overestimates her position within the EU ($\text{EU} > \text{EU}^{\text{Act}}$). However, the sizes of national and EU income misperceptions are different. Because she ranks her country wrongly within the EU, i.e., perceiving her EU position higher than her national position ($\text{EU} > \text{Nat}$), although the opposite case is correct ($\text{EU}^{\text{Act}} < \text{Nat}^{\text{Act}}$), she overestimates her EU position to a larger extent than her national position.

Figure 2.1b illustrates the scenario in which individual i has a larger EU than national income misperception. Naturally, other scenarios are possible. However, the overall logic of the systematic relationship between (mis-)perceptions of EU position, national position and country ranking should continue to hold.

To summarise, according to the location mechanism misperceptions of income positions at the EU level may result from two sources:

- *Extrapolating a misperceived national position to the EU level:* Individual i already misperceives her national position, which gives her a wrong starting point when estimating her position within the EU. Thus, individuals who overestimate (underestimate) their national position also overestimate (underestimate) their EU position.
- *Incorrect country ranking:* Individual i does not know the correct rank of her country in the EU. Using a false country ranking, she ends up with an incorrect perceived difference between her national and EU income position. Therefore, individuals who locate their country incorrectly within the EU should differ in the sizes of income misperceptions at the EU and the national level.

In the following, we empirically analyse sources of EU income (mis-)perceptions as suggested by our theoretical predictions. In particular, we test the relevance of the purported inference process and the predicted income misperceptions resulting from it.

2.3 Data

2.3.1 Data collection

To quantify any income perceptions and investigate their sources, we conducted online surveys in the four EU member states, Germany, Italy, Poland, and Sweden, between March 6 and March 31, 2020 (Beblo et al., 2023a). Data collection was administered by YouGov Germany. We drew quota samples of respondents aged 18 years and above from online access panels using the following criteria: gender (male, female), age (18–33, 35–54, 55 or older), education (low, middle, high), and income (12 categories). In total, 6,181 respondents participated in the survey, with 1,535 respondents in Germany, 1,532 in Italy, 1,561 in Poland, and 1,553 in Sweden. We pre-tested our question design on income perceptions in Germany in November 2019 by including our questions in a multi-topic survey from YouGov, with a sample size of 2,022 respondents. In the framework of the pre-test we conducted a question-order experiment, which we use for additional analyses. More details on the data collection are documented in Beblo et al. (2023b).

The choice of countries was guided by the motivation to include countries with different economic backgrounds. For example, the median equivalised net household income in 2019 is above EU average in Germany (23,504 Euro) and Sweden (24,490 Euro), close to EU average in Italy (17,165 Euro) and below average in Poland (7,142 Euro). On the other hand, the Gini coefficient is highest among the four countries in Italy (32.8) and above the EU average. The Gini coefficient is below the EU average in Germany (29.7), Poland (28.5) and Sweden (27.6). More detailed country characteristics can be found in appendix table A.1.

2.3.2 Survey and main variables

In the survey, respondents were first asked about their socio-political orientation, followed by detailed questions on their income. Based on the reported income, we calculated their actual income position in their country and in the EU by comparing the income information from the survey with the income distributions from the EU Statistics on Income and Living Conditions (EU-SILC) data. We chose EU-SILC as reference because it is a well-established database and allows for comparisons of national and EU income distributions.

As the core of our analysis is on perceived income positions, we first asked respondents to report their net household income in the previous year (2019) and then estimate their income position in their own country, using a question derived from the canonical literature on misperceptions (e.g. Karadja et al., 2017):

How many percent of the population in <COUNTRY> (18 years or older) do you think had a total yearly net household income which was lower than yours in 2019? (National Position)

To ensure comparability between national and EU income perceptions, we then used a similar question design to ask respondents to estimate their position within the EU:

The European Union (EU) currently has 28 Member States and their general economic situation is quite different (e.g. Denmark, France, Portugal and Bulgaria). Now think about your net household income and compare it with the population of all 28 EU Member States. How many percent of the EU population (18 years or older) do you think had a total yearly net household income which was lower than yours in 2019? (EU Position)

To examine to which extent EU citizens are aware of the difference between their own national and EU income position, we included a further question on how respondents rank their country's economic situation compared to the EU average:

Now think about the general economic situation of all 28 EU countries again. In comparison with other EU member states, how does <COUNTRY> look like? The economic situation in <COUNTRY> is . . . (Country Ranking)

The answer categories range from 1 ('much better') to 5 ('much worse'). For the data analysis, we summarize the categories into lower than EU average (categories 1 & 2), about EU average (category 3), and higher than EU average (categories 4 & 5).

As we focus on how respondents place themselves within the EU, we control in our multivariate analyses for the national identity of the respondents. The variable measures whether respondents identify themselves only as citizens of their own country or rather as EU citizens. We also control for sociodemographic characteristics including gender, education, age, number of children and employment status. Lastly, as our data collection happened to take place during the first wave of the COVID-19 pandemic, we included a variable measuring COVID-19 infection in respondents' surroundings in our main analysis. For summary statistics of all variables after data cleaning, see appendix table A.2.

In addition to data from the main survey we use data from the question-order experiment we conducted in the pre-test. One randomly chosen half of the respondents (National First

group) had to first answer the question about their national income position before being asked about their EU income position. The other half (EU First group) had to first estimate their EU income position. We use these data to further analyse how individuals form their EU income perceptions based on their perceptions at national level.

2.3.3 Sample characteristics

Before reporting the amount of their income, respondents were asked to indicate all types of income sources (e.g. income from employment or social benefits). The question primed respondents to think about different relevant income sources and therefore was supposed to reduce the likelihood to understate one's income. The grand share of income comes from employment, ranging from around 67% in Sweden to 75% in Poland (see appendix table A.3). Around one third in each country stems from retirement payments and pensions. The stated income source is in almost all cases in line with the employment status of the respondent.

To ensure comparability, we asked about the annual net household income in each participating country. We chose disposable income because for measures of inequality, any income, not only earnings, matters. Following the standard assumption that individuals pool and share their incomes within households, we asked about household (not individual) income. A comparison of our sample distributions with reference distributions (EU-SILC) shows no larger under- or overrepresentation of respondents in higher or lower income deciles. An exception is the sample in Italy, where respondents in the first national income decile are slightly overrepresented (18%, see appendix figure A.1).

In the data cleaning process, we found that some respondents in Germany and Poland obviously mistook monthly income for annual income, resulting initially in larger shares of respondents in the first two income percentiles. We compared yearly income information with additional information from a question on monthly net household income, which was asked by YouGov for sample screening purposes before the actual survey started. In fact, from this comparison it seems plausible that many respondents with very low yearly incomes erroneously reported monthly incomes. For respondents, where such a consistency exists, we recoded their monthly as annual income by multiplying it by 12.¹¹ In total, we recoded the income variable of 256 respondents in

¹¹ We illustrate our recoding by an example: For a respondent in Germany who indicated a yearly net household income of 1,300 Euro, we interpreted her income as monthly income and multiplied it by 12 ($12 \times 1,300 = 15,600$), if the respondent indicated belonging to the 1,000–1,499 Euro income screening group or plus/minus one income screening group. We allow for such a difference between screening group and stated income for three reasons: First, in the screening, respondents were asked about their current income, while we asked respondents about their

Poland and 175 respondents in Germany.

We added follow-up questions on income that asked respondents who had clicked ‘don’t know’ to make a fair guess. This substantially reduced the number of missing values for stated income and the estimates of their national and EU income position. Over all countries, the follow-up reduced missing values in income by 27%, in the national income position by 29% and in the EU income position by 15%. Appendix table A.4 shows some cross-country differences in response behaviour, e.g. about 29% of respondents in Italy did not estimate any national income position compared to about 18% of respondents in Sweden. These differences might reflect that in Sweden knowledge about yearly net income is more prevalent, whereas Italians are more familiar with their yearly gross income.

Across all countries, missing values are highest for the EU income position, followed by the national income position and stated income. This could result from a lack of familiarity with the EU or from the complexity of estimating the EU income position. However, even in Germany, the country with the highest difference between missing values of EU and national income positions, the difference is only six percentage points. Thus, the question on the EU income position seems not to overburden respondents in any country (or at least not substantially more than the question on the national income position). Comparing average responses, we see that those respondents, who reported income only after being encouraged to do so by the follow-up questions, stated significantly lower income as well as lower national and EU income positions in Sweden, significantly lower national and EU income positions in Germany, and significantly lower national income positions in Poland and Sweden. Differences are substantially large in Sweden and Germany and we account for these imbalances with robustness checks by excluding respondents who answered a follow-up question.

We removed respondents from the sample with missing values on any of the variables, reducing the sample sizes of each country by around one third. We also tested if treatment and control group in the pre-test in Germany are balanced. We find evidence for perfect randomisation between both groups (see appendix table A.5). The successful randomisation allows us to attribute any differences between control and treatment group as caused by the treatment.

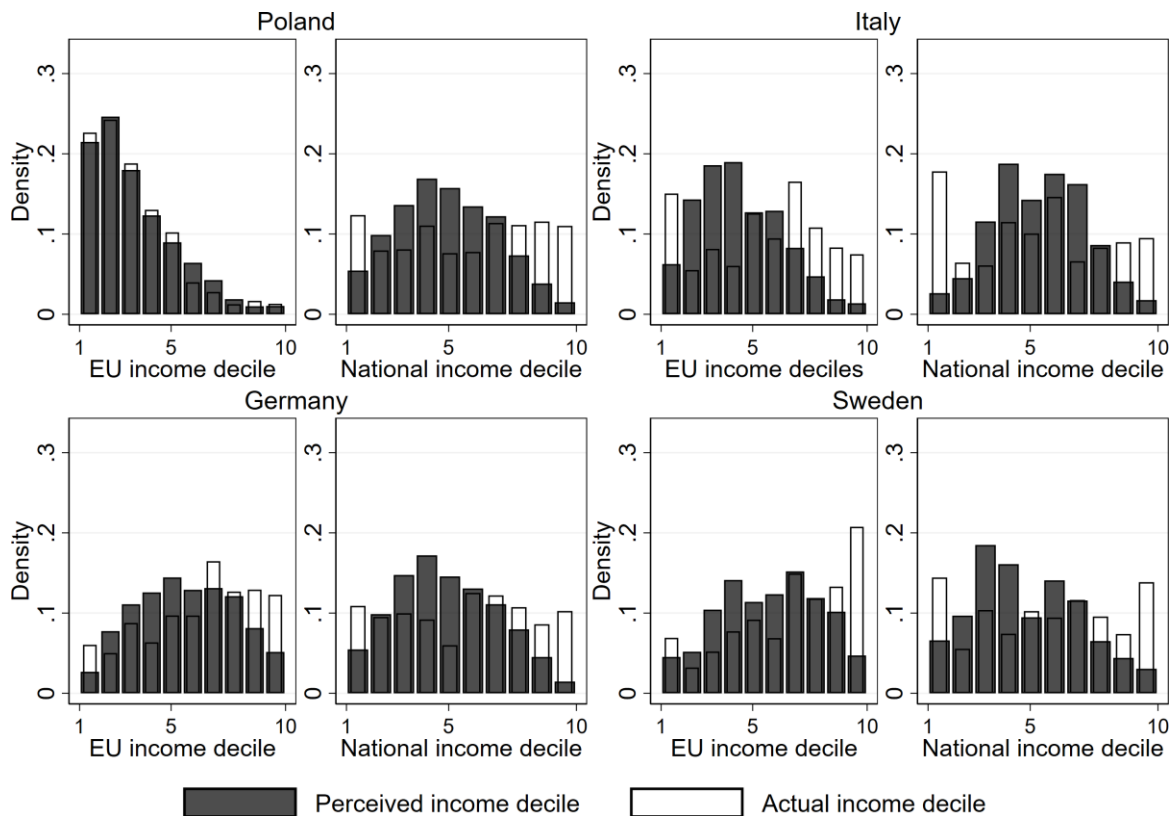
income in the previous year. Second, in the screening, respondents had to choose the income group they belonged to, while we asked them to state their exact income. Third, we primed respondents about their sources of income. So, respondents might state a higher income, now accounting for these other income sources, which they did not in the screening.

2.4 From national to EU income (mis-)perceptions

Figure 2.2 depicts the perceived and actual income positions at national and EU level for each country. The dark grey bars represent the perceived income deciles of the respondents. The white bars represent the actual income deciles.

The difference in the actual distributions at the EU (left) and national level (right) already captures the different economic ranking of the country within the EU: For instance, around 50% of Polish respondents are in fact located in the lower half of the Polish income distribution. However, within the EU income distribution around 88% of Polish respondents find themselves in the lower half. In contrast, while 45% of Swedish respondents are below the median in Sweden, only about 30% stand in the lower half of the EU income distribution.

Figure 2.2 Perceived and actual income positions



Notes: The figure displays the distribution of perceived and actual income positions (in deciles) at EU and national level for each country. Survey weights are applied.

We see substantial differences between the perceived and actual income decile at the national level in each country. In line with previous studies, perceived national income positions show a tendency towards the middle in all countries but most visibly for Poland and Germany. Thus, respondents are underrepresented in the lowest and highest perceived income deciles and

overrepresented in the perceived middle deciles. For the EU level, the histograms show a similar pattern for Germany and Sweden. Italians exhibit a greater tendency to underestimate at the EU compared the national level, whereas Poles make more accurate estimations.

For the following three sub-sections, we take Figure 2.2 as our starting point and test the location mechanism regarding the formation of EU income perceptions in three steps. First, we test our theoretical prediction that EU citizens use the national income position as an anchor to estimate their EU income position (Section 2.4.1). Then, we investigate if respondents perceive a higher or lower EU than national position in accordance with their perceived country ranking (Section 2.4.2). After, we analyse the formation of EU income misperceptions (Section 2.4.3), based on the two sources within the location mechanism, i.e., locating their personal position incorrectly at the national level or their country's rank incorrectly at the EU level, as discussed in the theory part.

2.4.1 Perceived EU and national income position

First, we investigate the prediction that EU citizens rely on their perceived national income position when estimating their EU position. To that end, we regress the perceived EU income percentile on the perceived national income percentile, the actual EU income percentile, and several control variables (national identity, education, age, number of children, employment status and COVID-19 affectedness).

Results of Table 2.1 show for each country a positive and significant association between the perceived national and EU income position. We interpret this as evidence that respondents indeed estimate their EU position by anchoring on their national income position. The association is particularly strong for Germany and Sweden. The coefficient of the actual EU income position is notably smaller, which shows that the perceived national position is a much stronger predictor than the actual EU income position. The small coefficient for the actual EU position also reflects the substantial amount of misperception of the EU position, already depicted in Figure 2.2.

The results in Table 2.1 provide indicative evidence that EU citizens anchor on their perceived national income position. However, these results do not exclude the possibility that respondents determine their EU position independently of their national position. Furthermore, they may not know their national nor their EU income position and simply transfer a random guess about their national position to the EU level. In both cases, the strong association between national and EU position would simply be an artefact, produced by using the same question design for estimating both positions. We address this caveat with the data from the question order

experiment collected in our pre-test. A randomised half of the respondents was asked first about their national income position (National Question First) and the other half first about their EU income position (EU Question First).

Table 2.1 Determinants of the perceived EU income position

	Dependent variable: Perceived EU percentile			
	Poland	Italy	Germany	Sweden
	(1)	(2)	(3)	(4)
Perceived Nat percentile	0.437*** (0.031)	0.562*** (0.041)	0.737*** (0.028)	0.749*** (0.030)
Actual EU percentile	0.011 (0.034)	0.054* (0.029)	0.132*** (0.024)	0.083*** (0.022)
Observations	1,008	909	1,003	1,063
R ²	0.250	0.346	0.628	0.633
Controls	Yes	Yes	Yes	Yes

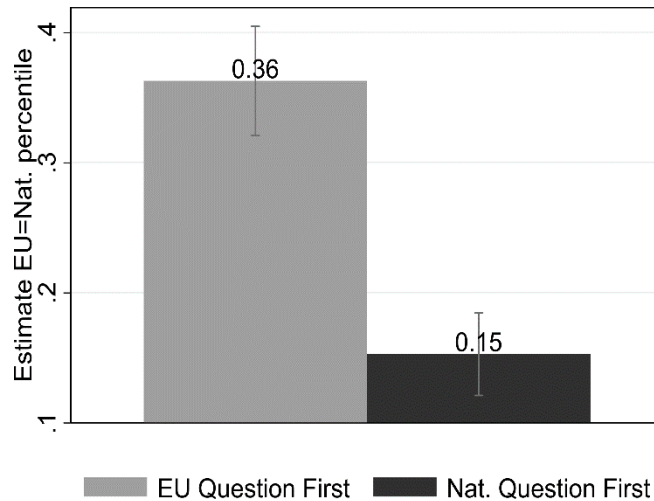
Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied. Dependent variable is the perceived EU income percentile. Independent variables are the perceived national income percentile and the actual EU income percentile. Control variables are national identity, gender, education, age, age², number of children, employment status and surroundings affected by COVID-19. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure 2.3 shows that 36% of the respondents in the EU Question First group estimate exactly the same EU as national position. In contrast, respondents who were first asked about their national income position estimate by 21 percentage points less often the same position. This large difference is statistically significant at the 1%-level and robust to including further control variables (see appendix table A.6). If it were true that the association obtained in Table 2.1 simply rests on the same question design or a random guess, we should not find any significant difference between the treatment groups. The fact that we do provides evidence against this caveat.

Furthermore, the results indicate that respondents who were first asked about their national position less often estimate the same EU and national position, thus tapping significantly less often in the dark. In contrast, respondents who were first asked about their EU position are more likely to be overburdened and simply opt for the same national and EU position. In other words, the question order experiment reveals more consistent and accurate estimates for the National Question First group than for the EU Question First group. This may be related to a priming effect where the sequence matters in which individuals reflect on different income positions. The

findings provide further evidence for our theoretical prediction that respondents, at least in Germany, orient themselves towards their national position when estimating their EU position, even if not solely.

Figure 2.3 Question order treatment effects for German respondents in the pre-test



Notes: The figure displays the share of German respondents in the pre-test who estimate the same income percentile at national and EU level. Respondents in the *EU Question First* group were first asked about their EU income position. Respondents in the *Nat. Question First* group were first asked about their national income position. 95% confidence intervals added.

2.4.2 Perceived difference: EU vs. national income position

We now investigate the prediction that the perceived country ranking drives the perceived difference between EU and national income position. We measure a perception of the difference between the income positions by subtracting the perceived national income percentile from the perceived EU percentile and categorise it into 3 categories: a lower EU than national position ($EU < Nat$), the same EU and national position ($EU = Nat$) and a higher EU than national position ($EU > Nat$).

Table 2.2 presents the descriptive results of how the perceived difference between EU and national income position differs along the perceived country ranking for each country. We coloured the correct perceived country ranking in each country in grey, that is, for Poland lower than the EU average, for Italy close to, and for Germany and Sweden higher than the EU average.

Looking first at Italy in the second row, we find that only 14% of Italian respondents rank their country correctly close to the EU average. A majority (78%) rank their country incorrectly lower than the EU average. However, of those, more than two thirds (71%) perceive the difference consistently with this country ranking. Furthermore, the share of respondents perceiving a lower (higher) EU than national income position decreases (increases) for respondents who rank their country close to the EU average or higher than the EU average.

These findings show that Italians align their estimates of the difference between EU and national income positions with their perceived country ranking. Therefore, although they are likely to have incomplete information about their country's income distribution and their country's actual ranking against the EU average, they are capable of correctly inferring the relationship between the EU and national income position from their perceived country ranking.

Table 2.2 Perceived difference – EU and national position – by perceived country rank

Country	Own country ranked	Perceived difference		
		EU<Nat	EU=Nat	EU>Nat
Poland	...lower than EU average (64%)	0.80	0.09	0.11
	...close to EU average (12%)	0.79	0.08	0.13
	...higher than EU average (24%)	0.62	0.11	0.27
Italy	...lower than EU average (78%)	0.71	0.13	0.16
	...close to EU average (14%)	0.52	0.20	0.28
	...higher than EU average (8%)	0.50	0.17	0.33
Germany	...lower than EU average (8%)	0.37	0.22	0.41
	...close to EU average (16%)	0.30	0.15	0.55
	...higher than EU average (76%)	0.15	0.11	0.74
Sweden	...lower than EU average (18%)	0.34	0.17	0.49
	...close to EU average (23%)	0.19	0.16	0.65
	...higher than EU average (59%)	0.12	0.10	0.78

Notes: Perceived difference between the EU and national income position of respondents who estimate a lower (EU<Nat), the same (EU=Nat) or a higher EU than national position (EU>Nat) by respondents' perceived country ranking. Highlighted in grey are the respondents who rank their country correctly against the EU average. In bold are shown the majority groups within each country (e.g. 64% of respondents in Poland rank their country lower than EU average and of those 80% estimate their own income position in the EU as lower than their national position). Survey weights are applied.

A majority of respondents in Poland (64%), Germany (76%), and Sweden (59%) rank their country correctly and among those, we find a high consistency between perceived country rank and perceived difference. The shares of those perceiving a correct difference in Germany and Sweden – a higher EU than national income position – is smaller among respondents who incorrectly rank their country lower than or close to the EU average. For Poland, the share of respondents perceiving a correct difference – a lower EU than national income position – is smaller among those who incorrectly rank their country higher than the EU average.

Furthermore, in all four countries, respondents who rank their country differently than the

majority – in Poland and Italy close to or higher and in Germany and Sweden close to or lower than the EU average – perceive a difference that is inconsistent with this country ranking. The inconsistency is particularly large among respondents who rank their country close to the EU average and it remains large, even when we allow for a tolerance corridor for the perceived difference of up to 20 percentiles (see appendix table A.7). Lastly, multivariate results in appendix table A.8 confirm that in each country respondents' perceptions of the difference vary statistically significantly depending on their perceived country ranking.

In summary, the majority of respondents in Poland, Germany and Sweden are aware of their country's position within the EU. Most Italians, on the other hand, rank Italy lower than the EU, revealing an overly pessimistic view of their country. A possible explanation for this is that respondents also think about income inequality and/or unemployment when ranking their country within the EU. In Italy, indicators such as the Gini coefficient and the unemployment rate are relatively high compared to the other countries or the EU average (see appendix table A.1). Overall, in line with the location mechanism, respondents in each country align their perceived difference between their EU and national income position to a large extent with their perceived ranking of their country.

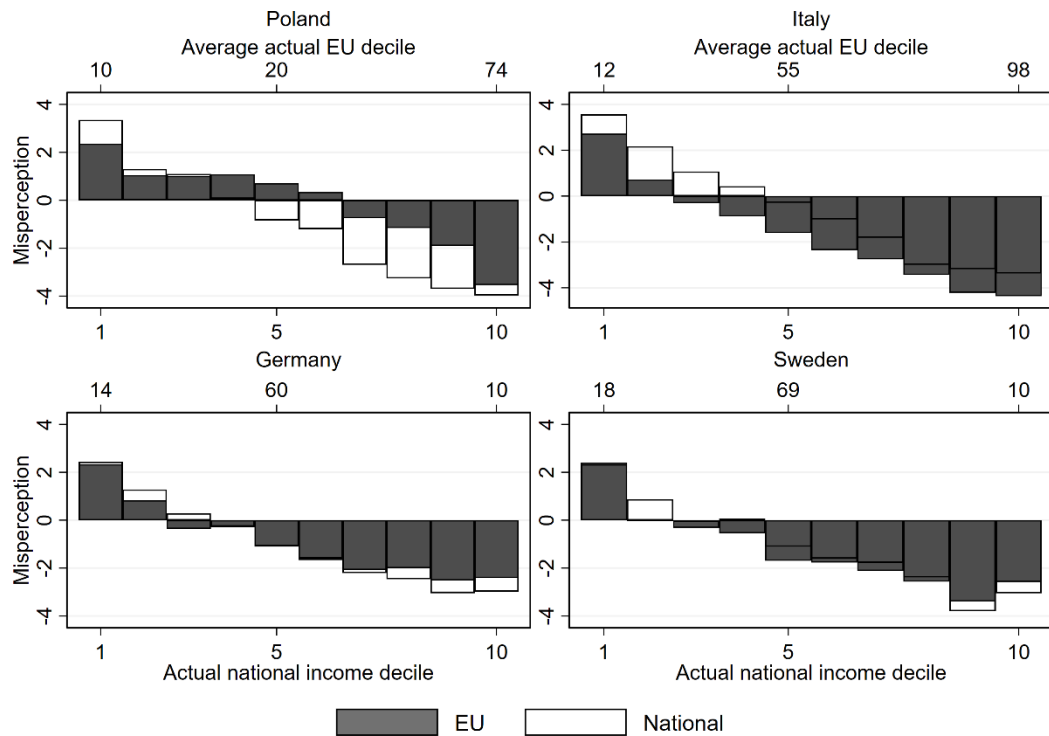
2.4.3 EU income misperceptions

In this section, we analyse the formation of EU income misperceptions. In particular, we investigate the two potential sources of EU income misperceptions: (1) extrapolating a misperceived national position to the EU level and (2) incorrectly ranking one's country within the EU. Following canonical literature (e.g. Karadja et al., 2017), we define an EU (national) income misperception by subtracting the actual EU (national) income percentile from the perceived EU (national) income percentile.

Figure 2.4 depicts misperceptions of EU and national income positions by actual national income deciles. Dark grey bars refer to misperceptions with regard to the EU income distribution, white bars with regard to the national income distribution. Whenever the dark grey bars are longer than the white bars, the line within the bar depicts the height of the latter. The directions of the national income misperceptions reveal in all countries a similar pattern as found in previous studies (e.g. Cruces et al., 2013; Karadja et al., 2017; Engelhardt & Wagener, 2018; Bublitz, 2022): Respondents in the lower income deciles tend to overestimate their income position, while those in the higher deciles tend to underestimate it. Furthermore, national income misperceptions are largest at both ends of the distribution. One must be aware that size and

direction of misperceptions are mechanically limited. That is, respondents in the lowest national income decile can hardly underestimate their position whereas respondents in the highest decile can hardly overestimate it.¹² The main result of Figure 2.4 is that we find for each country the typical S-shape of national income misperceptions also at the EU level (dark grey bars).

Figure 2.4 Misperceptions of EU and national income positions



Notes: The figure displays the average EU and national income misperception by the actual national income decile for each country. A misperception is defined as the perceived minus the actual income percentile. Survey weights applied.

However, we also obtain cross-country differences in the pattern of misperceptions. In Germany and Sweden, the size and direction of EU and national income misperceptions are very similar. In section 2.4.1, we showed that respondents estimate their EU position by anchoring on their national position. Having this result in mind, the similar pattern in Figure 2.4 provides strong evidence for the first source of EU income misperceptions to be at play: Respondents transfer incorrect information about their national income position to the EU level. Section 2.4.2, in turn, showed that respondents in all countries but Italy perceive the difference between EU and

¹² We also took account of a possible direction bias that may result from the design of the question, as argued by Hvidberg et al. (2023). We re-rank their perceived national income positions to make them approximately uniformly distributed across 1–10 deciles, and then re-calculate their misperceptions by subtracting the actual income deciles from the reordered perceived deciles. Appendix figure A.2 reveals that this re-ranking reduces the size of their misperceptions, particularly for the higher deciles, but the approximate S-shape of income misperceptions depicted in Figure 2.4 holds.

national income positions correctly. The correctly perceived difference explains why respondents in Germany and Sweden exhibit a very similar size in their income misperceptions at EU and national level. The similarity also holds for the direction of misperceptions. Very similar shares of German and Swedish respondents underestimate, overestimate or perceive their national as well as their EU income position correctly (this is depicted more closely in appendix figure A.3).

For Italy, in contrast, the deviations between national and EU income misperceptions are attributable to the second source of EU income misperceptions: the incorrect ranking of their own country within the EU. Specifically, a great majority of Italians, consistent with their perceived country ranking, estimate a lower EU than national income position although Italy is actually close to the EU average (see results in section 2.4.2). Therefore, respondents who overestimate their national income position (who are above zero in Figure 2.4) will estimate an EU income position that is closer to their actual position, while respondents who underestimate it will estimate a position that is even farer away. For that reason, much more (less) respondents in Italy underestimate (overestimate) their EU instead of national position (see also appendix figure A.3).

The pattern behind the larger deviations for Poland, in turn, is close to mechanical: The axis label at top of each plot in Figure 2.4 indicates the average actual income percentile within the EU for the first, fifth, and tenth national income decile. Since Poland ranks lower than EU average, Polish respondents in the fifth national income decile are on average in the 20th percentile within the EU. In fact, 88% of them are actually positioned in the first to fifth actual income decile within the EU. Since many of the Poles know their country rank, 86% also position themselves correctly within the lower half of the EU income distribution. Therefore, within a narrower EU income distribution, the chances of Poles estimating a correct position are simply higher in contrast to Germans and Swedes who also mostly rank their country correctly but whose incomes are more evenly distributed across the EU distribution.

Overall, our results confirm our predictions with regard to EU income misperceptions: Respondents form their EU income misperceptions in Poland, Germany, Italy and Sweden by extrapolating an incorrectly perceived national position to the EU level. In Italy, EU misperceptions additionally stem from an incorrect country ranking, resulting in smaller EU than national income misperceptions among lower-income respondents and larger EU than national misperceptions among higher-income respondents.

2.5 Conclusion

This paper is the first to explore how EU citizens perceive their own income positions within the EU. For this purpose, we conducted online surveys in the four EU member states, Germany, Italy, Poland and Sweden, in March 2020. Three months earlier, we examined the income questions in a pre-test in Germany. We investigate the ‘location mechanism’, which assumes that respondents base their income perceptions within the EU on how they locate themselves in their country or on how they locate their country within the EU.

We find strong evidence for our hypothesis of a location mechanism: The respondents’ perceptions are similar for their EU and their national income positions. The majority bases their guesses of the difference between both positions on where they rank their country compared to the rest of the EU. The results show that many EU citizens are able to transfer information about economic differences between member states to the individual level in order to locate themselves within the EU income distribution. Our paper therefore suggests that Europeans have a perspective on inequality that goes beyond the national frame of reference and proposes the use of cross-national measures of inequality at the policy level.

We believe there exist at least three promising directions for future research: First, although we analyse how the perception of the own country relates to the perception of the personal position, we still know little about the origins of country perceptions. For this endeavour, a battery of questions would be necessary, which our study could not include. Second, one may explore if our findings can be reproduced in different (non-Western) social contexts with a supra-national union like the EU, such as the Union of South American Nations or the African Union. Third, we encourage future research to investigate more thoroughly the political relevance of EU income misperceptions, i.e., how these misperceptions affect preferences towards different social policies that would target inequalities within the EU.

Chapter 3

Misperceptions, income positions and attitudes towards EU inequality: A cross-country survey experiment

Abstract

We examine the relationship between misperceptions, income positions and attitudes towards inequality at the supranational level of the EU. Conducting surveys in four EU member states (Germany, Italy, Poland and Sweden), we confirm that Europeans misperceive their own income position in the EU. Once we account for these misperceptions, we find for all four countries that the lower their income rank, the more citizens assess EU income differences as unjust and are supportive of an EU minimum wage. When we inform a randomized subsample about their misperceived EU income position, those who learn that they are richer than they initially thought assess EU income differences as less unjust. The experiment unveils differences across countries: The general result is driven by respondents in Italy, Poland and Sweden, whereas information on income misperceptions has opposing effects in Germany. This difference in the treatment reactions of the Germans is very robust and cannot be explained by their identification with the EU, trust in the EU, altruistic motives, political orientation, or socio-demographics.

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3.1 Introduction

To this day, large economic differences persist between the member states of the European Union. The EU addresses these differences with redistribution instruments such as the Cohesion Fund, which supports relatively poor member states through investments in, e.g. their infrastructure or environment. While there is broad agreement at the political level to promote greater convergence between member states, we know little about how their citizens assess the inequalities among each other. How does a Swedish citizen, living in a relatively rich country, perceive and assess EU inequality compared to a Polish citizen, who lives in a relatively poor country?

Theoretical models like the Meltzer-Richard model (Meltzer & Richard, 1981) predict a negative association of income and inequality aversion. These models, however, rely on the assumption that individuals have full information about their own income position. More recent empirical research on the national level questions this and shows that many individuals substantially misperceive their income position within their country. This indicates a tendency of misperceptions towards the center, a ‘center tendency’, where individuals with lower income tend to overestimate their income position, while those with higher income tend to underestimate it (e.g. Bublitz, 2022; Cruces et al., 2013; Engelhardt & Wagener, 2018; Karadja et al., 2017). Building on these studies, we test if relative income positions underlie the formation of attitudes towards inequality in a greater entity like the EU and what role income misperceptions play for analysing these attitudes.

We collected data from the four EU member states, Germany, Italy, Poland and Sweden, in March 2020. In an online survey, respondents reported their income, their perceived own national and EU income positions, as well as their EU identity and standard socio-demographics. A core feature of the survey is a randomised experiment that informed a subsample of respondents in each country about their actual income position within the EU. After the treatment, all respondents were asked to assess income differences in their country as well as in the EU. In addition to that, they were asked to state whether they are in favour of or against the introduction of an EU minimum wage, a policy measure that is widely discussed in the EU and tackles income differences between EU citizens.

Our findings reveal that a center tendency of misperceptions is also visible at the EU level. This means Europeans with lower income perceive a higher rank in the EU than is actually the case, whereas those with a higher income perceive themselves too low. These misperceptions play a central role in the relationship between income and attitudes towards EU inequality.

Europeans regard income differences in the EU as less unjust and are less in favour of an EU minimum wage, the higher they rank in the EU income distribution. However, and in line with the misperception literature, this association only holds, once we account for the substantial misperceptions that Europeans have of their own income position in the EU. Our experiment reveals that information about their misperception shifts attitudes towards EU inequality. Respondents who learn that they have a higher income position in the EU than they initially thought, tend to consider income differences in the EU as less of a problem. However, we do not obtain a treatment effect on the support for an EU minimum wage. This indicates that the information treatment did not affect respondents' preferences for the presented policy measure as it did for their general attitudes towards inequality.

For each country, we find the center tendency of misperceptions and a negative relationship between income position and aversion to EU inequality. However, we find country differences in how respondents react to the information treatment. Respondents from Italy, Poland and Sweden drive the general treatment effect described above. German respondents differ in their treatment response and consider income differences in the EU as less – instead of more – of a problem when they learn to be poorer. In the same vein, German respondents who learn that they stand lower (higher) in the EU are less (more) in favour of an EU minimum wage. Additional analyses reveal that this difference in the treatment reactions of the Germans is very robust and cannot be explained by, e.g. their identification with the EU, trust in the EU, altruistic motives, political position, or socio-demographics.

Our paper contributes to studies on interpersonal and cross-country comparisons within the EU. Delhey and Kohler (2006) and Lahusen and Kiess (2019), for instance, show that Europeans use foreign countries as a reference group and that cross-country comparisons affect their life satisfaction. Bublitz et al. (2022) find that EU citizens have a good understanding of the existing economic disparities across EU countries and a perspective on inequality that goes beyond the national frame of reference. Results of these studies thus indicate that EU citizens compare themselves with their EU co-citizens. Our findings reveal that cross-national income comparisons also play a socio-political role; i.e., EU citizens form their attitudes towards EU inequality based on where they rank themselves relative to their co-citizens in other member states.

We also contribute to the growing literature on income misperceptions by focusing for the first time on EU income misperceptions and their relation to attitudes towards EU inequality. To our knowledge, only D. Fehr et al. (2022) pursue a similar approach by testing whether

informing respondents simultaneously about their national and global position affects their redistributive preferences. While they partly replicate findings from previous studies on the national level, the information treatment has no effect on preferences for global redistribution. In contrast, our paper focuses on the EU, a lower but still supranational level, and a region for which established redistribution channels exist and with which EU citizens have a better picture and a closer relationship. Moreover, and in contrast to their study, we find that information on their misperceptions shifts Europeans' attitudes towards EU inequality, though with cross-country differences. This finding plausibly reflects that EU citizens are more strongly embedded within the EU, and less so globally. Moreover, our study is one of the few in the misperception literature (Bublitz, 2022; Hoy & Mager, 2021) that conduct cross-national surveys, which enhances the external validity of our findings.

At the policy level, our paper strongly relates to recurring debates on EU social and labour market policies. The EU has recently agreed on a framework on adequate minimum wages in all member states, seeking to increase the minimum wage protection for employed persons. Our paper contributes to this and future debates by analysing to what extent EU citizens are in favour of an EU minimum wage that would go beyond the current legislation. Furthermore, we know little about how EU citizens assess relative income disparities within the EU. Our paper therefore gives important insights into how EU citizens actually think about European convergence via reducing income inequalities across member states.

Our paper proceeds as follows: Section 3.2 presents the theoretical background. Section 3.3 describes our data and descriptive statistics. Section 3.4 presents the results and Section 3.5 concludes.

3.2 Theoretical background

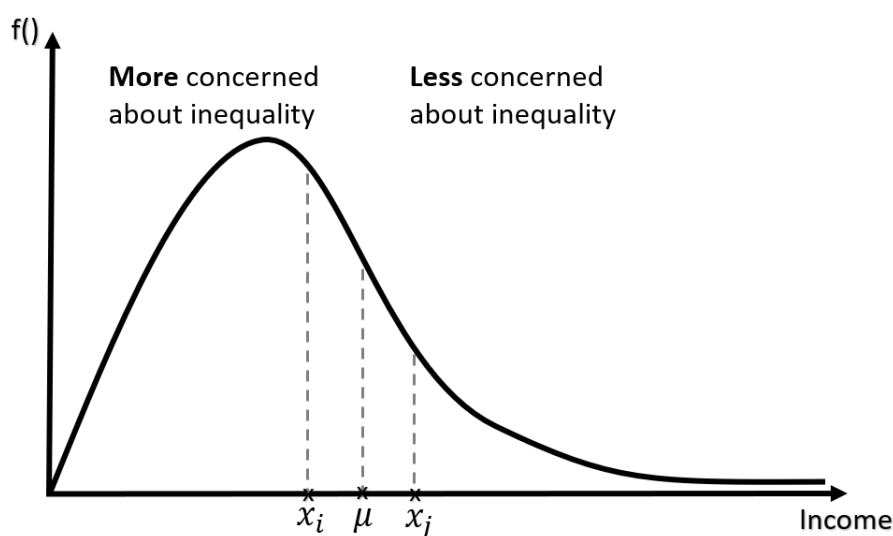
3.2.1 Income and attitudes towards inequality

Relative income positions play an important role in many economic models that predict attitudes towards income inequality. A prominent example is the Meltzer-Richard model (Meltzer & Richard, 1981), which assumes that individuals are in favour of redistribution and exhibit a stronger stance against income inequality when their income is lower than society's average income. The Relative Deprivation model (Clark & D'Ambrosio, 2015), in turn, predicts that individuals compare themselves with all of their co-citizens in society (not only 'the average') and feel the more deprived, the lower their income is relative to that of their co-citizens who are doing better. The Fehr-Schmidt model (E. Fehr & Schmidt, 1999) assumes

that individuals prefer equitable over non-equitable outcomes particularly when inequality is disadvantageous to them, i.e., when they are economically worse off than others (for the formalisation of the models, see appendix B2).

Figure 3.1 depicts the models' theoretical predictions graphically. The black curve with a solid line shows a typically right-skewed income distribution of individual i 's society with individual i 's income x_i , the average income μ of this distribution, and another individual j 's income x_j . In this scenario, individual i will prefer less inequality because (1) she has a lower than average income μ (Meltzer-Richard model), (2) she feels deprived relative to all co-citizens in society who have an income that is higher than her own income x_i (Relative Deprivation model), and (3) she views inequality between her and individual j as her own disadvantage (Fehr-Schmidt model). What all three models have in common is that they predict a negative relationship between income and their concern about inequality, based on a logic of self-interest: The higher (lower) their income, the less (more) individuals are negatively affected by inequality and, thus, the weaker (stronger) their aversion to it.

Figure 3.1 Income and attitudes towards inequality



Notes: The figure displays the relationship between income and attitudes towards inequality, based on the Meltzer-Richard model, the Relative Deprivation model and the Fehr-Schmidt model. The curve denotes the income distribution of individual i 's society. x_i denotes individual i 's income, μ the average income, and x_j denotes another individual j 's income.

Empirical research, however, has found no clear evidence for a negative relationship between income and attitudes towards inequality. Some research results are line with the general model predictions (e.g. Alesina & La Ferrara, 2005; Alesina & Giuliano, 2011; Franko et al., 2013; Guillaud, 2013) but an even larger number of studies shows heterogeneity in the

relationship between income and attitudes across, e.g. countries with different welfare schemes (Dion & Birchfield, 2010; Beramendi & Rehm, 2016), the income distribution (Bernasconi, 2006; Kambayashi & Lechevalier, 2022), or individuals' political knowledge and interest (Stiers et al., 2022). In summary, the significance of income for attitudes towards inequality varies widely.

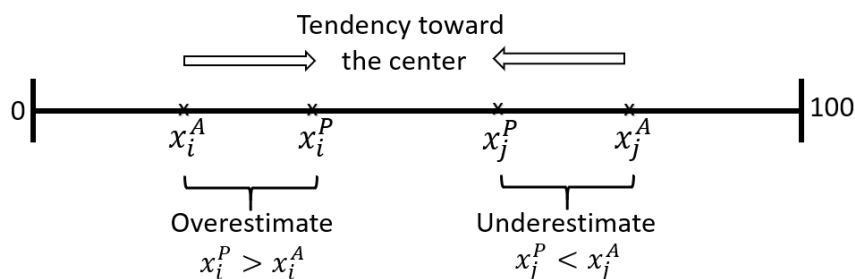
3.2.2 Center tendency of misperceptions

An important reason for the empirical results differing from the predictions of the models could be that all three models are based on the strong assumption that individuals have sufficient knowledge about the distribution of income in their society. Recent literature questions this assumption and shows that a majority of individuals misperceive their income position in their own country. In a pioneer study in the greater region of Buenos Aires (Argentina), Cruces et al. (2013) find that low-income individuals tend to overestimate their position and higher-income individuals tend to underestimate it. We illustrate this center tendency (i.e., the tendency towards the center) of misperceptions with Figure 3.2.¹³ The figure depicts an income distribution divided into percentiles, ranging from 0–100. Individual i represents in this figure a person with a lower actual income position who perceives a higher income rank and therefore overestimates her position ($x_i^P > x_i^A$). On the contrary, individual j has a higher actual income position but perceives a lower income rank and therefore underestimates her position ($x_j^P < x_j^A$). This center tendency of misperceptions has been confirmed for many countries, such as Denmark (Hvidberg et al., 2023), Germany (Engelhardt & Wagener, 2018; D. Fehr et al., 2022), Russia (Bublitz, 2022), Spain (Fernández-Albertos & Kuo, 2018), or Sweden (Karadja et al., 2017).

The existence of misperceptions and the systematic pattern of a center tendency should affect the relationship between income and attitudes. Despite that lower income typically triggers greater concerns about inequality, the fact that low-income individuals overestimate their position, and therefore perceive a higher rank, could weaken or negate the negative relationship between income and their attitudes. The same reasoning holds for higher-income individuals who tend to underestimate their position.

¹³ Scholars have used different terms to explain the systematic pattern by which misperceptions arise; e.g. 'centre bias' (Hvidberg et al., 2023), 'median bias' (Hoy & Mager, 2021), or 'middle-class bias' (M. Evans & Kelley, 2004; D. Fehr et al., 2022). However, these are theory-based concepts that imply certain mechanisms behind the formation of misperceptions. On the contrary, Figure 3.2 depicts only the pattern of lower-income individuals overestimating their income position and higher-income individuals underestimating it, without claiming that this is due to any particular mechanism. For further investigations on the formation of income misperceptions at EU level, see Bublitz et al. (2022).

Figure 3.2 Center tendency of misperceptions



Notes: The figure displays the tendency of misperceptions towards the center. The horizontal line denotes an income distribution divided into percentiles, ranging from 0–100. Individual i represents a low-income person with an actual income position x_i^A who perceives to have the position x_i^P . Individual j represents a higher-income person with an actual income position x_j^A who perceives to have the position x_j^P .

Moreover, most of the literature on income misperceptions has conducted survey experiments to analyse the effect of informing respondents about their misperceptions on their attitudes towards inequality at national level. In a meta-analysis of these experiments, Ciani et al. (2021) combine results from different countries. They show that, on the aggregate level, individuals adapt their attitudes after the information treatment in line with the theories' prediction of a negative relationship between income and inequality attitudes: Individuals who learn that they rank lower than they initially thought (that is, who overestimated their position) tend to show more aversion to inequality, while those who learn that they rank higher (that is, who underestimated their position) tend to show less aversion.

3.2.3 From the national to the EU level

We discussed theoretical models that assume a negative relationship between income and inequality attitudes at the national level and presented more recent studies that highlight the importance of misperceptions, which individuals have of their own income position, for this relationship. Building on both strands of research, our paper shifts the perspective from the national to the cross-national level of the EU. Specifically, we investigate the extent to which Europeans' relative income positions in the EU are related to their attitudes toward EU inequality, and the role misperceptions play here.

We analyse to what extent their misperceptions of their own EU income position affect the relationship between income and attitudes in two ways:

- We analyse how *accounting for misperceptions* affects the relationship between their EU income position and attitudes toward EU inequality, i.e., whether it is stronger or

only occurs when we consider the distorting effect that misperceptions can have on this relationship. Based on the presented theory, we predict that individuals who rank lower (higher) in the EU income distribution are more (less) concerned about EU inequality.

- Using experimental data, we investigate how *informing about misperceptions* of their own income rank changes Europeans' attitudes. We assume that individuals should be more (less) opposed to EU inequality when learning that they rank lower (higher) than initially thought, in line with the predicted negative relationship between income and attitudes.

3.3 Data and methods

3.3.1 Survey characteristics

Our data were collected within the research project 'Socioeconomic analyses of perceptions of (re-)distribution in Europe (SOECBIAS)' (Beblo et al., 2023a). The project analyses income (mis-)perceptions at the EU level and their impact on preferences for EU social policies. Based on quota samples (groups defined by gender, age, education and income), the survey was implemented and conducted by YouGov Deutschland in March 2020 in the four EU member states Germany, Italy, Poland, and Sweden. We carefully chose the four countries to represent European countries with different economic, cultural and historical backgrounds. Sweden and Germany are member states that rank economically higher in the EU (with median equivalised incomes of 25,005 Euro and 23,699 Euro, respectively), Italy is close to the EU average (17,554 Euro), while Poland ranks significantly lower (7,150 Euro).¹⁴ The data collection is described in Beblo et al. (2023b).

In the survey, we started with questions about respondents' socio-political orientations, followed by detailed questions on their actual and perceived income positions. Respondents in all countries were first asked to select their income sources from a list of different income types to remind them of all types of income that their household might have had in the previous year (2019). Respondents were then asked to state their yearly net household income. The exact wording of the income questions is provided in a technical appendix (appendix B3). We used respondents' stated income to calculate their actual income positions (in percentiles) in their own country and in the EU, based on the income data of EU-SILC.

¹⁴ Data on countries' median equivalised net household incomes are for the year 2019 and obtained via Eurostat (indicator: ilc_di04).

We chose disposable yearly income because all incomes (not only their monthly earnings) matter for inequality. We asked about household (not individual) income because we assume that individuals pool and share their incomes within their household and we did not necessarily ask the primary earner in the household. In line with the canonical literature on national income perceptions (e.g. Cruces et al., 2013; Kuziemko et al., 2015; Hoy & Mager, 2021; Bublitz, 2022), we did not adjust income for household size due to two main reasons: First, as evidenced by Cruces et al. (2013, p. 103), ‘individuals compare incomes in terms of total monthly household levels.’ Consequently, asking individuals about their total (and not adjusted) household income seems more intuitive. Second, the question about respondents’ actual income position is already complex, even more so for their EU income position. We therefore decided not to request respondents to additionally adjust for income by household size, in order not to ‘overburden’ respondents.

Afterwards, respondents were asked to estimate how many percent of their country’s and the EU population had a total yearly net household income that was lower than theirs in 2019. We explicitly asked respondents to estimate their position based on the total yearly net household income they had just reported. Answers to these questions denote their perceived national and EU income position. We use both variables to calculate their income misperception by subtracting their actual from their perceived income position, in line with the operationalisation of previous studies (e.g. Cruces et al., 2013; Karadja et al., 2017). Thus, respondents overestimate their income position when they estimate their position to be higher than it actually is, and they underestimate their position when they estimate their position to be lower than it actually is.

Following a randomisation procedure, one group of respondents was provided with information regarding their actual EU income position, which was determined by the total household income they had previously indicated. Respondents in the control group received no information and serve as the reference group to investigate whether information on respondents’ own EU income position affects their attitudes toward EU inequality. The treatment was very similarly designed to previous experimental research on misperceptions (e.g. Karadja et al., 2017; Bublitz, 2022; Hvidberg et al., 2023). The major difference is that we inform respondents about their cross-national income position and not their national position. The similarity in the treatment designs allows us to compare our findings from the EU level with findings from previous studies at national level. Figure B1.1 in appendix B1 depicts a screenshot of the treatment.

After the treatment, we elicited attitudes toward inequality with three questions. First, we asked all respondents the more general question whether they agree that income differences in their own country and within the EU are just. The answers range on a 5-point Likert scale from 1 ('agree strongly') to 5 ('disagree strongly'). Thus, the higher the value, the more respondents assess income differences as unjust, i.e., the higher their aversion to inequality. We use the question about their attitudes toward national inequality as a benchmark for analysing their EU inequality attitudes. In particular, this allows to measure the extent to which they find inequality in the EU more or less of a problem than at the national level. This variable additionally allows us to test whether we can reproduce the negative relationship between income and attitudes toward national inequality found in previous studies and to better compare these studies to our results at the EU level.

In addition, we also measure whether respondents are in favour of a specific policy that tackles these income differences. Respondents were asked to state if they would support the introduction of an EU minimum wage with answering categories ranging from 1 ('strongly against') to 5 ('strongly in favour'). We explained to the respondents that such a minimum wage would be adjusted to reflect the living costs in each EU member state and would guarantee each employed European a minimum standard of living. We chose the EU minimum wage as it is a widely known labour market policy in all European countries and combats income inequality by raising the incomes of employed persons at the bottom of the income distribution. The policy also tackles cross-country inequalities in the EU. As poorer member states have so far very low or no statutory minimum wages, their citizens would particularly benefit from the introduction of an EU minimum wage. Furthermore, it was a widely discussed policy measure within the EU at the time we implemented the survey. Consequently, respondents' attitudes toward an EU minimum wage measure their support for a real policy that is put into practice in the near future.

In the regression analyses, all dependent variables are standardised to z-scores (with a mean of zero and a standard deviation of one) for better interpretation. Apart from standard sociodemographic characteristics (age, gender, education and employment status), we additionally control in our regression models for EU identity (respondent identifies first or only as EU citizens). As our data collection was carried out during the first wave of the COVID-19 pandemic, we also include a variable about individual COVID-19 affectedness (asking whether respondents or anyone in their close surroundings was infected with the virus) to control for potential consequences of the pandemic on policy preferences. Summary statistics of the covariates are provided in the appendix table B1.1 (appendix B1).

We use data of the control group as well as the treatment group, the latter being the group that received information about their actual EU income position. We omit respondents with missing data in any of the included variables, resulting in a total sample size of 2,239 respondents. The sample size is similarly large for each country (551 respondents in Germany, 576 in Italy, 496 in Poland and 616 in Sweden). The missing values relate mostly to reported income and income perceptions at the national and the EU level, which are around one third of the initial sample. The missing values do not harm our treatment design as in each country, we find evidence for almost perfect randomisation between the treatment and the control group. The only exceptions are a five-percentage points smaller number of German respondents in the treatment group who indicated that their surrounding was affected by COVID-19 (13% in the control group) and a three-percentage points larger number of Swedish respondents in the treatment group who reported an EU identity (5% in the control group) (see appendix table B1.1). We account for these negligible imbalances with control variables in our regression analyses. To adjust for sample deviations from the overall population concerning the quotation characteristics (i.e., gender, age, education and income), we also apply survey weights in our analyses (though deviations are small, as shown in Beblo et al., 2023b).

3.3.2 Descriptive statistics

Table 3.1 shows descriptive statistics on respondents' attitudes toward income inequality. We concentrate here on the control group to obtain estimates that are not affected by the treatment. On average, respondents are slightly more likely to agree that income differences in their own country are unjust, with a mean value of 3.58 over all countries. Compared to German and Polish respondents, Italians (mean value: 3.75) assess income differences in their country as most unjust. In contrast, Swedes (mean value: 3.35) evaluate national income differences as significantly less unjust than respondents in each other country.

Taking all countries together, we find that attitudes toward EU income differences are, with a mean value of 3.56, quite similar to attitudes toward national income differences. Looking at the countries separately, respondents in Germany, Italy, and Sweden on average assess income differences in the EU as similarly unjust. However, and possibly surprising, Polish respondents assess the differences in the EU as significantly less unjust than all other respondents (mean value: 3.22), although Poland is the economically poorest country within our country sample. This finding provides suggestive evidence that people living in poorer countries do not automatically assess inequality as more unjust than people in richer countries.

Table 3.1 Attitudes toward national and EU inequality by country

	ALL	DEU	ITA	POL	SWE
	(1)	(2)	(3)	(4)	(5)
Nat income differences are unjust	3.58	3.62	3.75	3.64	3.35 [†]
<i>disagree strongly (1) – agree strongly (5)</i>	(1.12)	(1.12)	(1.09)	(1.16)	(1.09)
EU Income Differences are unjust	3.56	3.67	3.70	3.22 [†]	3.61
<i>disagree strongly (1) – agree strongly (5)</i>	(1.11)	(1.08)	(1.07)	(1.18)	(1.07)
Support for EU Minimum Wage	3.59	3.60	3.75	3.77	3.29 [†]
<i>strongly against (1) – strongly in favour (5)</i>	(1.18)	(1.17)	(1.08)	(1.15)	(1.24)

Notes: Mean values with standard deviations in parentheses, restricted to respondents in the control group.

[†] denotes significant country differences ($p < 0.05$), compared to each other country. Survey weights are applied.

Over all countries, respondents show slight support for the introduction of an EU minimum wage, with a mean value of 3.59. Here, too, are country-specific differences: Polish and Italian respondents, who are to gain the most on average from its introduction, are also the most in favour of an EU minimum wage, with a mean value of 3.77 for Poland and 3.75 for Italy respectively. The support in Germany (mean value: 3.60) is a bit lower, and it is significantly lower in Sweden (mean value: 3.29). These differences may also be reminiscent of the country-specific history with minimum wages. The existence of an above-average level of statutory minimum wage in Germany plausibly renders its citizens less supportive of an EU minimum wage than their Polish and Italian counterparts. The Swedes, in turn, have already a relatively high minimum wage based on collective bargaining, and may be afraid that they would pay for wage increases in other countries.

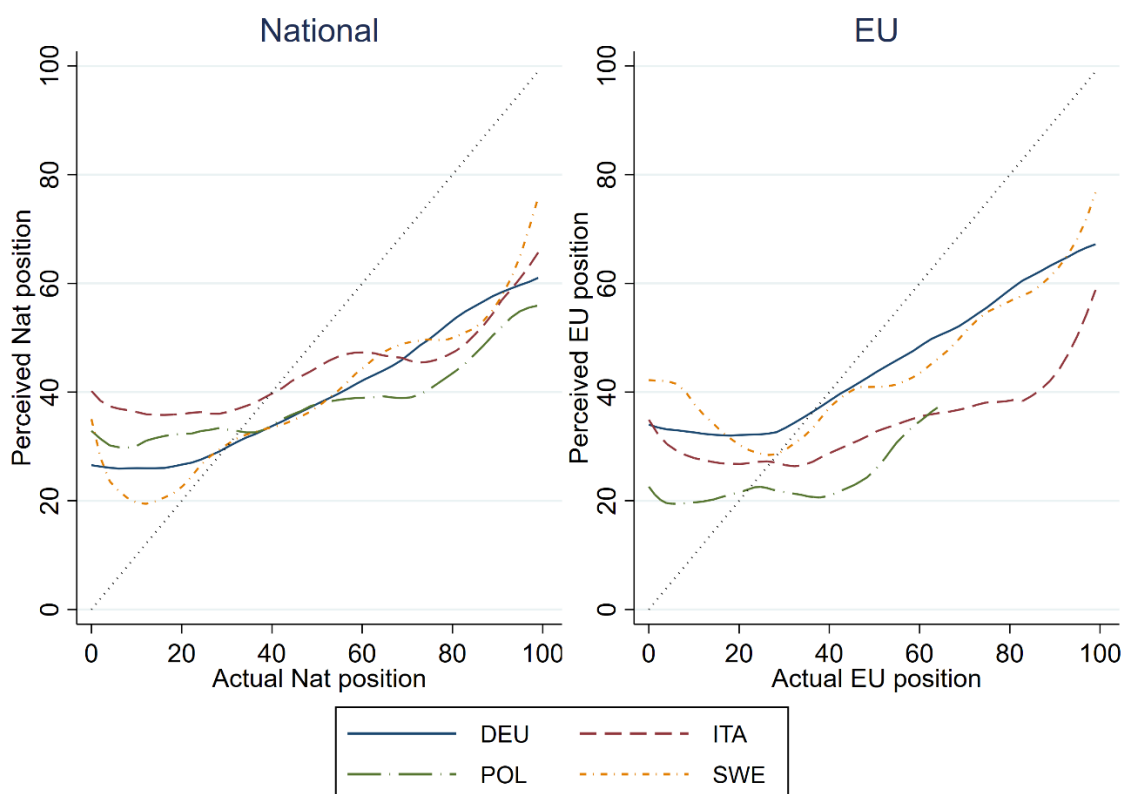
Overall, this section reveals heterogeneity in inequality attitudes across countries that only partly mirrors what one would expect based on the countries' different economic situations. This finding suggests a rather complex picture at the country level regarding the relationship between income and attitudes toward EU inequality that may also reflect specific cultural and institutional settings of different member states. Leaving these country-level differences aside, our paper focuses on the individual level and analyses individuals' attitudes within each country. Based on the theoretical background in Section 3.2, we examine the role of relative income positions for attitudes toward EU inequality and how income misperceptions affect this relationship.

3.4 Findings: Misperceptions, income positions and attitudes toward EU inequality

3.4.1 National and EU income misperceptions

Figure 3.3 illustrates respondents' perceived income positions as a function of their actual income position at the national (left panel) and the EU level (right panel), including respondents from both the control and the treatment group. The left panel confirms, in accordance with previous studies, the center tendency of national income misperceptions: For each country, those who stand at the bottom of the national income distribution tend to overestimate their income position (the curves are on the left side of the 45-degree dot line). In contrast, respondents who rank higher tend to underestimate their income position, that is, they perceive a lower than actual national income position.

Figure 3.3 Perceived and actual position at national and EU level



Notes: The left panel depicts the perceived national income position as a function of the actual national income position for each country. The right panel plots the perceived EU income position against the actual EU income position. The curves are smoothed using epanechnikov kernels with a bandwidth of 10. The curve for Poland in the right panel is cut at the 65th actual percentile, since over 93% are between the 1st and 65th percentile.

The right panel shows income misperceptions at the EU level. Here, the same pattern holds again for all four countries: Lower-income respondents overestimate and higher-income

respondents underestimate their cross-national income position. Thus, we find for each country the center tendency of income misperceptions also at the EU level. A comparison of the curves in the left and right panels additionally reveals that income misperceptions are similarly high at the EU and national level.

3.4.2 Accounting for misperceptions

As shown in the previous section, respondents misperceive not only their national but also their European income position. In this section, we analyse the relationship between income positions and attitudes toward inequality and what effect misperceptions have on this relationship. We concentrate on respondents in the control group, i.e., respondents who did not receive information about their actual position. As a benchmark, we first analyse relative income positions at national level and their relationship with attitudes toward national inequality.

Results are shown in Table 3.2. Column 1 in panel a) shows that respondents' actual national income position negatively associates with how unjust they assess income differences in their country. Moving up 10 percentiles in the actual income distribution makes respondents assess national income differences as less unjust by 0.03 standard deviations. However, the estimate of this relationship between income position and attitudes might be too small because of the substantial amount of misperception respondents have about their income position. Due to the center tendency of misperceptions (depicted in Figure 3.3), higher-income individuals tend to underestimate their position and should therefore regard income differences as more unjust, as they mis-rank themselves too low in the income distribution. The opposite holds for lower-income individuals, who perceive their rank as too high. This leads to a smaller coefficient in model 1, as long as we leave out the effect that income misperceptions have on the association between actual income positions and respondents' attitudes. In column 2, we therefore add variables on income misperceptions to the model and find that the coefficient more than doubles in size, which confirms our reasoning.

In a next step, we test if the negative relationship between respondents' income position and their attitudes also exists at the EU level. Results in columns 3 and 5 of panel a) reveal small negative and statistically insignificant associations between respondents' actual income position in the EU and their attitudes toward EU income differences as well as their support for an EU minimum wage. However, the association might be discounted toward zero by respondents' income misperceptions. In fact, adding EU income misperceptions to the model

again more than doubles the size of the coefficients, as displayed in columns 4 and 6. We now find that respondents assess EU income differences as significantly less unjust (at 10%-level) and support an EU minimum wage significantly less (at 5%-level) when they rank higher in the EU income distribution. Moving up the EU income rank by 10 percentiles makes respondents assess EU income differences as less unjust by around 0.03 standard deviations and decreases respondents' support for an EU minimum wage by around 0.04 standard deviations. The results are robust to including control variables, as revealed in panel b).

Table 3.2 Attitudes toward national and EU inequality by income and misperception

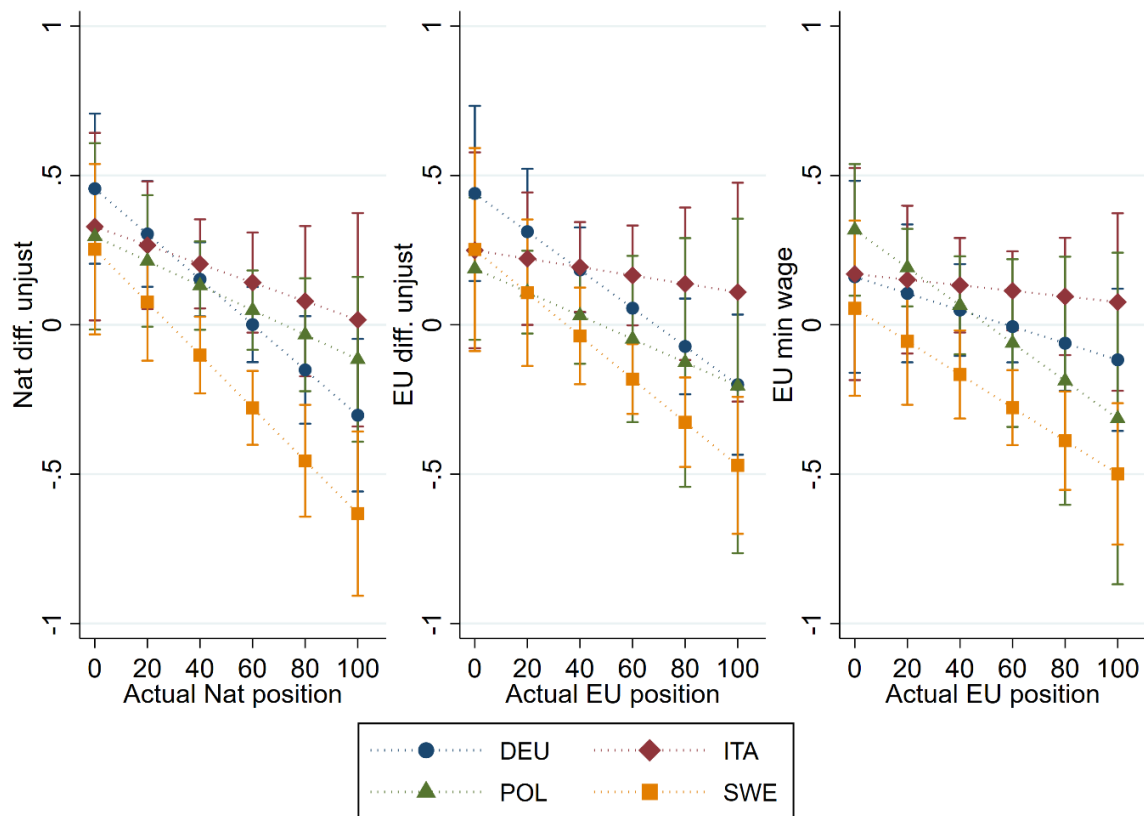
	Nat diff. unjust		EU diff. unjust		Supp. EU wage	
<i>Panel a) No Controls</i>	(1)	(2)	(3)	(4)	(5)	(6)
Actual Nat position	-0.325***	-0.752***				
	(0.114)	(0.173)				
Actual EU position			-0.149	-0.339*	-0.190	-0.446**
			(0.129)	(0.175)	(0.131)	(0.177)
Misperception	No	Yes	No	Yes	No	Yes
<i>Panel b) With Controls</i>	(1)	(2)	(3)	(4)	(5)	(6)
Actual Nat position	-0.224*	-0.637***				
	(0.119)	(0.184)				
Actual EU position			-0.087	-0.308*	-0.097	-0.374**
			(0.138)	(0.184)	(0.132)	(0.178)
Misperception	No	Yes	No	Yes	No	Yes
Observations	1,149	1,149	1,149	1,149	1,149	1,149
Country FE	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied, restricted to respondents in the control group. Dependent variables are standardised to z-scores and denote in columns 1 and 2 attitudes toward national income differences, in columns 3 and 4 toward EU income differences, and in columns 5 and 6 support for an EU minimum wage. Independent variables are the actual national and EU income position, ranging from percentile 1 to 100 divided by 100. Columns with even numbers additionally include national (column 2) and EU (columns 4 and 6) misperception, defined by subtracting the actual from the perceived position divided by 100. Control variables in Panel b) are EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19. * p < 0.10, ** p < 0.05, *** p < 0.01.

Figure 3.4 illustrates potential cross-country differences in the relationship between respondents' relative income position and their respective inequality attitudes while accounting for misperceptions. In the previously reported results, we controlled for country level differences using country fixed effects. Now, we further examine the three attitude variables by regressing them on the actual income position interacted with each country. The three panels

of Figure 3.4 display the results for all three outcome variables. The figure confirms in all countries the negative association between income rank and attitudes toward national income differences (left panel), EU income differences (middle panel), and the introduction of an EU minimum wage (right panel). The figure also shows that in Italy attitudes toward inequality within the EU are less associated with the actual EU position than in the other three countries. Italian respondents in all income groups tend to regard EU inequality as problematic. This finding suggests a widespread concern among Italians regarding their own economic situation and that of their country that is not moderated by their actual income level.

Figure 3.4 Attitudes towards national and EU inequality by actual income position for each country



Notes: The figure depicts conditional marginal effects (with 95% confidence intervals) from OLS models regressing attitudes toward national income differences (left panel), attitudes toward EU income differences (middle panel), and support for an EU minimum wage (right panel) against the actual income position interacted with country dummies. Dependent variables are standardised to z-scores. Models include variables on income misperceptions and a number of control variables (EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19).

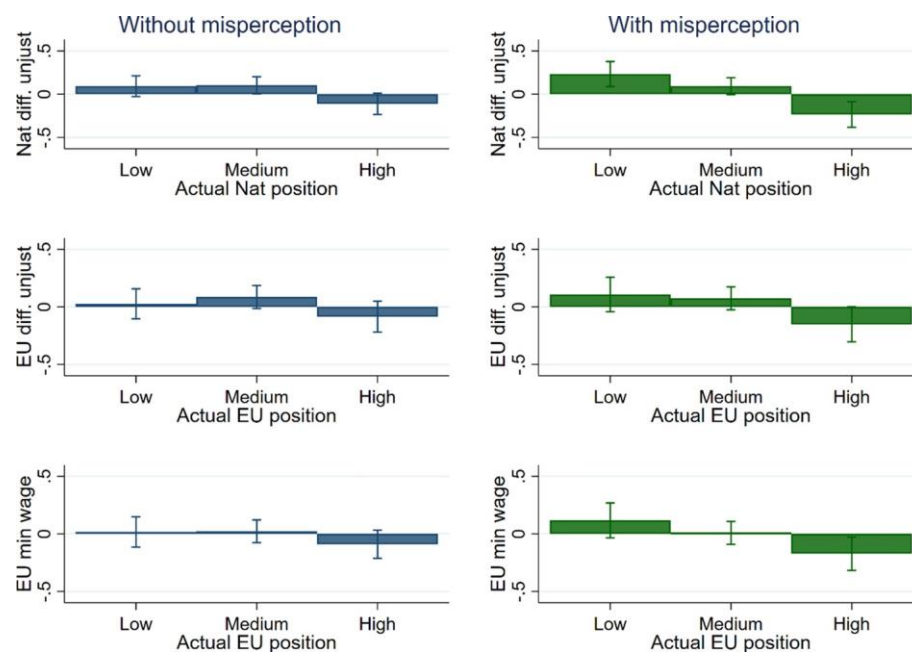
The results of Table 3.2 revealed the predicted negative association between actual income position and inequality attitudes at EU level, after accounting for respondents' income misperceptions. We argue that the changes in the coefficients result from the center tendency

of misperceptions, i.e., individuals with lower income tend to over- and those with higher income tend to underestimate their own income position. Therefore, accounting for misperceptions should have the greatest effect on the attitudes of respondents at the bottom and the top of the income distribution. To test this, we categorise respondents into three income groups: low (lower than 30th percentile), medium (30th–69th percentile) and high (70th percentile or higher). We then regress each of the three variables regarding inequality attitudes on income group and some controls in the first set of models, and additionally on income misperceptions in the second one.¹⁵ Figure 3.5 depicts the coefficients of the three income groups in two panels: The left panel displays the coefficients without accounting for misperceptions, while the right panel shows the coefficients with misperceptions included in the regression models. The results strongly support the proposed mechanism through which the center tendency of misperceptions influences individuals' attitudes toward inequality. Accounting for misperceptions in the regression models increases the coefficients of low- and high-income respondents. This means low-income (high-income) respondents assess national and EU income differences as even more (less) unjust and are more (less) in favour of an EU minimum wage. In contrast, attitudes among the medium-income group remain quite stable. This pattern is robust to using different thresholds for the categorisation of the income groups (see appendix B1, figure B1.2).

To sum up, findings of this section reveal for all four countries that individuals' relative income positions associate negatively with their aversion to inequality at both the national as well as the EU level, confirming our theoretical prediction. Consistent with the center tendency of misperceptions, the negative association between income position and attitudes holds at the cross-national level, though statistically significantly only when individuals' income misperceptions are taken into account. This confirms the importance of income misperceptions for attitudes toward inequality, in line with previous misperception literature.

¹⁵ We thank an anonymous referee who inspired these analyses.

Figure 3.5 Attitudes toward national and EU inequality by income group



Notes: The figure depicts marginal effects (with 95% confidence intervals) from OLS models regressing attitudes toward national income differences, EU income differences, and support for an EU minimum wage respectively on income group, without (left panel) and with (right panel) the inclusion of income misperceptions. Dependent variables are standardised to z-scores. Income groups are defined by actual position in national or EU income distribution (low: 0–29th percentile, medium: 30–69th percentile, high: 70–100th percentile). Control variables (EU identity, gender, education, age, age², employment status, and surroundings affected by COVID-19) and country dummies are included in all models.

3.4.3 Informing about misperceptions

In this section, we test whether informing respondents about their income misperceptions influences their attitudes toward EU inequality. In Section 3.2, we hypothesised that the information treatment shifts their attitudes at the EU level similarly to their attitudes at the national level. Respondents who learn about a higher income position in the EU should be less concerned about EU inequality, while respondents who learn about a lower rank should show more aversion to it. Since we assume heterogeneous treatment effects along the direction of their misperception, we interact the treatment with a misperception dummy. The dummy denotes whether respondents overestimate or underestimate their income position in the EU. In the treatment group, those who overestimate their position are therefore informed about a lower income position than they initially estimated, and those who underestimate it are informed about a higher position.

Table 3.3 shows the treatment effects for the group of respondents who underestimate their position and for those who overestimate their position. Results in column 1 of panel a) show for the complete sample that respondents who learn to have a higher income position in the EU

than they initially thought, regard EU income differences as less unjust by 0.1 standard deviations. This is in line with our previous finding of a negative association between income rank and attitudes toward EU inequality and confirms our theoretical prediction. Consistently, the coefficient of the treatment among respondents who learn about a lower rank is positive, although much smaller and not statistically significant.

Table 3.3 Effect of informing about misperception on attitudes toward EU inequality

	EU diff. unjust					
	ALL	DEU	ITA	POL	SWE	w/o DEU
<i>Panel a)</i>	(1)	(2)	(3)	(4)	(5)	(6)
TRT: Underestimate	-0.099*	0.078	-0.254**	-0.193	-0.051	-0.154**
	(0.056)	(0.105)	(0.113)	(0.129)	(0.114)	(0.066)
TRT: Overestimate	0.033	-0.254*	0.032	0.247	-0.034	0.098
	(0.085)	(0.148)	(0.177)	(0.172)	(0.177)	(0.102)
	Supp. EU wage					
	ALL	DEU	ITA	POL	SWE	w/o DEU
<i>Panel b)</i>	(1)	(2)	(3)	(4)	(5)	(6)
TRT: Underestimate	0.034	0.294***	0.137	-0.083	-0.188	-0.055
	(0.055)	(0.098)	(0.101)	(0.112)	(0.118)	(0.066)
TRT: Overestimate	-0.080	-0.393**	0.008	-0.052	0.105	0.001
	(0.085)	(0.155)	(0.166)	(0.148)	(0.186)	(0.102)
Observations	2,239	551	576	496	616	1,688
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes					Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied. Dependent variables are standardised to z-scores and denote in panel a) attitudes toward EU income differences and in panel b) the support for an EU minimum wage. Respondents in the treatment (TRT) group were informed about their actual EU income position. TRT: Underestimate (TRT: Overestimate) is the treatment effect among respondents who estimated an income position that is lower (higher) than their actual income position within the EU. All regressions include as control variables actual EU income position, EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19. * p < 0.10, ** p < 0.05, *** p < 0.01.

Results in columns 2–5 of panel a) reveal signs of coefficients for Italy, Poland and Sweden that are in line with the findings across the countries. On the contrary, the signs of the coefficients for Germany are reversed. German respondents who learn that they stand lower in the EU than they initially thought regard EU income differences as significantly less unjust. When excluding Germany from the sample, as shown in column 6, we observe for respondents

who underestimate their position in turn a stronger negative coefficient compared to the coefficient in column 1. Results of panel b) reveal no treatment effects on the support for an EU minimum wage among respondents in Italy, Poland and Sweden. However, and consistent with the deviating finding in panel a), German respondents are less supportive of an EU minimum wage when they learn about a lower rank and more supportive when learning to rank higher. Therefore, the results also reveal cross-country heterogeneity in how respondents react to the treatment in terms of their policy preferences between Germany and the other three countries.

Some studies allow for a tolerance corridor in misperceptions, since respondents might only shift their attitudes when being informed about a substantially large misperception. In a first robustness check, we therefore restrict the sample to respondents who over- or underestimate their income position in the EU by more than 10 percentiles. In line with this reasoning, we find slightly larger treatment effects for each country. One exception is the treatment effect on attitudes toward EU income differences for Germans who learn about a lower income rank, which turns statistically insignificant (p-value: 0.145), plausibly stemming from the smaller sample size (see appendix table B1.2). In a second robustness check, we analyse the treatment effects only for respondents who misperceived their income position by less than 10 percentiles. This allows us to test whether respondents' attitudes change when simply being confirmed about a rather accurate estimate of their position. We do not find any significant effects (see appendix table B1.3), providing strong evidence that the treatment effects obtained in Table 3.3 are driven by the direction of misperceptions, i.e., learning about a lower or higher position in the EU income distribution.

To sum up, we find that information on their EU income misperception shifts respondents' attitudes in a way that only partly corroborates our theoretical prediction. Respondents in Italy, Poland, and Sweden regard EU income differences as less unjust when learning that they rank higher in the EU. However, they do not shift their support for an EU minimum wage. The latter finding is consistent with the misperception literature that finds treatment effects on more general attitudes toward inequality but less on individuals' specific preferences toward policies that might tackle it (e.g. Kuziemko et al., 2015). What stands out are the reversed treatment effects in Germany. German respondents regard EU income differences as even less unjust when learning about a lower EU income position. Furthermore, the German sample also shifts their attitudes toward an EU minimum wage in a reversed way to our theoretical prediction and in contrast to respondents from the other three countries, whose policy preferences remain unchanged.

3.4.4 Heterogeneity in treatment effects

Most studies on income misperceptions reveal heterogeneous reactions to the information provision. Although they find effects, these are regularly small (for a review, see Ciani et al., 2021) and only significant when divided in sub-groups of respondents who overestimate (e.g. Cruces et al., 2013; Fernández-Albertos & Kuo, 2018; Hvidberg et al., 2023) or underestimate (e.g. Karadja et al., 2017; Bublitz, 2022) their national income position or who have certain ideological views (e.g. D. Fehr et al., 2022). In that sense, our findings of heterogeneous treatment effects are consistent with the misperception literature. However, previous studies seldomly provide plausible or consistent mechanisms for their deviating findings nor test these mechanisms. Thus, we cannot build on canonical literature to provide a more conclusive interpretation of the cross-country differences obtained in our study. In this section, we therefore explore first potential mechanisms which may explain the country differences revealed in the previous section. We focus on Germany where the treatment has opposing effects to what the theory predicts.

Our analyses are guided by the theoretical assumption that individuals form their preferences based on self-interest. One important side effect of the standard treatment design is that respondents who are informed about a higher income position also learn that there exist more people who are poor than they initially thought. Specifically, the treatment could increase concerns about inequality, which may be particularly high at the EU level with large differences in the living conditions between EU citizens. In a similar vein, those who learn about a lower position may care less about the economic situation of their fellow EU citizens and are, consequently, more concerned about their own situation. The deviating results for Germany may therefore be driven by the extent to which Germans care about the well-being of their co-citizens in the EU. As a proxy for this concern, we utilise respondents' stated EU identity as a proxy and investigate whether the treatment effects vary among German participants based on their identification as EU citizens.

Another explanation for their concern about EU inequality may stem from their general concern for other people. We thus use a variable that asks respondents to rank as most, second most, and third most important what a child should learn to prepare herself for life (to obey, to be well-liked or popular, to think for himself/herself, to work hard, to help others when they need help). We define respondents as altruistic who indicate that children should learn 'to help others when they need help' (as most or second most important) and the others as non-

altruistic.¹⁶

Results in Table 3.4 show the interaction effects along EU identity in panel a) and altruism in panel b), where we divide the German sample into those who under- and those who overestimate their EU income position. Results of panel a) reveal that none of the interactions are significant, which stands against our reasoning that the treatment effects could be driven by identification with the EU. In panel b), we test heterogeneity along altruistic motives. Column 2 shows that the treatment effect among Germans who learn about a higher rank are more in favour of an EU minimum wage when they are non-altruistic and significantly less so when they are altruistic, which is, however, contrary to what we suggested. All in all, the deviating treatment effects in Germany can neither be traced back to the sense of identification with the EU nor more general altruistic motives.

We also check for Germany the interaction between the treatment and two further proxies for EU identification: respondents' view that more political responsibility should be attributed to the EU and their political trust in the EU. In addition, we interact the treatment with respondents' political orientation and socio-demographics (working status, gender, age), which sometimes lead to heterogeneity in treatment effects (e.g. D. Fehr et al., 2022). Almost all of the interactions are again insignificant and thus suggest no plausible explanation for the deviating results in Germany (see appendix tables B1.4 and B1.5).

We also test heterogeneity in the treatment effects for Italy, Poland, and Sweden along EU identity and altruism. We find that almost all interactions are insignificant (see appendix table B1.6). The only significant effect is found for Sweden, where those who have non-altruistic motives are less supportive and those who are altruistic are more supportive of an EU minimum wage when learning about a higher income rank in the EU. This is in line with our earlier reasoning. Nonetheless, the results do not hint at any mechanisms that might be underlying the country difference between Germany and the other three countries.

To sum up, we find that accounting for income misperceptions confirms a negative relationship between relative income and aversion to EU inequality as predicted per theory. This holds for all four countries. However, informing respondents about their misperception changes attitudes in Italy, Poland, and Sweden, in line with our theory, while in Germany it goes in the opposite direction of what we hypothesise. Testing heterogeneity in treatment effects, we find no mechanism that drives the deviating results in Germany, showing a robust

¹⁶ Our operationalisation of altruism aligns with the approach taken by Alesina and La Ferrara (2005) as we adopt a similar methodology to define and measure altruistic motives.

difference between citizens from Germany and from the other three countries in their reactions to the information provision.

Table 3.4 Heterogeneity in treatment effects for Germany

	Underestimate		Overestimate	
	EU diff. unjust	Supp. EU wage	EU diff. unjust	Supp. EU wage
<i>Panel a) EU identity</i>	(1)	(2)	(3)	(4)
TRT	0.075 (0.118)	0.282** (0.111)	-0.339* (0.172)	-0.423** (0.167)
EU identity	0.317* (0.177)	0.558*** (0.169)	0.420 (0.298)	0.116 (0.330)
TRT x EU identity	0.018 (0.262)	0.099 (0.222)	-0.223 (0.359)	-0.020 (0.429)
Observations	384	384	167	167
<i>Panel b) Altruism</i>	(1)	(2)	(3)	(4)
TRT	0.100 (0.177)	0.625*** (0.170)	-0.486* (0.293)	-0.458 (0.318)
Altruism	0.509*** (0.145)	0.600*** (0.153)	0.289 (0.254)	0.582** (0.282)
TRT x Altruism	-0.033 (0.213)	-0.492** (0.202)	0.201 (0.340)	0.111 (0.366)
Observations	382	382	166	166
Controls	Yes	Yes	Yes	Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied. Dependent variables are standardised to z-scores and denote in uneven columns attitudes toward EU income differences and in even columns support for an EU minimum wage. The treatment is interacted with a dummy for EU identity in panel a) and altruism in panel b). Observations are smaller in panel b) due to missing values on altruism. All regressions include as control variables actual EU income position, EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19. * p < 0.10, ** p < 0.05, *** p < 0.01.

3.5 Discussion and conclusion

Our paper is the first to leave the national perspective by investigating how EU citizens' relative income positions in the EU relate to their attitudes toward EU income inequality. Additionally, we study the impact of a misperceived one's own income position on this relationship. With a randomised online survey experiment conducted in the four EU member states Germany, Italy,

Poland and Sweden, we also test to which extent information about income misperceptions changes these attitudes. This is of relevance because citizens may use broader cross-national reference frames to assess inequality and form policy preferences.

Our findings show for all four countries that individuals' relative income positions negatively associate with their aversion to inequality at both national and EU level, once we account for the substantial misperceptions they have of their own income rank. Consistently, informing respondents about a higher income rank in the EU than they initially thought makes them assess EU income differences as less unjust. The treatment effects are driven by Italy, Poland, and Sweden. In Germany, in contrast, information about misperceptions influences attitudes in a reversed way: Informing the German respondents that they stand lower (higher) than initially thought makes them regard EU income differences as less unjust and less (more) supportive of an EU minimum wage. The deviating findings for Germany do not relate to differences in their EU identity, trust in the EU, altruistic motives, political orientation, or socio-demographics.

The scope of our study is limited by the available data. First, we conduct analyses in four EU countries that represent member states with different economic, cultural and historical backgrounds. Future research could explore the cross-country differences with a wider range of countries. It may then be possible to identify countries where individuals exhibit similar reactions to the treatment as we observed for Germany. Second, regarding the observed heterogeneity in the treatment effects, our data lack detailed measurements of EU support that capture cultural, social, or political nuances and that may shed light on the German results. Third, our study investigates Europeans' attitudes toward an EU minimum wage as one EU policy measure. This invites future studies to explore attitudes toward other EU policies, e.g. an unemployment benefit scheme, a minimum income benefit scheme, or instruments that are already in place such as the Cohesion Fund. Finally, differences in treatment effects may also be caused by a different understanding of whether the country is a payer for or recipient of EU support. Researchers could thus consider collecting data to assess the extent to which respondents perceive their country and/or themselves as contributors or beneficiaries of an EU minimum wage and other policy measures at the EU level.

Chapter 4

Support for an EU-wide social policy? A country-comparative analysis of unemployment perceptions

Abstract

This paper explores the influence of unemployment perceptions on attitudes towards an EU-wide social policy that guarantees a minimum standard of living for the poor across 18 European countries. The paper relies on a theoretical framework that highlights the interaction among economic self-interest, ideology, and perceptions. Using data from Eurostat and the European Social Survey, the results show that Europeans with more negative perceptions of national unemployment or the living conditions of the unemployed are more likely to support an EU minimum income scheme. This association is particularly strong among individuals with non-egalitarian values or right-leaning ideology and remains relatively consistent across different national contexts. Additionally, support is stronger in countries with poor economic and welfare conditions. Overall, the findings reveal a high perceived legitimacy among Europeans for implementing a policy measure that aims to tackle poverty in the EU.

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4.1 Introduction

The European Union intervenes in the social policy domain to deal with inequality and to combat poverty and social exclusion within the EU, leaning towards a ‘social Europe’ (Martinsen & Vollaard, 2014). Still, one in five Europeans was at risk of poverty or social exclusion by 2022, i.e., having an income below the national poverty threshold, being socially deprived or excluded from the labour market as defined in the EU (Eurostat, 2023b). In addition, the situation varied largely between countries, ranging from 12% in Czechia up to 34% in Romania. A related question is whether there is general support for the EU’s intervention in social policy for the sake of the well-being of Europeans and perhaps stronger support in countries with a higher share of a poor population.

Although to date social policy remains mainly within the area of national authorities, political debates on fostering solidarity and redistribution beyond national borders are ongoing. These debates have gained increased importance in recent years due to major global crises such as climate change and the COVID-19 pandemic. This has reinforced the political relevance of studying public opinion on social policy at the EU level.

Against this background, this paper analyses EU citizens’ attitudes towards the introduction of an EU-wide social benefit scheme that guarantees a minimum standard of living for all poor people in the EU. At the national level, minimum income benefits are already in place in all member states to reduce poverty and social exclusion. However, in most countries, the benefit levels fall far below national poverty thresholds and vary significantly across countries. Therefore, promoting a minimum income benefit scheme at the EU level would address inequalities within and between member states. Potential alternative policies, such as a framework on adequate minimum wages that the EU has settled on by the end of 2022, aim to enhance minimum income protection for employed persons in the EU. Instead of addressing in-work poverty specifically like that, an EU-wide minimum income benefit would provide minimum income protection to all individuals in need, including the unemployed who live in poverty. In addition, such a policy measure would require rich member states to invest more financially, promoting redistribution at the EU level. A thorough understanding of Europeans’ support for the policy measure thus contributes to legitimising further integration within the EU, and in particular, to achieving the EU priority to tackle poverty in general.

While there has been a long-standing tradition of studying attitudes towards EU integration in general (e.g. Anderson & Reichert, 1995; Gabel, 1998; Gabel & Whitten, 1997), attitudes towards social-policy making at the EU level have seldom been discussed explicitly in previous

literature until the last few years (e.g. Baute & Meulemann, 2020; Beaudonnet, 2013; Burgoon, 2009; Gerhards et al., 2016; Roosma & van Oorschot, 2021). The recent studies demonstrated that support for EU social-policy making is generally stronger in member states with worse economic and welfare performances (e.g. lower welfare generosity or efficiency). While revealing a contextual impact on Europeans' attitudes, most studies left out how Europeans may perceive their country's conditions differently. Less is known about the specific role that individual perceptions of the national context may play in shaping attitudes. Perceptions at the individual level should be considered in addition to objective contextual factors, as people often exhibit significant misperceptions regarding national indicators, such as the level of unemployment, poverty or inequality (e.g. Cardoso et al., 2016; Choi, 2019; A. Kuhn, 2019). As a result, scholars found that support for redistribution at the national level is more strongly associated with individuals' perceptions of national inequality than with contextual factors (e.g. Bussolo et al., 2021; Gimpelson & Treisman, 2018). This prompts the question of whether perceptions also play a crucial role in explaining attitudes at the EU level.

The present study contributes to the existing literature by addressing the role of both objective contextual factors and individual perceptions of them in shaping Europeans' attitudes towards an EU-wide social policy in terms of a minimum income benefit scheme. This study centres on the perceptions of the unemployment rate and the living conditions of unemployed individuals within the country (also referred to as 'unemployment perceptions' or 'perceptions regarding unemployment' hereafter). In this study, I adapt a theoretical framework that highlights the interaction among economic self-interest, ideology, and the perceptions. Empirically, I combine macro data on country-level economic and welfare performances with individual-level data from the European Social Survey in 2016, which includes 18 EU member states. This paper aims to address the following research questions: *First*, how are attitudes towards an EU-wide minimum income scheme associated with unemployment perceptions differently in comparison to objective contextual factors regarding the economic and welfare performances of the EU member states? *Second*, to what extent can individuals' ideological motivations, such as egalitarianism or political ideology, influence the role of the perceptions in shaping the attitudes? *Finally*, do contextual factors also influence how unemployment perceptions relate to attitudes towards the policy measure?

4.2 Country performances and support for the EU's intervention in social policy

Since the Maastricht Treaty, the integration process within the EU has largely extended to the social dimension. The EU has begun to intervene even more in the social policy domain, since the economic crisis in 2007/08 has increased economic disparities between European countries. For instance, different European Structural and Investment Funds have been carried out, such as the European Social Fund, supporting initiatives that aim to reduce unemployment and promote economic and social cohesion (European Parliament, 2022).

However, from the perspective of European citizens, the Europeanisation of social policy resulted in a sudden loss of support for the EU back in the 1990s. There was growing public concern about the EU's intervention in the social policy domain having a negative impact on national social security systems (Ferrera, 2005), also described as the 'Post-Maastricht blues' (Eichenberg & Dalton, 2007). Scholars argued that this reflects an economic self-interest among Europeans, as their attitudes towards integration within the EU depend on how it could influence their country and themselves (see also Gabel, 1998; Gabel & Whitten, 1997). Accordingly, opposition to the EU's intervention in social policy would be particularly strong in member states with favourable economic and welfare conditions. In contrast, support would be strong in member states with unfavourable conditions to start with because their citizens may expect the EU's intervention in social policy to improve the level of social benefits in their country, from which they could possibly benefit (e.g. Burgoon, 2009).

In line with the economic self-interest explanation, recent comparative literature found that support for the EU's intervention in social policy is overall negatively associated with national economic and welfare performances. Instead of referring to the EU's intervention as a whole directly, empirical studies mostly narrowed it down to one specific aspect where the EU could possibly intervene. For instance, focusing on three European countries, i.e., Germany, Spain and Poland, Gerhards et al. (2016) showed that support for a specialised European social policy was strongest in Poland and weakest in Germany. In Mau (2005), support for EU welfare responsibility was much stronger in Mediterranean than in Continental countries, and was weakest in Scandinavian countries. Moreover, studies revealed that a higher level of national social protection relates to lower support for the welfare responsibility of the EU (Beaudonnet, 2013; Burgoon, 2009) and for a specific EU-wide income benefit scheme (Baute & Meuleman, 2020). Similarly, the support is negatively associated with national economic conditions (Beaudonnet, 2013; Burgoon, 2009; Roosma & van Oorschot, 2021).

Another growing branch of literature linked support for redistribution to the perceived, not the objective situation of a country. The main reasoning is that individuals tend to largely misperceive the actual state of their society with respect to national indicators such as the extent of unemployment, poverty, and inequality (e.g. Arin et al., 2021; Cardoso et al., 2016; Choi, 2019; A. Kuhn, 2019; Kunovich, 2012). Given these misperceptions, previous studies found that individual perceptions of, for example, national inequality, rather than actual contextual factors of a country, strongly associate with the demand for national redistribution (e.g. Bussolo et al., 2021; Gimpelson & Treisman, 2018). This raises the question of whether individuals' perceptions also have stronger explanatory power than objective contextual factors in analysing attitudes towards redistribution at a supranational level, i.e., the EU level.

To date, only two empirical studies (Baute & Meuleman, 2020; Roosma & van Oorschot, 2021) drew attention to the impact of perceptions about national context on attitudes towards redistribution at the EU level. Using the same individual-level survey data from the ESS in 2016, the results of both studies reveal that perceptions play a similarly important role as objective national economic and welfare conditions in explaining attitudes towards an EU-wide minimum income benefit scheme. First, the more negative the standard of living for unemployed or retired individuals in the country is perceived, the stronger the support for the policy measure. Second, individuals from countries with worse welfare performances tend to exhibit stronger support. However, neither of the studies discussed the gap between the objective national context and the individual perceptions or explicitly explained why perceptions should matter in addition to national context.¹⁷ This paper aims to address this research gap, with a focus on individual perceptions regarding unemployment.

In addition to the perceived standard of living for the unemployed addressed in the two previous studies, the present study includes a second measure of unemployment perceptions, i.e., the perceived national unemployment rate. Unemployed Europeans, who usually stand at the bottom of national income distribution (e.g. de Graaf-Zijl & Nolan, 2011; Gallie et al., 2003), should be among the primary target groups of an EU-wide social policy that aims to improve

¹⁷ Instead, both studies shifted their focus to additionally analyse how individuals' expectations about the EU's impact on national social benefits shaped their attitudes. Baute and Meuleman (2020) demonstrated that these expectations fully accounted for the contextual impact on the attitudes, leaving aside perceptions of the national context. Roosma and van Oorschot (2021) investigated whether the role of the perceptions could be attributed to a 'hope-or-fear reasoning' at the individual level: Individuals with negative (positive) perceptions of the living conditions of unemployed persons would expect an EU-wide social policy to improve (worsen) the level of social benefits in their country, and consequently, support the policy measure more (less) strongly. However, they found no empirical evidence to support this reasoning.

the well-being of those in poverty. Therefore, perceptions related to both the proportion of unemployed individuals in the country and their living conditions are particularly relevant for analysing attitudes towards such a policy measure. This paper accounts for both these individual unemployment perceptions as well as objective national economic and welfare performances, and investigated different mechanisms of how they affect attitudes towards an EU-wide minimum income benefit scheme.

4.3 Explaining attitudes towards an EU-wide social policy

The economic self-interest explanation is a common approach for analysing country variations in attitudes towards redistribution and social policy at the EU level, as previously discussed. At the individual level, empirical evidence indicates that it is not individuals' socioeconomic status that primarily shape these attitudes, but their ideological motivations (e.g. Baute & Meuleman, 2020; Gerhards et al., 2016). For instance, politically left-leaning individuals and individuals with egalitarian values are more in favour of an EU-wide social policy.

Both economic self-interest and ideological motivations are traditionally considered as important theoretical explanations for the demand for national redistribution (see Alesina & Guiliano, 2011), before being applied to the supra-national level. A more recent study by Bussolo et al. (2021) proposed a concise framework that particularly addresses the interplay between the economic self-interest, ideological motivations, and perceptions of national context in explaining demand for redistribution at the national level. Focusing on perceptions of national inequality, the basic theoretical assumption of the authors is that a stronger demand for national redistribution is associated with higher perceived national inequality, lower socioeconomic status, and a left-leaning ideology or similar views on social justice. Moreover, both self-interest and ideology play a crucial role in shaping individuals' perceptions. In particular, the authors argued that citizens of one country are exposed to the same national socioeconomic conditions, such as the extent of unemployment, poverty, and inequality within the country. Individuals' socioeconomic characteristics and ideology, including political orientation, determine how they may interpret such national context differently.

Accordingly, better national economic and welfare performances lead to more positive perceptions among individuals regarding the national context, such as lower perceived national inequality. Conditional on the same national context, individuals with a lower socioeconomic status or a left-leaning ideology tend to exhibit more negative perceptions and regard a high level of unemployment, poverty or inequality as more problematic.

In this paper, I adapt the theoretical approach of Bussolo et al. (2021) to explain attitudes towards redistribution at the EU level. As opposed to their focus on inequality perceptions, this paper explores the role of perceptions regarding unemployment in shaping attitudes towards an EU-wide social policy. Overall, I assume a similar mechanism with regard to how socioeconomic status, ideological motivations, and perceptions regarding unemployment within a country relate to attitudes at the EU level. Individuals with a lower socioeconomic status are likely to support social assistance at the EU level as an ‘imperfect substitute’ (Burgoon, 2009, p. 433) to assure their living conditions. In other words, driven by the self-interest motivation, individuals will support social policy at the EU level if they believe their country and themselves could benefit from it. Following this logic, individuals who perceive a high unemployment rate or a low standard of living for the unemployed in their country should be more in favour an EU-wide social policy. Therefore, I hypothesise that *the more negative the perceptions regarding unemployment in the country, the more likely the support for an EU-wide social policy* (H1).

Considering both the economic self-interest and ideological motivations, a few previous studies (e.g. Armingeon & Weisstanner, 2022; Margalit, 2013) addressed a conflict of interest by analysing the interplay between individuals’ socioeconomic status, such as income, and political ideology for shaping demand for national redistribution. They found that demand for national redistribution is overall stronger among left-leaning individuals and poor individuals. In addition, poor right-leaning individuals and rich left-leaning individuals also exhibit relatively strong demand, both of which are stronger compared to rich right-leaning individuals, though less strong compared to poor left-leaning individuals. With regard to the role of economic self-interest and how it could be influenced by ideology, their findings reveal that left-leaning ideology mitigates the influence of socioeconomic status on the attitudes. Accordingly, individuals with a left-leaning ideology or egalitarian values may face a similar conflict of interest when they hold positive perceptions regarding unemployment, i.e., perceptions of a low unemployment rate or a high standard of living for the unemployed in the country. Although not addressed in their theoretical framework directly, Bussolo et al. (2021) provided empirical evidence that the left-leaning ideology diminished the role of perceptions in shaping attitudes towards national redistribution. I expect ideology has a similar damping effect at the EU level, leading to my second hypothesis, namely *the relationship between unemployment perceptions and support for an EU-wide social policy is stronger among individuals with a right-leaning ideology or non-egalitarian values* (H2).

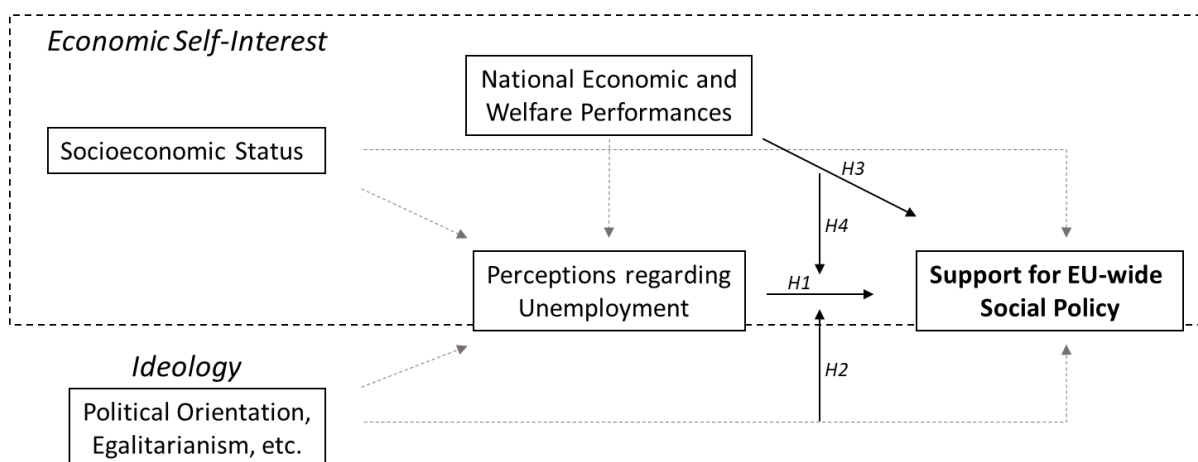
As elaborated, national economic and welfare performances play a role in the formation of individuals' perceptions, determining their between-country variation. Accordingly, the influence of unemployment perceptions on support for an EU-wide social policy could be partly explained by objective contextual factors. Moreover, previous studies empirically confirmed that attitudes towards social policy at the EU level are negatively associated with objective country performances. However, these studies did not analyse the role of the perceptions or discuss them in comparison with the contextual factors, as discussed in the previous section. Instead, they pointed out that contextual factors' impact on attitudes at the EU level results from public concern about the EU having a negative impact on national social security systems (e.g. Baute & Meuleman, 2020; Roosma & van Oorschot, 2021). In general, rich countries and countries with generous welfare provision are more likely to be negatively affected by the intervention of the EU, as competences are to be shifted from the national to the EU level (Baute et al., 2018; Ray, 2004). Consequently, driven by their economic self-interest, opposition from the citizens to the EU's intervention in social policy could be strong. Against this background, I assume that *individuals from countries with better economic and welfare performances are less likely to support an EU-wide social policy* (H3).

Considering both the literature that discussed the role of welfare state performances and the theoretical approach of Bussolo et al. (2021), objective contextual factors and subjective perceptions regarding unemployment have an impact on attitudes towards an EU-wide social policy that is partly independent from each other. Furthermore, there should be between-country variation in the role of the perceptions, depending on a country's actual economic and welfare performances. Given that the contextual factors could affect attitudes directly, support for an EU-wide social policy in a country may already reach a sufficiently high level due to the poor economic and welfare performances of the country. Consequently, perceptions regarding unemployment may no longer matter in that country. In contrast, attitudes towards an EU-wide social policy may vary strongly in rich countries or countries with generous welfare provision, depending on how individuals perceive unemployment within their own country. Following this logic, I expect that *the relationship between unemployment perceptions and support for an EU-wide social policy is stronger in countries with better economic and welfare performances* (H4).

Figure 4.1 depicts a full picture of the mechanisms with regard to the formation of attitudes towards an EU-wide social policy that I apply for studying the role of perceptions regarding unemployment. Arrows with black straight lines in the figure respectively denote the discussed hypotheses (H1–H4). Arrows with black dashed lines illustrate a more general interplay among

socioeconomic status, ideology, and unemployment perceptions that I do not explicitly address in terms of hypotheses.

Figure 4.1 Formation of attitudes towards EU-wide social policy



4.4 Data and methodology

4.4.1 Data

To examine the hypotheses empirically, the present study uses individual-level data from the 8th round of the European Social Survey (ESS8) that was held in 2016 in 23 countries, including five non-EU countries (European Social Survey Round 8 Data, 2016). This study focuses on EU member states to analyse attitudes towards an EU-wide social policy. The following 18 countries remained in the sample: Austria (AT), Belgium (BE), Czechia (CZ), Estonia (EE), Finland (FI), France (FR), Germany (DE), Hungary (HU), Ireland (IE), Italy (IT), Lithuania (LT), the Netherlands (NL), Poland (PL), Portugal (PT), Slovenia (SI), Spain (ES), Sweden (SE), and the United Kingdom (GB). After data cleaning, the sample consists of 29,286 individuals in total, with sample sizes ranging from 1,114 in Slovenia to 2,623 in Germany.¹⁸

For the first time, ESS8 included a specific survey question about attitudes towards a potential EU-wide minimum income benefit scheme. The introduced proposal comprised the following three features: 1) ‘The purpose is to guarantee a minimum standard of living for all poor people in the European Union’; 2) ‘The level of social benefit people receive will be adjusted to reflect the cost of living in their country’; 3) ‘The scheme would require richer European Union countries to pay more into such a scheme than poorer European Union

¹⁸ For descriptive analysis, post-stratification weights and population size weights were used in combination to reduce sampling error and potential non-response bias and to adjust the sample size for each country in proportion to its population size.

countries'. On a scale of 1 ('strongly against') to 4 ('strongly in favour'), respondents were asked if they would be against or in favour of such a scheme. Notably, over 80% of the respondents fell into the middle two categories ('against' or 'in favour'). In 12 out of the 18 countries, below 5% (30 respondents or less in several countries) selected 'strongly against' and 'strongly in favour', respectively. Therefore, I combine the first two and the last two of the original categories to generate a dichotomous dependent variable, denoting whether respondents would support an EU-wide minimum income benefit scheme or not. Eventually, 67% of all respondents were supportive of the policy measure. This paper presents the results using the dichotomous variable as the dependent variable, but the results remain robust when using the original variable with four categories.

I use two items in ESS8 on perceptions of the unemployment rate and the standard of living for the unemployed within the country as measures of unemployment perceptions. First, ESS8 asked respondents to estimate how many in every 100 working age people in their country are unemployed and looking for work. Respondents were provided with answering categories ranging from 1 ('0-4') to 11 ('50 or more') with an interval of 5 percentage points for their responses. They were then asked to assess the standard of living of people who are unemployed in their country on a scale of 0 ('extremely bad') to 10 ('extremely good').

Following the operationalisation in Baute and Meuleman (2020), egalitarianism is measured as a latent variable constructed from three items. Respondents were asked to report on a scale of 1 ('agree strongly') to 5 ('disagree strongly'), how much they agreed or disagreed with each of the following three statements: 1) 'Large differences in people's incomes are acceptable to properly reward differences in talents and efforts'; 2) 'For a society to be fair, differences in people's standard of living should be small'; 3) 'The government should take measures to reduce differences in income levels'. I recode the responses for the construction of the latent variable so that the higher the score, the stronger the egalitarianism.

Political ideology is measured by the item in which respondents were asked to place themselves on the scale of political left-right, ranging from 0 ('left') to 10 ('right'). I reverse the coding of the item for the analysis. Due to a high number of missing values (13% of all respondents), I include political ideology only for additional analysis.

According to the theoretical framework elaborated in the previous section, individuals' socioeconomic characteristics also have an impact on their attitudes towards an EU-wide social policy, as depicted in Figure 4.1. Therefore, in the regression analysis, I include as controls gender, age, and socioeconomic status. The latter is measured by four different indicators:

household income, welfare dependency, employment status, and education. Since this study focuses on attitudes towards an EU-wide social policy, I additionally control for respondents' emotional attachment to Europe. Summary statistics of all individual-level variables are provided in appendix table C.1.

At the country level, I use Eurostat data in 2016 for measuring objective national economic and welfare performances. I calculate welfare efficiency as the ratio between the percentage of the population at risk of poverty before and after social transfers.¹⁹ The efficiency scores can vary between 0 and 100. The higher the scores, the higher the welfare efficiency. The indicator shows the extent to which national social transfers protect citizens from poverty, which better measures the welfare performance of one country than other measurements such as the social welfare generosity scores (see Scruggs, 2014). For robustness checks, I use net expenditure on social protection benefits (as the percentage of gross domestic product per capita (GDP)) and at-risk-of-poverty rate (after social transfers) as alternative contextual factors that reflect the national welfare situation more generally. In addition, I use unemployment rate for measuring national economic performance and included GDP only for robustness checks because it correlates statistically highly with welfare efficiency (Pearson's correlation: 0.64).²⁰

Descriptive statistics of all contextual factors used in the main analysis and the robustness checks are provided in appendix table C.2. Table C.2 also shows statistics on the perceptions of the unemployment rate and the living standard of the unemployed at aggregate level (i.e., mean values for each country), which I additionally calculate for the descriptive analysis.

4.4.2 Methodology

I apply multilevel modelling to account for country-level variations in attitudes towards an EU-wide social policy according to national economic and welfare performances. Since the dependent variable is dichotomous, I estimate linear probability random intercept models to test the first three hypotheses.

For cross-level interactions, random slope models are more adequate than random intercept models, since the former allows for variations at the cluster level with respect to the coefficients

¹⁹ I use the Eurostat data in which pensions were excluded from social transfers. The at-risk-of-poverty threshold was set at 60% of the national median equivalised household income. The Eurostat codes are *ilc_li10* (before social transfers) and *ilc_li03* (after social transfers).

²⁰ Eurostat codes for net social expenditure, at-risk-of-poverty rate, unemployment rate, and GDP are *spr_net_ben*, *ilc_li03*, *une_rt_a_h* and *nama_10_pc*, respectively.

of lower-level covariates (Heisig & Schaeffer, 2019). However, my sample contains only 18 countries and a relatively large number of individuals per country. In the case of a small sample size at the cluster level, estimates of parameters referring to context effects are likely to be biased, and may cause additional reliability problems for including random slopes to test cross-level interactions (Bryan & Jenkins, 2016). To tackle this specific issue, one may consider two-step modelling (Achen, 2005; Heisig et al., 2017), which estimates cross-level interactions in a more straightforward manner: in a first step, regressions are estimated separately for each cluster, and in a second step, coefficient estimates of variables of interest obtained from the first-step regressions are regressed on the cluster-level indicators.

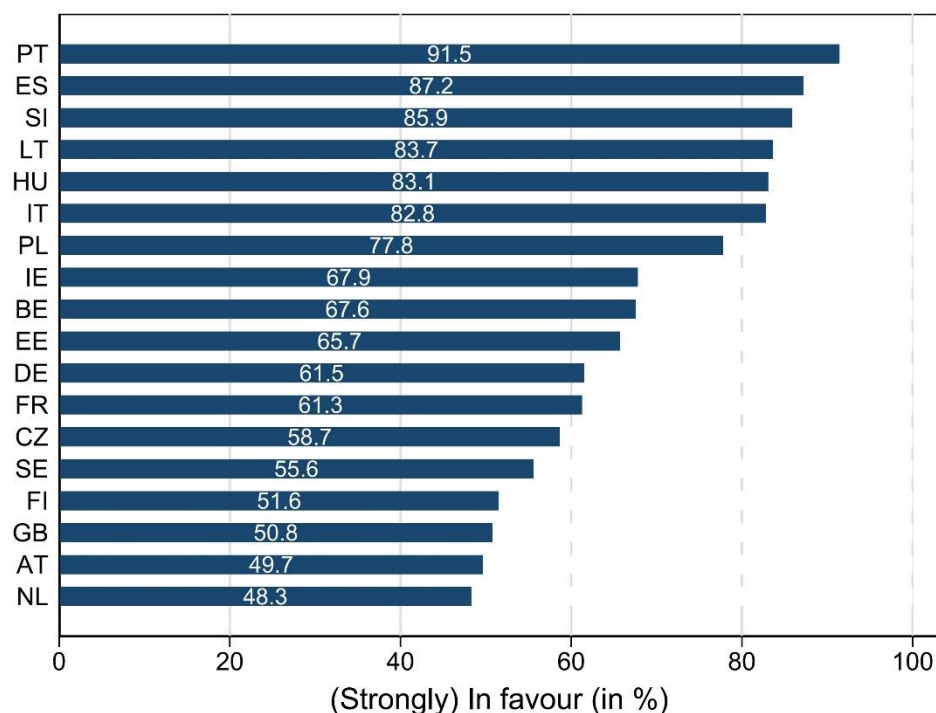
Given this context, I employ all three possible models, i.e., random intercept models, random slope models, and two-step modelling, to test my last hypothesis regarding cross-level interactions. I aim to draw robust conclusions by comparing the results of these different models. Country-level indicators are additionally standardised for better interpretation of the results.

4.5 Results

4.5.1 Support for an EU-wide minimum income scheme: descriptive statistics

As mentioned, a majority (67%) of all respondents were in favour of an EU-wide minimum income benefit scheme. However, there were distinct country differences. Figure 4.2 displays that the share of the supporters ranged from 48% in the Netherlands to 92% in Portugal. Support was stronger in Southern and Eastern European countries compared to countries in the North and West. Figure 4.2 suggests that the richer the country, or the better the welfare performance of the country, the lower the possibility of supporting the policy measure.

Figure 4.2 Support for EU-wide minimum income benefit scheme in 18 European countries

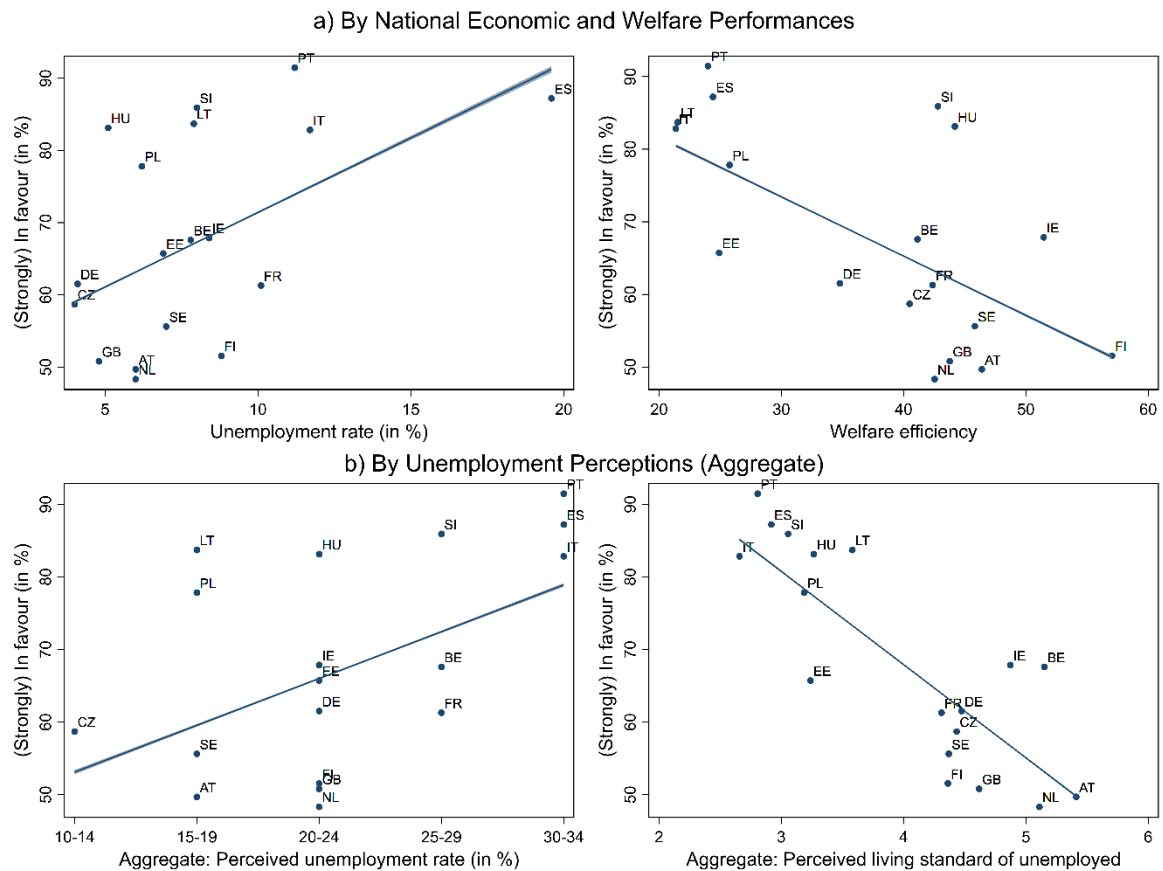


Notes: Using ESS8 data, 18 European countries, N= 29,286; Weighted statistics.

This assumption is backed up when looking at the correlation between the support and country characteristics regarding the economic and welfare performances. Figure 4.3a) shows that the higher the unemployment rate, or the lower the welfare efficiency of one country, the higher the share of respondents in that country that were (strongly) in favour of an EU-wide minimum income benefit scheme. This suggests a negative relationship between national economic and welfare performances and support for an EU social policy.

Consistent with the results regarding the objective country characteristics, Figure 4.3b) illustrates a positive correlation between unemployment perceptions and support for the policy measure: the higher the unemployment rate was perceived at aggregate level, the higher the share of respondents of one country in favour of an EU-wide minimum income scheme. The share of supporters is negatively correlated with aggregate-level perceptions on the standard of living of the unemployed in one country. In addition, Figure 4.3 shows a clearer and stronger linear correlation between the latter two (Pearson's correlation: -0.82) compared to the correlations for the other three presented indicators. It seems that the average perception regarding the standard of living of the unemployed within one country could better explain country differences in the attitudes.

Figure 4.3 Support for EU-wide minimum income benefit scheme



Notes: Pearson's correlation between the share of supporters in one country and national performances in Figure 4.3a) is 0.54 for unemployment rate (left) and -0.65 for welfare efficiency (right). The correlation between the share of supporters and aggregate-level unemployment perceptions in Figure 4.3b) is 0.52 for the perceived unemployment rate (left) and -0.82 for the perceived living standard of the unemployed (right). All correlations are highly significant ($p < 0.001$). Weights applied for ESS data ($N = 29,286$, 18 countries).

To sum up, descriptive statistics suggest that national economic and welfare performances as well as perceptions regarding unemployment matter for analysing attitudes towards an EU-wide social policy like a minimum income benefit scheme. Further analyses are needed to investigate their underlying mechanisms.

4.5.2 Impact of unemployment perceptions and country performances

This section shifts the focus from aggregate-level perceptions to perceptions at the individual level. Following the theoretical model, I test in this section the extent to which unemployment perceptions relate to attitudes towards an EU-wide minimum income benefit scheme, and how the role of the perceptions differs alongside individual ideology. In addition, I investigate how the attitudes are associated with national economic and welfare performances.

Table 4.1 Determinants of support for EU-wide minimum income benefit scheme

	Support for EU-wide minimum income benefit scheme				
	(1)	(2)	(3)	(4)	(5)
Perc. unemployment rate	0.005*** (0.001)	0.030*** (0.004)	0.005*** (0.001)	0.005*** (0.001)	0.005*** (0.001)
Perc. living standard of unemployed	-0.016*** (0.001)	-0.016*** (0.001)	-0.033*** (0.005)	-0.016*** (0.001)	-0.016*** (0.001)
Perc. unemployment rate x Egalitarian.		-0.007*** (0.001)			
Perc. living standard of unemployed x Egalitarian.			0.005** (0.002)		
Egalitarian.	0.092*** (0.004)	0.127*** (0.007)	0.071*** (0.007)	0.092*** (0.004)	0.092*** (0.004)
Nat. unemployment rate				0.013 ⁺ (0.007)	0.006 (0.007)
Nat. welfare efficiency					-0.006** (0.002)
Individual controls	Yes	Yes	Yes	Yes	Yes
N – Individual	29,286	29,286	29,286	29,286	29,286
N – Country	18	18	18	18	18
Residual – Individual	0.195	0.194	0.195	0.195	0.195
Residual – Country	0.067	0.068	0.067	0.060	0.041

Notes: Using multilevel linear probability random intercept models; ICC (null model) = 0.100; Individual-level covariates (gender, age, age², equivalent net household income, welfare dependency, employment status, education, European attachment, egalitarianism) included in all models; Standard errors in parentheses; Significance levels: ⁺ p<0.1, ** p<0.01, *** p<0.001

The results are depicted in Table 4.1. Column (1) shows that, at the individual level, the probability of supporting an EU-wide minimum income benefit scheme increases significantly by 0.5 percentage points as the perceived national unemployment rate increases by one unit, i.e., by 5 percentage points. The probability of supporting the policy measure decreases significantly by 1.6 percentage points as the perceived standard of living of the unemployed in one's country increases by one unit. Accordingly, the higher the unemployment rate or the worse the standard of living as unemployed is perceived by individuals, the more likely their support for an EU-wide minimum income scheme. This confirms my first hypothesis that

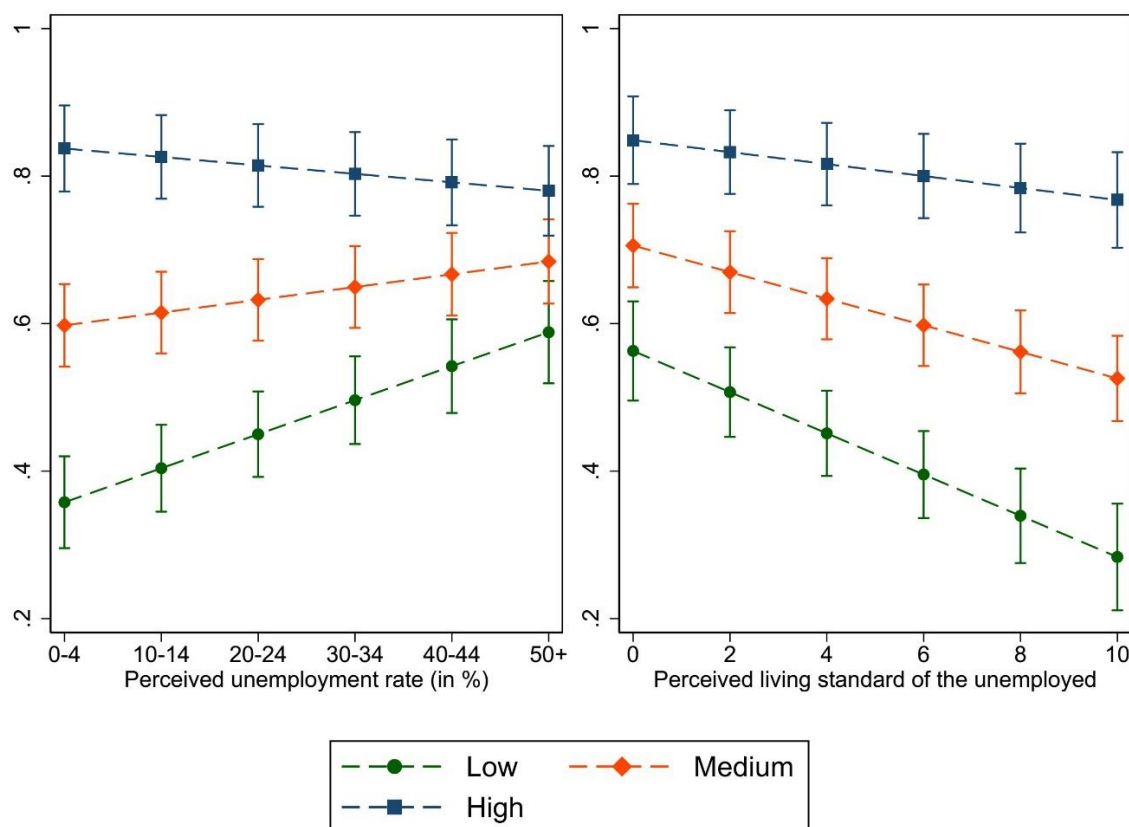
support for such a social policy is positively associated with more negative perceptions regarding unemployment (H1).

The results of column (1) additionally indicate a positive association between support for the policy measure and egalitarianism. Column (2) then shows that for respondents with non-egalitarian values, the probability of supporting an EU-wide minimum income benefit scheme increases significantly by 3 percentage points as the perceived national unemployment rate increases by one unit (5 percentage points). However, the more egalitarian the values of an individual, the less influential the perceived unemployment rate is on the attitudes. The coefficient of the perceived unemployment rate decreases significantly by 0.7 percentage points as the degree of egalitarianism increases by one unit. Similarly, column (3) shows that egalitarianism also reduces the negative association between the perceived living standard of the unemployed and the attitudes. For respondents without egalitarian values, they are 3.3 percentage points less likely to support an EU-wide minimum income benefit scheme as the perception rises by one unit. The size of the coefficient decreases significantly by 0.5 percentage points as the degree of egalitarianism increases by one unit.

Figure 4.4 plots the predicted probabilities of supporting an EU-wide minimum income scheme alongside unemployment perceptions and egalitarian values, illustrating the damping effect of egalitarianism on the role of unemployment perceptions: the association between the perceptions and support for the policy measure is strongest among individuals with low-level egalitarian values and weakest among those with high-level egalitarian values. In addition, individuals with high-level egalitarian values are most likely to exhibit support, regardless of their unemployment perceptions. Notably, among them, the probability of supporting the policy measure reaches about 80% for those holding the most positive unemployment perceptions additionally. The probability of support for this group is over 20 percentage points higher compared to individuals with low-level egalitarian values but the most negative unemployment perceptions. The results suggest that egalitarian values play a more crucial role than unemployment perceptions in shaping support for an EU social policy.

Additional analysis shows similar results for political left-right leaning (for full results see appendix table C.3). To summarise, the results are in line with my expectation of a conflict of interest among individuals between their economic self-interest and ideological motivations when forming attitudes towards an EU-wide social policy. The findings also confirm my hypothesis that the impact of unemployment perceptions on support for such a policy is stronger for individuals with less egalitarian values or a right-leaning ideology (H2).

Figure 4.4 Role of unemployment perceptions by egalitarianism



Notes: The figure plots the predicted probabilities of supporting an EU-wide minimum income benefit scheme alongside the perceived unemployment rate (left) and the perceived living standard of the unemployed (right), conditional on the level of egalitarianism (low, medium, high); The perceived unemployment rate ranges from ‘0–4%’ to ‘50% or more’ and the perceived living standard of the unemployed ranges from ‘extremely bad’ (0) to ‘extremely good’ (10); Using estimation specification for column (2) and column (3) of Table 4.1, respectively, with 95% CI.

Support for an EU-wide social policy is also associated with other individual characteristics that I include as control variables: younger individuals, individuals with lower income or education levels, individuals who are in education, unemployed or welfare dependent, and individuals who feel emotionally attached to the EU are more likely to exhibit their support (for full results, see appendix table C.4).

Turning to the contextual impact, columns (4) and (5) of Table 4.1 display the results of how national economic and welfare performances relate to attitudes towards an EU-wide minimum income scheme, while accounting for individual-level covariates. Column (4) shows that respondents in countries with a higher unemployment rate are more likely to support the policy measure (coef.: 0.013, significant at 10%-level). The coefficient reduces strongly and turns insignificant to including national welfare efficiency, as shown in column (5). In contrast, there is a significant negative relationship between welfare efficiency and the policy support

(coef.: -0.006), suggesting a stronger explanatory power of welfare efficiency than the unemployment rate as country-level determinants. Robustness checks reveal high consistency in the contextual impact when using net social expenditure and the at-risk-of-poverty rate as alternative indicators for country performances (see appendix table C.5). Overall, the results confirm my hypothesis that national economic and welfare performances relate to support for an EU-wide social policy negatively (H3).

Columns (4) and (5) additionally show that the coefficients of both indicators on unemployment perceptions remain unchanged after including contextual factors on national economic and welfare performances. It seems that the influence of unemployment perceptions on support for an EU-wide social policy cannot be explained by the contextual factors. As theoretically elaborated, contextual factors explain the country-specific differences in individuals' perceptions regarding unemployment. Consistent with the theoretical assumption, additional results show a significant positive association between unemployment perceptions and the country performances (see appendix table C.6). The result concerning the unchanged coefficients of unemployment perceptions on policy support in turn reveals a much more pronounced variation in the perceptions at the individual level compared to the cross-country variation.

4.5.3 Impact of unemployment perceptions by country performances

This section takes a step further by analysing how the national context influences the role of unemployment perceptions in shaping attitudes. I test whether the relationship between the perceptions and support for an EU-wide social policy is stronger in countries with better economic and welfare performances (H4).

Table 4.2 displays the results of random intercept models (column 1 and 2), random slope models (column 3 and 4), and two-step modelling (column 5 and 6).²¹ For better interpretation of the results, values of the contextual factors are standardised in all models. Panel a) shows that, on average, the higher national unemployment rate is perceived by individuals, the more likely their support for an EU-wide minimum income benefit scheme. The results are highly consistent across different models. Further, the positive coefficient of the perceived unemployment rate increases by 0.2 percentage points as national welfare efficiency increases by one standard deviation (SD) or national unemployment rate decreases by one SD. However,

²¹ In each of the random slope models, slopes are estimated only for the perception indicator used in the respective cross-level interaction. Results are quite robust to including slopes for further individual-level covariates.

the interaction terms are only significant in the random intercept models and no more significant when utilising random slope models or two-step modelling.

Accordingly, I find no substantial differences in the role of the perceived national unemployment rate alongside contextual factors, including the actual national unemployment rate. Notably, less than 3% of all respondents perceive a national unemployment rate that is lower than the actual rate, which varies between 4% and 20% across the 18 countries.²² Moreover, a majority of respondents perceive their country's unemployment rate as overly high, i.e., at least 10 percentage points higher than its actual value (for results on the distribution of misperceptions in each country, see appendix figure C.1). This should clarify my finding that the extent of the actual unemployment rate could not influence the role of the perceived unemployment rate in shaping attitudes. Additional analysis shows similar results when accounting for individual misperceptions of national unemployment rate (see appendix table C.7).

Panel b) of Table 4.2 shows that individuals who perceive a lower standard of living for the unemployed in their country are on average more likely to support an EU-wide minimum income scheme, and this finding held for all different models. In the random intercept models, the size of the coefficient increases by 0.2 percentage points (significant at 10%-level) as national welfare efficiency increases by one SD, and increases significantly by 0.4 percentage points as national unemployment rate decreases by one SD. The interaction term for national welfare efficiency turns insignificant with random slope or two-step modelling. In contrast, the interaction term for national unemployment rate remains significant in the random slope model. Though being again insignificant with two-step modelling, the direction and size of the coefficient are consistent across all models.

²² Given that individuals' perceptions of national unemployment rate were originally collected in categories, as mentioned in the previous section, it is only possible to roughly calculate their misperceptions.

Table 4.2 Role of unemployment perceptions by country performances

	Support for EU-wide minimum income benefit scheme					
	Random intercept		Random slope		Two-step	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel a) Role of perceived unemployment rate by contextual factors</i>						
Perc. unemployment rate	0.005*** (0.001)	0.005*** (0.001)	0.006** (0.002)	0.006** (0.002)	0.006** (0.002)	0.006** (0.002)
Perc. unemployment rate x Nat. welfare efficiency (std.)	0.002* (0.001)		0.002 (0.002)		0.002 (0.002)	
x Nat. unemployment rate (std.)		-0.002* (0.001)		-0.002 (0.002)		-0.002 (0.002)

Table 4.2 (continued)

	Random intercept		Random slope		Two-step	
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Panel b) Role of perceived living standard of unemployed by contextual factors</i>						
Perc. living standard of unemployed	-0.016*** (0.001)	-0.015*** (0.001)	-0.015*** (0.002)	-0.015*** (0.002)	-0.014*** (0.002)	-0.014*** (0.002)
Perc. living standard of unemployed x Nat. welfare efficiency (std.)	-0.002+ (0.001)		-0.002 (0.002)		-0.002 (0.002)	
x Nat. unemployment rate (std.)		0.004** (0.001)		0.004* (0.002)		0.003 (0.002)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
N – Individual	29,286	29,286	29,286	29,286	29,286	29,286
N – Country	18	18	18	18	18	18

Notes: Using multilevel linear probability models to test how contextual factors (in standardised values) influence coefficients of the perceived unemployment rate (panel a)) and the perceived living standard of the unemployed (panel b)). Column (1)–(2) display the results of random intercept models, column (3)–(4) display the results of random slope models, and column (5)–(6) display the results of two-step modelling; Both contextual factors, both indicators of perceptions, and the individual-level covariates (gender, age, age², equivalent net household income, welfare dependency, employment status, education, European attachment, egalitarianism) included in all models; Standard errors in parentheses; Significant levels: + p<0.1, * p<0.05, ** p<0.01, *** p<0.001.

In summary, the perceived living standard of the unemployed tend to influence support for an EU minimum income scheme differently alongside national unemployment rate as expected. The results of random intercept and random slope models indicate that the impact of the perception on the attitudes is stronger in countries with a lower unemployment rate. However, considering the results of all different models, I find no strong evidence of systematic changes in the role of unemployment perceptions alongside objective contextual factors. Therefore, my last hypothesis that perceptions regarding unemployment have a stronger impact in countries with better economic and welfare performances is not empirically supported. For analysing attitudes towards an EU-wide social policy, the findings suggest that unemployment perceptions play a role that could be influenced to a rather limited extent by national economic and welfare indicators.

4.6 Conclusions

The present study aims to gain a better understanding of public opinion on an EU-wide social policy that would guarantee a minimum standard of living for the poor, which targets inequality between European countries for reaching a social Europe. Using data for 18 European countries from the ESS and Eurostat in 2016, this paper contributes to the literature by investigating the different roles of individual perceptions regarding unemployment and objective national economic and welfare conditions.

Theoretically, this paper applies a theoretical framework that addresses the interplay of economic self-interest, ideology, and perceptions of the national context for explaining demand for redistribution. Specifically, I explore how perceptions of the national unemployment rate and the living conditions of the unemployed in the country influence attitudes towards an EU-wide social policy targeting unemployed Europeans together with other groups at risk of poverty. Further, I investigate the extent to which the role of these unemployment perceptions in shaping attitudes is influenced by individuals' ideological motivations and by national context on economic and welfare performances.

The empirical results confirm my overall assumption regarding the conditions under which EU citizens would support an EU-wide social policy. First, individuals in countries with poor economic and welfare performances are more likely to support an EU-wide minimum income benefit scheme. Second, the higher the unemployment rate or the worse the living standard of the unemployed in the country is perceived by individuals, the more likely their support. Additionally, the impact of the perceived living standard of the unemployed is stronger among

individuals from countries with a lower unemployment rate. However, there is no strong evidence of a systematic influence of objective country performances on the relationship between unemployment perceptions and support for an EU minimum income scheme. The role of unemployment perceptions in shaping support for the policy measure remains relatively consistent across national contexts.

In contrast, the impact of unemployment perceptions on support for the policy measure is – in line with my expectation – particularly strong for individuals with non-egalitarian values or a right-leaning ideology. This indicates a damping effect of egalitarianism and equivalent ideologies on the role of the perceptions, confirming a conflict of interest between economic self-interest and ideology also at the EU level for shaping the attitudes.

Methodologically, this paper adds to cross-country literature that analysed contextual effects using multilevel modelling. In particular, random slope models are widely used instead of random intercept models for testing cross-level interactions. This yet causes reliability problems regarding statistical inferences given a small sample size at the country level. This paper addresses this issue by including two-step modelling in addition to random intercept and random slope models to obtain robust conclusions regarding cross-level interactions between individual perceptions and national contextual factors.

Similar to previous studies, this research utilises secondary data and concentrated on the introduction of an EU-wide minimum income benefit scheme as a representative example of the EU's intervention in the social policy domain. Due to the limitations of existing data, it is difficult to study the role of unemployment perceptions and other determinants in explaining attitudes towards different dimensions regarding redistribution at the EU level, or towards other possible policy measures that tackle poverty within the EU. This invites further research using primary data to gain a more thorough understanding of public opinion on the EU's intervention in social policy as a whole.

Despite the data limitations, the findings of this paper provide important policy implications. First, citizens who live in, or believe that they live in, countries with poor economic and welfare conditions exhibit stronger support for an EU-wide social policy. Consistent with previous literature (e.g. Baute & Meuleman, 2020), this finding reveals a strong economic self-interest motivation behind it. However, it is member states in good economic conditions that would be required to contribute more financially to the policy measure, from which their citizens possibly do not directly benefit. This dilemma may consequently hinder social integration within the EU in terms of promoting redistribution between member states.

Nevertheless, and more importantly, my findings provide novel evidence that Europeans with egalitarian values tend to support the policy measure generally, and their perceptions regarding unemployment are thus much less relevant for their attitudes. This explains the result that in total two thirds of Europeans are in favour of an EU-wide minimum income benefit scheme, suggesting a high level of EU solidarity. The finding is contradictory to previous research that found relatively low support across countries for the EU to join in the decision-making on providing social welfare (e.g. Beaudonnet, 2013). This indicates different public opinion on different dimensions of the EU's intervention in the social policy domain, which should be taken into consideration in future debates on fostering integration within the EU. The overall support for an EU-wide minimum income scheme in turn reveals a high perceived legitimacy for introducing social policy that addresses poverty in the EU directly.

Chapter 5

Navigating subjective socioeconomic insecurity in times of crisis: An interplay of social status, crisis experiences and perceptions

Abstract

This paper aims to gain a better understanding of subjective socioeconomic insecurity in times of crisis. Using experiences from the financial crisis, the paper investigates the extent to which the COVID-19 pandemic and the Russia–Ukraine war have intensified feelings of socioeconomic insecurity among Germans. I analyse how this subjective insecurity is driven by individuals' initial social status and their personal crisis experiences and perceptions during the crises. I distinguish between objective and subjective social status, addressing the more critical role of the latter in shaping subjective insecurity. Using panel data from 2020 to 2022 and additional Eurobarometer data, the results show that Germans are less concerned about their jobs and more about their economic conditions. Subjective economic insecurity experienced a substantial increase in the summer of 2022, potentially as a result of the war, which led to an energy crisis and inflation in Germany. Individuals who perceive themselves at the bottom of society drive this increase, indicating a crucial role of subjective social status in explaining changes in feelings of insecurity. In contrast, objective status based on income, education or occupation does not explain the changes. Overall, lower-status groups are more likely to feel insecure. During crises, this negative association is intensified by individuals' crisis experiences such as income loss and their perceptions of economic affectedness.

This chapter is based on a manuscript that is submitted to *Soziale Welt* on 10 June 2024:

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5.1 Introduction

Major crises, such as the financial crisis in 2008/09 and the COVID-19 pandemic, have led to significant economic downturns worldwide. Consequently, individuals may feel insecure about their socioeconomic circumstances. Indeed, widespread subjective socioeconomic insecurity has emerged since the financial crisis, especially in economically hard-hit countries (Akaeda & Schöneck, 2022; Chung & van Oorschot, 2011; Lübke & Erlinghagen, 2014). Based on the example of the financial crisis, we might also expect increasing subjective insecurity after the beginning of the pandemic. Europeans may feel even more insecure due to Russia's attack on Ukraine since February 2022, which has resulted in a severe energy crisis and inflation in Europe, with the pandemic still ongoing.

Subjective socioeconomic insecurity is particularly relevant in times of crisis, as individuals may perceive themselves as vulnerable to economic and social changes in society, regardless of their actual socioeconomic circumstances. Higher subjective insecurity has further negative impacts on individuals concerning, for instance, their subjective well-being and mental health (Alcover et al., 2022; Fernandez-Urbano & Kulic, 2020), institutional trust (Delhey et al., 2023; Wroe, 2016) and welfare state attitudes (Marx, 2014).

Economically, the pandemic hit Germany moderately compared to other European countries. The expansion of short-time work has saved a sizeable share of the German population from losing their jobs. In addition, relief packages have been passed to mitigate the energy crisis and inflation caused by the Russia–Ukraine war. Against this background, investigating the extent to which Germans still feel insecure about their future circumstances is of particular interest.

This paper analyses changes in subjective socioeconomic insecurity in Germany from 2020, after the beginning of the pandemic, to around a half year after the war outbreak in 2022. I study to what extent individuals' subjective insecurity is driven by their social status at the onset of the pandemic, their personal crisis experiences during the pandemic and their perceptions of economic affectedness due to the pandemic. Moreover, I differentiate between objective and subjective social status. Individuals' subjective social status often does not correspond to their objective status based on personal occupation or income (M. Evans & Kelley, 2004) but explicitly refers to their assessment of their relative position in society. Subjective status also reflects the socioeconomic conditions of the entire household better than objective status (Oesch & Vigna, 2023). In this paper, I investigate whether subjective social status plays a more crucial role than objective status in shaping subjective insecurity in times of crisis.

For the main analysis, I use four-wave panel data collected in two research projects in Germany. The first wave took place in March 2020, the second in June and July 2020, the third in April 2021, and the last panel wave occurred in July and August 2022. The data contain three items on subjective insecurity asked in each wave, starting with the second panel wave. Objective and subjective measures of social status were included in the first panel wave, enabling me to investigate the impact of individuals' initial social status on their subjective insecurity during the pandemic. Additionally, I employ data from Eurobarometer surveys from 2004 to 2023 to illustrate the general trends of subjective insecurity in Germany over the past two decades.

Overall, Germans are less concerned about losing their jobs and more concerned about having financial difficulties and a much lower living standard. From summer 2020 to summer 2022, no substantial changes in insecurity regarding job loss occurred, but insecurity regarding the economic aspects clearly increased, particularly in summer 2022. Therefore, the pandemic seems to have had a relatively limited impact on subjective insecurity among Germans. Their concerns about their economic conditions increased significantly after the outbreak of the war. This observed increase is primarily driven by those with a lower subjective social position and could not be traced back to objective status based on income, education or occupation. This suggests, as expected, a more important role of subjective than objective social status in analysing changes in subjective insecurity during crises.

Across waves, individuals with a lower objective or subjective social status, particularly lower-income individuals, are more likely to feel insecure about their jobs and economic circumstances. Individuals are more likely to feel insecure when experiencing a personal crisis such as income loss or perceiving themselves to be more affected by the pandemic. The perceived affectedness of others, in contrast, plays no significant role. Moreover, individuals' crisis experiences and perceptions only partly explain the negative association between social status and subjective insecurity. Additional analysis using Eurobarometer data reveals a consistent pattern of higher subjective insecurity among lower-status groups over the last 20 years. During crises, the negative influence of social status is further intensified by individuals' crisis experiences and perceptions.

The rest of the paper is structured as follows: Section 5.2 analyses the potential impacts of the pandemic and the war on subjective socioeconomic insecurity in Germany in the context of earlier crises. Section 5.3 reviews the previous literature and addresses individuals' social status and their crisis experiences and perceptions as drivers of subjective insecurity. Section 5.4

introduces the study's data and methodology, and Section 5.5 presents its results. Section 5.6 discusses subjective insecurity among status groups in pre-pandemic times. Section 5.7 concludes the paper.

5.2 Subjective socioeconomic insecurity in Germany in times of crisis

The two major global crises of the last two decades, namely the financial crisis in 2008/09 and the recent COVID-19 pandemic, have led to substantial economic downturns worldwide. They have caused various degrees of decreased economic growth and increased unemployment rates in different countries. Although economically less affected by both crises than other European countries, Germany still experienced a contraction of its gross domestic product (GDP) of 5.7% in 2009 and 3.7% in 2020 (Statistisches Bundesamt, 2023). The country's GDP grew back within the two years following each crisis, suggesting a relatively short-term impact of both crises on the national economy.

The German government has enacted different policy measures in response to both crises to provide financial and social assistance to the citizens. Short-time work, among others, was largely used to cope with the financial crisis and further expanded shortly after the pandemic began. Indeed, no significant rise in unemployment took place in Germany in 2009, as the unemployment rate rose slightly by 0.3 percentage points compared to 2008 (7.8%) and continued to drop over the following ten years (Bundesagentur für Arbeit, 2023). This suggests that the short-time work scheme successfully buffered the negative impact of the financial crisis on the German labour market. By contrast, the use of short-time work during the pandemic, although much more intensified, especially during the first pandemic wave in the spring of 2020 (Gehrke & Weber, 2020), seems to have had a less encompassing cushioning effect. The unemployment rate increased from 5.0% in 2019 to 5.9% in 2020. In the following year, the unemployment rate dropped slightly to 5.7%, and it had not yet returned to the pre-pandemic level by the end of 2022 (Bundesagentur für Arbeit, 2023). Compared to the financial crisis, the pandemic has had a somewhat more significant and longer-lasting negative impact on the labour market. Nevertheless, Germany's unemployment rate has remained relatively low over the last 15 years.

Against a crisis that resulted in a decreasing national economy and increasing unemployment, individuals may feel particularly insecure about their own socioeconomic circumstances. Empirical evidence shows that German citizens felt increased concern about the financial situation of their households in 2008 (Burzan & Kohrs, 2013; Niehues & Stockhausen,

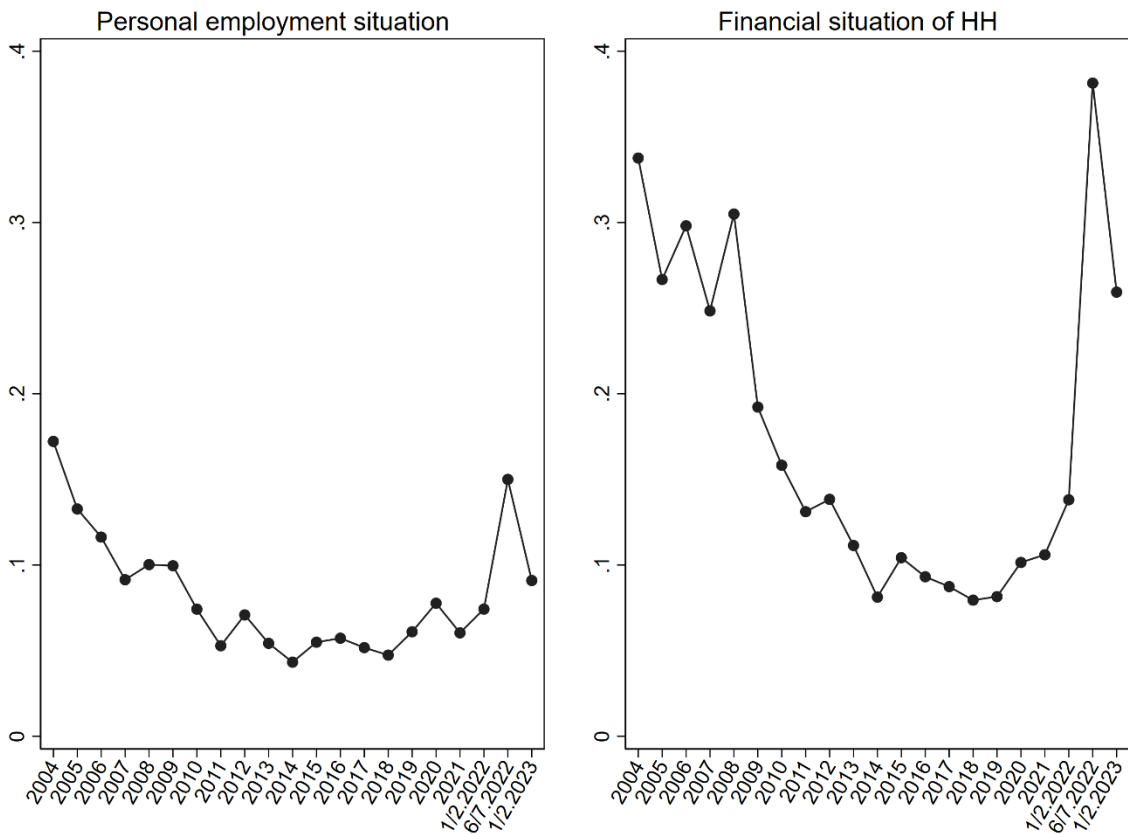
2020) when the economic crisis had not yet hit Germany. This suggests that citizens were concerned about their country and personal circumstances as the crisis hit other countries. Interestingly, public concern began to decrease in 2009 when Germany had just been hit by the financial crisis (ibid.). This may be surprising at first glance, but it is consistent with the fact that Germany was economically much less hard hit than other countries and recovered quickly afterwards. Moreover, it indicates that Germans are optimistic about themselves and their country in confronting the crisis. Following this logic, one may expect similar changes in subjective socioeconomic insecurity among German citizens after the COVID-19 pandemic began. Overall, there should be a significant rise in subjective insecurity since 2020. Taking the discussed differences regarding the labour market consequences of the two crises into consideration, the pandemic may have resulted in stronger and longer-lasting insecurity feelings among Germans.

In 2022, as the pandemic continued, the Russia–Ukraine war broke out at the end of February. This triggered an acute energy crisis in Germany, having a further negative impact on the national economy. Since then, relief packages have been adopted to cope with the situation, such as discounted local transport tickets (the ‘9 Euro-Ticket’) and the tax reduction for gas and district heating. Despite these measures, the year-on-year inflation rate in 2022 reached a historically high level (+7.9%), and the monthly inflation rate exceeded the 10-per cent threshold in October (Statistische Bundesamt, 2024). Under these circumstances, Germans may feel even more insecure about their own socioeconomic conditions.

Using Eurobarometer data, Figure 5.1 illustrates the trend of subjective insecurity among Germans at the aggregate level over a long period from 2004 to the beginning of 2023, encompassing the financial crisis, the pandemic and the war. I use data from Eurobarometer 96.3 and 97.5 for calculating statistics in 2022, as the former data were collected between 18 January and 14 February, before the outbreak of the war, and the latter were collected after the outbreak, in June and July 2022. Statistics for these two specific periods are presented separately to differentiate the potential impact of the war and the accompanying energy crisis and inflation from the impact of the pandemic on subjective insecurity.²³

²³ For statistics before 2022, I calculate the mean for each year containing multiple data collections. All data, including those for 2022 and the beginning of 2023, stem from Eurobarometer surveys and were accessed via the GESIS Data Catalogue. Detailed information on data sources is provided in a technical appendix (appendix D3).

Figure 5.1 Expecting own circumstances worse next year, 2004 – 2023 in Germany



Notes: The figure shows the share of Germans from 2004 to 2023 who expected their personal employment situation (left) and the financial situation of their household (right) to be worse in the upcoming year. Data source: Eurobarometer; own calculations, weights applied.

German citizens felt relatively secure about their employment situation over the last two decades, as shown in the left-hand chart in Figure 5.1. The share of respondents who expected a worse personal employment situation for the next year was below 20% throughout this period and mostly below 10%. Their subjective insecurity was relatively high (above 10%) before 2007, which could be linked to economic stagnation, rising unemployment and the Hartz reforms in Germany in the early 2000s. Focusing on the years of the financial crisis, a small rise occurred in 2008, indicating slightly higher subjective insecurity about one’s employment situation. This lasted until 2009, and the share of insecure respondents dropped in 2010 and afterwards. After the pandemic began, a similarly small rise took place in 2020 in the share of respondents who expected their employment situation to get worse. The share decreased from 2020 to 2021 but increased again in January/February 2022. Germans seemed to have persistent concerns about their employment situation, confirming my assumption of higher subjective insecurity during the pandemic. Notably, in June/July 2022, the share of Germans who

expressed concern further increased to about 15%, more than twice the share in early 2022 (about 7%). This suggests that the Russia–Ukraine war, together with the energy crisis and inflation, had a more significant impact on Germans’ perceived insecurity than did the pandemic. The share of insecure individuals dropped to approximately 9% in early 2023, still higher than one year before.

The right-hand chart in Figure 5.1 demonstrates a more dynamic pattern regarding whether Germans felt insecure about their household’s financial situation. In addition to the relatively high levels of subjective insecurity before the financial crisis, a further peak occurred in 2008: over 30% expected their financial situation to worsen the following year. Afterwards, the share of insecure respondents dropped drastically and remained low (below 10%) in the last few years until 2019. In 2020, subjective insecurity increased again. The share of respondents who felt insecure rose further in 2021 and 2022, reaching around 14% at the beginning of 2022. Notably, in the summer of 2022, it drastically increased to almost 40%, leading to the highest peak in the last 20 years. The share of insecure individuals decreased to about 26% at the beginning of 2023, which remains relatively high compared to early 2022 and prior. These changes suggest that German respondents have become much more concerned about their future financial situation since the start of the Russia–Ukraine war.

To sum up, compared to the situation during the financial crisis, Germans had less optimistic views about their future socioeconomic circumstances over the course of the pandemic. Here, we should keep in mind the different time spans of the two crises, as the financial crisis only hit Germany briefly in 2009, while the pandemic lasted for over three years. To analyse subjective insecurity in 2022, we need to also consider the war, as well as the energy crisis and inflation, since they seem to have had a substantial impact on subjective insecurity. Overall, the Eurobarometer statistics reveal increasing subjective insecurity in Germany since 2020. Individuals have more significant concerns about their financial situation than their employment situation. Taking these findings as a starting point, this paper aims to gain a better understanding of changes in subjective socioeconomic insecurity among Germans during the crises from 2020 to 2022. In particular, I analyse the extent to which the changes differ among individuals.

5.3 Social status, crisis perceptions and subjective socioeconomic insecurity

Subjective socioeconomic insecurity has drawn attention since the end of the last century due to globalisation and labour market flexibilization, together with the increasing proliferation of atypical employment (Countouris, 2007). The debate on subjective insecurity further expanded after the global financial crisis. Against this background, scholars – mainly conducting country-comparative analyses – have analysed how subjective insecurity is driven by (changing) contextual factors (e.g. Akaeda & Schöneck, 2022; Chung & van Oorschot, 2011; Lübke & Erlinghagen, 2014; van Oorschot & Chung, 2015). In contrast, this paper investigates how subjective insecurity is related to different individual characteristics, focusing on subjective insecurity during crises like the COVID-19 pandemic. I analyse subjective insecurity in terms of concerns about future socioeconomic circumstances.

Although not addressing individual-level determinants explicitly, previous research has found substantial differences regarding subjective insecurity among individuals with different social statuses. For instance, individuals with unemployment experiences or precarious socioeconomic circumstances (e.g. temporary contract and lower income) are more worried about losing their jobs and feel insecure about their general employment situation (Böckerman, 2004; Chung, 2019; Lübke & Erlinghagen, 2014). In addition, lower-status groups have more concern about having financial difficulties in the near future (Akaeda & Schöneck, 2022; Burgoon & Dekker, 2010; Mau et al., 2012). Overall, individuals with a lower social status exhibit higher levels of subjective socioeconomic insecurity. Consequently, we could expect a comparable influence of social status on subjective insecurity after the pandemic outbreak.

As discussed in Section 5.2, the pandemic has led to a relatively small increase in unemployment and a much larger increase in short-time work in Germany, accompanied by decreasing incomes for affected individuals. Widely used indicators of social status, such as occupation or income, may have thus changed rapidly over the course of the pandemic, depending on individuals' own crisis experiences, such as job changes or income loss. Accordingly, I distinguish between social status at the beginning of the pandemic and changes in employment or income during the pandemic. Individuals who have experienced job or income loss should feel more insecure about their future socioeconomic circumstances. More importantly, those with a lower social status at the onset of the pandemic tend to have higher subjective insecurity, regardless of potential subsequent changes in their employment or income. Further, individuals with a lower initial status are at higher risk of being affected in terms of

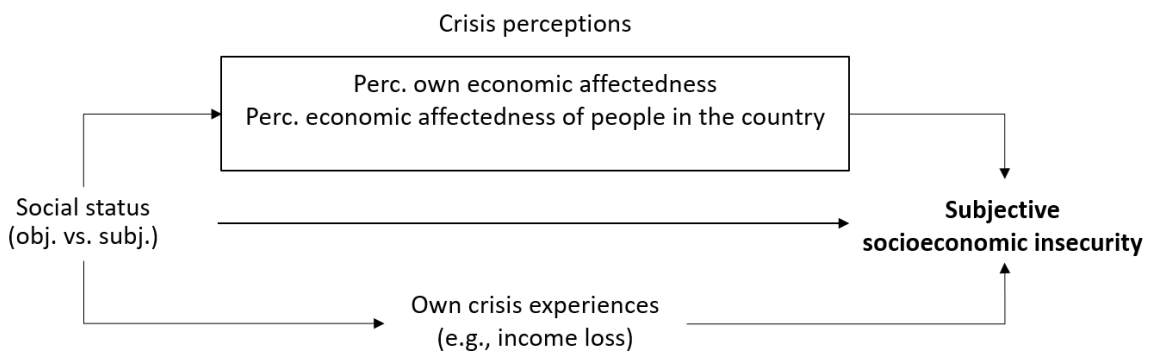
shifting into short-time work or losing their jobs and income, which leads to higher subjective socioeconomic insecurity.

In addition to classical objective measures of social status, subjective social status is often used in empirical studies, particularly for analysing different subjective indicators of individuals, such as subjective well-being (Präg et al., 2016) and support for the radical right (Gidron & Hall, 2017). Subjective social status highlights individuals' own position relative to others in society. More importantly, it addresses how individuals perceive their relative position in the social hierarchy, which may not always correspond to their objective status based on their occupation or income. Indeed, previous research has found a mismatch between objective and subjective social statuses, as individuals tend to place themselves in the middle of the social hierarchy (M. Evans & Kelley, 2004). Accordingly, as empirically confirmed, subjective social position plays a more critical role than objective measures in explaining subjective outcomes (e.g. Tan et al., 2020). Moreover, despite being referred to as the 'middle-class bias' (OECD, 2019), the disparities between objective and subjective measures do not necessarily imply that individuals misperceive their own status. Instead, subjective social position can offer a more comprehensive assessment than a singular measure such as income, occupation or education, as individuals may consider both their own and their partners' education, occupation, income and wealth when evaluating their overall social standing. A recent study by Oesch and Vigna (2023) corroborates that subjective social status provides a more accurate reflection of income and wealth within individuals' households than the objective measure based on occupation and additional employment details. Against this background, I argue that individuals' self-perceived social position also predicts their subjective insecurity better than their objective status.

Finally, individuals' perceptions of economic affectedness due to a crisis also shape their perceived insecurity. First, individuals may feel insecure about their future circumstances when they perceive themselves as economically affected by a crisis; notably, this perception is not necessarily solely due to their actual crisis experiences, such as income loss. Second, individuals may feel insecure when they perceive others in the country suffering from a crisis. Their initial social status at the beginning of a crisis plays a role in shaping both kinds of crisis perceptions. Empirical evidence shows that lower-status groups, in particular, perceive their country and themselves as highly affected economically by the financial crisis (Giugni & Mexi, 2018; Kiess & Lahusen, 2018; Uba, 2018). Similarly, lower-status groups may perceive themselves and other people in the country as more affected by the pandemic, resulting in higher subjective insecurity regarding their own future circumstances.

In a nutshell, individuals' initial social status plays a significant role in forming their subjective socioeconomic insecurity during a crisis. Their actual crisis experiences and perceptions of affectedness act as mediators that partly explain how initial status shapes subjective insecurity. Figure 5.2 illustrates the formation of subjective insecurity in times of crisis, addressing the interplay between individuals' initial social status at the onset of a crisis, their own crisis experiences during the crisis and their perceptions of economic affectedness due to the crisis. Given the potential disparities between objective and subjective measures of social status and that subjective social status better predicts household socioeconomic conditions, I differentiate the two measures to analyse their different impacts on subjective insecurity. First, I expect initial social status to have a negative effect on subjective insecurity during a crisis: *Individuals with a lower social status are more likely to feel insecure about their future socioeconomic circumstances* (H1). Second, I hypothesise that *subjective social status has a stronger influence on subjective insecurity than objective social status* (H2).

Figure 5.2 Formation of subjective socioeconomic insecurity in times of crisis



Subjective insecurity is heightened overall after the outbreak of a crisis, such as the financial crisis or the pandemic, as shown in Section 5.2 based on Eurobarometer statistics. I assume that changes in subjective insecurity over time differ among individuals with different social statuses. Using data from the European Social Survey fielded in 2008/2009, just after the financial crisis, Mau et al. (2012) found higher subjective insecurity in countries with increasing unemployment rates and inequality, especially among individuals with a lower social status. The authors pointed out that underprivileged groups may be generally more sensitive to crises and changing institutional contexts and are thus more likely to feel insecure. Following this argument, we could expect a particularly strong increase in subjective insecurity for lower-status groups. In contrast to Mau et al. and previous studies that used cross-sectional data, I utilise panel data from 2020 to 2022 to analyse changes in subjective insecurity among Germans. The panel design enables me to additionally employ fixed effects models to investigate how

individual changes in subjective insecurity during this period differ across different status groups. I hypothesise that *the probability of feeling socioeconomically insecure increases over time, especially for individuals with a lower social status* (H3). Furthermore, distinguishing between objective and subjective social status, I expect that *the increase in subjective insecurity over time is more strongly related to subjective social status* (H4).

During crises, individuals' initial social status – in addition to directly impacting their subjective insecurity – influences their subjective insecurity by determining their crisis experiences and perceptions. This mechanism should hold for both objective and subjective measures of social status. Lower-status groups are more prone to experiencing job changes or income loss and assessing themselves and others as negatively affected by a crisis. Consequently, they are more likely to feel socioeconomically insecure. Therefore, *the negative impact of individuals' social status on their subjective insecurity during a crisis should be partly explained by their crisis experiences and perceptions* (H5). Meanwhile, *individuals with their own crisis experiences (e.g., income loss) are more likely to feel insecure about their future socioeconomic circumstances* (H5a). Furthermore, *the more highly individuals perceive themselves to be economically affected by a crisis* (H5b), *or the more highly they perceive others in their country to be affected* (H5c), *the more likely they are to feel insecure*.

As discussed earlier and addressed within Hypotheses H5b and H5c, individuals' perceptions regarding their own and others' economic affectedness should have a similar positive influence on their subjective insecurity. This raises the question of the extent to which they feel insecure when perceiving their own affectedness as higher and others' affectedness as lower, or vice versa. Previous research has revealed that individuals base their assessments on cognitive comparisons with their past selves and with groups in their social environment (for a review, see Smith et al., 2012). In this sense, individuals feel insecure about their future socioeconomic circumstances when assessing their present employment or financial situation as worse than in pre-crisis times. Their subjective insecurity is intensified when they perceive themselves as more strongly affected by a crisis than others in their country. Building on this, I finally hypothesise that *individuals are more likely to feel socioeconomically insecure when perceiving themselves to be economically more highly affected by a crisis than others in the country* (H6).

5.4 Data and methodology

I use data containing four panel waves from 2020 to 2022, collected in two research projects in Germany (Beblo et al., 2023a; Lohmann et al., 2024). Data collection of the first panel wave took place from 6 March to 31 March 2020, as the pandemic has just begun in Germany. A quota sample alongside gender, age, education and income was drawn from an online access panel, with 1,535 participants in the first wave. The second panel wave was collected from 23 June to 12 July 2020, the third from 12 April to 28 April 2021, and the last panel wave was collected from 15 July to 19 August 2022. 85% of the original sample, or 1,304 respondents, participated in wave 2, 1,034 (67.5%) participated in wave 3, and 896 respondents of the original sample (58.4%) participated in the last wave.²⁴

The dataset includes three different measures of subjective socioeconomic insecurity. Starting with the second panel wave, respondents were asked in each wave to assess how likely they were in the next 12 months to 1) lose their job because of layoffs or company closure; 2) have difficulties paying current expenses, such as rent, utilities or loan repayments; 3) have to drastically lower their standard of living. Though lacking data for March 2020, the subsequent data allow me to capture changes in subjective insecurity from summer 2020 to summer 2022. Moreover, the three items address different dimensions of subjective insecurity, enabling me to analyse potential differences in job and economic insecurity. The last panel wave allows me to additionally investigate how the Russia–Ukraine war and the accompanying energy crisis and inflation influenced subjective insecurity while the pandemic was still ongoing. A further strength of the dataset is that it contains detailed information on respondents' income and employment situation and how they perceive their own economic affectedness due to the pandemic and that of other people in Germany. These items were also collected in each wave, starting with the second panel wave. Data from the first panel wave, in turn, contain different objective and subjective measures of social status. These data enable me to investigate how subjective insecurity and its changes over time are related to individuals' initial social status, objective changes in their employment and income, and their perceptions of economic affectedness.

Regarding subjective insecurity, the answers for each of the three items range from 0 to 100, and the higher the score, the higher the assessed risk. Additionally, respondents were given

²⁴ In the third and fourth panel waves, fresh samples of 203 and 220 respondents were added, respectively. In this paper, I only analyse the original sample. Further detailed information on data collection is provided in Lohmann et al. (2024).

the option ‘This has already happened’. In this case, they did not report their perceived future risks. For the main analysis, I recode each item into a dummy showing whether respondents feel insecure, defining it as ‘feeling insecure’ when respondents reported a perceived risk of 50 or higher or selected ‘This has already happened’.²⁵ As robustness checks, I use two alternative operationalisations of the dependent variables. In the first variant, I operationalise each item as a metric variable, denoting different degrees of subjective insecurity from low (1: perceived risk 0–20) to high (5: perceived risk 81–100 or ‘This has already happened’ selected). In the second variant, I operationalise the dependent variables as dummies, as in the main analysis, but exclude for each item respondents who selected ‘This has already happened’. The results are quite consistent across the different operationalisations. I discuss the results of the main analysis in detail in Section 5 and provide the results of the robustness checks in appendix D2 (tables D2.1–D2.4).

To measure individuals’ own crisis experiences, I first use the item where respondents reported how their net household income has changed. The answers range from 1 (‘strongly decreased’) to 5 (‘strongly increased’). I summarise the variable into three categories (i.e., ‘decreased’, ‘about the same’ and ‘increased’).

Another typical crisis experience during the pandemic involves a job loss or a shift to short-time work. Based on information on employment status that was asked about in all four panel waves, I build a new variable that captures changes in employment status compared to the first wave (March 2020), with four categories (‘(self-)employed, unchanged’, ‘shifted to short-time work’, ‘lost own job’ and ‘other/inactive’). Matching the official statistics on labour market dynamics (Bundesagentur für Arbeit, 2023; 2024), only about 1% of the respondents lost their job, and 4% shifted to short-time work in the second wave, that is, between March 2020 and June/July 2020. The changes are smaller for the subsequent waves. Thus, I summarise these two categories for the analysis.

Regarding perceptions of economic affectedness due to the pandemic, respondents were asked to place themselves and people in Germany, respectively, on a vertical scale from bottom (0 – ‘no economic affectedness’) to top (100 – ‘strong economic affectedness’). I divide the items by 10 in the regression analysis. Additionally, I take respondents’ own perceived

²⁵ Respondents were asked how likely they are to lose their job only when they had reported in previous questions that they are (self-)employed or have had paid work in the last seven days. The (self-)employed respondents who chose ‘This has already happened’ must have still had their jobs at the moment of data collection, as indicated, but they may have received an announcement of layoffs or company closure. Therefore, I also categorise these respondents as ‘feeling insecure’ about their job situation.

affectedness minus the perceived affectedness of people in Germany to calculate their own perceived affectedness relative to others in Germany. A score above 0 refers to a higher perceived affectedness for themselves than others. I then build a new dummy variable denoting whether respondents perceived themselves as more highly affected than others.

The data contain different objective measures of social status at the onset of the pandemic. I use monthly net household income as the objective measure for the main analysis. OECD (2019) defines the middle-income group as households with an equivalent disposable income between 75% and 200% of the national median. Following this definition and based on the median income in Germany in 2019, I categorise respondents with a monthly net household income between 1,500 and 4,000 Euro as the middle-income group (medium status).²⁶ Respondents with a monthly income of less than 1,500 Euro are categorised as the lower-income group (lower status), and those with an income of more than 4,000 Euro as the higher-income group (higher status). Since respondents reported their income in categories, I do not calculate the equivalent income for each household but control for household size in the regression analysis. For additional analyses, I included education (lower, medium or higher) and occupation (manual, skilled/service or professional/clerical) as two further objective measures of social status.

Regarding subjective social position, respondents were asked to place themselves within society on a vertical scale from bottom (0) to top (100). I categorise those who put themselves below 30 as the lower-status group, between 30 and 70 as the medium-status group, and those who placed themselves at 70 or higher as the higher-status group.

Besides household size, I include gender, age and a dummy on whether respondents live in eastern Germany as further controls and use the unbalanced sample.²⁷ Weights are applied in all analyses. After data cleaning, the sample consists of 2,616 observations from waves 2 to 4, with 1,052 respondents in wave 2 (June/July 2020), 836 in wave 3 (April 2021) and 728 respondents in wave 4 (July/August 2022). The sample is smaller for analysing job insecurity since unemployed respondents are excluded, leaving 1,607 observations, containing 650

²⁶ The yearly median equivalent net household income in Germany was 23,515 Euro in 2019, as documented in Eurostat (2023c), that is, approximately 2,000 Euro per month.

²⁷ The first panel wave contains an information treatment for a randomly chosen subsample initially designed to analyse income misperceptions, which is not the focus of this paper. For this reason, I additionally control for treatment group membership in all regressions.

respondents in wave 2, 526 in wave 3 and 431 in wave 4. Summary statistics of the variables for the main and additional analyses are displayed in table D1.1 in appendix D1.

In addition to descriptive analysis, I employ pooled OLS models with clustered robust standard errors. I estimate linear probability models for the main analysis since all three dependent variables are dichotomous. I test how individuals' objective and subjective social statuses at the onset of the pandemic relate to their subjective insecurity since then. Additionally, I use fixed effects models to check the consistency of the results regarding the changes in subjective insecurity among different status groups over time. Furthermore, I investigate the extent to which changes in employment and income and perceptions of economic affectedness explain subjective insecurity.

5.5 Results

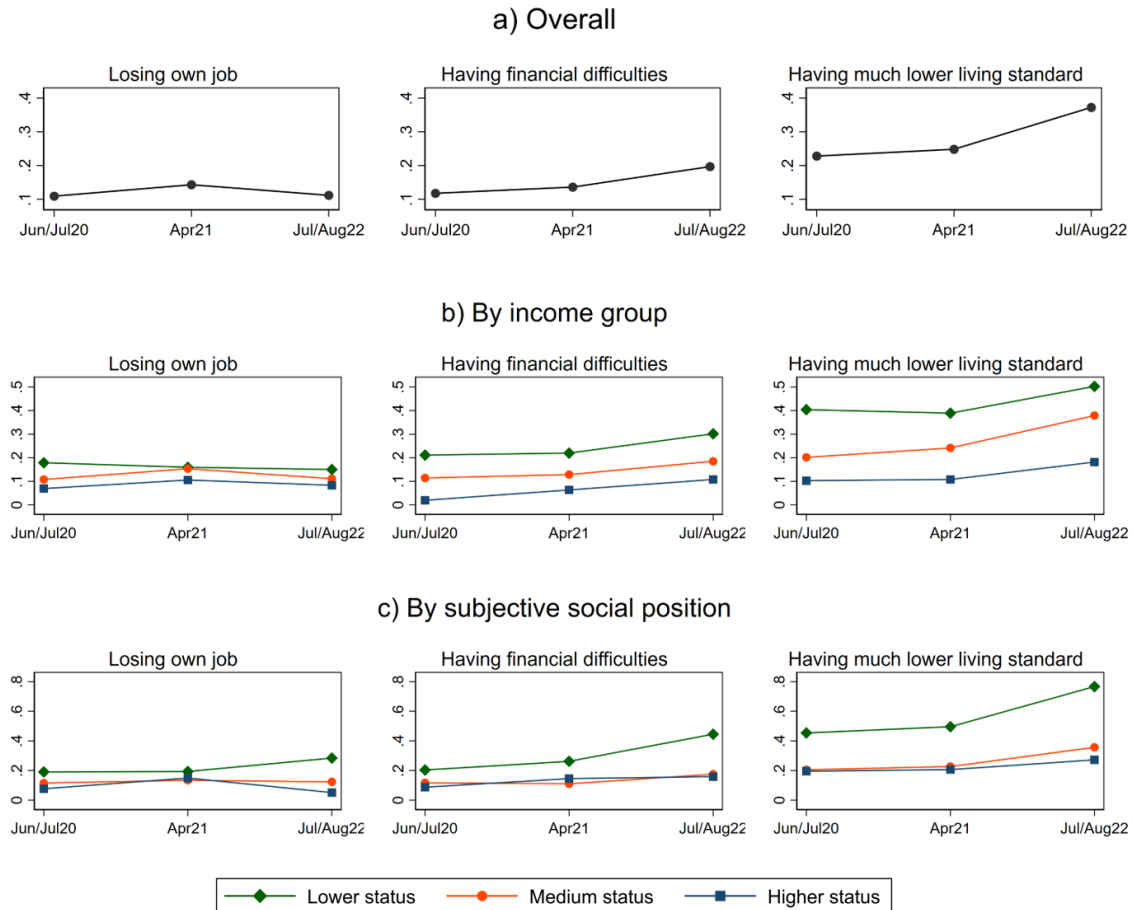
5.5.1 Descriptive statistics: Changes in subjective insecurity by social status

Figure 5.3 shows how subjective socioeconomic insecurity in Germany has changed from June/July 2020 to July/August 2022. Figure 5.3a) illustrates the overall changes, and Figures 5.3b) and 5.3c) illustrate the changes by income group and subjective social position at the beginning of the pandemic, respectively. Overall, subjective job insecurity among German respondents was relatively stable over time, as shown in Figure 5.3a). After a small rise in April 2021, subjective job insecurity dropped in July/August 2022 back to the level of two years before. The share of respondents concerned about losing their jobs in the next 12 months remained at a relatively low level, that is, less than 15% in all three waves. Consistent with the observed trends based on Eurobarometer data in Figure 5.1 (see Section 5.2), respondents were more concerned about their financial situation than their employment situation. No substantial change in subjective economic insecurity occurred from June/July 2020 to April 2021, but a clear increase took place by July/August 2022. Moreover, German respondents were throughout more likely to worry about having a much lower living standard than about having financial difficulties. More than 20% of respondents were concerned about the former in the summer of 2020, and the share increased to almost 40% by the summer of 2022.

Figure 5.3b) demonstrates a clear pattern: the higher-income group is least likely to feel insecure about their future socioeconomic circumstances, and the lower-income group is most likely to feel insecure. In particular, about half of the lower-income group were concerned about having a much lower living standard in July/August 2022, while less than 20% of the higher-income group were worried at the time. Changes in subjective insecurity from June/July 2020

to July/August 2022 were similar across different income groups. This indicates that the observed overall increase in subjective insecurity cannot be explained by income.

Figure 5.3 Changes of subjective socioeconomic insecurity, 2020 – 2022 in Germany



Notes: The figure presents the changes from June/July 2020 to July/August 2022 in the share of Germans who were worried about losing their jobs (left), having financial difficulties (middle) and having a much lower standard of living (right) in the next 12 months; figures 5.3a), 5.3b) and 5.3c) show the overall changes, changes by income group and by subjective social position, respectively; using own data, weights applied.

Figure 5.3c) shows that respondents who place themselves in the lower-status group are also more likely to feel insecure, applying to all three items on subjective insecurity. Notably, the situations for the medium and higher subjective status groups are very similar. Over all three panel waves, subjective insecurity for respondents with a medium or higher subjective status remained relatively stable. In contrast, a small increase in subjective job insecurity was evident in the last panel wave in July/August 2022 for the lower subjective status group. Furthermore, a substantial increase in subjective economic insecurity appeared among this group, especially in July/August 2022. This corresponds to the overall changes across all respondents depicted in Figure 5.3a). In the summer of 2022, over 40% of the lower subjective status group were concerned about having financial difficulties, and almost 80% were worried about having a

much lower standard of living. Accordingly, the overall increase in subjective economic insecurity seems to be driven by respondents with a lower subjective status.

To summarise, the descriptive statistics reveal that respondents with a lower social status at the onset of the pandemic were more likely to feel insecure, as expected. While job insecurity remained low, a substantial increase in economic insecurity took place from summer 2020 to summer 2022. The increase could possibly be traced back to respondents who perceive themselves to be at the lower end of the social hierarchy. This reveals the importance of including subjective social position in addition to objective measures for analysing subjective insecurity.

5.5.2 Impact of objective and subjective social status

In this section, I analyse how subjective insecurity is related to different objective and subjective measures of social status, with a focus on individuals' initial status at the beginning of the pandemic. In addition, I investigate whether the observed increasing subjective insecurity over time is indeed driven by respondents with a lower subjective social position, as revealed by the descriptive statistics. This section presents the results of the main analysis using pooled OLS linear probability models since the dependent variables on subjective insecurity are dichotomous. The results are robust using alternative operationalisations for the dependent variables, as discussed in Section 5.4 (see also tables D2.1 and D2.2 in appendix D2).

Table 5.1 displays the main results, controlling for individual characteristics, including gender, age, household size and place of residence. Panel a) shows the coefficients of income group and subjective social position across all waves. Compared to respondents with a lower status at the onset of the pandemic, those with a higher initial status are significantly less likely to be worried about losing their jobs, having financial difficulties and having a much lower standard of living in the next 12 months. The medium-status group is also less likely to have concerns about having financial difficulties and a much lower living standard. These patterns hold for both income group and subjective social position. Consistent with the descriptive results, the coefficients for the subjective medium- and higher-status groups are similar for all three dependent variables, indicating no substantial differences between the two groups. In contrast, higher-income respondents are less likely to feel insecure than those with a medium income.

Using education and occupation as alternative objective measures of social status, I find that higher-educated individuals and white-collar individuals or those with a higher

administrative position are less likely to feel economically insecure (for detailed results, see table D1.2 in appendix D1). Overall, the results confirm my first hypothesis that lower-status groups are more likely to feel insecure about their future socioeconomic circumstances (H1). A significant gap in subjective insecurity exists between the lower subjective status groups and the other two groups, though no substantial gap exists between the medium- and the higher-status groups. In contrast, medium-income individuals are more likely to feel insecure about their future circumstances than higher-income ones, and lower-income individuals are most likely to feel insecure. This reveals a clearer negative association between subjective insecurity and income. Therefore, my hypothesis that the influence of subjective social position is stronger than objective social status (H2) is not empirically supported. Nevertheless, there is also no evidence that objective measures have a stronger influence in general: Appendix table D1.2 shows that neither education nor occupation plays a more important role than subjective social position in subjective insecurity. Rather, my findings suggest a stronger influence of income on subjective insecurity across different measures of social status.

Table 5.1 Social status and subjective insecurity

	Losing own job		Having financial difficulties		Having much lower living standard	
	(1)	(2)	(3)	(4)	(5)	(6)
	Inc.	Subj. pos.	Inc.	Subj. pos.	Inc.	Subj. pos.
Panel a) by social status						
<i>Ref.: Lower status</i>						
Medium status	-0.058 (0.031)	-0.087 (0.050)	-0.132*** (0.027)	-0.158*** (0.038)	-0.206*** (0.032)	-0.300*** (0.041)
Higher status	-0.112** (0.036)	-0.119* (0.051)	-0.228*** (0.029)	-0.167*** (0.039)	-0.367*** (0.037)	-0.338*** (0.043)
<i>Ref.: Jun/Jul20</i>						
Apr21	0.033* (0.017)	0.035* (0.017)	0.018 (0.013)	0.018 (0.013)	0.018 (0.016)	0.019 (0.017)
Jul/Aug22	0.000 (0.018)	0.003 (0.018)	0.079*** (0.017)	0.080*** (0.017)	0.143*** (0.020)	0.144*** (0.020)

Table 5.1 (continued)

	Losing own job		Having financial difficulties		Having much lower living standard	
	(1)	(2)	(3)	(4)	(5)	(6)
	Inc.	Subj. pos.	Inc.	Subj. pos.	Inc.	Subj. pos.
Panel b) by social status for each wave						
<i>Ref.: Lower status</i>						
Medium status	-0.090*	-0.072	-0.130***	-0.088*	-0.249***	-0.250***
	(0.043)	(0.062)	(0.031)	(0.041)	(0.038)	(0.051)
Higher status	-0.145**	-0.114	-0.240***	-0.122**	-0.372***	-0.265***
	(0.047)	(0.063)	(0.032)	(0.042)	(0.043)	(0.054)
<i>Ref.: Jun/Jul20</i>						
Apr21	-0.019	0.002	0.005	0.057	-0.021	0.042
	(0.051)	(0.076)	(0.032)	(0.043)	(0.038)	(0.051)
Jul/Aug22	-0.029	0.088	0.090*	0.240***	0.095	0.310***
	(0.063)	(0.100)	(0.045)	(0.065)	(0.048)	(0.067)
<i>Ref.: Apr21 x</i>						
<i>Lower status</i>						
Apr21 x Medium status	0.064	0.017	0.009	-0.065	0.059	-0.023
	(0.055)	(0.079)	(0.037)	(0.046)	(0.044)	(0.056)
Apr21 x Higher status	0.059	0.072	0.039	0.001	0.024	-0.033
	(0.058)	(0.082)	(0.038)	(0.051)	(0.048)	(0.061)
<i>Ref.: Jul/Aug22 x</i>						
<i>Lower status</i>						
Jul/Aug22 x Medium status	0.033	-0.081	-0.018	-0.184**	0.084	-0.162*
	(0.067)	(0.102)	(0.050)	(0.068)	(0.055)	(0.072)
Jul/Aug22 x Higher status	0.042	-0.111	-0.000	-0.166*	-0.017	-0.231**
	(0.072)	(0.103)	(0.052)	(0.072)	(0.060)	(0.075)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,607	1,607	2,616	2,616	2,616	2,616

Notes: Using linear probability models; income group used as the measure of social status in columns (1), (3) and (5), and subjective social position used in columns (2), (4) and (6); individual controls are gender, age, household size, place of residence (West/East Germany) and treatment group membership; weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

After accounting for social status and individual controls, panel a) in Table 5.1 additionally shows that, in April 2021, respondents were slightly more likely to be concerned about losing their jobs compared to summer 2020. By the summer of 2022, the probability of feeling insecure returned to the level from two years before. Regarding subjective economic insecurity, there were no significant changes in the first year of the pandemic. Several months after the outbreak of the Russia–Ukraine war, in July/August 2022, respondents were significantly more likely to be concerned about having financial difficulties and a much lower standard of living.

Panel b) in Table 5.1 presents the results regarding whether lower-status groups, in particular, experience increasing subjective insecurity over time. Columns (1), (3) and (5) show no significant interaction effects between time period and income group for all three dependent variables. This indicates similar changes in subjective job and economic insecurity over time across income groups. Also, I find no substantial differences across subjective status groups regarding changes in subjective insecurity from June/July 2020 to April 2021, as displayed in columns (2), (4) and (6). However, changes in subjective economic insecurity in July/August 2022 differed significantly among respondents with different subjective social positions. In the summer of 2022, respondents with a lower subjective status were more likely to worry about having financial difficulties and a much lower living standard than in the summer of 2020. Compared to the lower subjective status group, those with a medium or higher status were significantly less likely to exhibit these worries in summer 2022. Adding the relevant coefficients, the probability of feeling insecure about future economic circumstances did not change substantially over time for respondents with a medium or higher subjective status. Therefore, the increasing insecurity is primarily driven by respondents who perceive a lower social status for themselves, confirming the descriptive statistics. This finding remains consistent when employing fixed effects models (see appendix table D1.3 in appendix D1).

My results first reveal a small, temporary increase in subjective job insecurity from summer 2020 to spring 2021, which remained relatively consistent across different status groups. Second, there was a significant increase in subjective economic insecurity from spring 2021 to summer 2022. The increase was driven by individuals with a lower subjective social position and could not be explained by income. Additional analyses show that other objective status measures, such as education and occupation, also do not explain the observed changes in subjective insecurity (see appendix table D1.2). This indicates that subjective social status – rather than objective measures – plays a vital role in explaining increasing economic insecurity in the summer of 2022. However, the observed increase in subjective job insecurity in spring 2021 was not associated with objective or subjective social status. These findings

partly support my hypotheses that subjective insecurity increases over time, particularly for those with a lower social status (H3), and that the increase is more strongly associated with subjective social status (H4).

Overall, the findings suggest that the COVID-19 pandemic itself has a somewhat limited impact on subjective insecurity among Germans. The short-term increase in subjective job insecurity from 2020 to 2021 could be attributed to the pandemic and its impact on unemployment and short-time work in Germany. Subjective economic insecurity did not increase solely due to the pandemic. The increase in 2022 should be interpreted as a joint consequence of the multiple crises at the time, including the pandemic, the Russia–Ukraine war and the accompanying energy crisis and inflation in Germany. Since then, Germans with a lower subjective social status have felt particularly vulnerable about their future economic conditions.

5.5.3 Interplay of social status, crisis experiences and perceived affectedness

In the next step, I analyse how the negative influence of social status at the onset of the pandemic on subjective insecurity could be explained by individuals' crisis experiences regarding changes in their employment and income during the pandemic. Moreover, I test the extent to which the influence of social status is explained by respondents' perceptions of their own economic affectedness and that of others due to the pandemic. Further, I investigate how subjective insecurity is associated with the perceived own affectedness compared to others. In this section, I discuss the results of the main analysis with subjective insecurity operationalised as dummies. Robustness checks show consistent results using other operationalisations, as mentioned in Section 5.4 (for detailed results, see a tables D2.3 and D2.4 in appendix D2).

Table 5.2 depicts the results of the OLS Models, using income at the beginning of the pandemic as a measure of initial social status. Panel a) displays the coefficients for subjective job insecurity. Panels b) and c) show the results for the two items on subjective economic insecurity. All regression models include individual controls and the variable regarding time periods. Columns (1) to (4) show that the negative coefficient of income group on subjective job insecurity becomes insignificant after including changes in employment and income. The coefficients for subjective economic insecurity decrease but remain negative and statistically significant after accounting for job and income changes and perceptions of economic affectedness. Compared to respondents with a lower initial income, those with a medium or higher income are less likely to worry about having financial difficulties and a much lower

living standard in the upcoming year. Across income groups, respondents with personal crisis experiences, especially a decreased income during the pandemic, are more likely to feel insecure. Furthermore, the higher respondents perceive themselves to be economically affected by the pandemic, the more likely they are to feel insecure. Individuals are also more likely to feel insecure the more strongly they perceive others in the country to be affected. However, the coefficient turns insignificant after accounting for the perceived own affectedness. Finally, Column (5) shows that respondents who perceive their own affectedness as higher than others' affectedness are more likely to be concerned about losing their jobs, regardless of the absolute levels of their perceived own affectedness. The perceived own affectedness relative to others has no significant coefficients on subjective economic insecurity.

The results are robust when using subjective social position, education or occupation for measuring social status (see table D1.4 in appendix D1). Overall, the results confirm my hypothesis that the negative impact of individuals' initial social status on their subjective insecurity is partly explained by their crisis experiences and perceptions of economic affectedness (H5). As expected, personal crisis experiences (H5a) and perceptions of their own economic affectedness (H5b) positively influence subjective insecurity. The perceived affectedness of others, against my expectation (H5c), has no significant impact. In addition, the results do not fully support my final hypothesis that individuals are more likely to feel insecure when they perceive themselves as more highly affected than others (H6). The positive association holds only for subjective job insecurity. The findings reveal that perceptions of one's own affectedness play a more important role than that of others in explaining subjective socioeconomic insecurity. More importantly, after accounting for their crisis experiences and perceptions, individuals with a lower social status at the onset of the pandemic are still more likely to feel insecure about their future economic circumstances.

Table 5.2 Social status, crisis experiences and perceptions, and subjective insecurity

Panel a)	Losing own job				
	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.058 (0.031)	-0.029 (0.031)	-0.027 (0.031)	-0.019 (0.030)	-0.016 (0.030)
Higher income	-0.112** (0.036)	-0.064 (0.035)	-0.060 (0.035)	-0.035 (0.034)	-0.030 (0.034)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.305*** (0.074)	0.302*** (0.075)	0.257*** (0.073)	0.265*** (0.072)
Other/inactive		0.027 (0.024)	0.026 (0.024)	0.021 (0.022)	0.022 (0.022)
<i>Ref.: Income about the same</i>					
Income decreased		0.148*** (0.026)	0.146*** (0.026)	0.082** (0.026)	0.081** (0.026)
Income increased		-0.016 (0.022)	-0.015 (0.022)	-0.002 (0.022)	-0.006 (0.021)
Perceived affectedness of others			0.007 (0.004)	-0.005 (0.005)	
Perceived own affectedness				0.027*** (0.004)	0.018*** (0.004)
<i>Ref.: Perceived affectedness (self <= others)</i>					
Perceived affectedness (self > others)					0.098** (0.037)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Obs.	1,607	1,607	1,607	1,607	1,607

Table 5.2 (continued)

Panel b)	Having financial difficulties				
	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.132*** (0.027)	-0.092*** (0.025)	-0.086*** (0.025)	-0.065** (0.023)	-0.065** (0.023)
Higher income	-0.228*** (0.029)	-0.161*** (0.028)	-0.151*** (0.027)	-0.107*** (0.025)	-0.106*** (0.025)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.132* (0.053)	0.126* (0.053)	0.079 (0.050)	0.080 (0.050)
Other/inactive		0.068*** (0.017)	0.067*** (0.017)	0.067*** (0.016)	0.067*** (0.016)
<i>Ref.: Income about the same</i>					
Income decreased		0.221*** (0.022)	0.215*** (0.022)	0.120*** (0.022)	0.120*** (0.022)
Income increased		-0.001 (0.022)	-0.001 (0.022)	0.011 (0.021)	0.011 (0.021)
Perceived affectedness of others			0.016*** (0.004)	-0.000 (0.004)	
Perceived own affectedness				0.036*** (0.003)	0.034*** (0.000)
<i>Ref.: Perceived affectedness</i>					
<i>(self <= others)</i>					
Perceived affectedness					0.023
<i>(self > others)</i>					
					(0.033)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Obs.	2,616	2,616	2,616	2,616	2,616

Table 5.2 (continued)

Panel c)	Having much lower living standard				
	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.206*** (0.032)	-0.153*** (0.030)	-0.144*** (0.029)	-0.116*** (0.026)	-0.117*** (0.026)
Higher income	-0.367*** (0.037)	-0.274*** (0.034)	-0.257*** (0.033)	-0.198*** (0.031)	-0.200*** (0.031)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.191** (0.062)	0.180** (0.061)	0.119* (0.058)	0.120* (0.059)
Other/inactive		0.074*** (0.021)	0.072*** (0.021)	0.072*** (0.019)	0.073*** (0.019)
<i>Ref.: Income about the same</i>					
Income decreased		0.333*** (0.025)	0.322*** (0.025)	0.198*** (0.025)	0.196*** (0.025)
Income increased		-0.045 (0.027)	-0.045 (0.027)	-0.029 (0.025)	-0.029 (0.025)
Perceived affectedness of others			0.028*** (0.005)	0.006 (0.005)	
Perceived own affectedness				0.048*** (0.004)	0.047*** (0.005)
<i>Ref.: Perceived affectedness</i>					
<i>(self <= others)</i>					
Perceived affectedness					0.026
<i>(self > others)</i>					
					(0.034)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Obs.	2,616	2,616	2,616	2,616	2,616

Notes: Using linear probability models; income group used as the measure of social status in all models; time period (Jun/Jul20, Apr21, Jul/Aug22) and individual controls (gender, age, household size, place of residence (West/East Germany) and treatment group membership) included in all models; weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

5.6 Social status determines subjective insecurity: A more general trend

One of the main findings discussed in the previous section is that the negative association between social status and subjective economic insecurity holds after considering personal crisis experiences and perceptions of economic affectedness. That is, individuals with a lower initial status are throughout more likely to feel economically insecure, regardless of whether they have experienced job changes or income loss during the pandemic or perceive themselves as highly affected by the pandemic. This section provides a broader perspective on whether these group-specific differences represent persistent trends already present in pre-pandemic times.

For this purpose, I utilise the same data from Eurobarometer surveys from 2004 to 2023 as used for Figure 5.1 in Section 5.2 (for a list of included surveys, see appendix D3). The Eurobarometer surveys did not ask respondents about their perceived risk of losing their jobs or having specific financial issues but about their general expectations regarding their future employment and financial situation. The data also contain information on respondents' education level and occupation. Since 2012, the Eurobarometer survey has additionally asked respondents how they perceive their own social class. These data enable me to obtain a general trend concerning changes in subjective insecurity among different status groups over the last two decades.²⁸

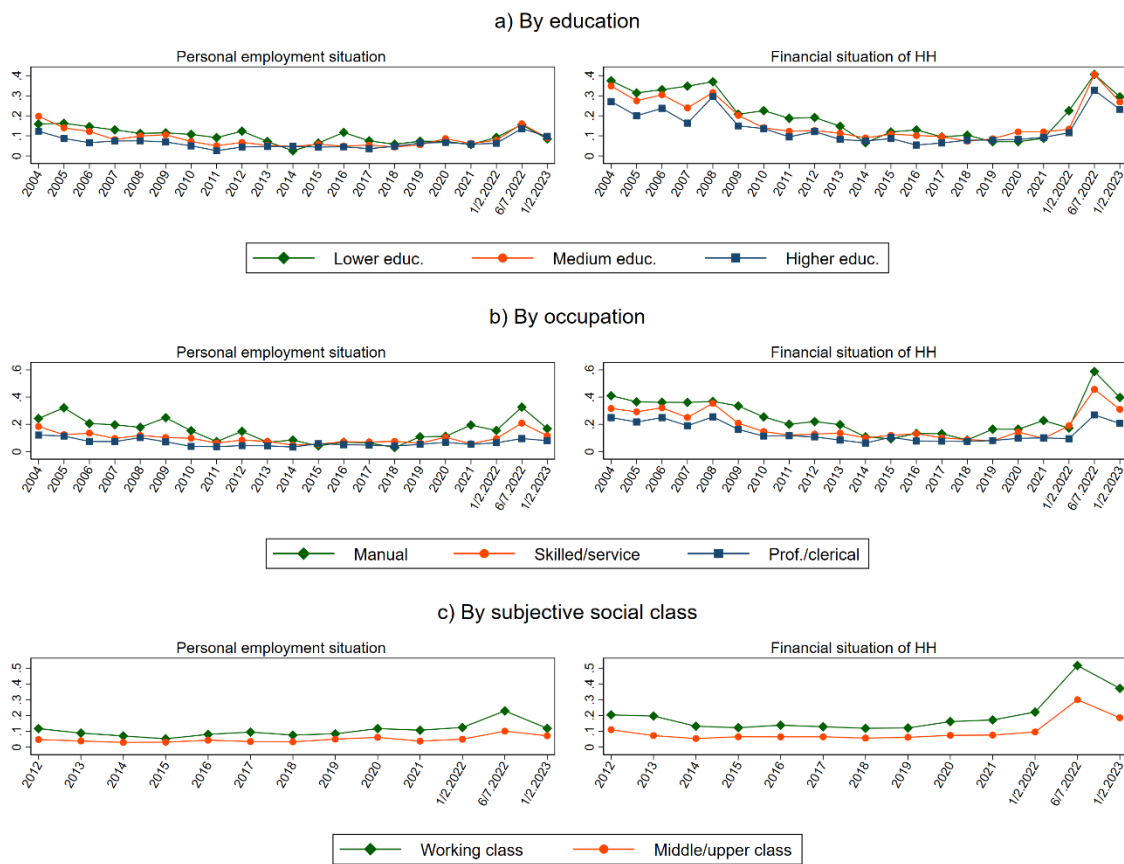
Figure 5.4 illustrates the changes in subjective job and economic insecurity in Germany from 2004 to early 2023 using the Eurobarometer data. Respondents are divided by education, occupation and subjective social class in Figures 5.4a), 5.4b) and 5.4c), respectively. Consistent with my previous findings, subjective job and economic insecurity both increased from 2019 to 2023. After minor changes till early 2022, the share of Germans expecting a worse personal employment situation has clearly increased by the summer of 2022. The increase is even more significant regarding expectations for the household's financial situation. These trends are consistent across status groups, particularly among individuals in manual occupations and those who perceive themselves as working class.²⁹ In early 2023, both subjective job and economic insecurity decreased for all status groups but to a level that remained higher than in early 2022

²⁸ I use the Eurobarometer data only for a supplementary analysis due to the absence of information on respondents' income, changes in their employment and income, and their crisis perceptions.

²⁹ This is inconsistent with the previous finding using the panel data that objective social status could not explain the increase in subjective insecurity. One reason could be the different measures of subjective insecurity in the two datasets. The mixed results, in turn, suggest intensified feelings of insecurity during crises regarding one's general employment and financial situation, particularly among individuals with a lower objective or subjective social status. In addition, those with a lower subjective status have increasing concerns, specifically about having financial difficulties and a much lower living standard.

before the outbreak of the Russia–Ukraine war. This suggests that the drastic increase in subjective insecurity in the summer of 2022 primarily resulted from the war, together with the energy crisis and inflation as external shocks that affected all Germans, confirming my findings from Section 5.5.2. The pandemic itself, in turn, had a relatively small influence, given that no substantial changes in subjective insecurity occurred from 2019 to early 2022 before the war outbreak.

Figure 5.4 Expecting own circumstances worse next year, changes by social status, 2004 – 2023 in Germany



Notes: The figure shows the changes from 2004 to 2023 in the share of Germans with different social status who expected their personal employment situation (left) and the financial situation of their household (right) to be worse in the upcoming year. Figures 5.4a), 5.4b) and 5.4c) illustrate the changes by education, occupation and subjective social class, respectively. Data source: Eurobarometer; own calculations, weights applied.

For a broader picture over the last 20 years, Figure 5.4 shows that individuals with lower education or manual jobs tend to worry more about their employment and financial situation worsening. Similarly, individuals who identify themselves as working class feel consistently more insecure about their future circumstances compared to those self-identifying as middle or upper class. The results indeed reveal a persistent pattern over time that subjective insecurity is negatively associated with social status. This pattern is evident during crises as well as in pre-

pandemic times and before the financial crisis. Individuals with a lower objective or subjective social status are generally more likely to feel socioeconomically insecure.

5.7 Conclusion

This paper aims to gain a better understanding of the extent to which Germans feel insecure about their future socioeconomic circumstances in times of crisis. Collecting four-wave panel data in Germany from March 2020 to July/August 2022, the study contributes to the literature by analysing changes in subjective socioeconomic insecurity among different status groups. In particular, the paper addresses the critical role of subjective social status in addition to objective status in explaining subjective insecurity after the outbreak of the COVID-19 pandemic and the Russia–Ukraine war.

Theoretically, the paper centres on the interplay between individuals' social status at the onset of the pandemic, their personal crisis experiences in employment and income during the pandemic, and their perceptions of economic affectedness. I discuss to what extent individual crisis experiences and perceptions explain the role of initial social status for subjective insecurity. Additionally, I analyse how perceptions of one's own affectedness compared to perceptions of others' affectedness influence subjective insecurity.

The results confirm my overall assumption of a negative relationship between subjective insecurity and social status: across all waves from summer 2020 to 2022, lower-status groups, in particular those with a lower income, are more likely to be worried about losing their jobs, having financial difficulties and a much lower standard of living in the upcoming year. In the summer of 2022, there was a substantial increase in subjective insecurity in the latter two economic aspects, driven by individuals with a lower subjective social status. In contrast, objective status measures, including income, education and occupation, could not explain the observed increase in subjective insecurity. The findings indicate the more important role of subjective than objective social status for analysing changes in subjective economic insecurity over time. This, in turn, reflects a mismatch between objective and subjective social status. During crises, individuals who perceive themselves at the lower end of the social hierarchy have increasing concerns about their future financial and living conditions.

Moreover, individuals are more likely to feel insecure about their jobs and economic situation when they have experienced short-time work, job or income loss. Irrespective of their actual crisis experiences, they are more likely to feel insecure when they perceive themselves as more affected economically. A positive association also exists between subjective insecurity

and the perceived economic affectedness of other people in the country, yet this turns insignificant when accounting for perceptions of the own affectedness. Similarly, the perceived own affectedness in comparison to others has no significant impact on subjective insecurity. This indicates that perceptions of one's own affectedness are much more relevant than perceptions of others' affectedness for shaping subjective socioeconomic insecurity during a crisis. More importantly, I find that the negative impact of social status on subjective economic insecurity holds after accounting for crisis experiences and perceptions. Additional analyses using the Eurobarometer data demonstrate that status-specific differences in subjective insecurity were already evident in pre-pandemic times. This reveals a more general trend that individuals with a lower social status are more likely to feel socioeconomically insecure, irrespective of whether a crisis occurs. During a crisis like the pandemic, the negative influence of social status on subjective insecurity is further strengthened by individuals' crisis experiences and perceptions.

Overall, my findings reveal a relatively limited impact of the pandemic on subjective socioeconomic insecurity in Germany. Since 2022, Germans have been additionally confronted with an energy crisis and inflation due to the war. This should at least partly explain the observed increase in subjective economic insecurity in the summer of 2022. The pandemic itself only resulted in a small, temporary increase in subjective job insecurity from 2020 to 2021. During the crises, Germans have been generally less concerned about losing their jobs than having worse financial and living conditions. Accordingly, the government's coping strategies, such as the short-time work scheme, seem to have buffered the negative impact of the pandemic not only on the German labour market but also on citizens' perceptions regarding job security. Future research based on cross-national studies analysing subjective insecurity in different institutional contexts would thus be welcome. In Germany, lower-status groups, particularly individuals who perceive themselves as having a lower social status, still feel particularly vulnerable regarding their future socioeconomic circumstances. This suggests that inequality is reinforced in times of crisis, which may contribute to recent trends, such as support for the radical right and other political attitudes and behaviours. Therefore, future research could explore potential links between changes in political trust or preferences and subjective socioeconomic insecurity.

Chapter 6

General conclusions and discussion

This dissertation focused on the subjective core of economic self-interest that shapes Europeans' expectations for European social policy. In particular, it examined how these expectations are shaped by perceptions rather than objective socioeconomic conditions. The dissertation analysed the expectations of Europeans concerning their attitudes towards income inequality within the EU in general and social policy measures at the EU level to specifically combat this inequality. Through four empirical studies, I addressed in this dissertation two existing research gaps identified from the relevant research fields, as outlined in Chapter 1. *First*, I investigated how Europeans form their perceptions of personal and national socioeconomic conditions (Chapters 2, 4, & 5). *Second*, I analysed the extent to which these socioeconomic perceptions influence attitudes towards EU inequality and social policies (Chapters 3 & 4). This concluding chapter presents the main findings of the empirical chapters and discusses some relevant limitations. Based on the empirical findings, I proceed to elaborate on the contributions of this dissertation and to suggest potential avenues for future research.

6.1 Discussion of main findings

The economic self-interest explanation is characterised by a subjective core. In the context of analysing expectations for European social policy, economic self-interest addresses the proposition that individuals would support the EU's intervention in social policy when (they believe that) their country and themselves could potentially benefit from it. The underlying premise is that individuals form their attitudes based on their subjective assessments of the EU's influence on their country and themselves. Moreover, the assessments of individuals are influenced by their perceptions of national and personal socioeconomic conditions. Most scholars have yet neglected the subjective core of economic self-interest by focusing on the relationship between the objective factors of both individual and national socioeconomic conditions and support for the EU's intervention in social policy (e.g. Burgoon, 2009; Gerhards et al., 2016). However, the subjective core of economic self-interest is of particular relevance, given that individuals tend to perceive national and their personal socioeconomic conditions very differently to the objective conditions (e.g. Bussolo et al., 2021; M. Evans & Kelley, 2004). This discrepancy is referred to in certain research as a 'mis'-perception, for instance, in the

context of personal relative income positions (e.g. Bublitz, 2022). Consequently, without consideration of these perceptions, previous literature may have underestimated the role of economic self-interest in shaping attitudes.

This dissertation took this as its starting point. The dissertation included four empirical studies to investigate the different socioeconomic perceptions held by Europeans and their influence on expectations for European social policy. The objective was to address the subjective core of economic self-interest explicitly. In the following, I discuss the main findings of each empirical chapter.

How perceptions shape expectations

The first three empirical chapters (Chapters 2–4) adopted a country-comparative perspective. In particular, Chapters 2 and 3 concentrated on four EU member states, namely Germany, Italy, Poland and Sweden, whereas Chapter 4 conducted analysis across 18 European countries.

Building on research on national income perceptions (e.g. Cruces et al., 2013; Engelhardt & Wagener, 2018), Chapters 2 and 3 represent a conceptual shift in the field by focusing on perceptions of income positions within the EU. Both chapters have adopted the concept of misperceptions derived from previous research, which refers to systematic mismatches between actual and perceived income positions.

Chapter 2 provides novel evidence that Europeans form their perceptions of their EU income position based on their perceptions of their national income position. Additionally, they assess the difference between their national and EU positions based on their perception of their country's economic situation in comparison to the EU average. The results show that German, Polish and Swedish citizens are well aware of the difference between their national and EU income positions, since they tend to correctly perceive their country's economic situation within the EU. The misperceptions of these individuals regarding their income position within the EU are primarily due to their misperceptions of their national income position. In contrast, Italians exhibit an overly pessimistic view of their country, perceiving Italy's economic situation to be worse than the EU average. Italians' misperceptions of their EU income position can be attributed to their misperceptions of both their national position and their country's economic rank. Overall, Chapter 2 demonstrates that Europeans misperceive their EU income position in a manner analogous to their misperceptions of their national position: In all four countries, those with a lower income tend to overestimate their income positions, while those with a higher income tend to underestimate them.

Previous research demonstrated a link between individuals' attitudes towards national inequality and redistribution and their (mis-)perceptions of their personal national income position (e.g. Bublitz, 2022; Cruces et al., 2013; Engelhardt & Wagener, 2018). The findings of Chapter 2 indicate that significant discrepancies between individuals' income position and their perceptions of it, i.e., the misperceptions, also exist at the EU level. This reveals a cross-national perspective of Europeans regarding their personal socioeconomic conditions, providing further evidence that Europeans have a perspective on inequality beyond national borders (e.g. Delhey & Kohler, 2006; Lahusen & Kiess, 2019). Against this background, it is important to consider the perceptions of personal EU income position, and in particular the misperceptions of it, when analysing attitudes towards inequality within the EU.

Chapter 3 has built upon this insight by examining the relationship between relative income positions, misperceptions and attitudes. The results are generally consistent with the theoretical models on relative income and attitudes towards income inequality that address economic self-interest (Meltzer & Richard, 1981; Clark & D'Ambrosio, 2015; E. Fehr & Schmidt, 1999): Europeans with a lower personal income position within the EU assess EU income inequality as more unjust and are more in favour of an EU minimum wage. However, for all four countries, this negative association is only observed when accounting for the substantial misperceptions that Europeans have of their EU income position. This, in turn, confirms the subjective core of economic self-interest in explaining attitudes. Furthermore, Chapter 3 demonstrates that providing individuals with information about their misperceptions can, to some extent, alter their attitudes. In particular, individuals assess income inequality within the EU as less problematic when they learn that their actual EU position is higher than they initially assumed. This finding reinforces the significance of income (mis-)perceptions in shaping attitudes, thereby confirming the subjective core of economic self-interest. Furthermore, this finding is in contrast with the study by D. Fehr et al. (2022), which demonstrated that information about personal global income position had no impact on attitudes towards global inequality. This suggests that Europeans are more closely aligned with the EU than with the global community.

The results of Chapter 3 also reveal notable differences between Germany and the other three countries in how individuals react to the information treatment. The general result discussed above applies to Italy, Poland and Sweden. In contrast, individuals from Germany assess EU inequality as less problematic when they learn that their actual EU income position is lower than they initially believed. Moreover, German respondents who learn that they rank lower (higher) in the EU are less (more) supportive of an EU minimum wage. Further analysis conducted in Chapter 3 has not yet identified a valid explanation for the difference in the

treatment reactions of Germans. This difference is highly robust and cannot be explained by individual characteristics such as EU identity, altruistic motives or political ideology.

Nevertheless, Chapter 3 illustrates a general pattern across countries whereby individuals' expectations for European social policy are shaped by their perceived EU income position. As demonstrated in Chapter 2, the perceptions of individuals regarding their EU income position depend on their perceptions of both their personal national income position and the national economic situation within the EU. In this regard, the findings of Chapter 3 suggest that Europeans' expectations are influenced not only by their perceptions of personal socioeconomic conditions but also by their perceptions of the national context, or in this case, of the national economic situation.

Chapter 4 has investigated further perceptions of the national context and their influence on expectations for European social policy. This chapter concentrated on the perceptions of the national unemployment rate and the living conditions of unemployed individuals within the country. The results align with the theoretical assumption derived from the framework of Bussolo et al. (2021), postulating that individuals perceive the national context to diverge substantially from the objective conditions, conditional on individual characteristics such as their ideology. Building on these results, Chapter 4 provides further evidence to support the subjective core of economic self-interest. In particular, the more negative the perceptions, i.e., the higher the national unemployment rate or the worse the standard of living among the unemployed within the country is perceived by individuals, the stronger is their support for an EU-wide minimum income benefit. At the country level, the results are in line with previous literature (e.g. Baute & Meuleman, 2020; Gerhards et al., 2016), indicating that the less favourable the national economic and welfare conditions, the more support there is. However, there is no clear evidence of a systematic influence of contextual factors on the relationship between perceptions of the national context and support for the policy measure. The findings reveal that, in addition to the objective national context, Europeans' perceptions of the national context play a crucial role in shaping their expectations for European social policy.

Furthermore, Chapter 4 demonstrates that the influence of the perceived national context on support for an EU-wide minimum income benefit is particularly pronounced among individuals with non-egalitarian values or a right-leaning ideology. In contrast, individuals with egalitarian values or a left-leaning ideology tend to support the policy measure in general. These individuals are less reliant on their perceptions of national socioeconomic conditions in forming their support. The results indicate that ideology plays a role in mitigating the influence of

economic self-interest on attitudes. This finding is consistent with previous studies that demonstrated an interplay between individuals' socioeconomic status and ideology for shaping attitudes towards national inequality (e.g. Armingeon & Weisstanner, 2022; Margalit, 2013). In contrast to previous studies, Chapter 4 focused on the subjective core of economic self-interest, revealing a conflict of interest between ideology and perceptions of national conditions in shaping attitudes at the supranational level of the EU.

Perceptions in times of crisis

Chapter 5 has examined the formation of individual perceptions of personal future socioeconomic conditions. This chapter has concentrated on Germany and analysed the concerns of Germans about their future socioeconomic conditions in the context of two recent crises: the COVID-19 pandemic and Russia's invasion of Ukraine. The results show a general increase from 2020 to 2022 in concerns among Germans regarding their future economic conditions, particularly during the summer of 2022. This should be understood as a result of the Russian invasion, which has caused a severe energy crisis and inflation in Europe, including Germany. On the other hand, the pandemic led to a minor, temporary increase in 2021 in Germans' concerns about losing their job in the near future. Overall, the results indicate that a changing national context during crises has an impact on individuals' subjective socioeconomic insecurity. In this regard, the finding of the contextual impact is consistent with previous literature indicating greater subjective insecurity in the context of the global financial crisis in 2007/08 and afterwards (e.g. Akaeda & Schöneck, 2022; Mau et al., 2012).

At the individual level, those with a lower objective or subjective social status at the outset of the pandemic are found to be more likely to experience feelings of insecurity regarding their future socioeconomic conditions afterwards. In particular, individuals with a lower subjective social status feel increasingly insecure over time, from 2020 to 2022. Furthermore, Chapter 5 illustrates a more general pattern over the past two decades, whereby individuals with a lower objective or subjective social status tend to experience feelings of socioeconomic insecurity more strongly, regardless of the occurrence of a crisis. In times of crisis, lower-status groups, in particular those who perceive themselves at the lower end of the social hierarchy, are more sensitive to crises and the changing national context. These groups are more likely to experience job or income loss and perceive themselves as more affected by the crises. Consequently, there is an increase in feelings of insecurity about the future during crises. The findings of Chapter 5 provide insight into the manner in which individuals' perceptions of their future socioeconomic conditions are associated with both their past and current socioeconomic conditions.

Furthermore, the findings indicate that there is an extension of inequality to the subjective dimension in terms of subjective socioeconomic insecurity, which has been further intensified in times of crisis.

Conclusions and limitations

The empirical studies presented in this dissertation provide compelling evidence that the subjective core of economic self-interest is a particularly relevant lens for understanding Europeans' expectations for European social policy. In light of the empirical findings, the following general conclusions can be drawn: The perceptions of Europeans regarding their personal and national socioeconomic conditions diverge considerably from the objective conditions, which are influenced by individual characteristics, such as ideology and socio-demographics. Consequently, the diverse socioeconomic perceptions of Europeans play a crucial role in shaping their expectations for European social policy, in addition to the objective context. The findings indicate that, in general, the more negative the perceptions, the stronger the expectations, confirming the subjective core of economic self-interest.

It should be noted that this dissertation acknowledges certain relevant limitations, which should be taken into account when interpreting the results. The limitations are primarily due to the nature of the data employed in the empirical chapters.

First, it is important to be cautious about generalising the empirical findings of the cross-country analyses conducted by the three empirical chapters in a broader context of the entire EU. In particular, only Chapter 4 includes a relatively large country sample of 18 European countries. Both Chapters 2 and 3 focused on four countries, selected to represent the diverse economic and institutional backgrounds of the member states. Nevertheless, it remains unclear whether the demonstrated mechanisms regarding the formation of perceptions of income position within the EU and potential misperceptions are applicable across the EU. Similarly, it remains an empirical question whether the influence of income (mis-)perceptions on expectations for European social policy is consistent across all member states.

In addition, Chapters 2, 3 and 5 utilise quota samples derived from online surveys instead of probability-based samples. Due to the limitations of the sampling methodology in ensuring data representativeness, these three chapters place greater emphasis on the relationships between factors. In this regard, the chapters employ survey experiments or panel data to additionally enhance the internal validity of the results, as discussed in Chapter 1. A further limitation of Chapter 5 is derived from the panel data used for the main analysis. As the first

panel wave took place at the outset of the pandemic in Germany, the data lack measures prior to the pandemic. Consequently, the panel data may have only captured a part of the impact of the pandemic on subjective socioeconomic insecurity. As an imperfect alternative, this chapter employs additional cross-sectional data from Eurobarometer surveys from 2004 to 2023 to validate the main results on subjective socioeconomic insecurity among different status groups.

This dissertation examined the formation and impact of socioeconomic perceptions. In the context of measurements of perceptions, it is important to consider the issue of measurement errors, which is also a common issue in survey research in general (e.g. Bertrand & Mullainathan, 2001; Saris & Revilla, 2016). This is relevant for the interpretation of the dissertation's findings, in particular with regard to the extent of individuals' income misperceptions, as addressed in Chapters 2 and 3, which employed the same dataset. Nevertheless, Chapter 3 demonstrates that informing respondents about their actual income position within the EU systematically changes their attitudes, depending on whether they over- or underestimated their position initially. This, in turn, implies that individuals are well aware of their stated income perceptions, and that the measured (mis-)perceptions are not random, although potential measurement errors cannot be completely excluded. Therefore, the findings regarding both the formation and impact of EU income (mis-)perceptions should remain valid.

6.2 Contributions and future research

Despite the limitations discussed in the previous section, this dissertation makes the following important contributions and provides some potential avenues for future research. *First*, this dissertation highlights the subjective core of economic self-interest in shaping Europeans' expectations for European social policy, which has been largely overlooked in previous literature. The dissertation provides strong empirical evidence to support the subjective core of economic self-interest. In particular, there exist notable discrepancies between objective personal and national socioeconomic conditions and individual perceptions of them (Chapters 2 & 4). Furthermore, both types of socioeconomic perceptions are found to play a crucial role, in addition to the objective context, in shaping expectations for European social policy (Chapters 3 & 4). Chapter 5 analyses a third type of socioeconomic perceptions, namely perceptions of personal future socioeconomic conditions. To further address the subjective core of economic self-interest, future research may also consider examining the extent to which these perceptions of Europeans may influence their expectations.

Second, this thesis broadens the scope of research analysing socioeconomic perceptions and attitudes towards national inequality. It demonstrates that the role of the perceptions in shaping attitudes can be extended from the national to a supranational level of the EU (Chapters 3 & 4). Moreover, the thesis provides novel evidence indicating that Europeans hold a cross-national perspective when assessing their relative income position within the EU (Chapter 2). Consequently, perceptions of personal EU income position have an influence on attitudes towards inequality and social policy at the EU level (Chapter 3). For future research, it would be beneficial to conduct analyses with a larger country sample, in particular to test the influence of income (mis-)perceptions on attitudes across countries. This may, in turn, provide insights into the differing reactions of the German respondents to the information treatment, as evidenced in Chapter 3.

Third, there is a lack of knowledge regarding the formation of socioeconomic perceptions at both the individual and national level. This dissertation addresses this research gap by investigating the mechanisms underlying the formation of different perceptions, including perceptions of personal income position in the EU (Chapter 2) and the national context regarding unemployment (Chapters 4). Furthermore, this dissertation includes a study of the formation of subjective socioeconomic insecurity and provides insights into the impact of recent crises on Germans' perceptions of their future socioeconomic conditions (Chapter 5). Future research may consider analysing the cases of other countries to identify potential general patterns and country-specific differences in subjective insecurity.

Fourth, this dissertation also provides some policy implications. The findings regarding the subjective core of economic self-interest further confirm a strong economic self-interest logic among Europeans when forming their expectations for European social policy. In particular, individuals who believe that they live in a country with good economic and welfare conditions, or those who assess their country's economic situation as better than the EU average and therefore perceive a higher own income position within the EU, tend to exhibit less aversion to EU inequality and be less supportive of EU social policies. However, it is the member states in favourable economic conditions that would be required to contribute more financially to foster European social integration. This represents a significant challenge for the EU in terms of further integration and social cohesion. Given the substantial discrepancy between individual perceptions of national and personal socioeconomic conditions and the objective context, it would be beneficial to enhance Europeans' awareness of this discrepancy, and in some cases, their awareness of their misperceptions. One potential avenue for addressing this issue is the promotion of scientific transfers at the local, national and EU levels. In particular, the

dissemination of information to the general public about the accurate conditions of European societies and the EU's specific measures to address inequality and social cohesion may enhance their support for social integration within the EU.

Overall, the empirical findings of my dissertation reveal a common expectation among Europeans that the issue of inequality should be addressed at the EU level. Across countries, a majority of individuals are in favour of potential policy measures designed to reduce income inequality and poverty in the EU, such as an EU minimum wage or minimum income benefit. In other words, there is a high perceived legitimacy among Europeans for promoting social welfare beyond national borders. Nevertheless, national welfare states continue to play a central role in the provision of social security, which also contributes to citizens' feelings of security about their future socioeconomic conditions, particularly in times of crisis. In Germany, for instance, the impact of the pandemic on subjective socioeconomic insecurity is limited, even in the first year of the pandemic. This suggests that the government's coping strategies, such as the short-time work scheme, have mitigated the potential negative impact of the pandemic on citizens' perceptions of socioeconomic security. Considering the recent and ongoing crises that the EU has been confronted with, this dissertation offers insights into Europeans' perceptions of their present and future, as well as their expectations regarding social policy within Europe.

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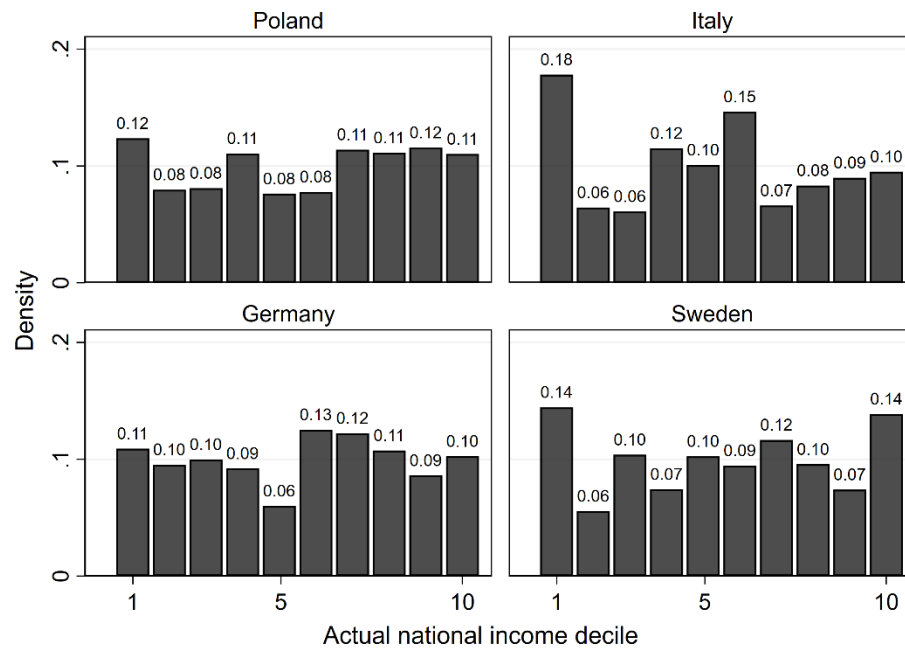
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Appendices

Appendix A

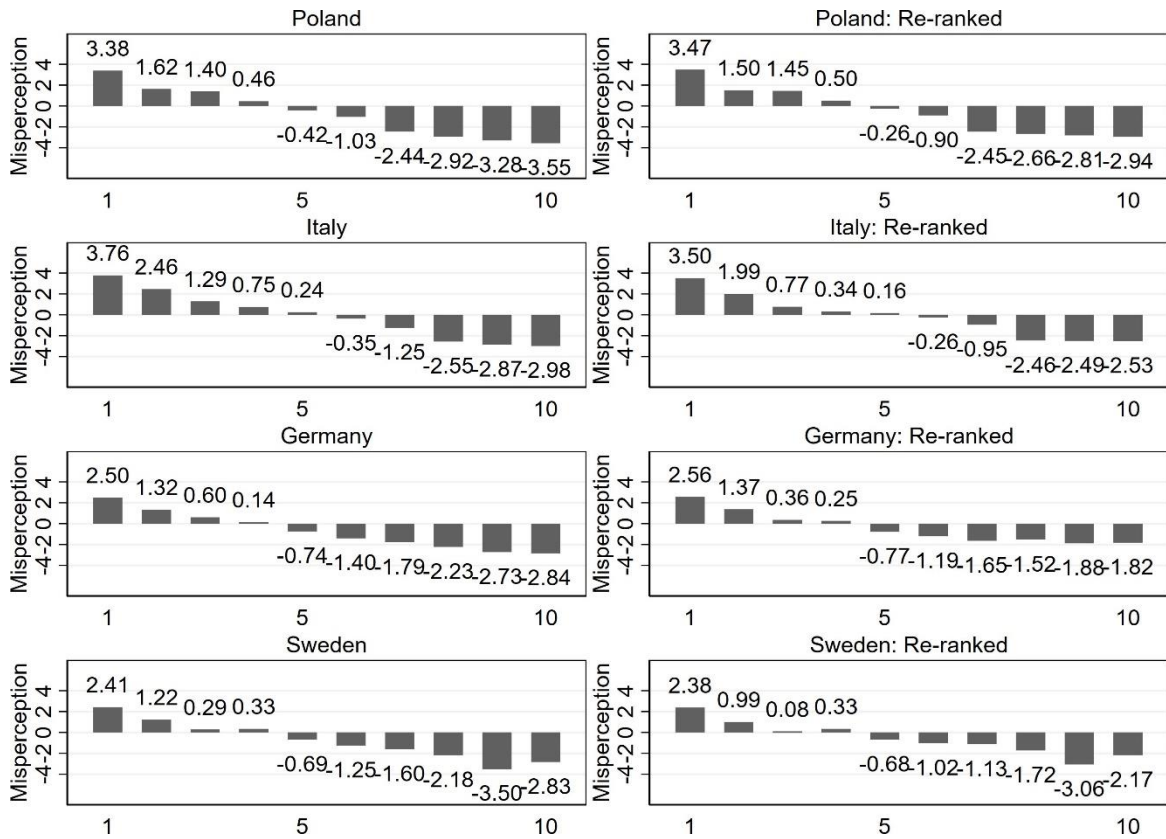
‘Where do I stand in the EU? Income comparisons and perceptions’ (Chapter 2)

Figure A.1 Distribution of actual national income positions



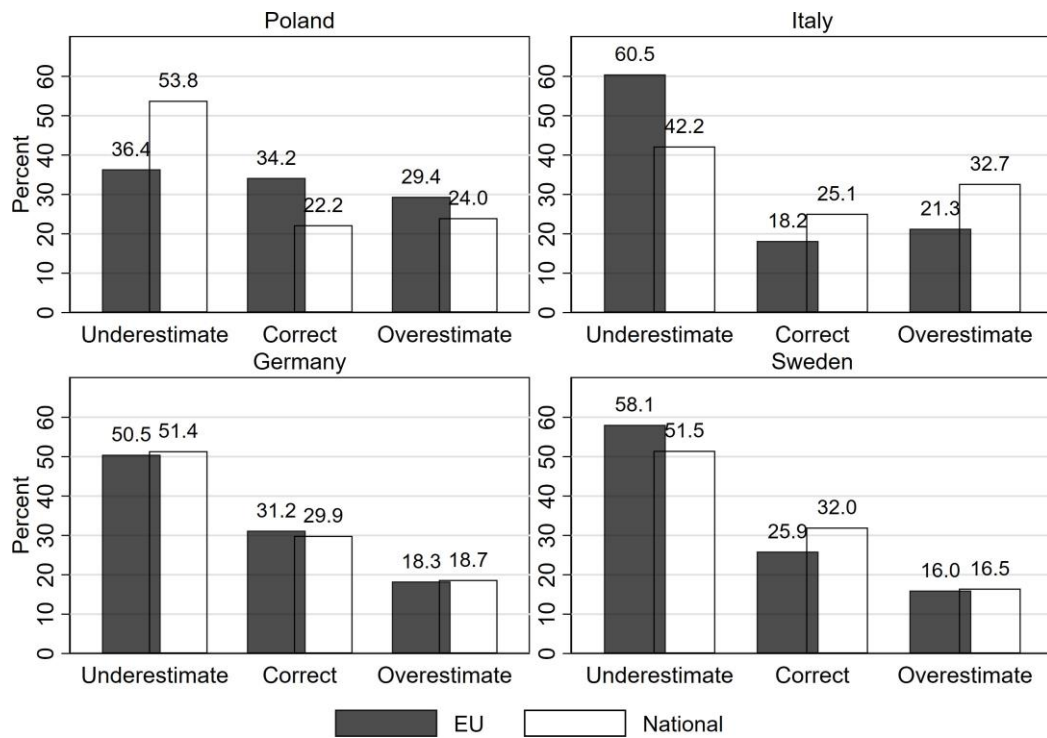
Notes: The figure displays the distribution of the actual national income position (in deciles) for each country. Survey weights are applied.

Figure A.2 Re-ranked misperceptions of national income positions



Notes: The figure displays the average national income misperception by the actual national income decile for each country. The left panel depicts average national income misperceptions directly obtained from the sample. The right panel depicts re-ranked average national income misperceptions, where the perceived national income positions were first re-ranked, such that they are approximately uniformly distributed across 1–10 deciles, and then misperceptions were calculated by subtracting the actual income decile from the re-ranked perceived decile. Survey weights are applied.

Figure A.3 EU and national misperception groups



Notes: The figure displays the distribution of EU and national income misperception groups for each country. Respondents may underestimate their position (perceived minus actual position below zero), overestimate their position (perceived minus actual position above zero), or perceive a correct position (the difference between perceived and actual position is 10 percentage points or less). Survey weights are applied.

Table A.1 Country characteristics

	Accession to EU/EEC	Equiv. net HH income	Gini coefficient	Unemployment rate	Social expenditure
Poland	2004	7,142	28.5	3.3	21.2
Italy	1958	17,165	32.8	9.9	29.2
Germany	1958	23,504	29.7	3.0	30.0
Sweden	1995	24,490	27.6	7.0	27.8
EU-28		17,904	30.6	6.3	27.6

Notes: Data source is Eurostat, last accessed on April 05, 2024. Column 1 of the table shows the year each country joined the EU/EEC. The EU was formally established as the Maastricht treaty came into force in 1993. However, Italy and (West) Germany were among the six founding members of the European Economic Community (EEC), which was established in 1958. The rest of the table shows the median equivalised net household income in Euro (column 2, indicator: ilc_di04), the Gini coefficient of equivalised disposable household income (column 3, indicator: ilc_di12), the unemployment rate (column 4, indicator: une_rta), and social protection expenditure as a percentage of GDP (column 5, indicator: spr_exp_sum) for each country in the sample and the EU (including the UK) in 2019.

Table A.2 Summary statistics

	Min	Max	Poland		Italy		Germany		Sweden	
			Mean	SD	Mean	SD	Mean	SD	Mean	SD
Actual Nat percentile	0	100	50.75	30.49	46.88	30.41	49.94	29.19	50.12	30.17
Actual EU percentile	0	100	25.62	20.64	48.16	28.76	57.40	26.91	60.91	28.27
Perceived Nat percentile	0	100	40.05	21.60	44.24	19.95	40.18	21.70	39.89	23.22
Perceived EU percentile	0	100	23.96	19.90	34.59	20.45	48.05	23.41	49.26	23.86
Rank: Country<EU	0	1	0.64	0.48	0.78	0.42	0.08	0.27	0.18	0.38
Rank: Country=EU	0	1	0.12	0.33	0.15	0.35	0.16	0.37	0.23	0.42
Rank: Country>EU	0	1	0.24	0.42	0.08	0.27	0.76	0.43	0.59	0.49
National identity	0	1	0.20	0.40	0.35	0.48	0.27	0.44	0.45	0.50
Female	0	1	0.50	0.50	0.50	0.50	0.47	0.50	0.46	0.50
Low education	0	1	0.17	0.37	0.46	0.50	0.18	0.39	0.20	0.40
Medium education	0	1	0.61	0.49	0.40	0.49	0.53	0.50	0.49	0.50
High education	0	1	0.22	0.42	0.14	0.35	0.29	0.45	0.31	0.46
Age	18	92	44.62	15.84	48.31	15.19	49.74	15.87	51.45	17.56
Number of children	0	9	1.39	1.27	1.18	1.14	1.12	1.21	1.39	1.33
Working	0	1	0.58	0.49	0.51	0.50	0.55	0.50	0.49	0.50
In education	0	1	0.06	0.24	0.09	0.29	0.06	0.23	0.07	0.25
Unemployed	0	1	0.04	0.19	0.11	0.31	0.03	0.17	0.06	0.25
Retired	0	1	0.21	0.41	0.16	0.37	0.30	0.46	0.33	0.47
Other	0	1	0.12	0.32	0.13	0.34	0.07	0.25	0.05	0.21
Affected by COVID-19	0	1	0.05	0.23	0.12	0.33	0.09	0.29	0.14	0.35

Notes: The table includes data for Poland (N=1,008), Italy (N=909), Germany (N=1,003) and Sweden (N=1,063). Survey weights are applied.

Table A.3 Income type of household by employment status

	Employment Status	Income type (in %)					N
		Employment	Retirement/ pensions	Social benefits	Financial assistance	Capital	
Poland	Working	96.14	14.85	16.54	5.43	7.58	836
	Education	87.05	30.40	34.11	19.84	15.81	110
	Unemployed	65.72	8.85	39.38	12.66	2.96	87
	Retired	26.05	99.57	5.76	0.92	5.80	334
	Other	68.70	15.10	39.72	16.95	6.19	164
	<i>All</i>	75.22	33.93	19.03	7.09	7.30	1,531
Italy	Working	92.17	13.17	4.99	3.97	8.40	703
	Education	82.29	15.74	5.19	3.17	15.37	130
	Unemployed	54.57	24.41	22.59	8.09	6.34	196
	Retired	23.30	91.28	3.33	1.06	12.47	261
	Other	62.00	32.28	5.70	4.50	11.39	227
	<i>All</i>	70.83	31.47	7.18	4.04	9.94	1,517
Germany	Working	94.29	11.82	7.47	4.28	17.98	844
	Education	68.62	12.92	26.85	43.24	17.63	94
	Unemployed	36.50	6.83	70.01	8.76	9.16	55
	Retired	24.24	94.34	12.15	1.99	13.67	402
	Other	66.04	22.42	19.69	9.56	11.04	129
	<i>All</i>	71.19	34.92	13.49	6.83	16.11	1,524
Sweden	Working	95.03	12.88	12.48	3.03	19.47	754
	Education	81.15	1.90	49.34	17.51	24.72	120
	Unemployed	48.17	21.21	55.66	15.47	10.45	113
	Retired	24.79	95.43	8.93	1.98	22.18	470
	Other	52.82	17.31	47.02	1.05	13.80	80
	<i>All</i>	66.72	37.94	19.33	4.67	19.70	1,537

Notes: The table depicts the income types of the respondents' households by employment status of the respondent with survey weights applied. Rows do not sum up to 100%, since respondents could indicate several sources of income. 'other' includes 'unpaid family workers', respondents 'doing housework, looking after children or other persons', or who answered 'other'.

Table A.4 Income and income positions – missing values and means

Variables	Missing Values (in %)		Means		Diff.	P-value	
	Without follow-up	With follow-up	Without follow-up	Only follow-up			
Poland	Actual Nat percentile	27.67	19.99	48.34	49.99	-1.64	0.56
	Perceived Nat percentile	34.85	23.25	40.20	36.85	3.35	0.01
	Perceived EU percentile	28.76	24.98	24.21	21.98	2.23	0.41
Italy	Actual Nat percentile	32.77	22.26	45.20	45.17	0.03	0.55
	Perceived Nat percentile	39.88	28.92	45.13	39.84	5.29	0.01
	Perceived EU percentile	36.10	31.59	34.57	32.08	2.49	0.85
Germany	Actual Nat percentile	21.95	17.46	48.25	49.89	-1.64	0.76
	Perceived Nat percentile	30.49	22.02	40.50	31.52	8.98	0.00
	Perceived EU percentile	32.90	28.14	47.92	35.20	12.73	0.00
Sweden	Actual Nat percentile	25.05	17.77	49.33	43.50	5.83	0.03
	Perceived Nat percentile	25.31	18.16	39.49	32.96	6.53	0.00
	Perceived EU percentile	27.04	21.64	48.85	38.11	10.74	0.00

Notes: The table depicts missing and mean values for the actual national position and the perceived national and EU income positions with survey weights applied. Columns 3 and 4 indicate the number of missing values (in %) in the respective variables without and with the answers of a follow-up question. Columns 5 and 6 show mean values of the actual national, the perceived national, and the perceived EU income position for respondents who gave a direct estimate and those who only gave an answer in the follow-up question. Columns 7 and 8 show the difference in means between both groups and the p-values, resulting from t-tests.

Table A.5 Balance in randomization for German sample in the pre-test

	EU First	National First	Difference	P-value
Low income (below 1500€)	0.23	0.22	0.02	0.46
Medium income (1500€ – 3500€)	0.47	0.51	-0.05	0.13
High income (above 3500€)	0.30	0.27	0.03	0.32
Low education	0.21	0.20	0.01	0.82
Medium education	0.34	0.33	0.01	0.70
High education	0.45	0.47	-0.02	0.59
Female	1.44	1.46	-0.02	0.50
Age	50.45	49.57	0.88	0.39
Married	0.44	0.46	-0.02	0.55
Number household members	2.21	2.21	-0.00	1.00
Living in a city	0.41	0.40	0.01	0.70
Living in East Germany	1.22	1.23	-0.01	0.75

Notes: Columns 2 and 3 show the mean values for the EU First group (N=507) and the National First group (N=497). Column 4 and 5 show the difference in means between both groups and the p-values, resulting from t-tests.

Table A.6 Question order treatment effects for German respondents in the pre-test

	Dependent variable: Perceived EU=Nat percentile	
	(1)	(2)
Nat Question First	-0.210*** (0.027)	-0.206*** (0.027)
Constant	0.363*** (0.021)	0.416*** (0.119)
Observations	1,004	1,004
R^2	0.057	0.075
Controls		Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions. Dependent variable is the probability to estimate the same EU as national percentile (ref. not the same). Respondents in the *Nat Question First* group were first asked about their national income position. Respondents in the reference group were first asked about their EU income position. Control variables are household income, education, gender, age, marital status, household size, and indicators for living in the city and residing in East Germany. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table A.7 Perceived difference – EU and national position – with 20 percentiles tolerance

Country	Own country ranked	Perceived difference		
		EU<Nat	EU=Nat	EU>Nat
Poland	...close to EU average	0.67	0.24	0.09
Italy	...close to EU average	0.42	0.38	0.20
Germany	...close to EU average	0.23	0.34	0.43
Sweden	...close to EU average	0.14	0.38	0.48

Notes: The table displays the perceived difference between the EU and national income position of respondents who estimate a lower (EU<Nat), the same (EU=Nat) or a higher EU than national position (EU>Nat), restricted to respondents who rank their country close to EU average and allowing for a tolerance corridor of up to 20 percentiles. Survey weights are applied.

Table A.8 Determinants of the perceived difference – EU and national position

	Dependent variable: Perceived difference			
	Poland	Italy	Germany	Sweden
	(1)	(2)	(3)	(4)
	EU<Nat	EU<Nat	EU>Nat	EU>Nat
Country close to EU	-0.016 (0.042)	-0.211*** (0.056)	0.125* (0.068)	0.161*** (0.053)
Country higher than EU	-0.150*** (0.040)	-0.190** (0.084)	0.285*** (0.059)	0.272*** (0.045)
Observations	1,008	909	1,003	1,063
R^2	0.075	0.055	0.074	0.078
Controls	Yes	Yes	Yes	Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied. Dependent variables are binaries: For Poland and Italy, $EU < Nat$ indicates the likelihood to perceive the personal EU income position lower than the national income position (ref. equal/higher). For Germany and Sweden, $EU > Nat$ indicates the likelihood to perceive the EU income position higher (ref. equal/lower). Main explanatory variable is the perceived rank against EU average (lower than EU, equal to EU, higher than EU). Control variables are national identity, gender, education, age, age², number of children, employment status, and surroundings affected by COVID-19. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

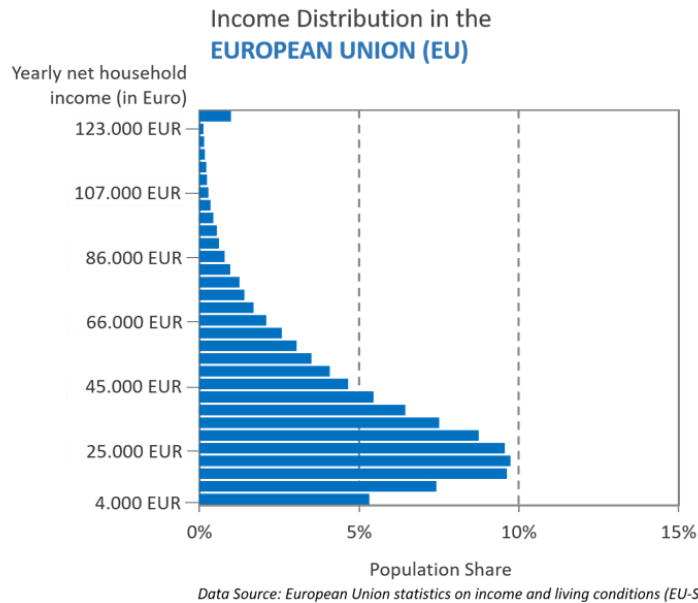
Appendix B

‘Misperceptions, income positions and attitudes towards EU inequality:
A cross-country survey experiment’ (Chapter 3)

Appendix B1

Figure B1.1 Information treatment

Slide 1

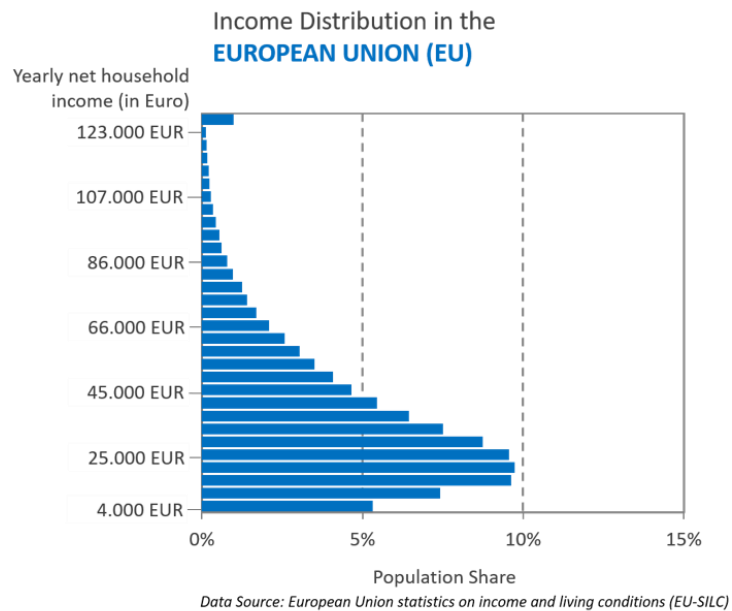


The figure depicts different yearly incomes in the EU from bottom to top. At the bottom are households with little or no yearly income and at the top are households with a yearly income of 123.000 Euro or more.

The bars denote how many households in the EU have a certain annual income. The longer the bar is, the larger is the share of households that earns a particular income.

As you can see, income in the EU is not equally distributed because some households have more income and others have less.

Slide 2



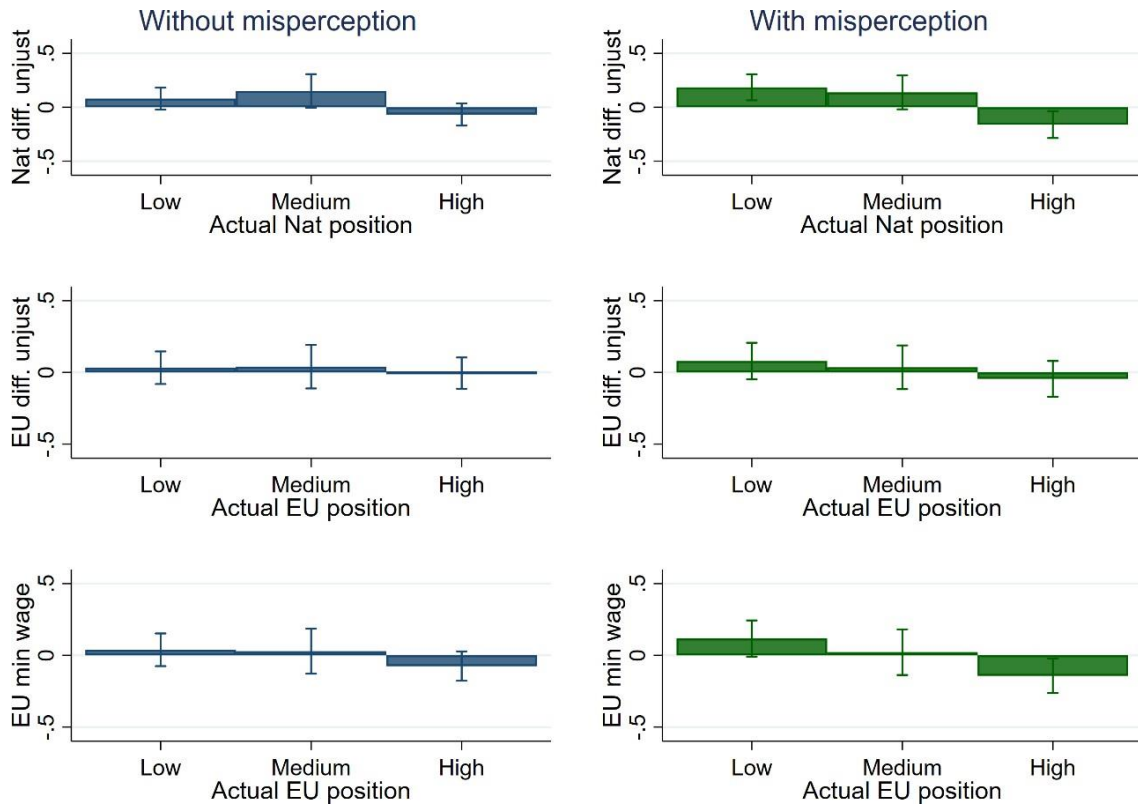
As a reminder: You indicated to have a yearly income of ____ Euro.

In the EU:

- ____ percent of households are poorer than you.
- ____ percent was your guess.

Notes: The treatment informs respondents about their actual income position within the EU.

Figure B1.2 Results of Figure 3.5 using different thresholds for the categorisation of income group



Notes: The figure depicts marginal effects (with 95% confidence intervals) from OLS models regressing attitudes toward national income differences, EU income differences, and support for an EU minimum wage respectively on income group, without (left panel) and with (right panel) the inclusion of income misperceptions. Dependent variables are standardised to z-scores. Income groups are defined by actual position in national or EU income distribution (low: 0–39th percentile, medium: 40–59th percentile, high: 60–100th percentile). Control variables (EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19) and country dummies are included in all models.

Table B1.1 Summary statistics and balancing

			DEU			ITA			POL			SWE		
	Min	Max	Control	TRT	Diff	Control	TRT	Diff	Control	TRT	Diff	Control	TRT	Diff
			Mean	Mean		Mean	Mean		Mean	Mean		Mean	Mean	
Actual Nat percentile	0	100	51.50	50.30	-1.20	47.17	44.27	-2.90	52.39	51.15	-1.24	48.08	50.30	2.21
Actual EU percentile	0	100	58.53	57.73	-0.80	48.47	45.67	-2.80	27.40	26.10	-1.30	58.75	61.72	2.97
Perceived Nat percentile	0	100	40.55	40.98	0.43	43.98	45.20	1.22	39.96	39.59	-0.37	37.65	39.55	1.89
Perceived EU percentile	0	100	47.45	49.73	2.28	33.58	34.95	1.37	23.39	22.39	-1.00	47.67	49.11	1.45
Age	18	89	48.13	50.38	2.25	48.29	48.14	-0.16	44.11	44.35	0.25	51.40	52.39	0.99
Female	0	1	0.47	0.45	-0.02	0.48	0.50	0.02	0.47	0.45	-0.02	0.47	0.46	-0.02
Low education	0	1	0.16	0.19	0.03	0.46	0.46	0.01	0.12	0.19	0.07	0.24	0.18	-0.06
Medium education	0	1	0.55	0.52	-0.03	0.41	0.41	0	0.64	0.57	-0.08	0.46	0.50	0.04
High education	0	1	0.29	0.29	0.00	0.14	0.13	-0.01	0.24	0.24	0.01	0.30	0.32	0.02
Working	0	1	0.59	0.52	-0.07	0.48	0.53	0.05	0.63	0.63	0.00	0.47	0.49	0.01
EU identity	0	1	0.19	0.17	-0.02	0.19	0.17	-0.02	0.14	0.16	0.02	0.05	0.08	0.03 [†]
Affected by COVID-19	0	1	0.13	0.08	-0.05 [†]	0.13	0.12	-0.01	0.07	0.06	0.00	0.14	0.12	-0.02

Notes: The table shows average values for control and treatment group for Germany, Italy, Poland and Sweden. *Diff* denotes the difference in means between both groups. Significant differences are marked with †. Survey weights are applied. † $p < 0.05$.

Table B1.2 Results of Table 3.3 for misperceptions larger than 10 PP

	EU diff. unjust					
	All	DEU	ITA	POL	SWE	w/o DEU
Panel a)	(1)	(2)	(3)	(4)	(5)	(6)
TRT: Underestimate	-0.149** (0.065)	0.089 (0.129)	-0.294** (0.124)	-0.269 (0.168)	-0.127 (0.115)	-0.216*** (0.075)
TRT: Overestimate	0.015 (0.109)	-0.281 (0.192)	0.188 (0.211)	0.188 (0.235)	-0.230 (0.235)	0.093 (0.130)
	Supp. EU wage					
	All	DEU	ITA	POL	SWE	w/o DEU
Panel b)	(1)	(2)	(3)	(4)	(5)	(6)
TRT: Underestimate	0.025 (0.063)	0.251** (0.118)	0.144 (0.112)	-0.022 (0.140)	-0.230* (0.120)	-0.044 (0.074)
TRT: Overestimate	-0.003 (0.113)	-0.470** (0.184)	0.291 (0.207)	-0.130 (0.197)	0.311 (0.268)	0.137 (0.136)
Observations	1,543	364	434	313	432	1,179
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Country FE	Yes					Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied for respondents who misperceive their EU income position by more than 10 percentiles. Dependent variables are standardised to z-scores and denote in panel a) attitudes toward EU income differences and in panel b) support for an EU minimum wage. Respondents in the treatment (TRT) group were informed about their actual EU income position. *TRT: Underestimate* (*TRT: Overestimate*) is the treatment effect among respondents who estimated an income position that is lower (higher) than their actual income position within the EU. All regressions include as control variables actual EU income position, EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table B1.3 Results of Table 3.3 for misperceptions smaller than 10 PP

		EU diff. unjust					
		All	DEU	ITA	POL	SWE	w/o DEU
Panel a)		(1)	(2)	(3)	(4)	(5)	(6)
TRT		0.097 (0.086)	-0.054 (0.163)	0.173 (0.194)	0.170 (0.175)	0.264 (0.160)	0.166 (0.103)
		Supp. EU wage					
		All	DEU	ITA	POL	SWE	w/o DEU
Panel b)		(1)	(2)	(3)	(4)	(5)	(6)
TRT		-0.009 (0.090)	0.207 (0.172)	-0.278 (0.170)	-0.107 (0.161)	0.119 (0.195)	-0.095 (0.106)
Observations		607	171	114	159	163	436
Controls		Yes	Yes	Yes	Yes	Yes	Yes
Country FE		Yes					Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied for respondents who misperceive their EU income position by less than 10 percentiles. Dependent variables are standardised to z-scores and denote in panel a) attitudes toward EU income differences and in panel b) support for an EU minimum wage. Respondents in the treatment (TRT) group were informed about their actual EU income position. All regressions include as control variables actual EU income position, EU identity, gender, education, age, age², employment status, and surroundings affected by COVID-19. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table B1.4 Heterogeneity in treatment effects for Germany: Attitudes

	Underestimate		Overestimate	
	EU diff. unjust (1)	EU min wage (2)	EU diff. unjust (3)	EU min wage (4)
Panel a) More EU				
TRT	-0.050 (0.139)	0.216* (0.128)	-0.351* (0.206)	-0.453** (0.214)
More EU	0.364** (0.147)	0.445*** (0.151)	0.343 (0.226)	0.499** (0.247)
TRT x More EU	0.211 (0.208)	0.071 (0.195)	0.045 (0.302)	0.251 (0.301)
Observations	380	380	167	167
Panel b) EU trust	(1)	(2)	(3)	(4)
TRT	0.178 (0.138)	0.493*** (0.134)	-0.426* (0.217)	-0.530*** (0.192)
EU trust	-0.113 (0.141)	0.367** (0.143)	-0.263 (0.243)	-0.079 (0.250)
TRT x EU trust	-0.242 (0.212)	-0.459** (0.193)	0.159 (0.325)	0.170 (0.326)
Observations	376	376	161	161
Panel c) Right-wing	(1)	(2)	(3)	(4)
TRT	0.036 (0.117)	0.193* (0.107)	-0.214 (0.180)	-0.346* (0.178)
Right-wing	-0.403** (0.158)	-0.476*** (0.158)	0.102 (0.240)	-0.526** (0.255)
TRT x Right-wing	0.098 (0.231)	0.282 (0.220)	-0.472 (0.313)	0.004 (0.314)
Observations	380	380	167	167
Controls	Yes	Yes	Yes	Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied. Dependent variables are standardised to z-scores and denote in uneven columns attitudes toward EU income differences and in even columns support for an EU minimum wage. The treatment is interacted with a dummy for being in favour of more political responsibility at EU level (vs. national level) in panel a) (score 6 or higher on a 0-10 scale), political trust in the EU (score of 6 or higher on a 0-10 scale of the two items ‘trust in EU parliament’ and ‘trust in European commission’) in panel b), and having a politically right-wing position (score 6 or higher on a 0-10 scale) in panel c). Observations are different due to missing values on each moderator. All regressions include as control variables actual EU income position, EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table B1.5 Heterogeneity in treatment effects for Germany: Socio-demographics

	Underestimate		Overestimate	
	EU diff. unjust (1)	EU min wage (2)	EU diff. unjust (3)	EU min wage (4)
Panel a) Working				
TRT	0.115 (0.148)	0.215 (0.150)	-0.265 (0.217)	-0.385* (0.218)
Working	0.373 (0.261)	-0.058 (0.228)	0.548 (0.333)	0.219 (0.245)
TRT x Working	-0.065 (0.207)	0.149 (0.198)	-0.209 (0.295)	-0.077 (0.315)
Panel b) Female	(1)	(2)	(3)	(4)
TRT	0.232 (0.152)	0.334** (0.140)	-0.426* (0.219)	-0.392** (0.195)
Female	0.349** (0.136)	0.275** (0.138)	-0.289 (0.224)	-0.255 (0.227)
TRT x Female	-0.343* (0.201)	-0.078 (0.187)	0.102 (0.296)	-0.068 (0.306)
Panel c) Older age	(1)	(2)	(3)	(4)
TRT	0.159 (0.160)	0.443*** (0.133)	-0.534** (0.222)	-0.460* (0.240)
Older age	0.122 (0.218)	0.435** (0.202)	-0.304 (0.326)	0.438 (0.398)
TRT x Older age	-0.156 (0.206)	-0.260 (0.193)	0.318 (0.307)	0.079 (0.311)
Observations	384	384	167	167
Controls	Yes	Yes	Yes	Yes

Notes: Coefficients and robust standard errors (in parentheses). Dependent variables are standardised to z-scores and denote in uneven columns attitudes toward EU income differences and in even columns support for an EU minimum wage. The treatment is interacted with a dummy for working in panel a), being female in panel b), and begin of older age (above 50 years) in panel c). All regressions include as control variables actual EU income position, EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table B1.6 Heterogeneity in treatment effects for Italy, Poland and Sweden

	ITA				POL				SWE			
	Underestimate		Overestimate		Underestimate		Overestimate		Underestimate		Overestimate	
	EU diff. unjust (1)	EU min wage (2)	EU diff. unjust (3)	EU min wage (4)	EU diff. unjust (5)	EU min wage (6)	EU diff. unjust (7)	EU min wage (8)	EU diff. unjust (9)	EU min wage (10)	EU diff. unjust (11)	EU min wage (12)
Panel a) EU identity												
TRT	-0.308** (0.125)	0.152 (0.110)	-0.030 (0.201)	-0.034 (0.167)	-0.217 (0.139)	-0.083 (0.124)	0.295 (0.188)	-0.107 (0.164)	-0.093 (0.116)	-0.221* (0.120)	-0.074 (0.183)	0.103 (0.189)
EU identity	-0.028 (0.196)	0.177 (0.189)	-0.327 (0.238)	0.253 (0.198)	-0.107 (0.228)	0.181 (0.193)	0.421 (0.317)	-0.332 (0.223)	-0.105 (0.676)	-0.073 (0.509)	0.370 (0.409)	0.279 (0.385)
TRT x EU identity	0.356 (0.254)	-0.183 (0.248)	0.495 (0.374)	-0.084 (0.337)	0.065 (0.320)	-0.032 (0.277)	-0.195 (0.429)	0.666** (0.307)	0.442 (0.702)	0.295 (0.563)	-0.392 (0.575)	-0.601 (0.539)
Observations	384	384	192	192	304	304	192	192	460	460	156	156
Panel b) Altruism	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
TRT	-0.203 (0.160)	0.017 (0.131)	-0.109 (0.258)	-0.067 (0.208)	-0.101 (0.150)	-0.072 (0.128)	0.340 (0.216)	0.025 (0.194)	-0.210 (0.169)	-0.460*** (0.169)	-0.143 (0.241)	-0.139 (0.269)
Altruism	0.264 (0.172)	-0.019 (0.147)	0.239 (0.238)	0.058 (0.245)	0.249 (0.222)	0.211 (0.206)	0.256 (0.257)	0.046 (0.207)	0.273* (0.146)	0.145 (0.160)	0.277 (0.283)	0.496** (0.246)
TRT x Altruism	-0.065 (0.219)	0.207 (0.193)	0.381 (0.345)	0.084 (0.312)	-0.416 (0.296)	-0.027 (0.269)	-0.174 (0.395)	-0.148 (0.352)	0.247 (0.220)	0.556** (0.227)	-0.031 (0.346)	0.140 (0.338)
Observations	380	380	186	186	302	302	180	180	453	453	155	155
Controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Coefficients and robust standard errors (in parentheses) from OLS regressions with survey weights applied. Dependent variables are standardised to z-scores and denote in uneven columns attitudes toward EU income differences and in even columns support for an EU minimum wage. The treatment is interacted with a dummy for EU identity in panel a) and altruism in panel b). Observations are smaller in panel b) due to missing values on altruism. All regressions include as control variables actual EU income position, EU identity, gender, education, age, age², employment status and surroundings affected by COVID-19. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Appendix B2: Three models on attitudes toward inequality

In the Meltzer-Richard model (Meltzer & Richard, 1981), individuals only care about their personal consumption (where consumption equals income) and the tax scheme relies on lump-sum benefits, financed by a proportional income tax (Alesina & Giuliano, 2011; Iversen & Goplerud, 2018). As long as the budget is balanced and non-linear efficiency costs of taxation are involved, individual i obtains the following utility function U_i with a tax rate t , average income x_A and a wastage w :

$$U_i = c_i = (1 - t)x_i + x_A t - wt^2 \quad (1)$$

The first term $(1 - t)x_i$ denotes the after-tax labour income, $x_A t$ is the lump-sum transfer and wt^2 denotes the efficiency costs of taxation (this notation stems from Alesina and Giuliano, 2011). Individual i chooses the optimal tax rate t^* by maximizing her consumption c_i with $t^* = \frac{x_A - x_i}{2w}$. Individual i is in favour of a redistributive tax t^* , if her income is lower than average (given that the efficiency costs are not too large). Consequently, as long as $(x_A - x_i) > 0$, individual i will prefer less inequality, since through redistribution she will increase her consumption. In contrast, for respondents with income x_i , such that $(x_A - x_i) < 0$, a reduction of inequality will make them worse off, since their income will be reduced.

The Relative Deprivation model (Clark & D'Ambrosio, 2015), in turn, predicts that individuals compare themselves with all of their co-citizens in society (not only ‘the average’) and feel the more deprived, the lower their income is relative to that of their co-citizens who are doing better. Following Yitzhaki (1979) and Hey and Lambert (1980), Clark and D'Ambrosio define relative deprivation as the sum of the differences between individual i 's income x_i and the incomes x_j of all individuals who are better off than i ($x_j > x_i$, where $j \in B_i(x)$), divided by the number of individuals n in society:

$$D_i(x) = \sum_{j \in B_i(x)} \frac{x_j - x_i}{n} \quad (2)$$

The higher $D_i(x)$, the more deprived individual i is due to inequality in society. The key element of the Relative Deprivation model is that individuals dislike inequality to different extents, depending on where they stand in the income distribution: individuals with a lower income position will regard inequality as more unjust and will be more in favour of redistribution compared to individuals with a higher income position.

In contrast to the first two models, the Fehr-Schmidt model (E. Fehr & Schmidt, 1999) assumes that all individuals prefer equitable over non-equitable outcomes, independent of where they stand in society. However, they evaluate these inequalities differently, depending on whether inequality is advantageous or disadvantageous for them. In the two-player scenario, individual i 's utility function includes her income x_i and the utility loss from inequality:

$$U_i = x_i - \alpha_i \max[x_j - x_i, 0] - \beta_i \max[x_i - x_j, 0], i \neq j, \quad (3)$$

where $\alpha_i \max[x_j - x_i, 0]$ is the utility loss from disadvantageous inequality (where $x_i < x_j$) and $\beta_i \max[x_i - x_j, 0]$ denotes the utility loss from advantageous inequality (where $x_i > x_j$). Fehr and Schmidt assume that $\alpha_i > \beta_i$ (where $0 \leq \beta_i < 1$), so that individual i suffers more from disadvantageous than from advantageous inequality. Therefore, the Fehr-Schmidt model predicts that inequality always causes a utility loss, but this loss is even greater if inequality is to their own material disadvantage.

Appendix B3

In our survey, respondents were asked to state their yearly net household income with the following questions:

- Which of the following types of income did your whole household receive last year (2019)? Please select every type of income you or at least one of your household members have received.
 - Income from employment (i.e., wages or salaries as employee; income from independent, freelance or commercial activities)
 - Income from retirement, pensions
 - Income from social benefits
 - Maintenance payments or financial assistance from persons who do not live in the household
 - Income from capital assets (including interest, dividends, profits from capital investment; income from rental of a property or land)
 - Don't know
- When you add the income of all your household members together: What was your total yearly net household income last year (2019)?

Net means after deduction of taxes and social contributions.

Total means all types of income, i.e. income from employment, retirement, pensions, social benefits, capital assets, maintenance and other income of all persons in your household.

_____ <NATIONAL CURRENCY>

Don't know

- *[When 'Don't know' was selected in the previous question:]*

Information of your income is central to our study. Therefore, an approximate answer is also very helpful for us. Please give us your best guess: When you add the income of all your household members together: What was your total yearly net household income last year (2019)?

Net means after deduction of taxes and social contributions.

Total means all types of income, i.e. income from employment, retirement, pensions, social benefits, capital assets, maintenance and other income of all persons in your household.

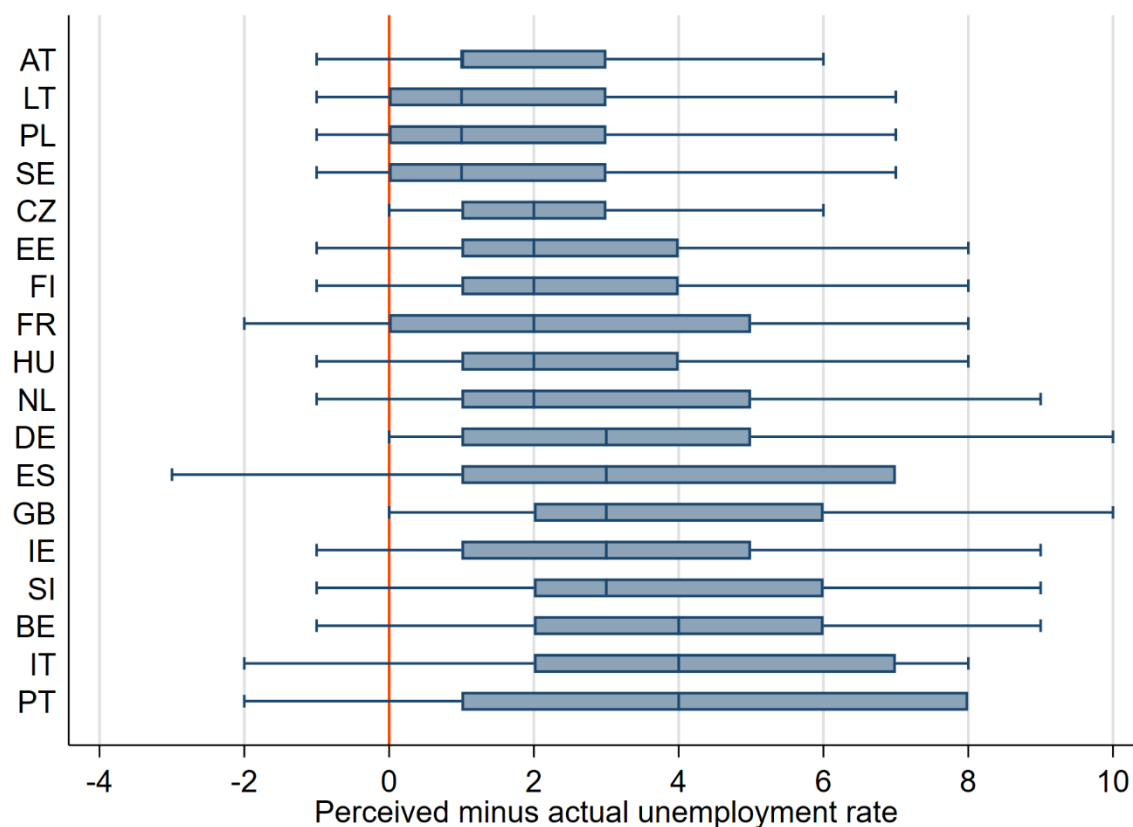
_____ <NATIONAL CURRENCY>

Don't know

Appendix C

‘Support for an EU-wide social policy? A country-comparative analysis of unemployment perceptions’ (Chapter 4)

Figure C.1 Unemployment misperceptions in 18 European countries



Notes: The figure illustrates the distribution of misperceptions of national unemployment rate for each country; misperceptions calculated as the difference between the perceived and actual unemployment rate (in categories), positive values denoting a higher perceived than actual unemployment rate; box plots sorted by the median of each country, with outside values excluded; weights applied.

Table C.1 Summary statistics of individual-level variables

	Min./Max.	Mean	Standard Deviation
Support for EU-wide minimum income benefit scheme	0/1	0.67	0.47
Perceived unemployment rate	1/11	5.48	3.01
Perceived standard of living as unemployed	0/10	3.99	2.05
Egalitarianism	1/5	3.47	0.78
Political ideology (right (0) - left (10))	0/10	5.09	2.19
Emotional attachment to Europe	0/10	5.87	2.48
Age	15/100	47.40	18.30
Male	0/1	0.50	0.50
Female	0/1	0.50	0.50
Equivalent net household income			
1st quantile	0/1	0.20	0.40
2nd quantile	0/1	0.46	0.50
3rd quantile	0/1	0.18	0.38
4th quantile	0/1	0.01	0.09
No answer	0/1	0.16	0.36
Welfare dependency			
No	0/1	0.95	0.22
Yes	0/1	0.05	0.22
(Self-)Employed	0/1	0.53	0.50
In education	0/1	0.10	0.30
Unemployed	0/1	0.06	0.23
Retired	0/1	0.22	.041
Housework/looking after children	0/1	0.06	0.25
Other	0/1	0.04	0.18
Low education	0/1	0.31	0.46
Medium education	0/1	0.35	0.48
High education	0/1	0.34	0.47

Notes: ESS8 data (N= 27,007 for political ideology, N= 29,286 for all other variables), weights applied.

Table C.2 Descriptive statistics of country performances and aggregate-level perceptions

Country	Obs.	Welfare efficiency	Net social spending	Poverty risk rate	GDP	Unemployment rate	Aggregate: Perceived unemployment rate	Aggregate: Perceived living standard
AT	1,661	46.4	26.3	14.1	40,920	6.0	4	5.4
BE	1,690	41.1	25.8	15.6	37,960	7.8	6	5.2
CZ	1,842	40.5	18.1	9.7	16,790	4.0	3	4.4
DE	2,623	34.8	25.8	16.5	38,070	4.1	5	4.5
EE	1,819	24.9	16.0	21.7	16,530	6.9	5	3.2
ES	1,501	24.4	22.1	22.3	23,980	19.6	7	2.9
FI	1,809	57.0	27.8	11.6	39,580	8.8	5	4.4
FR	1,849	42.4	30.2	13.6	33,430	10.1	6	4.3
GB	1,661	43.8	24.8	15.8	37,080	4.8	5	4.6
HU	1,256	44.2	18.3	14.4	11,850	5.1	5	3.3
IE	2,129	51.5	14.6	16.8	56,870	8.4	5	4.9
IT	1,859	21.4	24.4	20.6	28,210	11.7	7	2.7
LT	1,379	21.5	14.3	21.9	13,560	7.9	4	3.6
NL	1,445	42.5	22.4	12.7	41,590	6.0	5	5.1
PL	1,187	25.8	18.1	17.0	11,110	6.2	4	3.2
PT	1,119	24.0	22.0	19.0	18,060	11.2	7	2.8
SE	1,343	45.8	25.4	16.2	46,990	7.0	4	4.4
SI	1,114	42.8	22.6	13.9	19,590	8.0	6	3.1

Notes: Welfare efficiency measured as the ratio between the at-risk-of-poverty rate before and after social transfers; net social expenditure measured as the percentage of GDP in the country; GDP measured in Euro; the perceived national unemployment rate ranged from 1 ('0–4%') to 11 ('50% or more'), the perceived living standard of the unemployed in the country ranged from 0 ('extremely bad') to 10 ('extremely good'). Data sources: Eurostat 2016, ESS8 (weights applied).

Table C.3 Role of unemployment perceptions by political ideology

	Support for EU-wide minimum income benefit scheme		
	(1)	(2)	(3)
Perc. unemployment rate	0.006*** (0.001)	0.021*** (0.002)	0.006*** (0.001)
Perc. living standard of unemployed	-0.019*** (0.001)	-0.018*** (0.001)	-0.024*** (0.003)
Perc. unemployment rate x Political ideology (right to left)		-0.003*** (0.000)	
Perc. living standard of unemployed x Political ideology (right to left)			0.001+ (0.001)
Political ideology (right to left)	0.022*** (0.001)	0.038*** (0.003)	0.018*** (0.003)
Individual-level controls	Yes	Yes	Yes
N - Individual	27,007	27,007	27,007
N - Country	18	18	18

Notes: Using multilevel linear probability random intercept models; different sample size using political ideology instead of egalitarianism; standard errors in parentheses; individual-level covariates (gender, age, age², equivalent net household income, welfare dependency, employment status, education, European attachment) included in all models; significance levels: + p<0.1, *** p<0.001.

Table C.4 Full results of Table 4.1: Determinants of support for EU minimum income scheme

	Support for EU-wide minimum income benefit scheme				
	(1)	(2)	(3)	(4)	(5)
Perc. unemployment rate	0.005*** (0.001)	0.030*** (0.004)	0.005*** (0.001)	0.005*** (0.001)	0.005*** (0.001)
Perc. living standard of unemployed	-0.016*** (0.001)	-0.016*** (0.001)	-0.033*** (0.005)	-0.016*** (0.001)	-0.016*** (0.001)
Perc. unemployment rate x Egalitarianism		-0.007*** (0.001)			
Perc. living standard of unemployed x Egalitarianism			0.005** (0.002)		
Egalitarianism	0.092*** (0.004)	0.127*** (0.007)	0.071*** (0.007)	0.092*** (0.004)	0.092*** (0.004)
Nat. unemployment rate				0.013+ (0.007)	0.006 (0.007)
Nat. welfare efficiency					-0.006** (0.002)
Individual-level controls					
Gender (<i>Ref.: Male</i>)					
Female	0.002 (0.005)	0.002 (0.005)	0.002 (0.005)	0.002 (0.005)	0.002 (0.005)
Age	-0.003** (0.001)	-0.003** (0.001)	-0.003** (0.001)	-0.003** (0.001)	-0.003** (0.001)

Appendix C – Support for an EU-wide social policy? A country-comparative analysis of unemployment perceptions

Age ²	0.000*	0.000*	0.000*	0.000*	0.000*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Equivalent net household income (<i>Ref.: 1st quartile</i>)					
2nd quartile	-0.019**	-0.020**	-0.020**	-0.019**	-0.019**
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
3rd quartile	-0.018*	-0.017 ⁺	-0.018 ⁺	-0.018*	-0.018*
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
4th quartile	-0.030	-0.027	-0.029	-0.030	-0.030
	(0.030)	(0.030)	(0.030)	(0.030)	(0.030)
No answer	-0.044***	-0.044***	-0.044***	-0.044***	-0.044***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Welfare dependency (<i>Ref.: No</i>)					
Yes	0.033*	0.032*	0.032*	0.033*	0.033*
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Employment status (<i>Ref.: (Self-)Employed</i>)					
In education	0.033*	0.032*	0.033*	0.033*	0.033*
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Unemployed	0.028*	0.028*	0.028*	0.027*	0.027*
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)
Retired	-0.009	-0.009	-0.008	-0.009	-0.009
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Housework/looking after children	0.023 ⁺	0.022 ⁺	0.023 ⁺	0.023 ⁺	0.023 ⁺
	(0.012)	(0.012)	(0.012)	(0.012)	(0.012)
Other	0.017	0.017	0.018	0.018	0.018
	(0.015)	(0.015)	(0.015)	(0.015)	(0.015)
Education (<i>Ref.: Low</i>)					
Medium	-0.022**	-0.022**	-0.022**	-0.021**	-0.021**
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)
High	-0.037***	-0.037***	-0.037***	-0.037***	-0.037***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.008)
European attachment	0.019***	0.019***	0.019***	0.019***	0.019***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Constant	0.385***	0.264***	0.460***	0.281***	0.577***
	(0.041)	(0.045)	(0.046)	(0.071)	(0.119)
N - Individual	29,286	29,286	29,286	29,286	29,286
N – Country	18	18	18	18	18
Residual – Individual	0.195	0.194	0.195	0.195	0.195
Residual – Country	0.067	0.068	0.067	0.060	0.041

Notes: Using multilevel linear probability random intercept models; ICC (null model) = 0.100; standard errors in parentheses; significance levels: ⁺ p<0.1, * p<0.05, ** p<0.01, *** p<0.001.

Table C.5 Robustness checks using alternative contextual indicators

	Support for EU-wide minimum income benefit scheme		
	(1)	(2)	(3)
Perc. unemployment rate	0.005*** (0.001)	0.005*** (0.001)	0.005*** (0.001)
Perc. living standard of unemployed	-0.016*** (0.001)	-0.016*** (0.001)	-0.016*** (0.001)
Expect. EU lowering national social benefits			
Net social expenditure (as percentage of GDP) GDP (in 1000 Euro)		-0.008 (0.005) -0.004* (0.002)	
At-risk-of-poverty rate			0.018** (0.007)
Individual-level controls	Yes	Yes	Yes
N - Individual	29,286	29,286	29,286
N - Country	18	18	18

Notes: Using multilevel linear probability random intercept models; standard errors in parentheses; individual-level covariates (gender, age, age², equivalent net household income, welfare dependency, employment status, education, European attachment, egalitarianism) included in all models; significance levels: * p<0.05, ** p<0.01, *** p<0.001.

Table C.6 Determinants of unemployment perceptions

	Perceived unemployment rate	Perceived living standard of unemployed
	(1)	(2)
Individual-level factors		
Gender (<i>Ref.: Male</i>)		
Female	0.733*** (0.030)	-0.036 (0.022)
Age	-0.029*** (0.006)	-0.031*** (0.004)
Age ²	0.000** (0.000)	0.000*** (0.000)
Equivalent net household income (<i>Ref.: 1st quartile</i>)		
2nd quartile	-0.567*** (0.042)	0.066* (0.031)
3rd quartile	-0.959*** (0.053)	-0.031 (0.039)
4th quartile	-1.076*** (0.173)	-0.279* (0.127)
No answer	-0.525*** (0.054)	-0.005 (0.040)

Appendix C – Support for an EU-wide social policy? A country-comparative analysis of unemployment perceptions

Welfare dependency (Ref.: No)		
Yes	0.149 ⁺ (0.077)	-0.307*** (0.056)
Employment status (Ref.: (Self-)Employed)		
In education	-0.587*** (0.074)	-0.206*** (0.054)
Unemployed	0.479*** (0.075)	-0.519*** (0.055)
Retired	0.098 ⁺ (0.057)	-0.067 (0.042)
Housework/Looking after children	0.309*** (0.068)	-0.253*** (0.049)
Other	0.480*** (0.086)	-0.431*** (0.063)
Education (Ref.: Low)		
Medium	-0.487*** (0.042)	0.084** (0.030)
High	-1.173*** (0.043)	0.015 (0.032)
Egalitarianism	0.102*** (0.020)	-0.423*** (0.015)
Contextual factors		
Welfare efficiency	-0.000 (0.018)	0.049** (0.015)
Unemployment rate	0.232*** (0.054)	-0.045 (0.047)
Constant	4.596*** (0.954)	4.972*** (0.821)
N-Individual	29,286	29,286
N-Country	18	18

Notes: Using multilevel linear probability random intercept models; ICC (null model for estimation specification in column (1)) = 0.17, ICC (null model for estimation specification in column (2)) = 0.19; standard errors in parentheses; significance levels: ⁺ p<0.1, * p<0.05, ** p<0.01, *** p<0.001.

Table C.7 Role of unemployment misperceptions by country performances

	Support for EU-wide minimum income benefit scheme					
	Random intercept		Random slope		Two-step	
	(1)	(2)	(3)	(4)	(5)	(6)
Misperceptions of unemployment rate	0.005*** (0.001)	0.005*** (0.001)	0.006** (0.002)	0.006** (0.002)	0.006** (0.002)	0.006** (0.002)
Misperceptions of unemployment rate x Nat. welfare efficiency (std.)	0.002* (0.001)		0.002 (0.002)		0.002 (0.002)	
x Nat. unemployment rate (std.)		-0.002* (0.001)		-0.002 (0.002)		-0.002 (0.002)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
N – Individual	29,286	29,286	29,286	29,286	29,286	29,286
N – Country	18	18	18	18	18	18

Notes: Using multilevel linear probability models to test how contextual factors (in standardised values) influence coefficients of misperceptions regarding national unemployment rate; misperceptions calculated as the difference between the perceived and actual unemployment rate (in categories), positive values denoting a higher perceived than actual rate; columns (1) and (2) display the results of random intercept models, columns (3) and (4) display the results of random slope models, and columns (5) and (6) display the results of two-step modelling; both contextual factors, both indicators of perceptions, and the individual-level covariates (gender, age, age², equivalent net household income, welfare dependency, employment status, education, European attachment, egalitarianism) included in all models; standard errors in parentheses; significant levels: * p<0.05, ** p<0.01, *** p<0.001.

Appendix D

‘Navigating subjective socioeconomic insecurity in times of crisis: An interplay of social status, crisis experiences and perceptions’ (Chapter 5)

Appendix D1

Table D1.1 Summary statistics

	Min/Max	Mean	SD
Subjective insecurity: Losing own job	0/1	0.121	0.327
Subjective insecurity: Having financial difficulties	0/1	0.146	0.353
Subjective insecurity: Having much lower living standard	0/1	0.275	0.446
Wave 2 (June/July 2020)	0/1	0.403	0.491
Wave 3 (April 2021)	0/1	0.320	0.467
Wave 4 (July/August 2022)	0/1	0.277	0.447
Income group			
Lower	0/1	0.221	0.415
Medium	0/1	0.593	0.491
Higher	0/1	0.186	0.389
Subjective social position			
Lower	0/1	0.101	0.302
Medium	0/1	0.612	0.487
Higher	0/1	0.287	0.452
Changes in employment			
(Self-)Employed, unchanged	0/1	0.481	0.500
Short-time work/lost job	0/1	0.035	0.184
Other/inactive	0/1	0.484	0.500
Changes in household income			
About the same	0/1	0.247	0.431
Decreased	0/1	0.646	0.478
Increased	0/1	0.107	0.309
Perceived own affectedness	0/10	3.005	3.003
Perceived affectedness of others	0/10	5.815	1.942
Perceived own affectedness compared to others			
Self <= others	0/1	0.835	0.371
Self > others	0/1	0.165	0.371
Male	0/1	0.486	0.500
Female	0/1	0.514	0.500
Age group			
18–34 years	0/1	0.233	0.423
35–54 years	0/1	0.366	0.482
55 years or more	0/1	0.400	0.490

Appendix D1 – Navigating subjective socioeconomic insecurity in times of crisis: An interplay of social status, crisis experiences and perceptions

Household size			
1 person	0/1	0.314	0.464
2 persons	0/1	0.411	0.492
3 persons	0/1	0.139	0.346
4 persons or more	0/1	0.136	0.343
Place of residence			
West Germany	0/1	0.806	0.396
East Germany	0/1	0.194	0.396
Treatment group membership			
Control	0/1	0.324	0.468
Treatment I	0/1	0.323	0.468
Treatment II	0/1	0.353	0.478
Education			
Lower	0/1	0.193	0.395
Medium	0/1	0.541	0.498
Higher	0/1	0.265	0.442
Occupation			
Manual	0/1	0.054	0.225
Skilled/service	0/1	0.430	0.495
Professional/clerical	0/1	0.516	0.500

Notes: N = 2,616 for all variables except for subjective job insecurity (N = 1,607) and occupation (N = 2,082); education and occupation only used for additional analyses; weights applied.

Table D1.2 Results of Table 5.1 using other measures of social status

	Losing own job		Having financial difficulties		Having much lower living standard	
	(1) Educ.	(2) Occup.	(3) Educ.	(4) Occup.	(5) Educ.	(6) Occup.
Panel a) by social status						
<i>Ref.: Lower educ. (manual occup.)</i>						
Medium (skilled/service)	0.017 (0.026)	0.037 (0.046)	-0.056* (0.023)	0.053 (0.033)	-0.053 (0.030)	-0.082 (0.065)
Higher (prof./clerical)	0.007 (0.028)	-0.012 (0.045)	-0.067** (0.025)	-0.021 (0.031)	-0.106** (0.032)	-0.178** (0.064)
<i>Ref.: Jun/Jul20</i>						
Apr21	0.034* (0.017)	0.044** (0.017)	0.018 (0.013)	0.030* (0.014)	0.019 (0.017)	0.027 (0.018)
Jul/Aug22	0.002 (0.018)	-0.007 (0.018)	0.080*** (0.017)	0.080*** (0.018)	0.144*** (0.020)	0.158*** (0.022)
Panel b) by social status for each wave						
<i>Ref.: Lower educ. (manual occup.)</i>						
Medium (skilled/service)	0.036 (0.033)	0.022 (0.065)	-0.038 (0.028)	0.066 (0.046)	-0.044 (0.036)	-0.124 (0.079)
Higher (prof./clerical)	0.019 (0.034)	-0.048 (0.063)	-0.066* (0.029)	-0.012 (0.043)	-0.110** (0.037)	-0.238** (0.077)
<i>Ref.: Jun/Jul20</i>						
Apr21	0.051 (0.040)	-0.016 (0.093)	0.028 (0.030)	-0.011 (0.057)	0.023 (0.033)	-0.075 (0.081)
Jul/Aug22	0.036 (0.046)	-0.030 (0.065)	0.105** (0.038)	0.159 (0.088)	0.154*** (0.045)	0.101 (0.093)
<i>Ref.: Apr21 x Lower educ. (manual occup.)</i>						
Apr21 x Medium (skilled/service)	-0.021 (0.046)	0.044 (0.098)	-0.021 (0.035)	0.023 (0.062)	-0.022 (0.041)	0.084 (0.086)
Apr21 x Higher (prof./clerical)	-0.017 (0.048)	0.077 (0.095)	0.004 (0.038)	0.061 (0.060)	0.029 (0.045)	0.129 (0.084)
<i>Ref.: Jul/Aug22 x Lower educ. (manual occup.)</i>						
Jul/Aug22 x Medium (skilled/service)	-0.049 (0.053)	0.004 (0.072)	-0.040 (0.046)	-0.070 (0.093)	-0.010 (0.054)	0.055 (0.100)
Jul/Aug22 x Higher (prof./clerical)	-0.021 (0.054)	0.040 (0.069)	-0.012 (0.048)	-0.096 (0.090)	-0.018 (0.055)	0.064 (0.097)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,607	1,420	2,616	2,082	2,616	2,082

Notes: Using linear probability models; education (lower, medium, higher) used as the measure of social status in columns (1), (3) and (5), and occupation (manual, skilled/service, prof./clerical) used in columns (2), (4) and (6); controls are gender, age, household size, place of residence (West/East Germany) and treatment group membership; weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

Table D1.3 Results of panel b) in Table 5.1 using fixed-effects models

	Losing own job		Having financial difficulties		Having much lower living standard	
	(1) Inc.	(2) Subj. pos.	(3) Inc.	(4) Subj. pos.	(5) Inc.	(6) Subj. pos.
<i>Ref.: Jun/Jul20</i>						
Apr21	-0.034 (0.041)	-0.068 (0.060)	-0.016 (0.030)	0.008 (0.043)	-0.005 (0.036)	0.051 (0.053)
Jul/Aug22	-0.055 (0.048)	-0.004 (0.069)	0.075* (0.033)	0.170*** (0.047)	0.129** (0.040)	0.268*** (0.057)
<i>Ref.: Apr21 x</i>						
<i>Lower status</i>						
Apr21 x Medium status	0.071 (0.046)	0.077 (0.063)	0.031 (0.035)	-0.012 (0.047)	0.043 (0.042)	-0.029 (0.057)
Apr21 x Higher status	0.048 (0.053)	0.135* (0.066)	0.065 (0.044)	0.050 (0.051)	0.014 (0.053)	-0.038 (0.062)
<i>Ref.: Jul/Aug22 x</i>						
<i>Lower status</i>						
Jul/Aug22 x Medium status	0.064 (0.052)	-0.004 (0.073)	-0.005 (0.038)	-0.116* (0.050)	0.063 (0.046)	-0.101 (0.061)
Jul/Aug22 x Higher status	0.016 (0.060)	-0.007 (0.076)	0.005 (0.047)	-0.088 (0.054)	-0.027 (0.058)	-0.155* (0.066)
Obs.	1,607	1,607	2,616	2,616	2,616	2,616

Notes: Using fixed-effects models; income group used as the measure of social status in columns (1), (3) and (5), and subjective social position used in columns (2), (4) and (6); weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

Table D1.4 Results of Table 5.2 using other measures of social status

	Losing own job				Having financial difficulties				Having much lower living standard			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Panel a) Using subjective social position												
<i>Ref.: Lower subj. social pos.</i>												
Medium	-0.087 (0.050)	-0.069 (0.050)	-0.056 (0.049)	-0.055 (0.049)	-0.158*** (0.038)	-0.117*** (0.035)	-0.086** (0.032)	-0.086** (0.032)	-0.300*** (0.041)	-0.246*** (0.036)	-0.202*** (0.032)	-0.205*** (0.032)
Higher	-0.119* (0.051)	-0.075 (0.052)	-0.059 (0.050)	-0.059 (0.050)	-0.167*** (0.039)	-0.105** (0.037)	-0.077* (0.034)	-0.078* (0.034)	-0.338*** (0.043)	-0.251*** (0.039)	-0.213*** (0.035)	-0.215*** (0.035)
<i>Ref.: (Self-)Employed, unchanged</i>												
Short-time work/ lost job		0.304*** (0.074)	0.256*** (0.073)	0.264*** (0.072)		0.140** (0.053)	0.083 (0.050)	0.084 (0.050)		0.203*** (0.059)	0.124* (0.056)	0.126* (0.056)
Other/inactive		0.030 (0.023)	0.022 (0.022)	0.022 (0.022)		0.082*** (0.017)	0.076*** (0.016)	0.076*** (0.016)		0.093*** (0.021)	0.083*** (0.019)	0.084*** (0.019)
<i>Ref.: Income about the same</i>												
Income declined		0.150*** (0.027)	0.082** (0.026)	0.081** (0.026)		0.227*** (0.023)	0.122*** (0.022)	0.121*** (0.022)		0.338*** (0.025)	0.196*** (0.025)	0.194*** (0.025)
Income increased		-0.017 (0.022)	-0.002 (0.022)	-0.006 (0.021)		-0.009 (0.022)	0.007 (0.021)	0.006 (0.021)		-0.055* (0.027)	-0.034 (0.025)	-0.034 (0.025)
Perceived own affectedness			0.027*** (0.004)	0.018*** (0.004)			0.037*** (0.003)	0.035*** (0.004)			0.049*** (0.004)	0.048*** (0.005)
Perceived affectedness of others			-0.005 (0.005)				-0.000 (0.004)				0.006 (0.005)	
<i>Ref.: Perceived affectedness (self <= others)</i>												
Perceived affectedness (self > others)				0.099** (0.037)				0.025 (0.033)				0.031 (0.034)
Time period	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,607	1,607	1,607	1,607	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616

Appendix D1 – Navigating subjective socioeconomic insecurity in times of crisis: An interplay of social status, crisis experiences and perceptions

Panel b) Using education												
<i>Ref.: Lower educ.</i>												
Medium	0.017 (0.026)	0.018 (0.024)	0.035 (0.023)	0.037 (0.023)	-0.056* (0.023)	-0.048* (0.021)	-0.023 (0.020)	-0.023 (0.019)	-0.053 (0.030)	-0.044 (0.026)	-0.009 (0.023)	-0.009 (0.023)
Higher	0.007 (0.028)	0.003 (0.026)	0.015 (0.025)	0.020 (0.025)	-0.067** (0.025)	-0.063** (0.023)	-0.043* (0.021)	-0.043* (0.021)	-0.106** (0.032)	-0.101*** (0.028)	-0.073** (0.025)	-0.073** (0.025)
<i>Ref.: (Self-)Employed, unchanged</i>												
Short -time work/ lost job		0.305*** (0.074)	0.255*** (0.073)	0.263*** (0.071)		0.143** (0.053)	0.083 (0.050)	0.084 (0.050)		0.206*** (0.062)	0.123* (0.058)	0.125* (0.058)
Other/inactive		0.037 (0.023)	0.028 (0.022)	0.029 (0.022)		0.089*** (0.018)	0.081*** (0.016)	0.081*** (0.016)		0.112*** (0.021)	0.101*** (0.019)	0.102*** (0.019)
<i>Ref.: Income about the same</i>												
Income declined		0.153*** (0.026)	0.083** (0.026)	0.081** (0.026)		0.234*** (0.023)	0.126*** (0.022)	0.125*** (0.022)		0.356*** (0.025)	0.207*** (0.025)	0.205*** (0.025)
Income increased		-0.018 (0.022)	-0.004 (0.022)	-0.008 (0.021)		-0.006 (0.022)	0.009 (0.021)	0.009 (0.021)		-0.052 (0.027)	-0.031 (0.026)	-0.031 (0.026)
Perceived own affectedness			0.028*** (0.004)	0.018*** (0.004)			0.037*** (0.003)	0.036*** (0.004)			0.050*** (0.004)	0.050*** (0.005)
Perceived affectedness of others			-0.005 (0.005)				0.000 (0.004)				0.007 (0.005)	
<i>Ref.: Perceived affectedness (self <= others)</i>												
Perceived affectedness (self > others)				0.099** (0.037)				0.022 (0.033)				0.025 (0.034)
Time period	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,607	1,607	1,607	1,607	2,616	2,616	2,616	2,616	2,616	2,616	2,616	2,616

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Panel c) Using occupation												
<i>Ref.: Manual occup.</i>												
Skilled/service	0.037 (0.046)	0.037 (0.042)	0.065 (0.040)	0.062 (0.039)	0.053 (0.033)	0.059 (0.032)	0.074* (0.031)	0.074* (0.031)	-0.082 (0.065)	-0.077 (0.056)	-0.059 (0.053)	-0.056 (0.054)
Prof./clerical	-0.012 (0.045)	0.016 (0.040)	0.055 (0.039)	0.052 (0.038)	-0.021 (0.031)	0.010 (0.030)	0.042 (0.030)	0.042 (0.030)	-0.178** (0.064)	-0.134* (0.055)	-0.091 (0.053)	-0.089 (0.053)
<i>Ref.: (Self-)Employed, unchanged</i>												
Short-time work/ lost job		0.326*** (0.079)	0.287*** (0.078)	0.292*** (0.076)		0.108* (0.052)	0.061 (0.050)	0.063 (0.050)		0.191** (0.068)	0.123 (0.064)	0.125 (0.065)
Other/inactive		0.001 (0.028)	-0.001 (0.027)	-0.001 (0.026)		0.064** (0.021)	0.063** (0.020)	0.063** (0.020)		0.083** (0.026)	0.081*** (0.024)	0.082*** (0.024)
<i>Ref.: Income about the same</i>												
Income declined		0.149*** (0.027)	0.082** (0.027)	0.082** (0.027)		0.198*** (0.024)	0.109*** (0.023)	0.107*** (0.023)		0.328*** (0.028)	0.205*** (0.029)	0.200*** (0.028)
Income increased		-0.006 (0.024)	0.003 (0.023)	-0.002 (0.023)		0.001 (0.025)	0.011 (0.023)	0.010 (0.023)		-0.027 (0.031)	-0.014 (0.029)	-0.013 (0.029)
Perceived own affectedness			0.026*** (0.004)	0.018*** (0.005)			0.032*** (0.004)	0.030*** (0.004)			0.043*** (0.004)	0.046*** (0.005)
Perceived affectedness of others			-0.005 (0.005)				0.002 (0.004)				0.013* (0.005)	
<i>Ref.: Perceived affectedness (self <= others)</i>												
Perceived affectedness (self > others)				0.083* (0.038)				0.035 (0.035)				0.004 (0.040)
Time period	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,420	1,420	1,420	1,420	2,082	2,082	2,082	2,082	2,082	2,082	2,082	2,082

Notes: Using linear probability models; subjective social position, education and occupation used as the measure of social status in panels a), b) and c) respectively; time period (Jun/Jul20, Apr21, Jul/Aug22) and individual controls (gender, age, household size, place of residence (West/East Germany) and treatment group membership) included in all models; weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

Appendix D2

Table D2.1 Results of Table 5.1 using other operationalisation of subjective insecurity (metric)

	Losing own job		Having financial difficulties		Having much lower living standard	
	(1) Inc.	(2) Subj. pos.	(3) Inc.	(4) Subj. pos.	(5) Inc.	(6) Subj. pos.
Panel a) by social status						
<i>Ref.: Lower status</i>						
Medium status	-0.210*	-0.266	-0.444***	-0.560***	-0.752***	-1.080***
	(0.097)	(0.139)	(0.090)	(0.125)	(0.112)	(0.143)
Higher status	-0.360**	-0.334*	-0.760***	-0.574***	-1.286***	-1.247***
	(0.114)	(0.145)	(0.103)	(0.132)	(0.128)	(0.151)
<i>Ref.: Jun/Jul20</i>						
Apr 21	0.110*	0.115*	0.057	0.058	0.070	0.073
	(0.051)	(0.051)	(0.043)	(0.043)	(0.056)	(0.057)
Jul/Aug22	0.055	0.063	0.269***	0.271***	0.531***	0.537***
	(0.059)	(0.059)	(0.056)	(0.056)	(0.066)	(0.066)
Panel b) by social status for each wave						
<i>Ref.: Lower status</i>						
Medium status	-0.321*	-0.157	-0.469***	-0.281*	-0.909***	-0.922***
	(0.136)	(0.162)	(0.107)	(0.132)	(0.133)	(0.178)
Higher status	-0.488***	-0.281	-0.809***	-0.353*	-1.347***	-0.992***
	(0.146)	(0.166)	(0.112)	(0.139)	(0.147)	(0.188)
<i>Ref.: Jun/Jul20</i>						
Apr 21	-0.050	0.141	-0.032	0.220	-0.114	0.112
	(0.155)	(0.224)	(0.108)	(0.147)	(0.137)	(0.186)
Jul/Aug22	-0.095	0.360	0.289	0.951***	0.373*	1.120***
	(0.203)	(0.299)	(0.156)	(0.226)	(0.175)	(0.251)
<i>Ref.: Apr21 x Lower status</i>						
Apr21 x Medium status	0.195	-0.093	0.106	-0.232	0.265	-0.023
	(0.169)	(0.234)	(0.122)	(0.156)	(0.156)	(0.200)
Apr21 x Higher status	0.178	0.100	0.143	-0.072	0.153	-0.091
	(0.179)	(0.243)	(0.128)	(0.171)	(0.169)	(0.213)
<i>Ref.: Jul/Aug22 x Lower status</i>						
Jul/Aug22 x Medium status	0.154	-0.308	-0.036	-0.762**	0.255	-0.562*
	(0.214)	(0.308)	(0.169)	(0.235)	(0.192)	(0.264)
Jul/Aug22 x Higher status	0.250	-0.339	0.010	-0.738**	0.025	-0.831**
	(0.235)	(0.311)	(0.184)	(0.248)	(0.211)	(0.276)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
N	1,607	1,607	2,616	2,616	2,616	2,616

Notes: Robustness check using OLS models, with subjective insecurity operationalised as metric variables; each dependent variable ranging between 1 and 5: the higher the score, the higher the subjective insecurity; income group used as the measure of social status in columns (1), (3) and (5), and subjective social position used in columns (2), (4) and (6); individual controls are gender, age, household size, place of residence (West/East Germany) and treatment group membership; weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

Table D2.2 Results of Table 5.1 excluding respondents who selected ‘already happened’

	Losing own job		Having financial difficulties		Having much lower living standard	
	(1) Inc.	(2) Subj. pos.	(3) Inc.	(4) Subj. pos.	(5) Inc.	(6) Subj. pos.
Panel a) by social status						
<i>Ref.: Lower status</i>						
Medium status	-0.036 (0.028)	-0.076 (0.049)	-0.064** (0.022)	-0.117*** (0.035)	-0.085** (0.029)	-0.212*** (0.043)
Higher status	-0.078* (0.031)	-0.098* (0.049)	-0.120*** (0.023)	-0.136*** (0.035)	-0.199*** (0.032)	-0.241*** (0.044)
<i>Ref.: Jun/Jul20</i>						
Apr21	0.018 (0.015)	0.019 (0.015)	0.005 (0.011)	0.006 (0.011)	0.003 (0.015)	0.005 (0.015)
Jul/Aug22	-0.022 (0.015)	-0.019 (0.015)	0.068*** (0.015)	0.070*** (0.015)	0.106*** (0.020)	0.113*** (0.020)
Panel b) by social status for each wave						
<i>Ref.: Lower status</i>						
Medium status	-0.056 (0.040)	-0.100 (0.061)	-0.063* (0.026)	-0.085* (0.037)	-0.129*** (0.036)	-0.187*** (0.053)
Higher status	-0.086 (0.044)	-0.130* (0.062)	-0.131*** (0.025)	-0.115** (0.037)	-0.196*** (0.041)	-0.199*** (0.055)
<i>Ref.: Jun/Jul20</i>						
Apr21	-0.009 (0.046)	-0.063 (0.064)	0.006 (0.028)	0.009 (0.042)	-0.027 (0.039)	-0.003 (0.064)
Jul/Aug22	-0.039 (0.055)	-0.013 (0.099)	0.060 (0.038)	0.168* (0.067)	0.044 (0.053)	0.257** (0.099)
<i>Ref.: Apr21 x Lower status</i>						
Apr21 x Medium status	0.037 (0.051)	0.071 (0.067)	-0.009 (0.031)	-0.014 (0.043)	0.050 (0.044)	0.005 (0.066)
Apr21 x Higher status	0.017 (0.053)	0.119 (0.071)	0.022 (0.031)	0.021 (0.047)	-0.000 (0.045)	0.013 (0.071)
<i>Ref.: Jul/Aug22 x Lower status</i>						
Jul/Aug22 x Medium status	0.026 (0.058)	0.004 (0.101)	0.008 (0.043)	-0.108 (0.070)	0.104 (0.059)	-0.131 (0.102)
Jul/Aug22 x Higher status	0.001 (0.060)	-0.025 (0.101)	0.012 (0.044)	-0.108 (0.071)	-0.016 (0.061)	-0.204 (0.105)
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	1,548	1,548	2,435	2,435	2,255	2,255

Notes: Robustness check using the same operationalisations of the dependent variables and the same model specifications as for the main analysis (Table 5.1), and excluding respondents who selected ‘This has already happened’ as their response of original survey items; income group used as the measure of social status in columns (1), (3) and (5), and subjective social position used in columns (2), (4) and (6); individual controls are gender, age, household size, place of residence (West/East Germany) and treatment group membership; weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

Table D2.3 Results of Table 5.2 using other operationalisation of subjective insecurity (metric)

Panel a)	Losing own job				
	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.210*	-0.107	-0.101	-0.073	-0.064
	(0.097)	(0.094)	(0.095)	(0.090)	(0.090)
Higher income	-0.360**	-0.194	-0.180	-0.097	-0.083
	(0.114)	(0.107)	(0.108)	(0.104)	(0.103)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.733***	0.724***	0.576**	0.600**
		(0.203)	(0.205)	(0.199)	(0.194)
Other (inactive)		0.109	0.105	0.090	0.093
		(0.073)	(0.073)	(0.069)	(0.069)
<i>Ref.: Income about the same</i>					
Income declined		0.500***	0.491***	0.278***	0.275***
		(0.080)	(0.080)	(0.079)	(0.080)
Income increased		-0.053	-0.050	-0.008	-0.020
		(0.070)	(0.070)	(0.068)	(0.067)
Perceived affectedness of others			0.026	-0.015	
			(0.014)	(0.013)	
Perceived own affectedness				0.090***	0.061***
				(0.013)	(0.015)
<i>Ref.: Perceived affectedness (self <= others)</i>					
Perceived affectedness (self > others)					0.300**
					(0.116)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Obs.	1,607	1,607	1,607	1,607	1,607
Panel b)	Having financial difficulties				
	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.444***	-0.295***	-0.276**	-0.197*	-0.196*
	(0.090)	(0.085)	(0.084)	(0.077)	(0.077)
Higher income	-0.760***	-0.512***	-0.476***	-0.312***	-0.311***
	(0.103)	(0.095)	(0.094)	(0.087)	(0.086)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.498**	0.474*	0.303+	0.309+
		(0.185)	(0.184)	(0.174)	(0.174)
Other (inactive)		0.247***	0.243***	0.243***	0.243***
		(0.059)	(0.059)	(0.053)	(0.053)
<i>Ref.: Income about the same</i>					
Income declined		0.831***	0.809***	0.460***	0.457***
		(0.077)	(0.077)	(0.073)	(0.073)
Income increased		-0.004	-0.004	0.042	0.039
		(0.075)	(0.075)	(0.071)	(0.071)

Appendix D2 – Navigating subjective socioeconomic insecurity in times of crisis: An interplay of social status, crisis experiences and perceptions

Perceived affectedness of others			0.057*** (0.012)	-0.003 (0.012)	
Perceived own affectedness				0.134*** (0.012)	0.122*** (0.013)
<i>Ref.: Perceived affectedness (self <= others)</i>					
Perceived affectedness (self > others)					0.128 (0.107)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Obs.	2,616	2,616	2,616	2,616	2,616
Having much lower living standard					
Panel c)	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.752*** (0.112)	-0.546*** (0.102)	-0.513*** (0.099)	-0.411*** (0.089)	-0.414*** (0.089)
Higher income	-1.286*** (0.128)	-0.934*** (0.114)	-0.872*** (0.111)	-0.658*** (0.103)	-0.663*** (0.103)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.662*** (0.201)	0.620** (0.197)	0.397* (0.185)	0.402* (0.186)
Other (inactive)		0.307*** (0.071)	0.300*** (0.070)	0.300*** (0.063)	0.302*** (0.063)
<i>Ref.: Income about the same</i>					
Income declined		1.229*** (0.083)	1.192*** (0.083)	0.737*** (0.084)	0.729*** (0.084)
Income increased		-0.128 (0.088)	-0.129 (0.088)	-0.069 (0.083)	-0.069 (0.082)
Perceived affectedness of others			0.099*** (0.015)	0.021 (0.015)	
Perceived own affectedness				0.174*** (0.013)	0.173*** (0.016)
<i>Ref.: Perceived affectedness (self <= others)</i>					
Perceived affectedness (self > others)					0.078 (0.114)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Obs.	2,616	2,616	2,616	2,616	2,616

Notes: Robustness check using OLS models, with subjective insecurity operationalised as metric variables; each dependent variable ranging between 1 and 5: the higher the score, the higher the subjective insecurity; income group used as the measure of social status in all models; time period (Jun/Jul20, Apr21, Jul/Aug22) and individual controls (gender, age, household size, place of residence (West/East Germany) and treatment group membership) included in all models; weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

Table D2.4 Results of Table 5.2 excluding respondents who selected ‘already happened’

Panel a)	Lowing own job				
	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.036 (0.028)	-0.021 (0.028)	-0.020 (0.029)	-0.016 (0.028)	-0.014 (0.028)
Higher income	-0.078* (0.031)	-0.048 (0.031)	-0.046 (0.031)	-0.032 (0.031)	-0.029 (0.031)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.305*** (0.077)	0.303*** (0.078)	0.273*** (0.076)	0.279*** (0.075)
Other (inactive)		0.012 (0.021)	0.012 (0.022)	0.009 (0.021)	0.010 (0.021)
<i>Ref.: Income about the same</i>					
Income declined		0.096*** (0.024)	0.094*** (0.024)	0.056* (0.024)	0.055* (0.024)
Income increased		-0.018 (0.018)	-0.018 (0.018)	-0.008 (0.018)	-0.010 (0.018)
Perceived affectedness of others			0.004 (0.004)	-0.004 (0.004)	
Perceived own affectedness				0.017*** (0.003)	0.011** (0.004)
<i>Ref.: Perceived affectedness (self <= others)</i>					
Perceived affectedness (self > others)					0.065* (0.033)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Obs.	1,548	1,548	1,548	1,548	1,548
Panel b)	Having financial difficulties				
	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.064** (0.022)	-0.054* (0.021)	-0.051* (0.021)	-0.041* (0.020)	-0.041* (0.020)
Higher income	-0.120*** (0.023)	-0.101*** (0.022)	-0.095*** (0.022)	-0.072*** (0.021)	-0.072*** (0.021)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.091 (0.048)	0.087 (0.048)	0.057 (0.046)	0.058 (0.046)
Other (inactive)		0.010 (0.014)	0.010 (0.014)	0.012 (0.013)	0.013 (0.013)
<i>Ref.: Income about the same</i>					
Income declined		0.110*** (0.019)	0.107*** (0.019)	0.057** (0.018)	0.056** (0.018)
Income increased		-0.007 (0.018)	-0.007 (0.018)	0.001 (0.017)	0.001 (0.017)

Appendix D2 – Navigating subjective socioeconomic insecurity in times of crisis: An interplay of social status, crisis experiences and perceptions

Perceived affectedness of others			0.010***	0.000	
			(0.003)	(0.003)	
Perceived own affectedness				0.021***	0.021***
				(0.003)	(0.003)
<i>Ref.: Perceived affectedness (self <= others)</i>					
Perceived affectedness (self > others)					0.009 (0.029)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Obs.	2,435	2,435	2,435	2,435	2,435
Having much lower living standard					
Panel c)	(1)	(2)	(3)	(4)	(5)
<i>Ref.: Lower income</i>					
Medium income	-0.085**	-0.075**	-0.069*	-0.061*	-0.063*
	(0.029)	(0.028)	(0.027)	(0.026)	(0.026)
Higher income	-0.199***	-0.170***	-0.159***	-0.130***	-0.132***
	(0.032)	(0.032)	(0.031)	(0.030)	(0.030)
<i>Ref.: (Self-)Employed, unchanged</i>					
Short-time work/lost job		0.135	0.127	0.083	0.084
		(0.070)	(0.070)	(0.067)	(0.067)
Other (inactive)		-0.002	-0.003	0.003	0.004
		(0.020)	(0.020)	(0.019)	(0.019)
<i>Ref.: Income about the same</i>					
Income declined		0.220***	0.211***	0.140***	0.138***
		(0.028)	(0.027)	(0.026)	(0.026)
Income increased		-0.043	-0.043	-0.031	-0.030
		(0.023)	(0.023)	(0.022)	(0.022)
Perceived affectedness of others			0.021***	0.008	
			(0.004)	(0.004)	
Perceived own affectedness				0.032***	0.032***
				(0.004)	(0.005)
<i>Ref.: Perceived affectedness (self <= others)</i>					
Perceived affectedness (self > others)					0.026 (0.039)
Time period	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
N	2,255	2,255	2,255	2,255	2,255

Notes: Robustness check using the same operationalisations of the dependent variables and the same model specifications as for the main analysis (Table 5.2), and excluding respondents who selected ‘This has already happened’ as their response of the original survey items; income group used as the measure of social status in all models; time period (Jun/Jul20, Apr21, Jul/Aug22) and individual controls (gender, age, household size, place of residence (West/East Germany) and treatment group membership) included in all models; weights applied; significant levels: * p<.05, ** p<.01, *** p<.001.

Appendix D3: Data sources of the Eurobarometer statistics (2004 – 2023)

- European Commission, Brussels. 2023. Eurobarometer 98.2 (2023). *GESIS, Köln. ZA7953 Datenfile Version 1.0.0.* <https://doi.org/10.4232/1.14081>
- European Commission, Brussels. 2023. Eurobarometer 97.5 (2022). *GESIS, Köln. ZA7902 Datenfile Version 1.0.0.* <https://doi.org/10.4232/1.14010>
- European Commission, Brussels. 2022. Eurobarometer 96.3 (2022). *GESIS, Köln. ZA7848 Datenfile Version 1.0.0.* <https://doi.org/10.4232/1.13908>
- European Commission, Brussels. 2022. Eurobarometer 95.3 (2021). *GESIS, Köln. ZA7783 Datenfile Version 1.0.0.* <https://doi.org/10.4232/1.13826>
- European Commission, Brussels. 2022. Eurobarometer 93.1 (2020). *GESIS, Köln. ZA7649 Datenfile Version 2.0.0.* <https://doi.org/10.4232/1.13866>
- European Commission, Brussels. 2017. Eurobarometer 80.1 (2013). *GESIS Datenarchiv, Köln. ZA5876 Datenfile Version 2.0.0.* <https://doi.org/10.4232/1.12768>
- Europäische Kommission. 2014. Eurobarometer 75.3 (2011). *GESIS Datenarchiv, Köln. ZA5481 Datenfile Version 2.0.1.* <https://doi.org/10.4232/1.11852>
- Europäische Kommission. 2012. Eurobarometer 72.4 (Oct-Nov 2009). *GESIS Datenarchiv, Köln. ZA4994 Datenfile Version 3.0.0.* <https://doi.org/10.4232/1.11141>
- Europäische Kommission. 2012. Eurobarometer 71.3 (Jun-Jul 2009). *GESIS Datenarchiv, Köln. ZA4973 Datenfile Version 3.0.0.* <https://doi.org/10.4232/1.11135>
- Europäische Kommission. 2012. Eurobarometer 66.3 (Nov-Dec 2006). *GESIS Datenarchiv, Köln. ZA4528 Datenfile Version 2.0.1.* <https://doi.org/10.4232/1.10982>
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- Europäische Kommission. 2012. Eurobarometer 63.4 (May-Jun 2005). *GESIS Datenarchiv, Köln. ZA4411 Datenfile Version 1.1.0.* <https://doi.org/10.4232/1.10968>
- Europäische Kommission. 2012. Eurobarometer 62.0 (Oct-Nov 2004). *GESIS Datenarchiv, Köln. ZA4229 Datenfile Version 1.1.0.* <https://doi.org/10.4232/1.10962>
- Russo, Luana, and Milena Bräutigam. 2023. Harmonized Eurobarometer 2004-2021. *GESIS, Köln. Datenfile Version 3.0.0.* <https://doi.org/10.7802/2539>

Summary

This dissertation examined the perspective of Europeans regarding their expectations for European social policy, focusing on attitudes towards income inequality within the EU and potential EU social policy measures. Previous research has employed the economic self-interest explanation to study how attitudes towards European (social) integration are associated with individual objective socioeconomic status and contextual factors. This dissertation built on this research but emphasised the subjective core of economic self-interest, guided by the premise that rather than objective individual and national socioeconomic conditions, it is individual perceptions of them that directly shape attitudes. It is important to consider the role of socioeconomic perceptions, given that individuals often hold perceptions that diverge significantly from the objective context. This dissertation included four empirical studies to investigate how Europeans form their perceptions of national and personal socioeconomic conditions and the extent to which these perceptions influence their attitudes towards EU inequality and social policies. In addition to individuals' current conditions, the dissertation also studied the formation of perceptions regarding their future in the context of subjective socioeconomic insecurity during crises. The empirical analyses included a range of primary and secondary data, such as cross-national, experimental and longitudinal survey data, as well as contextual data. A variety of methods were employed for the data analysis, including multilevel modelling, experimental and panel analyses. The findings confirm a significant discrepancy between objective socioeconomic conditions and individual perceptions of them. These include perceptions of personal relative income positions and the national context of unemployment and the standard of living for the unemployed within the country. Both types of perceptions are found to have an influence on attitudes. Across countries, the more negative the perceptions, the stronger the aversion to EU inequality and the support for EU social policies. These findings provide strong evidence of the subjective core of economic self-interest, which is crucial for a comprehensive understanding of Europeans' expectations for European social policy. Furthermore, this dissertation demonstrates that individuals with a lower social status, in particular those perceiving themselves at the bottom of society, tend to feel increasingly insecure about their future socioeconomic conditions during crises. This should be considered in future debates on European social policy-making, given the recent and ongoing crises that the EU has been confronted with.

German summary (Zusammenfassung)

Im Rahmen dieser Dissertation wurde die Perspektive der Europäer:innen hinsichtlich ihrer Erwartungen an die europäische Sozialpolitik untersucht. Dabei wurde der Fokus auf die Einstellungen zur Einkommensungleichheit innerhalb der EU sowie auf die Einstellungen zu potenziellen sozialpolitischen Maßnahmen auf EU-Ebene gelegt. In der früheren Forschung wurde anhand des Ansatzes des wirtschaftlichen Eigeninteresses untersucht, inwiefern die Einstellungen zur europäischen (sozialen) Integration mit dem individuellen objektiven sozioökonomischen Status und den kontextuellen Faktoren zusammenhängen. Die vorliegende Dissertation baute auf der genannten Forschung auf, betonte jedoch den subjektiven Kern des wirtschaftlichen Eigeninteresses. Der Ausgangspunkt ist, dass nicht die objektiven individuellen und nationalen sozioökonomischen Situationen, sondern die individuellen Wahrnehmungen dieser Situationen die Einstellungen direkt beeinflussen. Es ist wichtig, die Rolle der sozioökonomischen Wahrnehmungen zu berücksichtigen, da Individuen oft Wahrnehmungen aufweisen, die erheblich von dem objektiven Kontext abweichen. Im Rahmen dieser Dissertation wurden vier empirische Studien durchgeführt, um zu untersuchen, wie die Europäer:innen ihre Wahrnehmungen der nationalen und persönlichen sozioökonomischen Situationen gestalten und inwieweit diese Wahrnehmungen ihre Einstellungen zur Ungleichheit und Sozialpolitik auf EU-Ebene beeinflussen. Des Weiteren wurde die Entstehung von Wahrnehmungen individueller Zukunftsperspektiven im Kontext subjektiver sozioökonomischer Unsicherheit in Krisenzeiten untersucht. Die empirischen Analysen basierten auf einer Reihe von Primär- und Sekundärdaten, darunter länderübergreifende, experimentelle und längsschnittliche Umfragedaten sowie kontextbezogene Daten. Eine Vielzahl von Methoden wurde verwendet, einschließlich Mehrebenen-, experimenteller und Panelanalysen. Die Ergebnisse weisen darauf hin, dass eine signifikante Diskrepanz zwischen den objektiven sozioökonomischen Situationen und der individuellen Wahrnehmungen dieser Situationen besteht. Dazu zählen die Wahrnehmungen der persönlichen relativen Einkommensposition sowie des nationalen Kontextes bezüglich der Arbeitslosigkeit und des Lebensstandards der Arbeitslosen im Land. Es wird festgestellt, dass beide Arten von Wahrnehmungen über die Länder hinweg einen Einfluss auf die Einstellungen haben. Je negativer die Wahrnehmung, desto stärker die Abneigung gegen Einkommensungleichheit in der EU sowie die Unterstützung für Sozialpolitik auf EU-Ebene. Diese Ergebnisse liefern starke Belege für den subjektiven Kern des wirtschaftlichen Eigeninteresses, der für ein umfassendes

Verständnis der Erwartungen der Europäer:innen an die europäische Sozialpolitik von entscheidender Bedeutung ist. Des Weiteren demonstriert diese Dissertation, dass Individuen mit einem niedrigen sozialen Status, insbesondere diejenigen, die sich selbst am unteren Ende der Gesellschaft sehen, dazu neigen, sich in Krisenzeiten eine zunehmende Unsicherheit hinsichtlich ihrer zukünftigen sozioökonomischen Situation zu verspüren. Dies sollte in zukünftigen Debatten über die Ausgestaltung der europäischen Sozialpolitik berücksichtigt werden, insbesondere vor dem Hintergrund der jüngsten und anhaltenden Krisen, mit denen die EU konfrontiert ist.