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In search of discontent. Spatial and social stratification of political grievances in Europe

Vigna Nathalie

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FACULTÉ DES SCIENCES SOCIALES ET POLITIQUES

INSTITUT DES SCIENCES SOCIALES

In search of discontent. Spatial and social stratification of political grievances in Europe

THÈSE DE DOCTORAT

présentée à la

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de l'Université de Lausanne

pour l'obtention du grade de

Docteure en Sciences Sociales

par

Nathalie Vigna

Directeur de thèse
Prof. Daniel Oesch

Jury
Prof. Leen Vandecasteele, Université de Lausanne
Prof. Lukas Haffert, Université de Genève
Prof. Catherine E. de Vries, Università Bocconi de Milan
Prof. Bastian Betthäuser, Sciences Po Paris

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Faculté des sciences sociales et politiques

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Le Décanat de la Faculté des sciences sociales et politiques de l'Université de Lausanne, au nom du Conseil et sur proposition d'un jury formé des professeurs

- M. Daniel OESCH, Professeur, Directeur de thèse
- Mme Leen VANDECASTEELE, Professeure à l'Université de Lausanne
- Mme Catherine E. DE VRIES, Professeure à l'Université de Bocconi, Italie
- M. Bastian BETTHÄUSER, Professeur Assistant à l'Université Sciences Po Paris, France
- M. Lukas HAFFERT, Professeur Associé à l'Université de Genève

autorise, sans se prononcer sur les opinions de la candidate, l'impression de la thèse de Madame Nathalie VIGNA, intitulée :

"In search of discontent. Spatial and social stratification of political grievances in Europe."

Nicky LE FEUVRE
Doyenne

Lausanne, le 3 mai 2024

Résumé

Cette thèse vise à comprendre les sources structurelles de deux des principaux défis politiques contemporains, à savoir le succès des partis populistes de droite radicale dans de nombreux pays occidentaux et l'opposition de certains groupes aux politiques environnementales. Elle teste l'hypothèse, largement répandue dans la littérature, selon laquelle ces phénomènes découlent d'un mécontentement politique croissant au sein de certains groupes et dans certaines régions. Elle analyse ce mécontentement à travers les prismes de la stratification sociale et spatiale, en se basant sur les données de l'International Social Survey Programme, du European Social Survey et du European Values Survey.

Les résultats montrent que, bien que la classe ouvrière se perçoive comme ayant un statut social subjectif inférieur à celui des classes moyennes et moyennes supérieures, cette différence est restée stable au cours des dernières décennies. De même, les hiérarchies spatiales au sein des pays contribuent à façonner le statut subjectif des citoyens, mais ces différences ne semblent pas s'être accrues dans les pays européens étudiés. De plus, le fossé urbain-rural en matière de satisfaction politique est relativement faible et stable dans de nombreux pays européens. Dans l'ensemble, ces résultats soulignent l'importance de la stratification sociale et spatiale dans la formation des attitudes politiques des citoyens, notamment en ce qui concerne le soutien aux politiques environnementales. Cependant, ils remettent également en question l'hypothèse d'un ressentiment croissant au sein des classes populaires ou des communautés périphériques.

Abstract

This thesis seeks to understand the structural causes of two of today's major political challenges, namely the success of radical right populist parties in many Western countries and the opposition of certain groups to environmental policies. It tests the hypothesis, widespread in the literature, that these developments stem from growing political discontent among certain groups and in certain places. It analyses political grievances through the lens of social and spatial stratification, using data from the International Social Survey Programme, the European Social Survey and the European Values Survey.

The results show that, while workers see themselves as having a lower subjective social status than the middle and upper-middle classes, this difference has remained stable over the last decades. Similarly, spatial hierarchies within countries do contribute to shaping citizens' subjective status, but these differences do not seem to have increased in the European countries studied. Moreover, the urban-rural divide in political satisfaction is comparatively small and stable over time in many European countries. Overall, these findings highlight the importance of both social and spatial stratification in shaping citizens' political attitudes, as in the case of support for environmental policies. However, they also challenge the hypothesis of growing resentment in working-class or peripheral communities.

Acknowledgments

I would like to thank the four jury members Leen Vandecasteele, Lukas Haffert, Catherine E. de Vries and Bastian Betthäuser for their valuable feedback and criticism. The process of writing the final manuscript and discussing it with you was invigorating. It gave value to several years of work and reminded me how fascinating it is to delve deeply into interesting questions with rigour and creativity. It has convinced me that I want to keep that sparkle alive for a little longer.

I think that the most valuable outcome of these five years are the many things I have learned. These include, of course, interesting literature and statistical methods, writing and presentation skills, organising seminars -such as the legendary WIPs-, being challenged by other researchers and commenting on their work when it was my turn... And also some other extremely valuable soft skills, such as organising a petanque tournament - and also winning it fair and square, contrary to the gossip - or randomising the distribution of small chocolates during lunches as a way of reducing global inequalities.

I am very grateful to everyone who has accompanied me on this learning journey. In particular, I have been fortunate to share it with the most envied supervisor I have ever heard of. Daniel is brilliant, but also very supportive. He cares so much about getting the best out of his various PhD students that he speaks a different language to each of them. With me, it's French. And I am lucky, because French-speaking Daniel does not make as many jokes as English-speaking Daniel. Now it's time to admit how intimidating it was for me at first when I could not understand any of the jokes he was telling at lunch.

I was also lucky to share these five years with the other PhD students and postdocs on the fifth floor of Geopolis, with the colleagues from the LIVES PhD school in Lausanne and Geneva, and with the other researchers with whom I sometimes shared my doubts and struggles, not only related to statistical models.

When I arrived in Lausanne, I was welcomed by a friendly international community with whom I shared interesting discussions, but above all many beers and good evenings. I tried to contribute to this community the best way I could: by calling some parties, cooking pizza, and organising regular retreats in my home village of Rueglio, thanks to the infinite hospitality of my parents. Many of these friendships will last forever.

Lausanne has also given me other communities with which I could cultivated two essential parts of myself with unprecedented commitment: dancing Nathalie and mountain Nathalie. And, of course, Lausanne has given me a family in the Chemin de la Prairie, made up of four loving flatmates, a few extras and an indeterminate number of pilgrims who have used our sofa. You can measure the amount of love I received from this family by the number of

dinners they cooked for me during these years, as I was always coming back late from the dance classes or from a day in the mountains. Without their carbonara and their deadly spicy miso soup, my research would certainly have been less productive as well.

These different communities have taken me on crazy adventures, from climbing Swiss glaciers to sailing on the Mediterranean Sea. My life over the last five years has indeed been incredibly diverse, multilingual and definitely also transnational.

Among other issues, this thesis explores the role of place in individual lives. Clearly, it also corresponds to a personal search for the meaning of place. Ever since I arrived in Switzerland, it has been a constant effort to hold together the different parts of my heart scattered across Europe. With the passage of time, it has become even more difficult, as some of my new Lausannois friends have moved on to new places. However I decide to take my next steps, wrestling with this intricate tangle of spatial trajectories will continue to challenge me. I believe that what helps me find my way through it is the fact that I never forget where I started from.

Un paese ci vuole, non fosse che per il gusto di andarsene via. Un paese vuol dire non essere soli, sapere che nella gente, nelle piante, nella terra c'è qualcosa di tuo, che anche quando non ci sei resta ad aspettarti.

Cesare Pavese, *La luna e i Falò*

[A village is necessary, if only for the pleasure of leaving it. A village means not being alone, knowing that in the people, in the plants, in the earth there is something of yours, that even when you are not there, it remains to wait for you.

Cesare Pavese, *The Moon and the Bonfires]*

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1. Introduction

This thesis examines the structural sources of political discontent. It is motivated by the need to understand some of today's major political challenges, namely the unprecedented success of radical right populist parties in many Western countries and the opposition of certain groups to environmental policies. It is not an analysis of voting, but a description of the political grievances that are at the root of these circumstances through the lenses of social and spatial stratification.

It tests the hypothesis, widespread in the literature, that these political developments can be understood in the light of growing political discontent among certain groups in recent decades. These groups would have felt left behind by their political elites and therefore started to express their discontent, for example through the ballot box. But have we seen growing discontent in Europe? Among whom? And where?

The present thesis seeks to explore this discontent. In particular, it tests two main ideas: that these political grievances have spread at the bottom of the social hierarchy, that is, among the working class rather than the middle or upper-middle classes; and that they have developed in certain geographical areas of European countries, namely in towns and rural areas, rather than in large cities.

This introduction serves to first outline the background and the most interesting literature underpinning the empirical analysis of the following chapters. It will also show how the present thesis contributes to this literature. The introduction then provides an overview of the data sources used in this thesis and anticipates some reflections on the methodological choices. It concludes with a summary of the four empirical chapters and their main findings.

1.1. The success of radical right populism: the emergence of new political grievances

In 2016, Donald Trump's victory in the US general election shook the international press. He had upset the pre-election polls, surprising many international observers who had not seen it coming. It was only a few months after Boris Johnson had won the Brexit vote in the UK. It was a new high point in the trend of success for right-wing populist leaders that has since characterised many Western countries, including European ones.

There has been widespread concern in the public and academic spheres about the success of the populist radical right parties, a group of political forces that combine populism with nativism and authoritarianism (Mudde, 2007). Much academic attention has focused on understanding the reasons for their success. Indeed, the rise of these parties has revealed a major shift in the political cleavages that structure electoral campaigns in advanced democracies. Although the historical economic class cleavage continues to structure the opposition between the left (the preserve of socio-cultural professionals) and the right (the preserve of large business owners and managers), the new radical right is competing with the former for the support of the working class and with the latter for the support of small business owners (Oesch & Rennwald, 2018). A new dimension of political competition has become central: the cultural dimension (Rydgren, 2013). This new cleavage is centred on the divide between universalism and particularism, or between globalism and patriotism. Radical right-wing parties often appeal to voters' identities, drawing a sharp division between 'us' and 'them' and fuelling cultural grievances (Bornschier et al., 2021). But why does this discourse appeal to voters?

While some research has sought to understand the nature of these political forces, other studies have focused on the demand side of voters. Some observers have blamed structural economic changes for worsening the conditions of some groups relative to others. Income and wealth inequalities between those at the very top and those at the bottom have increased in most

Western countries in the last decades (Alvaredo et al., 2018; Piketty, 2013, 2019). The recent development of labour markets has particularly hurt people at the bottom of the ladder, who would have begun to take revenge on the political elite. The proposed explanations have, in different ways, revolved around the idea of growing political discontent among certain groups. Arguments such as the "losers of globalisation" (Kriesi et al., 2008), or “status anxiety” (Gidron & Hall, 2017, 2019), as well as the “revenge of the places that don’t matter” (Rodríguez-Pose, 2018), propose different, but related points of view on this issue. They all tap into the idea that some groups have felt a loss and that this has led to the emergence of new political grievances.

1.2. Social stratification of political grievances: the status anxiety hypothesis

Some researchers have seen these grievances in terms of status anxiety (Gidron & Hall, 2017). The status approach highlights the fact that both economic challenges and cultural developments play a role in the emergence of the new political grievances. On the one hand, structural shift towards a skills-based service economy and outsourcing in the globalised world have worsened the economic conditions of many unskilled workers, who have been facing stagnating incomes, job losses and higher levels of unemployment. On the other hand, low-skilled workers are seen as feeling excluded from the general change in cultural values of the elites, which have become more progressive, cosmopolitan and open to minorities. Some groups, such as migrants and women have gained new rights and climbed the hierarchy of social prestige, while native working class men would have felt left behind and relegated to the margins of society (Gidron & Hall, 2019). This feeling has also been defined as nostalgic deprivation, which refers to the “discrepancy between individuals' understandings of their current status and their perceptions of their past” (Gest et al., 2018, p. 2).

This argument builds on ethnographic research examining the political attitudes of the working class in economically depressed areas of the United States and the United Kingdom (Cramer, 2016; Gest, 2016a; Hochschild, 2016). These qualitative studies point to workers' sense of having lost status - or honour - and their consequent resentment of the liberal elite. In quantitative studies, subjective social status is the perfect tool to measure such feelings.

Following Max Weber (Weber, 1922/1978), social status depends on a symbolic hierarchy of social recognition. Therefore, subjective status is only partially related to the objective place that people occupy in the labour market, but also reflects the degree of social honour or prestige that is accorded to them (Chan & Goldthorpe, 2007; Gidron & Hall, 2017). In their influential paper, Gidron and Hall (2017) argue that structural developments have led to a decline in the subjective social status of a particular category of citizens, namely men without a university education. They tentatively show that this relative decline has occurred in many Western democracies, and that low levels of subjective social status are associated with a higher likelihood of voting for populist parties.

Indeed, people seem to care about social recognition as much as they care about money (Ridgeway, 2014). This consideration has contributed to the renewed popularity of the subjective measure of social status in quantitative research (Engler & Weisstanner, 2020; e.g. Gest et al., 2018; Gidron & Hall, 2017; Nolan & Weisstanner, 2020). This thesis contributes to this research stream. In the first empirical chapter (chapter 2), we use subjective social status to investigate at the micro level the processes that have been argued to underlie the status hypothesis, i.e. that the working class in Western countries has seen its status shrink in recent decades. We find contradictory results for this hypothesis, suggesting that the spread of the status narrative may rather be the result of a diffuse nostalgic bias, i.e. the idea that the past was better than the present. Alternative mechanisms then need to be explored. One of these relates to growing spatial inequalities within countries.

1.3. Spatial stratification of political grievances: the geography of discontent

A growing strand of literature has recently brought together scholars from different fields – geography, political science, sociology - interested in understanding the emergence of new political grievances by focusing on spatial disparities. The electoral success of Donald Trump and Marine Le Pen, but also other political events such as the Brexit vote in 2016 or the Yellow Vests protests in France in 2018, have been linked to growing geographical inequalities within countries (D. Adler & Ansell, 2020; Dijkstra et al., 2020; Jennings & Stoker, 2019; Rodríguez-Pose, 2018).

The centre-periphery divide is one of the historical political cleavages identified in the seminal work of Lipset & Rokkan (1967). Together with the state-church, agriculture-industry and employer-worker conflicts, the urban-rural cleavage was at the origin of the formation of party systems in Western countries. According to this new body of literature, the old spatial cleavage has not disappeared, but has even become more relevant in recent decades as a result of structural economic changes.

Indeed, spatial inequalities in Western countries seem to have increased recently. In half of the OECD countries, (intra-country) disparities between regions in GDP per capita have increased steadily since 2000, and the top 20% of regions now have, on average, twice the GDP per capita of the bottom 20% of regions in the same country (OECD, 2020). Enrico Moretti (2012) showed for the US that the rise of the service economy has led to the success of some large cities, such as San Francisco or Boston, where highly skilled and creative workers are concentrated, while the old manufacturing centres are losing jobs and people. Similarly, European capital regions have become increasingly dynamic, attractive and globalised, while more peripheral regions - post-industrial cities, suburbs, rural areas - have stagnated and

suffered job losses. The metropolitan areas of Paris, London and Stockholm now concentrate at least 30% of their countries' GDP (Hurley et al., 2019, p. 1).

According to an influential argument, the growing differences between the dynamic cores embedded in the global economy and the stagnating periphery would have generated growing discontent in the “places that don’t matter” (Rodríguez-Pose, 2018). The inhabitants of these regions, feeling neglected by the national policies of the urban elites, would have used the ballot box to take revenge. The source of the observed discontent wouldn't be "people left behind" but rather "places left behind", in a new geographical configuration called the "geography of discontent" (Dijkstra et al., 2020).

Some research has indeed demonstrated the statistical correlation between the relative deprivation of some areas and the success of anti-EU parties (Dijkstra et al., 2020). A large number of studies have also pointed to existing - and in some cases widening - gaps in political attitudes and political trust between different types of place in Europe in recent decades, focusing in particular on the urban-rural divide (García Del Horno et al., 2023; Kenny & Luca, 2021a; Lago, 2021; Maxwell, 2019; McKay et al., 2021, 2023; Mitsch et al., 2021).

The *socio-economic composition* of the stagnating areas, often inhabited by older and low-skilled workers, explains a large part of the difference between places in terms of populist radical right attitudes or opposition to immigration (Arzheimer & Bernemann, 2023; Maxwell, 2019). However, some researchers show that another part of the story is better explained by *contextual characteristics*, such as the lack and poor quality of public services in these places (Cremaschi et al., 2023; Iglesias-Pascual et al., 2021; Rickardsson, 2021).

Another strand of literature has advanced the emergence of a political cleavage rooted in *place-based identity*. In her influential ethnography, Katherine J. Cramer (2016) describes the emergence of a *rural resentment* in the rural community of Wisconsin. She argues that distrust

of politicians shaped political preferences in this community, leading them to vote for radical right-wing candidates who then oppose greater national investment in public services from which the community would have benefited. Alignment with candidates' values and social identities, rather than concrete policy proposals, would have been a fundamental criterion for deciding whom to support.

Dissatisfaction with the economic divergence of certain areas alone may then not explain the emergence of the new spatial cleavage. The cultural dimension also appears as a relevant aspect of the story. Cramer's argument stresses the importance of a rural consciousness, i.e. a place-based group identity which influences how people understand politics. In terms of social identity theory (Tajfel, 1978), rural people would have developed "out-group hostility towards places that they perceive to enjoy undeserved benefits that are not available to their own communities" (Borwein & Lucas, 2023, p. 1).

In Europe, through statistical analysis and ethnographic work in France, Jennifer Fitzgerald (2019) has shown the role of localism, or the sense of attachment to the community in which people live, in making voters more receptive to the appeal of radical right politicians.

Closely related to place-based identity, political representation is one of the central mechanisms for the emergence of place-based discontent. On the one hand, Cramer (2016) argues that rural residents in Wisconsin feel neglected by politicians and the administration, both being seen as much more concerned with the problems of the cities. On the other hand, some political forces explicitly mobilize rural identities in elections. Electoral systems in Western countries organise political representation on a geographical basis, making the spatial distribution of political support very relevant for electoral competition (Rodden, 2019). In this context, some politicians appeal to citizens' geographical identities to gain their support by exploiting their place attachment. This has been shown to be particularly powerful in shaping the political evaluations of rural voters (Jacobs & Munis, 2019).

Some quantitative research has tried to measure place resentment with statistical indicators. Munis (2020) developed a psychometric scale based on 13 items measuring distributional, representational and cultural concerns - the three fundamental aspects of place resentment, he argues. He shows that US citizens most likely to score high on the scale tend to be male, rural, and have high levels of place identity and racial resentment. Similarly, Borwein & Lucas (2023) show that place resentment in Canada is higher among rural residents, and that rural resenters tend to be older, more conservative, and less satisfied with democracy, while this is not the case for urban residents with high levels of place resentment. Trujillo & Crowley (2022) further emphasise the cultural dimension of place resentment by showing that support for Trump in the US is only predicted by the symbolic dimension of place resentment, that is, the fact that people feel that rural areas are underrepresented in decision-making and that their way of life is disrespected, but not the materialistic concern that rural areas receive fewer resources.

For Europe, Huijsmans (2023b) shows in the Netherlands that higher levels of place resentment are associated with higher unemployment, a larger knowledge economy, but also with a greater linguistic difference between local dialect and standard Dutch and a greater distance from the places of residence of national MPs. He then shows that place resentment is an important mediator explaining the relationship between spatial inequalities and anti-immigrant and populist attitudes (Huijsmans, 2023a). In a similar vein, Arzheimer & Bernemann (2023) show that place resentment also explains an important part of the spatial variation in populist right-wing attitudes in Germany.

This thesis contributes to this stream of literature by integrating spatial stratification into the analysis. Rather than measuring place-based resentment, we examine how spatial stratification contributes to the configuration of political grievances. Understanding how political grievances are distributed across the centre-periphery divide is the first step in testing

theories of rising place-based resentment. We examine regional differences, particularly between urban and rural residents, in subjective status (second empirical study, chapter 3), satisfaction with democracy (third empirical study, chapter 4), and support for environmental policies (fourth empirical study, chapter 5).

In each study, we first look at the descriptive differences between places and only later analyse these differences net of the socio-economic characteristics of their inhabitants, which partly mediate them. This is because the composition of a place, which may also change over time, helps to define the characteristics of a particular context, and both compositional and contextual effects can contribute to the geographical configuration of political grievances.

The results of this thesis show that spatial stratification is indeed relevant in predicting differences in subjective social status in some countries, but there does not seem to be a widening gap. Moreover, the urban-rural divide is associated with relatively small and stable differences in satisfaction with democracy. While it may be relevant in individual countries, these results cast doubt on the explanatory power of the place resentment hypothesis at the European level. However, place is more important in predicting people's willingness to pay for environmental policies. Indeed, the environmental domain is an emblematic case to examine the intersection between social and spatial stratification.

1.4. Social and spatial stratification of environmental policy support

A rapidly growing body of research explores the links between inequalities and climate change or environmental degradation, two of the greatest challenges of our time. Environmental policies are linked to social inequalities in different ways: poorer people are likely to contribute less to carbon emissions, suffer more from the consequences of environmental degradation, and are also more likely to bear the costs of environmental policies (Chancel, 2020).

Even if Europeans who are sceptical or indifferent to environmental issues have become a minority, the fact is that environmental policies rarely generate consensus, especially when they impose costs on individuals (Pohjolainen et al., 2018). Dissatisfaction with such policies can fuel anti-green-transition movements or the success of climate sceptic parties (Rodríguez-Pose & Bartalucci, 2023). Understanding where and among whom this discontent may arise is therefore crucial.

On the one hand, it has been observed that lower socio-economic groups tend to be less environmentally sensitive and less supportive of environmental policies (Arndt et al., 2023; Levi, 2021; Lübke, 2022). On the other hand, some research has shown that spatial inequalities may also play a role in influencing support for environmental policies. Indeed, some geographical areas are more vulnerable to environmental policies than others (O'Sullivan et al., 2020; Vona, 2021). The green transition is likely to have a greater impact on regions with high carbon emissions and dependence on sectors such as industry, agriculture and transport (Rodríguez-Pose & Bartalucci, 2023). These regions are often already relatively poor, so the transition may widen the gap between the economic centres of countries - the largest cities - and the periphery - towns and rural areas. Moreover, some policies, such as taxes on energy consumption or on fossil fuels, are likely to affect households living in rural areas more, with larger houses and greater dependence on cars for daily commuting (Filippini & Heimsch, 2016; Spiller et al., 2017).

This thesis contributes to this literature by examining differences across social and spatial stratification in people's general willingness to pay for environmental policies (chapter four). We show that being sensitive to environmental issues does not automatically mean being willing to contribute to environmental regulation through personal costs. Rather, socio-economic inequalities and urban-rural differences intersect in shaping this willingness.

This finding allows us to derive one of the core messages of this thesis, namely that some of the most relevant contemporary political cleavages can only be understood by looking at class and space together. While we find no clear evidence of a strong or growing urban-rural divide in terms of political discontent, this dimension of stratification may still be relevant in shaping political attitudes in several European countries.

1.5. Data and methodological considerations

The thesis consists of four studies based on individual-level data from large international surveys in several European countries: the International Social Survey Programme (ISSP), the European Social Survey (ESS) and, to a lesser extent, the European Values Survey (EVS). These studies analyse group differences in the levels and historical trends of our key outcome variables, namely subjective social status, satisfaction with democracy and willingness to pay for environmental policies.

The ISSP was first launched in 1984 by a consortium of researchers from Australia, Germany, the United Kingdom and the United States. It has since been expanded and includes today 45 countries, although they do not always participate in each annual module. The ISSP provides individual data from nationally representative surveys of around 1,500 respondents per country. The surveys are organised around annual thematic modules that are repeated more or less regularly. A general secretariat, based at the FORS centre in Lausanne (Switzerland), coordinates the development of the source questionnaires, while data collection is carried out by individual organisations in each country[1].

[1] More information on the organisation and methodology of the ISSP can be found at: https://issp.org/about-issp/

Due to its early establishment and the very large number of countries involved, the ISSP has the advantage of allowing analysis over a long historical period and a large number of countries. However, it has the disadvantage of a lack of harmonisation of certain variables, in particular socio-economic indicators such as household income or ethnic origin. Considerable work has therefore been done to harmonise certain variables across countries and years and to build up a comprehensive dataset that allows cross-country historical analysis.

The ISSP is the primary data source for the first and second empirical chapters of the thesis, as it is the only available cross-national surveys that regularly measures respondents' subjective social status. The ISSP module 2020 focusing on environmental attitudes was used for the main analysis in the fourth empirical chapter.

The second source of data for this thesis is the European Social Survey (ESS). This cross-national survey has been conducted across Europe every two years since its inception in 2001. It measures attitudes, beliefs and behaviours in around thirty countries. While a core set of questions is systematically repeated, specific topics are addressed in each module. Data collection is highly harmonised across countries. Until 2020, when the pandemic challenged the traditional mode of data collection, only face-to-face interviews were used in each country. The ESS has also the advantage of providing analysis weights for every country sample and for the aggregated dataset.

Providing a measure of satisfaction with democracy in each round, the ESS was the main source of data for the analyses in the third empirical chapter. In addition, the 10th module (2020) focusing on environmental attitudes was used to replicate the analyses of the ISSP in the fourth empirical chapter.[2].

[2] More information on the organisation and methodology of the ESS can be found at: https://www.europeansocialsurvey.org/

Finally, the latest module of the European Values Survey (EVS) was used to replicate some of the analyses on satisfaction with democracy in chapter three. The EVS is a European survey with the primary objective of collecting data on the moral and social values of European citizens towards the European institutions and beyond. Since 1981, five modules have been carried out in several European countries. The last module was carried out between 2017 and 2020, depending on the country[3].

Table 1.1 below summarises the research questions addressed in each chapter and the data sources that informed the analyses.

Survey data is an irreplaceable source of information for quantitative analysis of individuals' attitudes and subjective evaluations. The use of survey data also allows the researcher to estimate differences between groups at the individual level. This is an important advantage when studying differences between places. Studies using voting, for example, often infer individual behaviour from aggregate data at the level of electoral districts at best, with the risk of committing the ecological fallacy - i.e. attributing the characteristics of a group to its individual members (Firebaugh, 2008). Using survey data, we take the opposite approach: we look at individual probabilities and infer spatial trends based on where these individuals live.

We can also control for various socio-economic characteristics in order to estimate the part of the differences between places that is due to their specific composition. And we can examine the link between several individual attitudes, as in the case of mediation analyses, which seek to understand whether an observed effect of an independent variable on a dependent one is mediated by a third factor.

[3] More information on the organisation and methodology of the EVS can be found at: https://europeanvaluesstudy.eu/about-evs/

However, as will be discussed in individual chapters, this is not without its limitations. For example, the researcher must rely on self-reported data for socio-economic information, which may be incomplete or imprecise. Moreover, survey data rarely provide detailed information on the location of respondents, forcing the researcher to rely on self-reported variables on the type of place where people live, which may be inaccurate (Nemerever & Rogers, 2021).

Table 1.1. Research questions addressed and data sources used in each chapter.

	Research question	**Data sources**
Chapter 2 A Decline in the Social Status of the Working Class? Conflicting Evidence for 8 Western Countries, 1987–2017 (co-author: Daniel Oesch)	Did the subjective status of the working class decreased relatively to the other classes over the last decades in Europe and in the US?	**ISSP** (1987, 1992, 1999, 2002-2017); replications with **ESS** (2002-2016).
Chapter 3 Subjective social status in places that don't matter: geographical inequalities in France and Germany	How does subjective status differ between regions, notably between the urban centres and rural regions, and how have these potential differences evolved over the past two decades in France and Germany?	**ISSP** (1992, 1999-2021); replications with **ESS** (2012).
Chapter 4 An urban-rural divide of political discontent in Europe? Conflicting results on satisfaction with democracy	Do people living in the outskirts, in small cities and, most of all, in rural areas show lower levels of satisfaction with how the political institutions work compared to people living in European large cities? And did political satisfaction decrease in outskirts, small cities and rural areas relative to big cities over the last two decades?	**ESS** (2002-2020); replications with **ISSP** (2004, 2014) and **EVS** (2017/21).
Chapter 5 Who is ready to pay for protecting the environment? Social and spatial divides in Europe	Do the social and the spatial stratification predict people's willingness to pay for environmental policies in Europe, even beyond climate change beliefs and environmental concern?	**ISSP** (2020) & **ESS** (2016).

In addition, the analysis presented in this thesis followed two other general methodological guidelines that should be highlighted here. First, each study was replicated using multiple data sources, following the principle of identical analysis on parallel data sources (Firebaugh, 2008). This is a way of partially dealing with the limitations of single databases, such as exclusion and measurement errors, and of highlighting a type of uncertainty in the results that is not modelled by the usual estimates of standard errors.

Second, all analyses were carried out at the level of individual countries. Even when a European perspective was adopted in formulating the research questions and/or in carrying out the main analysis, the models were always reproduced on each country sample. As the analyses presented will show, what we observe at the European level may in fact be the aggregation of quite different stories in individual countries. It would therefore be a mistake to infer information about individual countries from the analysis of the aggregate sample.

The four studies focus on three main outcome variables. The first two studies examine subjective social status, the third uses satisfaction with democracy and the fourth (un)willingness to pay for environmental protection. While subjective social status is more closely related to social stratification, satisfaction with democracy and willingness to pay for the environment are more related to political attitudes, at different levels of concreteness. However, they are all positively (albeit weakly) correlated: satisfaction with democracy and willingness to pay for environmental protection are on average lower among people from lower social classes, who also tend to place themselves lower on the subjective status scale. Table 1.2 shows the correlation between each pair of outcomes in the international data samples where they are available.

Table 1.2. Correlation matrix showing Pearson's correlation coefficients between the three outcome variables: subjective social status (SSS), satisfaction with democracy (SWD) and willingness to pay for environmental protection (WPE).

SSS	1		
SWD	*ISSP 2004 & 2014:* **0.289** *ESS 2012:* **0.285**	1	
WPE	*ISSP 2020:* **0.187**	*ESS 2016:* **0.222**	1
	SSS	**SWD**	**WPE**

1.6. Abstracts of the four empirical studies

Study 1 (chapter 2): A Decline in the Social Status of the Working Class? Conflicting Evidence for 8 Western Countries, 1987–2017.

The consensus view among political scientists is that the subjective social status of low-skilled workers has declined over the last decades, and this status loss of the working class is seen as contributing to the rise of the radical right. We examine the micro-foundation of this claim by tracing the evolution of subjective status for different social classes in Europe and the US. We use all available survey rounds of the International Social Survey Programme 1987–2017 and replicate findings with the European Social Survey 2002–2016. While unskilled workers perceive their status to be lower than members of the middle class everywhere, we find no relative or absolute fall in their subjective social status over time. Unskilled workers were at the bottom of the status hierarchy in the 1990s and 2010s. Our findings throw doubt on the narrative that sees workers' falling subjective social status as a prominent driver behind the rise of the radical right.

Study 2 (chapter 3): Subjective social status in places that don't matter: geographical inequalities in France and Germany.

In recent decades, the rise of the service economy and the growing attractiveness of large cities have created new social inequalities within countries, which have been seen as a source of resentment for people living in the "places that don't matter". We study spatial inequalities in terms of subjective social status using a measure of the place in the social hierarchy that individuals believe they occupy in France (1999-2017) and Germany (1992-2021) on the basis of data from the International Social Survey Program. In France we find important and persistent inequalities between urban and rural areas, as well as between the capital region and all the other regions, partially mediated by income differences. However, the time trend does not show any consistent increase in the geographical differences in subjective status apart from a possible negative trend in rural areas from 2006 to 2010 and in rural places and the outskirts of large cities after 2013 compared to large cities. In Germany, our analysis shows weak differences in subjective social status between urban and rural areas, but large inequalities between the West and East. While this gap is still relevant today, it has partially decreased over the past decades.

Study 3 (chapter 4): An urban-rural divide of political discontent in Europe? Conflicting results on satisfaction with democracy.

In recent decades, social inequalities within countries have been seen as a source of resentment for people living in the "places that don't matter". A "geography of discontent" would have emerged in Europe. Our study puts this hypothesis to the test, by assessing differences and trends in satisfaction with how democracy works in a given country between people living in big cities, outskirts of big cities, small cities, and rural areas over the last two decades.

Our study is based on a large dataset from the European Social Survey for the period 2002-2020 and for 19 countries. We also reproduce our main analyses on two other large data sources, the International Social Survey Program and the European Values Survey. We find that urban-rural differences in SWD are statistically significant and follow the expected hierarchy, but they are very small over the entire studied period – only around 2.5 percentage points difference between big cities and rural areas -, especially compared to the large differences between countries. Moreover, they are negligible compared to differences between socio-economic groups, notably in terms of citizenship, working status, education, social classes, or income deciles. This finding is consistent when using different dependent variables related to political satisfaction, such as trust in parliament or in politicians. Even if a strong heterogeneity in terms of SWD spatial gaps exists between countries, overall, our findings throw doubt on the narrative of a generalised geography of discontent in rural Europe and highlight the relevance of the country-specific contexts.

Study 4 (chapter 5): Who is ready to pay for protecting the environment? Social and spatial divides in Europe.

Climate change and environmental pollution are among the greatest challenges of our time, and the proportion of people who are sceptical about these issues has become a minority. However, environmental policies rarely generate consensus, especially when they impose costs on individuals. We contribute to the understanding of who is unwilling to pay for environmental protection, from the perspective of social and spatial stratification. We analyse individual-level data from two recent international surveys (the ISSP 2020 and the ESS 2016) in 13 European countries. We find large differences in people's willingness to pay higher taxes for environmental protection between socio-economic groups and between different locations: people in the 5th income quintile are 13 percentage points more likely to oppose such a decision, and 9 percentage points separate the likelihood for people living in big cities from those living

in rural areas. These differences are only weakly mediated by individuals' concern for the environment and climate change beliefs. Finally, the intersection of the social and spatial dimensions of stratification helps to provide a more complete picture: those most willing to pay for environmental policies are not only part of the upper middle class, but also tend to live in big cities, rather than in more peripheral places.

2. A decline in the social status of the working class? Conflicting evidence for 8 Western countries, 1987-2017[4]

2.1. Introduction

An influential argument maintains that, over the last few decades, economic and cultural shifts have depressed the subjective social status of low-skilled workers. This loss of subjective social status among the working class is widely seen as contributing to the mounting support for the radical right (Gidron & Hall, 2017, 2019; Rydgren, 2013). Standing in line for economic prosperity that no longer materializes, low-skilled workers increasingly feel like strangers in their own land (Hochschild, 2016). The radical right is not alone in being depicted as owing its success to voters who feel threatened in their social status: Brexit has also been interpreted as the revolt of lower educated blue-collar workers who feel left behind (Chan et al., 2020; Hobolt, 2016).

This paper does not add another explanation for right-wing populism, nor does it look into the drivers of party support. Instead, it examines the micro-foundations of the claim that the subjective social status of the working class has fallen – in absolute or relative terms – over the last 30 years in Europe and the United States. While accounts of working-class marginalization abound, empirical studies into how subjective social status has evolved over time are exceedingly rare (for an exception, see Gidron and Hall 2017). This lack of evidence

[4] Chapter co-authored with Daniel Oesch and published as:
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is surprising because workers' loss of subjective social status seems to be largely taken for granted.

However, it is not obvious that the working class enjoyed a better social standing a few decades ago. The retrospective construction of a better world that was lost is part of the radical right's narrative (Taggart, 2002). Yet it is ahistorical and may well be wrong. If low-skilled workers were already at the bottom of the status hierarchy in the 1980s, the possibility of a further drop may be limited. Sharp shifts in workers' subjective social status also run counter to the reference group theory which expects individuals to primarily compare themselves to people similar to them, notably family, friends and co-workers (Evans et al., 1992; Merton & Kitt, 1950). Therefore, if members of the same network experienced similar shifts in their economic fortune, their subjective social status may not have changed much over time.

Of course, there are also compelling reasons to expect a widening class gap in subjective social status over the last three decades. In Europe and the United States, the 1980s represent a watershed moment, when income inequality had reached its lowest level of the 20th century and the Keynesian class compromise came to an end (Piketty, 2019, p. 37). Thereafter, Reagan and Thatcher's neo-conservative revolution, the implosion of the communist bloc, automation and globalization put the working class under growing pressure. While top incomes have soared, the bottom half of the population has since been treading water in many countries (Nolan & Thewissen, 2018; Piketty, 2013).

An open question is whose subjective social status has fallen most. As job growth over the last decades has been skewed towards high-paid and low-paid occupations in some countries (Dwyer & Wright, 2019; Goos & Manning, 2007), status anxiety may not be strongest in the bottom tier of society. Rather, it may be skilled workers and the "squeezed middle" who face the most pressure from technological change and suffer disproportionately from status anxiety (Gidron & Hall, 2017, p. 66; Kurer & Palier, 2019).

What happened to the class gap in subjective social status is, then, an empirical question. Our paper examines how it changed for different classes between 1987 and 2017. Over this period, the economic fortune of working-class households varied widely across Western countries. Median household income evolved more favourably in Britain than the United States, in Norway than in Sweden, in Poland than in Hungary or in Switzerland than in Germany (Nolan & Thewissen, 2018, 2020). These differences plead for a comparative approach. We thus present a comprehensive analysis of how the class gap in subjective social status evolved in these eight countries over the last 30 years. We do so by analysing individual-level data from the International Social Survey Programme 1987-2017 and the European Social Survey 2002-16.

In what follows, our paper first clarifies the concepts of class and status. It then discusses the arguments pleading for or against an increase in workers' social standing. This allows us to develop three hypotheses about whose subjective social status may have declined over the last decades in which countries. The ensuing sections present the data, method and measurement, and then show results for the absolute and relative evolution of subjective social status over time by class and education. The conclusion discusses the implications of our findings for the burgeoning literature on the radical right.

2.2. Class, status and nostalgic bias

Social status was famously distinguished from social class by Max Weber (Weber, 1922/1978). Although the two indicators of social advantage are correlated, they capture distinctive features of stratification. While class arises from the social relations of labour markets and has an objective economic basis, social status is rooted in a symbolic hierarchy and based on subjective perceptions that people occupy more or less honourable positions in society (Chan & Goldthorpe, 2004). Class thus refers to economic resources and power, whereas status

is based on cultural beliefs about honour, esteem and respect (Weber, 1922/1978). Status captures the extent of esteem that people believe is accorded them within society. It reflects people's views about the recognition they receive relative to others and thus embodies their sense of where they stand in society (Gidron & Hall, 2017, p. 61). Status matters because many people care as much about social recognition as they do about money and power (Ridgeway, 2014, p. 3).

The issue at stake is whether class differences in subjective social status have widened over the last decades – the period of the Great Divide in economic fortunes (Stiglitz, 2016) –, and notably whether the working class has fallen down the status ladder. In the public debate, working-class decline is an ever-present concern. Under the title "Insecurity forever, the rise of a new class", the New York Times described the "anxious class" that loses ground in "an increasingly competitive economy that no longer values workers as much as it once did". However, this article appeared in 1994 – and thus over a quarter of a century ago, years before the radical right would become a major political force.

This argument raises the possibility that the subjective social status of the working class may have been stable over the last decades for the simple reason that it was very low to begin with (Ganzeboom & Treiman, 1996, p. 214). It contrasts with the belief that everything was better in the good old days – a belief that is deeply rooted in society.[5] The romanticized recall of an ideal world that has been lost is particularly important for right-wing populism. By

[5] A case in point is given by Veenhoven (2008: 53) who each year asked his incoming sociology students to vote on whether modernization over the last century had made society more or less livable. Year after year, a majority would state that it has made society less livable – although life expectancy doubled, literacy increased from below 20% to above 80% and income per capita grew many-fold (Piketty 2019: 32).

evoking nostalgia, this narrative plots the pure past against the corrupt present and blames the elite for the perceived decline in today's society (H. Betz & Johnson, 2004; Taggart, 2002).[6]

Survey evidence suggests that this narrative falls on fertile ground. Gest and colleagues (2018) show that the feeling of nostalgic deprivation – the gap between individuals' perceived current and past status – increases radical-right support in Britain and the United States. In the same vein, Britons who voted for Brexit were much more likely to declare that life is worse today than 30 years ago than Britons who voted against Brexit (Gidron & Hall, 2019, p. 4). Similarly, Elchardus and Spruyt (2016) show for Belgium that support for populism is closely linked with a view of society being in decline. However, one single data point in time does not settle the question as to whether subjective social status really did decline over time – or whether we deal with nostalgic deprivation and thus a retrospective construction.

Besides nostalgic bias, another reason for doubting major shifts in subjective social status comes from reference group theory, which argues that individuals form a judgement about their own social standing by comparing it not to society as a whole, but to people around them such as family, friends and colleagues (Merton & Kitt, 1950). As networks are homophilous and bring together people in similar occupations who are exposed to similar economic shifts (McPherson et al., 2001), inter-group comparison of subjective social status could well remain constant over time – because people in the same network move up (or down) together. In support of reference group theory, Kelley and Evans (1995, p. 166) find for six Western countries that "rich and poor, well-educated and poorly educated, high-status and low-status, all see themselves near the middle of the subjective status ranking." The reason is that even high-status people consider many acquaintances to be above them (family doctors looking up to medical

[6] A prominent example was Donald Trump's campaign slogan to "make America great again" that directly appealed to a mythical golden past (Inglehart and Norris 2016: 16).

school professors) and low-status people see others even lower (factory workers looking down on sweepers) (Evans et al., 1992, p. 465).

2.3 Political and economic pressure on the working class

Nostalgic bias and reference group theory notwithstanding, there are good reasons to expect the working class to have fallen down the status ladder. From the middle of the 19th century to the 1970s, the central question in European politics revolved around the worker question and the place that the working class should occupy in society (Castel, 1999; Esping-Andersen, 1990). This is no longer the case as the working class has been moved from the centre of the political scene to its margins[7].

In parallel to political marginalisation, economic developments over the past thirty years such as mass unemployment, trade union erosion, the spread of atypical jobs and wage stagnation have stalled the gradual improvement of living conditions for the working class (Hall & Lamont, 2013). The working class has lost out from educational expansion and occupational upgrading and finds itself at the gradually less populated bottom-end of the social structure (Oesch, 2015). The neoliberal turn in the 1980s and 1990s also redefined the criteria of what counts for social status, making individuals' success on the market more central for public esteem (Hall & Lamont, 2013, p. 4). While the prestige of highly educated professionals and managers increased, lower-skilled workers were forced to accept poorly paid jobs – jobs that, at the same time, may have provided increasingly weak social status.

[7] The best illustration of this phenomenon is the extent to which incoming left governments in the 1990s shifted their appeal from the working to the middle class. A particularly clear case is the UK where the then Prime Minister Tony Blair invited Labour supporters to join his shift from "the old establishment to a new, larger, more meritocratic middle class" (Guardian, 15. 1. 1999). Similarly, in 1997 Labour's deputy Prime Minister John Prescott allegedly remarked that "we're all middle class now".

These changes in politics and the economy are also seen as having fostered a feeling of relative deprivation, where growing segments of the working class believe that they receive less than what they deserve, both in terms of material resources and social recognition (Elchardus & Spruyt, 2016; Hall & Lamont, 2013). Pushed to the fringes of the national community, the social integration of the working class may thus have become tenuous (Castel, 1999; Gest, 2016b; Gidron & Hall, 2019).

2.4. Whose subjective status has declined?

The argument of status anxiety comes in several versions. An influential version is associated with (Gidron & Hall, 2017, p. 63) who argue that economic and cultural developments in Western democracies have combined over the past 30 years to depress the subjective social status of lower skilled workers in manual, clerical and routine service occupations. The fall in subjective social status is expected to be particularly strong among white working-class men, whose rank in the status-order has been additionally challenged by women's and ethnic minorities' quest for equal rights. Women and minorities are seen as "cutting in line" ahead of working-class men in the long wait for economic progress (Hochschild, 2016). While Gidron and Hall (2017, p. 63) put forward occupation and social class as the decisive locus of falling subjective social status,[8] their empirical analysis looks at how the social status of men and women without college education has evolved over time relative to that of all men and women. Their findings tentatively suggest that the subjective social status of lower-educated men has decreased in most Western countries, but results are descriptive, based on a few survey rounds only, and do not easily extrapolate to the entire

[8] "Since social status is closely associated with the quality of a person's occupation, these developments [in technology and the economy] are likely to have depressed the social status of many workers" (Gidron and Hall 2017, p. 63).

working class. Still, our first hypothesis is that Gidron and Hall's (2017) argument about working-class decline holds.

Hypothesis 1: over the last thirty years, the subjective social status of the low-skilled working class has declined both in absolute terms and relative to that of the (upper-)middle class.

A second version of the status-anxiety argument sees social stratification in terms of three tiers. Its starting point is that job growth over the last decades has been skewed towards high-paid and low-paid occupations at the expense of mid-paid occupations, notably in the US (Dwyer & Wright, 2019; Wright & Dwyer, 2003) and UK (Goos & Manning, 2007; Oesch & Piccitto, 2019). The idea is that intermediate jobs held by skilled production workers and office clerks – the skilled working class – are more exposed to automation and offshoring than low-paid service jobs. Therefore, rather than the bottom tier of society, it may be the mid-tier whose subjective social status has come under greatest pressure. These workers who are a few rungs up from the bottom of the social hierarchy may suffer most from status anxiety because "they still have a significant measure of status to defend" (Gidron and Hall 2017, p. 66). A telling example comes from an ethnographic study of bus drivers in France whose social representation is not bipolar, but tripolar, distinguishing three hierarchical levels: the top, middle and bottom. As bus drivers, they see themselves in the middle and feel under pressure not only from above, but also from below, notably from migrant workers and the unemployed (Schwartz, 2009, p. 5).

This argument fits the narrative of the "devalued" intermediate classes in the United States who perceive the elites from above and the minorities from below to be thriving at their expense (Hochschild 2016). Moreover, it echoes findings that the strongest supporters of the radical right are not the most deprived individuals, but production workers who are skilled

(Bornschier & Kriesi, 2013, p. 21) and who perceive their economic situation as middling (Im et al., 2019). Radical-right support has thus been explained by a relative decline of status and position in the income distribution (Bornschier & Kriesi, 2013, p. 21; Burgoon et al., 2019). Likewise, Brexit has been seen as an expression of "the social malaise of intermediate classes, the so-called 'squeezed middle'" (Antonucci et al., 2017, p. 2). This leads us to formulate a second hypothesis:

Hypothesis 2: over the last thirty years, it is primarily the subjective social status of skilled workers that has declined both in absolute terms and relative to that of the upper-middle class.

2.5. Country differences in the evolution of status

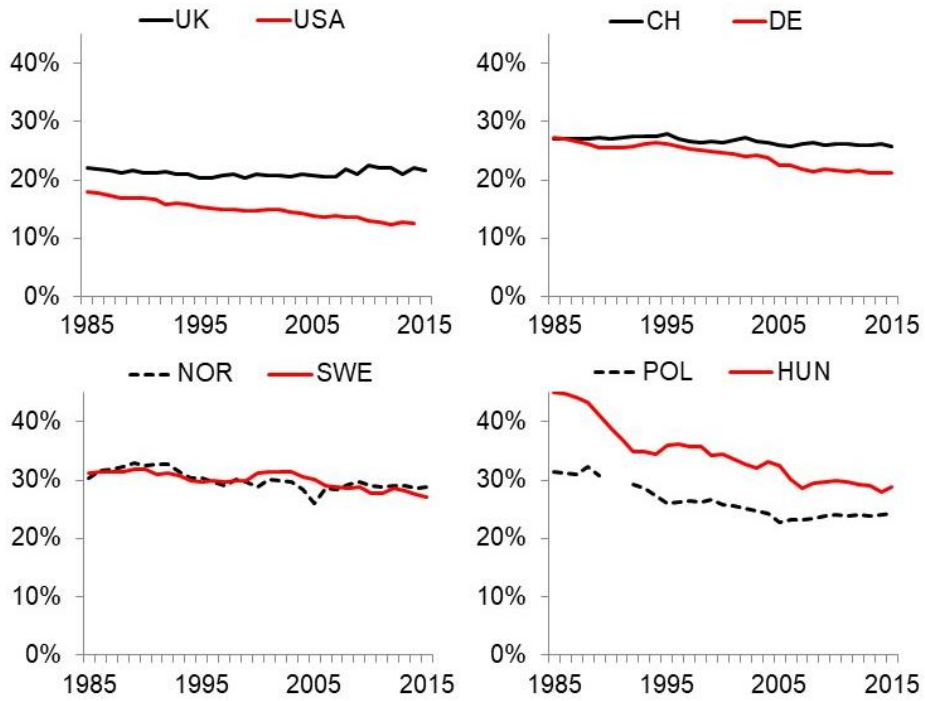
Our discussion suggests that workers' subjective social status has evolved uniformly across the Western World. This assumption is not implausible if global shifts such as skill-biased technological change and offshoring put pressure on the working class everywhere. At the same time, national institutions such as the welfare state and macroeconomic policy, collective bargaining and minimum wages are likely to channel these shifts into different outcomes for working-class households in different countries (Gautié & Schmitt, 2010).

Our empirical analysis thus compares the evolution of subjective social status for eight countries. We select four pairs of countries that each share a range of cultural and geographic features, but diverge in the economic trajectory of the working class since the 1980s. These pairs comprise Britain and the United States, Germany and Switzerland, Hungary and Poland, Norway and Sweden. One could imagine additional – and different – pairs, but our selection is limited as long data series on subjective social status are available for only a dozen countries.

While these eight countries were exposed to similar shifts in technology and trade, the working class fared much better in some countries than in others. This becomes clear from Figure 2.1 which shows the share of national income that went to the bottom half of the adult population between 1985 and 2015. While this share remained stable at 22 per cent in the UK, it dwindled from 18 to 13 per cent in the United States. Similarly, it stayed constant at 27 per cent in Switzerland, but shrank from 27 to 21 per cent in Germany. Households in the bottom half did somewhat better in Norway (where their income share went from 30 to 29 per cent) than in Sweden (where their share declined from 31 to 27 percent), but these changes are minor. In contrast, the proportion of income going to the population's bottom half fell dramatically in the former socialist countries, with a larger relative decline in Hungary (from 45 to 29 per cent) than Poland (31 to 24 per cent).

The working class did not only fare better in relative terms in some countries than in others, but also in absolute terms. The evolution of median household income, corrected for inflation, gives a good idea of how living conditions evolved for ordinary people over time. In the United States, the median household saw its income increase, on average and in constant prices, by a meagre 0.3 per cent per year between 1979 and 2013 as compared to an annual rise of 1.6 per cent in the UK over the same period (Nolan & Thewissen, 2018). Similarly, the median household in Hungary lost 0.2 per cent per year (1991-2012), whereas it gained 1.4 per cent in Poland (1992-2013). In both Norway and Sweden, median households saw their income rise substantially, although income growth was stronger in Norway (2.4 per cent over 1979-2010) than Sweden (1.8 per cent over 1983-2013). Finally, the median household's income evolved almost as sluggishly in Germany as in the US, with an annual increase of 0.5 per cent between 1984 and 2010, half as much as in Switzerland (Nolan & Thewissen, 2018, 2020).

Figure 2.1. share of pre-tax national income that goes to the bottom 50% of the adult population



Source: World Inequality Database https://wid.world/

The stagnation of household income in Germany, Hungary or the US is likely to contrast with social expectations. Children raised in the three post-war decades were socialized in a period of steadily increasing incomes, with each new generation expecting to exceed the level of economic prosperity enjoyed by the previous generation (Gest et al., 2018, p. 1698; Inglehart & Norris, 2016, p. 449). This seems no longer to be the case for many workers in the Western World, notably the United States (Chetty et al., 2017). Based on the evolution of relative income shares and absolute income over the last three decades, we formulate a third and last hypothesis that expects country differences:

Hypothesis 3: over the last thirty years, the subjective social status of the working class should have fallen more in the US than the UK, in Germany than Switzerland, in Hungary than Poland and, possibly, in Sweden than Norway.

2.6. Data, measures and method[9]

Data

Our empirical analysis is based on individual-level data from the International Social Survey Programme (ISSP). The ISSP is an academically driven cross-country collaboration that produces nationally representative surveys. While the ISSP includes more than 40 countries, it was founded in 1984 by just four countries and long-term data availability is limited to only a dozen countries. Therefore, our analysis focuses on the eight countries mentioned. However, in order to show that countries were not cherry-picked based on results, our robustness tests present findings for a larger group of nations for which long data series are available.[10]

The question on subjective social status was included in the ISSP rounds 1987, 1992, 1999, and then between 2002 and 2017 annually (Norway and Sweden), biannually (Germany, Hungary and Switzerland) or less frequently (Poland, the UK and US). Our analysis attributes each ISSP round to the year when the survey was effectively fielded rather than the official year of a module. This provides us with a maximum of 18 (Sweden), 17 (Norway), 15 (Hungary) and 12 (Germany) yearly data rounds and a minimum of 5 (UK), 9 (Poland and the US) and 10 (Switzerland) yearly data rounds. We restrict our analysis to the working-age population from 20 to 60 and leave away individuals with incomplete information. This provides us with analytical samples of a minimum of 500 respondents in Britain (1999) and a maximum of 3223

[9] Complete replication material for our empirical analysis can be found at Oesch and Vigna (2021).
[10] These countries include Australia, Austria, Czech Republic, Russia, Slovak Republic and Slovenia.

respondents in Poland (1987). ISSP only provides weights for some years and some countries (e.g. none for Sweden). We thus show unweighted results, but our findings remain unchanged when using weights (results available from the authors). Table A.1 in the Appendix A shows the data availability and number of observations for each country and survey year.

Measures

Our key dependent variable is subjective social status which we measure with a single-item measure that captures an individual's perceived rank in the social hierarchy. It asks individuals to place themselves on a 10-point social ladder. The question states that "in our society there are groups which tend to be towards the top and groups which tend to be towards the bottom". Respondents are then shown a vertical figure going from 1 to 10 and are asked "where would you put yourself on [such] a scale from the bottom to the top?". This question has been widely used in recent research on subjective social status (Gidron & Hall, 2017; Lindemann & Saar, 2014; Van Noord et al., 2019). It has, however, a colourful past. The pioneers of the ISSP had originally considered it as a measure of subjective class identification (Kelley & Evans, 1995; Smith, 1986), before calling it subjective social status in later studies (Evans & Kelley, 2004). In the early 2000s, a group of health psychologists had then re-invented the same question as the MacArthur scale of subjective social status (N. E. Adler et al., 2000; Singh-Manoux et al., 2003).

Of course, this single-item indicator of subjective social status is not beyond criticism. Asking individuals to locate themselves on a hierarchical status ladder is just one way of measuring social status. Another indicator measures Max Weber's notion of status as social honour by looking at marital and friendship networks. The argument is that individuals feel comfortable mingling with and marrying into networks of people who are neither too much above nor below their status rank. Social status is then defined in terms of social distance and

measured by patterns of friendship or marriage between individuals working in different occupations (Carella & Ford, 2020; Chan & Goldthorpe, 2004).

While our analysis follows Gidron and Hall (2017) and focuses on the subjective status ladder, we resort to two additional items as a robustness test. A first item asks respondents to compare their job's social status with the status of their fathers' job when respondents were in their teens (on a 5-point scale). This question makes the reference person explicit and tells us how individuals in different classes see their own status relative to their fathers' status when they were teenagers. This question about intergenerational status mobility was only asked in four ISSP rounds (1987, 1992, 1999, 2009).

A second item asks people to indicate how satisfied they are with their life (on a scale from 0 to 10) and is measured with data from the European Social Survey (ESS). If the falling social status of the working class has gone along with resentment, anger and anxiety, this should also show in a decrease of life satisfaction. Earlier research suggests that subjective social status and life satisfaction are strongly correlated across Europe (Schneider, 2019). ESS 2012 contains both measures and our analysis confirms this finding: The correlation between subjective social status and life satisfaction is 0.44 (Pearson's R) and an increase by one point on the (11-point) social-status scale leads to an increase by 0.57 points on the (11-point) life-satisfaction scale. Since the question on life satisfaction is not asked in the ISSP, we resort to the eight rounds of the ESS that were carried out between 2002 and 2016. This has the added benefit of allowing us to replicate our analysis for the same countries (except the US) with a different dataset. Table AW.1 in the web-appendix shows the descriptive statistics.

Since our measures of subjective social status and life satisfaction use three different scales (1-10, 1-5, 0-10), we standardize these scales into a common unit of measurement that goes from 0 (minimum status or life satisfaction) to 100 (maximum status or life satisfaction), making for easier comparison of results across models.

Our key independent variable is social class. We follow Gidron and Hall (2017, 2019) and resort to a schema proposed by Oesch (2006), distinguishing five classes: (1) the upper-middle class of managers, professionals and large employers; (2) the lower middle class of associate managers, semi-professionals and technicians; (3) small business owners including self-employed artisans, shop owners and farmers; (4) the skilled working class of craftsmen, office clerks, sales and service workers; (5) the unskilled working class of operatives, farmhands and unskilled service workers. This schema has a hierarchical structure and comes close to the classification devised by Erikson and Goldthorpe (1992). As a robustness test, we do not separate the working class hierarchically into skilled and unskilled workers, but instead distinguish production workers, service workers and office clerks. This allows us to test the argument that is the traditional working class of (industrial) production workers whose subjective social status has declined.

Individuals are allocated to different classes based on information about their current occupation or, where missing, on their partner's occupation (as measured with ISCO-88 4-digit),[11] employment status (in order to separate employees from employers and the self-employed) and, for employers, the number of employees they have (to distinguish large employers from small business owners).

We replicate our analysis by using education instead of class as indicator of stratification and distinguish three educational levels: (1) less than full upper secondary education; (2) upper-secondary and post-secondary, but not tertiary education; (3) university degree. Besides class

[11] For some countries and survey rounds, occupations were measured at a less detailed level, notably for the Britain, Poland and the United States in 1987 as well as Britain and Sweden in 1992. From 2014 on, occupations were measured with ISCO-08 instead of ISCO-88. Table W.2 (web-appendix) provides detailed information and the Stata codes to define social classes in ISSP are available here: https://people.unil.ch/danieloesch/scripts/

and education, our models also control for survey year, age and gender. Table A.2 in the appendix shows descriptive statistics for all the variables used.

Method

In order to reduce short-term fluctuations that may be due to common errors in surveys linked to coverage, sampling, nonresponse or measurement, we use locally weighted scatterplot smoothing (LOWESS). This technique consists in calculating the subjective social status of each class in a given year by also taking into account information from adjacent years, with neighbouring years getting higher weights and more distant years lower weights. We then estimate for each country a separate linear regression based on the following equation:

$$y_i = \beta_1 + \beta_2 class_i + \beta_3 year_i + \beta_4 class_i * year_i + \beta_5 controls_i + \epsilon_i$$

Our dependent variable y_i measures the subjective social status of individual i. Our two main predictors are individuals' social class $class_i$ and the survey year $year_i$. The interaction term $class_i * year_i$ accounts for a differential time trend in subjective social status across classes and thus shows relative change. $Controls_i$ include gender, age and education, and ϵ_i represents the error term. We facilitate the interpretation of results by graphically plotting the predicted values of subjective social status over time for different class profiles.[12]

2.7. Descriptive results for subjective social status over time

Figure 2.2 shows how the subjective social status of different classes has evolved over time in absolute terms. While these graphs are based on scatterplot smoothing, Figure A.1 in

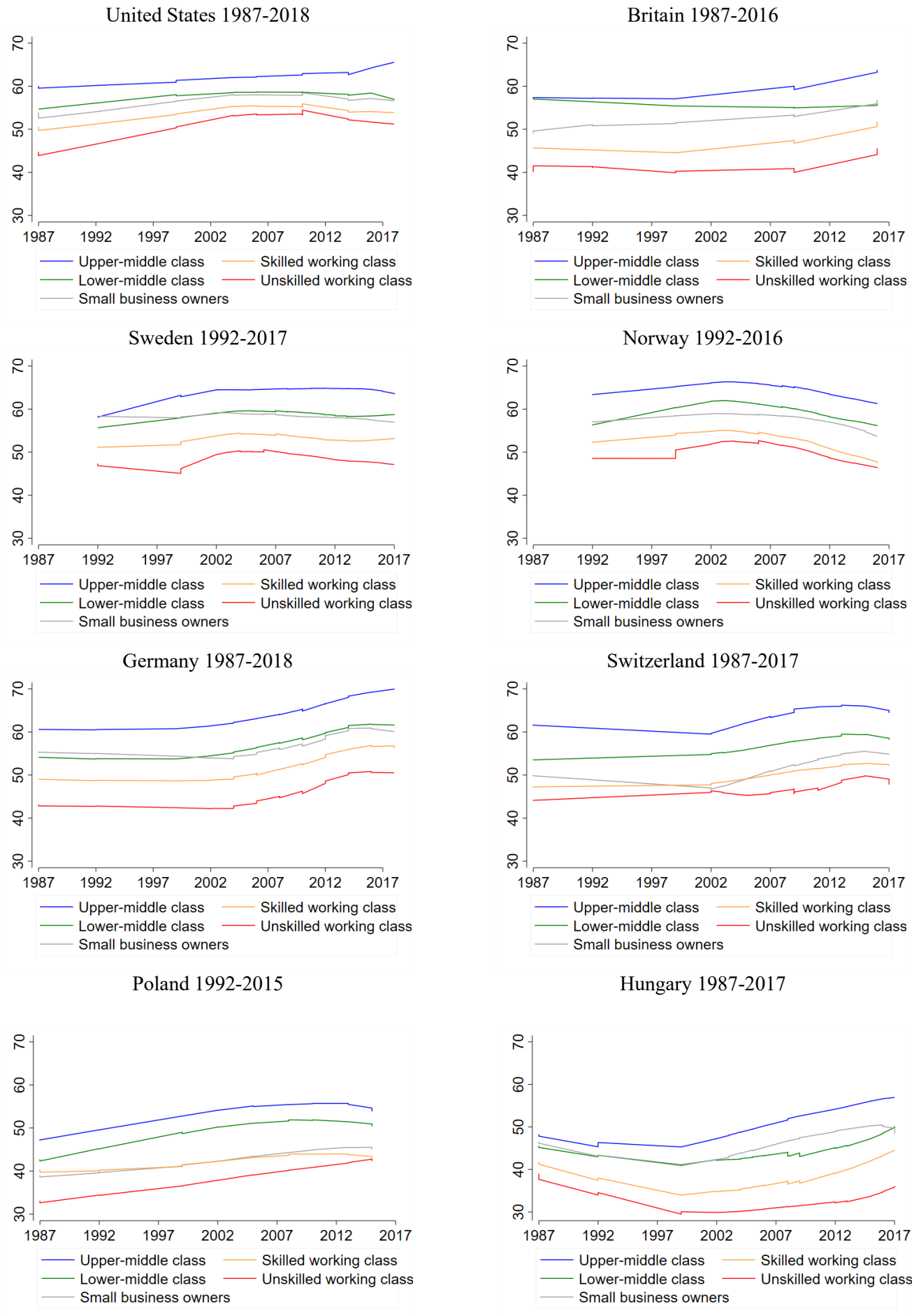
[12] In our predictive margins plots, we show results that combine certain classes with certain education levels in order to avoid rare and atypical combinations such as being in the unskilled working class and having a university degree or being in the upper-middle class and not having any post-compulsory schooling.

the Appendix A shows raw averages for each year and reminds us that the second 15 years under study (2002-2017) are based on more data points than the first 15 years (1987-2002). The members of the upper-middle class attribute themselves, on average, the highest social standing in each country and year, whereas the members of the unskilled working class perceive themselves everywhere to be towards the bottom of society. At the top, the upper-middle is followed by the lower-middle class and at the bottom the skilled working-class has the second-lowest status. Small business owners occupy an intermediate position.

This rank-order confirms that our measure of status captures hierarchical differences in social standing. Yet our primary interest is not in levels, but the time trend. In this regard, Figure 2.2 contradicts our expectations. The subjective social status of the unskilled and skilled working class remained basically constant in Britain, Poland, Sweden, and Switzerland. It possibly even increased in Germany (between 2002 and 2015) and the US (between 1987 and 2005). Hungary in the 1990s and Norway after 2005 are the two only countries where the subjective status of the working classes decreased. Figure AW.1 in the Appendix A[13] presents the same analysis for six additional countries (Australia, Austria, Czech Republic, Russia, Slovak Republic and Slovenia) and also points to a stable time trend in the subjective status of the working classes.

[13] Figures and tables beginning with the letters AW are the ones that are included in the Web Appendix of the published version of this chapter.

Figure 2.2. the evolution of subjective social status (on a scale from 0 to 100) by social classes



Note: lines show locally weighted scatterplot smoothing (LOWESS). See Figure A.1 in the appendix for raw averages.

The central argument put forward by Gidron and Hall (2017) was the declining status of working-class men rather than women. For this reason, we show the evolution of subjective social status separately for men and women (see Figures AW.2 and AW.3 in the Appendix A). Yet again, the time trends do not reveal any systematic decline in subjective status among either men or women. While both men and women in more advantaged class positions have higher subjective status than working-class men and women, the class gap in social status remains constant over time for both genders.

Figure 2.2 only provides crude evidence on the relative change in the subjective social status of the working classes compared to the middle classes. Possibly, subjective status increased faster in the upper-middle class than the working class. We thus specifically present the difference in status of the skilled and unskilled working class relative to the upper-middle class over time, again focusing on the critical category of men. The result is shown in Figure A.2 (Appendix A) and confirms that the gap in subjective social status between the upper-middle class and both the skilled and unskilled working class was stable or decreased in almost all the countries, except in Sweden 1992-1999, Poland 1997-1999 and Hungary.

It could be argued that the trends in subjective social status are parallel between classes because of the nature of the variable: just as income deciles cannot show increasing distance between deciles, a ladder representing society as a whole cannot be adapted to show increasing distance between rungs (groups). However, this mechanism is unlikely to have a strong effect on our results because the distribution of subjective status tends to be concentrated around the central values of the scale (4-5-6) over the whole period, with small standard deviations (see Table A3 in Appendix A). If workers felt much less social prestige in recent years than they did a few decades ago, they would still be able to place themselves in the lower rungs of the ladder. However, they are very rarely chosen by ISSP respondents.

We further compare our results to Gidron and Hall (2017) by replicating our analysis for three educational levels. When tracing the evolution of subjective social status by education, we observe the expected hierarchy with university-educated individuals having everywhere the highest social status and individuals with less than upper-secondary education the lowest status (see Figure A.3 in the Appendix A). However, the evolution over time in social status is again flat. The social status of both the low- and mid-educated group seems constant over time. Despite some fluctuations, the dominant trend is stability.

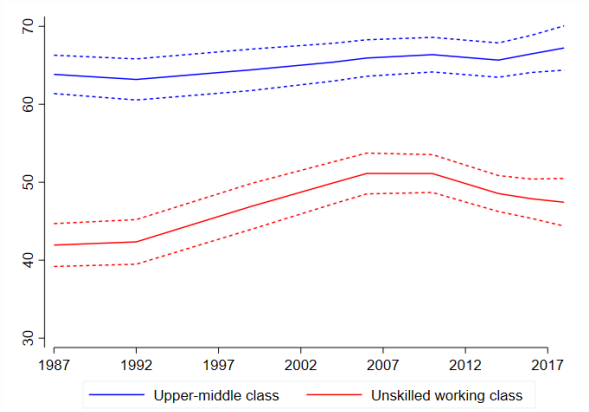
2.8. Multivariate results for subjective social status over time

Of course, these bivariate relationships may hide large shifts in classes' composition. This is the case if the mean age of working-class incumbents increased faster than in the other classes, if expanding university attendance changed the educational composition of the middle classes or if women's growing employment changed the gender mix more in one class than another. Therefore, we estimate a multivariate linear model on the evolution of social status by class and education, keeping age and gender constant.

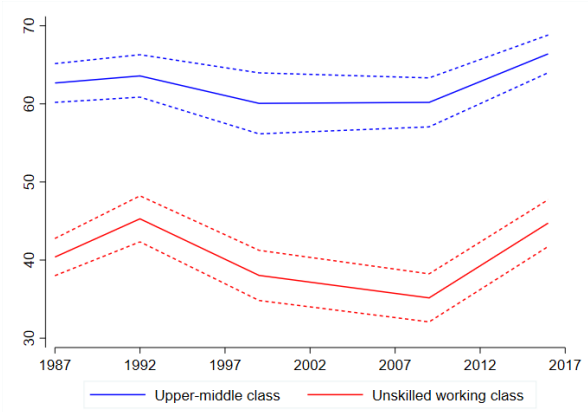
Figure 2.3 shows how the predicted subjective social status evolved over time for a 40-year old man from either the upper-middle class with university education or the unskilled working class with compulsory schooling. When comparing these two profiles that combine the highest class with the highest educational level and the lowest class with the lowest educational level, we observe larger disparities in subjective social status. Still, these estimates contradict the idea of an absolute decrease in the subjective social status of the unskilled working class in six out of eight countries: Germany, Hungary, Sweden, Switzerland, Britain and the US. In the US, their status seems to have increased. We only find a decreasing trend for Norway (after 2007) and Poland (after 2012).

Figure 2.3. predicted values and confidence intervals of subjective status (0-100) for a man aged 40 in the upper-middle (with tertiary education) or unskilled working class (without upper-sec. educ.)

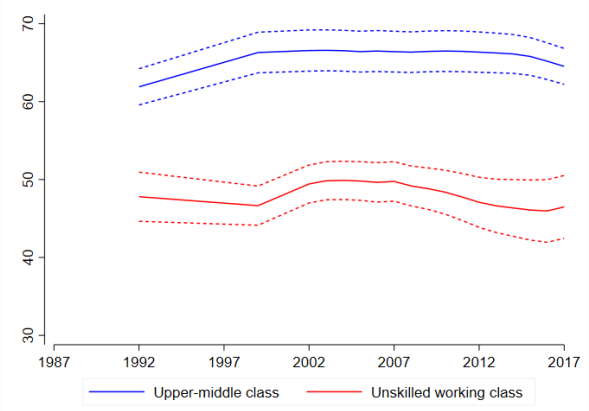
United States 1987-2018



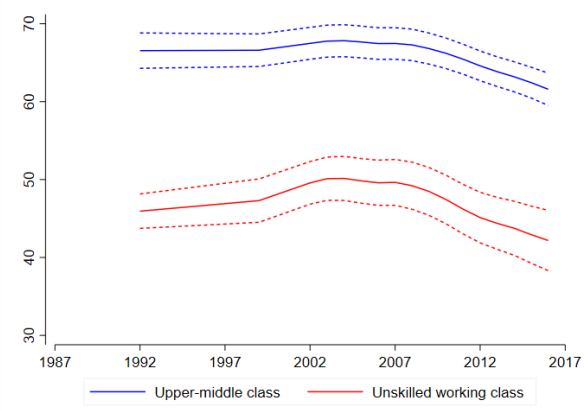
Britain 1987-2016



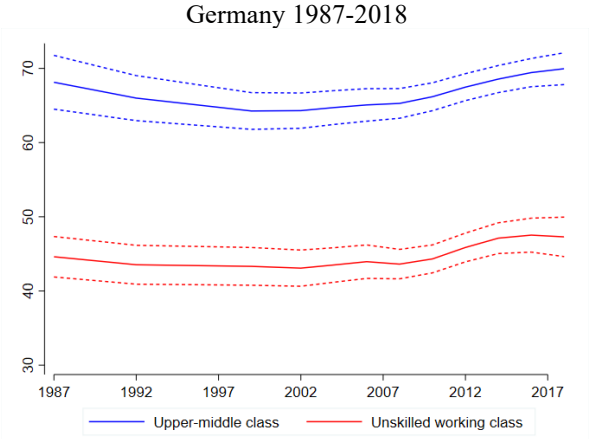
Sweden 1992-2017



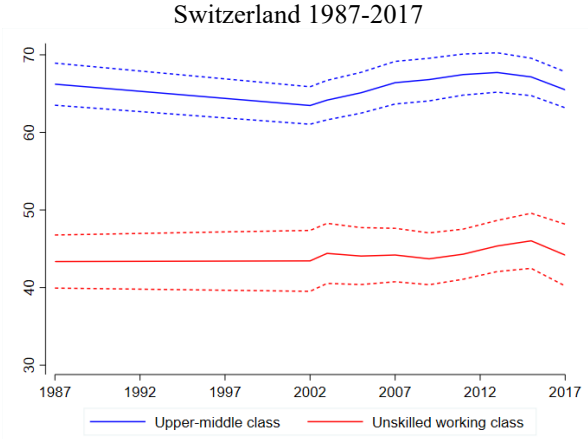
Norway 1992-2016



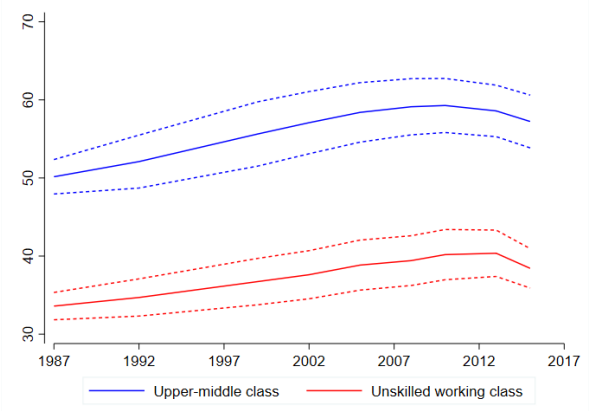
Germany 1987-2018



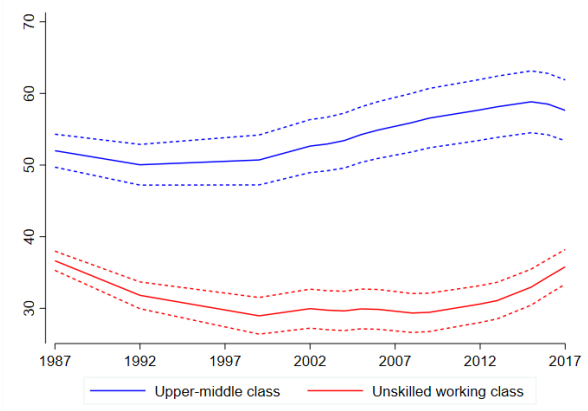
Switzerland 1987-2017



Poland 1987-2015



Hungary 1987-2017



While these figures throw doubt on our hypothesis of an absolute downward trend in the status of the working class, the status gap may still have widened in relative terms if the subjective social status of the upper-middle class increased (more) over time. We test this argument by estimating a regression on social status with class, time period and an interaction as predictors (as well as age and gender as controls). The interaction term between class and time period then tells us whether there is a differential trend in social status across classes. As reference period, we take the survey rounds before 2000 and compare them to the subsequent survey rounds which we merge into three five-year periods (2000-05, 2006-11, 2012-17).

The coefficients are shown in Table A.4 (Appendix A) and suggest that social status evolved in parallel for the unskilled working class and the upper-middle class in Norway, Poland, Sweden, Switzerland and, with the exception of 2006-11, Germany. In the United States, the unskilled working class made up ground in terms of subjective social status, whereas it clearly fell behind the upper-middle class in Hungary and, to a lesser extent, in Britain. Contrary to our first hypothesis, the gap in social status between the upper-middle and unskilled working class seems not to have widened over time in the majority of countries.

The stability of the class gap is not quite as clear when comparing the evolution of social status between the skilled working class and the upper-middle class. While the differential is constant in Britain and Switzerland and even decreases in the United States, we observe a widening gap in Poland and, above all, Hungary. To a lesser extent, a relative status decline is also visible for the skilled working class in Germany in the period 2006-2011 and in Norway and Sweden after 2012. However, except in Hungary and Poland, the effect size reaches at most 2.8 points and is thus small, given that the mean status scores of skilled workers lies between 40 and 50 points (and status differs by 9 to 12 points between the upper-middle class and skilled working class). Moreover, there is no relative status decline for the skilled working class in the US, but a status increase. Overall, these results provide little support for our second hypothesis.

2.9. Robustness tests

Another measure of the working class

We assess our findings by using a different class measure that does not hierarchically separate the skilled from the unskilled working class, but distinguishes, within the working class, production workers (such as assemblers and craft workers), service workers (such as sales assistants and waiters) and office clerks (such as secretaries and receptionists). The other class categories of small business owners, lower-middle and upper-middle class remain unchanged. This class measure allows us to test the claim that de-industrialisation has primarily put pressure on the traditional working class of production workers, whereas interpersonal service workers may have been less affected.

Figure AW.3 (in the Appendix A) compares how the predicted subjective social status evolved over time for a 40-year old male production worker or service worker relative to a member of the upper-middle class. We find again that service and production workers attribute themselves a lower status than do members of the upper-middle class. However, there is basically no difference between these two working-class categories in either absolute levels or the evolution over time. Point estimates are very close and confidence intervals overlap. These results invalidate our expectation of a stronger fall in the social status of production workers than service workers.

Another possibility is that the subjective social status of the working class has not declined on average, but has drifted apart internally as parts of the working class benefitted from rising living standards and another part was left behind. We test this idea of increasing heterogeneity within the working-class by tracing variance in social status by class over time. Figure AW.4 (in the Appendix A) plots the standard deviation of our status measure for three classes over the last three decades. It shows that variance in social status is systematically higher

among unskilled workers than skilled workers and, above all, the upper-middle class. However, with the exception of Norway and Sweden in the 1990s and Switzerland after 2012, we do not observe anywhere an increasing variance in status within the working classes.

Social status compared to father's social status

As a further robustness test, we use a status measure where respondents compare the social status of their present job relative to the perceived status of their father's job when respondents were aged 16 (see footnote 6 above for the question wording). For this indicator, Figure 2.4 reports predicted probabilities from a multivariate regression model and shows how middle-aged men perceive their status in an intergenerational perspective depending on whether they belong to the upper-middle class (with university education) or the unskilled working class (without upper-secondary education). Over time, unskilled workers provide a decreasing assessment of their status relative to their fathers in Britain, Germany, Hungary, Switzerland and the US, whereas the status was stable in the 2000s in Norway and Sweden. Overall, in the eyes of the unskilled working class, the status of their own job compared less favourably to the status of their fathers' jobs in 2009 than it did for respondents in the 1990s.

However, since these analyses are available for four survey rounds at most and stop in 2009, they are based on small samples and results are uncertain. We therefore resort to a formal test of period differences by regressing class, survey year and the interaction between class and survey year on intergenerational subjective social status, holding age and gender constant (see Table AW.4 in the Appendix A). Between the early 1990s and 2009, the class gap in intergenerational status is basically constant in Hungary, Sweden, Switzerland and the US, whereas the disparity becomes larger in Britain, Germany, Norway and Poland. This gap tends to widen over time for both the skilled and unskilled working class. Note, however, that these

estimates on the evolution of intergenerational social status often fail to reach statistical significance and are thus more tentative than the results for subjective social status.

Life satisfaction as a proxy for discontent

Some readers may be sceptical about the substantive meaning of our measure of subjective social status. For this reason, we provide a last robustness test by replicating our analysis with a different measure – life satisfaction – and a different dataset – the European Social Survey. Workers who feel left behind and marginalized are likely to not only report lower social status, but also to have become less satisfied with their lives. Both earlier research (Schneider 2019) and our own analysis (see above) indicate that individuals' subjective social status is closely associated with their life satisfaction.

Figure 2.5 shows how life satisfaction evolved by class over the eight rounds of the European Social Survey that took place between 2002 and 2016. We estimate a multivariate regression on life satisfaction for a man aged 40 who is either in the upper-middle class and holds university education or in the unskilled working class and has less than upper-secondary education.[14] Results are plotted as predicted values and show that the members of the unskilled working class report systematically lower life satisfaction than those of the upper-middle class in each one of the seven European countries studied. Differences are small (and not statistically significant) in Sweden and Norway, but large in Britain, Germany and Hungary.

However, concerning the evolution over time, we do not observe any downwards trend in life satisfaction among unskilled workers in any country – neither in absolute terms, nor in relative terms as compared to the upper-middle class. Two exceptions are Poland where the

[14] These estimates and confidence intervals are again locally smoothened. For the exact estimates and confidence intervals, please see Figure A.5 in the web-appendix.

unskilled working class makes up ground and Hungary (as well as possibly Britain) where it loses ground relative to the upper-middle class. Elsewhere, the dominant pattern seems stability over time. This pattern is consistent with the trendless fluctuation that we observe for the evolution of subjective social status.

Figure 2.4. Subjective status of respondent's job as compared to status of father's job – for a man aged 40 in the upper-middle (with university ed.) or unskilled working class (without upper-sec. educ.)

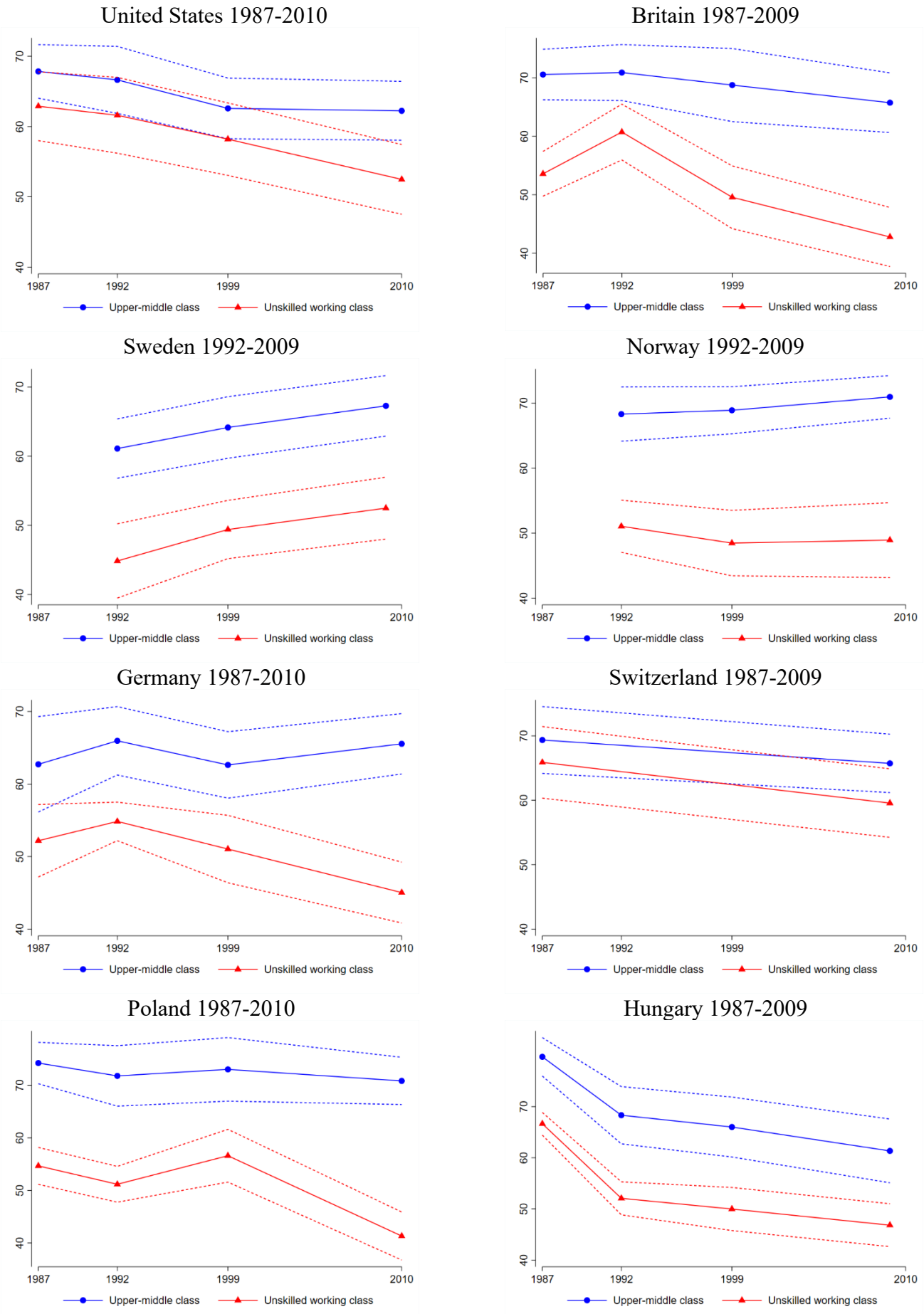
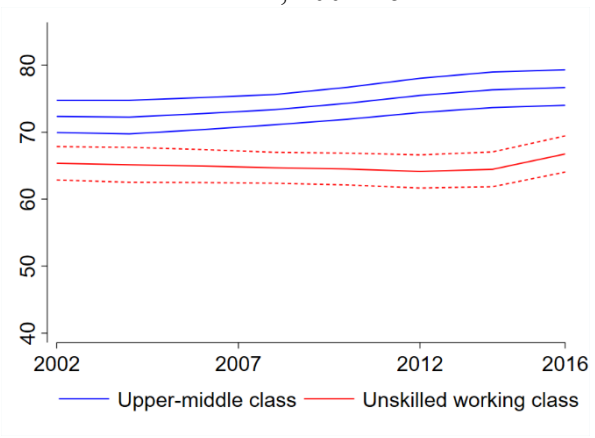


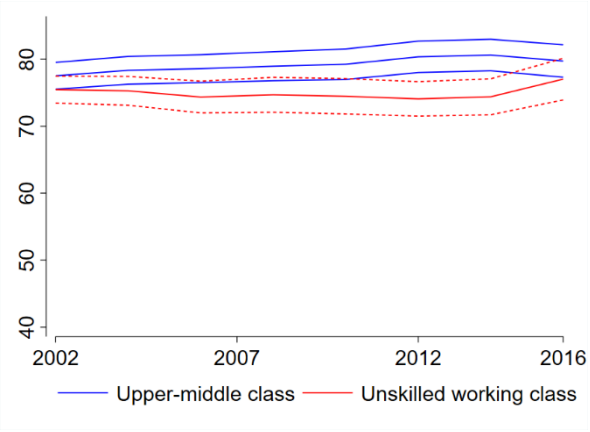
Figure 2.5. Predicted values of life satisfaction (from 0 to 100) for a man aged 40 in the upper-middle class (with university education) or unskilled working class (without upper-secondary educ.)

United States, not available

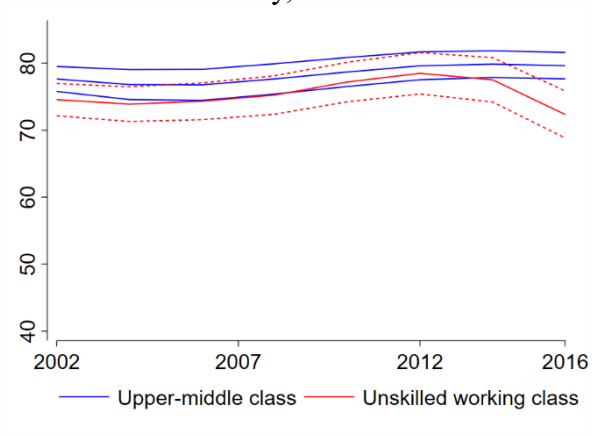
Britain, 2002-16



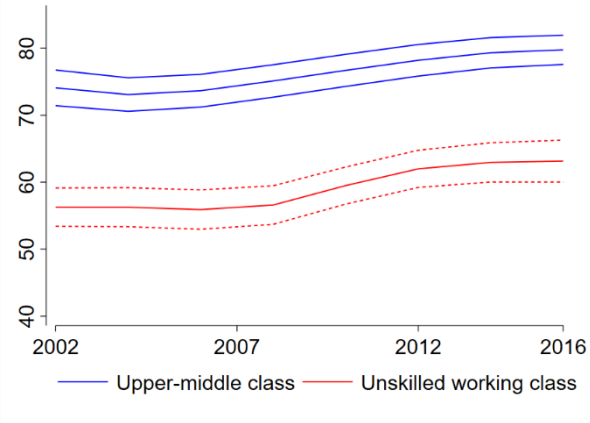
Sweden, 2002-16



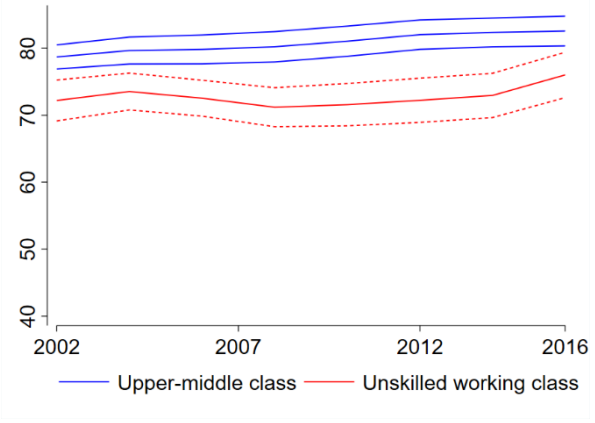
Norway, 2002-16



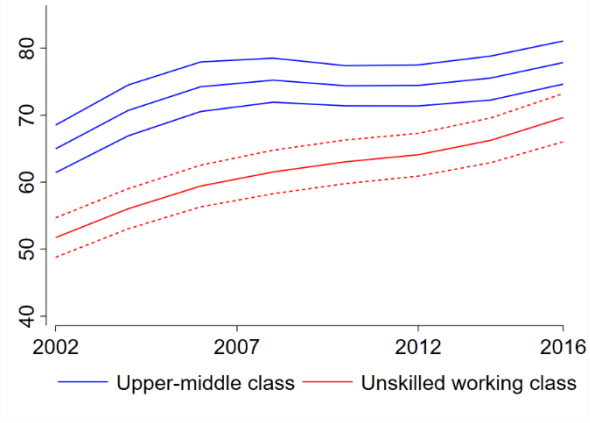
Germany, 2002-16



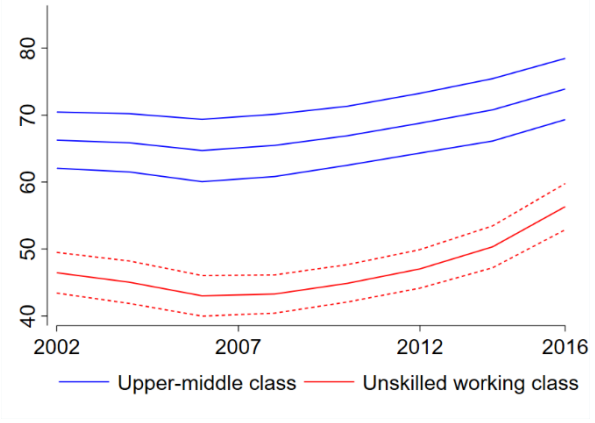
Switzerland, 2002-16



Poland, 2002-16



Hungary, 2002-16



2.10. Conclusion

Objective indicators show that over the last few decades the working class has been left behind in many respects in the western world. Notably, their real incomes have stagnated (Nolan and Thewissen 2018), while top incomes and income inequality have gone sky high (Piketty 2013). The most tangible sign that the quality of life of the working class has declined comes from mortality rates in the United States, showing that the life expectancy of lowly educated middle-aged whites has been falling since 1999 (Case & Deaton, 2015).

Our paper's goal has been to examine whether these objective evolutions are reflected in workers' subjective assessment of their place in society. We thus tested the claim that the subjective social status of the working class has fallen over the last thirty years in Europe and the United States. Following Gidron and Hall (2017), we had expected to see a decline in the subjective social status of low-skilled (hypothesis 1) and skilled workers (hypothesis 2) in absolute terms as well as in relative terms when compared to the upper-middle class. Moreover, based on the income evolution of the population's bottom half, we expected a stronger decline in some countries such as the Germany, Hungary and notably the United States where income inequality has soared than in Norway, Sweden and Switzerland where income inequality has remained more stable (hypothesis 3).

We tested these three hypotheses by analysing all the available rounds of the International Social Survey Programme between 1987 and 2017. Contrary to our expectations, there is no downwards trend in workers' subjective social status and no widening class gap in subjective social status over time. Rather, we find trendless fluctuation and stability in the subjective social status of the unskilled and skilled working class as well as among the lowly-educated. These findings prompt us to not only reject our first two hypotheses, but also the third expectation of systematic cross-country differences. The social status of the working class does not seem to

have evolved differently in Britain, Germany or the United States than in Norway, Sweden and Switzerland.

The only result that is in line with our expectations stems from the intergenerational status comparison. In 2009, working-class respondents evaluated their status less favourably relative to their fathers' status than working-class respondents had done twenty years earlier. Over time, workers have thus come to perceive less status mobility – either because their own status has fallen or their fathers' status has risen over time (as younger cohorts of fathers possibly benefitted from the rapid occupational upgrading of the post-war decades). Yet as we do not find any evidence for a decreasing trend in workers' life satisfaction over the last two decades, we remain cautious in over-interpreting the result of declining intergenerational status.

Nonetheless, these results throw doubt on the claim that workers have lost subjective status over the last decades (Gidron and Hall 2017, Hochschild 2016, Inglehart and Norris 2017), and they are also at odds with cross-sectional findings where respondents perceive their status as having fallen over time (Gest et al. 2018). Two reasons potentially explain this divergence. To begin with, nostalgic bias and the belief that the world was better in the past is deeply rooted in society (and skilfully exploited by the radical right), even if it lacks an empirical basis. To the extent that unskilled workers were already at the bottom of the status hierarchy in the 1980s, the possibility of further falling down the status ladder may have been limited. Moreover, the observed stability in subjective status is fully consistent with reference group theory and the idea that individuals compare their status to people similar to them (Evans et al. 1992). If members of the working class jointly travelled downwards in the socio-economic hierarchy, these shifts may not have left any marks on their subjective status.

What do our findings mean for the narrative that sees workers' falling social status as a prominent driver behind the rise of the radical right? The narrative's micro-foundations seem shaky because the working class reported similarly low levels of social status in the 1990s,

2000s and 2010s. Recent research suggests that perhaps the main change in social status over time has not taken place at the level of class, but at the level of place (D. Adler & Ansell, 2020; Carreras et al., 2019; Jennings & Stoker, 2019; Rodríguez-Pose, 2018). Rather than focussing on workers left behind, an alternative explanation may lie in communities left behind. As deindustrialization and globalization have concentrated opportunities and resources in a few thriving cities, residents in peripheral towns, declining industrial areas and rural regions may feel increasingly marginalized as a community. It may then be this collective loss of social status and broadly shared discontent at the geographical level that provide fertile ground for the radical right.

Another promising explanation of the rising radical right shifts the analytical lens from the demand-side of voters to the supply-side of parties. Over the last three decades, social democratic parties have intensified their courting of the salaried middle classes. As they moved towards the centre on economic issues, they reduced political conflict over the economy with conservative parties (Kriesi et al., 2008; Rennwald & Evans, 2014). As a consequence, political differences over culture – notably migration and supra-national integration – have become much more salient. The radical right has been successful in exploiting this growing cultural conflict in order to attract workers who felt orphaned by the social-democratic move towards the centre (H.-G. Betz & Meret, 2012; Oesch & Rennwald, 2018). Of course, these accounts remain speculative. Yet our results suggest that we may need another explanation for the radical right's rise than the status loss of the working class.

3. Subjective social status in places that don't matter. Geographical inequalities in France and Germany[15]

3.1. Introduction

The past few years have seen renewed interest in the topic of spatial inequalities within countries and their social and political consequences (e.g., Adler & Ansell, 2020; Jennings & Stoker, 2019; Rodríguez-Pose, 2018). While social inequalities between the top earners and the bottom earners have risen in recent decades in almost all parts of the world (Piketty, 2019), spatial differences also seem to have widened in Western countries. In half of the OECD countries, GDP inequalities between regions have constantly increased since 2000, and in the whole OECD group the top 20% of regions now display, on average, twice the GDP per capita of the bottom 20% of regions in the same country[16] (OECD, 2020b).

Spatial differences within countries have been driving forces of the recent success of populist and radical right parties. An analysis of European countries at the district level shows that the populist vote is concentrated in areas characterised by local economic and industrial decline, lower employment rates and less educated populations (Dijkstra et al., 2020). Donald Trump's electoral success was largely due to support that emerged among similar populations in rural areas (Cramer, 2016; Monnat & Brown, 2017).[17] In the United Kingdom, the Brexit vote in 2016 revealed a country divided between pro-European metropolitan areas, and towns and rural zones claiming national sovereignty (Jennings & Stoker, 2019).

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[15] Chapter published as:
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https://doi.org/10.1080/14616696.2022.2163276

[16] The 2020 OECD regional report refers to 2018 data.

[17] Detailed maps of 2020 US presidential election can be found on The New York Times website: https://www.nytimes.com/interactive/2021/upshot/2020-election-map.html.

Our analysis originates from these considerations and aims to provide new evidence about spatial inequalities within countries and the so-called "geography of discontent" (Dijkstra et al., 2020). The growing differences between the dynamic cores embedded in the global economy and the stagnating peripheries have generated growing discontent in the "places that do not matter", where people feel neglected by national politics (Rodríguez-Pose, 2018). Our study wishes to contribute to the description of the "geography of discontent" by analysing spatial differences and trends within countries in terms of subjective social status. This is a measure of the hierarchical position people believe they occupy in society and is particularly useful for studying political discontent because it reflects individuals' perceptions of their social standing. Our article thus shares in the renewed interest in subjective social status (Gidron & Hall, 2017; Gest et al., (2018); Engler & Weisstanner, (2020); Nolan & Weisstanner, 2020; Oesch & Vigna, 2021).

We study geographical inequalities of subjective status over the previous two decades and aim to answer two questions: how does subjective status differ between regions, notably between the urban centres and rural regions, and how have these potential differences evolved over the past two decades? We analyse the differences in subjective social status between areas and their trends, both at the mean level and controlling for objective individual socioeconomic factors that are heterogeneously distributed across space.

We focus on France and Germany, the two most populous countries in the European Union, characterised by different degrees of centralisation. In France, spatial inequalities have long been at the centre of the political debate, and some events as the spread of the Yellow Vests movement in small towns and rural areas have recently brought them to the fore. Germany, instead, has been characterised by a history of territorial division and still struggles for levelling West-East differences. Geographical inequalities in Germany have recently been made visible by the uneven distribution of the support for the far-right party Alternative for Germany (AFD)

in the last federal elections of 2021[18]. We use individual-level data from the International Social Survey Programme (ISSP) from the periods 1999-2017 for France and 1992-2021 for Germany.

In what follows, we first clarify the concept of subjective social status. After presenting our first two hypotheses on spatial inequalities of subjective status in Western countries, we discuss the specificities of our case studies and present some additional hypotheses on regional inequalities in France and in Germany. We then present the data and methods and show the main findings, confirming the relevance of spatial inequalities in the two countries but casting doubt on their recent increase. We conclude with a discussion of these results and their implications.

3.2. The concept of subjective social status

According to Weber (1978 [1922]), social status depends on a symbolic hierarchy of social recognition. It reflects the degree of social honour that is accorded to people (Chan & Goldthorpe, 2007). This characteristic differentiates the concept of social status from the concept of social class, which is based on the position people occupy in the labour market and thus has an objective basis.

Although social status is correlated with the objective position of individuals, namely, their education, employment and income (Andersson, 2015; Evans & Kelley, 2004; Lindberg et al., 2021), it is not limited to it. Social status constitutes a specific dimension of inequalities based on differences in esteem and respect.

Subjective social status is often measured by asking people to place themselves on a ladder representing society. This subjective response about where an individual feels he or she

[18] For a map of the unequal geographic distribution of the AFD votes in Germany, see Financial Times, 2021: https://www.ft.com/content/501b1f94-67e7-4418-b2e9-eee6022bb12c [accessed on 17. 9. 2022].

stands in relation to others captures the social recognition he or she believes is warranted (Gidron & Hall, 2017). The relevance of subjective social status in the study of inequalities is confirmed by its correlation to socially stratified outcomes. Often used in research on health outcomes, subjective social status has been shown to be positively correlated with several causes of mortality (Demakakos et al., 2018) and with both physical and mental health (Präg, 2020; Scott et al., 2014), even after controlling for several objective indicators of socioeconomic status.

Subjective social status has been recently used by scholars interested in analysing status dynamics and their consequences on political behaviour, especially exploring the link between status anxiety and the electoral success of radical right populist parties or the Brexit vote (Gest et al., 2018; Gidron & Hall, 2017, 2019). As subjective social status depends on people's perception of how much recognition they receive from society, it also serves as an indicator of people's feeling "left behind" by their society, a feeling populist parties are often said to appeal to. To the extent that subjective status is related to components of people's objective condition as well as their subjective perception, it has been considered as capturing both economic and cultural aspects of political discontent (Gidron & Hall, 2017).

In their influential article, Gidron and Hall (2017) analysed the evolution of the subjective social status of men and women without college educations relative to that of all men and women. They adopt a descriptive approach and compare the relative subjective status of people without college education over several points in time, finding that this specific portion of the population has become increasingly frustrated about their place in society. Even if subsequent analyses on time trends have cast doubt on the hypothesis of the status downgrading of the working class in most Western countries (Oesch & Vigna, 2021), Gidron and Hall's results are in line with the argument of status anxiety that other scholars have made. Gest points out "the emerging sense of displacement" of working-class communities (Gest, 2016b, p. 127), and

Arlie Hochschild (2016) shows in her ethnography that white working-class men in the US feel that their status has been downgraded by the elite and is threatened by the rising status of minorities.

At the same time, another argument underlines the importance of the community dimension, suggesting that status loss was more heavily concentrated in specific areas within countries. The deindustrialisation and the rise of the service economy have led to the concentration of economic activities in large and dynamic cities, while towns and rural areas are often characterised by the lack of opportunity. It is people living in declining places that would feel increasingly left behind by the global economy and national political elites (Rodríguez-Pose, 2018).

Previous studies on the link between place-based factors and subjective social status are rare. The reference group theory suggests that people tend to compare their social position with colleagues, family and friends and thus people who are similar to them. As a consequence, they generally see themselves as being in the middle of the social hierarchy (e.g. Evans et al., 1992; Merton & Kitt, 1950). This would mean that economic changes at the community level do not have much influence on individual perceptions. Nevertheless, Evans & Kelly (2004) showed that national indicators like wealth and the unemployment rate have a significant impact on individual subjective social status. Moreover, comparative research has shown that high levels of income or education inequalities have a stigmatisation effect on people at the bottom of the social hierarchy, who tend to have a lower subjective social status in more unequal societies – but the reverse is not true for people at the top of the social hierarchy (Lindemann & Saar, 2014). If this mechanism holds not only between countries, but also within countries at the between-regions level, people living in declining areas should show lower subjective social status when objective spatial inequalities are larger, making regional differences in subjective positions also particularly large.

3.3. Rising spatial inequalities in the West

Although we observe a trend of economic convergence between countries, economic inequalities seem to be increasing within countries and between regions within a given country (Eurofound, 2019). These spatial changes in the Western world have their origins in the rise of the service economy and the decline of the ancient industrial poles. Moretti (2012) shows, for the US how deindustrialisation has resulted in a stark decline of the old manufacturing centres. At the same time, the human capital externalities of many service activities led to increasingly concentrated economic growth in a few globalised poles such as Austin, Boston, New York, San Francisco and San José or Seattle, contributing to a geographical "Great Divergence". Some exurb and minor urban centres as Youngstown, Michigan Coty or Toledo in the Rust Belt of the US, have become "post-traumatic cities": they have lost their industrial basis, leaving their inhabitants disempowered, marginalised and nostalgic about the past (Gest, 2016b).

The agglomeration effect of service activities also contributed to the success of European metropolitan centres, especially capital cities such as London, Dublin or Warsaw, while many regions became increasingly depopulated, namely, rural ones (Hurley et al., 2019). The result is an increasing dualization between core and periphery. A new social divide may thus emerge that divides citizens who live in cities strongly benefitting from global economic growth and citizens who live in suburban communities, postindustrial towns and the urban periphery (Jennings & Stoker, 2017). In terms of people's attitudes, places that have experienced economic decline seem to have become more closed and communitarian, while dynamic cities enjoying strong economic growth have become more liberal and cosmopolitan (Jennings & Stoker, 2019).

All these elements suggest that within-country inequalities may have become increasingly important to understanding social change in Western countries. In particular, the growing concentration of economic activities in large cities may have depressed the subjective social

position of people living in declining areas, which are former industrial cities and rural areas. To illustrate this claim, we can recall the French protest movement of the Gilets Jaunes (Yellow Vests), that took to the streets in 2018 primarily in the countryside and small cities. Rising fuel prices were the casus belli, and mobility was the issue around which the movement primarily rallied. The physical distance itself between the working class, disproportionately living in the countryside and small towns, and the elite living in the large cities was singled out as having played a role in building solidarity inside the movement (Jetten et al., 2020).

Our first two hypotheses, thus, are the following:

Hypothesis 1: Subjective social status in France and Germany is higher in large cities than in suburbs, small towns or rural areas.

Hypothesis 2: These spatial inequalities in subjective social status have increased over the past two decades.

3.4. Regional inequalities in France and Germany

While the increasing concentration of resources in large cities seems to be the case for most Western countries in recent decades, specific geographical characteristics differentiate France and Germany.

First of all, the two countries have different levels of centralisation, suggesting different configurations of the centre-periphery inequalities. Some data can give an idea of those differences. France is a centralised state, with 80% of total government expenditures managed at the central level. In contrast, Germany is a federal republic with substantive regional autonomy and only 60% of total government expenditures accruing to the central government, 23% going to the federate states, and the rest to the municipal level[19]. Moreover, with a

[19] These data are from 2020 and are available on the OECD Fiscal Decentralisation Database: https://www.oecd.org/tax/federalism/fiscal-decentralisation-database/.

population of almost 13 million, the metropolitan area of Paris accounts for almost 20% of the entire French population, and only one other large metropolitan area accounts for more than 2 million inhabitants: Lyon. In contrast, Germany has seven large metropolitan areas with more than 2 million inhabitants, and only 6% of the national population live in Berlin, the largest one[20].

France thus is a centralised country hierarchically organised around a predominant centre, Paris, with few other important cities, while Germany appears more like a network of dynamic cities. These differences should also be visible in the spatial disparities in subjective social status in the two countries: inequalities should be marked in France, especially between the capital region and the other areas of the country, while no specific city or region is expected to prevail in Germany.

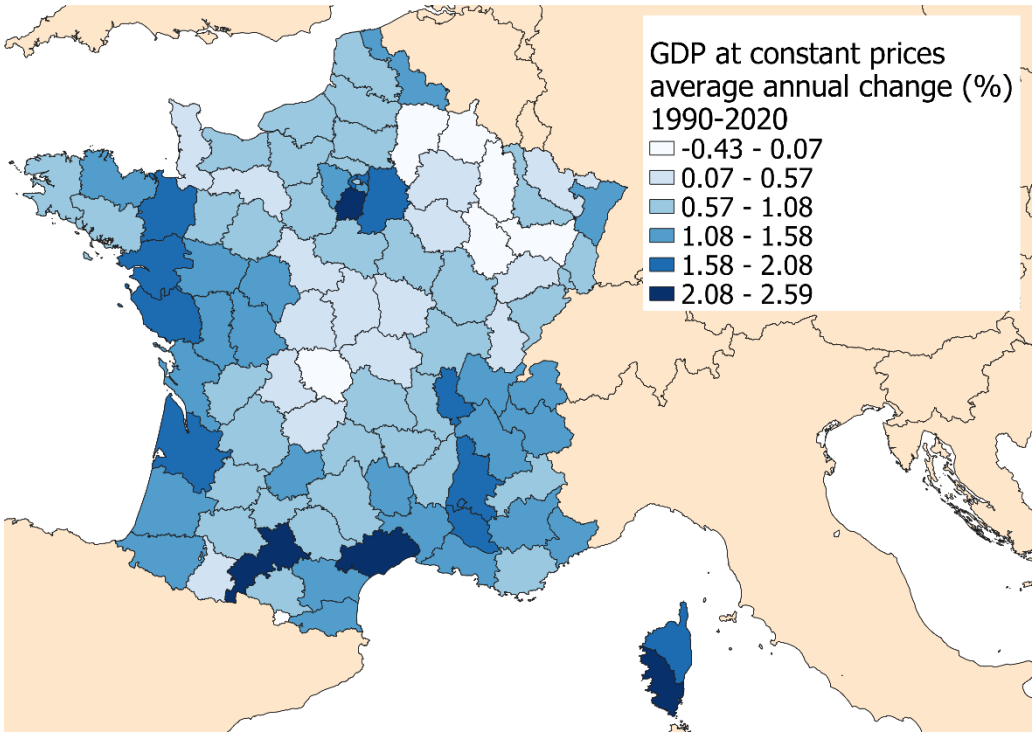
The two countries also have two very different histories of spatial inequalities. The problem of spatial inequalities is not new in the French public debate. In 1947, the French geographer Jean-François Gravier (1947) published a book titled Paris et le désert français [Paris and the French desert], denouncing the large concentration of resources in the capital. This work constituted a reference for French territorial policies for several decades. The Interministerial Delegation of Land Planning and Regional Attractiveness (DATAR) was created in 1964 and immediately began work on reforms that were first called "regionalisation" and then "decentralisation" (Bodiguel, 2006).

Even if the concentration of industrial activities decreased somewhat over the past century (Bonnet et al., 2021), the economic inequalities between the region of Paris and the rest of the country seem to persist. The census in 2008 revealed that the region of Ile-de-France, which

[20] These data refer to 2018 for France and to 2020 for Germany, and they are available on the OECD statistical database: https://stats.oecd.org/Index.aspx?Datasetcode=CITIES#.

only corresponds to 2% of the national territory, accounts for 29% of the GDP, with the average salary being 28% higher than the national mean (Lafourcade, 2012).

Figure 3.1. Average annual percentage change in GDP in France by department during period 1990-2020



Source: European Commission, ARDECO database.
https://knowledge4policy.ec.europa.eu/territorial/ardeco-online_en

These spatial inequalities seem to persist over time and even increase. The map in figure 3.1 show the average percentage change in GDP in each department between 1990 and 2020. We see that the most dynamic areas are around Paris, in the South and South-East - Haute-Garonne, Hérault, Corse, Rhône, Drôme and Vaucluse - and in the Atlantic coast, notably in Gironde, Vendée, Loire-Atlantique and Ille-et-Vilaine. France's "empty diagonal", identified in the portion of lands going from the southwestern department of the Landes to the northeastern department of the Meuse, traditionally described as a nondynamic and sparsely populated area, seems to further lose weight, and this is true even from the demographic point of view (Oliveau & Doignon, 2016). Currently, Lyon, Lille, Bordeaux, Nantes, Toulouse, Marseille/Aix-de-

Provence and Grenoble are the only poles alongside Paris where intercompany services and research activities are concentrated, while Paris remains the primary centre for finance and culture. New fractures would have emerged between the globalised metropolises and what has been called peripheral France (France périférique) (Guilluy, 2015).

The recent political events further brought the idea of a divided country to the fore. The 2022 presidential election revealed great spatial differences. During the first round of balloting, the radical right party, Marine Le Pen's then-called Front National, obtained more than 30% of the votes in several provinces in the northeast and southern parts of the country, while her score was less than 6% in the city of Paris[21].

These arguments lead us to suppose that spatial inequalities in France are deeply rooted, both from an objective point of view and in the perception of people. Differences between regions seem to have increased during recent decades due to structural changes in the national economy. This leads us to formulate the following hypotheses for France:

Hypothesis 3: Subjective social status is higher in the departments forming the urban area of Paris, in the department of Marseille and in the one of Lyon - the three largest metropolitan areas - than in the other French departments, and it is higher in the capital region than in all the other regions.

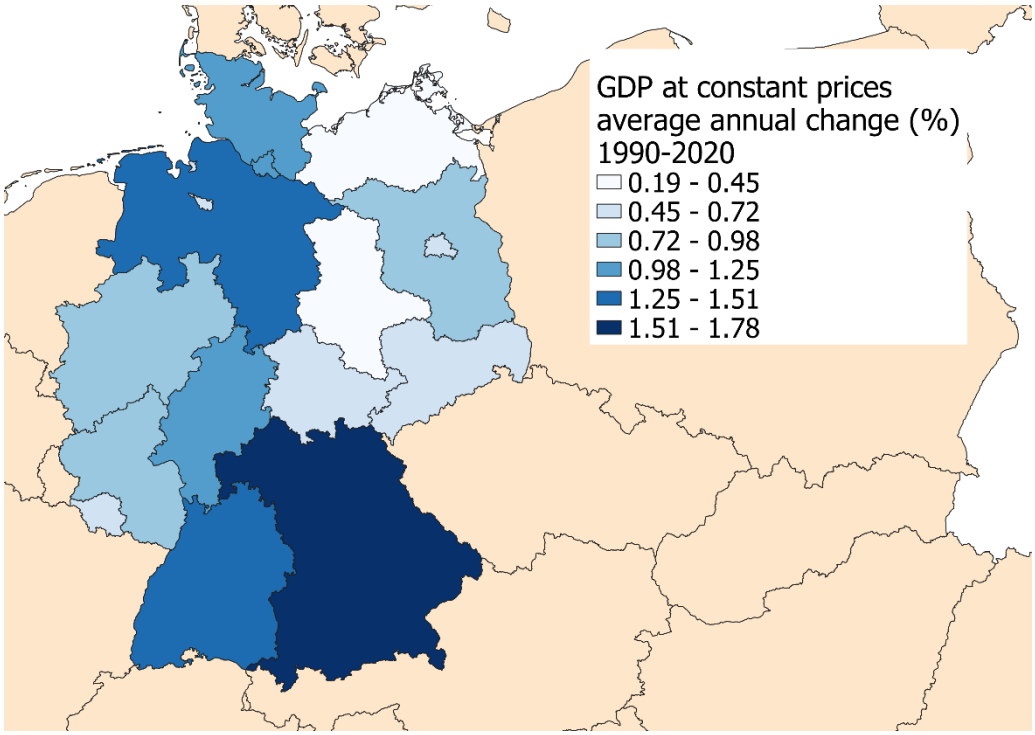
Hypothesis 4: These spatial inequalities in subjective social status have increased over the past two decades.

[21] For a map of the unequal geographic distribution of the votes for the Front National in the 2022 French presidential election, see Public Sénat, 2022: https://www.publicsenat.fr/article/politique/presidentielle-2022-la-carte-interactive-des-resultats-du-premier-tour-201841 [accessed on 17. 9. 2022].

Having experienced 40 years of separation before the reunification in 1990, Germany has a recent history of division. At the moment of reunification, the East German economy was weaker, and wages and earnings were substantially lower than in West Germany (Fuchs-Schündeln et al., 2010). The following period consisted of the convergence of the eastern political and economic institutions towards the western ones. In an effort to reduce the economic disparities between the two regions, large financial transfers from West Germany to East Germany were made. Nevertheless, the gap proved hard to close. In 2012, almost 25 years after reunification, the average net wealth of West German residents was still more than twice that of East German residents (Grabka & Westermeier, 2014). Germany now includes some of the richest metropolitan areas of all OECD countries, notably Munich, Dusseldorf, Frankfurt, Stuttgart and Cologne, but they are all situated in the former West Germany (OECD, 2019).

These strong objective economic differences are also visible in subjective indicators. While we are not aware of any studies on subjective social status, research on life satisfaction has shown that in 1991, the difference in mean life satisfaction between East and West was 1.3 points on a scale from 0 to 10. This differential decreased to less than 0.6 points in the following years, but did not disappear and even increased again after 2000 (Easterlin & Plagnol, 2008). We then expect subjective status gap to have also decreased over the last decades but to still be visible nowadays.

Figure 3.2. Average annual percentage change in GDP in Germany by department during period 1990-2020



Source: European Commission, ARDECO database.
https://knowledge4policy.ec.europa.eu/territorial/ardeco-online_en

Beyond the East–West divide, strong differences also exist between the single federal states. In terms of income and economic dynamism, the country is composed of a small group of leading states, with the southern states at the forefront (Kokocin´ska & Puziak, 2020). The map in figure 3.2 illustrates this claim by showing the average annual GDP change for each state 1990-2020. The southwestern states have been much more dynamic compared to the others. While Bayern and Niedersachsen saw an average annual GDP change of 1.78 % and 1.41 % respectively, this was only 0.19 % in Sachsen-Anhalt. District-level data help us to further illustrate those geographical differences. In 2016, for example, the average disposable income in Starnberg, a district of Bavaria, was almost 35,000 euros, while the mean for all German districts was only 21,700 euros. In 2019, while the Bavarian districts of Eichstatt and

Donau-Ries had an unemployment rate of less than 2%, the north-western districts of Bremerhaven and Gelsenkirchen struggled with 13% (Franz et al., 2019).

Not surprisingly, these inequalities are also visible in the recent electoral results. The party of radical right Alternative for Germany (AFD) gained vast support in economically vulnerable and demographically old districts, mainly in the eastern part of the country, while the Green Party was disproportionately successful in economically thriving and younger places such as München, Stuttgart and Hamburg (Franz et al., 2019).

Our additional hypotheses for Germany, thus, are the following:

Hypothesis 5: Subjective social status is higher in the western states than in the eastern ones and, within West Germany, it is higher in the southern states than in the northern-western ones.

Hypothesis 6: Spatial inequalities between East and West Germany have partially declined in the past two decades but remain important today.

3.5. Data, measures and method

Data

We use individual-level data from the ISSP. Germany has been part of the programme since its foundation, and France joined in 1996. At the beginning, the question on subjective social status was only included in the modules about inequalities, but since 2002, it has been asked every year. Unfortunately, some geographical variables changed over time. Nevertheless, in our analysis, we can use up to 16 rounds for some models for France (from 1999 to 2017[22])

[22] A first release of 2018 data for France was available at the moment of the review process, but the sample is small and the geographical variables do not seem reliable, leading to a sharp and sudden increase in subjective status levels across all places.

and up to 19 rounds for Germany (from 1992 to 2021)[23]. References to all datasets including DOIs are available in the Appendix B. The annual samples vary from a minimum of 905 respondents (Germany 1999) to a maximum of 3,117 observations (Germany 2012). Table B.1 in the Appendix B shows the size of each country-year sample.

We also replicate our analyses on data from the European Social Survey (ESS), the only other large international survey providing a measure of subjective social status. This variable is available in round 6, which was run in 2012. While we cannot reproduce trends over time with these data, the ESS allows us to replicate the analysis on levels[24].

Measures

Our analysis is set at the individual level, and our dependent variable is subjective social status. It is measured with the MacArthur scale, which asks individuals to place themselves on a 10-point social ladder representing society. This single-item measure captures individuals' perceived rank in the social hierarchy (Gidron & Hall, 2017). The question is worded as follows: "In our society there are groups that tend to be towards the top and groups that tend to be towards the bottom. Where would you put yourself on a scale from the bottom to the top?" Respondents are then shown the figure of a ladder going from 1 to 10[25].

Our key independent variables are geographic indicators that split the territory in different ways. We build four different geographical variables for France and three for Germany to verify each of our hypotheses and to make our results as robust as possible.

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[23] Our analysis attributes each ISSP round to the year when the survey was effectively fielded rather than the official year of a module. In Germany, the ISSP modules were administered in pairs every two years (ex. The 2003 and the 2004 modules were both administrated in 2004) and the 2020 module was administrated in 2021.

[24] The replication package for data preparation and for reproducing all analyses in Stata 17 is available: DOI 10.17605/OSF.IO/E28ZH

[25] The corresponding question in round 6 of the European Social Survey, which we use for robustness analyses, consists of 11 categories, scored from 0 to 10.

For France, statistical division NUTS level 3 (corresponding to departments) allows us to build three geographical variables. A first variable separates the three largest metropolitan centres — the department of Paris (with postal code 75) and all the departments of its first and second cluster (77, 78, 91, 92, 93, 94, 95), the department of Lyon (69, Rhône) and the department of Marseille (13, Bouches du Rhône)[26] —from all the other departments. A second geographical variable groups the departments into six macro-regions: Île de France, Centre-Bassin Parisien, the northeastern region, the western region, Méditerannée-Pyrénées, and Auvergne-Rhône-Alpes. A third indicator separates the departments into three groups—predominantly urban, predominantly rural, intermediate—following the OECD categorisation (OCDE, 2013).

For Germany, NUTS is only distinguished at the aggregate level 1 in the ISSP. A first indicator thus separates the West-German states from the East-German states. These two macro-regions correspond to the areas belonging to the former Federal Republic of Germany and the German Democratic Republic, with the region of Berlin entirely categorised in the eastern area. Another indicator divides the country into three areas: Southwest-Germany (Baden-Württemberg and Bayern), Northwest-Germany (corresponding to all the other western states) and East Germany.

Finally, we use an auto-assessed item available in ISSP that asks people in which kind of place they live. Our typology for France and Germany consists of four types of places: large cities, outskirts of large cities, small towns, and rural areas (the last category merges country villages and farms or houses in the countryside). The main limit of this variable is that it is

[26] The departments of Rhône and Bouches du Rhône include some municipalities that cannot be considered as part of the urban area of the departmental capital, as they are quite distant and prevalently rural. Unfortunately, no information on municipalities was available to overcome this limitation.

available nly starting from 2005 for France and from 2002 for Germany[27]. Tables B.2 (France) and B.3 (Germany) in the Appendix B provide descriptive statistics of all geographical indicators.

Method

For each country, we first describe the evolution of subjective social status in different places over time. We weight our individual observations using the probability weights provided by the ISSP. Moreover, we also use locally weighted scatterplot smoothing (LOWESS) to reduce short-term fluctuations due to sampling errors and to highlight long-term trends. In this way, each data point is adjusted considering the adjacent points, with neighbouring points getting higher weights than distant ones.

We then estimate multivariate linear models, which allow us to compare similar profiles of people across different places. The models are defined by the following equation:

$$y_i = \beta_1 + \beta_2 \text{geovar}_i + \beta_3 \text{year}_i + \beta_4 \text{geovar}_i * \text{year}_i + \beta_5 \text{controls}_i + \epsilon_i$$

Our dependent variable is subjective social status, while $geovar_i$ corresponds to one of our geographical variables. The interaction term $geovar_i * year_i$ accounts for the differential time trends in each type of place defined by the geographical variable used. Our controls include gender, age, whether people cohabitate with a partner, education and social class. These controls allow us to determine the correlation between the place where people live and their subjective social status, independent of their objective standing. Unfortunately, we could not include the

[27] The national sampling strategies do not guarantee the representativeness of each NUT sample with respects to its actual population. Nevertheless, we aggregated NUTS3 for France into larger macro-regions and, in the end, our analyses rely on sizable regional samples. As reported in tables A2 and A3 in the appendix, each round provides more than 100 observations in each category of all geographical indicators. Moreover, we estimate the trends based on many rounds for each country and not on sporadic points in time. These elements should reduce the concerns about the regional representativeness of the samples.

ethnic group or the migration status, as only poor data are available on this topic. For education, we recoded ISCED codes into three categories: tertiary education, secondary and post-upper-secondary education, and no more than compulsory education. For social class, we use a collapsed version of the Oesch class schema (Oesch, 2006), grouping occupations into four categories: the upper-middle class, the lower-middle class, small business owners and the working class[28]. Results are again weighted.

Further models were also run including income as an additional independent variable. Income cannot be considered a simple control variable, similar to class and education, as salaries from similar jobs strongly vary between places. We interpret income as a mediating variable between place and subjective social status. We use equivalent monthly household income, adjusted for inflation through the consumer price index based on the values of 2017[29].

3.6. Results: France

The map in Figure 3.3 presents the subjective social status for each French department averaged over the period 1999-2018 (see figure B.1 in the Appendix B for the map showing standard deviation in the same period). The thick black lines delimitate the borders of the six macroregions we use for our analysis. We can see that subjective status ranges from less than 4,5 points in Haute-Marne (4.11), Aveyron (4.43), in Indre (4.47) and in Orne (4.48), to 6.13 in the department of Paris. This map also shows the so-called "empty diagonal" going from the southwest to the northeast of the country, characterised by low levels of mean subjective social

[28] The upper-middle class includes large employers, managers and professionals; the lower-middle class is composed by semi-professionals, associate managers and technicians; the small business owners correspond to the so-called petite bourgeoisie; the working class includes both skilled and unskilled workers.

[29] We compute equivalent monthly household income based on the OECD modified scale which assigns the value of 1 to the household head, 0.5 to every additional adult and 0.3 to every child. In same cases in which it is not possible to disentangle adults and children, all the members of the household are assigned the value of 0.4.

status, while darker colours and higher social status are associated with the department of Paris, the departments of the Côte d'Azur including the cities of Marseille and Nice, the department of Lyon and a few others. Two maps in the Appendix B show the average subjective social status by department at the beginning of the studied period and at the end of it (figure B.2).

Figure 3.3. Mean subjective social status (on a scale from 1 to 10) in France by department during the period 1999-2017

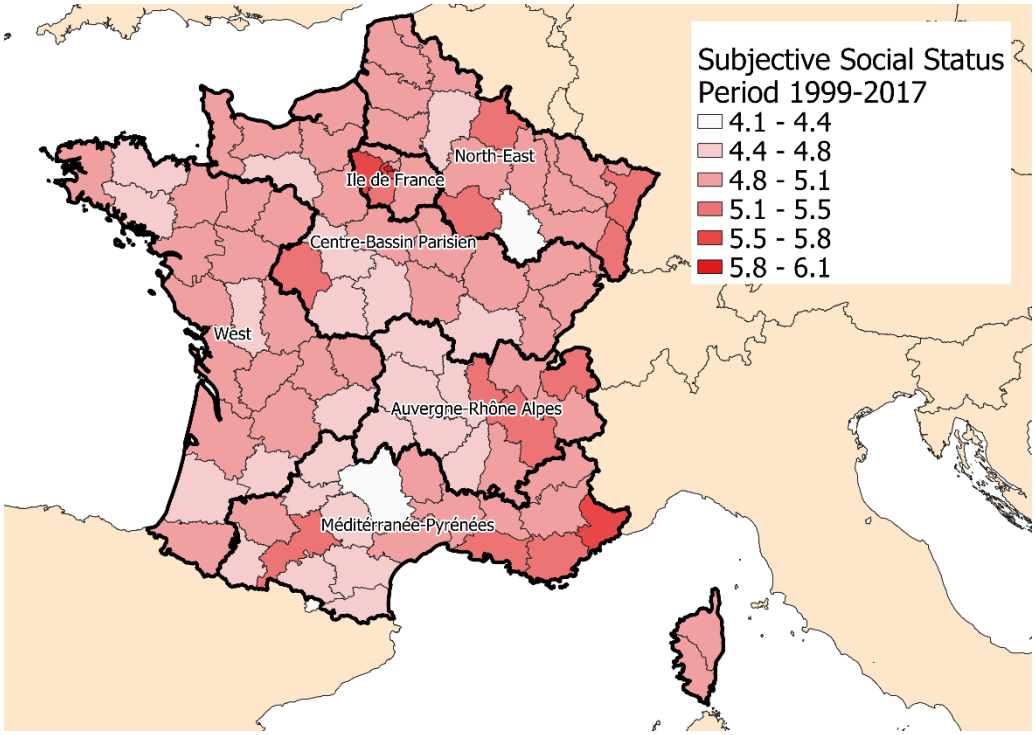


Figure 3.4 depicts more clearly the regional inequalities, as well as their trends over time. The descriptive trends are estimated through simple regression models that only include the interaction between each geographical indicator and time (and accounting for the available weights). Overall, we see that the average subjective social status slightly decreased in France during the studied period. The top-left plot illustrates the differences between the three largest urban areas – the departments of the urban areas of Paris as well as the departments of Lyon and Marseille -, and all the other departments. There is a large status difference between people living in the three main metropolitan centres and people living in the rest of the country.

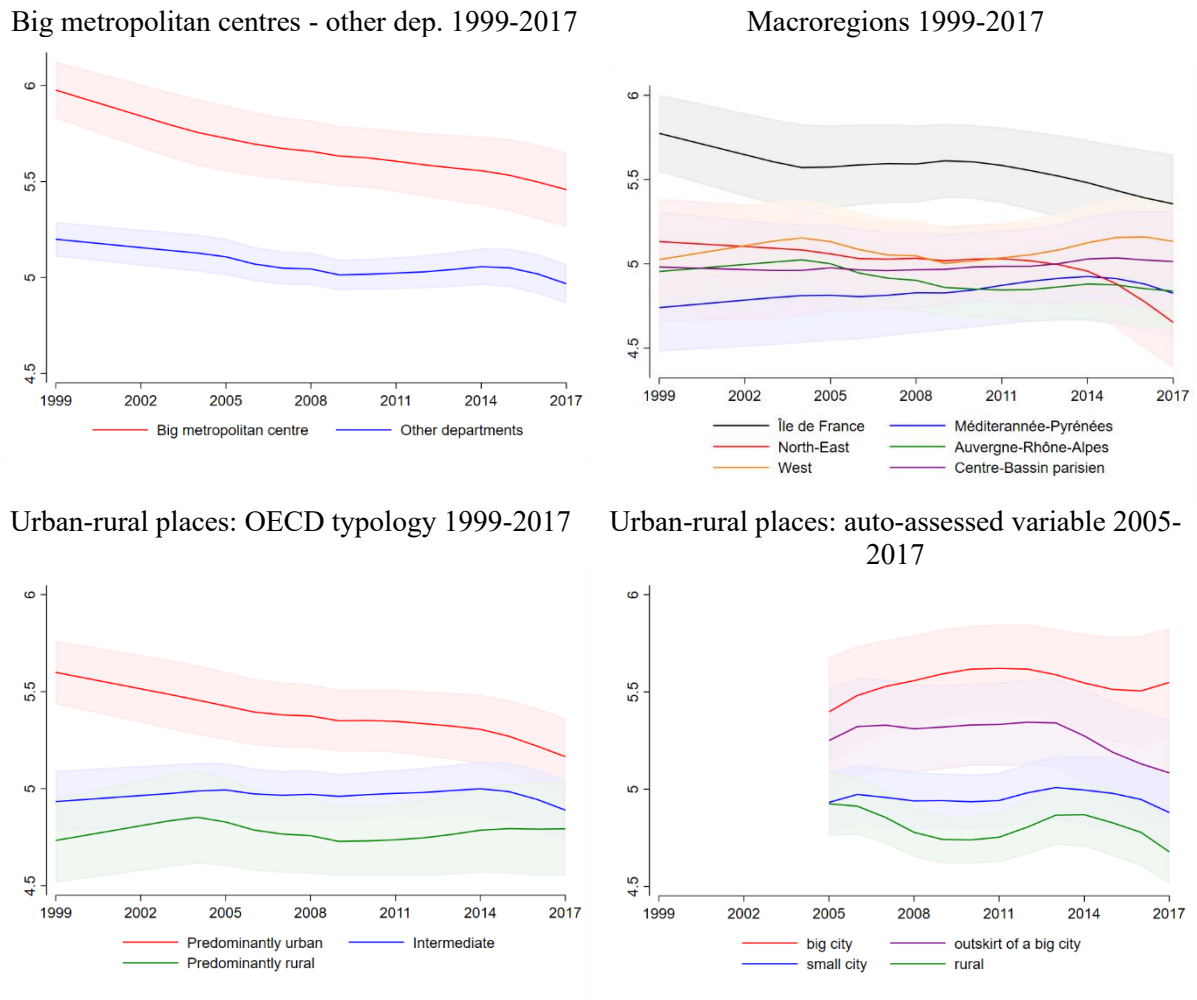
Nevertheless, subjective status decreased over the entire period in both groups of departments and the trend is no more negative for the second group (see table B.4 in the Appendix B for coefficients and significance tests), meaning that, overall, average social status did not decrease more in the "forgotten departments" than in the three main urban agglomerations. Similarly, the difference between the region of Paris (Île de France) and all the other regions is visible, but the status gap seems to decrease over the period between the capital region and almost all the other regions, and stayed stable between the capital region and the North-East (top-right plot of Figure 3.3). These results cast doubt on the argument of a decreasing status of people living in "peripheral France".

The last two plots of Figure 3.4 show how subjective social status evolved over time in France depending on a place's degree of urbanisation. The graph on the bottom left is based on the OECD typology referring to the degree of urbanisation of the departments, while the graph on the bottom right reports the results produced with the auto-assessed typology (2005-2017). Even if confidence intervals overlap a little, both graphs show a clear-cut ranking between the types of places: the higher the degree of urbanisation, the higher the average subjective social status. Moreover, the predominantly urban departments saw a stronger decrease in subjective status than the intermediate and predominantly rural departments. These results partially conflict with what we observe in the graph based on the auto-assessed urban-rural variable: the right-hand panel shows a slightly decreasing status for people living in the outskirts of large cities after 2013 and for people living in rural areas from 2006 to 2010 and, again, after 2014, while status remained constant in large and small cities.

These apparently contrasting results could be partly due to the fact that the predominantly urban departments contain both people living in cities and people living in the outskirts of large cities, and possibly only the status of the latter may have declined over the study period. Nevertheless, the comparison between these two graphs questions the declining subjective

status of rural residents: if people who define themselves as inhabitants of rural areas (approximately 37% of the national sample in France) seem to report a decline in status, this is not true if we include people living in rural departments according to the OECD categorisation (less than 20% of the national sample). This could mean that the auto-assessed variable is a more precise indication of the kind of place people live in or that we should not overinterpret the small changes over time as they may simply reflect trendless fluctuations.

Figure 3.4. Evolution of subjective social status (on a scale from 1 to 10) in France: differences between places with 95% confidence intervals.



We move on to multivariate models, where we control for gender, age, cohabitation status, education and social class. We run several linear models using the different geographical divides

as independent variables (for an overview of the regression results with period coefficients, see Table B.5 in the Appendix B).

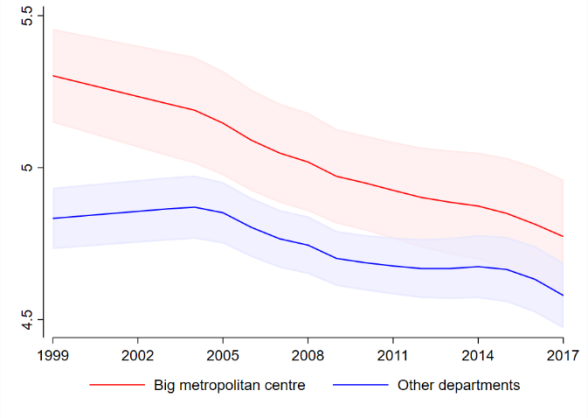
For an easier visualisation of the regression results, Figure 3.5 shows the predicted subjective social status for a man aged 40 with secondary level education, belonging to the working class and living in different places (the geographical indicators are presented in the same order of the descriptive results).[30] We can see that the differences between the type of places are clear, confirming our first two hypotheses.

However, according to our multivariate analyses, the gap between regions does not seem to have widened over the period under study: Figure 3.5 shows that the gap remained constant between the large metropolitan centres and the other departments and even decreased between regions and between urban and rural departments. The interaction terms modelling relative time-trends of subjective status in those areas confirm these results (see table B.5 in the Appendix B). Only according to the auto-assessed variable does subjective social status seem to have decreased slightly more on the outskirts and in small cities and rural places than in large cities. An additional negative trend is particularly visible in rural places from 2006 to 2011 and on the outskirts of large cities after 2013. Nevertheless, these fluctuations are relatively small and cannot be considered a clear result. Overall, there is no clear increase in the status differences between the types of places, as only one of our four variables would suggest a possible increase in status inequalities, while the others suggest an appeasement.

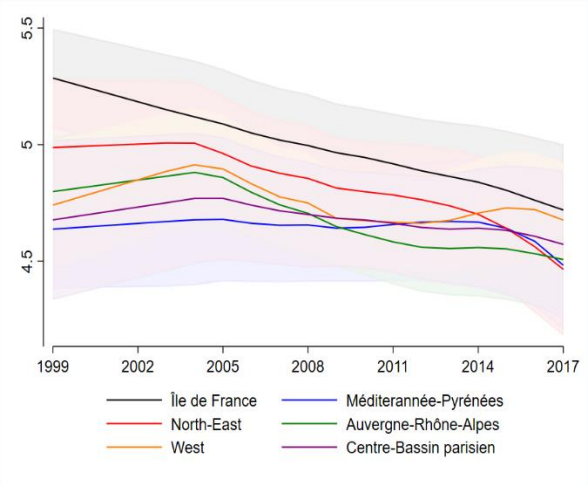
[30] As in the previous plots, the estimates were smoothed locally to better illustrate real trends and get rid of trendless fluctuations.

Figure 3.5. Evolution of predicted subjective social status (on a scale from 1 to 10) and 95% confidence intervals in France for a man aged 40 belonging to the working class, depending on his place of residence.

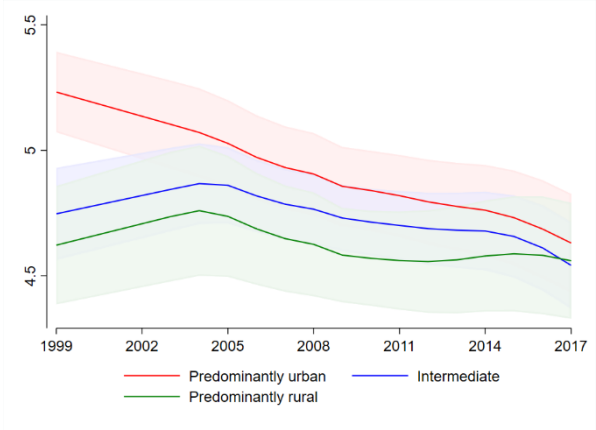
Big metropolitan centres - other dep. 1999-2017



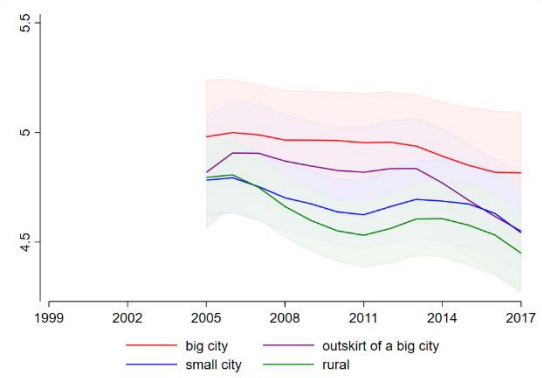
Macroregions 1999-2017



Urban-rural places: OECD typology 1999-2017



Urban-rural places: auto-assessed variable 2005-2017

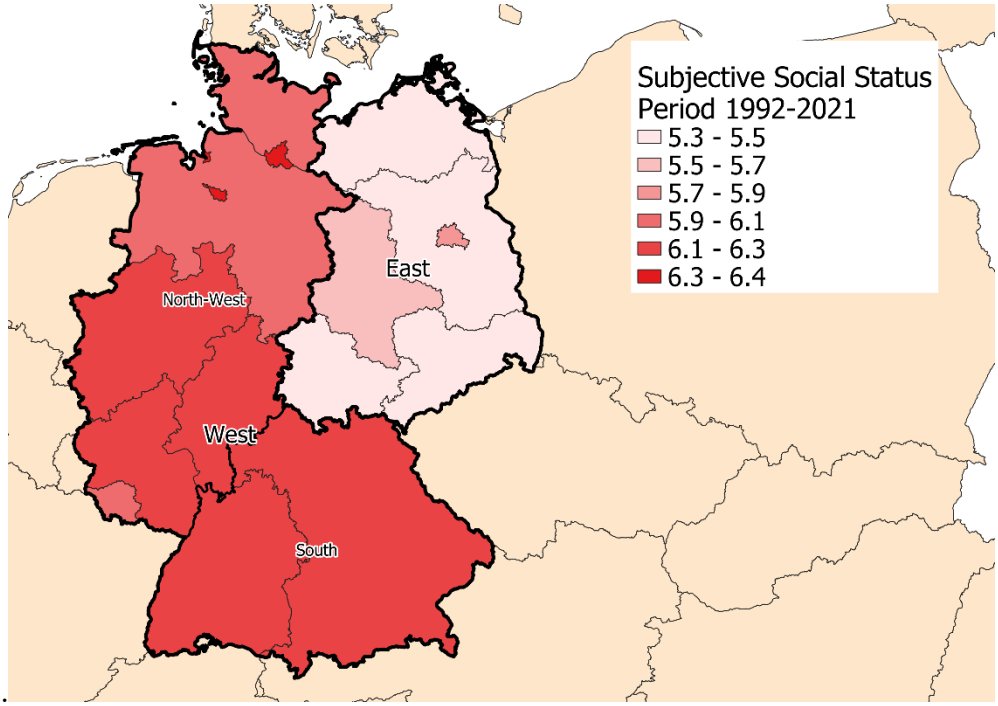


We test status differences between regions and by degree of urbanisation by reproducing our analysis with data from round six of the European Social Survey (see Table B6 in the Appendix B for the regression results). Even if subjective status differences are generally smaller in this survey, these analyses confirm that, in 2012, people living in the capital region had a higher subjective status than people living in almost all the other regions (with the exception of Centre-Bassin Parisien). The hierarchy between large cities, outskirts, small cities and rural areas is also confirmed by this robustness test.

We further investigate the link between place and subjective social status by running the same models adding household income as a further control variable (see Table B.7 in the Appendix B for the regression results). We interpret income as a mediator between the place where people live and their subjective social status, as both earnings and prices vary across places. The results show that individual income effectively mediates a part of the association between places and subjective status, but another part of the story remains unexplained.

3.7. Results: Germany

Figure 3.6. Mean subjective social status (on a scale from 1 to 10) in Germany by state during the period 1992-2021



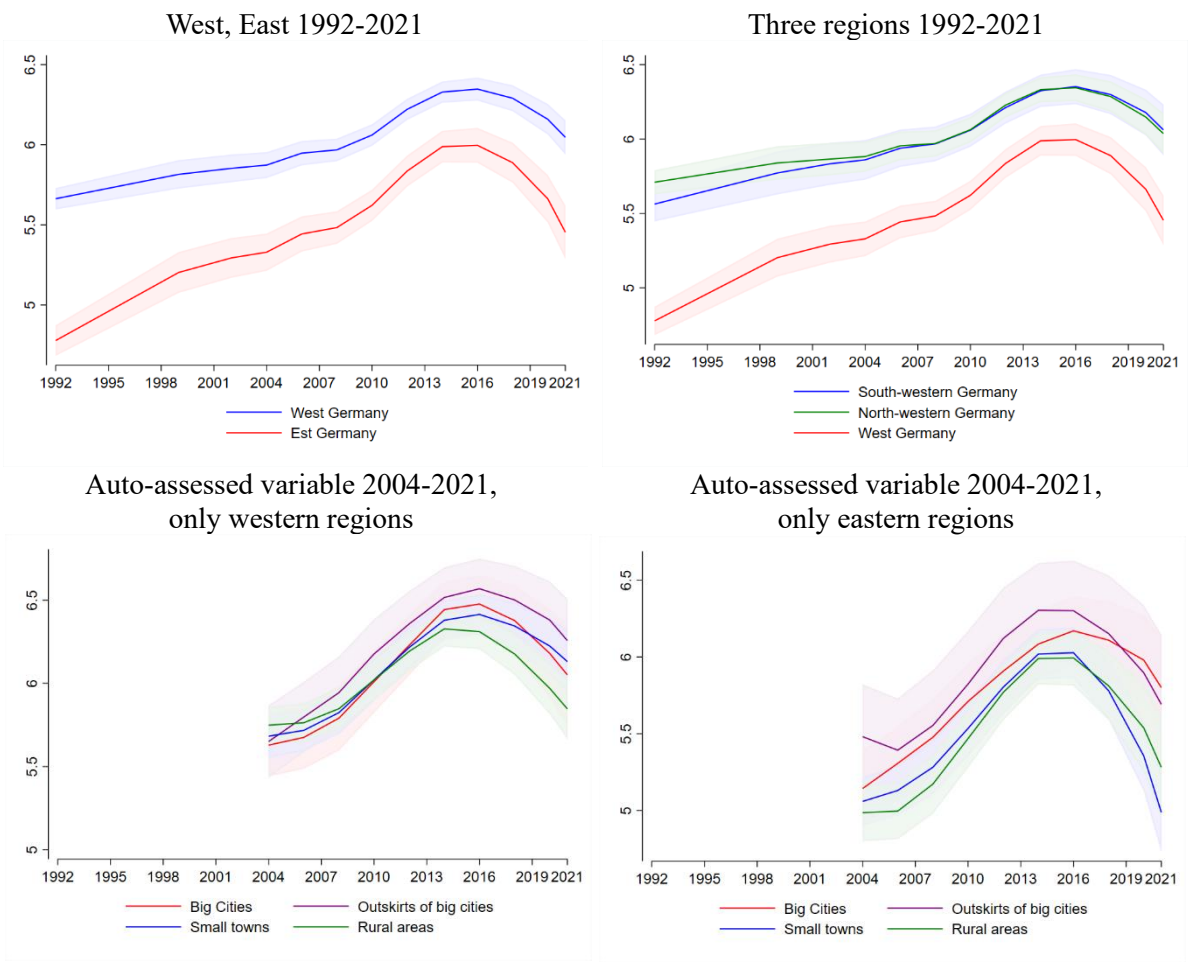
The map in Figure 3.6 shows how subjective social status varies across the states in Germany, averaged over the period 1992-2021. There is a clear difference between the former eastern states and the western ones. Eastern states also show higher level of variance in subjective social status compared to the western ones (see figure B.3 in the Appendix B). And,

comparing the same map in the 90' and at the end of the 2010s, it is evident that subjective status has increased in the entire country over time (figure B.4 in the Appendix B).

The top plots of Figure 3.7 allow us to better compare the evolution of subjective social status over time in West and East Germany (on the left) and between southern, northwestern and eastern Germany (on the right). Those are descriptive results. In all parts of the country subjective social status increased between 1992 and 2016 and decreased afterwards. The difference between the former western states and the eastern ones is evident, corresponding to almost 1 point on the 1-10 scale in 1992. As expected, this gap decreases over time, and in 2014 it corresponds to less than 0.5 points, staying stable thereafter. The significance test of periods interaction terms confirms that subjective status increased more rapidly in the East Germany than West Germany (see table B.8 in the Appendix B for regression results). However, contrary to our hypothesis, we do not observe any significant differences between the southern and north-western states. The east-west divide seems to be the only significant difference in terms of social status.

The two bottom plots in Figure 3.7 show how subjective social status evolved over time in Germany depending on a place's degree of urbanisation declared by the respondents. The differences between the kinds of places are smaller than what we observe in France and not statistically significant. Surprisingly, the ranking between the four types of places is also different. Subjective social status increased in all kinds of places from 2004 to 2014, and only people living on the outskirts of large cities showed systematically higher values of subjective status than the others. Comparing West and East Germany, we see that the differences between the curbs are slightly larger in eastern states than in western states.

Figure 3.7. Evolution of subjective social status (on a scale from 1 to 10) in Germany: differences between places with 95% confidence intervals.

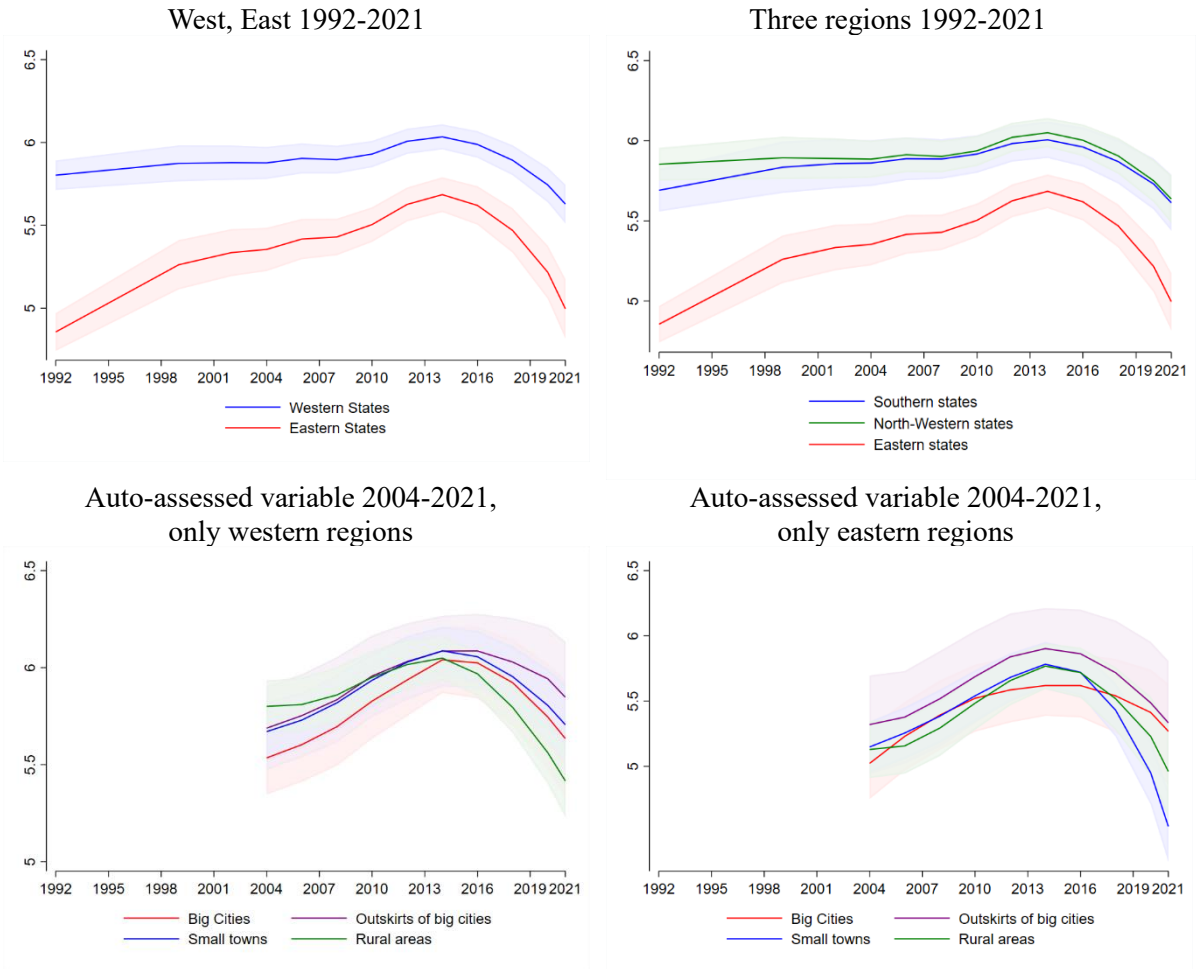


The multivariate regression results confirm the same large difference between eastern and western states. Even when controlling for gender, age, cohabitation status, education and social class, there is an average difference of 0.5 points between the citizens of the two parts of the country (see Table B.9 in the Appendix B for the regression results). Likewise, our robustness test on the ESS confirms the salience of the east-west divide, with a 0.6 points difference between East and West Germany in 2012 (see Table B.10 in the Appendix B).

When running multivariate models with household income, we observe that this variable mediates part of the east-west difference in subjective social status. However, a sizeable difference of 0.4 points is not explained by individual income differences (see Table B.11 in the Appendix B).

The multivariate analyses of trends confirm that the gap between the east and west has continuously decreased over the decades (and that, contrary to our expectations, no higher subjective social status is associated with living in the southern states compared to the northern ones. The top plots in Figure 3.8 help visualising those results.

Figure 3.8. Evolution of predicted subjective social status (on a scale from 1 to 10) and 95% confidence intervals in Germany for a man aged 40 belonging to the working class, depending on his place of residence



Concerning the degrees of urbanisation, the difference between the types of places remains small after controlling for age, gender, cohabitation status, education and social class. If there was a hierarchy, moreover, it would be the opposite of the one observed in France: citizens living in the outskirts of large cities have slightly higher subjective status than the others throughout the study period in East Germany, and people living in large cities have a lower

subjective status than the others in the most recent years in both the west and the east (Figure 3.8, bottom plots). When adding income as an additional control, then even these small differences between the kinds of places disappear, meaning that they are due to differences in economic conditions. At the end of the day, our hypothesis on the hierarchy between the kind of places should be rejected for Germany: in Germany, there is no negative correlation between subjective social status and living in rural places and no positive correlation with living in a large city. Our robustness test with the ESS survey confirms this result (see Table B.10 in the Appendix B).

3.9 Conclusion

Spatial inequalities within countries have been the source for new social and political divides in the past few decades (Gest, 2016b; Jennings & Stoker, 2019; Moretti, 2012). According to an influential argument, the residents of the so-called periphery feel increasingly left behind (Rodríguez-Pose, 2018). Our study analyses spatial inequalities from a subjective point of view using social status and measuring the position people think to occupy in the social hierarchy. Our analyses show the levels and trends of subjective social status in different areas of the European Union's two most populous countries, France and Germany. We examine whether subjective social status differs between places of the same country and if those differences have increased over the last two decades.

Overall, the average subjective social status slowly decreased in France over the studied period, especially if we control for people's objective socio-economic conditions. In contrast, the average subjective status constantly increased in Germany from 1992 until 2016, but then decreased notably. In both cases, then, we observe a negative country-level trend at least in the most recent period, possibly reflecting the growing of a generalised sentiment of dissatisfaction.

Our analyses show two different patterns of geographical inequality in the two countries, pointing to the specific configuration of the spatial divides in different contexts. The centre-periphery divide is very evident in France's centralised state. Consistent with our hypotheses, people living in the three largest urban centres perceive their status to be higher than people living in the rest of the country – as do people living in the region of Paris more generally compared to those in all other regions. Subjective social status is overall significantly higher in urban places than in rural areas during the entire studied period from 1999 to 2017. These geographical differences are visible even when controlling for education and social class, and they are only partly mediated by income differences between places.

In Germany, by contrast, spatial inequalities appear to be different. The disparities in subjective status between urban and rural places are very weak, and people living in large cities often place themselves lower on the social ladder than do people living in the outskirts or in rural areas. The urban-rural divide seems to play a subordinate role in self-evaluated social status in Germany. In contrast, and coherently with what objective indicators as GDP suggest, the east-west divide has not disappeared. Even controlling for gender, age, education and social class, people living in the eastern states have a significantly lower subjective social status than those living in the western part of the country. This difference is partially but not completely explained by income inequalities.

Overall, our paper gives credence to the relevance of within-country spatial inequalities from the subjective point of view. People's perception of their social standing is correlated to the place they live in. However, surprisingly, our results do not support the hypothesis that inequalities between regions have widened in the past two decades. Regional inequalities have even decreased in France over the entire period, especially because people's subjective social status has decreased more in the large metropolitan areas than in the other places. Coherently with Rodriguez-Pose's (2018) claims about the decline of France's North-East, then, subjective

status decreased in that area, but it unexpectedly also decreased in the capital region and stayed more stable in the others. This definitely contrasts with our hypothesis about the growing frustration of the "peripheral France" (Guilluy, 2011, 2015). Only when we consider an auto-assessed categorisation of urban-rural citizens, which may be more precise than a geographical variable based on departments, we can possibly see increasing gaps between the types of places: both on a descriptive level and controlling for the objective socioeconomic position of people, it seems that people living in rural areas perceived a slightly decreasing status between 2006 and 2010 and after 2013 – similarly to people living in the outskirts of large cities, while subjective status was almost constant in large cities throughout the study period. Nevertheless, these trends are weak, and further analyses based on larger datasets with a more precise geographic location of respondents, as the municipality of residence, would be necessary to clarify this point. Survey data allow us to investigate the subjective dimension of social stratification, but they unfortunately provide limited information on people' location compared, for example, to register data.

Likewise, we do not see increasing spatial inequalities in Germany. Subjective status has decreased in the whole country starting from 2014, after a long period of constant increase, suggesting a generalised deterioration of people' perception of their social standing in the last years. But the only relevant geographical divide, the one between eastern and western States, has partially decreased over the study period.

The role of internal migration in the observed relative trends between places remains an open question. The observed decline of subjective status in the Ile de France and in the French large metropolitan centres, for example, could be due to the decrease of the perceived social position of citizens who lived permanently there, but also to the arrival of new low-subjective status people. Economic and demographic decline are intrinsically intertwined and are likely to

combine differently in different areas. Further analyses based on longitudinal data could help understanding the role of migration flows.

In conclusion, in neither of the two countries does our paper find clear support for the hypothesis of growing differences between “central” and “peripheral” places. This casts doubt on the idea of a growing resentment in the “places that don’t matter” (Rodríguez-Pose, 2018). The recent popularity of right-wing populist parties in rural communities and the spread of specific political movements such as the French Gilet Jaunes in the same areas could be due to the successful mobilisation of silent spatial hierarchies that have long been in place, or to the more successful mobilisation of some latent discontent that grew, more or less recently, throughout the two countries.

4. An urban-rural divide of political discontent in Europe? Conflicting results on satisfaction with democracy[31]

4.1. Introduction

Spatial differences within countries have been linked by many scholars to the recent success of populist and radical right parties in the Western world. In the 2016 US presidential election, Donald Trump's success emerged in towns and rural areas, while large cities mostly supported Hillary Clinton (Monnat & Brown, 2017). Similarly, in Europe, the populist vote is concentrated in districts characterized by local economic decline, low employment rates, and less educated populations (Dijkstra et al., 2020), and people living in rural areas are more likely to vote for anti-EU parties than those living in cities (de Dominicis et al., 2020). In the United Kingdom, the Brexit vote of 2016 revealed a country divided between pro-European metropolitan areas on the one hand and towns and rural areas claiming national sovereignty on the other (Jennings & Stoker, 2019). In France, the Yellow Vest protest movement originated in sparsely populated regions, and spatial mobility was at the heart of their revendications (Jetten et al., 2020).

In light of these elements, scholars have argued that geographical patterns of political discontent are emerging in the Western world, and the urban-rural axis would be a key dimension of the so-called "geography of discontent" (Dijkstra et al., 2020). According to this idea, the economic inequalities that have emerged within countries have led to growing political discontent in the regions characterised by local economic decline. The citizens living in the so-

[31] Chapter accepted for publication:
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called “places that don’t matter” (Rodríguez-Pose, 2018) would then have started to use the ballot box to take their revenge.

Our study puts this narrative of the urban-rural dimension of the geography of discontent in Europe to the test. Rather than analysing the populist and radical-right vote, we focus on its roots: political discontent. While votes can be influenced by campaigns and individual candidates, we want to focus on one of the underlying grievances of public opinion. We analyse urban-rural differences in political discontent by using the survey question on satisfaction with how democracy works, a widely used indicator of people’s satisfaction with political institutions (Canache et al., 2001; e.g. Daoust & Nadeau, 2021; Foa et al., 2020; Lago, 2021). It is a single question asking people “On the whole, how satisfied are you with the way democracy works in [country]?”. We want to know whether people living in the outskirts, in small cities and, above all, in rural areas are less satisfied with the way political institutions work compared to people living in large cities. And we also want to describe the historical trends of these differences: has political satisfaction decreased in outskirts, small cities and rural areas compared to big cities over the last two decades? Our analysis contributes to the understanding of the urban-rural dimension of political satisfaction from a temporal perspective, and therefore to the description of the geography of discontent in Europe.

Some recent studies have identified geographical patterns of place-based resentment in some countries, such as Germany (Arzheimer & Bernemann, 2023), the Netherlands (Huijsmans, 2023b), Canada (Borwein & Lucas, 2023) and the US (Munis, 2020). However, place-based resentment, which depends on people’s specific attachment to the place where they live and the feeling that it is not getting its fair share, is only one of the aspects shaping spatial disparities in terms of political discontent (Arzheimer & Bernemann, 2023).

More generally, previous research has found that there is an urban-rural divide in political attitudes among European citizens. This concerns attitudes towards the political system, as well as attitudes towards specific issues such as the welfare state, the police or

migration (Kenny & Luca, 2021a; Maxwell, 2019). Using ESS data from the period 2002-2018, Kenny & Luca (2021a) show that satisfaction with democracy is significantly lower in outskirts, small cities and rural areas than in large cities, and Lago (2021) comes to similar conclusions. However, these studies make it difficult to interpret the magnitude of the spatial differences, since they do not provide any comparison with the other relevant social cleavages. Moreover, they only present aggregate results at the European level or by European macro-area, thus masking potential heterogeneity between countries. It is not clear whether the urban-rural divide is a significant dimension of political discontent across Europe, or whether it is salient only in some countries. Finally, little is known about the relative trends in political satisfaction in different types of places.

Based on individual-level data from the European Social Survey for the period 2002-2020 for 19 countries, our paper analyses levels and trends of political satisfaction, in four types of place: large cities, outskirts of large cities, small cities, and rural areas. We do not attempt to specifically identify place-based discontent, but use satisfaction with democracy as an indicator of people's overall satisfaction with the political system in the different places.

In what follows, we discuss why we would expect spatial differences in political satisfaction and outline our main hypotheses. We then present our data and methods and show that urban-rural differences in political satisfaction in Europe are rather small compared to the much larger differences between countries on the one hand, and to other large social divides within countries on the other. Moreover, political satisfaction has not declined in small cities or in rural areas over the last two decades. In the light of our findings, the recent success of populist parties in small towns and rural areas may be a reflection of historically rooted spatial cleavages rather than a symptom of an exceptional outbreak of political discontent in these areas. Thus, there is some important heterogeneity in terms of spatial cleavages in political satisfaction across countries, which highlights the relevance of their specific contexts.

4.2. Satisfaction with democracy as an indicator of political discontent

Satisfaction with how democracy works (hereafter SWD) is a measure of political support (Canache et al., 2001). Following Easton's (Easton, 1965, 1975) tripartite model of political support – the political community, the regime and the authorities -, SWD concerns the level of the regime. It then concerns the form of government itself and its formal and informal rules, rather than specific institutions or individuals in power at any given time. Moreover, building on the distinction made by Norris (1999), SWD does not account for the legitimacy of democratic principles at an abstract level, but rather indicates citizens' support for the regime's concrete performance. SWD measures people's assessment of the regime's effectiveness in delivering goods (Linde & Ekman, 2003).

The economy is indeed a key dimension of people's satisfaction with the democratic regime (Christmann, 2018; Daoust & Nadeau, 2021; Quaranta & Martini, 2016). At the same time, SWD is related to political processes and the institutional context (Norris, 2011). At the individual level, SDW is positively influenced by the perception of government responsiveness (Linde & Peters, 2020) and by citizens' democratic attitudes such as believing that it matters who they vote for (Ridge, 2022). Research also suggests that, while SWD is more strongly linked to citizens' perceptions of the state of the economy in poorer countries, political considerations such as the feeling of being represented are particularly relevant in rich countries (Daoust & Nadeau, 2021). Finally, SWD appears to be strongly correlated with several indicators of confidence in political institutions (Canache et al., 2001). Even if a large debate has historically opposed scholars on the definitive meaning of the item (see Canache et al., 2001; Singh & Mayne, 2023), the above evidence suggests that SWD is a useful and synthetic indicator for examining citizens' overall political support and, consequently, political discontent.

SWD is also particularly useful for studying spatial inequalities because it is linked to both the material conditions of individuals and the contextual factors that shape their experiences. On the one hand, more affluent people tend to be more satisfied because they have access to high-quality goods, which leads them to evaluate the performance of the democratic regime more positively (Nadeau et al., 2020). On the other hand, previous research has shown that SWD is lower among people who have experienced poor public services and have negative evaluations of local government performance (Weitz-Shapiro, 2008). Therefore, even though the question asks respondents about the way democracy works in their *country,* we can say that SWD depends on citizens' satisfaction with the political system at differen levels, including the local level. Especially in the case of important between-region inequalities in terms of the state of the labour market or the provision of public services, different levels of SWD could then be found across national territories. Finally, the individual and the contextual factors of SWD are interrelated, as lower status citizens are also more dependent on government transfers and services, and the lack of individual resources to cope with difficult circumstances makes them more vulnerable to general economic fluctuations (Nadeau et al., 2020).

Our analyses do not investigate the causal mechanisms between contextual conditions and individual SWD, but they build on the demonstrated link between citizens' SWD and the context in which they live to study the urban-rural divide in political satisfaction.

4.3. Why would we expect an urban-rural divide in political satisfaction?

The rural-urban divide has been a classic dimension of political cleavages since the emergence of modern states (Lipset & Rokkan, 1967). Since the industrial revolution, cities have been inhabited by workers in manufacturing industries, while rural areas were still dominated by the people engaged in agricultural production, two groups with different interests. As the modernisation theory suggests, then, the economic development and the demographic

growth in cities have been followed by a shift of their inhabitants towards more liberal and tolerant political views, fuelled by the large opportunities for socialisation and freedom that cities offer (Luca et al., 2023).

The urban-rural dimension of political polarisation is thus a historical reality. However, the recent decline of the industrial economy and the advent of globalisation seem to have reignited it. Some cities have been able to jump into the service economy of the globalised era, while other places have not (Moretti, 2012). The agglomeration advantage of the service economy favours large cities, which tend to concentrate resources and employment opportunities. Smaller cities and rural areas have often been left behind. European metropolitan areas, including capitals such as London, Dublin or Warsaw, are well connected in the globalised economy and attract multicultural and dynamic populations, while other areas are increasingly depopulated, especially rural areas (Hurley et al., 2019). According to the OCDE (2020a), the average contribution of capital regions to the national GDP has increased by almost 3 percentage points between 2000 and 2016, reaching the rate of 27%. For example, the Ile de France, the Paris region, now accounts for more than 30% of French GDP.

According to a poular narrative, political attitudes would then have diverged between citizens living in cities - which have benefited greatly from global economic growth - and citizens living in suburban communities, post-industrial towns and the urban periphery, where economic opportunities and public services are scarce. Those lagging areas have been called the “places that don’t matter” (Rodríguez-Pose, 2018). The argument is that people living there would have felt left behind by the national elites, have become more closed and communitarian (Jennings & Stoker, 2017, 2019), and have begun to take revenge through the ballot box. The recent uneven economic development between places would then have led to a cultural grievance, with the inhabitants of the “periphery” turning against their governments, which were accused of only looking after the interests of the urban upper and upper-middle classes. The large spatial differences in political satisfaction would have been made visible by the

success of anti-system and populist parties in sparsely populated areas, where the so-called "geography of discontent" emerged (Dijkstra et al., 2020).

This idea has been supported by qualitative research in the United States, illustrating the sense of being "left behind" felt by residents of rural and post-industrial areas (Cramer, 2016; Hochschild, 2016). And the current urban-rural divide in political attitudes has also been addressed by a number of quantitative studies. As discussed above, several recent studies have pointed to a cleavage in political attitudes and trust between urban and rural areas in Europe in recent decades (Arzheimer & Bernemann, 2023; Huijsmans, 2023b; Kenny & Luca, 2021a; Lago, 2021; Maxwell, 2019; McKay et al., 2021, 2023; Mitsch et al., 2021).

Two main mechanisms have been highlighted. On the one hand, the differences in political attitudes between urban and rural areas are due to the different composition of these places: rural areas have a lower level of education and a larger proportion of the working class, who face harsher living conditions, while the upper and middle classes are more concentrated in cities. The attractiveness of economically successful cities fuels socio-demographic sorting through internal migration. On the other hand, some research argues that it is the spatial context per se that matters, as urban-rural differences in SWD are visible even after controlling for individual characteristics (e.g. Kenny & Luca, 2021a; Lago, 2021). According to this view, people living in these areas would express some kind of place-based political resentment (Arzheimer & Bernemann, 2023; Huijsmans, 2023b).

Both mechanisms contribute to the supposed urban-rural divide in political discontent. Based on these arguments, we hypothesize that there are important differences in SWD between urban and rural areas in Europe. We expect these differences to be relevant even when compared to differences between social groups defined, for example, by social class or education. More specifically, even if some heterogeneity in economic and demographic dynamism is likely to characterise places with similar levels of urbanisation, we expect to see a hierarchy of political

satisfaction between highly urbanised and poorly urbanised places. Our first hypothesis is therefore as follows:

Hypothesis 1: SWD is lower in the outskirts of big cities, and even more so in small cities and rural areas, than in big cities.

Moreover, given the heterogeneous economic and demographic development within countries, we expect these differences to have widened over the last two decades, because of the negative trend of political satisfaction in the more peripheral places. Some scholars have indeed shown that the spatial divide in political attitudes has recently increased in several European countries such as the Netherlands (Huijsmans et al., 2021) and England (Jennings & Stoker, 2016), notably between residents of large cities and those living in small cities or rural areas. Mitsch and his colleagues (2021) analysed data from the ESS on 18 countries and showed that divergent trends between urban and rural places can also be observed for trust in the political system, although they only focused on the period 2008-2018. We assess the recent trends in urban-rural differences in SWD by testing our second hypothesis:

Hypothesis 2: The gap in SWD between big cities, small cities and rural areas grew over the last two decades in Europe because of a negative trend in the less urbanised areas.

4.4. Data, measures, and method

Data

We use individual-level survey data from the European Social Survey, which covers the period 2002-2020 with one round every two years. This database has the advantage of including the SWD variable in each round and of providing information on the type of place where respondents live, for a large number of European countries.

We base our analyses on all respondents over the age of 18 and exclude countries that were not consistently observed over the period studied, so that the estimated trends are not biased by an unbalanced sample. This leaves us with 19 European countries, consisting of about 320,000 individuals over the entire period for the descriptive models and, after listwise deletion of cases with missing variables, about 240,000 for the multivariate models (see Table A.1 in the Appendix for the total number of available observations by country and year).

Valgarðsson and Devine (2022) show that measures of SWD vary between different data sources. We therefore try to increase the robustness of our results by following the practice of "identical analysis of parallel data" (Firebaugh, 2008) and reproduce our main analysis using data from the International Social Survey Program (ISSP) and the European Values Survey (EVS). SWD is available in the ISSP modules about citizenship in the years 2004 and 2014 for all the 19 countries under study, while the last round of EVS (fielded between 2017 and 2021) provides data for 17 out of the 19 countries of this study and allows us to use another variable which is very close to SWD: the satisfaction with how the political system works in the country. The results from these analyses are shown in the Appendix C.

Measures

Our main dependent variable is satisfaction with how democracy works (SWD). The question is worded as follows: "And on the whole, how satisfied are you with the way democracy works in [country]?". The answer is coded on an 11-points scale, going from "0-Extremely dissatisfied" to "10-Extremely satisfied". We have recoded this variable on a scale of 0-100 in order to facilitate comparison with the results from the other databases and to facilitate interpretation of the results, as the differences between the groups are small.

The average SWD in Europe is around 52 points (on a scale of 0-100) and has remained stable over the last two decades. However, there are notable differences between countries. The average SWD is 72 in Denmark - the country with the highest score - but only 40 in Slovenia -

the country with the least satisfied citizens (for more details on this: Figure A1 in the Appendix shows the average SWD in each country over the whole period, as well as the SWD trends in some countries selected as examples from different European regions and different SWD levels).

Our main independent variable is the type of place where respondents live. The original geographical variable is based on self-assessment and includes five categories: “a big city; suburbs or outskirts of a big city; town or small city; country village; farm or home in the countryside”. As the last category was chosen by only a few people, we have combined the last two categories into “rural areas”. Overall, 17% of respondents in our pooled European sample live in big cities, 13% in the outskirts of big cities, 32 % in small cities, and 38% in rural areas. Slovenia is the least urbanised country, with more than 50% of its citizens living in rural areas, while this proportion only corresponds to 24% in Great Britain (see Table A.2 in the Appendix for the distribution of the geographical categories in each country under study). Based on self-assessment, this variable could reflect different interpretations of what a big city and a small city are for different people and in different countries. This is a major limitation of our study, as with any study based on survey data with limited information on respondent’s place of residence, as subjective and objective definitions of places often do not coincide (Nemerever & Rogers, 2021). At the same time, the proportion of respondents self-identifying as rural in our data is similar in most countries to the Eurostat statistics (see Table A3 in the Appendix for a comparison of these features). Moreover, an objective measure based on the number of inhabitants in the municipality or on population density would be less suited to the specific urban structure of each country in our sample: "big city" cannot mean the same size in Germany, where three cities - Berlin, Hamburg and Munich - have more than one million inhabitants and nine others have more than 500,000 inhabitants, and in Switzerland, where no city reaches this size.

Our multivariate analyses include several control variables to account for individual characteristics that are often heterogeneously distributed across places and that may be correlated with SWD. This allows us to roughly disentangle the two mechanisms contributing to urban-rural differences: the composition of places and the direct effect of place-based discontent. We control for demographic characteristics such as gender and age, for the fact of being a citizen of the country of residence and for being a member of the dominant ethnic group. Finally, we control for the socio-economic characteristics of the respondents. We include education (less than secondary, secondary or post-secondary, tertiary education), income measured by national deciles[32], unemployment status and social class. We measure class using the 16-class Oesch scheme[33] (Oesch, 2006), which allows us not only to capture the vertical dimension of social hierarchy in detail, but also to distinguish horizontally between categories of citizens who tend to have different political attitudes, such as managers and socio-cultural professionals. We also present results using a collapsed version of the same class schema with only 5 categories, which allows us to better interpret the magnitude of the class effects.

Previous research has shown that SWD is also influenced by the results of recent elections: people who voted for the party that won the government tend to be more satisfied with the way democracy works than those who voted for the losing party (Anderson & Guillory, 1997; Daoust & Nadeau, 2021; Han & Chang, 2016; Singh et al., 2012). This led Lago (2021) to control for the winner/loser status of the party the respondent voted for in the last election in his analyses of urban-rural differences in SWD. However, we believe that adding this variable

[32] Income was measured through national deciles only starting from 2008, while it was coded into country-specific categories in the precedent rounds. We used uniform random imputation to transform the household income variable in 2002, 2004 and 2006 into national deciles: we first assigned a random value within the limits of their category to every respondent; we then coded the assigned values into national deciles based on the observed distribution.

[33] The 16 classes are defined as follows: large employers, self-employed professionals, small business owners with employees, small business owners, without employees, technical experts, technicians, skilled manual, low-skilled manual, higher-grade managers and administrators, lower-grade managers and administrators, skilled clerks, unskilled, socio-cultural professionals, socio-cultural semi-professionals, skilled service, low-skilled service workers.

to the models would introduce an over-control bias. On the one hand, the hypothesis behind the left-behind narrative is that people vote for anti-system political parties as a consequence of their political dissatisfaction. Since political discontent is our dependent variable, it would be wrong to control for the vote. On the other hand, the party voted for could mediate the causal relationship between place-based political grievances and SWD, because of its effect on SWD conditional on who won the elections. In this view, the vote is a mediating variable and controlling for it would hide part of the correlation between places and SWD.

Method

We run linear regression models with fixed effects for countries and years, as defined by the following equation:

$$y_i = \beta_1 + \beta_2 \text{place}_i + \beta_3 \text{year}_i + \beta_5 \text{country}_i + (\beta_4 \text{place}_i * \text{year}_i) + \beta_5 \text{controls}_i + \epsilon_i$$

The year fixed effects account for the general time trends in SWD, and the country fixed effects make our estimates of urban-rural differences dependent only on within-country variation in SWD, excluding baseline differences between countries that may depend on many institutional, cultural and linguistic (question wording) elements. Our models for estimating trends in SWD differences also include the interaction term *place*year*, which accounts for the different time trends in SWD between our four categories of places. We cluster the standard errors by country to adress the issue of the potential error correlation within countries, and we include in each model the weights available in the ESS dataset. We also reproduce the main analysis using multilevel models with three levels (individuals, years, countries).

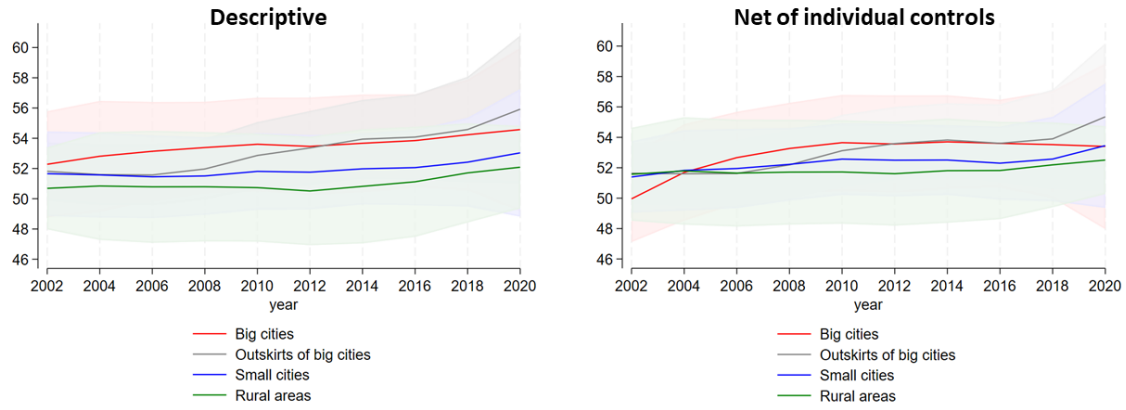
4.5. Results: urban-rural differences in the aggregate European sample

Figure 4.1 describes the evolution of SWD in the different types of places in Europe. The left-hand plot shows descriptive trends, based on simple regression models with country fixed

effects. The results have been smoothed using locally weighted scatterplot smoothing (LOWESS) for a better understanding of the long-term patterns (the same plot without smoothed trends can be found in Figure A2 of the Appendix). We can see that SWD is significantly higher in big cities than in small cities and, even more, rural areas. This is the case throughout the whole period. While in the first decade of the 21st century SWD was also lower in suburban areas than in big cities, this difference disappeared in the second decade. SWD increased slowly in big cities and their outskirts for most of the period. It remained stable in small cities and rural areas until 2016, and then increased slightly there too. So there is no downward trend in the so-called "peripheral areas". Even in relative terms, small towns and rural areas have not moved away from the big cities: apart from the very beginning of the 2000s, when all the edges were closer together, the gap in political satisfaction between places has remained constant. The only relevant change is the growing SWD in the outskirts of large cities over the whole period.

The observed differences between places confirm our expectations regarding the hierarchy, but they are small. If we compare them with the differences between countries, for example, we see that the urban-rural divide is far from being the first spatial dimension shaping SWD in Europe. On average, there is only a difference of 2.5 points (on a scale of 0-100) between big cities and rural areas over the period studied, while there is a difference of more than 30 points between the more satisfied countries (Denmark and Switzerland) and the less satisfied countries (Slovenia and Hungary). Focusing on the most populous European countries, we see that SWD in France is on average 10 points lower than in Germany, and 6 points lower than in the UK. The full list of estimates from the regression models can be found in Table C4 of the Appendix.

Figure 4.1. Trends of SWD (0-100) in the different kinds of places in Europe, 2002-2020 (95% confidence intervals)



Predicted values are based on linear regressions with year and country-level fixed effects, and standard errors clustered at the country level. The interaction term "place*year" models the differential time trends between places. Individual controls are gender, age, nationality, ethnic group, education, unemployment status, social class and income decile.

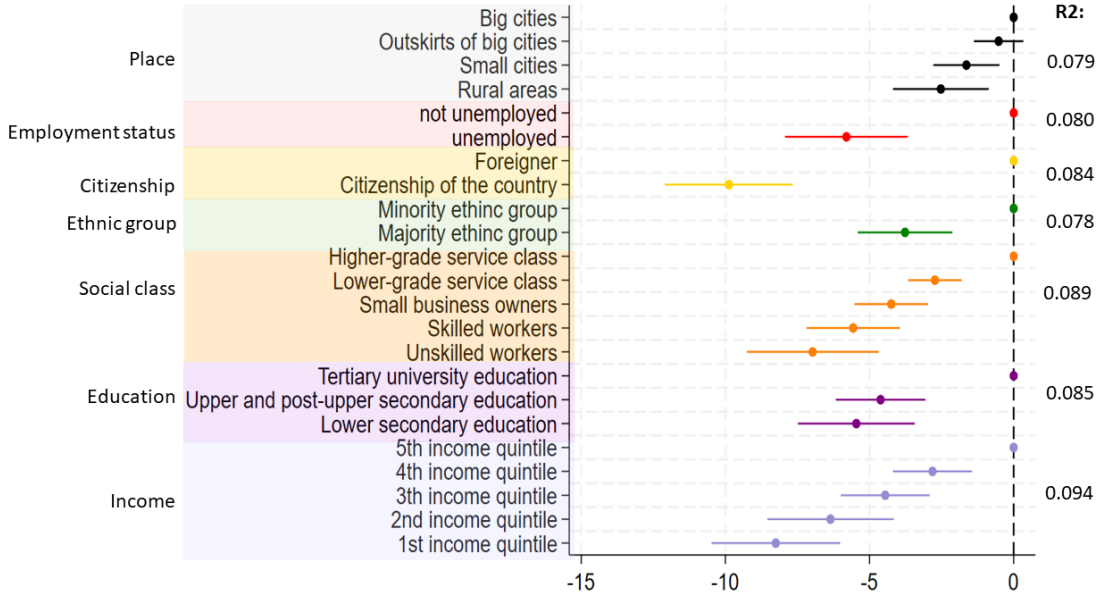
When the individual characteristics of the respondents are controlled for, the differences between places become even smaller, meaning that they are largely explained by the different socio-demographic composition of people living in different places. The right-hand plot in Figure 4.1 describes the SWD trends in the different types of place based on multivariate models controlling for the relevant individual characteristics (the same plot without smoothed trends can be found in Figure C2 in the Appendix). The average difference between big cities and rural areas over the period is only 1.3 points in this case. Still, there is no negative trend in small towns or rural areas.

The relevance of within-country spatial differences in SWD appears to be even lower when compared to the relevance of the differences between other social groups, such as social classes or income groups.

Figure 4.2 provides an overview of some between-groups differences by comparing the coefficients associated with several socio-economic variables. We run seven different models, each of them including country fixed effects and a different socio-economic variable (indicated by a different colour in the figure). We can see that all the used socio-demographic variables

used are associated with larger differences compared to our geographical indicator, and they explain more variance in the dependent variable as indicated by the adjusted R2. For example, the average difference between nationals and non-nationals is 10 points, and people in the fifth quintile of the income distribution are on average 8 points less satisfied than those in the first quintile. These results are almost identical when using a different modelling strategy, i.e. multilevel models (the results of this analysis are presented in the Appendix, Figure C3).

Figure 4. 2. Differences of SWD (0-100) between several social groups in Europe, 2002-2020.



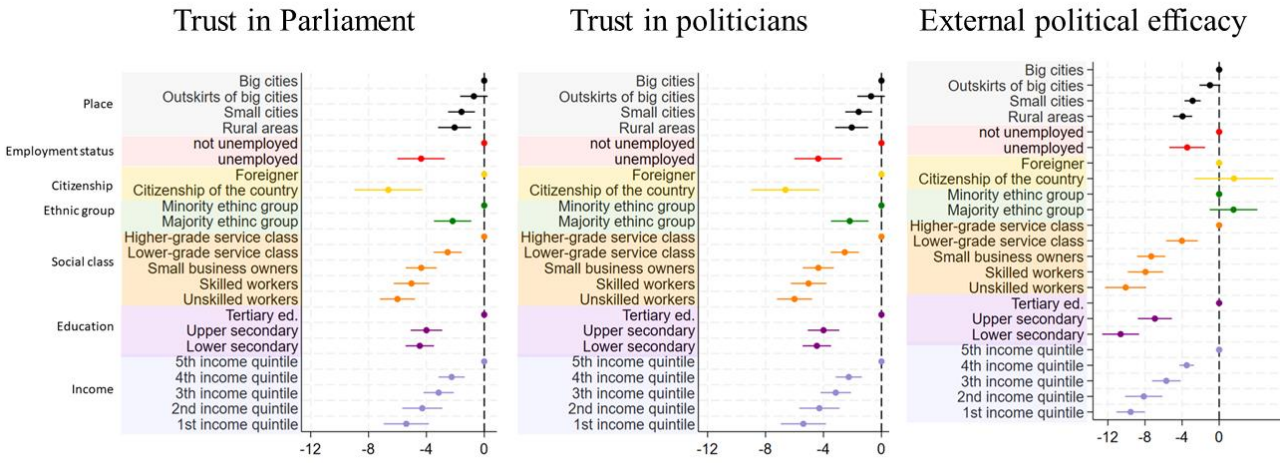
Every color corresponds to a separate model including year and country-level fixed effects, with standard errors clustered at the country level.

4.6. Robustness analyses

To check the robustness of our results, we also repeated these analyses using two other dependent variables that are conceptually close to and highly correlated with SWD (Canache et al., 2001): trust in parliament, trust in the politicians. We also repeated these analyses for external political efficacy, that is, the extent to which respondents believe that the political

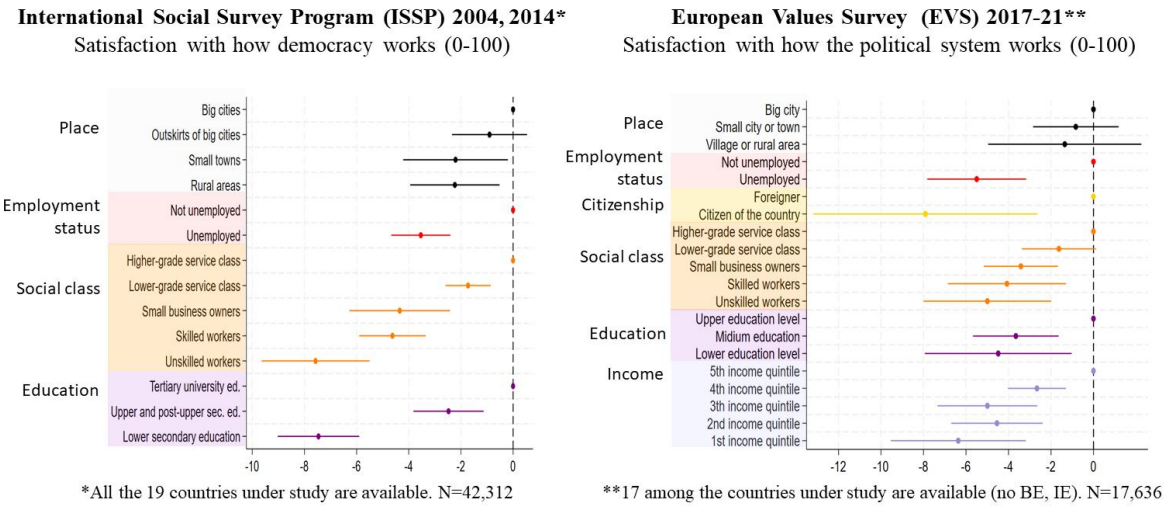
system allows people like them to have a say in what the government does or to influence policy (we averaged these two items). These results are shown in Figure 4.3 and confirm our previous analyses: for the three variables, the difference between urban and rural places is less than half the size of the differences between the top and bottom social classes or between the top and bottom income quintiles.

Figure 4.3. Differences of trust in parliament (0-100), trust in politicians (0-100) and external political efficacy (0-100) between several social groups in Europe, 2002-2020



We then reproduced the analyses of political satisfaction using two other samples, the 2004 and 2014 rounds of the ISSP (using SWD) and the round 2017-21 round of the EVS (using satisfaction with the political system). The results are shown in Figure 4.4 and are again very similar to those for the ESS sample. The average difference between big cities and rural areas is 2.2 (on an identical scale from 0 to 100) according to ISSP data, and all the available socio-economic indicators are associated with larger differences in SWD. Analyses of EVS data, which provide a measure of satisfaction with the way the political system works, also confirm that unemployment, social class, education, income and citizenship are much stronger predictors of political satisfaction than the type of place where people live.

Figure 4.4. Differences of political satisfaction (0-100) between several social groups in Europe, based on ISSP and EVS data (every model includes country fixed effects)



Every color corresponds to a separate model including year (for ISSP only) and country-level fixed effects, and standard errors clustered at the country level.

As a further robustness analysis, we looked at spatial differences within income groups. Differences in SWD between places may be very small because they are only relevant for certain groups, namely the most vulnerable ones, who are less resilient to income circumstances and cannot, for example, compensate for the lack of public services in their area through their personal resources. Indeed, as some research has shown, low-income citizens give more weight to their perception of the economic context in which they live than high-income citizens do when assessing their SWD (Nadeau et al., 2020). We therefore calculated the spatial differences in SWD within each income quintile, controlling only for basic demographic information, age and gender (see Figure C.4 in the appendix for the full results). In line with our expectations, the geographical differences within the poorest group are slightly larger than within the richest group. Nevertheless, this variation is small, as even within the lowest quintile of the income distribution, the difference in SWD between urban and rural residents is only 3.5 percentage points. By comparison, the difference in SWD between respondents in the lowest and highest income quintiles is more than 8 percentage points.

These results suggest that spatial differences in terms of SWD may be more visible among the most disadvantaged individuals, but also that socio-economic groups are much more relevant than places for explaining SWD inequalities. We can say that, overall, spatial differences in SWD in the aggregate European sample are minor and that the kind of place people live in is far from being the most relevant social cleavage of political satisfaction.

4.6. Results: urban-rural differences in single countries

However, the low relevance of spatial disparities in SWD in the aggregate European sample could mask large differences between countries. We then run our models separately for each country in our sample. Figure 4.5 shows the differences in SWD between big cities and rural areas for each country over the whole period studied (see Figure C.5 and Figure C.6 in the Appendix for the differences between big cities and the three other types of place in each country, at the descriptive level and net of individual controls), and Figure 4.6 shows the trends in SWD by place in the six countries with the largest spatial differences (Figures C.7 and C.8 in the Appendix show the trends of trust in parliament and trust in politicians), which confirms the absence of a generalised polarisation across places.. We can see that for several countries spatial disparities are absent or weak, but for others the urban-rural divide is relevant.

Unsurprisingly, this is the case in France, where public debate and scientific research have often highlighted an important spatial divide between the few large cities and the so-called "Peripheral France" (Guilluy, 2015). Important differences between the French most urbanised and rural French departments have been shown by scholars in terms of depopulation (Oliveau & Doignon, 2016), but also in terms of wealth (Bonnet et al., 2021) or the subjective status of their inhabitants, a measure of people's perception of their place in the social hierarchy (Vigna, 2023). SWD is on average 5.7 percentage points lower in rural areas than in big cities in France over the period studied. We also observe a negative trend in SWD in rural areas between 2010 and 2016, when the gap with big cities reaches 8 percentage points, comparable to the gap

between people with tertiary education and those with only secondary education, and larger than the gap between those in the higher-grade service class and unskilled workers (only 6 points).

Strong urban-rural divides in political satisfaction are also observed in the Nordic countries, Slovakia and Belgium (where the urban-rural divide may reflect the regional divide between the richer and more urbanised Flanders and Brussels-Capital region, and the relatively rural and poorer Wallonia). But there is no negative trend for rural areas in these countries.

Surprisingly, the urban-rural dimension does not seem to be relevant for political satisfaction in the UK, although the Brexit vote in 2016 has been interpreted by some scholars as a symptom of strong spatial differences between the globalised modern cities and the post-industrial towns and peripheral areas (Jennings & Stoker, 2019). In some other countries, such as Poland, Spain, the Netherlands, and Austria, living in rural areas is practically not associated with lower SWD than living in a big city.

Overall, our results highlight the heterogeneity between countries in terms of spatial cleavages. And, in terms of their trends, specific stories have unfolded in each country. Explaining this heterogeneity is beyond the scope of this paper, as a variety of factors could be at play. These include, for example, the different levels of urbanisation (Lago, 2021), and we could also think of several institutional factors such as the different levels of centralisation-federalism or the different electoral systems - majoritarian vs. proportional. Previous literature has shown that less proportional systems are associated with lower levels of SWD (Aarts & Thomassen, 2008), but they could also particularly affect how people living in peripheral areas feel that the political system takes their needs into account. Cultural specificities in the way rural areas are represented in the public debate may also have an impact on the urban-rural gap in SDW. While it would not be possible to take all these factors into account in the context of this study, our analyses are intended to warn, in a more modest way, that it would be misleading to speak of a generalised urban-rural pattern in SWD over the last two decades in Europe.

Figure 4.5. Differences in SWD between big cities and rural places by country for the period 2002-2020

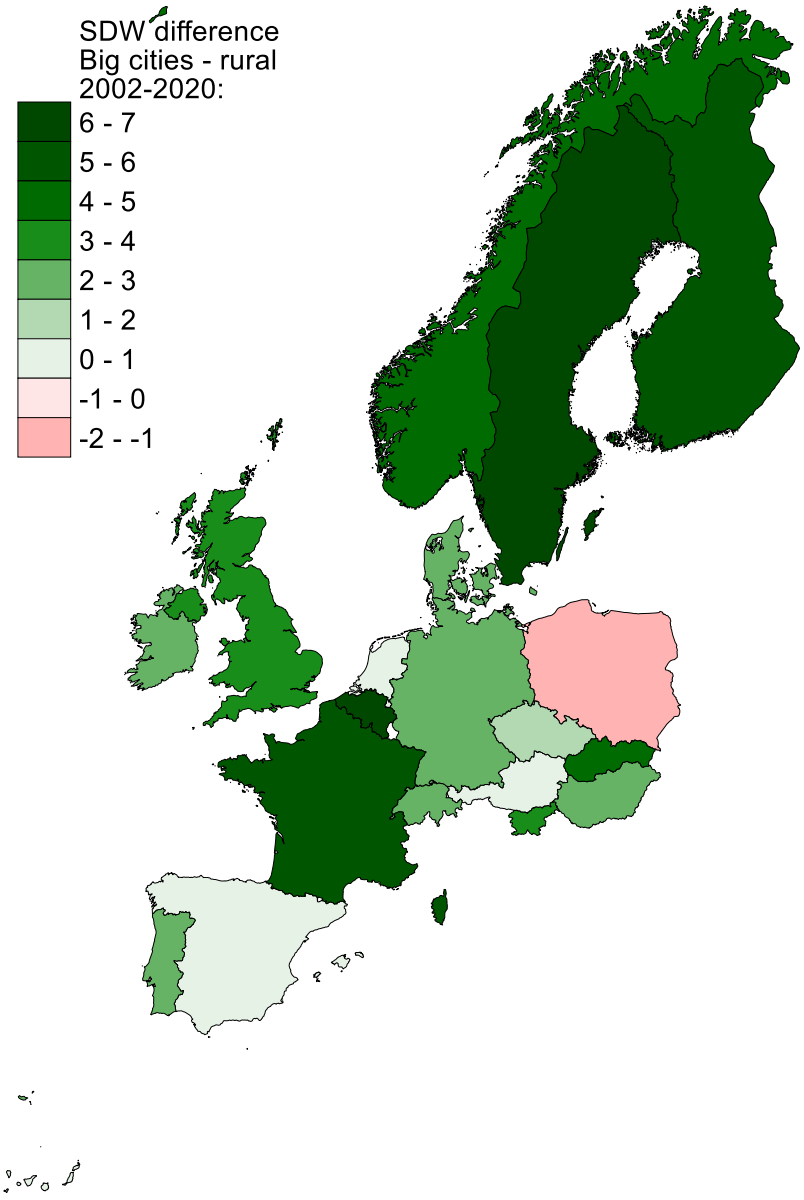
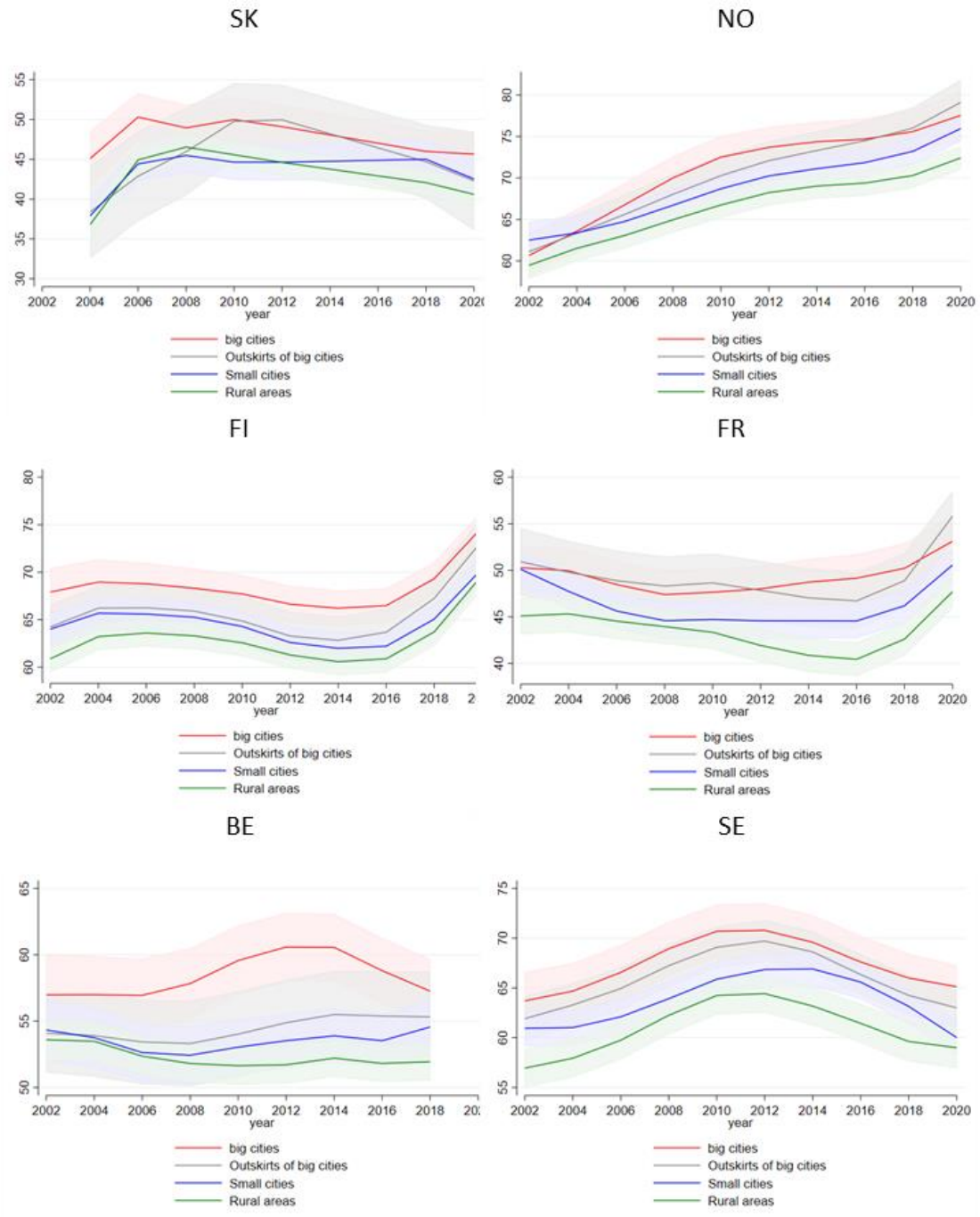


Figure 4.6. Average SWD in the different kinds of places in the countries with the largest urban-rural differences, 2002-2020 (95% confidence intervals)



4.7. Conclusion

We analyse spatial differences in terms of political satisfaction in Europe using SWD, a measure of people's satisfaction with how democracy works in their country. Based on individual survey data from the period 2002-2020 for 19 countries, we analyse the means and the trends of SWD in four types of places: big cities, outskirts of big cities, small cities, and rural areas. We also reproduce our main analyses on two other data sources: the International Social Survey Programme (2004, 2014) and the European Values Survey (2017-21). Building on the literature on "the geography of discontent" (Dijkstra et al., 2020) and on "the places that don't matter" (Rodríguez-Pose, 2018), we test the hypotheses that SWD is lower in the more peripheral areas than in big cities and that this difference increased over the last two decades.

We show that SWD is slightly higher among people living in big cities than in rural places, with outskirts and small cities in between. This finding goes beyond the simple urban-rural dichotomy and confirms the expected hierarchy between places in terms of political satisfaction. It is also consistent with previous analyses on SWD by Lago (2021) and Kenny & Luca (2021a), as well as on political trust (Mitsch et al., 2021), both in terms of the hierarchy and the significance of the observed differences. However, these authors hardly discuss the magnitude of these differences. We show that these differences are indeed very small, and they are negligible compared to the large differences between countries in Europe. SWD is on average only 2.5 percentage points higher in big cities than in rural areas, while the difference between the countries with the highest score and those with the lowest is more than 30 points.

Concerning the mechanisms beyond this difference, then, the urban-rural divide is largely explained by the composition of places, as it becomes even smaller when controlling for individual characteristics. This discredits the idea of an additional direct effect of place on political discontent, e.g. place-based discontent. Most importantly, by comparing several socio-economic indicators, we show that the differences between the four types of places are small compared to the differences between social groups as defined by citizenship, employment

status, education, social class or income. For example, more than 8 percentage points separate the average SWD of people in the first and last income deciles. Socio-economic factors remain the most important predictors of people's political satisfaction. Our robustness analyses on two other data sources, the International Social Survey and the European Values Survey, confirm this result.

Finally, our hypothesis on SWD trends should also be rejected. The gap between big cities, small cities and rural areas has remained largely stable over the last two decades, while SWD in the outskirts of big cities has grown somewhat faster. The stronger positive trend in the outskirts of big cities could explain the widening of the urban-rural gap highlighted by some previous studies on political trust in the shorter period 2008-2018 (Mitsch et al., 2021). Nevertheless, political discontent does not seem to have increased in small cities and rural areas, either at the descriptive level or when controlling for individual socio-economic characteristics.

Our findings challenge the urban-rural dimension of the so-called “geography of discontent” at the European level. The narrative of growing resentment among citizens living in peripheral areas, who feel abandoned by national elites and take revenge through the ballot box, seems to be based on a weak foundation. In many countries, the success of far-right parties in both urban and rural areas may be linked more to the historical spatial divide between progressive cities and conservative rural areas than to any exceptional increase in spatial inequality. The emergence of a new type of political party in Europe may simply have made this cleavage more visible by representing the conservative and anti-cosmopolitan values of citizens traditionally living in rural areas.

Yet, there is a great deal of heterogeneity between countries in terms of urban-rural differences. In some of the countries studied, the gap in SWD between big cities and small cities or rural places is more consistent than in the others. In France, rural places are also associated with a negative trend between 2010 and 2016. In this country, the urban-rural divide in political satisfaction may indeed have played a role in shaping the recent geography of voting. France's

sparsely populated areas witnessed the rise of the Yellow Vest protest movement in 2018 (Jetten et al., 2020) and the electoral success of Marine Le Pen's far-right party in the 2022 presidential election (Lévy et al., 2022).

Moreover, in other countries other dimensions of spatial inequalities may be more relevant than the urban-rural divide, such as the west-east divide in Germany, the regional inequalities in Spain or the north-south divide in Italy. More generally, the so-called 'peripheries', i.e. places far from political, economic and cultural centres, do not necessarily correspond to rural areas (de Lange et al., 2023). And the inhabitants of former industrial and densely populated cities experiencing economic decline may also feel abandoned by their national political elites. In sum, geographical cleavages within countries can be linked to the characteristics of their territories, but also to specific historical, economic and political processes. Explaining this heterogeneity is beyond the scope of this paper and requires further research.

Finally, a major limitation of our analyses is the fact that the urban-rural variable is self-reported. Unfortunately, survey data that allow analyses on subjective indicators rarely provide accurate objective information on the location of respondents. Studies using richer data would help to describe trends in political satisfaction in different places with greater precision.

5. Who is ready to pay for protecting the environment? Social and spatial divides in Europe

5.1. Introduction

Climate change and environmental pollution are among the greatest challenges of our time. Emissions from human activities have caused rapid global changes in the biosphere, with adverse impacts on nature and on people that will continue to intensify (IPCC, 2023). However, environmental policies imply structural changes with short-term economic costs, which can hit some population groups particularly hard and make it difficult for politicians to reach a broad consensus. While the vast majority of Europeans now believe in the reality of climate change, opposition to environmental policies is still not uncommon. Most citizens support measures that do not involve direct costs, such as subsidies for renewable energy, but only 30% of Europeans support taxes on fossil fuels (Pohjolainen et al., 2018).

In 2018, the Yellow Vest protests broke out in the French periphery following President Macron's decision to raise fossil fuel prices. While participants in the movement did not deny the general need for environmental protection measures, they were opposed to having to bear the cost of these measures (Driscoll, 2023). To the extent that many actions against climate change cost money, they are unpopular and can fuel political discontent, leading either to an "anti-green transition revolt" as in the Yellow Vests movement, or increased votes for climate change sceptic parties (Colantone et al., 2024; Rodríguez-Pose & Bartalucci, 2023). Understanding who is willing to pay for environmental protection - and who is not - is therefore crucial.

In this paper, we contribute to this understanding by describing the relevance of social and spatial stratification in shaping individual willingness to pay for environmental protection and climate change mitigation. We analyse individual-level data from 13 European countries

from the two most recent international surveys on environmental attitudes, the 2020 round of the International Social Survey Programme (ISSP) and the 2016 module of the European Social Survey (ESS). Our analyses are based on two questions asking people how willing they would be to pay much higher taxes to protect the environment (ISSP data) and whether they agree with increasing taxes on fossil fuels to reduce climate change (ESS data). We test for structural differences between groups defined by various indicators of social and spatial stratification, namely education, social class, household income and the type of place where people live.

A large body of literature has focused on the determinants of popular support for environmental policies, and many individual characteristics have been found to be associated with it. These characteristics include the level of environmental concern, demographic and socio-economic characteristics, personal values and ideologies, trust in political institutions, and specific beliefs about the fairness and effectiveness of particular policies (for a complete review and meta-analyses on previous studies see Bergquist et al., 2022). However, these sets of explanations are not independent of each other, and examining their relative importance can be misleading. Indeed, people's values and beliefs depend in part on socio-economic characteristics and on context of life, which shape individuals' living conditions and socialization processes. Therefore, our study takes a step back in the causal chain and focuses specifically on social and spatial stratification.

Post-materialism (Inglehart, 1995) and the affluence hypothesis (Diekmann & Franzen, 1999) are usually mobilized to emphasise the role of socio-demographic factors in shaping people's acceptance of environmental policies. According to post-materialism, people begin to care about non-material issues, such as environmental protection, only after their material needs for economic security have been met. The affluence hypothesis suggests that the middle and upper classes are more likely than the working class to support environmental policies if they

involve costs, simply because an increase in the cost of living does not change much in their standard of living and consumption possibilities.

In addition, the financial burden of environmental policies is often not shared equally among social groups. In the absence of progressive compensation, environmental policies that engender a fix cost for everybody, such as taxes on fossil fuels, have a greater impact on poorer households, which means that they can increase economic inequalities (Vona, 2021). Moreover, recent research has shown that some geographical areas are more vulnerable to environmental policies than others (O'Sullivan et al., 2020; Vona, 2021). The green transition is likely to affect more the economies of regions that are already poorer than the others, with the risk of widening the gap between the economic centres of countries and the so-called "left behind places" (Rodríguez-Pose & Bartalucci, 2023). This can easily fuel discontent, especially as people living in peripheral areas already tend to feel more distant from political centres and often feel that their voice is not taken into account by national elites (Arzheimer & Bernemann, 2023; Huijsmans, 2023b).

In the following, we develop our hypothesis on the relationship between social and spatial stratification and support for costly environmental policies. We then describe the data and methods used, and show that both socio-economic and spatial determinants are strongly associated with large differences in people's willingness to pay higher taxes for environmental protection: for example, people in the 5th income quintile are 13 percentage points more likely to oppose such a decision, and 9 percentage points separate the likelihood for people living in big cities from those living in rural areas. Our results are consistent across two datasets. We also show that such differences are only weakly mediated by individuals' concern for the environment and their belief in climate change, suggesting that living conditions may limit people's willingness to pay for environmental protection even when they are politically

concerned about environmental issues. Moreover, our analyses show that the intersection of the social and spatial dimensions of stratification helps getting a complete picture: the most willing to pay for environmental policies are not only part of the upper-middle class, but they also live in big cities rather in more peripheral places. Nevertheless, the results at the aggregate level hide much heterogeneity between single countries, as the urban-rural divide is not relevant in several countries under study.

5.2. Individual determinants of the support for environmental policies

The literature suggests that being concerned about the environment and supporting environmental policies are two different concepts (Fairbrother, 2022). In other words, believing in environmental problems is not the only necessary condition for supporting environmental policies or being willing to pay for them. More than 90% of Europeans do believe that climate change is real and 78% of them say that they are at least “somewhat worried” about it (Pohjolainen et al., 2018). Nevertheless, support for environmental policies is not straightforward, especially when they imply a personal cost. 46% of Europeans oppose increasing taxes on fossil fuels – and this proportion can rise to almost 60% in some countries such as Poland or Spain (Pohjolainen et al., 2018).

A large body of literature has focused on understanding the determinants of support for environmental policies, singling out many individual characteristics associated with it. Based on a comprehensive meta-analysis of 51 studies in 33 countries, Bergquist & colleagues (2022) identify four broad sets of determinants. First there are personal evaluations of climate change, which include, for example, concern about the problem, perceived risk, and specific beliefs about climate change and the environment. The second group of determinants includes beliefs about specific policies, such as their fairness and perceived effectiveness. The authors then identify several "psychological factors", such as personal values, ideology and trust. Finally,

socio-demographic characteristics of individuals, such as gender, age, education or income, play a role.

Previous research has highlighted gender and age differences in perceptions of climate change in several countries, with men and older people on average being more sceptical about the relevance of climate change and less willing to promote behavioural change (Poortinga et al., 2019). In terms of socio-economic characteristics, the literature has shown that people from lower socio-economic backgrounds tend to be more uncertain about climate change (Lübke, 2022) and less supportive of environmental policies (Arndt et al., 2023; Levi, 2021). There are two explanations for this: on the one hand, socio-economic conditions have an indirect effect on people's willingness to support environmental policies, as they are linked to the socialisation of individuals into certain norms, beliefs and political ideologies. On the other hand, they may have a direct effect on people's willingness to pay for environmental protection.

In the literature on the socio-economic determinants of support for environmental policy, two main theories are usually advanced. The post-materialist theory (Inglehart, 1995) suggests that people become concerned about post-material problems, such as environmental degradation, only after a certain level of material needs has been met. From a historical perspective, the increasing affluence of a society leads to a change in the values of its citizens, who become more concerned about the protection of the environment. Some comparative studies have indeed found that citizens in wealthier countries are on average more concerned about the environment than those in poorer countries (Franzen and Meyer 2010), but others contradict this finding. Fairbrother (2013) finds that environmental concern is generally higher in poorer countries, while within countries it is the richest people who are the most concerned.

However, the idea of the environment as a post-material issue has been challenged by scholars who point at the material nature of environmental issues. In his influential book “The Environmentalism of the Poor” (2002), Joan Martinez-Alier points to several examples where

local communities have engaged in environmental struggles to protect their environment and thus defend their material livelihoods.

Another theory explaining the link between socio-economic conditions and support for environmental policies is the affluence (or prosperity) hypothesis (Diekmann & Franzen, 1999; Franzen & Meyer, 2010). Without straying too far from the post-materialist hypothesis, it posits that vulnerable people are less likely to support environmental policies because the costs of these policies are harder for them to bear. An increase in prices or taxes to protect the environment may have a large impact on their ability to consume, while it will have little impact on the living standards of the wealthy. There would then be a direct effect of wealth on people's willingness to pay for environmental policy, over and above any change in their values.

Both visions imply a trade-off between good consumption and environmental protection: people are willing to protect the environment at the expense of other goals, such as economic growth, only if economic security is guaranteed. Conversely, environmental policies have an economic cost and can worsen people's living conditions. Moreover, if they are not accompanied by progressive compensations, they can have a greater impact on the most vulnerable, creating new inequalities between the winners and losers of the ecological transition. Resistance to such policies can then be summed up in a more general dissatisfaction with political decisions that are perceived as unfair.

In addition to material constraints, in fact, socio-economic conditions may also affect people's willingness to pay for environmental policies through other mechanisms. For example, people who occupy lower positions in the labour market tend to have lower trust in political institutions (Foster & Frieden, 2017) and support for environmental policies is highly dependent on people's trust in the political institutions that implement them (Fairbrother et al., 2019; Harring, 2018).

The mechanisms outlined above suggest that individuals' willingness to pay for environmental policies may be strongly correlated with their position in social stratification, even beyond their concern for the environment. In our analyses, we use a comprehensive definition of an individual's position in the social stratification by measuring it across its different dimensions: educational attainment, class position in the labour market, and household income. We then test the following hypotheses:

Hypothesis 1: Citizens with less education, belonging to the working class and benefiting from lower household incomes are less likely to accept an increase in taxes to pay for environmental policies.

Hypothesis 2: Differences between socio-economic groups in willingness to pay for environmental protection are partly, but not completely, mediated by belief in climate change and concern for the environment

5.3. The urban-rural divide in support for environmental policies

In addition to their socio-economic characteristics, citizens' willingness to pay for environmental policies may also depend on where they live. Several reasons suggest that there may be an urban-rural divide in the acceptance of environmental policies, especially when they involve costs for households.

First, the costs of environmental policies often do not fall equally on people living in different areas. At a structural level, the green transition is likely to have a greater impact on the economies of regions with high carbon emissions and reliance on sectors such as industry, agriculture and transport (Rodríguez-Pose & Bartalucci, 2023). These regions are often already poorer than the rest, and there is the risk of widening the gap between the economic centres of countries, which tend to be the biggest cities, and the periphery, often made up of towns and

rural areas. As a result, “green discontent” (Rodríguez-Pose & Bartalucci, 2023) may emerge in the peripheral areas, where residents already tend to have lower levels of trust in political institutions (Kenny & Luca, 2021b; McKay et al., 2021; Mitsch et al., 2021) and feel that their opinions are not taken into account by the political elite (Arzheimer & Bernemann, 2023; Huijsmans, 2023b).

The rise of the Yellow Vest movement, which erupted in France in 2018 after President Macron's decision to increase fuel prices, made this mechanism visible. The people who participated in the protests were not willing to pay for the green transition. They were demanding better living conditions and a greater role for their voices in political decision-making (Driscoll, 2023). They felt that workers living outside the big cities, often already enduring poor living conditions, were unfairly required to bear the cost of environmental protection.

The protest also highlighted the fact that, beyond regional structural changes, the costs of environmental policies are heterogeneously distributed across households. Increases on energy or fuel prices due to environmental policies are likely to affect citizens living in rural areas more: families living in larger houses with higher energy consumption and relying more on the car for daily travel are the losers of such policies and are typically located in rural and suburban areas (Filippini & Heimsch, 2016; Spiller et al., 2017).

Several studies have indeed pointed to an urban-rural divide in support for environmental policies (e.g. Arndt et al., 2023; Douenne & Fabre, 2020; Ewald et al., 2022; Robert Bonnie, 2020). Arndt & colleagues (2023) explain that economic insecurity drives this difference, as people living in small towns and rural areas are more likely to fear income losses as a result of environmental policy implementation than those living in large cities. This highlights the importance of a spatial dimension of the prosperity hypothesis.

However, a general urban-rural divide in willingness to pay for environmental protection is not straightforward, as other research relativises spatial differences in support for different types of policy. In Norway, Sivonen (2022) indicates that only policies related to rural culture and lifestyle, such as reducing beef production and reducing deforestation, are less popular among rural citizens than among urban citizens, but not energy-related regulations. Otjes & Krouwel (2022) also find that the urban-rural divide in the Netherlands is relevant when environmental policies concern the natural-agricultural dimension and not the energy dimension. Therefore, the question remains whether there is a difference between urban and rural residents in their willingness to pay for environmental protection and whether this is consistent across countries. The following hypotheses need to be tested:

Hypothesis 3: People living in rural areas are less likely to accept an increase in taxes to protect the environment compared to the ones living in small cities, in outskirts or, even more, in big cities.

Hypothesis 4: Spatial differences in willingness to pay higher taxes to protect the environment are partly, but not completely, mediated by belief in climate change and concern for the environment.

Finally, another open question is how spatial stratification intersects with socio-economic stratification. We could imagine that the effect of the spatial context on individual attitudes to environmental policy is different for people with different individual resources. While wealthy people can compensate for increases in the cost of living in any context, the ability of vulnerable families to cope with these increases is likely to be more influenced by the opportunities and constraints offered by the spatial context in which they live. In other words, the trade-off between environmental sacrifices and living standards is likely higher in rural areas, and where

households tend to have higher energy consumption, in terms of transport and heating, and where fewer public services are often provided. We then test a final hypothesis:

Hypothesis 5: Differences between socio-economic groups in willingness to pay higher taxes for environmental protection are greater in rural than in urban areas.

5.4. Data, measures, and method

Data

We analyse individual-level survey data from the 2020 round of the International Social Survey Programme (ISSP), the most recent international survey data on attitudes towards the environment, and from the 2016 module of the European Social Survey (ESS) dedicated to attitudes towards climate change. We use data from those 13 European countries that are covered by both databases, corresponding to about 17,000 valid individual observations for the ISSP and 22,000 for the ESS[34]. Table D.1 in the Appendix D shows the number of observations available for each country.

Measures

The first set of analyses is based on the data from the ISSP 2020. Our dependent variable is measured by the question: "How willing would you be to pay much higher taxes in order to protect the environment?". We replicated our analyses using another similar question asking how willing respondents would be to pay much higher *prices* in order to protect the environment. For both questions, respondents had to choose between five answers: "Very unwilling", "Fairly willing", "Neither willing nor unwilling", "Fairly unwilling" and "Very

[34] The number of valid observations is smaller for the models including income quintiles, as this variable has many missing values. In order to avoid an excessive restriction of the analytical sample, the observations with missing values on the income variable were not excluded from the other models.

unwilling". For a much simpler interpretation of the results, we have recoded these variables as binary, separating people who say they are unwilling (either very unwilling or fairly unwilling) from people who say they are willing to pay higher taxes/prices or are indifferent.

For our analyses of 2016 ESS data, we use a variable asking “To what extent are you in favour or against the following policies in [country] to reduce climate change? Increasing taxes on fossil fuels, such as oil, gas and coal”. Respondents answered on a scale from 0 ('Strongly in favour') to 5 ('Strongly against'). Similarly to the previous case, we have recoded this variable as binary, separating those who are against from those who are in favour or indifferent. Although it is very similar to the ISSP variable, the ESS variable explicitly indicates some goods that would be affected by the tax increase, meaning fossil fuels.

Our analysis of social stratification looks at three dimensions: (i) education, measured with the international ISCED classification and recoded into three categories: compulsory education, secondary and post-secondary education, tertiary-university education; (ii) social class, based on the position of people in the labour market and measured using the Oesch class scheme with 5 categories: higher service class, lower service class, small business owners, skilled workers and unskilled workers; (iii) household income quintiles[35].

Our analysis of the spatial hierarchy is based on a variable indicating the type of place where people live. While the ISSP and the ESS do not provide precise information on respondents' place of residence, both surveys include a detailed self-assessed variable that is based on a question asking people which category best describes the place where they live. The original geographical variable has five categories: "a big city; suburbs or outskirts of a big city; town or small city; rural village; farm or house in the country". As the last category was chosen

[35] In the ESS, national deciles of household income were available. They were recoded into quintiles. In the ISSP, instead, income is measured through country-specific variables, some numeric and others categoric. Every country-specific variable was transformed into quintiles following the criteria of the best available thresholds.

by only a few people, it was merged with villages to form "rural areas". Table D.2 in the Appendix D shows the proportion of people living in the four types of place in each country.

Two variables were used to test the mediating role of concern for environmental issues between social (and spatial) stratification and willingness to pay for environmental protection. The first variable is the level of environmental concern. It is based on the question "In general, how concerned are you about environmental issues?" (ISSP data) and "How concerned are you about climate change?" (ESS data) respectively. In both cases, respondents could answer on a five point Likert scale[36]. The second mediating variable indicates whether respondents believe in climate change and its causes. It includes four categories: respondents who do not believe in climate change, those who believe that the climate is changing mainly because of natural processes, those who believe that the climate is changing equally because of natural processes and human activities, and those who believe that the climate is changing mainly because of human activities[37]. Table D.3 in the Appendix D shows the proportion of responses in each country.

Finally, we control for the basic demographic indicators: gender and age (recoded into 4 groups: 18-35, 36-50, 51-65, and over 65) and include the available weights in every model[38].

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[36] In the ISSP, only the first ("Not at all concerned") and the fifth ("Very concerned") points were labelled. In the ESS, every answer was labeled and the categories at the extremities were slightly different, as the possible answers were: 1 "Not at all worried", 2 "Not very worried", 3 "Somewhat worried", 4 "Very worried", 5 "Extremely worried".

[37] In the ISSP, the question is formulated: "There has been a lot of discussion about the world's climate and the idea it has been changing in recent decades. Which of the following statements comes closest to your opinion?". Four different answers are possible: "The world's climate has not been changing", "The world's climate has been changing mostly due to natural processes", "The world's climate has been changing about equally due to natural processes and human activity", "The world's climate has been changing mostly due to human activity".
In the ESS, answers to two different questions had to be combined: "You may have heard the idea that the world's climate is changing due to increases in temperature over the past 100 years. What is your personal opinion on this? Do you think the world's climate is changing?" and "Do you think that climate change is caused by natural processes, human activity, or both?".

[38] For the ESS data, *anweights* were used, a type of weight that also takes into account differences in population size between countries. For ISSP data, the available weights (valid only at country level) were first transformed to take account of differences in population size between countries.

Method

Our analysis uses linear probability models with country fixed effects to estimate the average differences between groups in the probability of opposing higher taxes (or prices) to protect the environment. Country fixed effects allow us to focus on within-country variation by taking into account the baseline differences between countries that may depend on many cultural, political and linguistic (question wording) elements. Each model is defined by the following equation, where P indicates the probability of respondents to be unwilling to pay higher taxes, X_n corresponds to one of the strafication predictors mentioned above and X_m stands for our control variables age and gender:

$$\mathrm{P}(\mathrm{Y}=1|\mathrm{country},\mathrm{X}_n,\mathrm{X}_m)_\mathrm{i} = \beta_0 + \beta_1 country_i + \beta_2 \mathrm{X}_\mathrm{ni} + \beta_3 X_{mi} + \epsilon_\mathrm{i}$$

We then implemented some models that included the interaction between social and spatial predictors to model the combination of these two dimensions of stratification. Finally, we estimate mediation models that include environmental concern and climate change beliefs.

5.5 Descriptive results

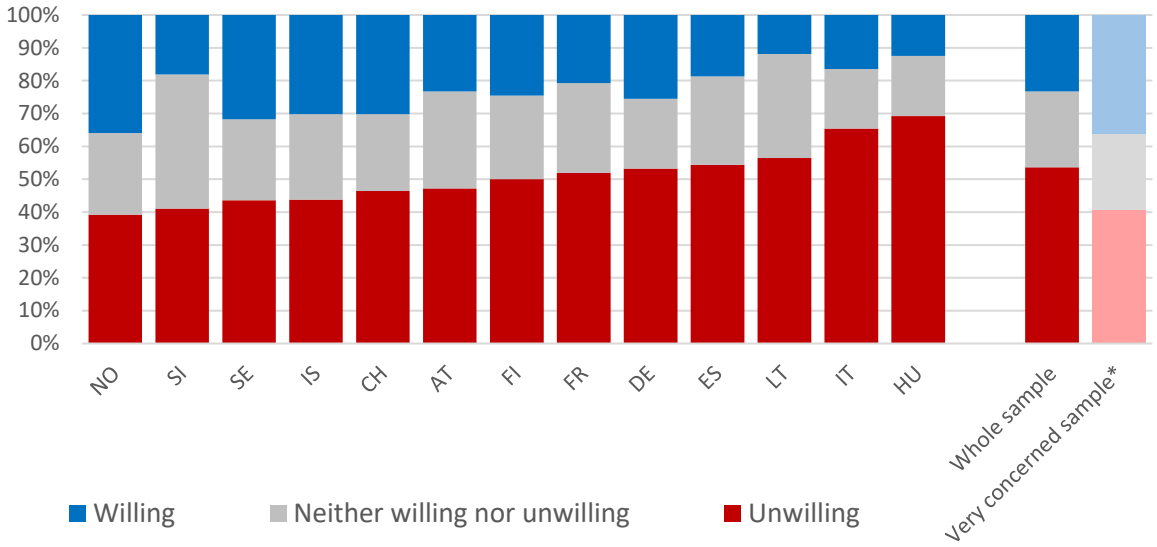
As shown in Figure 5.1, more than half of the respondents in the ISSP sample (top plot) state that they are not willing to pay much higher taxes to protect the environment. There are some differences between countries, as this proportion is less than 40% in Denmark or Norway, while it is more than 60% in Croatia, Italy or Hungary. Moreover, even among those who are very concerned about environmental issues (the highest level of concern expressed on a scale of 1 to 5), who believe in climate change and who believe that human activity is at least partly responsible for it, the proportion of people who oppose higher taxes to protect the environment is still 40%. This confirms that concern for the environment and support for environmental policies that entail a personal cost are two different concepts. Examining the distribution of

such support across the social and spatial hierarchy is not simply a matter of understanding who is most and least concerned about the environment.

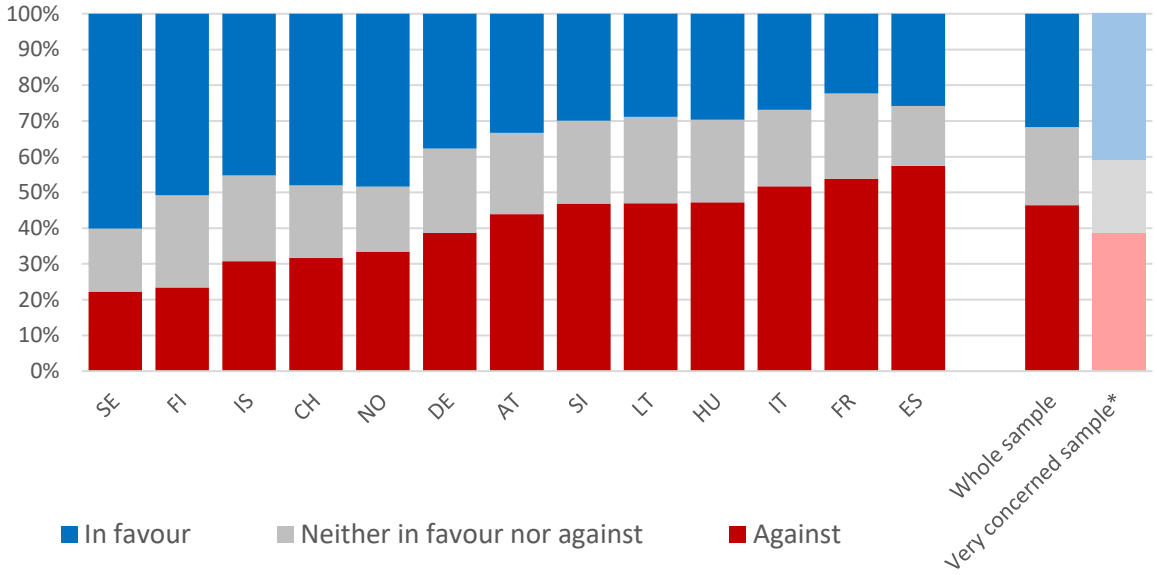
Similar results are obtained using data from the ESS (bottom plot): 46% of respondents are against increasing taxes on fossil fuels in order to reduce climate change, and this proportion still corresponds to 39% if we look only at those who think that the climate is probably changing, at least partly due to human activities, and are very or extremely concerned about it.

Figure 5.1. Proportions of people who are willing, not willing and indifferent to pay higher taxes to protect the environment, by country (weighted)

ISSP 2020



ESS 2016



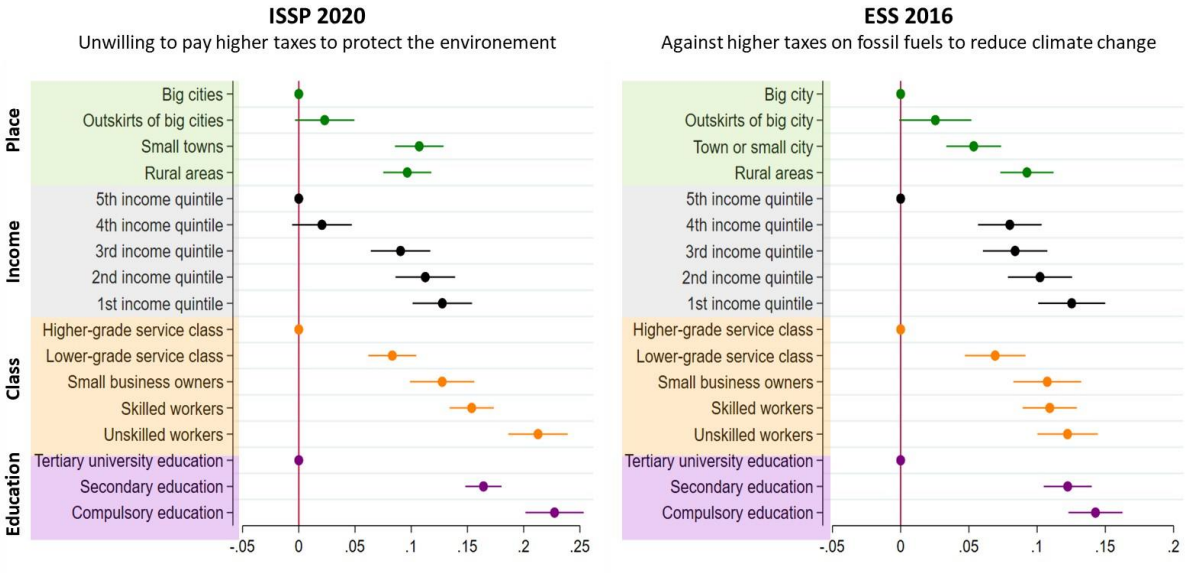
*The sample is restricted to the respondents who declare to be very concerned with environmental issues (ISSP) or with climate change (ESS) and who believe that climate change is happening and that human activities are at least as much responsible for it as natural processes.

5.6. Results from the linear probability models

Figure 5.2 shows the average difference between groups in the probability of opposing higher taxes to protect the environment (ISSP data, left-hand panel) or opposing higher taxes on fossil fuels to reduce climate change (ESS data, right-hand panel). For the full regression results, see Tables D.4 and D.5 in the Appendix D. Each colour corresponds to a separate model testing the difference between groups defined by a predictor (and including gender, age group and country fixed effects). These results show that the more peripheral a place is, the more likely its inhabitants are to oppose higher taxes to protect the environment. People living in rural areas are on average 9 percentage points (ESS) or 10 points (ISSP) more likely to oppose higher taxes to protect the environment than people living in big cities.

The differences between socio-economic groups are even greater. The left-hand panel (ISSP) shows that people in the bottom household income quintile are 13 percentage points more likely to oppose higher taxes to protect the environment. In terms of social class, skilled workers are 15 percentage points more likely to oppose higher taxes than those in the higher service class, and this difference rises to 21 percentage points when unskilled workers are considered. Similarly, there is a difference of 23 percentage points between the tertiary educated and those with only compulsory education. The right-hand panel shows very similar results, although the group differences in the ESS database are somewhat smaller.

Figure 5.2. Differences between groups in the probability of opposing higher taxes to protect the environment



Note: every colour corresponds to a separate linear probability model including gender, age, country fixed effects and weights. 95% confidence intervals are represented.

One might also be interested in the relationship between the three stratification dimensions, i.e. class, education and income. Specific mechanisms could indeed link education rather than class or income to attitudes towards environmental policy. However, it is unfortunately not possible to disentangle their independent effects as they are all strongly correlated (Bihagen & Lambert, 2018). A person's job is a strong determinant of their income, and largely (but not entirely) dependent on their education. Figure D.1 in Appendix D shows the results of such a model where all the predictors are included together. We can see that they are all significant and that, coherently with the results from the separate models, education seems to be slightly more important than the others.

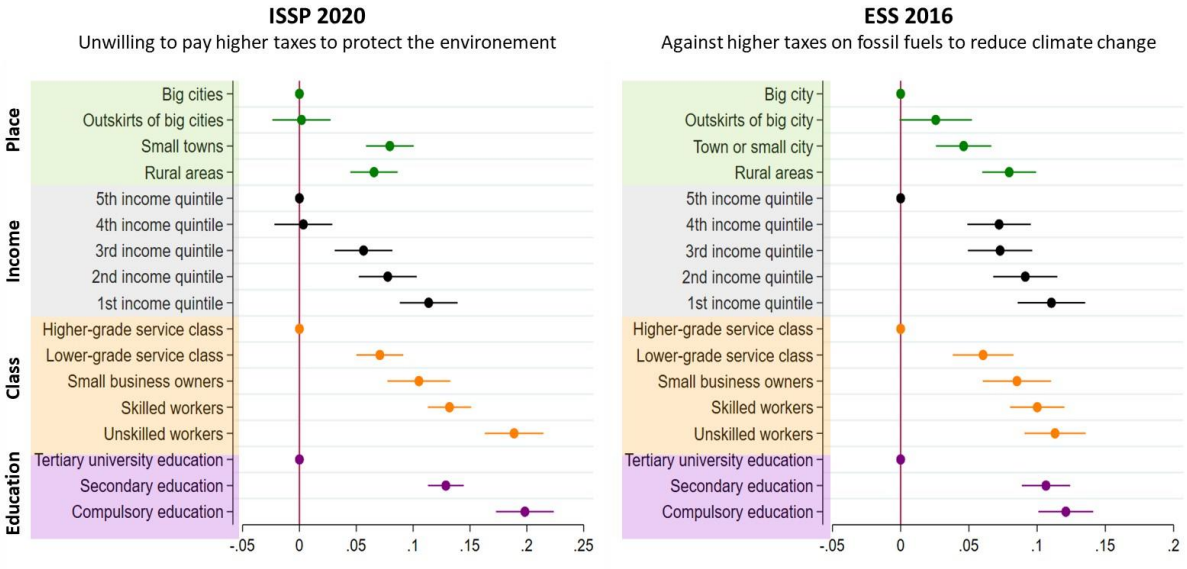
We repeat our analyses with two additional mediating variables to see whether environmental attitudes help to explain these spatial and socio-economic differences in policy support. We do not intend to provide an exhaustive account of all possible mediations between social stratification and support for environmental policies, which are numerous, but wish to

test the hypothesis that the different levels of environmental sensitivity across social groups alone cannot explain the different levels of support for environmental policies.

On the one hand, we control for beliefs about climate change and its causes, i.e. whether respondents believe that climate change is happening and whether they believe that it is mostly caused by natural processes, by human activities or a mixture of the two. On the other hand, we control for the level of concern about the environment (ISSP data) or about climate change (ESS data). Both variables seem to be strongly related to people's willingness to pay for environmental policies. According to the ISSP data, for example, there is a 40 percentage point lower probability of accepting to pay for environmental policies among those who are not at all concerned about the environment as compared to those who are very concerned about it (see again Tables D.4 and D.5 in the Appendix D for the full results).

The differences between places and between socio-economic groups, however, appear to be mediated by climate change beliefs and environmental concerns. Figure 5.3 shows the coefficients associated with the spatial and socio-economic predictors in the models including the two mediating variables. As expected, we can see that these coefficients are somewhat smaller than in the first models, but still quite consistent. For example, the difference between people living in big cities and those living in rural areas is still 7 percentage points in the ISSP data (left panel) and 8 in the ESS data (right panel), and the difference between the higher service class and unskilled workers is 19 percentage points in the ISSP data and 11 in the ESS data. This means that beliefs about climate change and environmental concern only partially mediate the relationship between socio-economic conditions and support for costly environmental policies. While sensitivity to environmental issues translates into a willingness to pay higher taxes to protect the environment, socio-economic differences continue to influence people's willingness to sacrifice their purchasing power.

Figure 5.3. Differences between groups in the probability of opposing higher taxes to protect the environment, controlling for environmental concern and climate change believes



Note: every colour corresponds to a separate linear probability model including gender, age, country fixed effects and weights, as well as the mediating variables environmental concern and climate change believes. 95% confidence intervals are represented.

5.7 The intersection of social and spatial stratification

We move on to study the interaction between spatial and socio-economic stratification. Contrary to our hypothesis (HP5), differences between social classes are not greater in rural areas than in urban areas, and this is true also for differences between educational groups (see Figure D.2 in the Appendix D for a visualization of the results from the linear probability models including the interaction terms).

However, one might think that the spatial stratification of environmental policy support is only relevant because of the different composition of geographic places in terms of socio-economic characteristics. While this is certainly part of the story, it is not the only explanation. Rather, Figure 5.4 suggests that the spatial and socio-economic dimensions are two distinct axes of stratification of support for increasing taxes to pay for environmental policies.

Figure 5.4 shows the predicted probabilities of opposing higher taxes to protect the environment (top panels) for people belonging to different social classes and living in different types of place. We can see that, according to both databases, the highest probabilities are concentrated in the lower right-hand corner, corresponding to people at the bottom of the social hierarchy and living in more peripheral areas. Conversely, the people who are least likely to oppose higher taxes to protect the environment include the upper class living in large cities. The differences between the groups reaches 30 percentage points according to the ISSP data (between the upper service class living in big cities and the unskilled working class living in small cities) or 24 percentage points according to the ESS data (between the upper service class living in big cities and the unskilled working class living in rural areas). Overall, these results show that by combining the spatial and socio-economic dimensions we obtain a clearer picture of how the willingness to pay higher taxes for the environment is distributed across different groups.

Figure 5.4. Predicted probability of being unwilling to pay to protect the environment for different groups in different places

ISSP 2020

Probability of being unwilling to pay higher taxes to protect the environment

	Big city	Outskirt of big city	Small city	Rural area
Higher-grade service class	42%	44%	45%	51%
Lower-grade service class	46%	49%	60%	54%
Small business owners	51%	52%	64%	59%
Skilled workers	57%	52%	64%	63%
Unskilled workers	63%	65%	73%	64%

ESS 2016

Probability of being gainst higher taxes on fossil fuels to reduce climate change

	Big city	Outskirt of big city	Small city	Rural area
Higher-grade service class	29%	38%	40%	45%
Lower-grade service class	39%	37%	46%	50%
Small business owners	50%	50%	46%	52%
Skilled workers	47%	45%	48%	53%
Unskilled workers	49%	46%	51%	53%

Note: linear probability models including age, gender, class, place, the interaction between place and class, country fixed effects, weights.

5.8. Results at the country level

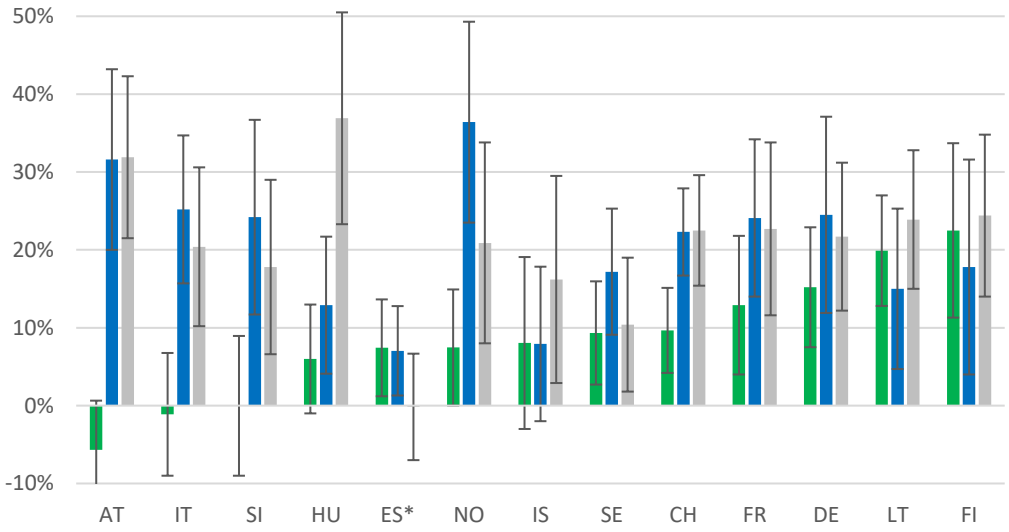
Our results at the European level may hide different stories in individual countries. For this reason, we look at each country separately.

Figure 5.5 shows the differences in willingness to pay higher taxes to protect the environment between groups defined by place, class and education in each of country studied. The large differences between socio-economic groups are confirmed when looking at single countries. Educational groups and social classes are almost everywhere associated with significant differences in willingness to pay for environmental protection or climate change mitigation.

Differences between urban and rural residents, on the other hand, appear to be insignificant in 5 of the 13 countries studied according to the ESS data (ES, HU, IT, IS, LT) and in 6 countries according to the ISSP data (AT, HU, IT, IS, NO, SI). As these two groups do not completely overlap, it is difficult to draw conclusions on country variation, and it would be unwise to interpret individual country cases. Nevertheless, it can be concluded that differences between socio-economic groups in the willingness to pay higher taxes to protect the environment are present to varying degrees in each of the countries studied, while the relatively large urban-rural gap observed at the aggregate level is not. Rather, it may result from the combination of different country-specific spatial dynamics. Of course, in some countries other spatial disparities may be relevant, such as those between regions specialised in sectors affected by green transitions and others.

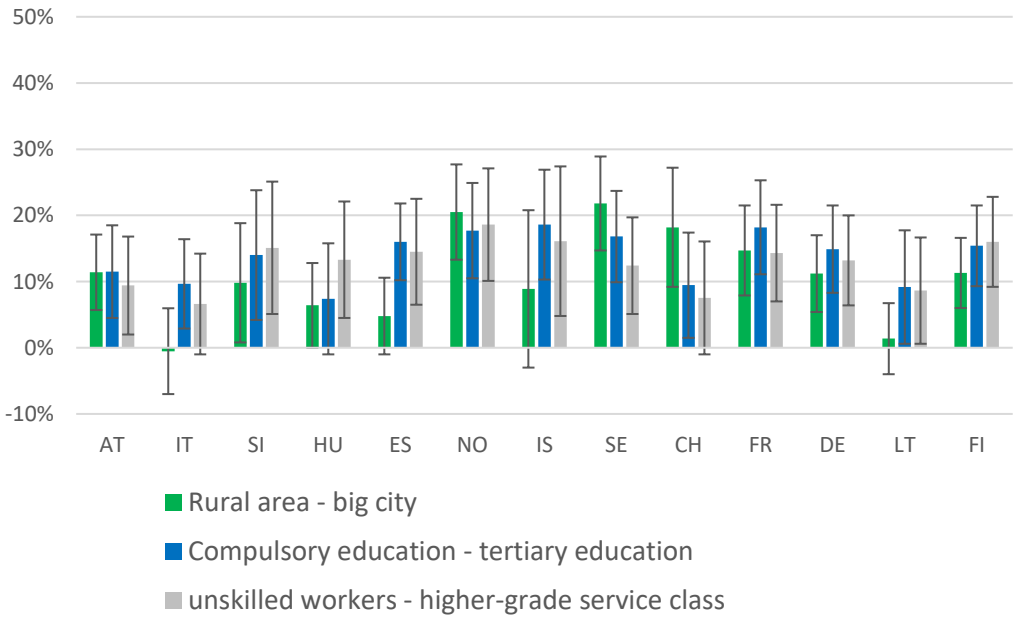
Figure 5.5. Differences between groups in the probability of opposing higher taxes by country, with 95% confidence intervals (gender, age groups and weights included as controls)

ISSP 2020



*The difference between the higher-grade service class and unskilled workers appears to be oddly inexistent in Spain, but this result is unreliable and probably due to the small sample of respondents in this last category, as it is not true if we consider the skilled workers (+6 percentage points).

ESS 2016



5.9. Replication: the willingness to pay higher prices to protect the environment

Finally, it could be argued that the differences highlighted between spatial and socio-economic groups reflect differences in attitudes towards taxation in general, rather than differences in willingness to pay taxes for environmental protection in particular. In a final set of analyses, we therefore reproduce our models with an alternative dependent variable, the willingness to pay higher prices (instead of higher taxes) to protect the environment, which is available in the ISSP 2020 data. This option is relatively less controversial, with only 35% of citizens opposing it. However, even in this case, the opposition does not disappear when all those who are not environmentally sensitive are excluded, as 23% of environmentally sensitive respondents are not willing to pay higher prices (see Figure D.3 in the Appendix D for results by country).

The differences between socio-economic groups are somewhat smaller here than in the analyses of willingness to pay higher taxes to protect the environment. This is counterintuitive, as the less affluent might expect taxes to be at least partly progressive - unlike prices – and it may be related to the specific intolerance of some groups towards taxes.

Only spatial differences appear to be less important compared to previous models (rural dwellers are only 4 percentage points less willing to pay higher prices than people living in big cities). The analysis of individual countries shows that this masks a great deal of variation between countries: urban-rural differences are indeed relevant in some cases, such as Hungary, Sweden, Germany, Lithuania, Finland and perhaps France, but are insignificant or negligible in the other countries studied (see Figure D.5 in the Appendix D for the results by country).

5.10. Conclusion and discussion

In this paper we analyse the relationship between spatial and social stratification and willingness to pay for environmental policies. Based on two different large scale comparative surveys (ISSP 2020 and ESS 2016) from 13 European countries, we show that there are consistent differences between socioeconomic groups. We use several indicators of socioeconomic position - education, class, household income - and they all point to the fact that the least privileged groups of society are much less willing to pay higher taxes to protect the environment or mitigate climate change. This finding is observed for all the countries studied, and is also visible when using an alternative dependent variable based on a question asking people whether they would be willing to pay higher prices to protect the environment.

These findings are consistent with previous literature on socio-economic differences in support for carbon taxes (Arndt et al., 2023; Levi, 2021). While these previous studies focus only on a specific policy, our analyses show that less privileged citizens are less willing to pay for environmental protection even when asked more generally about it. Moreover, we illustrate the size of the differences between socio-economic groups, without controlling for intermediate factors such as political attitudes, which introduce a collider bias and hide part of the story. Even if group differences appear generally larger in ISSP data than in ESS data, a difference of 13 percentage points in terms of probability of opposing higher taxes to protect the environment (or higher taxes on fossil fuels to reduce climate change) is observed between the highest and lowest quintiles of household income in both surveys.

Our analyses also partially confirm the existence of relevant urban-rural differences in support for environmental policies (e.g. Arndt et al., 2023; Douenne & Fabre, 2020; Ewald et al., 2022; Robert Bonnie, 2020). At the aggregate level, this spatial divide is associated with almost 10 percentage points difference in citizens' attitudes towards environmental taxes in both datasets. We show that by combining the social and the spatial hierarchy, we get a more

complete picture of political support among different groups in Europe. It is not the upper-middle class *per se* that is most willing to pay for environmental policies, but the upper-middle class specifically living in large cities.

However, we also show that the urban-rural divide is not the norm in every country, as in some countries we do not find significant differences between the inhabitants of different types of place. Our paper does not get into the complex task of trying to explain the variation across countries, but calls for more country-specific studies that could also consider other dimensions of the spatial hierarchy.

We further contribute to the knowledge on environmental policy support by showing that these differences are only partially explained by the different levels of environmental concern or different beliefs about climate change across the social hierarchy. As suggested by others (e.g. Arndt et al., 2023; Fairbrother, 2022), environmental concern and support for environmental policies are two different concepts, and individuals' socio-economic conditions shape their willingness to pay for environmental protection, even beyond environmental values. This has important implications for public policy, as it means that raising awareness of climate change is not enough to make the most vulnerable people willing to contribute through personal costs. Environmental policy-makers cannot seek public consensus without also addressing social inequalities, or at least providing progressive compensation.

Finally, it must be acknowledged that our study analyses respondents' stated intentions to contribute to environmental protection through personal costs, but does not look at their actual behaviour. Many people who say they are willing to pay to protect the environment may in fact be influenced by a sense that this is the most desirable response. This also applies to people at the top of the social hierarchy who may actually oppose environmental policies when faced with concrete interventions that impose costs on them. This is illustrated by the map of the results of the referendum on increasing the price of parking for SUVs in Paris in early 2024:

the richest neighbourhoods, where most SUV owners live, were the ones where opposition was strongest. In parallel, a study in Milan on the consequences of banning polluting cars - which are not necessarily large, but rather older - found that those who had to pay extra costs as a result of this policy were more likely to vote for the right-wing populist party Lega in the following elections, regardless of their views on environmental issues (Colantone et al., 2024). More research based on real-life case studies rather than survey data would help to understand whether concrete environmental policies systematically face opposition from the target groups that bear their costs, regardless of the socio-economic characteristics of these groups and their a priori stated willingness to pay for environmental protection. In any case, this hypothesis would once again underline the importance of redistribution in the design of environmental policies.

6. Conclusion

This thesis contributes to a better understanding of the social and spatial stratification of political discontent in Europe. It tests the hypothesis that the working class has been characterised by growing discontent in recent decades, and the hypothesis that this has occurred particularly in the more peripheral areas of countries, i.e. in rural areas and small towns, rather than in large cities. These hypotheses were examined in four empirical studies which shed light on different aspects of the social and spatial stratification of political grievances.

The four studies are based on large cross-national survey data and examine differences between groups on several indicators, notably subjective social status, satisfaction with democracy and willingness to pay for environmental protection. The analyses take a historical perspective: where possible, not only current differences are analysed, but also their evolution over recent decades.

The first study (chapter 2) tested the hypothesis that the subjective social status of the working class in Europe (and the United States) has declined in eight countries between 1987-2017. Our results reject the hypothesis of a decline in subjective status of low-skilled and skilled workers both in absolute terms and relative to the upper-middle class. Workers' status does not appear to have declined, either in absolute or relative terms, and also not more in some countries than in others. We only find some decline in workers' perceived status mobility in relation to their fathers, probably as a consequence of the rapid occupational upgrading from which the parental generation had benefited. The subjective status of the working class was already at the bottom of the social hierarchy in the 1980s and 1990s and could hardly have fallen any further.

What does this mean for the status loss narrative? Our findings cast doubt on this argument as an explanation for the success of radical right populist parties. It does not seem that workers today see themselves as receiving less social recognition than they did a few

decades ago. Rather, the nostalgic bias - the idea that the past was better - may be a constant in the history of our societies.

We then moved on to chapter 3 to examine the spatial stratification of subjective social status in Germany, a federal state with a recent history of division and reunification, and France, a highly centralised country. Following the "places that don't matter" argument (Rodríguez-Pose, 2018), we analysed whether subjective status differs between places within the same country and whether these differences have increased over the last two decades.

Overall, we find a decreasing subjective status in both countries: in France, this general decline concerns the whole period studied, while in Germany we see it only after 2016. However, our results on spatial inequalities tend to contradict our hypothesis. In Germany, inequalities between places in terms of subjective social status are negligible throughout the period. Only the difference between the western and eastern regions is marked, but it is decreasing. In France, although the differences between cities, towns and rural areas and between regions are large and follow the expected patterns, they do not seem to have increased in recent decades. On the contrary, the differences between regions have narrowed, as have those between urban and rural departements. It is only when we look at a self-assessed variable indicating the type of place where people live that we see a slight decline in the subjective status of rural areas and suburbs in the very latest period after 2013.

On the one hand, these results reveal the heterogeneity of spatial stratification between the two countries studied and highlight the importance of looking at individual countries. On the other hand, they weaken the narrative of growing political discontent in the periphery. We find no evidence of a sense of being left behind among these communities. The recent popularity of right-wing populist parties in rural France and the spread of the Yellow Vest protests in the same areas may rather be due to the successful mobilisation of long-established

spatial hierarchies and griefs. And in both countries, some latent generalised discontent may have been skilfully mobilised by the radical right in some areas more than others.

However, the striking heterogeneity between the two countries in terms of urban-rural differences calls for a more in-depth analysis of this dimension of spatial stratification. Therefore, we moved on to focus specifically on the urban-rural dimension of spatial stratification in Europe in chapter 4. For 19 European countries, it analyses differences between places in political discontent, as measured by satisfaction with democracy, over the period 2002-2020.

We find that urban-rural differences are small over the whole period, especially when compared with differences between socio-economic groups defined by education, social class or household income. Urban-rural gaps are also fairly stable over the period, with the only significant trend being an increase in satisfaction with democracy in the suburbs of large cities. It is true that in some specific countries, such as France or the Nordic countries, urban-rural differences are greater than in the others, and that in some cases other dimensions of spatial stratification may be more important (such as the East-West divide in Germany or the regional differences in Spain). Nevertheless, our results cast doubt on the argument of a generalised growing resentment in the more peripheral areas of European countries.

However, this does not mean that the historical divide between progressive cities and more conservative rural areas no longer exists. Moreover, the urban-rural divide may be relevant in shaping other types of political attitudes.

The spatial stratification of political attitudes does indeed appear to be relevant when we consider support for environmental policies, one of the most compelling issues in contemporary politics. In the last empirical study (chapter 5), we examined how willingness to pay for environmental protection varies across social and spatial stratification in 13 European countries. Our results show that both dimensions of stratification are important in predicting the outcome

variable, over and above group differences in climate change beliefs and environmental concern (although in some countries, such as Italy, Hungary or Iceland, no urban-rural differences are observed). Social and spatial stratification intersect: overall, the people most likely to support this type of policy are not only those belonging to the upper-middle class, but more specifically the upper-middle class living in large cities.

Our analyses are of course limited in several ways. One possible limitation is the way in which subjective social status is measured in the surveys used. It is measured by a single item that asks respondents to place themselves on a scale, without explicitly asking them to compare themselves with particular groups. However, the status anxiety argument suggests that the political dissatisfaction of a particular type of citizen - typically white, working-class men - stems from their perception that other groups - typically women and minorities - have improved their social standing (Gidron & Hall, 2019; Hochschild 2016). A question that explicitly asks people to compare their status with that of these groups may be better suited to capturing this perception. Unfortunately, such a question is not currently available in any major international database, but its inclusion in a new data collection would be very helpful in further developing the analyses presented in this thesis.

Another limitation is that we cannot take account of internal migration in our data. Changes (or stability) in attitudes in some places may be partly due to some people leaving or new people moving in (for example, higher status people moving out of some rural areas to find a suitable job and lowering the average subjective status there). Only the use of longitudinal data, following the spatial trajectories of individuals, would help to identify the contribution of internal migration to the observed trends in different places (Maxwell, 2019). However, these developments are still part of the general trends that characterise places (the attractiveness of a place for certain groups can be the cause of their migration, which in turn contributes to making

the place economically and demographically dynamic and more attractive) and it would be a mistake to think that we need to eliminate them in order to see the "real trends".

More generally, interpreting the analyses on spatial dynamics is not straightforward. Different types of mechanisms could explain the link between a place and the attitudes of the people who live there, such as a place's characteristics in terms of infrastructure or service provision, its socio-economic composition - both of which are likely to change over time -, but also its historical legacy, specific events that have happened there, or even its distance from other places. Disentangling these mechanisms empirically is difficult and not always possible. Nevertheless, we believe that describing the differences between places already contributes to our understanding of spatial inequalities in terms of political discontent and should not be discarded.

Other limitations of the empirical studies in this thesis relate to the specificities of survey data. First, the large surveys used are designed to be representative at the national level, but not necessarily at the regional level or by the type of place. We try to partially mitigate this limitation by always relying on large samples, using data from many years whenever possible. Another challenge was the categorisation of urban and rural locations.

Another challenge was the categorisation of urban and rural locations. When analysing survey data, we have limited access to objective information on the location of respondents. In most cases we only know where they live based on the international classification NUTS 1 (or at best NUTS 2). In most countries, this classification corresponds to regions that are too large to be classified as urban or rural as a unit. We then have to rely on a self-assessed variable based on how respondents define the place where they live (as a big city, the outskirts of a big city, a small city, a village or a house in the countryside). These categories may be interpreted differently by different people, leading to an imprecise measure. However, they also allow for flexible interpretation between countries with different urbanisation structures, compared to

standardised categorisations based on the number of inhabitants of municipalities. "Big city" cannot mean the same size in Germany, where three cities - Berlin, Hamburg and Munich - have more than one million inhabitants and nine others have more than 500,000 inhabitants, and in Switzerland, where no city reaches this size.

Overall, our analyses contribute to an understanding of the social and spatial stratification of new political grievances. They challenge the hypothesis that solely explains the recent success of far-right populist parties with growing resentment in working-class or peripheral communities. The idea that people have started voting for these political forces because they are 'angry' or 'dissatisfied' with the political elite or with their place in the social hierarchy does not seem to tell the whole story. While blaming the corrupt elite is undoubtedly part of the discourse of these parties, we might focus more on understanding how they have succeeded in selling this narrative. The subjective status of workers does not seem to have declined in recent decades, but a discourse centred on the loss of status of certain groups has still been propagated by certain political forces, which may have made 'status issues' politically more salient. A focus on the supply-side of political parties would be helpful to understand how this discourse has been promoted and how it has mobilised voters. On the other hand, we should probably also try to understand the vote of the populist right as a real choice based on values, preferences and morals, rather than a simple manifestation of discontent.

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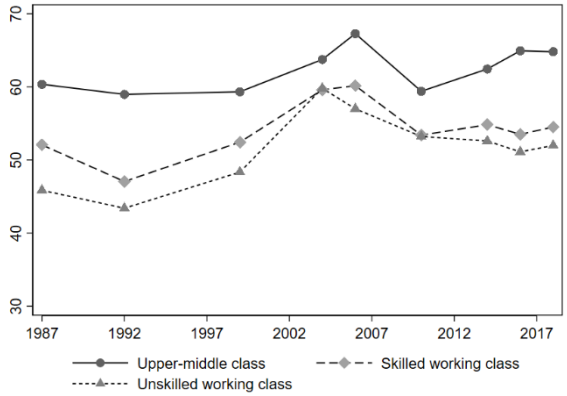
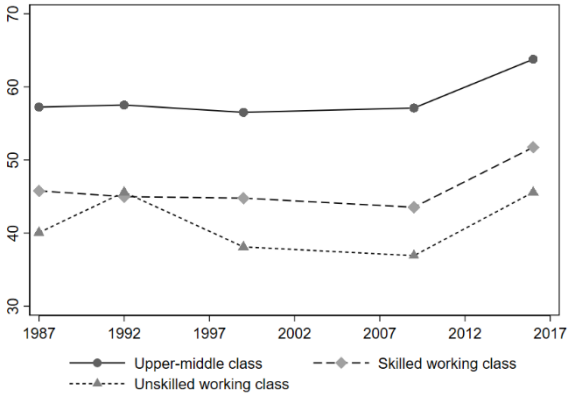
Appendix A (chapter 2)

Figure A.1: the evolution of subjective social status (on a scale from 0 to 100) by social classes

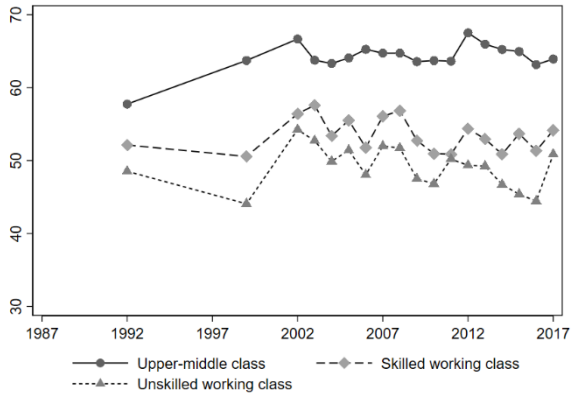
United States 1987-2018



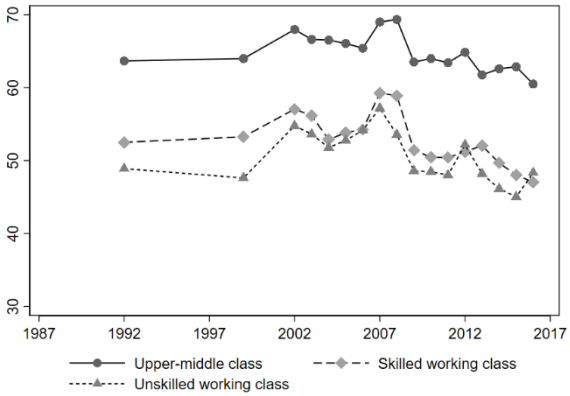
Britain 1987-2016



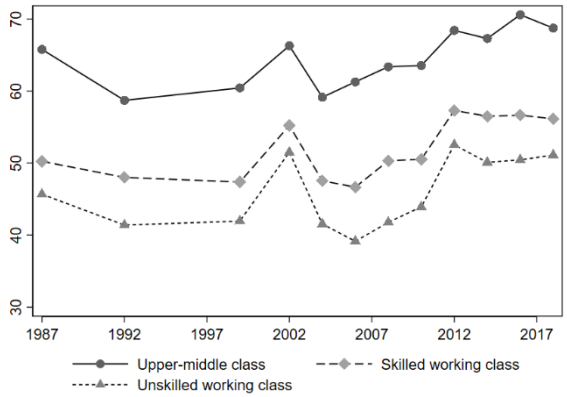
Sweden 1992-2017



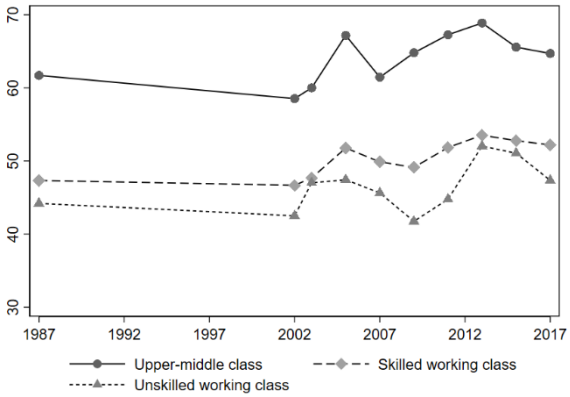
Norway 1992-2016



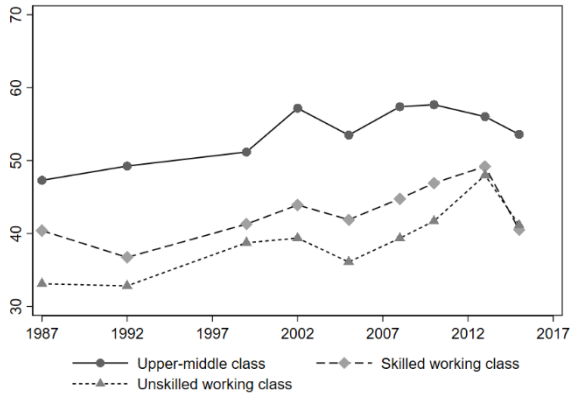
Germany 1987-2018



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

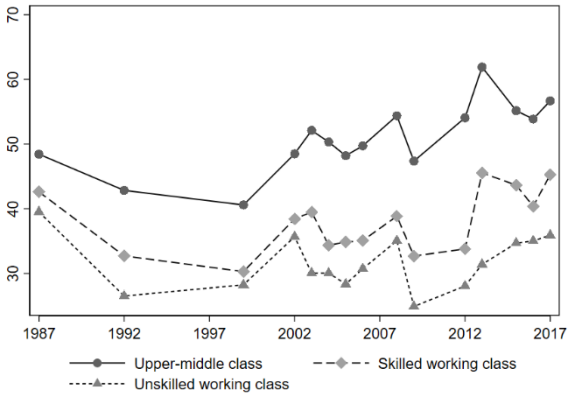
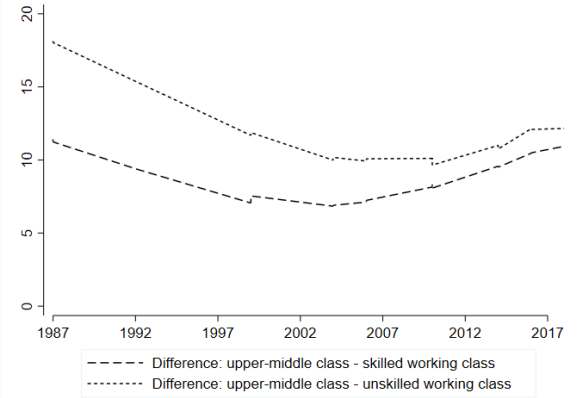
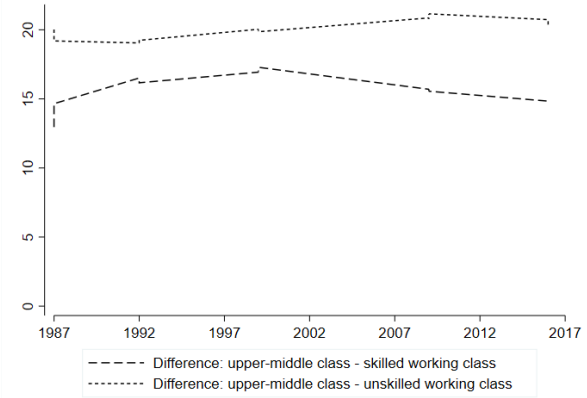


Figure A.2: the class gap in subjective social status (on a scale from 0 to 100), men only

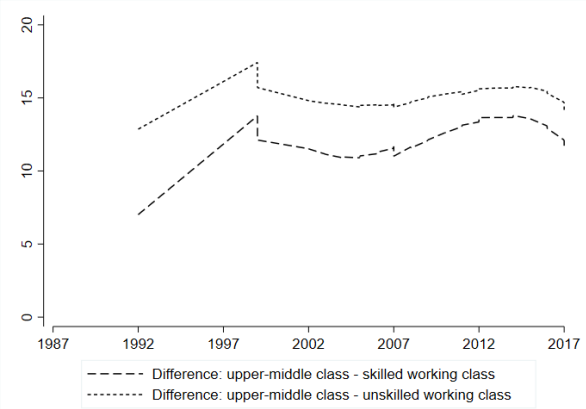
United States 1987-2017



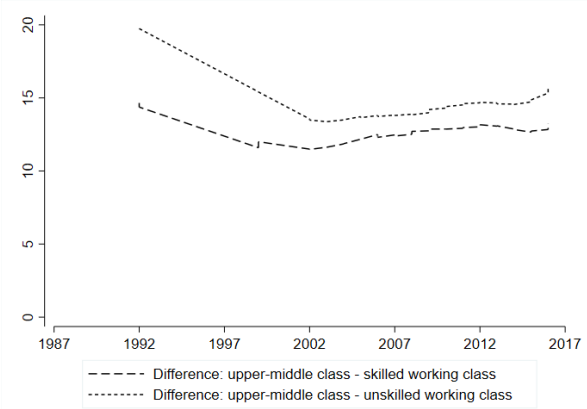
Great Britain 1987-2016



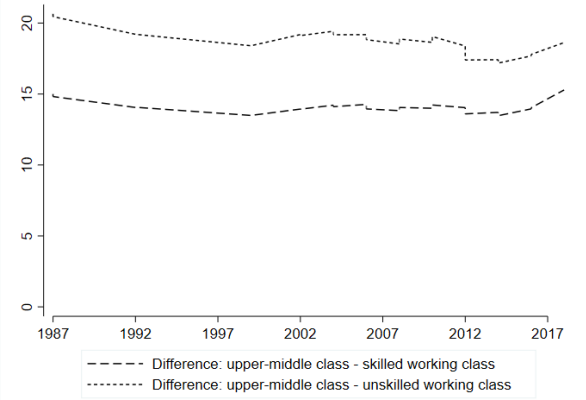
Sweden 1992-2017



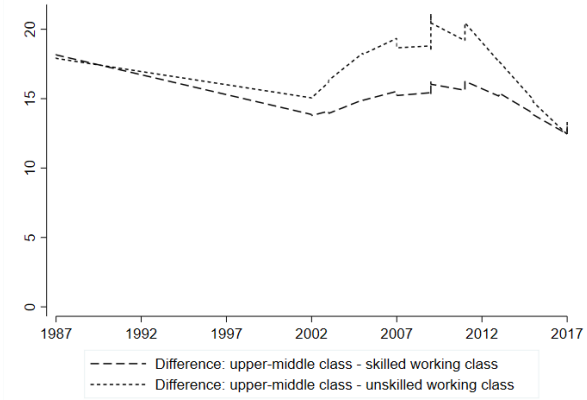
Norway 1992-2016



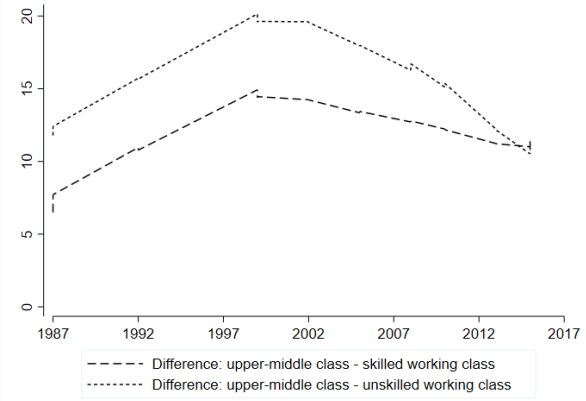
Germany 1987-2017



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

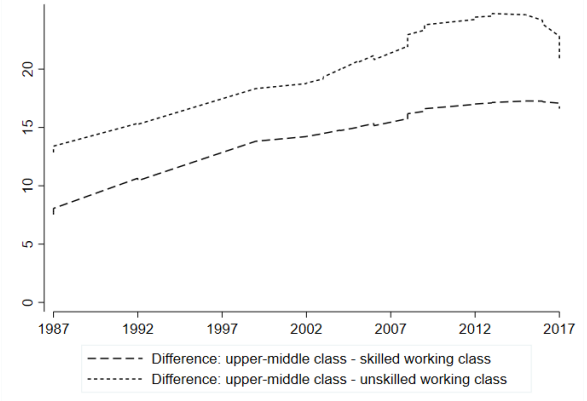
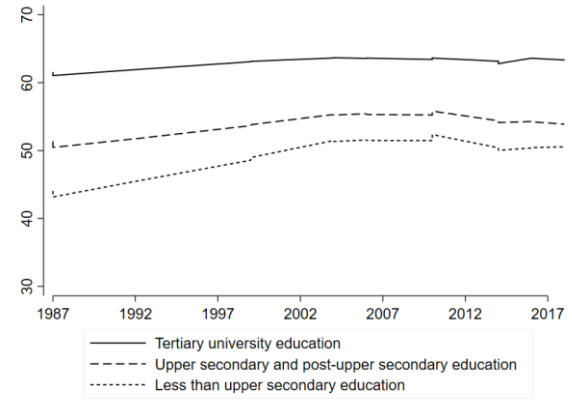
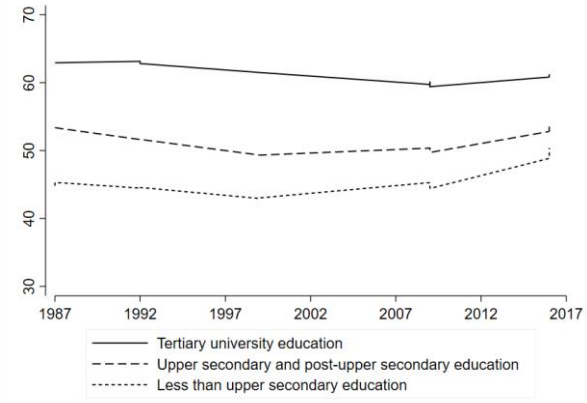


Figure A.3: the evolution of subjective social status (on a scale from 0 to 100) by education

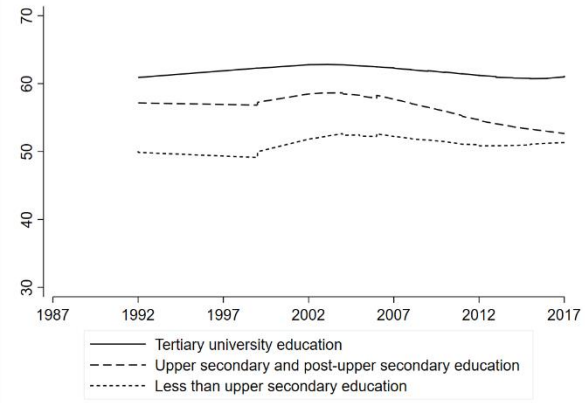
United States 1987-2018



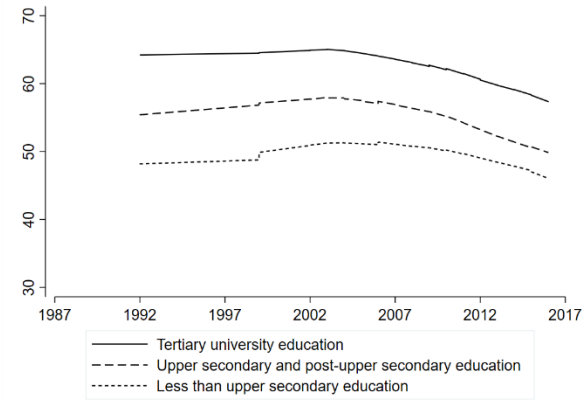
Britain 1987-2016



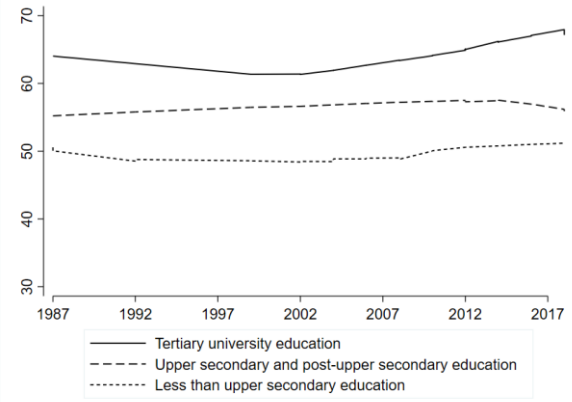
Sweden 1992-2017



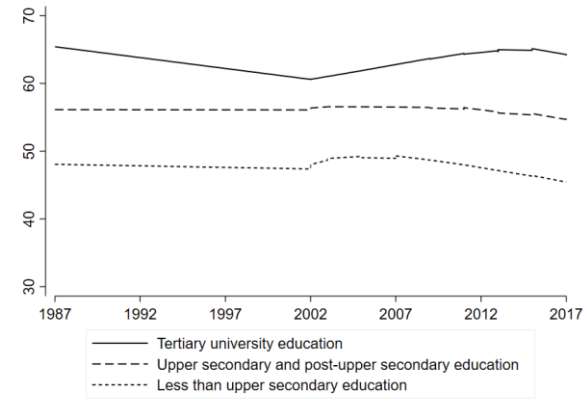
Norway 1992-2016



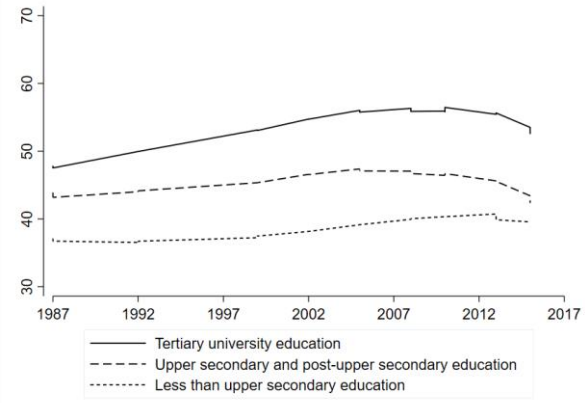
Germany 1987-2018



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

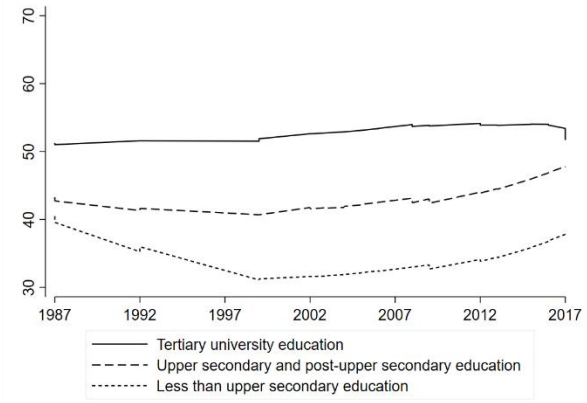


Table A.1: number of observations with non-missing values in analytical sample of ISSP data rounds (ages 20-60)

	1987	1992	1999	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
CH	703	-	-	637	682	-	715	-	643	-	808	-	792	-	844	-	817	-	721	-
DE	749	2,238	834	885	-	1,652	-	1,961	-	1,968	-	1,724	-	2,126	-	2,163	-	2,031	-	1,036
GB	866	727	500	-	-	-	-	-	-	-	596	-	-	-	-	-	-	850	-	-
HU	1,902	850	803	644	611	659	639	645	-	699	744	-	-	602	688	-	669	710	717	-
NO	-	1,032	937	1,069	1,085	1,023	1,016	944	817	725	1,016	877	1,221	942	1,005	893	973	756	-	-
PL	3,223	1,201	583	845	-	-	858	-	-	833	-	844	-	-	704	-	1,129	-	-	-
SE	-	558	787	682	761	833	903	769	836	782	733	718	647	592	623	544	671	614	619	-
US	1,110	899	858	-	-	906	-	1,094	-	-	-	2,006	-	-	-	1,711	-	1,898	-	760

Table A.2: Descriptive statistics of variables in analytical sample of ISSP data rounds (ages 20-60)

	CH	DE	GB	HU	NO	PL	SE	US
Subjective social status (mean from 0 to 100)	54.7	54.4	49.8	39.6	57.4	43.2	56.6	56.2
Subjective social status relative to father (mean from 0 to 100)	61.3	57.1	57.6	62.5	54.7	60.9	52.7	56.8
Social class (in %)								
Upper-middle class	21.8	15.5	24.1	10.5	24.5	11.3	22.4	21.9
Lower-middle class	24.5	23.0	12.0	14.9	26.2	16.5	24.0	18.1
Small business owners	9.8	6.7	7.7	6.8	7.3	17.5	7.2	8.5
Skilled working class	31.6	39.8	34.6	42.6	30.5	37.3	27.7	31.7
Unskilled working class	12.2	15.0	21.7	25.2	11.5	17.5	18.8	19.8
Education (in %)								
Less than upper secondary education	40.7	49.9	51.9	51.9	19.2	40.8	37.4	11.8
Upper secondary education	38.0	32.5	29.0	38.0	39.4	41.7	26.9	60.0
University tertiary education	21.4	17.6	19.1	10.1	41.4	13.6	35.7	28.2
Age (in years)	41.1	41.0	41.1	41.2	41.2	40.2	41.8	40.1
Gender (in %)								
Men	49.6	49.3	44.7	45.5	47.2	46.8	47.2	45.1
Women	50.4	50.7	55.3	54.5	52.8	53.3	52.8	54.9

Table A.3. Mean subjective social status (1-10) and standard deviation (in brackets) for each social class in some years over the study period.

	1987	1999	2009	2017
Higher-grade service class	5.94 (1.57)	6.01 (1.67)	6.01 (1.57)	6.38 (1.92)
Lower-grade service class	5.45 (1.54)	5.43 (1.62)	5.51 (1.56)	5.86 (1.64)
Small business owners	4.96 (1.85)	5.21 (1.83)	4.95 (1.80)	5.46 (2.00)
Skilled workers	5.02 (1.65)	4.81 (1.80)	4.82 (1.69)	5.20 (1.75)
Unskilled workers	4.56 (1.84)	4.36 (1.93)	4.35 (1.75)	4.79 (1.85)

Table A.4: linear regression on subjective social status (from 0 to 100)

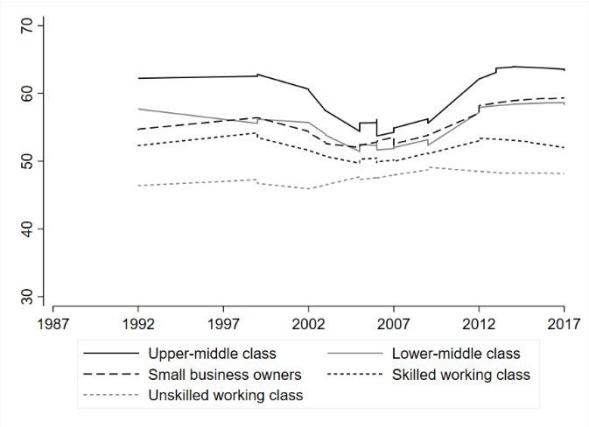
		US	GB	SE	NO	DE	CH	PO	HU
Class	(ref.: Upper-middle class)								
	Skilled working class	-8.89***	-11.62***	-9.34***	-11.04***	-11.90***	-14.18***	-9.04***	-8.53***
		(0.98)	(1.02)	(1.17)	(1.02)	(0.86)	(1.77)	(0.93)	(0.94)
	Unskilled working class	-13.46***	-15.81***	-14.67***	-15.46***	-17.88***	-17.25***	-13.97***	-10.68***
		(1.12)	(1.13)	(1.31)	(1.19)	(1.04)	(2.23)	(1.06)	(0.96)
Years	(ref. : 1987-1999)								
	2000-2005	4.05***		4.30***	3.03***	1.72	-0.50	7.33***	4.43***
		(1.46)		(1.10)	(0.95)	(1.14)	(1.55)	(1.64)	(1.28)
	2006-2011	2.57**	-0.32	4.14***	1.69*	2.74***	2.71*	9.57***	4.63***
		(1.09)	(1.75)	(1.02)	(0.90)	(0.97)	(1.59)	(1.50)	(1.47)
	2012-2017	3.92***	6.39***	4.86***	-1.17	8.67***	4.48***	7.16***	11.52***
		(1.05)	(1.43)	(1.01)	(0.91)	(0.91)	(1.54)	(1.44)	(1.31)
Interactions	(ref.: Upper-middle x 1987-1999)								
	Skilled working class x 2000-2005	4.87**		0.13	-0.78	0.15	1.94	-3.32*	-4.58***
		(2.00)		(1.45)	(1.22)	(1.31)	(2.03)	(1.84)	(1.46)
	Skilled working class x 2006-2011	2.54*	-1.47	-1.64	-0.75	-2.06*	0.16	-2.55	-5.97***
		(1.39)	(2.24)	(1.37)	(1.17)	(1.10)	(2.04)	(1.74)	(1.64)
	Skilled working class x 2012-2017	-0.53	0.04	-2.82**	-2.01*	-0.08	1.01	-2.86*	-6.54***
		(1.35)	(1.89)	(1.38)	(1.20)	(1.05)	(2.00)	(1.69)	(1.46)
	Unskilled working class x 2000-2005	9.76***		2.13	1.79	0.60	2.25	-3.17	-7.92***
		(2.30)		(1.59)	(1.46)	(1.61)	(2.58)	(2.06)	(1.58)
	Unskilled working class x 2006-2011	5.80***	-4.16*	-0.23	1.53	-3.48***	-3.42	-2.51	-9.09***
		(1.57)	(2.43)	(1.51)	(1.41)	(1.32)	(2.57)	(2.03)	(1.75)
	Unkilled working class x 2012-2017	1.77	-2.07	-2.24	0.94	0.20	1.65	1.84	-12.54***
		(1.50)	(2.20)	(1.59)	(1.49)	(1.28)	(2.55)	(1.83)	(1.53)
Male		1.65***	1.91***	0.83***	-0.12	-0.22	0.21	0.89**	0.03
		(0.39)	(0.61)	(0.29)	(0.25)	(0.25)	(0.40)	(0.38)	(0.33)
Age		0.03*	0.06**	-0.08***	-0.02**	-0.04***	0.06***	-0.20***	-0.15***
		(0.02)	(0.03)	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)
Constant		57.49***	53.74***	63.14***	64.79***	61.78***	59.31***	55.58***	51.50***
		(1.04)	(1.37)	(1.03)	(0.92)	(0.92)	(1.57)	(1.10)	(1.02)
Observations		10,501	3,599	12,789	16,409	18,414	7,376	10,223	11,588
R-squared		0.05	0.14	0.10	0.10	0.15	0.12	0.09	0.11

Standard errors in parentheses : *** p<0.01, ** p<0.05, * p<0.1

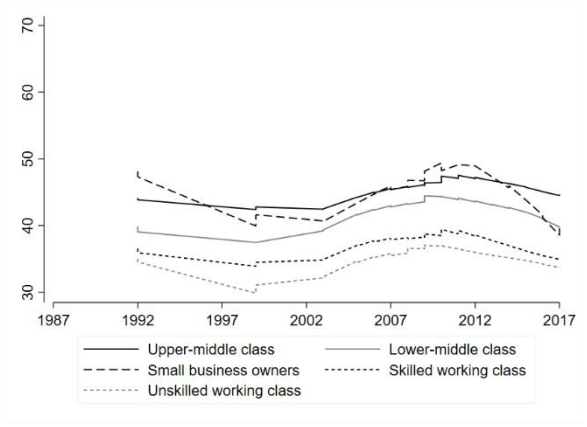
All models include controls for age and gender. For two classes (lower-middle class and small business owners), main effects and interaction effects are not shown.

Figure AW.1. The evolution of subjective social status (on a scale from 0 to 100) by social classes

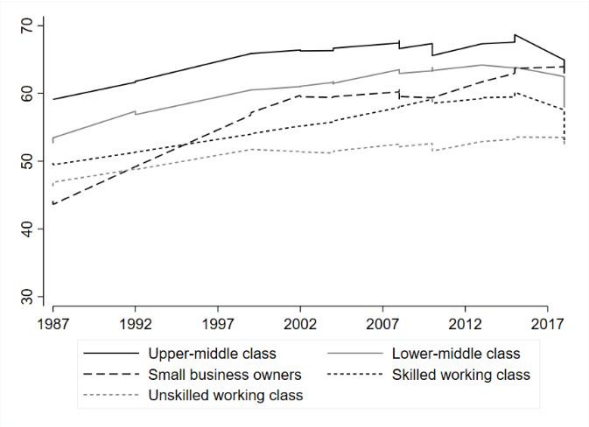
Australia 1992-2017



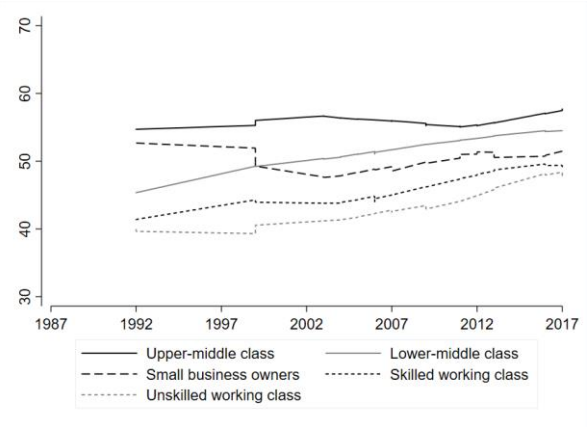
Russia 1992-2017



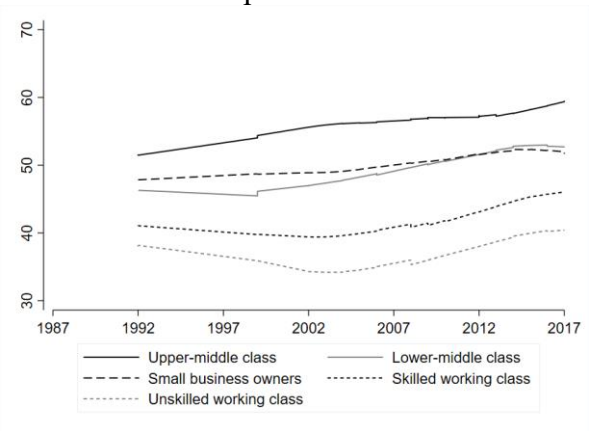
Austria 1987-2018



Slovenia 1992-2017



Czech Republic 1992-2017



Slovak Republic 1992-2017

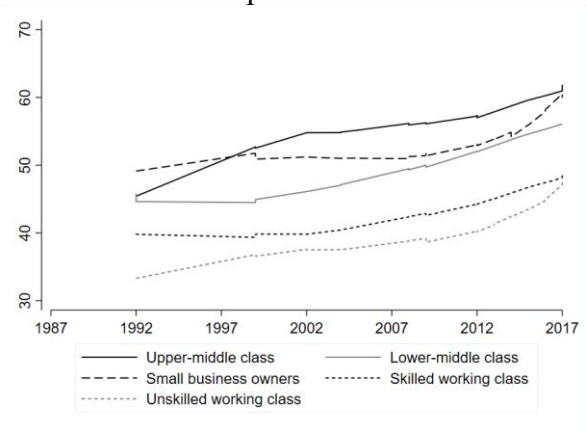
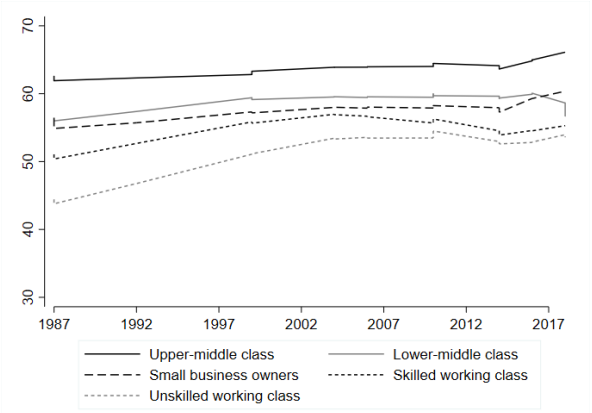
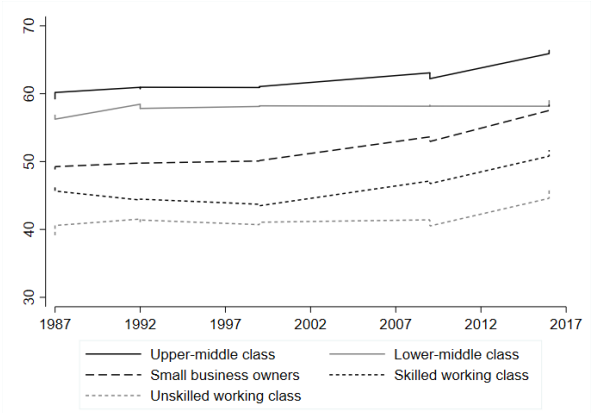


Figure AW.2. Subjective social status (on a scale from 0 to 100) by social class - men

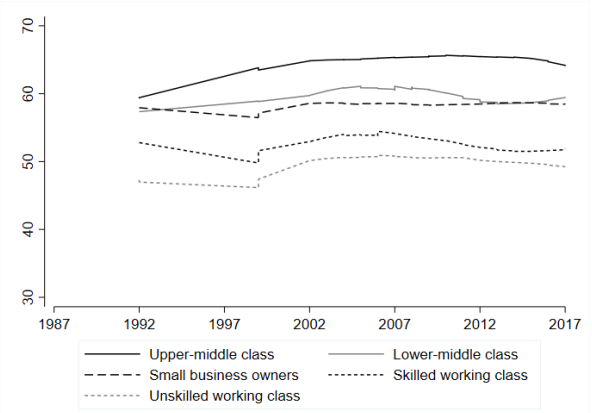
United States 1987-2017



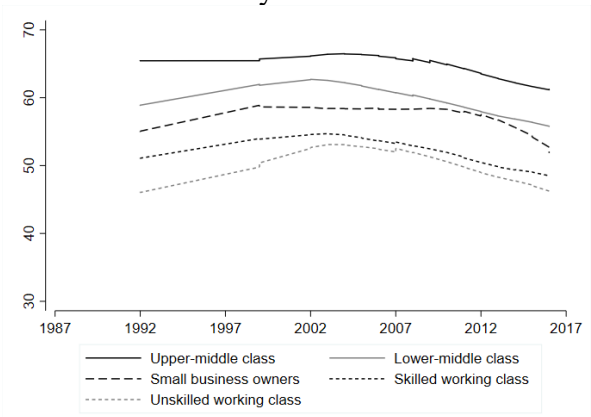
Great Britain 1987-2016



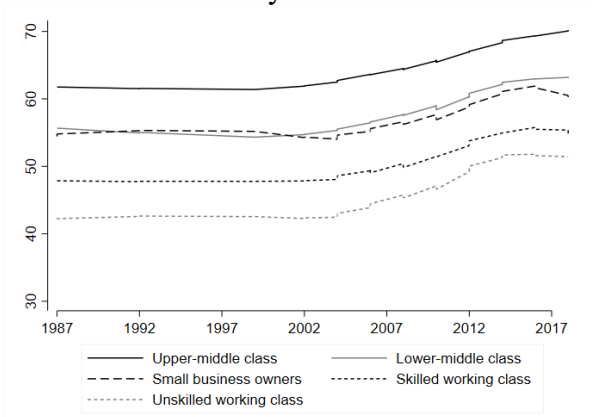
Sweden 1992-2017



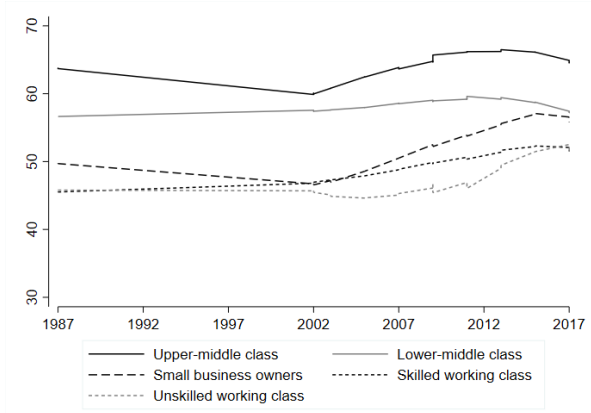
Norway 1992-2016



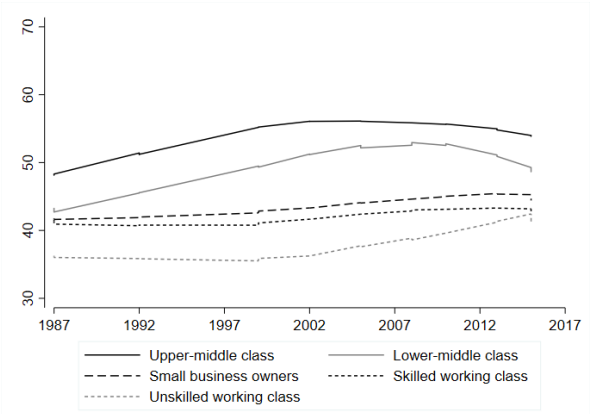
Germany 1987-2017



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

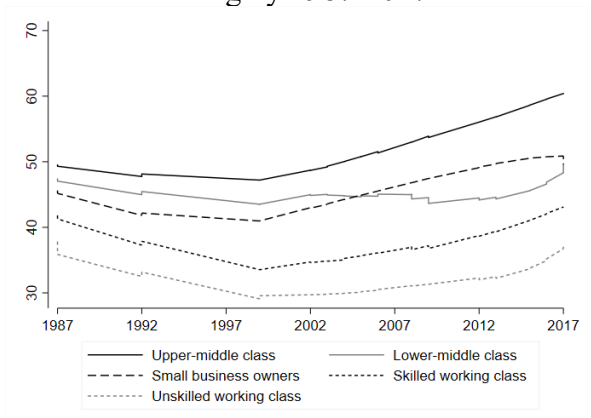
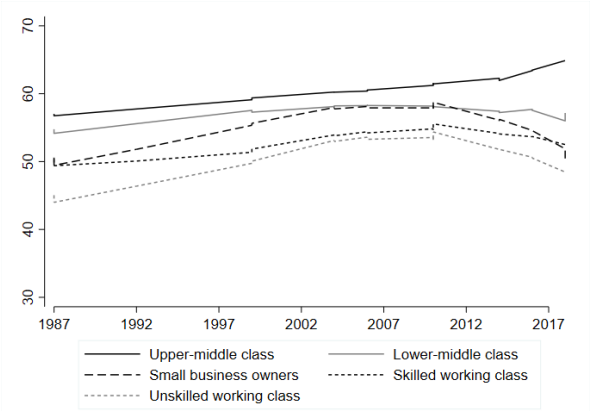
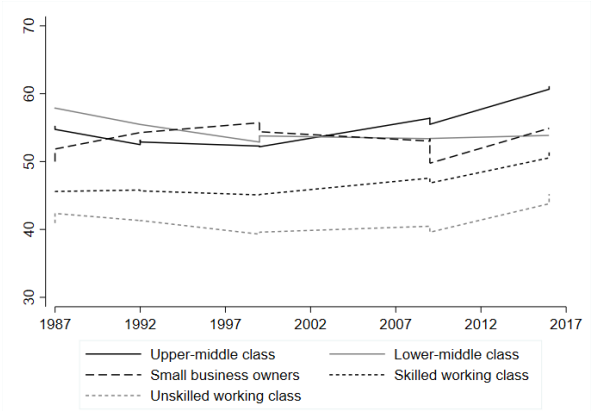


Figure AW.3. Subjective social status (on a scale from 0 to 100) by social class - women

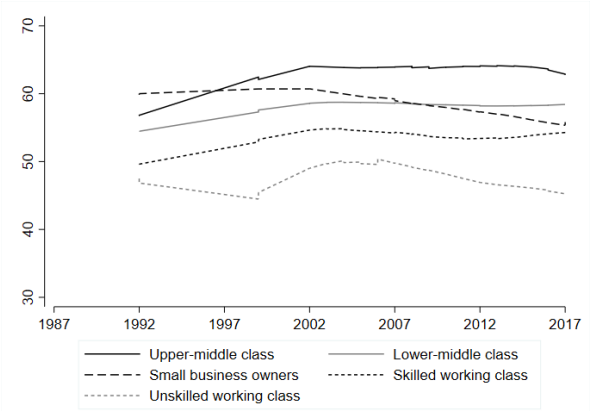
United States 1987-2017



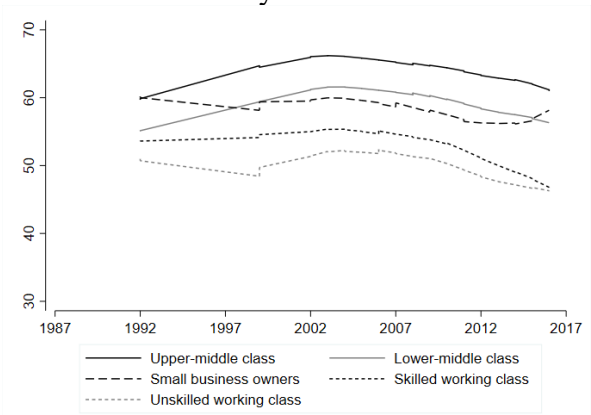
Great Britain 1987-2016



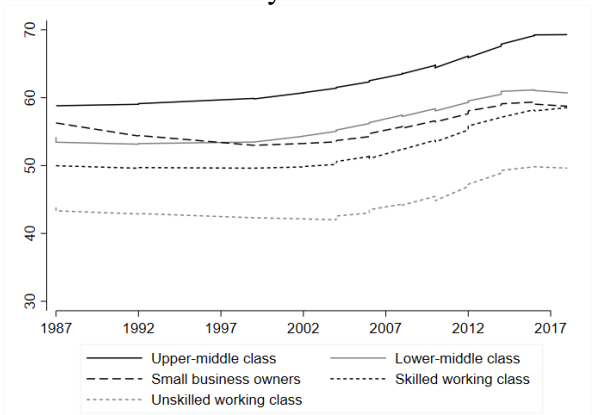
Sweden 1992-2017



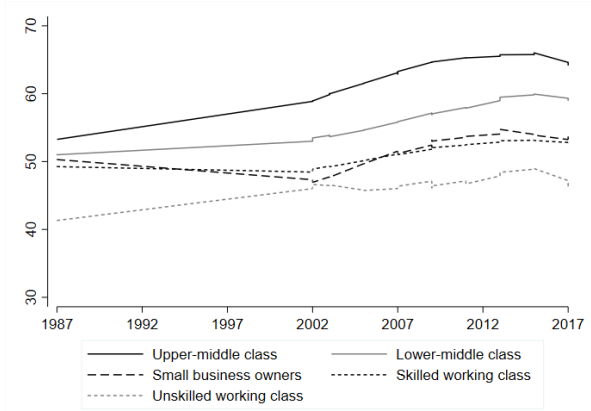
Norway 1992-2016



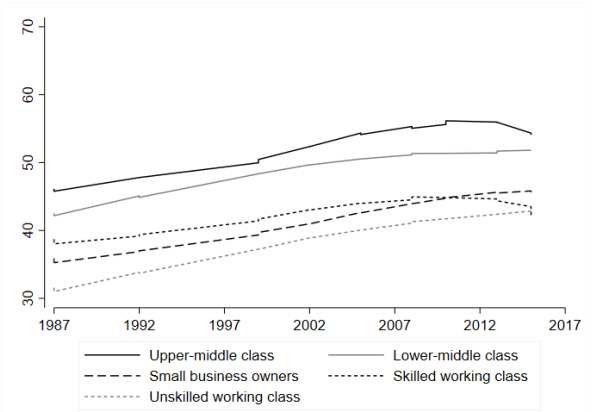
Germany 1987-2017



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

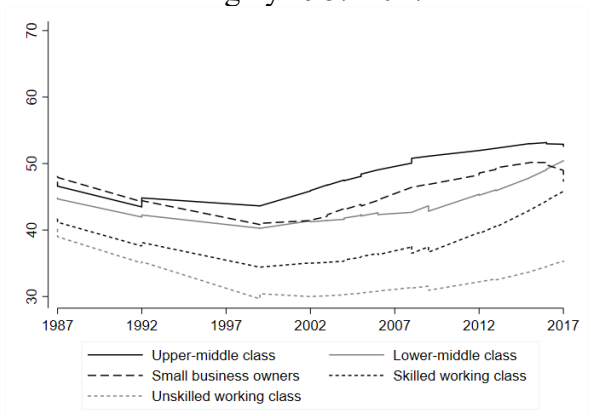


Figure AW.4. Predicted values of subjective status for a man aged 40 in the upper-middle class (with tertiary education) or the unskilled working class (without upper-secondary education)

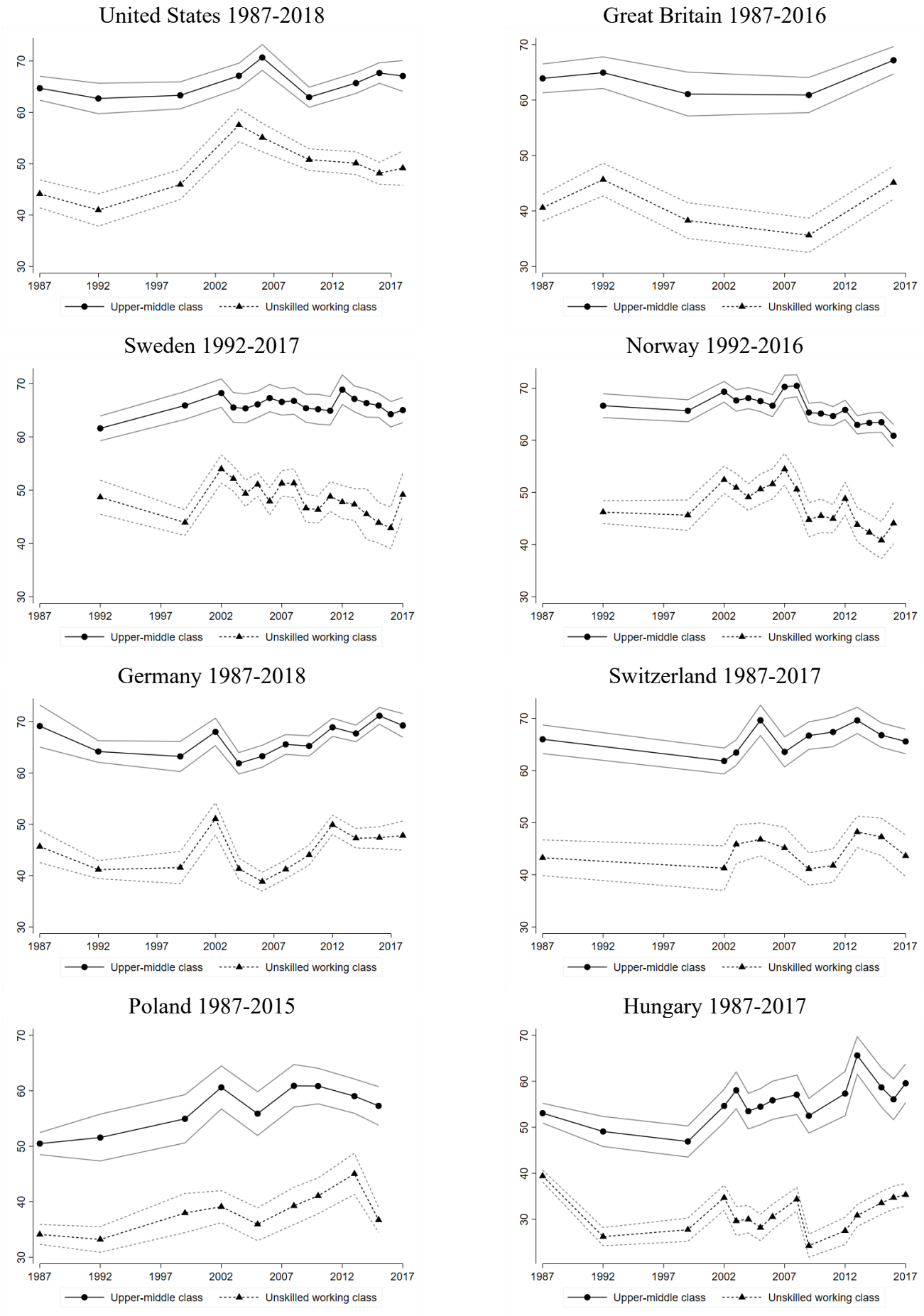


Figure AW.5. Predicted values and confidence intervals of subjective status (0-100) for a man aged 40 for three classes. upper-middle class, production workers or service workers

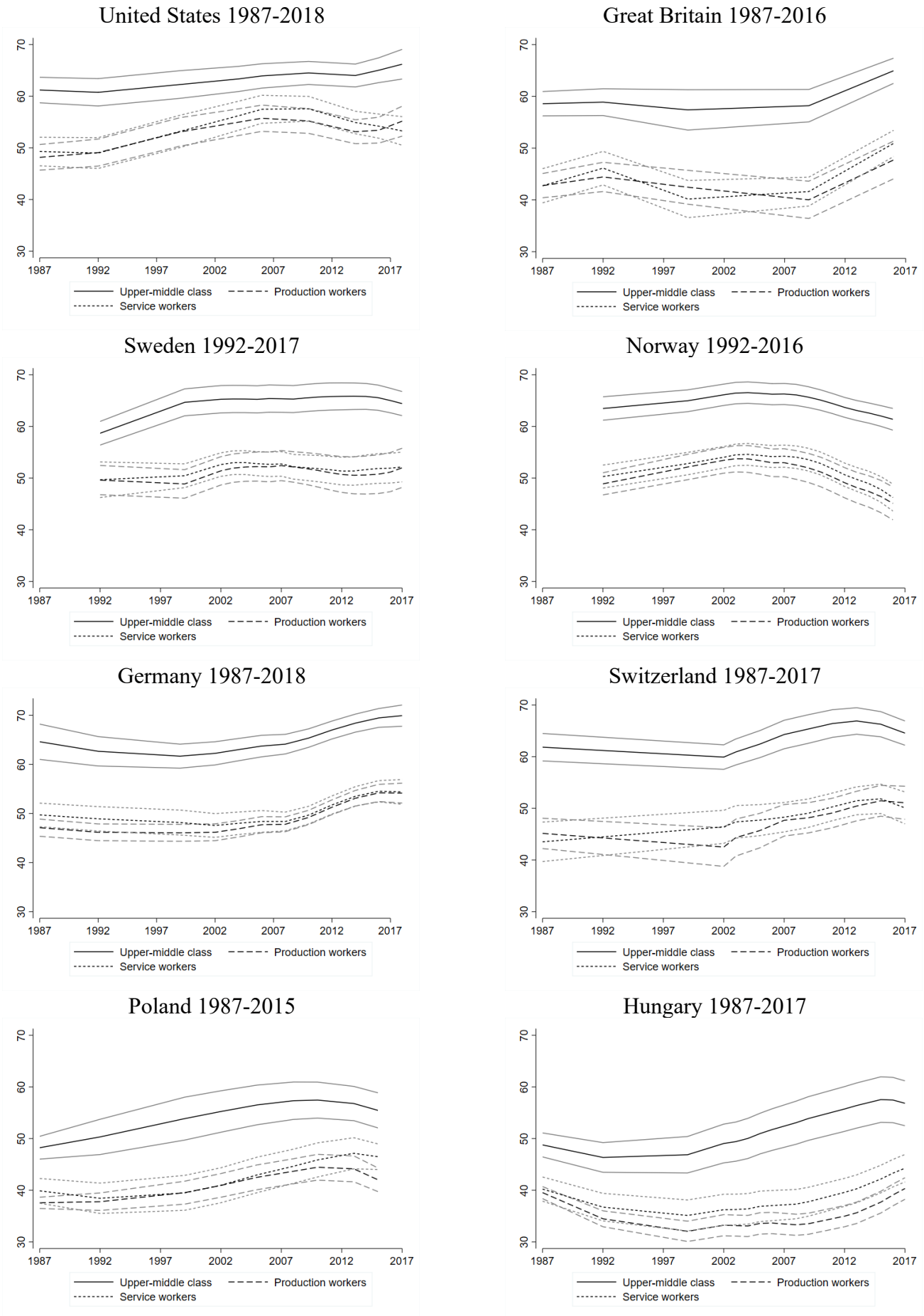
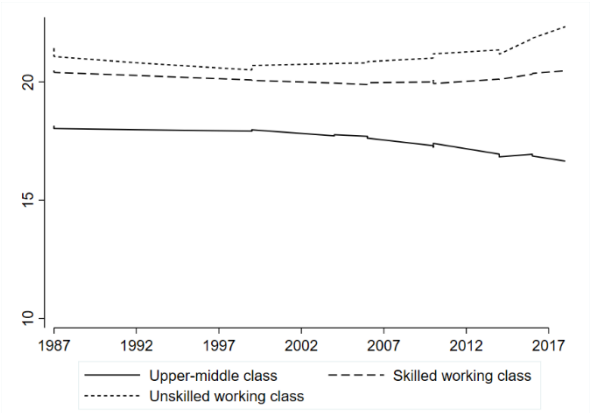
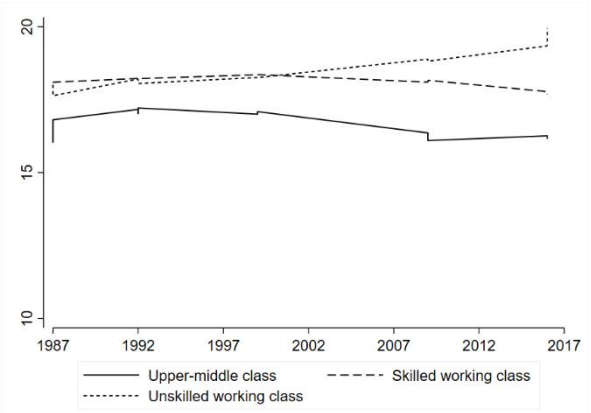


Figure AW.6. The evolution of variance in the subjective social status of three social classes (standard deviation on a scale from 0 to 100, evolution over time smoothened with lowess)

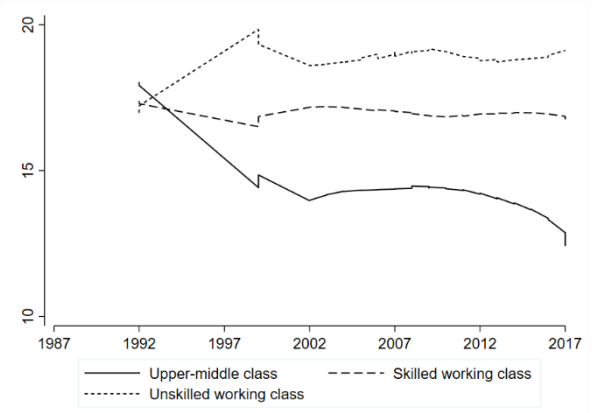
United States 1987-2018



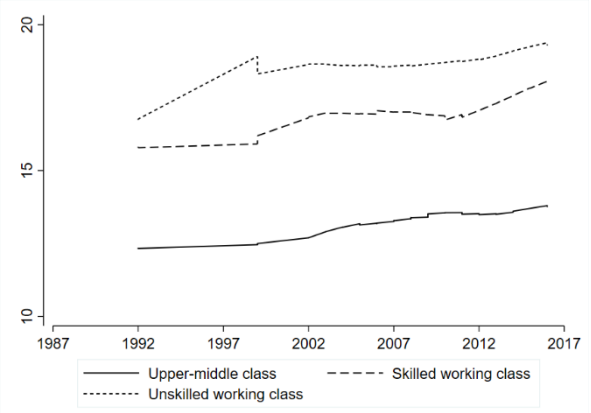
Great Britain 1987-2016



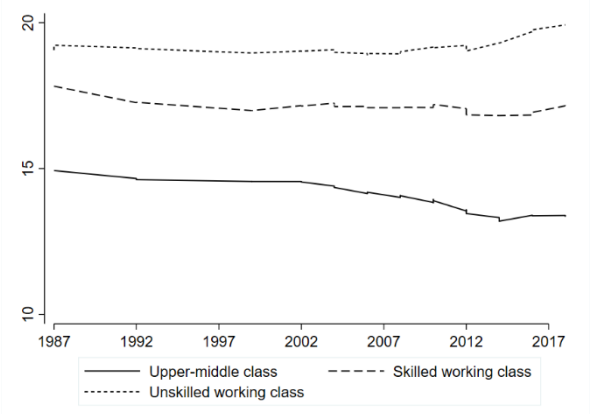
Sweden 1992-2017



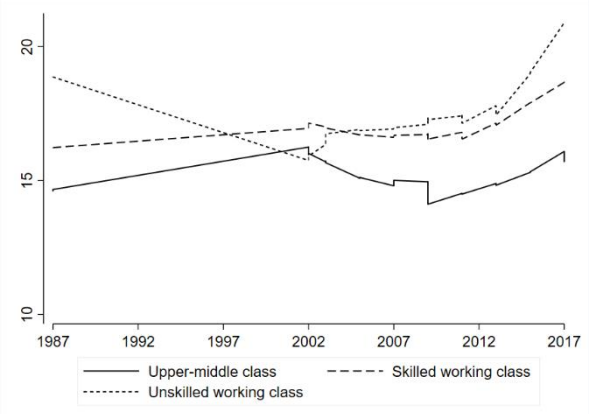
Norway 1992-2016



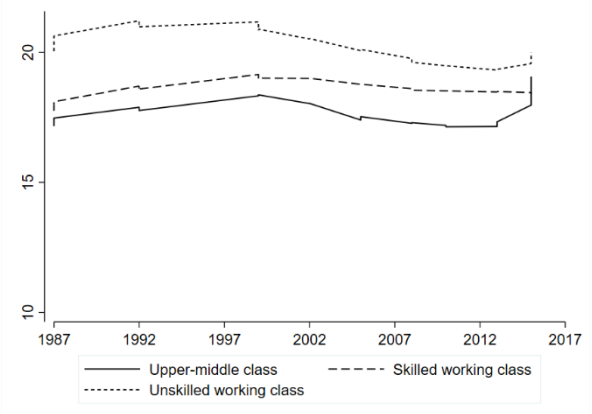
Germany 1987-2018



Switzerland 1987-2017



Poland 1987-2015



Hungary 1987-2017

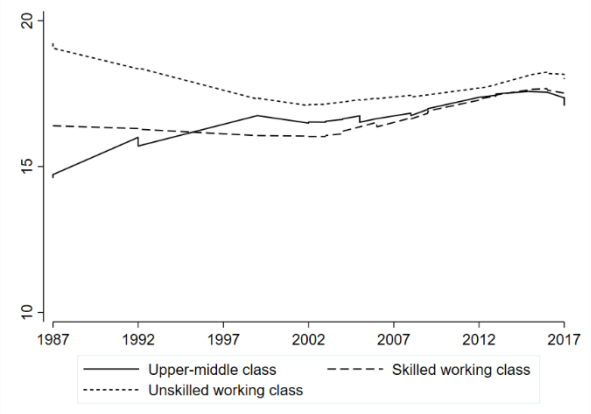


Figure AW.7. Predicted values of life satisfaction (from 0 to 100) for a man aged 40 in the upper-middle class (with university education) or unskilled working class (without upper-secondary education)

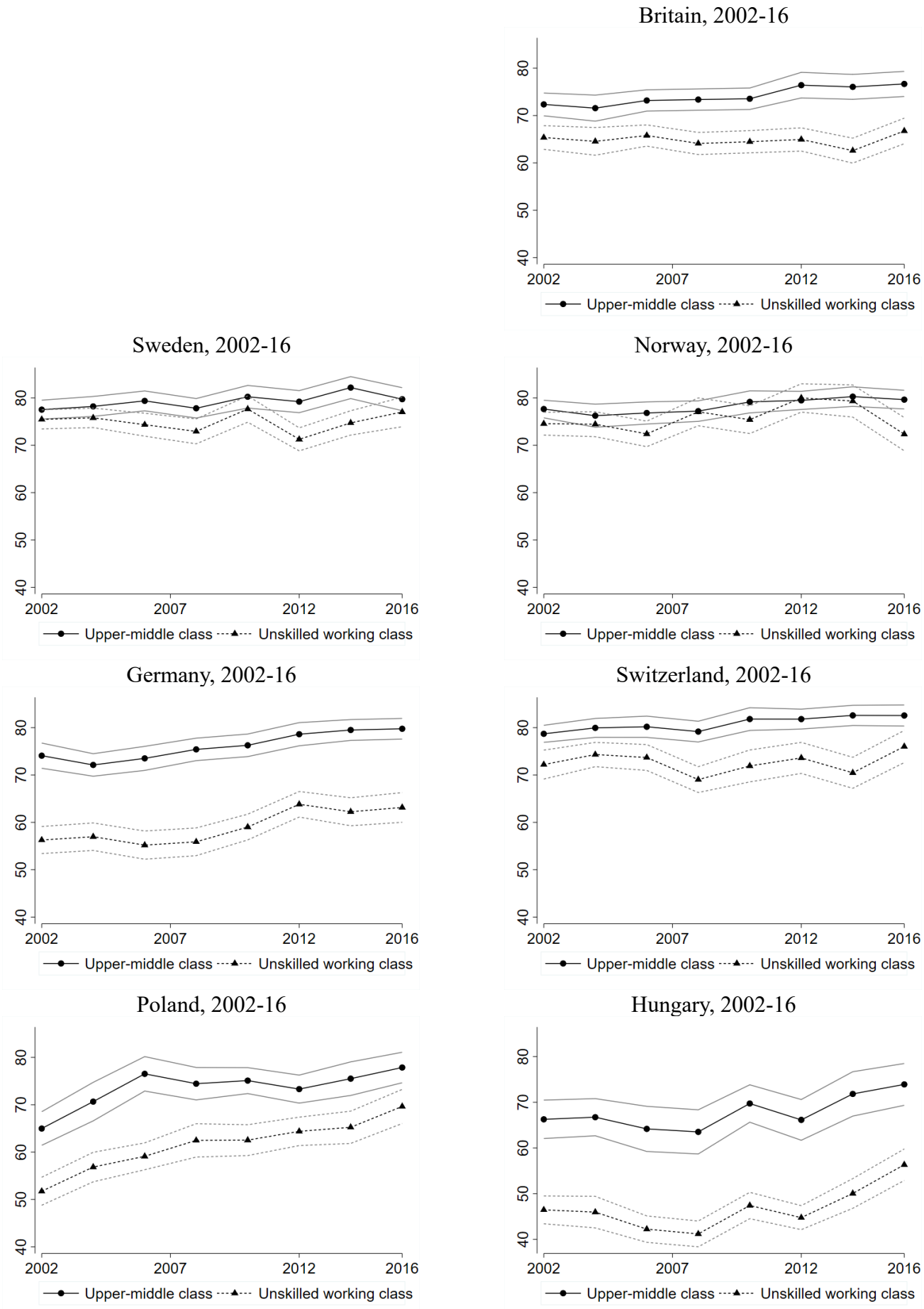
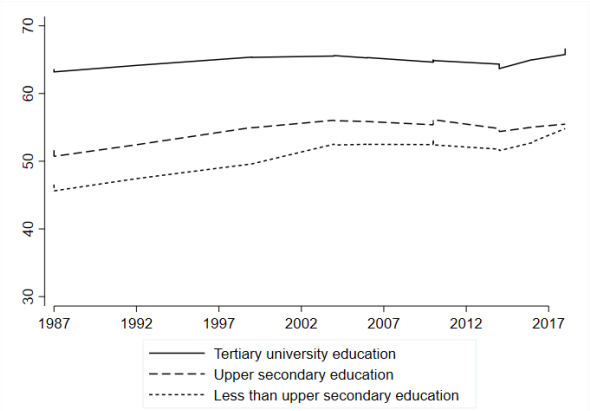
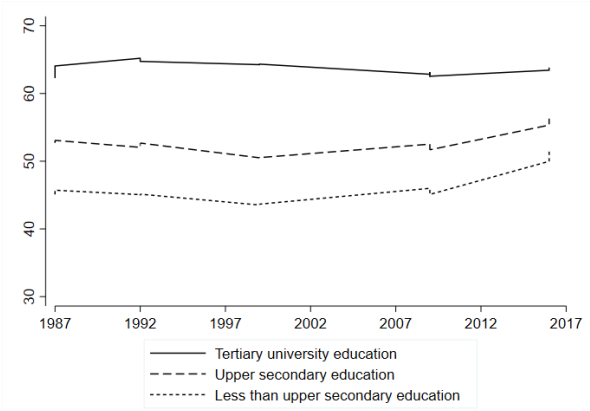


Figure AW.8. Subjective social status (on a scale from 0 to 100) by educational level, men only

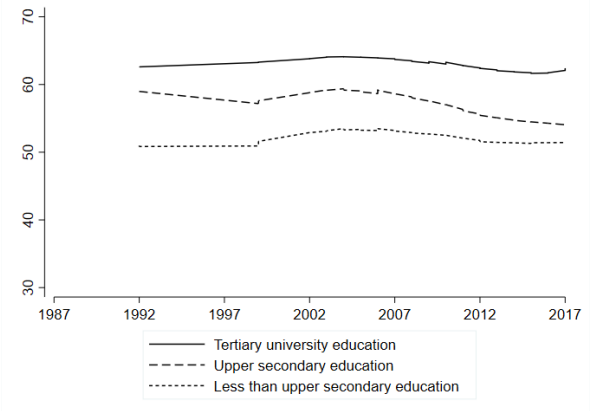
United States 1987-2017



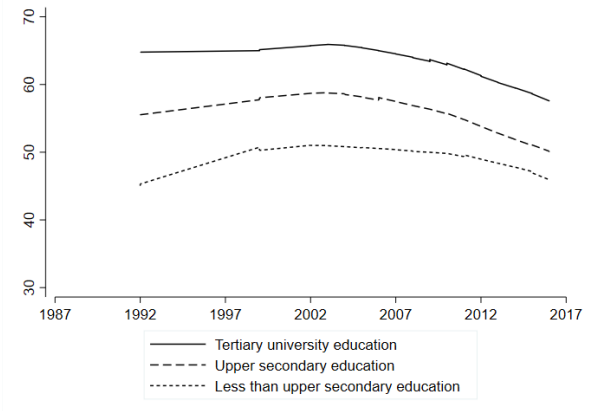
Great Britain 1987-2016



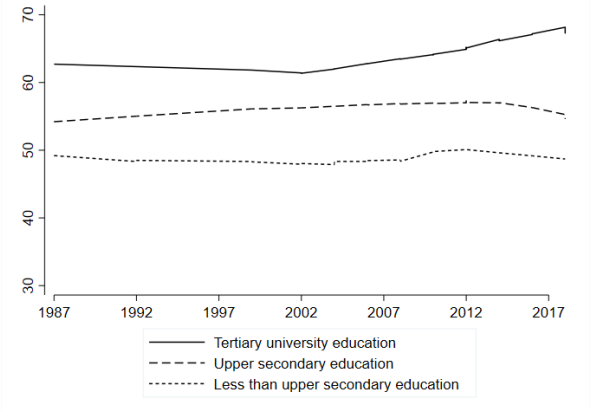
Sweden 1992-2017



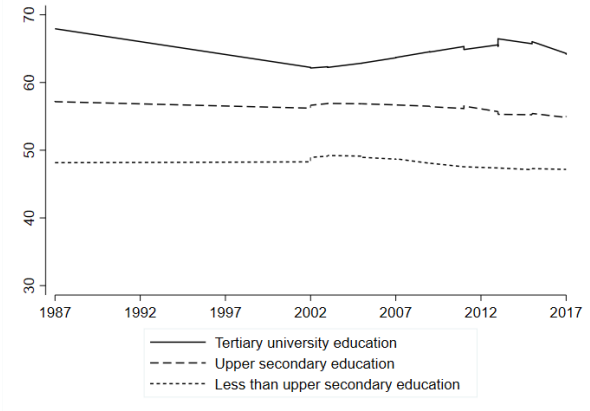
Norway 1992-2016



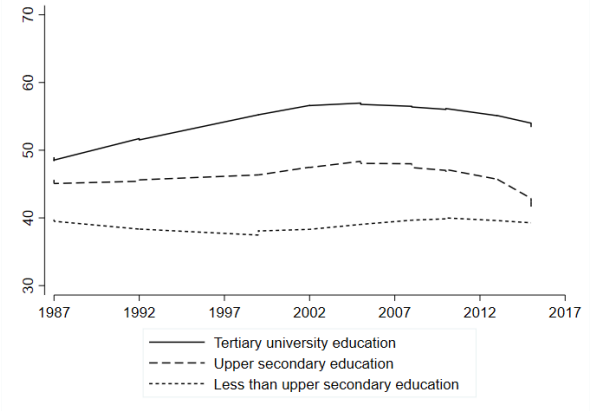
Germany 1987-2017



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

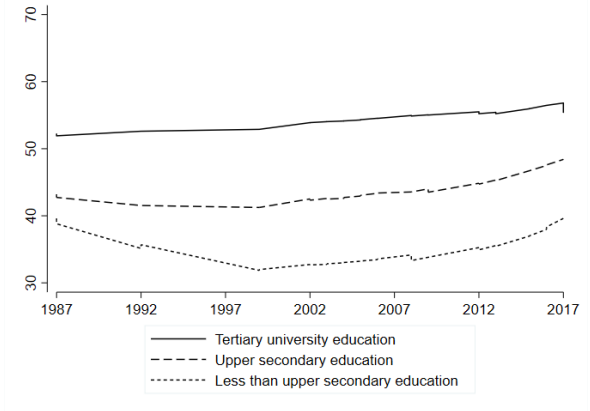


Figure AW.9. Gap in subjective social status (from 0 to 100) – holders of tertiary university education relative to holders of secondary education, men only

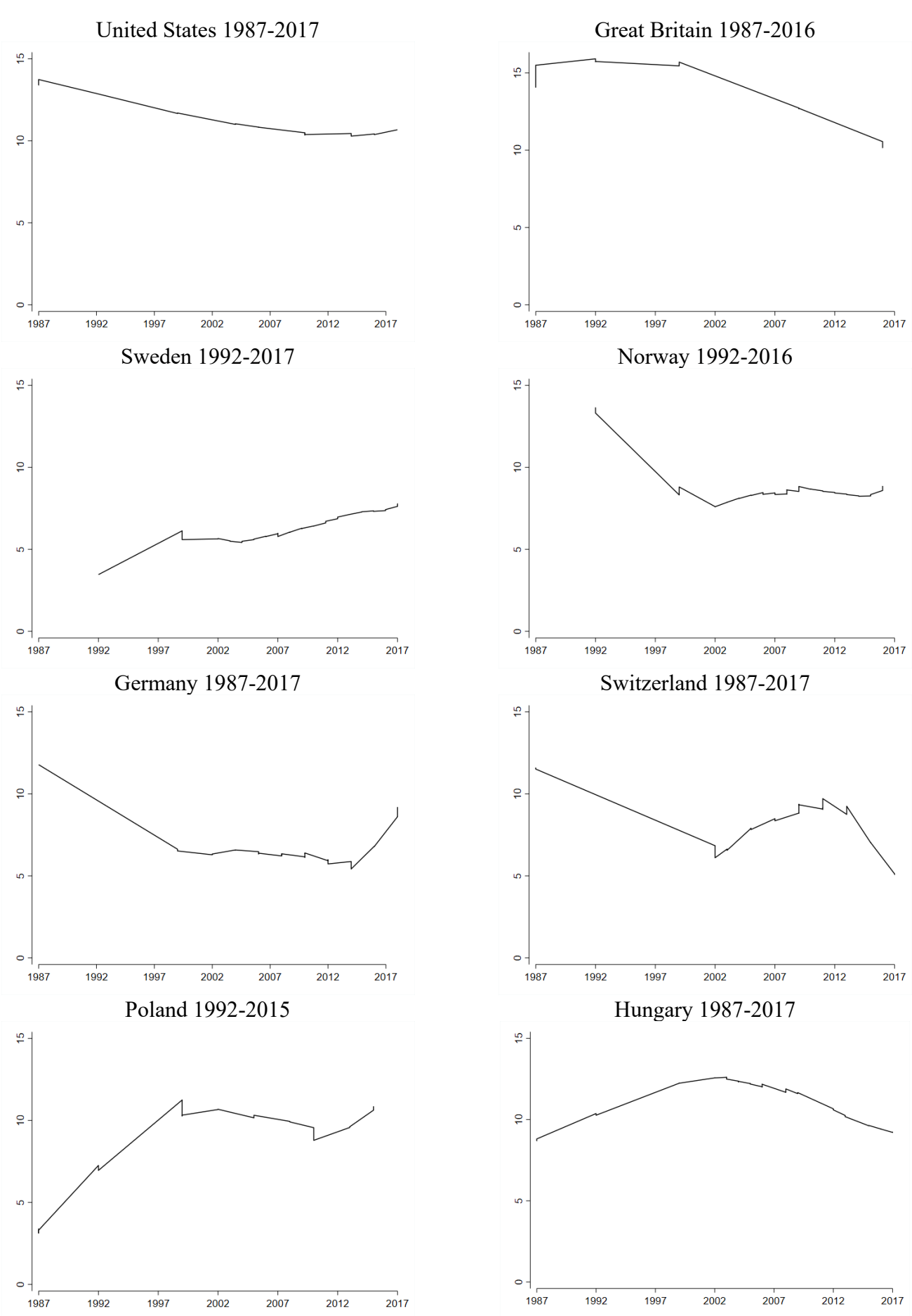
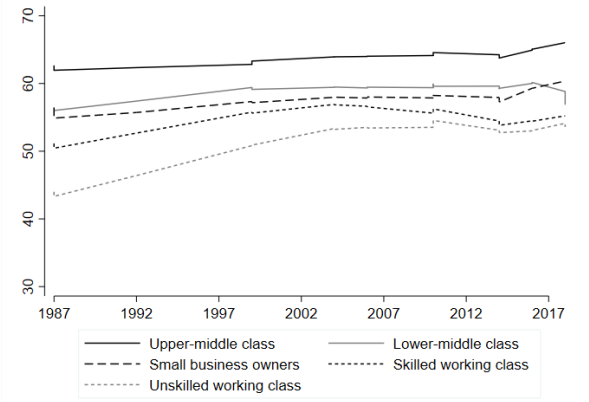
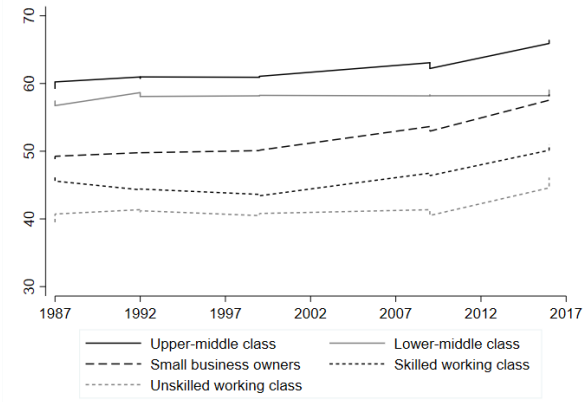


Figure AW.10. Subjective social status (on a scale from 0 to 100) for each social class, men only. Classes defined without using information about partner's occupation

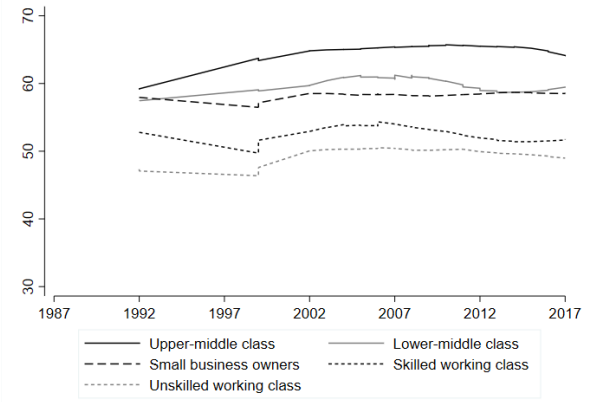
United States 1987-2017



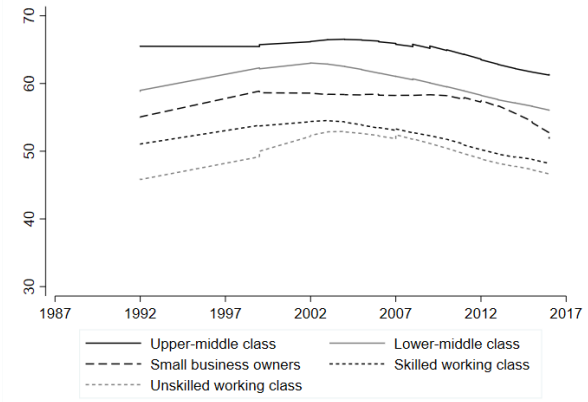
Great Britain 1987-2016



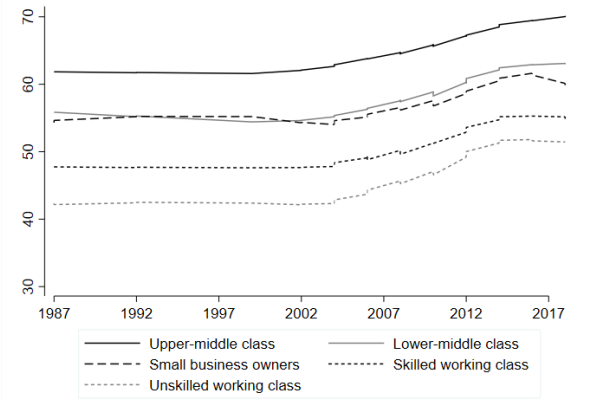
Sweden 1992-2017



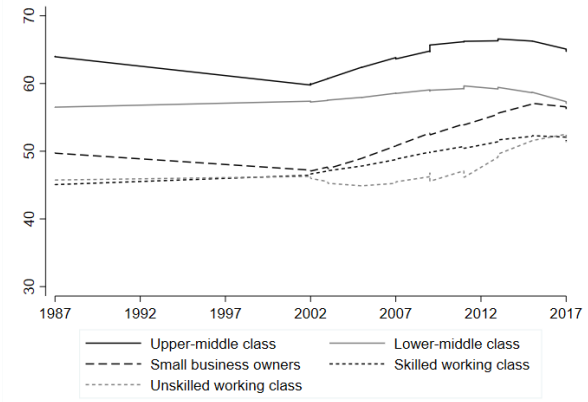
Norway 1992-2016



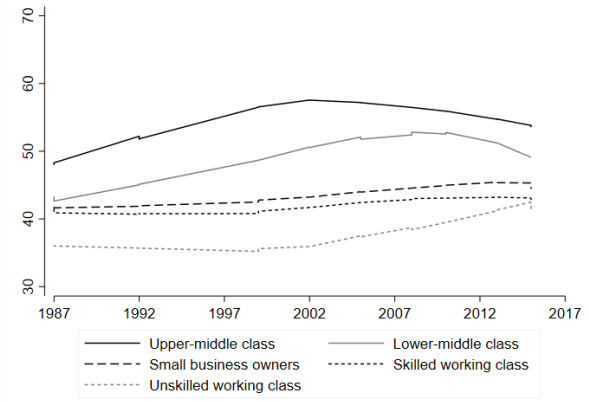
Germany 1987-2017



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

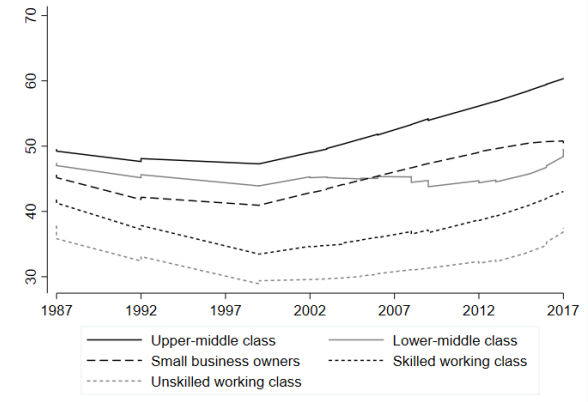
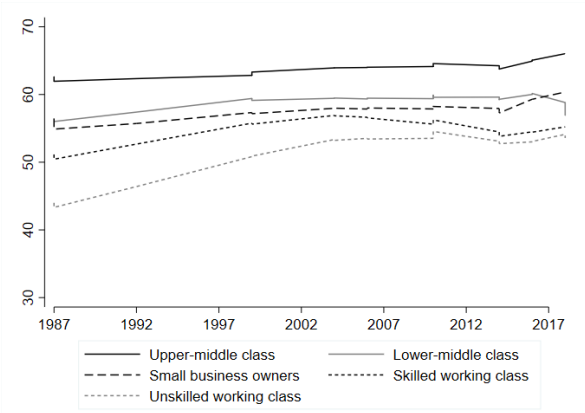
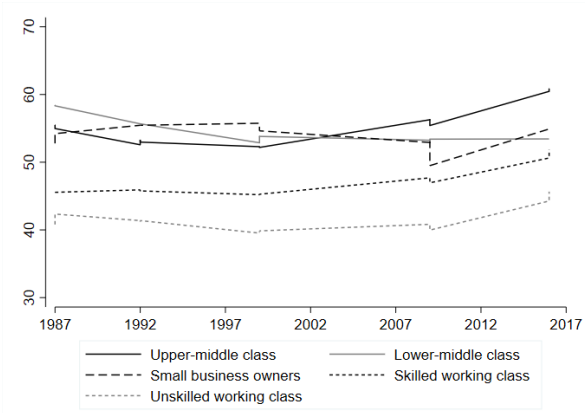


Figure AW.11. Subjective social status (on a scale from 0 to 100) for each social class, women only. Classes defined without using information about partner's occupation

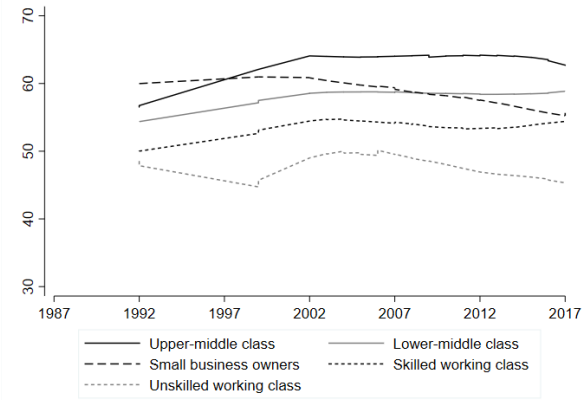
United States 1987-2017



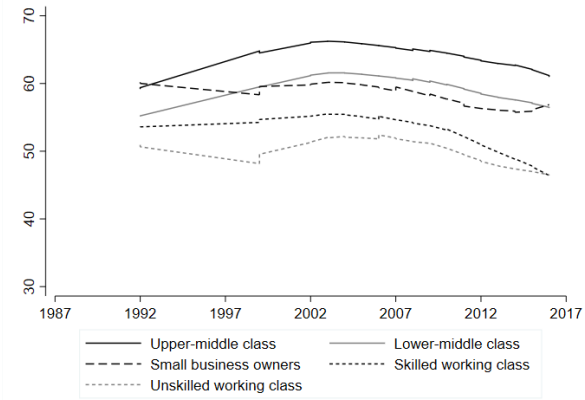
Great Britain 1987-2016



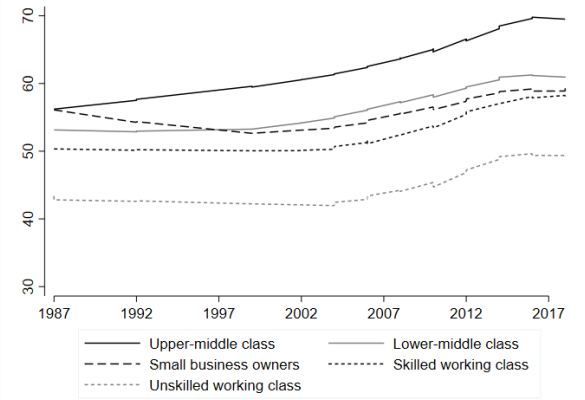
Sweden 1992-2017



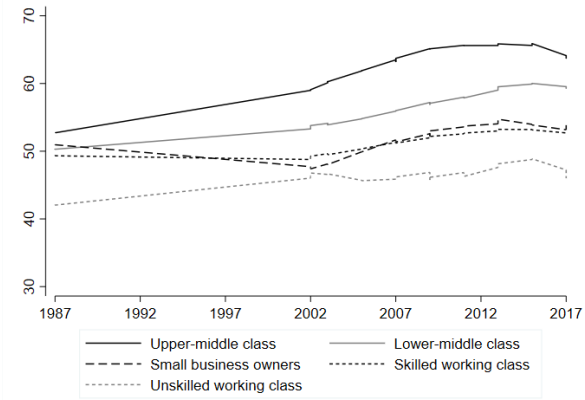
Norway 1992-2016



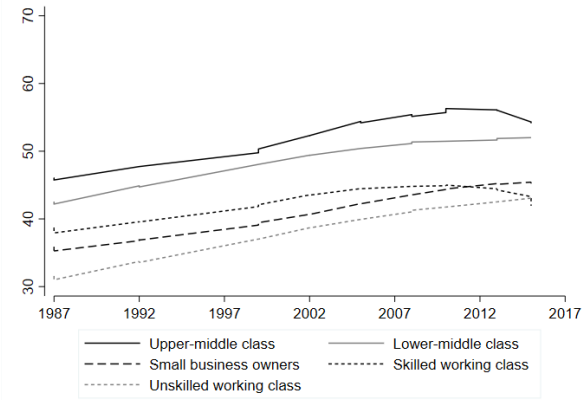
Germany 1987-2017



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

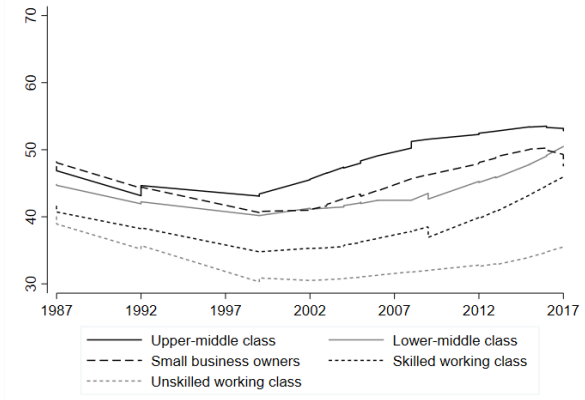
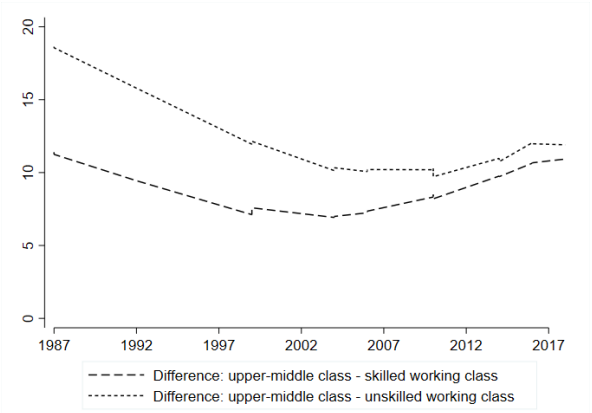
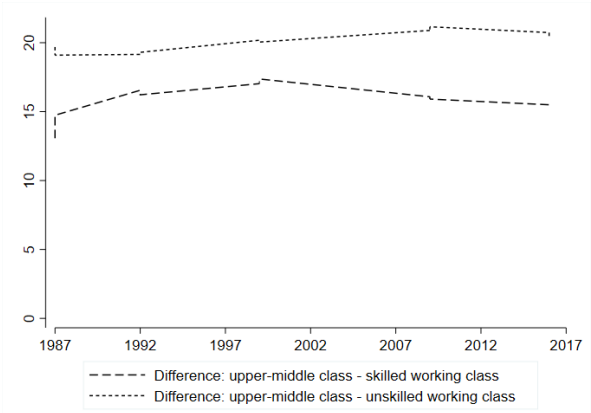


Figure AW.12. Subjective social status (on a scale from 0 to 100) for each social class, men only. Classes defined without using information about partner's occupation.

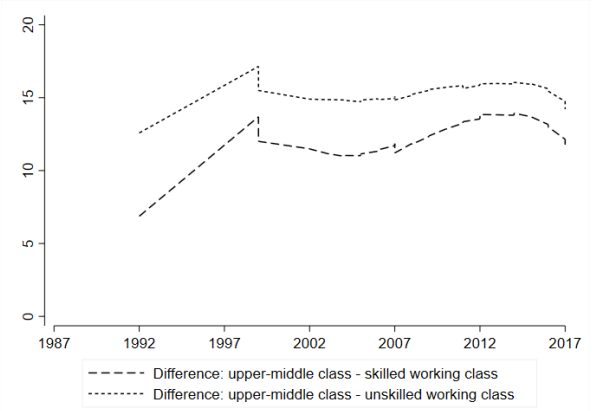
United States 1987-2017



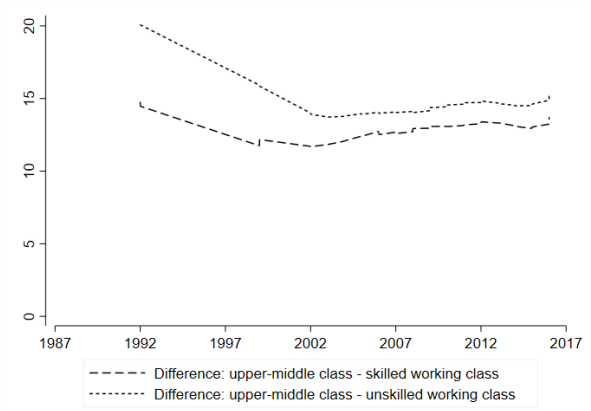
Great Britain 1987-2016



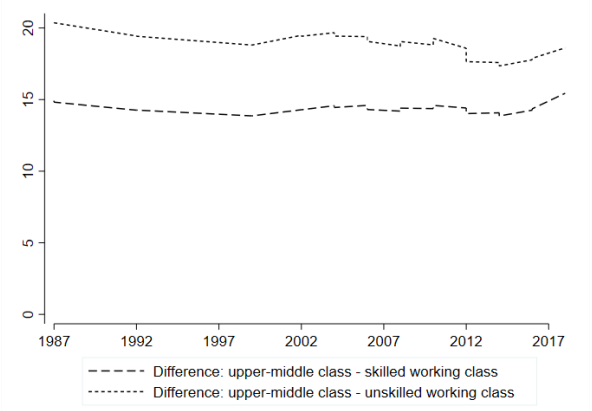
Sweden 1992-2017



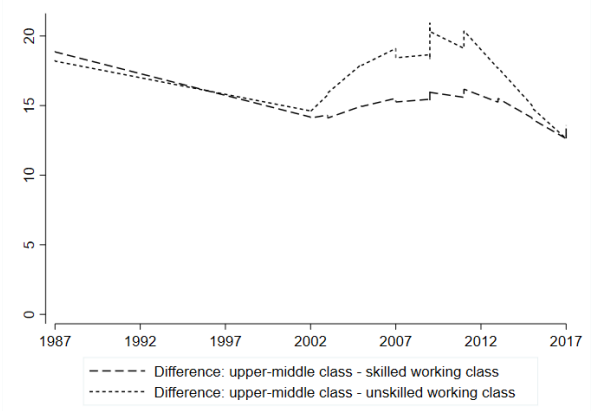
Norway 1992-2016



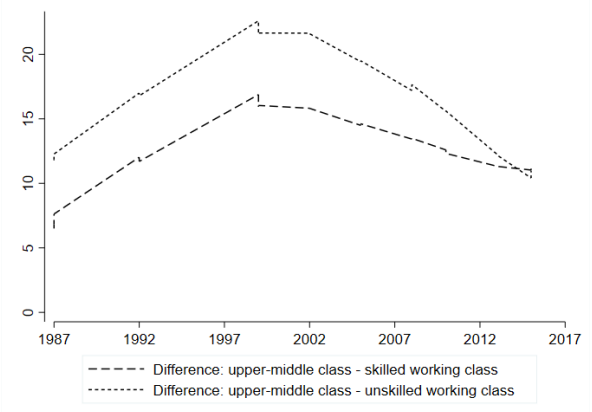
Germany 1987-2017



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

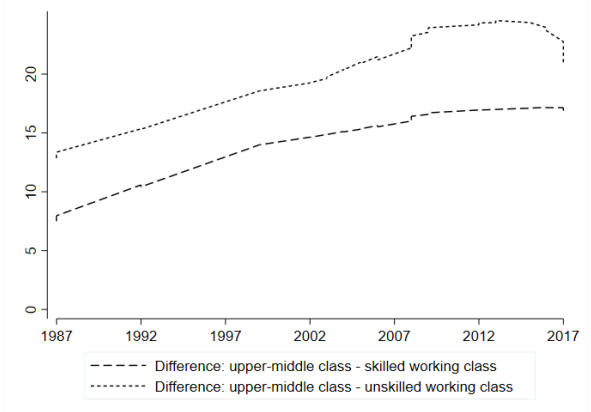
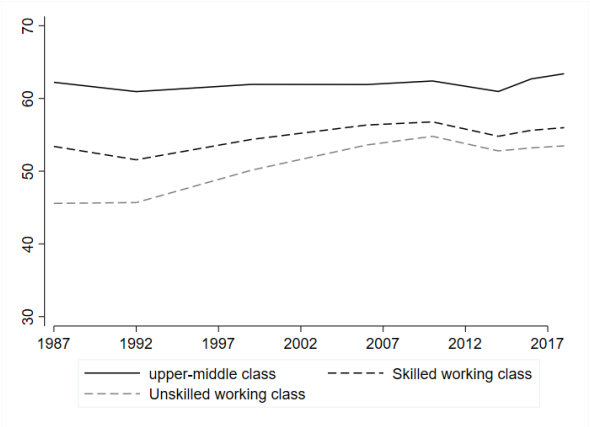
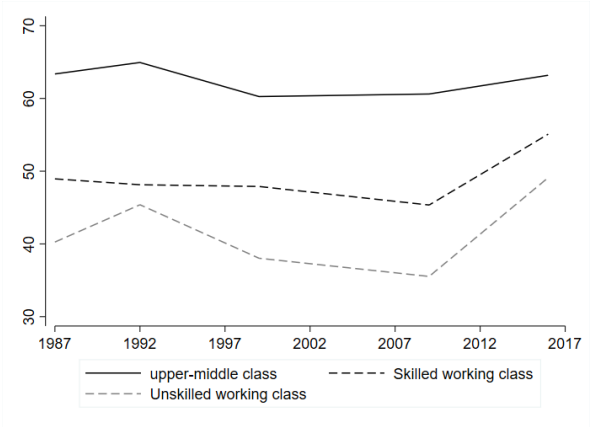


Figure AW.13. Predicted subjective social status for a men aged 40 earning the mean income of his class

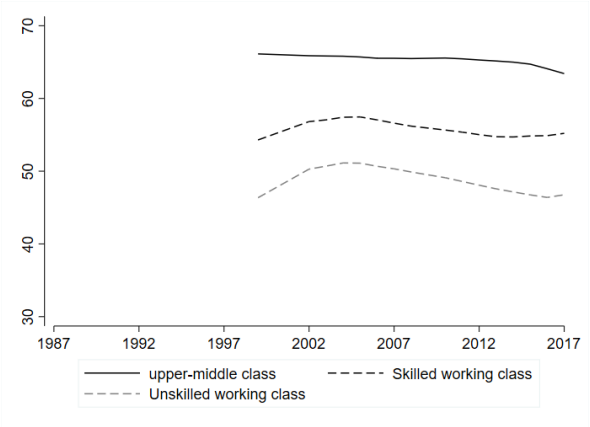
United States 1987-2017



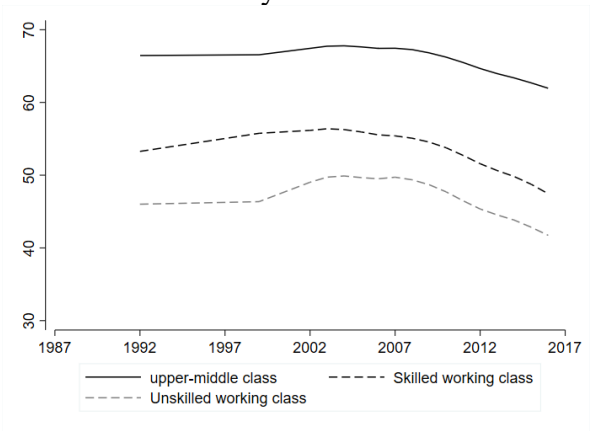
Great Britain 1987-2016



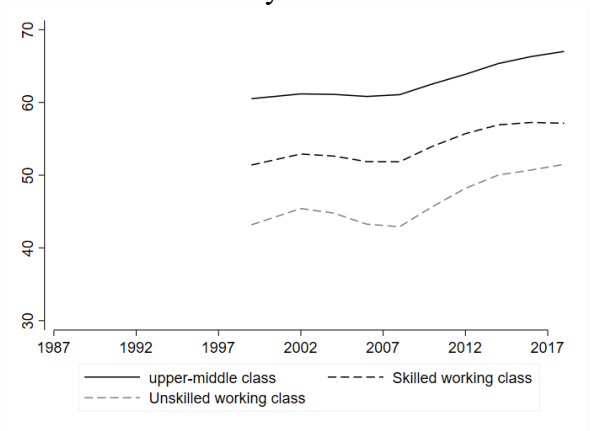
Sweden 1999-2017



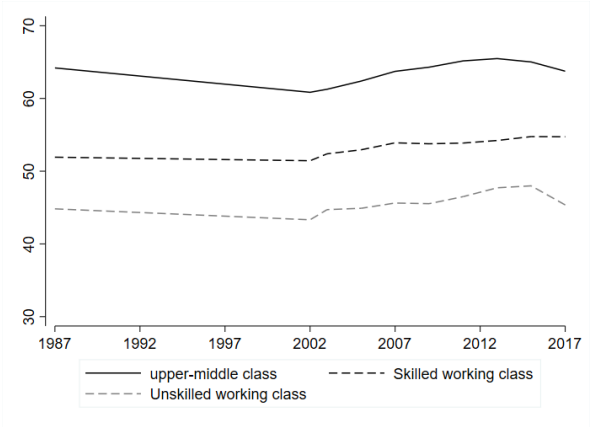
Norway 1992-2016



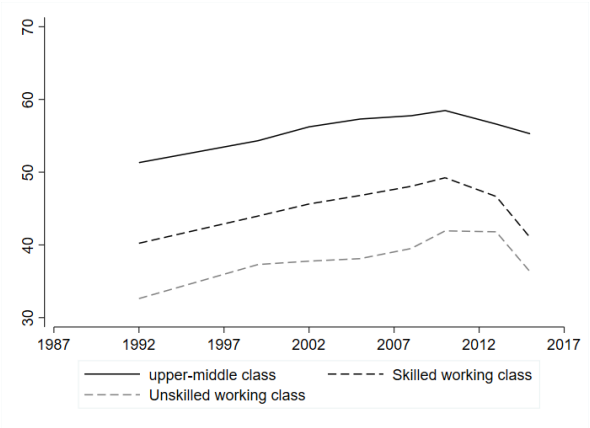
Germany 1999-2017



Switzerland 1987-2017



Poland 1992-2015



Hungary 1987-2017

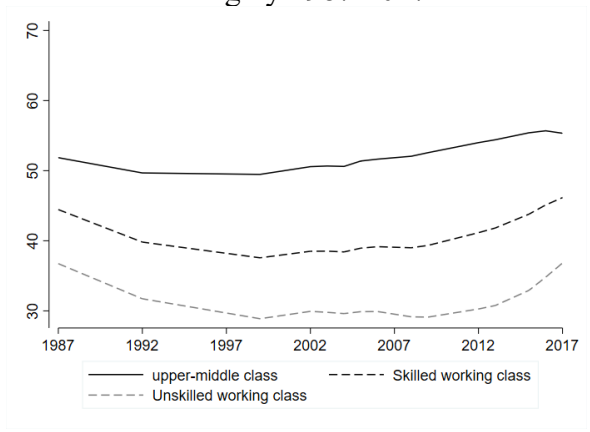


Table AW.1. Descriptive statistics of variables in analytical sample of ESS rounds 1-8 (2002-16), respondents aged 20-60

		CH	DE	GB	HU	NO	PL	SE
Satisfaction with life (0-100)		79.7	70.0	69.8	57.6	78.2	67.8	77.8
Social class								
	Upper-middle class (%)	22.2	17.7	20.8	10.9	21.6	16.2	20.5
	Lower-middle class (%)	24.4	22.0	16.0	15.3	24.9	15.5	23.5
	Small business owners (%)	10.6	8.7	11.1	8.3	6.4	15.5	7.7
	Skilled working class (%)	31.2	37.4	30.8	38.8	33.9	34.0	28.7
	Unskilled working class (%)	11.6	14.2	21.2	26.8	13.2	18.8	19.6
Education								
	Less than upper secondary educ. (%)	14.5	7.8	35.3	17.5	9.0	22.8	12.0
	Upper secondary and post upper-secondary educ. (%)	52.6	60.7	22.4	63.4	47.0	55.5	53.6
	University tertiary educ.(%)	33.0	31.5	42.4	19.1	44.1	21.8	34.5
Gender	Men (%)	48.4	50.4	44.6	45.9	53.3	48.9	50.5
	Women (%)	52.6	49.6	55.4	54.1	46.8	51.1	49.5
Age		39.3	39.5	39.6	39.1	38.7	37.1	10.2
Total number of complete observations		9025	14360	10462	7910	9074	9170	9035

Table AW.2. Operationalization of the class measure in the ISSP. occupational variable used for each country and year (grey. no ISCO codes)

	CH	DE	GB	HU	NO	PL	SE	US
1987	ISCO88 - 4 digits	ISCO88 - 4 digits	GB_OCC87 - 3 digits	ISCO88 - 4 digits		PL_OCC87 - 12 categories		US_OCC87 - 3 digits
1992		ISCO88 - 4 digits	GB_OCC92 - 2 digits	ISCO88- 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	SE_OCC92 - 3 digits	ISCO88 - 4 digits
1999		ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits
2002	ISCO88 - 4 digits	ISCO88 - 4 digits		ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	
2003	ISCO88 - 4 digits			ISCO88 - 4 digits	ISCO88 - 4 digits		ISCO88 - 4 digits	
2004		ISCO88 - 4 digits		ISCO88 - 4 digits	ISCO88 - 4 digits		ISCO88 - 4 digits	ISCO88 - 4 digits
2005	ISCO88 - 4 digits			ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	
2006		ISCO88 - 4 digits		ISCO88 - 4 digits	ISCO88 - 4 digits		ISCO88 - 4 digits	ISCO88 - 4 digits
2007	ISCO88 - 4 digits				ISCO88 - 4 digits		ISCO88 - 4 digits	
2008		ISCO88 - 4 digits		ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	
2009	ISCO88 - 4 digits		ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits		ISCO88 - 4 digits	
2010		ISCO88 - 4 digits			ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits
2011	ISCO88 - 4 digits				ISCO88 - 4 digits		ISCO88 - 4 digits	
2012		ISCO88 - 4 digits		ISCO88 - 4 digits	ISCO88 - 4 digits		ISCO88 - 4 digits	
2013	ISCO88 - 4 digits			ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	ISCO88 - 4 digits	
2014		ISCO08 - 4 digits			ISCO08 - 4 digits		ISCO08 - 4 digits	ISCO08 - 4 digits
2015	ISCO08 - 4 digits			ISCO08 - 4 digits	ISCO08 - 4 digits	ISCO08 - 4 digits	ISCO08 - 4 digits	
2016		ISCO08 - 4 digits	ISCO08 - 4 digits	ISCO08 - 4 digits	ISCO08 - 4 digits		ISCO08 - 4 digits	ISCO08 - 4 digits
2017	ISCO08 - 4 digits			ISCO08 - 4 digits			ISCO08 - 4 digits	
2018	ISCO08 - 4 digits	ISCO08 - 4 digits						ISCO08 - 4 digits

Table AW.3. The 10 most frequent occupations in the class of skilled and low-skilled service workers 1987-2013 (based on ISCO88-4 digit, ISSP)

	Skilled service workers	Freq	%	Low-skilled service workers	Freq	%
1	shop salespersons & demonstrators	20,747	41.98	helpers & cleaners in establishments	8,193	17.22
2	cooks	5,593	11.32	waiters waitresses & bartenders	5,828	12.25
3	institution-based personal care workers	4,143	8.38	domestic helpers & cleaners	4,917	10.34
4	child-care workers	3,504	7.09	elementary occupations	3,753	7.89
5	hairdressers barbers beauticians etc workers	2,160	4.37	personal care etc workers	3,451	7.25
6	protective services workers nec	2,127	4.3	car taxi & van drivers	2,995	6.3
7	police officers	1,923	3.89	domestic etc helpers cleaners & launder workers	2,668	5.61
8	bus & tram drivers	1,820	3.68	doorkeepers watchpersons etc workers	2,327	4.89
9	service workers & shop & market sales workers	1,404	2.84	building caretakers	2,028	4.26
10	fire-fighters	544	1.1	home based personal care workers	1,548	3.25

Table AW.4 Linear regression on the subjective status of respondents' job compared to the perceived status of their father's job when they were 16 (on a scale from 0 to 100)

		US	GB	SE	NO	DE	CH	PO	HU
Class	(Ref. upper-middle class)								
	Skilled working class	-4.52**	-9.58***	-11.18***	-12.07***	-8.51***	-0.93	-11.20***	-7.20***
		(1.83)	(1.79)	(2.77)	(2.39)	(1.42)	(2.75)	(1.77)	(1.67)
	Unskilled working class	-6.91***	-14.05***	-16.17***	-16.07***	-13.77***	-3.36	-18.34***	-13.64***
		(2.16)	(1.97)	(3.24)	(2.58)	(1.71)	(3.46)	(2.00)	(1.68)
Years	(Ref. 1987-1992)								
	1999	-4.86*	-1.50	2.67	0.98	-4.18*		-1.07	-9.72***
		(2.51)	(3.32)	(2.75)	(2.55)	(2.49)		(3.39)	(3.06)
	2009	-5.21**	-5.31*	6.03**	3.05	-1.61	-3.53	-2.77	-14.62***
		(2.48)	(2.79)	(2.77)	(2.41)	(2.38)	(2.95)	(2.71)	(3.33)
Interactions									
	Skilled working class	-3.18	-7.08*	-0.23	-2.66	1.79		-3.81	-1.73
	x 1999	(3.32)	(4.06)	(3.77)	(3.29)	(2.86)		(3.86)	(3.50)
	Skilled working class	-2.08	-3.34	-3.98	-10.46***	-2.87	-2.18	-3.12	0.19
	x 2009	(3.22)	(3.61)	(3.90)	(3.22)	(2.79)	(3.78)	(3.21)	(3.71)
	Unskilled working	0.66	-5.21	1.44	-3.68	1.06		5.36	-2.45
	class x 1999	(3.70)	(4.48)	(4.32)	(3.94)	(3.62)		(4.38)	(3.81)
	Unskilled working	-4.62	-7.83**	1.02	-5.94	-7.59**	-2.71	-8.13**	-0.61
	class x 2009	(3.66)	(3.94)	(4.37)	(4.02)	(3.36)	(4.76)	(3.74)	(4.03)
Male		6.96***	5.97***	5.96***	7.39***	4.72***	8.92***	-0.46	2.63***
		(0.99)	(1.10)	(1.13)	(0.96)	(0.71)	(1.38)	(0.81)	(0.83)
Age		0.46***	0.38***	0.41***	0.51***	0.28***	0.29***	0.22***	0.17***
		(0.05)	(0.05)	(0.05)	(0.04)	(0.03)	(0.06)	(0.04)	(0.04)
Constant		42.42***	49.72***	38.66***	39.78***	51.81***	48.77***	63.17***	66.72***
		(2.34)	(2.41)	(2.81)	(2.57)	(1.88)	(3.47)	(2.24)	(2.11)
Observations		3,777	2,639	2,014	2,868	4,366	1,441	4,032	4,062
R-squared		0.06	0.10	0.11	0.15	0.07	0.06	0.07	0.08

Standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Coefficients for two classes (lower-middle class and small business owners) – with main effects and interaction effects – are not shown.

Appendix B (chapter 3)

Table B.1. Number of observations with non-missing values in analytical sample of ISSP data rounds for every model.

	France				**Germany**			
	NUTS 3 based variables		Kind of place (auto-assessed variable)		NUTS 2 based variables		Kind of place (auto-assessed variable)	
	Model without income	Model with income	Model without income	Model without income	Model without income	Model with income	Model without income	Model with income
1992	.	.	.	.	2,894	1,734	.	.
1999	1,519	1,428	.	.	905	710	.	.
2002	.	.	.	.	1,221	1,018	.	.
2003	1,238	917	.	.	.	.	.	.
2004	1,208	1,104	.	.	2,337	2,019	2,296	1,983
2005	1,244	1,090	1,243	1,090	.	.	.	.
2006	1,557	920	1,564	924	2,846	2,353	2,845	2,352
2007	1,772	1,505	1,769	1,504	.	.	.	.
2008	2,065	1,688	2,071	1,690	2,935	2,284	2,931	2,280
2009	2,539	2,334	2,535	2,335	.	.	.	.
2010	1,747	1,340	1,750	1,344	2,520	2,145	1,256	1,065
2011	2,762	2,101	2,764	2,103	.	.	.	.
2012	1,945	1,259	1,948	1,261	3,113	2,730	3,113	2,730
2013	1,697	834	1,691	832	.	.	.	.
2014	991	504	991	504	3,080	2,743	3,080	2,743
2015	1,043	584	1,048	587	.	.	.	.
2016	1,266	799	1,270	803	3,015	2,723	3,015	2,723
2017	1,291	807	1,291	806	.	.	.	.
2018	.	.	.	.	2,770	2,494	2,770	2,494
2019	.	.	.	.	.	.	.	.
2020	.	.	.	.	914	914	914	914
2021	.	.	.	.	1,529	1,529	1,527	1,527
Total	25,884	19,214	21,935	15,783	30,079	25,396	23,747	20,811

Table B.2. Geographical distribution in analytical sample of ISSP data rounds for France

		Large metropolitan centres		**Regions**					
		Large metr. centres	Other departments	Île de France	Centre - Bassin Parisien	North-East	West	Méditérranée - Pyrénées	Auvergne - Rhône - Alpes
1999	Freq.	1331	188	335	188	257	337	225	177
	%	87.62	12.38	22.05	12.38	16.92	22.19	14.81	11.65
2003		1110	128	223	162	208	288	220	137
		89.66	10.34	18.01	13.09	16.8	23.26	17.77	11.07
2004		1081	127	215	159	195	268	220	151
		89.49	10.51	17.8	13.16	16.14	22.19	18.21	12.5
2005		1131	113	227	162	205	277	198	175
		90.92	9.08	18.25	13.02	16.48	22.27	15.92	14.07
2006		1403	154	245	218	246	368	265	215
		90.11	9.89	15.74	14	15.8	23.64	17.02	13.81
2007		1587	185	270	278	267	413	310	234
		89.56	10.44	15.24	15.69	15.07	23.31	17.49	13.21
2008		1829	236	386	286	353	443	318	279
		88.57	11.43	18.69	13.85	17.09	21.45	15.4	13.51
2009		2349	190	334	403	390	622	441	349
		92.52	7.48	13.15	15.87	15.36	24.5	17.37	13.75
2010		1601	146	214	286	304	407	294	242
		91.64	8.36	12.25	16.37	17.4	23.3	16.83	13.85
2011		2485	277	481	385	443	589	451	413
		89.97	10.03	17.41	13.94	16.04	21.33	16.33	14.95
2012		1753	192	337	249	332	441	331	255
		90.13	9.87	17.33	12.8	17.07	22.67	17.02	13.11
2013		1507	190	281	225	263	363	316	249
		88.8	11.2	16.56	13.26	15.5	21.39	18.62	14.67
2014		893	98	162	133	166	211	183	136
		90.11	9.89	16.35	13.42	16.75	21.29	18.47	13.72
2015		925	118	176	134	188	212	185	148
		88.69	11.31	16.87	12.85	18.02	20.33	17.74	14.19
2016		1141	125	196	161	212	290	241	166
		90.13	9.87	15.48	12.72	16.75	22.91	19.04	13.11
2017		1148	143	204	183	197	286	247	174
		88.92	11.08	15.8	14.18	15.26	22.15	19.13	13.48
Tot.		23274	2610	4286	3612	4226	5815	4445	3500
		89.92	10.08	16.56	13.95	16.33	22.47	17.17	13.52

		Kind of department (OECD cat.)			Kind of place (auto-assessed)			
		Prev. Urban	Intermediate	Prev. Rural	Big city	Outskirt of a big city	Small city	Rural area
1999	Freq.	553	691	275				
	%	36.41	45.49	18.1	.	.	.	.
2003		441	570	227				
		35.62	46.04	18.34	.	.	.	.
2004		403	598	207				
		33.36	49.5	17.14	.	.	.	.
2005		393	610	241	190	180	417	456
		31.59	49.04	19.37	15.29	14.48	33.55	36.69
2006		492	744	321	206	217	500	641
		31.6	47.78	20.62	13.17	13.87	31.97	40.98
2007		539	865	368	241	257	575	696
		30.42	48.81	20.77	13.62	14.53	32.5	39.34
2008		715	962	388	363	298	677	733
		34.62	46.59	18.79	17.53	14.39	32.69	35.39
2009		660	1288	591	293	323	822	1097
		25.99	50.73	23.28	11.56	12.74	32.43	43.27
2010		463	894	390	205	211	544	790
		26.5	51.17	22.32	11.71	12.06	31.09	45.14
2011		915	1333	514	465	454	875	970
		33.13	48.26	18.61	16.82	16.43	31.66	35.09
2012		677	932	336	341	313	595	699
		34.81	47.92	17.28	17.51	16.07	30.54	35.88
2013		564	800	333	313	231	514	633
		33.24	47.14	19.62	18.51	13.66	30.4	37.43
2014		327	483	181	172	139	314	366
		33	48.74	18.26	17.36	14.03	31.69	36.93
2015		378	496	169	189	150	345	364
		36.24	47.56	16.2	18.03	14.31	32.92	34.73
2016		432	609	225	203	176	422	469
		34.12	48.1	17.77	15.98	13.86	33.23	36.93
2017		429	622	240	216	187	429	459
		33.23	48.18	18.59	16.73	14.48	33.23	35.55
Tot.		8381	12497	5006	3397	3136	7029	8373
		32.38	48.28	19.34	15.49	14.3	32.04	38.17

Table B.3. Geographical distribution in analytical sample of ISSP data rounds for Germany

		West-East		Three regions			Kind of place (auto-assessed)			
		West	East	South	North-West	East	Big city	Outskirt of a big city	Small city	Rural area
1992	Freq.	1848	1,088	601	1,247	1,088				
	%	62.94	37.06	20.47	42.47	37.06	.	.	.	.
1999		590	319	221	369	319				
		64.91	35.09	24.31	40.59	35.09	.	.	.	.
2002		804	420	309	495	420				
		65.69	34.31	25.25	40.44	34.31	.	.	.	.
2004		1507	836	524	983	836	419	239	815	829
		64.32	35.68	22.36	41.95	35.68	18.2	10.38	35.4	36.01
2006		1813	1,040	581	1,232	1,040	470	314	1,053	1,015
		63.55	36.45	20.36	43.18	36.45	16.48	11.01	36.92	35.59
2008		1935	1,007	695	1,240	1,007	544	309	1,142	943
		65.77	34.23	23.62	42.15	34.23	18.52	10.52	38.87	32.1
2010		1727	804	678	1,049	804	201	162	464	436
		68.23	31.77	26.79	41.45	31.77	15.91	12.83	36.74	34.52
2012		2031	1,093	777	1,254	1,093	624	346	1,049	1,105
		65.01	34.99	24.87	40.14	34.99	19.97	11.08	33.58	35.37
2014		2055	1,035	798	1,257	1,035	484	467	898	1,241
		66.5	33.5	25.83	40.68	33.5	15.66	15.11	29.06	40.16
2016		1960	1,056	711	1,249	1,056	578	337	1,030	1,071
		64.99	35.01	23.57	41.41	35.01	19.16	11.17	34.15	35.51
2018		2111	1,046	760	1,351	1,046	620	350	1,125	1,062
		66.87	33.13	24.07	42.79	33.13	19.64	11.09	35.64	33.64
2020		774	440	296	478	440	251	163	384	416
		63.76	36.24	24.38	39.37	36.24	20.68	13.43	31.63	34.27
2021		1016	518	375	641	518	278	259	528	467
		66.23	33.77	24.45	41.79	33.77	18.15	16.91	34.46	30.48
Total		20171	10,702	7326	12845	10702	4,469	2946	8488	8585
		65.34	34.66	23.73	41.61	34.66	18.25	12.03	34.66	35.06

Figure B.1. Standard deviation of subjective social status (on a scale from 1 to 10) in France by department during the period 1999-2017

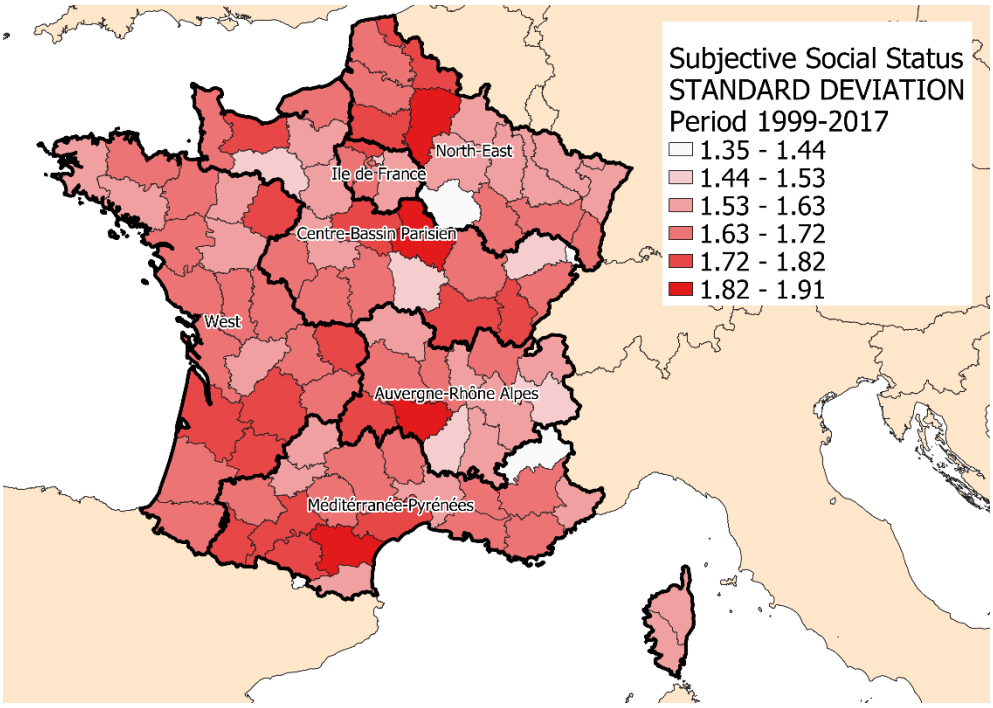


Figure B.2. Mean subjective social status (on a scale from 1 to 10) in France by department at the beginning of the studied period (1999-2004) and at the end (2015-2017).

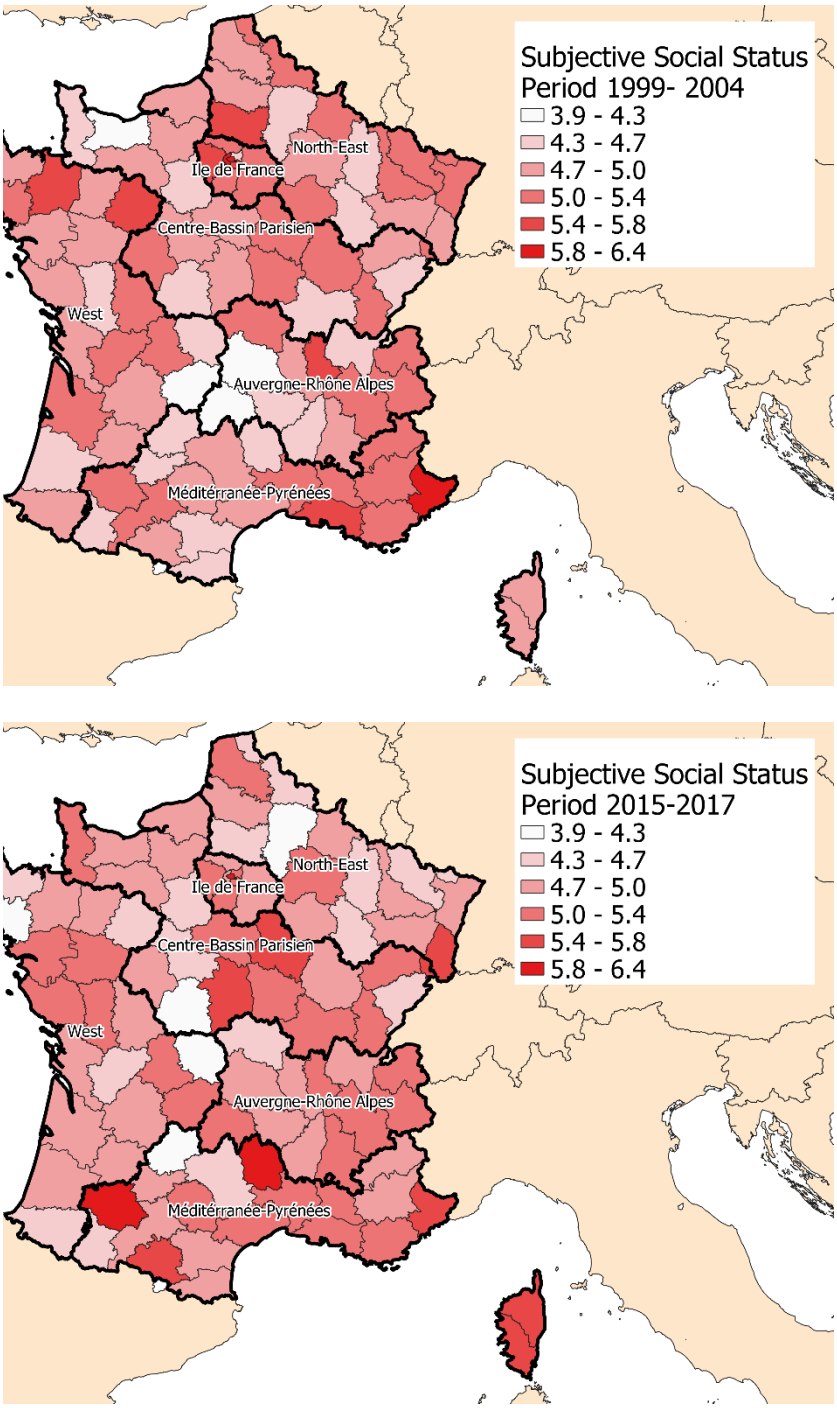


Figure B.3. Standard deviation of subjective social status (on a scale from 1 to 10) in Germany by state during the period 1992-2021

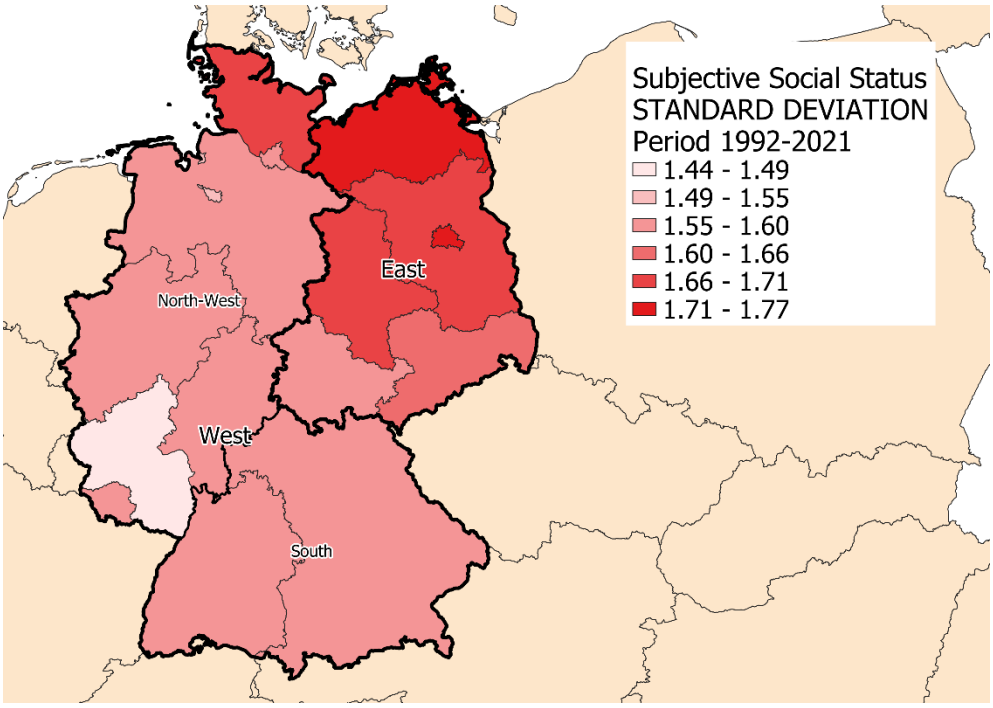


Figure B.4. Mean subjective social status (on a scale from 1 to 10) in Germany by state at the beginning of the studied period (1992-1999) and at the end (2018-2021).

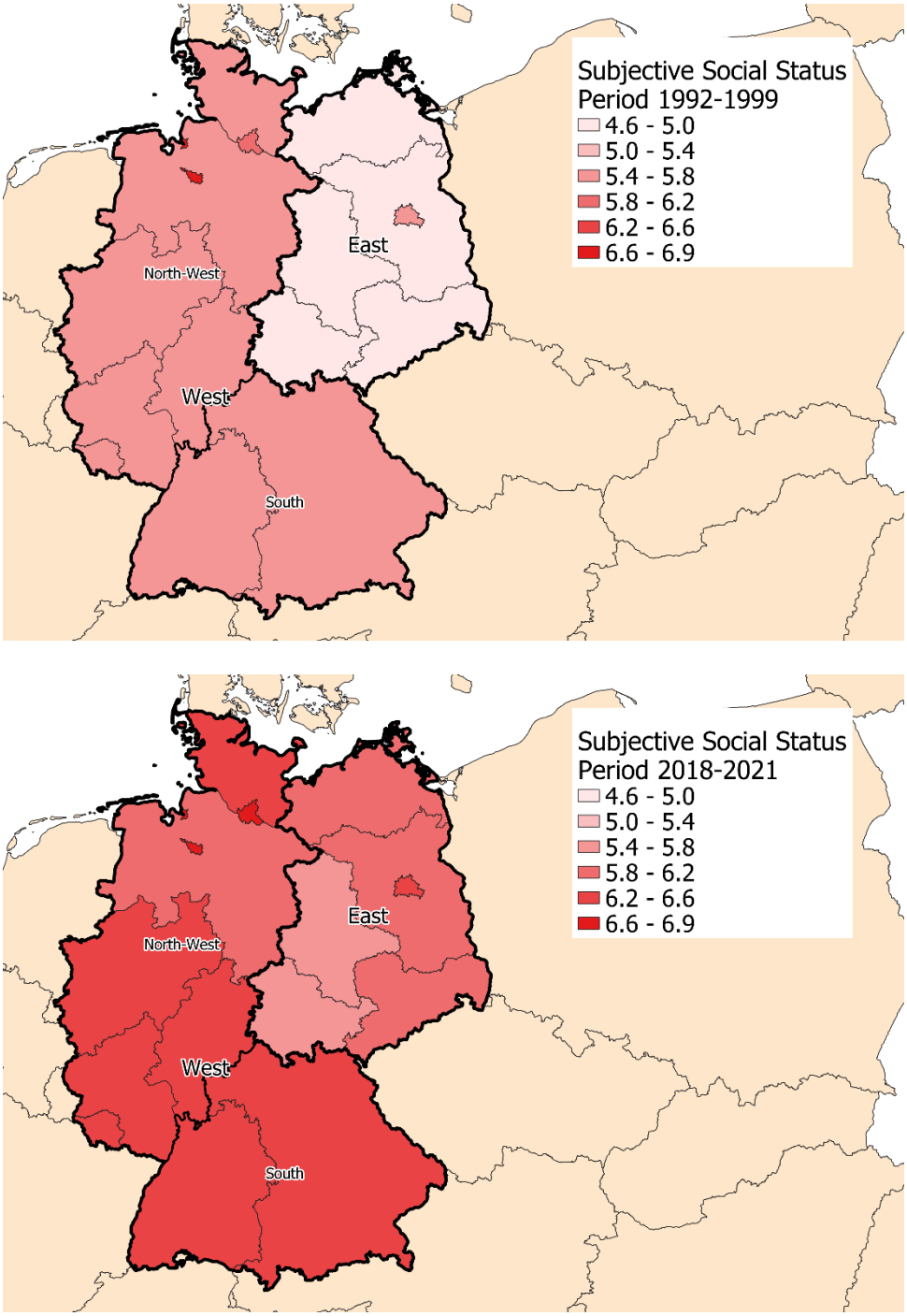


Table B.4. Linear regressions on subjective social status (from 1 to 10) for France including different geographical variables. Descriptive models without any controls (* p < 0.1; ** p < 0.05; *** p <0.01).

Large metropolitan centres vs other departments			**Regions**			**Kind of place (department categorisation)**			**Kind of place (auto-assessed variable)**		
Period (ref: 1999-2004)											
2005-2009		-0.13			-0.08			-0.20**	**Period** (ref: 1999-2007)		
2010-2014		-0.13			-0.07			-0.14*	2010-2014		0.11
2015-2017		-0.29**			-0.28*			-0.33***	2015-2017		-0.04
Department (ref: large metropolitan centers)			**Region** (ref: Ile de France)			**Kind of place** (ref: prev. urban)			**Kind of place** (ref: big city)		
Other departments	-0.59***	-0.66***	Centre - Bassin Parisien	-0.74***	-0.92***	Intermediate	-0.41***	-0.57***	Outskirt of a big city	-0.26***	-0.20**
Time trend differences			North-East	-0.57***	-0.57***	Prev. rural	-0.62***	-0.72***	Small town	-0.62***	-0.61***
Other departments # 2005-2009		0.05	Ouest	-0.69***	-0.67***	**Time trend differences**			Rural area	-0.79***	-0.72***
Other departments # 2010-2014		0.09	Méditerranée- Pyrénées	-0.52***	-0.51***	Intermediate # 2005-2009		0.19*	**Time trend differences**		
Other departments # 2015-2017		0.23*	Auvergne-Rhône-Alpes	-0.60***	-0.67***	Intermediate # 2010-2014		0.17*	outskirt of big city # 2010-14		-0.08
			Time trend differences			Intermediate # 2015-2017		0.31**	outskirt of big city # 2015-17		-0.15
			Centre-Bassin P. # 2005-2009		0.13	Prev. rural # 2005-2009		0.12	small town # 2010-14		-0.05
			Centre-Bassin P. # 2010-2014		0.22	Prev. rural # 2010-2014		0.05	small town # 2015-17		0.07
			Centre-Bassin P. # 2015-2017		0.43**	Prev. rural # 2015-2017		0.31*	rural area # 2010-14		-0.17*
			North-East # 2005-2009		-0.03				rural area # 2015-17		0.01
			North-East # 2010-2014		0.06						
			North-East # 2015-2017		-0.05						
			West # 2005-2009		-0.05						
			West # 2010-2014		-0.06						
			West # 2015-2017		0.14						
			Méditerr.-Pyr. # 2005-2009		-0.06						
			Méditerr.-Pyr. # 2010-2014		-0.07						
			Méditerr.- Pyr # 2015-2017		0.26						
			Auvergne-R.-A. 2005-2009		0.03						
			Auvergne-R.-A # 2010-2014		0.05						
			Auvergne-R.-A. # 2015-2017		0.33*						
cons	5.51***	5.63***		5.58***	5.67***		5.37***	5.53***		5.58***	5.54***
N	28,783	28,783		28,783	28,783		28,783	28,783		24,127	24,127

Table B.5. Linear regressions on subjective social status (from 1 to 10) for France including different geographical variables, controlling for gender, age, cohabitation status, social class and education (* p < 0.1; ** p < 0.05; *** p <0.01).

Large metropolitan centres vs other departments			**Regions**			**Kind of place (department categorisation)**			**Kind of place (auto-assessed variable)**		
Gender	0.12***	0.12***		0.12***	0.12***		0.12***	0.12***		0.13***	0.13***
Age	0.01***	0.01***		0.01***	0.01***		0.01***	0.01***		0.01***	0.01***
Cohabitation status	0.27***	0.27***		0.26***	0.26***		0.26***	0.27***		0.30***	0.31***
Class (ref: higher-grade service c.)											
Lower grade service class	-0.58***	-0.57***		-0.58***	-0.57***		-0.59***	-0.58***		-0.60***	-0.59***
Small business owners	-0.57***	-0.53***		-0.57***	-0.53***		-0.58***	-0.54***		-0.57***	-0.54***
Workers	-1.00***	-0.98***		-1.00***	-0.98***		-1.01***	-0.99***		-1.02***	-1.00***
Education (ref: university ed.)											
Secondary and post-secondary	-0.49***	-0.52***		-0.48***	-0.53***		-0.48***	-0.52***		-0.45***	-0.49***
Compulsory education	-0.89***	-0.93***		-0.89***	-0.93***		-0.89***	-0.93***		-0.81***	-0.84***
Period (ref: 1999-2004)											
2005-2009		-0.23**			-0.20*			-0.26***	**Period** (ref: 1999-2007)		
2010-2014		-0.30**			-0.28***			-0.33***	2010-2014		0
2015-2017		-0.46**			-0.46***			-0.50***	2015-2017		-0.18*
Department (ref: large metropolitan centers)			**Region** (ref: Ile de France)			**Kind of place** (ref: prev. urban)			**Kind of place** (ref: big city)		
Other departments	-0.29***	-0.41***	Centre - Bassin Parisien	-0.36***	-0.59***	Intermediate	-0.18***	-0.36***	Outskirt of a big city	-0.15***	-0.12
Time trend differences			North-East	-0.20***	-0.24*	Prev. rural	-0.30***	-0.46***	Small town	-0.30***	-0.30***
Other departments # 2005-2009		0.14	Ouest	-0.34***	-0.38***	**Time trend differences**			Rural area	-0.41***	-0.34***
Other departments # 2010-2014		0.12	Méditerranée- Pyrénées	-0.27***	-0.31**	Intermediate # 2005-2009		0.23**	**Time trend differences**		
Other departments # 2015-2017		0.22	Auvergne-Rhône-Alpes	-0.32***	-0.48***	Intermediate # 2010-2014		0.19*	outskirt of big city # 2010-14		-0.05
			Time trend differences			Intermediate # 2015-2017		0.30**	outskirt of big city # 2015-17		-0.11
			Centre-Bassin P. # 2005-2009		0.22	Prev. rural # 2005-2009		0.18	small town # 2010-14		-0.06
			Centre-Bassin P. # 2010-2014		0.30*	Prev. rural # 2010-2014		0.13	small town # 2015-17		0.09
			Centre-Bassin P. # 2015-2017		0.42**	Prev. rural # 2015-2017		0.36**	rural area # 2010-14		-0.18*
			North-East # 2005-2009		0.02				rural area # 2015-17		0.02
			North-East # 2010-2014		0.1						
			North-East # 2015-2017		0.03						
			West # 2005-2009		0.09						
			West # 2010-2014		-0.01						
			West # 2015-2017		0.13						
			Méditerr.-Pyr. # 2005-2009		0.05						
			Méditerr.-Pyr. # 2010-2014		0						
			Méditerr.- Pyr # 2015-2017		0.24						
			Auvergne-R.-A. 2005-2009		0.18						
			Auvergne-R.-A # 2010-2014		0.17						
			Auvergne-R.-A. # 2015-2017		0.35*						
cons	5.94***	6.06***		5.86***	6.07***		5.76***	6.02***		5.83***	5.85***
N	25,828	25,884		25,884	25,884		25,884	25,884		21,935	21,935

Table B.6. Linear regressions on subjective social status (from 0 to 10) for France including different geographical variables, controlling for gender, age and social class, with data from European Social Survey data round6. (* p < 0.1; ** p < 0.05; *** p <0.01).

Regions		**Kind of place (auto-assessed variable)**	
Gender	-0.1		-0.1
Age	0.01*		0.01
Cohabitation status	0.25*		0.30**
Class (ref: higher-grade service class)			
Lower grade service class	-0.46***		-0.42**
Small business owners	-0.42*		-0.38*
Workers	-0.67***		-0.65***
Education (ref: university ed.)			
Secondary and post-secondary	-0.44***		-0.41***
Compulsory education	-0.51***		-0.50***
Region (ref: Ile de France)		**Kind of place** (ref: big city)	
Centre - Bassin Parisien	0.03	Outskirt of a big city	-0.15
North-East	-0.03	Small town	-0.1
Ouest	-0.14	Rural area	-0.36**
Méditerranée- Pyrénées	-0.40**		
Auvergne-Rhône-Alpes	0		
cons	5.77***		5.78***
N	1824		1823

Table B.7. Linear regressions on subjective social status (from 1 to 10) for France including different geographical variables, controlling for gender, age, cohabitation status, social class, education and income (* p < 0.1; ** p < 0.05; *** p <0.01).

Large metropolitan centres vs other departments			**Regions**			**Kind of place (department categorisation)**			**Kind of place (auto-assessed variable)**		
Gender	0.09***	0.09***		0.09**	0.09**		0.09***	0.09***		0.10***	0.10***
Age	0.00***	0.00***		0.00***	0.00***		0.00***	0.00***		0.00***	0.00***
Cohabitation status	0.24***	0.27***		0.24***	0.27***		0.24***	0.27***		0.27***	0.31***
Class (ref: higher-grade service class)											
Lower grade service class	-0.38***	-0.37***		-0.38***	-0.36***		-0.38***	-0.37***		-0.41***	-0.39***
Small business owners	-0.30***	-0.25***		-0.29***	-0.25***		-0.30***	-0.25***		-0.32***	-0.27***
Workers	-0.68***	-0.65***		-0.68***	-0.66***		-0.68***	-0.66***		-0.72***	-0.69***
Education (ref: university ed.)											
Secondary and post-secondary	-0.41***	-0.46***		-0.41***	-0.47***		-0.41***	-0.46***		-0.38***	-0.43***
Compulsory education	-0.72***	-0.78***		-0.72***	-0.78***		-0.72***	-0.77***		-0.66***	-0.71***
Equivalent household income	0.33**	0.33***		0.33***	0.34***		0.34***	0.34***		0.32***	0.32***
Period (ref: 1999-2004)											
2005-2009		-0.16**			-0.13			-0.18**	**Period** (ref: 1999-2007)		
2010-2014		-0.27***			-0.27**			-0.31***	2010-2014		-0.08
2015-2017		-0.36***			-0.41**			-0.43***	2015-2017		-0.17
Department (ref: large metropolitan centers)			**Region** (ref: Ile de France)			**Kind of place** (ref: prev. urban)			**Kind of place** (ref: big city)		
Other departments	-0.19***	-0.26***	Centre - Bassin Parisien	-0.25***	-0.43***	Intermediate	-0.10***	-0.23***	Outskirt of a big city	-0.16**	-0.14
			North-East	-0.08	-0.06	Prev. rural	-0.20***	-0.33***	Small town	-0.22***	-0.20**
Time trend differences			Ouest	-0.22***	-0.28**				Rural area	-0.33***	-0.26***
Other departments # 2005-09		0.11	Méditerranée- Pyrénées	-0.17***	-0.17	**Time trend differences**					
Other departments # 2010-14		0.07	Auvergne-Rhône-Alpes	-0.22***	-0.30**	Intermediate # 2005-09		0.17*	**Time trend differences**		
Other departments # 2015-17		0.08				Intermediate # 2010-14		0.15	outskirt of big city # 2010-14		0.02
			Time trend differences			Intermediate # 2015-17		0.17	outskirt of big city # 2015-17		-0.2
			Centre-Bassin P. # 2005-09		0.19	Prev. rural # 2005-2009		0.17	small town # 2010-14		-0.04
			Centre-Bassin P. # 2010-14		0.25	Prev. rural # 2010-2014		0.11	small town # 2015-17		-0.01
			Centre-Bassin P. # 2015-17		0.29	Prev. rural # 2015-2017		0.25	rural area # 2010-14		-0.15
			North-East # 2005-2009		-0.05				rural area # 2015-17		-0.07
			North-East # 2010-2014		0.06						
			North-East # 2015-2017		-0.12						
			West # 2005-2009		0.13						
			West # 2010-2014		0						
			West # 2015-2017		0.12						
			Méditerr.- Pyr. # 2005-2009		0.02						
			Méditerr.- Pyr. # 2010-2014		-0.06						
			Méditerr.- Pyr # 2015-2017		0.21						
			Auvergne-R.-A. # 2005-09		0.08						
			Auvergne-R.-A # 2010-14		0.11						
			Auvergne-R.-A. # 2015-17		0.22						
cons	5.00***	5.23***		5.01***	5.16***		4.94***	57.28***		5.07***	5.09***
N	19,214	19,214		19,214	19,214		19,214	19,214		15,783	15,783

Table B.8. Linear regressions on subjective social status (from 1 to 10) for Germany including different geographical variables. Descriptive models without any controls (* p < 0.1; ** p < 0.05; *** p <0.01).

West vs East			**Three regions**			**Kind of place (auto-assessed variable)**			**Kind of place only West**		**Kind of place only East**	
Period (ref: 1992-1999)												
2002-2006		0.13***			0.23***	**Period** (ref: 2004-2006)						
2008-2012		0.43***			0.51***	2008-2012		0.61***		0.54***		0.62***
2014-2016		0.78***			0.82***	2014-2016		1.02***		0.94***		0.96***
2018-2021		0.60***			0.71***	2018-2021		0.88***		0.77***		0.99***
Region (ref: West)			**Region** (ref. South-West)			**Kind of place** (ref: big ciy)						
East	-0.61***	-0.80***	North-west	0.00	0.12*	Outskirt of a big city	0.15***	0.15	0.10*	0.05	0.10	0.16
Time trend differences			East	-0.61***	-0.72***	Small town	-0.09**	0.02	-0.06	0.05	-0.25***	-0.1
Eastern states # 2002-2006		0.24***	**Time trend differences**			Rural area	-0.10**	0.05	-0.09**	0.11	-0.29***	-0.17
Eastern states # 2008-2012		0.34***	North-West # 2002-2006		-0.16*	**Time trend differences**						
Eastern states # 2014-2016		0.48***	North-West # 2008-20		-0.12	Outskirt of big c. #2008-12		0.01		0.11		-0.1
Eastern states # 2018-2021		0.42***	North-West # 2014-16		-0.06	Outskirt of big c. #2014-16		-0.06		-0.03		0.08
			North-West # 2018-21		-0.16*	Outskirt of big c. #2018-21		-0.04		0.05		-0.32
			East # 2002-2006		0.14	Small town # 2008-2012		-0.13		-0.11		-0.17
			East # 2008-2012		0.26***	Small town # 2014-2016		-0.07		-0.14		0.1
			East # 2014-2016		0.44***	Small town # 2018-2021		-0.13		-0.09		-0.33*
			East # 2018-2021		0.31***	Rural area # 2008-2012		-0.13		-0.16		-0.08
						Rural area # 2014-2018		-0.15		-0.26*		0.07
						Rural area # 2018-2021		-0.29**		-0.37***		-0.21
_cons	6.11***	5.67***		6.11***	5.59***		6.07***	5.42***	6.21***	5.60***	5.78***	5.17***
N	34,302	34,302		34,302	34,302		26,764	26,764	17,623	17,623	9,141	9,141

Table B.9. Linear regressions on subjective social status (from 1 to 10) for Germany including different geographical variables, controlling for gender, age, cohabitation status, social class and education (* p < 0.1; ** p < 0.05; *** p <0.01).

West vs East			**Three regions**			**Kind of place (auto-assessed variable)**			**Kind of place only West**		**Kind of place only East**	
Gender	-0.03	-0.03		-0.03	-0.03		-0.05*	-0.05*	-0.06*	-0.06*	-0.02	-0.02
Age	-0.00***	-0.00***		-0.00***	-0.00***		-0.00***	-0.00***	-0.00***	-0.00***	-0.00***	-0.01***
Cohabitation status	0.35***	0.36***		0.35***	0.36***		0.40***	0.40***	0.37***	0.38***	0.40***	0.41***
Social class (ref: higher-grade service class)												
Lower grade service class	-0.36***	-0.39***		-0.36***	-0.39***		-0.38***	-0.40***	-0.42***	-0.42***	-0.22***	-0.25***
Small business owners	-0.41***	-0.44***		-0.41***	-0.44***		-0.44***	-0.46***	-0.49***	-0.50***	-0.25**	-0.28***
Workers	-0.81***	-0.85***		-0.81***	-0.85***		-0.82***	-0.86***	-0.82***	-0.84***	-0.73***	-0.77***
Education (ref: university ed.)												
Secondary and post-secondary	-0.32***	-0.31***		-0.33***	-0.31***		-0.32***	-0.32***	-0.35***	-0.35***	-0.24***	-0.23***
Compulsory education	-0.87***	-0.75***		-0.87***	-0.75***		-0.94***	-0.78***	-0.88***	-0.80***	-0.99***	-0.82***
Period (ref: 1992-1999)												
2002-2006						**Period** (ref: 2004-2006)						
2008-2012		0.15***			0.23***	2008-2012		0.42***		0.37***		0.40***
2014-2016		0.22***			0.25***	2014-2016		0.56***		0.50***		0.39**
2018-2021		0.00			0.08	2018-2021		0.41***		0.34***		0.33**
Region (ref: West)			**Region** (ref. South-West)			**Kind of place** (ref: big ciy)						
East	-0.52***	-0.86***	North-west	0.04	0.13*	Outskirt of a big city	0.12**	0.17*	0.04	0.11	0.14*	0.09
Time trend differences			East	-0.50***	-0.77***	Small town	0.04	0.12	0.02	0.12	0.00	0.07
Eastern states # 2002-2006		0.33***	**Time trend differences**			Rural area	0.02	0.16**	-0.02	0.20**	-0.21	0.02
Eastern states # 2008-2012		0.43***	North-West # 2002-2006		-0.14	**Time trend differences**						
Eastern states # 2014-2016		0.53***	North-West # 2008-20		-0.12	Outskirt of big c. #2008-12		-0.04		-0.02		0.02
Eastern states # 2018-2021		0.44***	North-West # 2014-16		-0.04	Outskirt of big c. #2014-16		-0.12		-0.16		0.22
			North-West # 2018-21		-0.12	Outskirt of big c. #2018-21		-0.08		-0.07		-0.16
			East # 2002-2006		0.23**	Small town # 2008-2012		-0.09		-0.09		-0.1
			East # 2008-2012		0.34***	Small town # 2014-2016		-0.05		-0.12		0.12
			East # 2014-2016		0.50***	Small town # 2018-2021		-0.16		-0.15		-0.31*
			East # 2018-2021		0.36***	Rural area # 2008-2012		-0.13		-0.15		-0.09
						Rural area # 2014-2018		-0.17*		-0.28**		0.06
						Rural area # 2018-2021		-0.32***		-0.43***		-0.14
_cons	7.09***	7.00***		7.07***	6.91***		6.99***	6.60***	7.11***	6.76***	6.57***	6.29***
N	30,079	30,079		30,079	30,079		23,747	23,747	15,563	15,563	8,184	8,184

Table B.10. Linear regressions on subjective social status (from 0 to 10) for Germany including different geographical variables, controlling for gender, age and social class with data from the European social Survey round 6 (* p < 0.1; ** p < 0.05; *** p <0.01).

West vs East		**Three regions**		**Kind of place (auto-assessed variable)**		**Kind of place - only West**	**Kind of place - only East**
Gender	-0.14*		-0.14*		-0.14*	-0.04	-0.32**
Age	0		0		-0.00*	0	-0.01**
Cohabitation status	0.30***		0.30***		0.31***	0.27**	0.29*
Social class (ref: higher-grade service class)							
Lower grade service class	-0.50***		-0.50***		-0.54***	-0.51***	-0.56**
Small business owners	-0.55***		-0.54***		-0.55***	-0.77***	-0.16
Workers	-0.83***		-0.83***		-0.87***	-0.91***	-0.66***
Education (ref: university ed.)							
Secondary and post-secondary	-0.31***		-0.31***		-0.29***	-0.22*	-0.51***
Compulsory education	-0.50***		-0.51***		-0.42***	-0.50***	-0.39
	-0.14*						
Region (ref: West)		Region (ref. South-West)		Kind of place (ref: big ciy)			
East	-0.61***	North-west	0.12	Outskirt of a big city	0.05	0.07	-0.05
		East	-0.53***	Small town	-0.11	-0.02	-0.19
				Rural area	0.17	0.16	0.07
_cons	6.90***		6.84***		6.79***	6.65***	6.80***
N	2,657		2,657		2657	1710	947

Table B.11. Linear regressions on subjective social status (from 1 to 10) for Germany including different geographical variables, controlling for gender, age, cohabitation status, social class, education and income (* p < 0.1; ** p < 0.05; *** p <0.01).

West vs East			**Three regions**			**Kind of place (auto-assessed variable)**			**Kind of place only West**		**Kind of place only East**	
Gender	-0.06**	-0.06**		-0.06**	-0.06**		-0.09***	-0.08***	-0.09***	-0.09**	-0.07	-0.07*
Age	-0.00***	0.00***		-0.00***	0.00***		-0.00***	0.00***	-0.00***	0.00***	0	0.00*
Cohabitation status	0.30***	0.31***		0.30***	0.31***		0.33***	0.33***	0.32***	0.32**	0.31***	0.31***
Social class (ref: higher-grade service class)												
Lower grade service class	-0.21***	-0.24***		-0.21***	-0.24***		-0.23***	-0.26***	-0.27***	-0.28***	-0.12	-0.14*
Small business owners	-0.28***	-0.31***		-0.28***	-0.31***		-0.29***	-0.32***	-0.36***	-0.37***	-0.13	-0.16
Workers	-0.54***	-0.58***		-0.54***	-0.58***		-0.54***	-0.58***	-0.56***	-0.58***	-0.48***	-0.52***
Education (ref: university ed.)												
Secondary and post-secondary	-0.21***	-0.19***		-0.21***	-0.19***		-0.20***	-0.20***	-0.24***	-0.23***	-0.13*	-0.13*
Compulsory education	-0.75***	-0.61***		-0.75***	-0.61***		-0.81***	-0.64***	-0.76***	-0.65***	-0.86***	-0.69***
Equivalent household income	0.36***	0.36***		0.36***	0.36***		0.38***	0.38***	0.35***	0.35***	0.45***	0.45***
Period (ref: 1992-1999)												
2002-2006		0.04			0.20**	**Period** (ref: 2004-2006)						
2008-2012		0.19***			0.35***	2008-2012		0.42***		0.36***		0.40***
2014-2016		0.26***			0.35***	2014-2016		0.53***		0.47***		0.39**
2018-2021		0.10*			0.24**	2018-2021		0.39***		0.32***		0.32**
			Region (ref. South-West)									
Region (ref: West)						**Kind of place** (ref: big ciy)						
East	-0.39***	-0.66***	North-west	0.03	0.22**	Outskirt of a big city	0.06	0.04	-0.02	-0.05	0.11	0.05
			East	-0.37***	-0.51***	Small town	0.03	0.01	0	0.05	0.05	0.13
Time trend differences						Rural area	0.04	0.18*	-0.01	0.19*	0.06	0.09
Eastern states # 2002-2006		0.25***	**Time trend differences**			**Time trend differences**						
Eastern states # 2008-2012		0.35***	North-West # 2002-06		-0.25**	Outskirt of big c. #2008-12		-0.02		0.08		-0.02
Eastern states # 2014-2016		0.46***	North-West # 2008-20		-0.23*	Outskirt of big c. #2014-16		-0.04		-0.06		0.27
Eastern states # 2018-2021		0.32***	North-West # 2014-16		-0.12	Outskirt of big c. #2018-21		0.04		0.09		-0.13
			North-West # 2018-21		-0.20*	Small town # 2008-2012		-0.10		-0.08		-0.13
			East # 2002-2006		0.08	Small town # 2014-2016		-0.03		-0.06		0.08
			East # 2008-2012		0.20*	Small town # 2018-2021		-0.11		-0.05		0 -0.30*
			East # 2014-2016		0.37***	Rural area # 2008-2012		-0.14		-0.16		-0.09
			East # 2018-2021		0.18	Rural area # 2014-2016		-0.16		-0.24*		0.04
						Rural area # 2018-2021		-0.24**		-0.32**		-0.11
_cons	6.13***	5.99***		6.11***	5.84***		6.02***	5.64***	6.22***	5.88***	5.51***	5.23***
N	25,396	25,396		25,396	25,396		20,811	20,811	13,488	13,488	7,323	7,323

Appendix C (chapter 4)

Table C.1. Available observations by country and year

Descriptive models:

Country	2002	2004	2006	2008	2010	2012	2014	2016	2018	2020	Total
AT	2,106	2,064	2,187	.	.	.	1,728	1,957	2,400	1,831	14,273
BE	1,619	1,659	1,692	1,660	1,624	1,777	1,681	1,695	1,679	.	15,086
CH	1,925	2,012	1,727	1,727	1,414	1,412	1,444	1,424	1,431	1,447	15,963
CZ	1,200	2,707	.	1,903	2,271	1,816	1,995	2,166	2,352	2,389	18,799
DE	2,763	2,634	2,724	2,632	2,859	2,791	2,907	2,700	2,238	7,779	32,027
DK	1,408	1,383	1,424	1,530	1,485	1,549	1,413	.	1,491	.	11,683
ES	1,525	1,530	1,745	2,364	1,795	1,784	1,818	1,854	1,535	2,170	18,120
FI	1,825	1,854	1,771	2,044	1,748	2,066	1,963	1,836	1,648	1,515	18,270
FR	1,455	1,754	1,918	1,981	1,670	1,903	1,834	1,982	1,920	1,865	18,282
GB	1,909	1,754	2,195	2,183	2,175	2,071	2,130	1,831	2,091	.	18,339
HU	1,479	1,332	1,376	1,405	1,446	1,862	1,558	1,504	1,557	1,743	15,262
IE	1,825	2,097	1,522	1,662	2,367	2,466	2,217	2,563	2,076	.	18,795
NL	2,246	1,780	1,799	1,705	1,760	1,775	1,826	1,607	1,549	1,414	17,461
NO	1,987	1,678	1,652	1,461	1,452	1,536	1,346	1,464	1,309	1,341	15,226
PL	1,843	1,522	1,526	1,453	1,574	1,728	1,468	1,532	1,375	1,850	15,871
PT	1,312	1,899	1,983	2,137	1,991	2,049	1,177	1,202	988	1,700	16,438
SE	1,839	1,795	1,796	1,702	1,399	1,748	1,701	1,475	1,488	2,154	17,097
SI	1,376	1,261	1,304	1,182	1,279	1,167	1,123	1,212	1,221	1,171	12,296
SK	.	1,303	1,602	1,708	1,762	1,783	.	.	1,050	1,330	10,538
Tot	31,642	34,018	31,943	32,439	32,071	33,283	31,329	30,004	31,398	31,699	319,826

*Most complete models**:

Country	2002	2004	2006	2008	2010	2012	2014	2016	2018	2020	Total
AT	1,225	1,051	1,265	0	0	0	1,232	1,415	1,904	1,271	9,363
BE	1,198	1,218	1,392	1,378	1,296	1,532	1,466	1,478	1,471	0	12,429
CH	1,469	1,557	1,380	1,285	1,141	1,147	1,176	1,146	1,132	1,165	12,598
CZ	832	1,562	0	1,290	1,499	1,151	1,269	1,599	1,489	1,594	12,285
DE	2,102	1,978	1,982	2,088	2,182	2,336	2,534	2,351	1,950	5,544	25,047
DK	1,220	1,204	1,264	1,304	1,289	1,339	1,262	0	1,278	0	10,160
ES	802	799	1,001	1,391	1,268	1,314	1,292	1,307	1,039	1,329	11,542
FI	1,674	1,713	1,630	1,892	1,616	1,941	1,849	1,696	1,550	1,426	16,987
FR	0	1,393	1,607	1,686	1,442	1,643	1,614	1,714	1,622	1,573	14,294
GB	1,649	1,228	1,716	1,854	1,688	1,539	1,715	1,475	1,704	0	14,568
HU	0	1,032	0	979	1,064	1,205	1,059	875	864	1,181	8,259
IE	0	1,516	1,078	1,403	1,452	1,723	1,643	1,817	1,436	0	12,068
NL	1,891	1,498	1,545	1,474	1,391	1,470	1,629	1,400	1,298	1,256	14,852
NO	1,770	1,618	1,578	1,400	1,379	1,455	1,272	1,377	1,191	1,267	14,307
PL	1,428	1,165	1,153	1,124	1,150	1,291	1,045	1,120	825	1,295	11,596
PT	851	935	965	825	0	888	901	1,022	766	1,047	8,200
SE	1,731	1,680	1,636	1,610	1,300	1,566	1,549	1,362	1,368	1,970	15,772
SI	1,027	776	921	809	879	819	824	978	996	983	9,012
SK	0	714	867	0	1,037	1,120	0	0	789	855	5,382
Tot	20,869	24,637	22,980	23,792	23,073	25,479	25,331	24,132	24,672	23,756	238,721

*some country are missing in some years compared to the previous table, because no income variable is available

Figure C.1. Average SWD (pooled over the period 2002-2020) and trends in some country

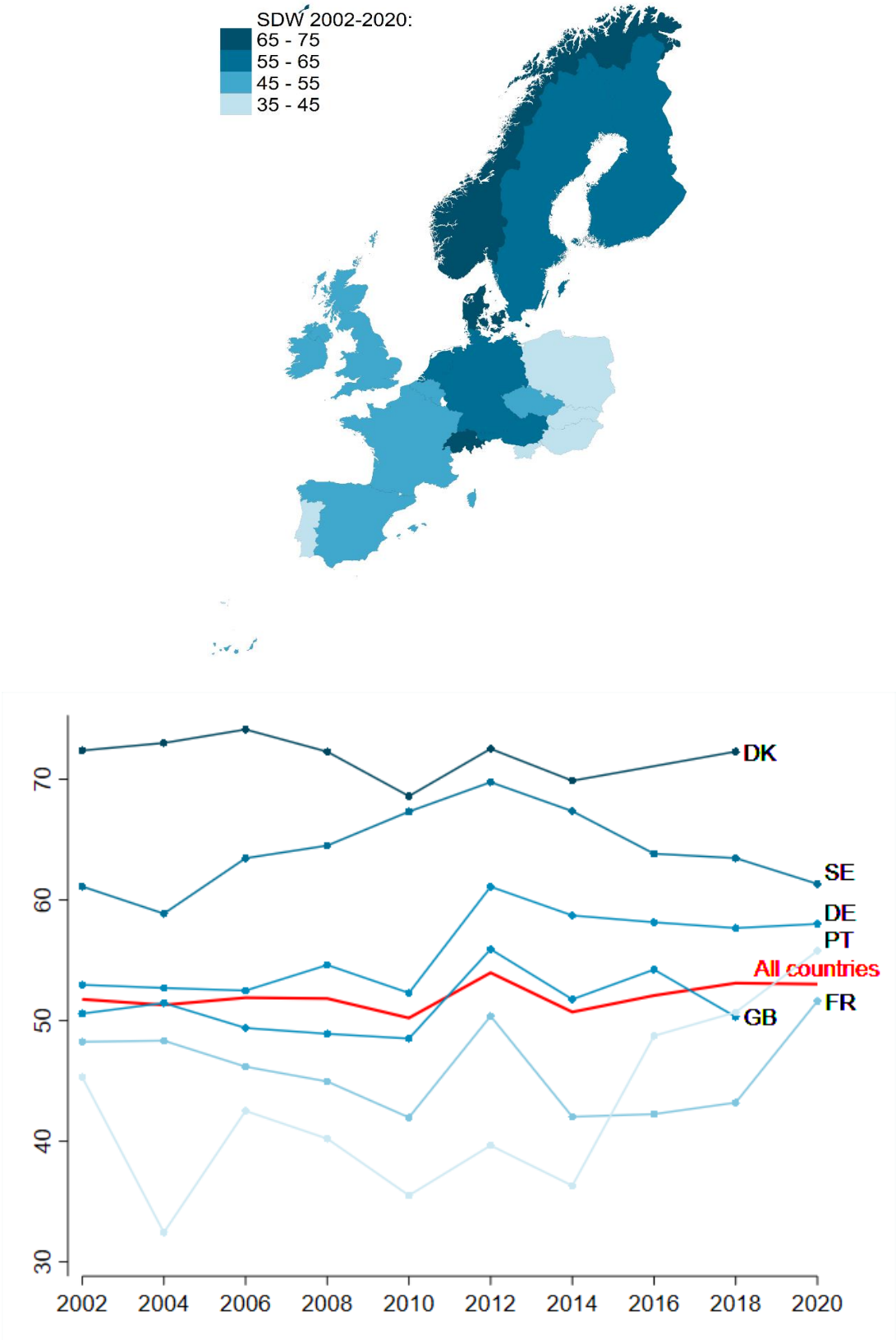


Table C.2. Distribution of the four kinds of places by country

		Big cities	Outskirts of big cities	Small cities	Rural areas	Total
AT	Freq.	3,144	1,384	3,705	6,040	14,273
	%	22.0	9.7	26.0	42.3	100
BE	Freq.	2,003	1,583	3,613	7,887	15,086
	%	13.3	10.5	23.9	52.3	100
CH	Freq.	1,322	1,665	3,854	9,122	15,963
	%	8.2	10.4	24.1	57.1	100
CZ	Freq.	5,231	849	7,294	5,425	18,799
	%	27.8	4.5	38.8	28.9	100
DE	Freq.	5,659	4,297	11,742	10,329	32,027
	%	17.7	13.4	36.7	32.3	100
DK	Freq.	2,028	2,499	3,937	3,219	11,683
	%	17.4	21.4	33.7	27.6	100
ES	Freq.	3,774	1,211	5,383	7,752	18,120
	%	20.8	6.7	29.7	42.8	100
FI	Freq.	3,595	2,240	5,461	6,974	18,270
	%	19.7	12.3	29.9	38.2	100
FR	Freq.	3,478	2,267	5,983	6,554	18,282
	%	19.0	12.4	32.7	35.9	100
GB	Freq.	1,511	4,057	8,348	4,423	18,339
	%	8.2	22.1	45.5	24.1	100
HU	Freq.	3,958	608	5,348	5,348	15,262
	%	25.9	4.0	35.0	35.0	100
IE	Freq.	1,365	4,361	5,013	8,056	18,795
	%	7.3	23.2	26.7	42.9	100
NL	Freq.	3,546	1,812	4,480	7,623	17,461
	%	20.3	10.4	25.7	43.7	100
NO	Freq.	2,363	2,761	4,141	5,961	15,226
	%	15.5	18.1	27.2	39.2	100
PL	Freq.	3,919	683	5,159	6,110	15,871
	%	24.7	4.3	32.5	38.5	100
PT	Freq.	3,900	2,550	5,088	4,900	16,438
	%	23.7	15.5	31.0	29.8	100
SE	Freq.	2,494	3,820	5,887	4,896	17,097
	%	14.6	22.3	34.4	28.6	100
SI	Freq.	1,354	1,651	2,633	6,658	12,296
	%	11.0	13.4	21.4	54.2	100
SK	Freq.	1,747	571	3,243	4,977	10,538
	%	16.6	5.4	30.8	47.2	100
Total	Freq.	56,391	40,869	100,312	122,254	319,826
	%	17.6	12.8	31.3	38.2	100

Table C.3. Rural population (% total population)

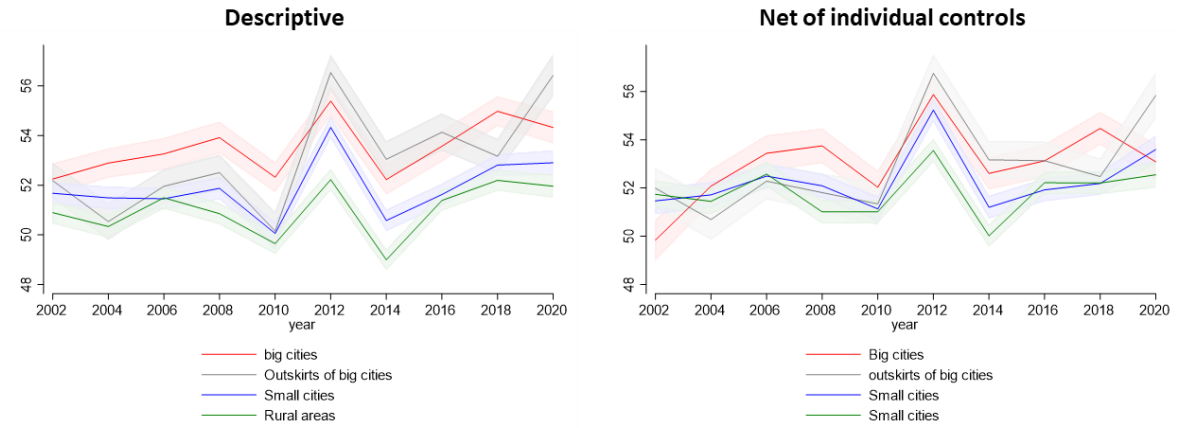
	Eurostat statistic*	ESS datataset
AT	41	42
BE	18	51
CH	25	58
CZ	47	30
DE	23	32
DK	45	27
ES	27	43
FI	30	38
FR	35	35
GB	14	23
HU	40	32
IE	43	42
NL	15	45
NO	40	40
PL	42	41
PT	27	36
SE	29	28
SI	45	54
SK	41	49
Average across all countries in the sample	33	39

* Population distribution by degree of urbanization in 2014 (only Norway: 2015), from the EU-SILC survey. This measure is based on the classification of local administrative units (LAU) following the criteria of geographical contiguity and population density. For more information: https://ec.europa.eu/eurostat/web/degree-of-urbanisation/methodology

Table C.4. Regression results on SDW (0-100).

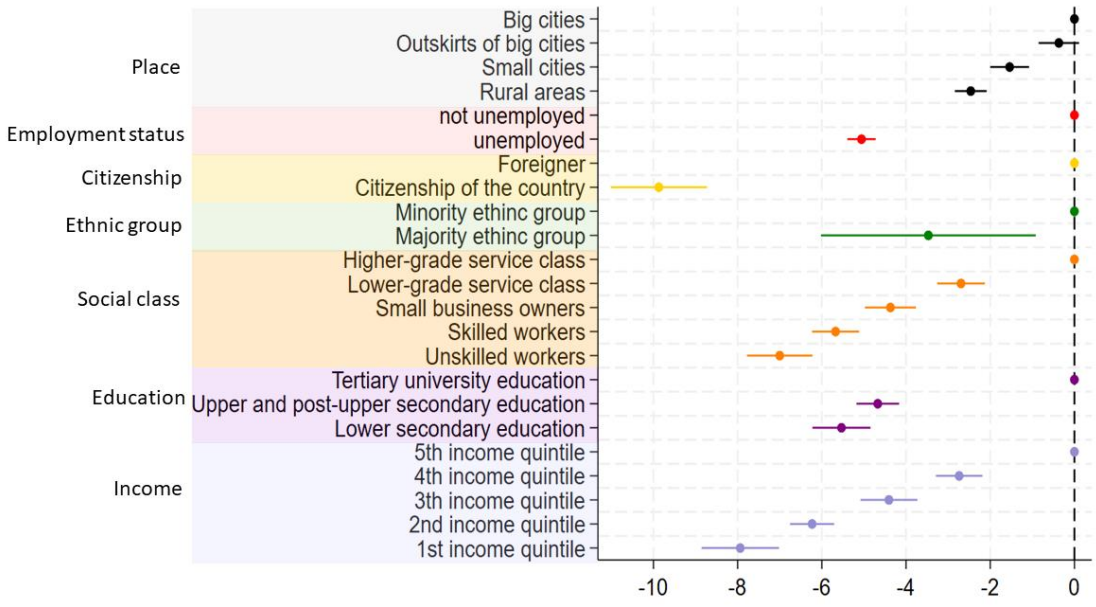
	Descriptive models		**Models including individual controls**		
Age			0.06***	0.06***	0.06***
Male (ref: female)			1.80***	1.79***	1.26***
No country citizenship			10.69***	10.69***	10.56***
Ethnic minority			2.26***	2.23***	2.20***
Unemployed			-3.71***	-3.71***	-3.75***
Class (ref: upper-middle class)					
Lower-grade service class			16 classes :	16 classes :	-0.73***
Small business owners			omitted	omitted	-1.50***
Skilled workers					-1.97***
Unskilled workers					-2.69***
Education level (ref: less than secondary)					
Secondary and post secodary			0.65	0.67*	0.82**
Tertiary			3.11***	3.12***	3.28***
Income national deciles (ref: 1st deciles)					
2nd decile			0.82	0.84*	0.82
3rd decile			1.87***	1.87***	1.87***
4th decile			2.51***	2.51***	2.56***
5th decile			3.34***	3.35***	3.42***
6th decile			4.00***	4.01***	4.12***
7th decile			4.46***	4.47***	4.63***
8th decile			5.36***	5.38***	5.55***
9th decile			6.46***	6.47***	6.68***
10th decile			7.14***	7.14***	7.35***
Country dummies (ref: AT)					
BE	-3.90***	-3.84***	-4.83***	-4.78***	-4.82***
CH	13.76***	13.81***	12.07***	12.11***	12.08***
CZ	-7.60***	-7.55***	-6.68***	-6.63***	-6.85***
DE	-2.07***	-2.03***	-2.20***	-2.14***	-2.22***
DK	13.94***	14.00***	14.45***	14.49***	14.39***
ES	-7.76***	-7.71***	-8.01***	-7.95***	-8.02***
FI	6.74***	6.77***	7.07***	7.09***	6.91***
FR	-12.08***	-12.04***	-12.53***	-12.49***	-12.54***
UK	-15.48***	-15.41***	-14.12***	-14.00***	-14.29***
HU	-5.16***	-5.09***	-5.44***	-5.32***	-5.29***
IE	3.08***	3.13***	2.42***	2.47***	2.54***
NL	10.75***	10.80***	10.61***	10.66***	10.59***
NO	-13.11***	-13.05***	-12.21***	-12.16***	-12.39***
PL	-15.17***	-15.13***	-11.83***	-11.81***	-11.98***
PT	6.03***	6.06***	5.51***	5.55***	5.46***
SE	-17.81***	-17.73***	-17.46***	-17.41***	-17.57***
SI	-13.43***	-13.39***	-13.38***	-13.35***	-13.60***
SK	-6.70***	-6.62***	-7.24***	-7.16***	-7.09***
Place (ref: big cities and their outskirts)					
Outskirts of big cities	-0.52	-0.06	-0.22	2.15**	2.10**
Small cities	-1.64***	-0.57	-0.83**	1.62**	1.54**
Rural areas	-2.53***	-1.35	-1.31*	1.90**	1.72**
Year (ref: 2002)					
2004	-0.35	0.64	0.14	2.27*	2.26*
2006	0.26	1.01	1.23	3.57***	3.58***
2008	0.38	1.67	0.55	3.90**	3.98**
2010	-1.21	0.08	-0.11	2.19	2.25
2012	2.50	3.14	3.56	6.03*	6.09*
2014	-0.96	-0.02	-0.12	2.76	2.83
2016	0.64	1.32	1.00	3.28	3.29
2018	1.45	2.73	1.22	4.63**	4.69**
2020	1.66	2.08	1.96	3.23	3.30
Place-specific trends :					
Outskirts#2004		-2.30*		-3.60**	-3.53**
Outskirts#2006		-1.24		-3.28***	-3.22***
Outskirts#2008		-1.34		-4.09*	-4.09*
Outskirts#2010		-2.11		-2.86*	-2.88*
Outskirts#2012		1.21		-1.28	-1.27
Outskirts#2014		0.88		-1.58	-1.57
Outskirts#2016		0.63		-2.14	-2.10
Outskirts#2018		-1.75		-4.15***	-4.13***
Outskirts#2020		2.16		0.60	0.60
Small cities#2004		-0.83		-2.03	-2.00
Small cities #2006		-1.24		-2.53***	-2.52***
Small cities #2008		-1.47**		-3.27***	-3.32***
Small cities #2010		-1.69*		-2.52***	-2.55***
Small cities #2012		-0.49		-2.27*	-2.29*
Small cities #2014		-1.08		-3.03***	-3.07***
Small cities #2016		-1.38		-2.82*	-2.81*
Small cities #2018		-1.60*		-3.90***	-3.94***
Small cities #2020		-0.85		-1.10	-1.12
Rural#2004		-1.20		-2.56***	-2.52***
Rural #2006		-0.41		-2.74***	-2.70***
Rural #2008		-1.71		-4.63***	-4.66***
Rural #2010		-1.32		-2.91***	-2.89***
Rural #2012		-1.81		-4.22***	-4.22***
Rural #2014		-1.88*		-4.48**	-4.50**
Rural #2016		-0.83		-2.81**	-2.73**
Rural #2018		-1.43		-4.16**	-4.16**
Rural #2020		-1.01		-2.43	-2.42
Constant	59.02***	58.13***	48.92***	46.50***	47.92***
Observations	319,826	319,826	238,721	238,721	238,721
Adjusted R-squared	0.08	0.08	0.12	0.12	0.12

Figure C.2. Trends of SDW (0-100) in the different kinds of places in Europe, 2002-2020 (95% confidence intervals)



Note: values are based on linear regressions with country and year fixed effects. Individual controls are gender, age, nationality, belonging to a ministry, education, unemployment status, social class and income decile.

Figure C.3. Differences of SWD (0-100) between several social groups in Europe, 2002-2020: results from multilevel models.



Every color corresponds to a separate random-intercept multilevel model, including three levels: individuals nested in years nested in countries.

Figure C.4. Differences in SDW between people living in the four kinds of places within each income quintile

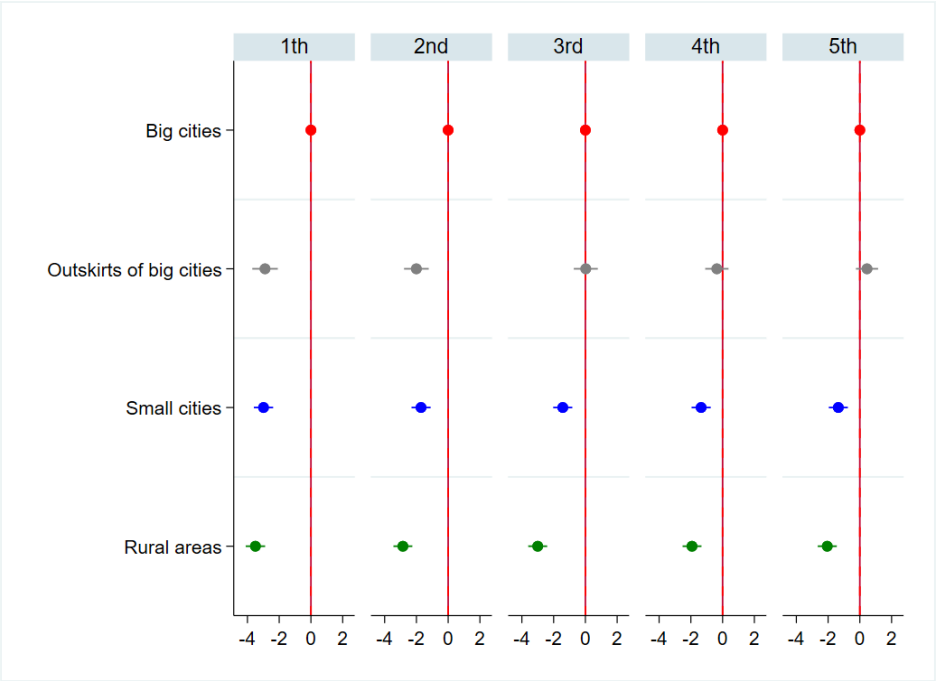


Figure C.5. Differences in SDW between the big cities and the other kinds of places in each of the studied countries (2002-2020), descriptive

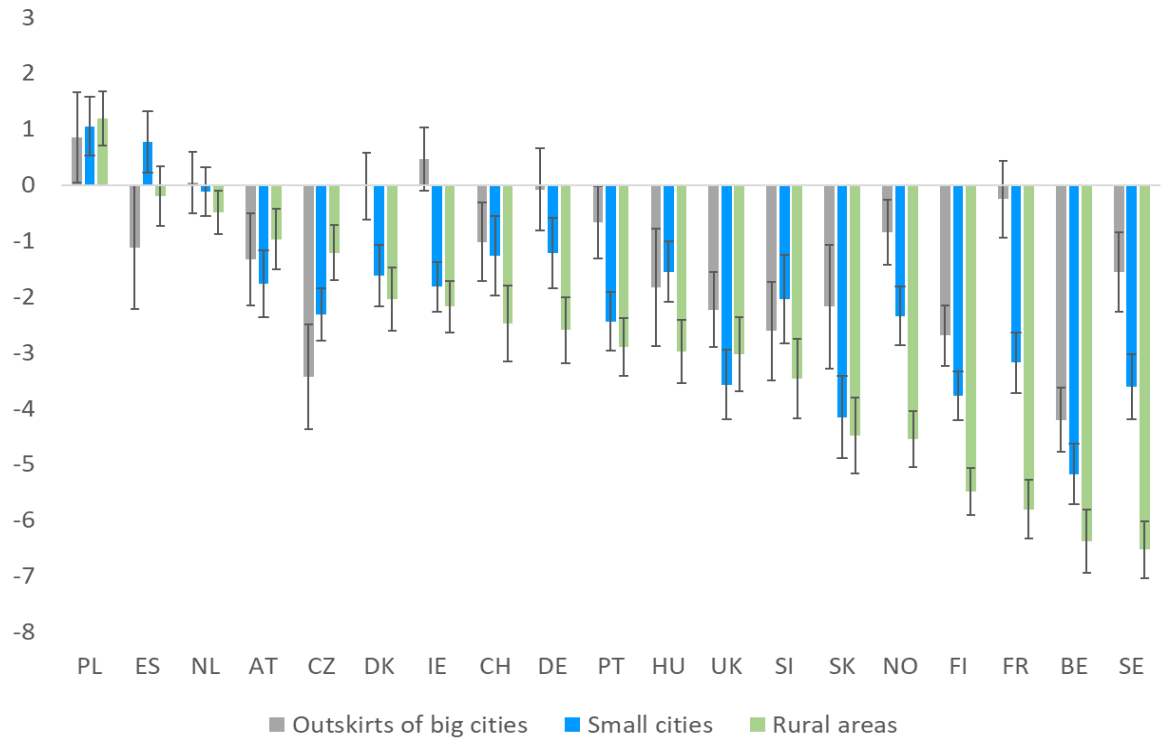


Figure C.6. Differences of SDW between the four kinds of places in each country under study (2002-2020), net of individual controls

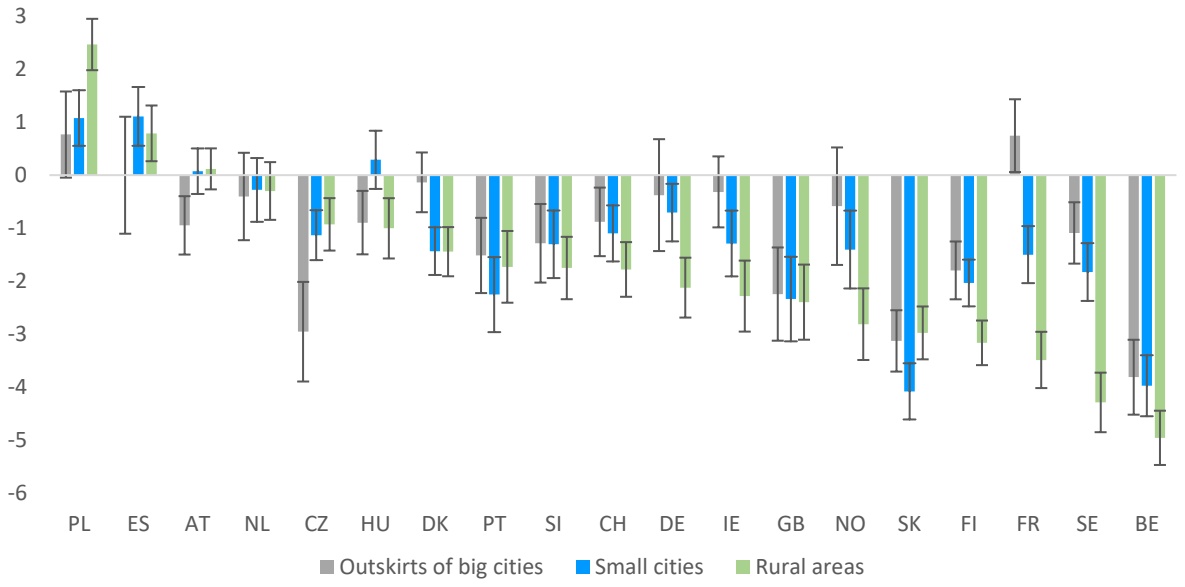


Figure C.7. Average trust in country's parliament in the different kinds of places in the countries with the largest urban-rural differences, 2002-2020 (95% confidence intervals)

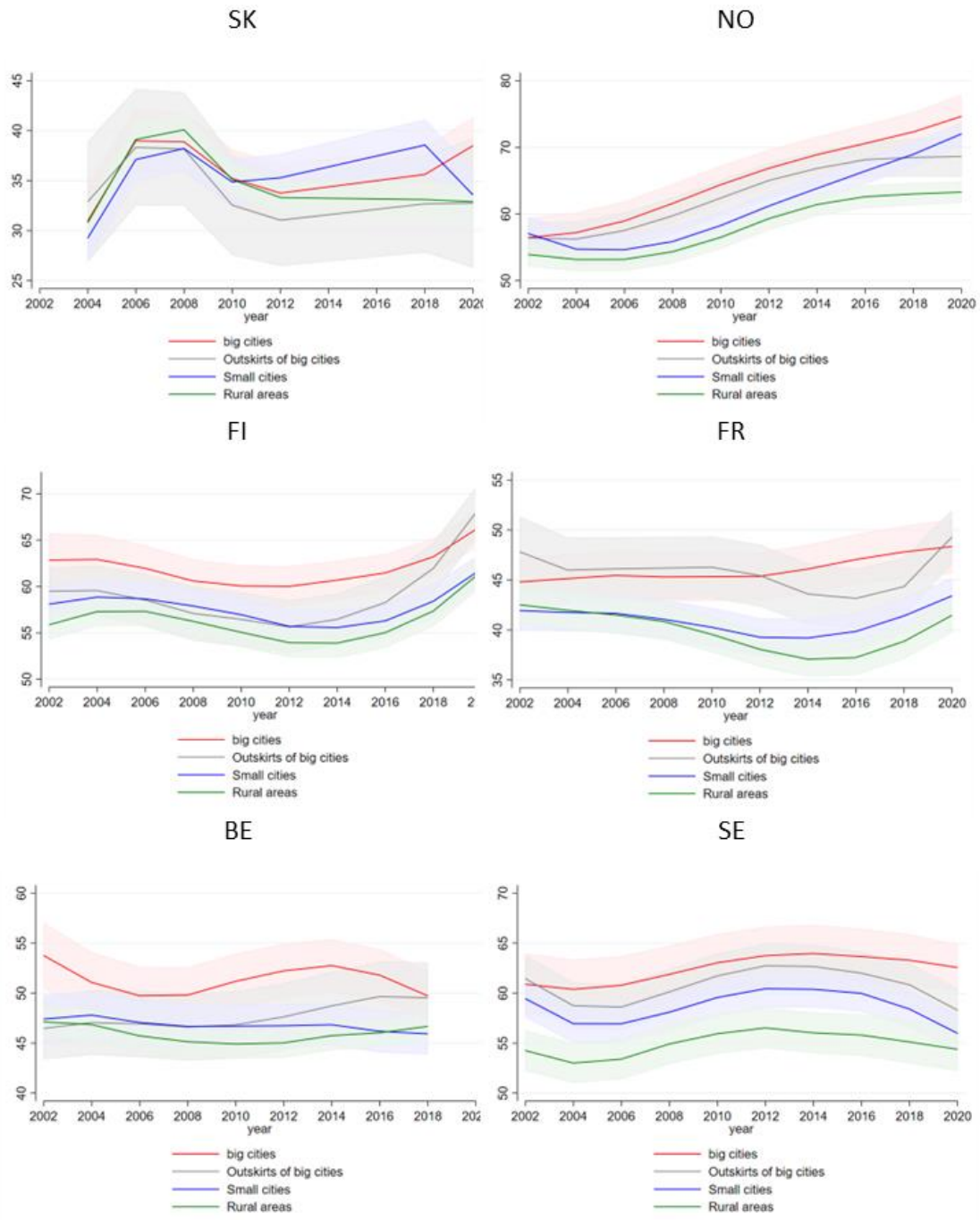
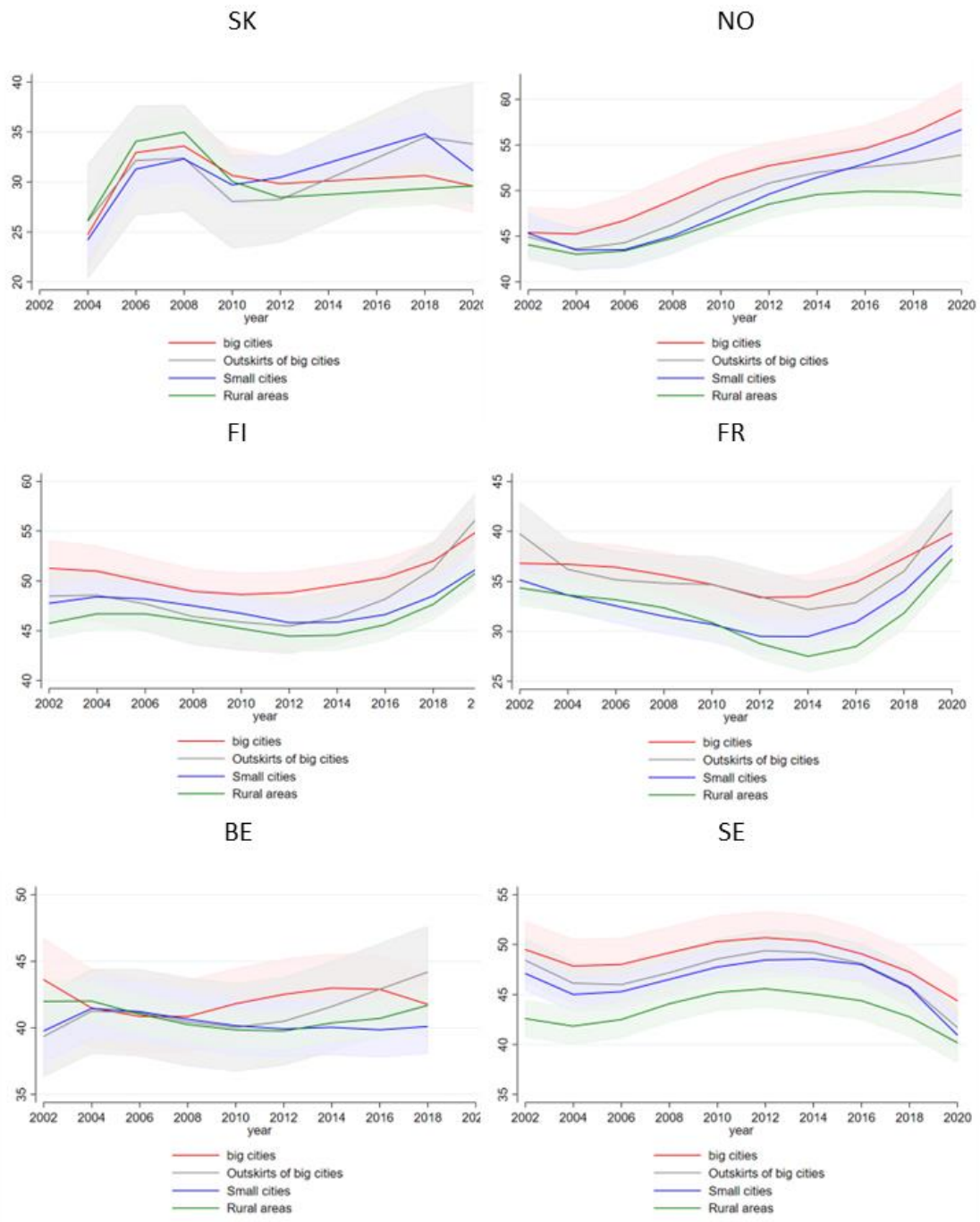


Figure C.8. Average trust in politicians in the different kinds of places in the countries with the largest urban-rural differences, 2002-2020 (95% confidence intervals)



Appendix D (chapter 5)

Table D.1. Available observations by country

	ISSP 2020			ESS 2016		
Country	**Total N**	**Valid N**	**Valid N (household income)**	**Total N**	**Valid N**	**Valid N (household income)**
AT	1261	1200	1017	2010	1897	1439
CH	4280	3683	3248	1525	1387	1170
DE	1702	1501	1184	2852	2605	2372
ES	2254	1750	1330	1958	1732	1390
FI	1137	983	880	1925	1782	1720
FR	1520	1194	1071	2070	1911	1758
HU	1001	929	613	1614	1358	904
IS	1150	865	545	880	841	788
IT	1138	855	487	2626	2048	1228
LT	1200	1092	815	2122	1887	1655
NO	1131	875	801	1545	1438	1390
SE	1921	1602	1392	1551	1477	1396
SI	1102	896	671	1307	1148	1008
Total	**20797**	**17425**	**14054**	**23985**	**21511**	**18218**

Table D.2. Distribution (%) of the four kinds of places by country (weighted)

ISSP 2020

Country	Big cities	Outskirts of big cities	Small cities	Rural areas
AT	28.01	3.05	34.1	34.85
CH	10.81	13.87	25.44	49.88
DE	17.1	17.74	33.89	31.27
ES	23.59	10.34	30.21	35.86
FI	11.16	33.83	26.74	28.28
FR	13.98	13.85	35.85	36.31
HU	36.82	1.61	33.16	28.41
IS	40.58	26.94	22.08	10.4
IT	21.87	7.25	33.92	36.96
LT	38.1	4.21	27.75	29.95
NO	29.26	12.34	23.2	35.2
SE	24.59	19.29	24.66	31.46
SI	16.06	7.89	26.56	49.49
Total	**18.09**	**14.06**	**32.69**	**35.17**

ESS 2016

Country	Big cities	Outskirts of big cities	Small cities	Rural areas
AT	23.73	7.14	23.54	45.59
CH	8.28	7.44	27.77	56.51
DE	14.12	14.11	35.21	36.56
ES	20.05	5.95	26.33	47.67
FI	21.89	12.54	26.93	38.64
FR	15.9	11.68	35.56	36.86
HU	27.61	5.35	34.52	32.52
IS	13.6	24.44	49.69	12.28
IT	11.08	5.47	34.29	49.16
LT	37.78	0.4	33.58	28.24
NO	15.56	15.84	29.51	39.09
SE	12.8	20.99	39.13	27.08
SI	12.58	10.05	22.29	55.08
Total	**15.73**	**10.23**	**32.98**	**41.06**

Table D.3. Distribution of the mediating variables (weighted)

ISSP 2020		**ESS 2016**	
Concern for the environement		**Worried about climate change**	
1- Not at all concerned	1.85 %	1- Not at all worried	2.78 %
2-	5.91 %	2- Not very worried	13.66 %
3-	22.02 %	3- Somewhat worried	45.68 %
4-	34.59 %	4- Very worried	30.53 %
5- Very concerned	35.64 %	5- Extremely worried	7.36 %
Climate change believes		**Climate change believes**	
1- The climate is not changing	1.24 %	1- The climate is not changing	4.84 %
2- Climate change is due mostly to natural processes	4.21 %	2- Climate change is due mostly to natural processes	4.92 %
3- Climate change is due equally to natural processes and human activities	35.74 %	3- Climate change is due equally to natural processes and human activities	39.04 %
4- Climate change is due mostly to human activities	58.80 %	4- Climate change is due mostly to human activities	51.21 %

Table D.4. Linear probability models: the probability of being unwilling to pay higher taxes to protect the environment (ISSP 2020).

		Model 1	Model 1b	Model 2	Model 2b	Model 3	Model 3b	Model 4	Model 4b
Gender	Male (ref. female)	0.03***	0.00	0.05***	0.02*	0.05***	0.01*	0.04***	0.01
Age group	18-35 (ref.)								
	36-50	-0.01	-0.01	0.01	-0.01	0.00	-0.00	-0.01	-0.01
	51-65	-0.01	-0.01	-0.01	-0.02	-0.00	-0.01	-0.03**	-0.03***
	More than 65	-0.01	-0.03**	-0.01	-0.03**	0.00	-0.02	-0.04***	-0.05***
Country	fixed effects	X omitted	X omitted	X omitted	X omitted	X omitted	X omitted	X omitted	X omitted
Env. concern	1-Not at all (ref.)								
	2		-0.01		0.00		-0.01		0.00
	3		-0.14***		-0.14***		-0.15***		-0.13***
	4		-0.32***		-0.33***		-0.31***		-0.30***
	5-Very concerned		-0.41***		-0.44***		-0.40***		-0.39***
Cli. change believes	1-No cl. Change		-0.04		-0.09**		-0.05		-0.06*
	2-Cl. change for natural processes		0.15***		0.15***		0.15***		0.15***
	3-Natural processes and human act.		0.10***		0.09***		0.10***		0.09***
	4- Human activities (ref.)								
Place	Big cities (ref.)								
	Outskirts of big cities	0.02*	0.00						
	Small cities	0.11***	0.08***						
	Rural areas	0.10***	0.07***						
Household income	1st quintile (ref.)								
	2nd quintile			0.02	0.00				
	3rd quintile			0.09***	0.06***				
	4th quintile			0.11***	0.08***				
	5th quintile			0.13***	0.11***				
Class	Higher-grade service (ref.)								
	Lower-grade service class					0.08***	0.07***		
	Small business owners					0.13***	0.11***		
	Skilled workers					0.15***	0.13***		
	Unskilled workers					0.21***	0.19***		
Education	Tertiary (ref.)								
	Secondary							0.16***	0.13***
	Compulsory							0.23***	0.20***
_cons		0.39***	0.65***	0.34***	0.62***	0.32***	0.57***	0.32***	0.57***
N		17,425	16,949	14,054[a]	13,751[a]	17,425	16,949	17,425	16,949
Adj. R2		0.02	0.11	0.03	0.13	0.04	0.12	0.04	0.13

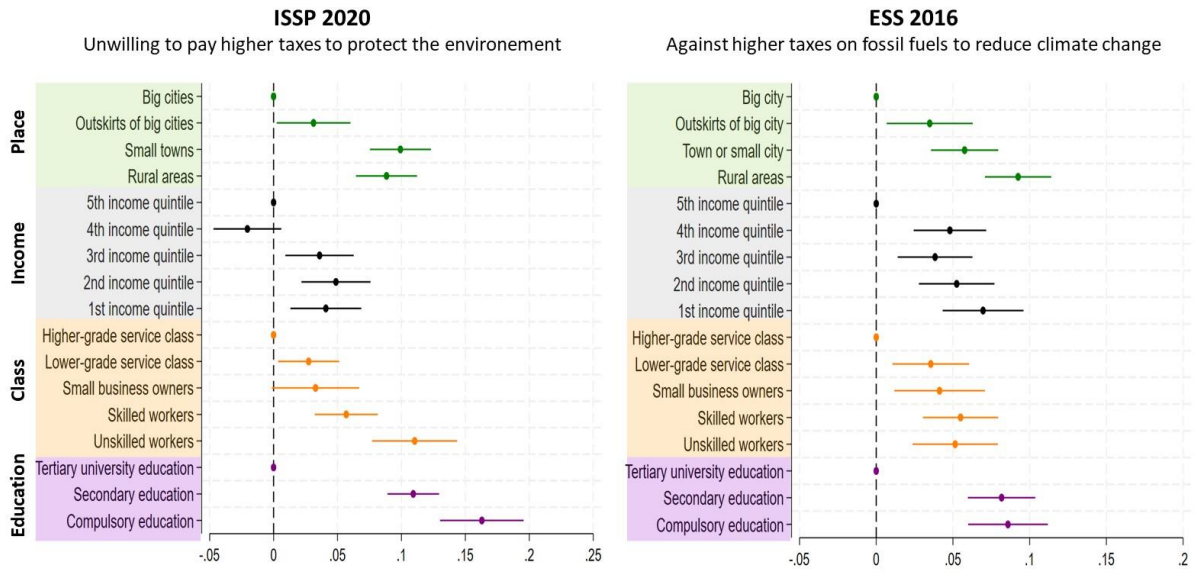
[a] The models testing differences between household income quintiles rely on a smaller number of observation, because of numerous missing values in the income variable. The observations missing values only in that variable were not excluded from the other models.
*** p<0.01, ** p<0.05, * p<0.1

Table D.5. Linear probability models: the probability of being against increasing taxes on fossil fuels to reduce climate change (ESS 2016).

		Model 1	Model 1b	Model 2	Model 2b	Model 3	Model 3b	Model 4	Model 4b
Gender	Male (ref. female)	0.04***	0.04***	0.04***	0.04***	0.05***	0.04***	0.04***	0.03***
Age group	18-35 (ref.)								
	36-50	0.06***	0.06***	0.07***	0.06***	0.07***	0.07***	0.06***	0.06***
	51-65	0.09***	0.09***	0.09***	0.08***	0.10***	0.09***	0.09***	0.08***
	More than 65	0.08***	0.05***	0.07***	0.04***	0.09***	0.06***	0.06***	0.04***
Country	fixed effects	X	X	X	X	X	X	X	X
		omitted	omitted	omitted	omitted	omitted	omitted	omitted	omitted
Worried cl.	1-Not at all (ref.)								
change	2-Not very worried		-0.07***		-0.06**		-0.07***		-0.07***
	3-Somewhat worried		-0.15***		-0.15***		-0.14***		-0.14***
	4-Very worried		-0.21***		-0.20***		-0.20***		-0.20***
	5-Extremely worried		-0.24***		-0.26***		-0.24***		-0.24***
Cli. change	1-No cl. Change		0.07***		0.09***		0.07***		0.07***
believes	2-Cl. change for natural processes		0.10***		0.11***		0.10***		0.10***
	3-Natural processes and human act.		0.09***		0.09***		0.08***		0.08***
	4- Human activities (ref.)								
Place	Big cities (ref.)								
	Outskirts of big cities	0.03*	0.03*						
	Small cities	0.05***	0.05***						
	Rural areas	0.09***	0.08***						
Household income	1st quintile (ref.)								
	2nd quintile			0.08***	0.07***				
	3rd quintile			0.08***	0.07***				
	4th quintile			0.10***	0.09***				
	5th quintile			0.13***	0.11***				
Class	Higher-grade service (ref.)								
	Lower-grade service class					0.07***	0.06***		
	Small business owners					0.11***	0.09***		
	Skilled workers					0.11***	0.10***		
	Unskilled workers					0.12***	0.11***		
Education	Tertiary (ref.)								
	Secondary							0.12***	0.11***
	Compulsory							0.14***	0.12***
_cons		0.30***	0.49***	0.30***	0.51***	0.26***	0.45***	0.26***	0.46***
N		21,505	20,589	18,213[b]	17,548[b]	21,505	20,589	21,471	20,560
Adj. R2		0.04	0.06	0.05	0.07	0.04	0.07	0.05	0.07

[b] The models testing differences between household income quintiles rely on a smaller number of observation, because of numerous missing values in the income variable. The observations missing values only in that variable were not excluded from the other models.
*** p<0.01, ** p<0.05, * p<0.1

Figure D.1. Differences between groups in the probability of opposing higher taxes to protect the environment (complete model)

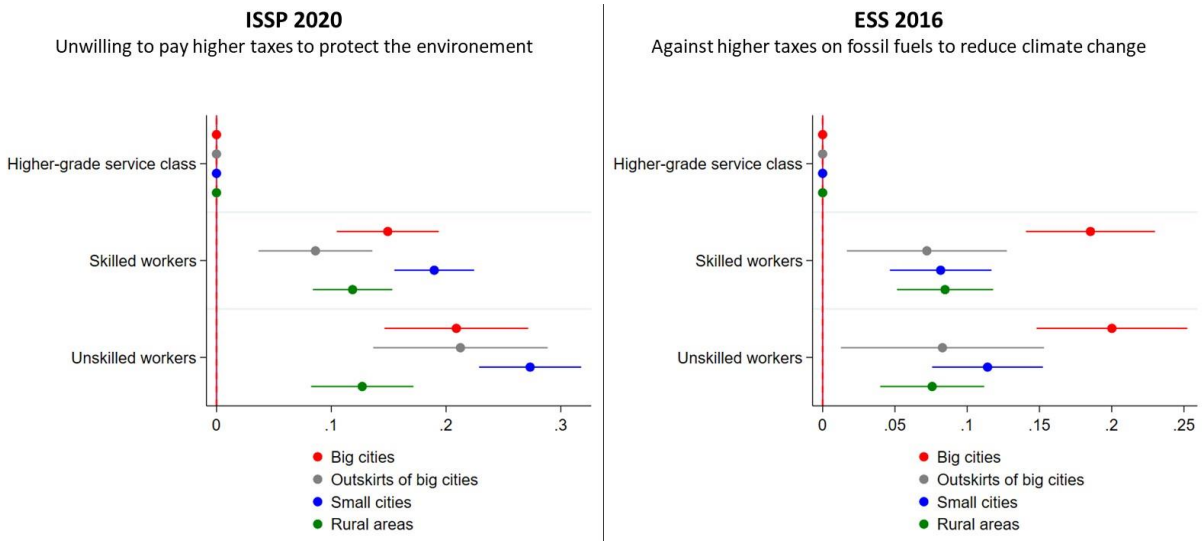


Note: all the estimates comes from a unique model where the four predictors are tested together and including gender, age, country fixed effects and weights. 95% confidence intervals are represented.

Figure D.2. Marginal differences between some social classes and educational groups in the probability of opposing higher taxes to protect the environment, in every kind of place with 95% confidence intervals (linear probability models including the interaction between place and class/education, gender, age, country fixed effects and weights)

Social class

(The top one and the bottom two classes of our 5 classes schema are displayed)



Education

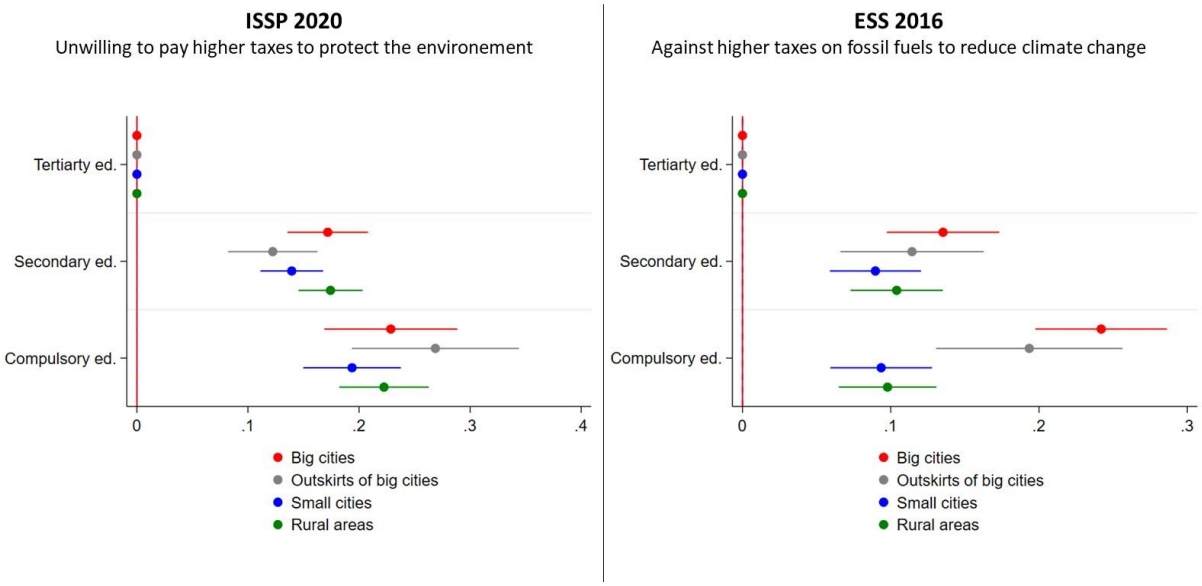
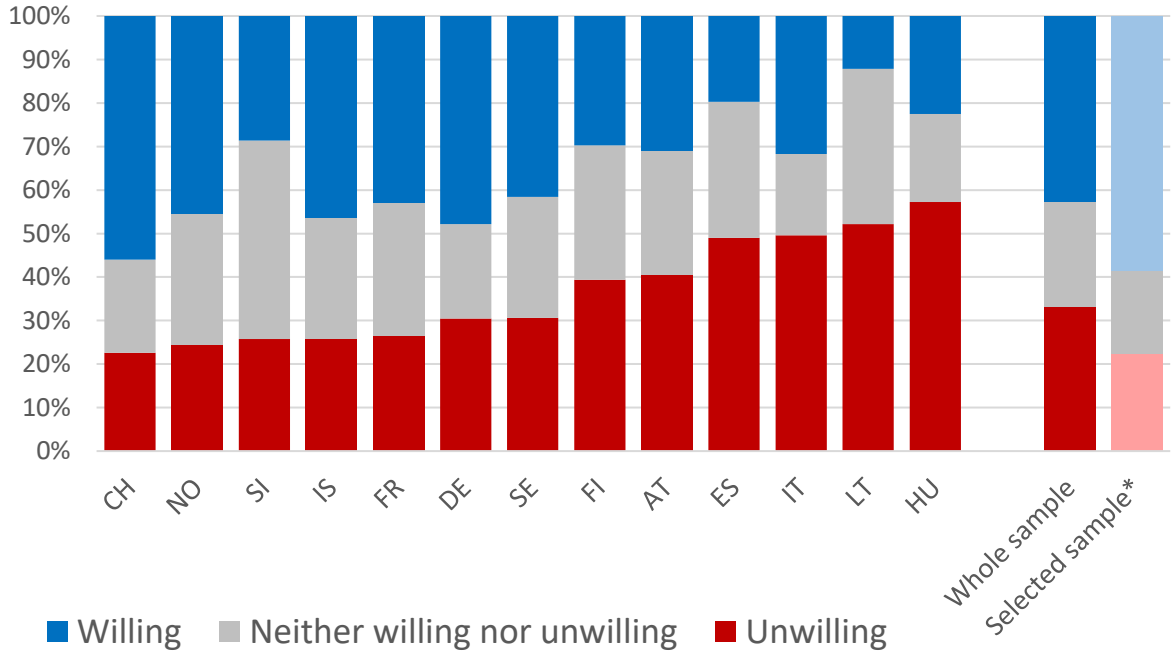


Figure D.3. Proportions of people who are willing, not willing and indifferent to pay higher prices to protect the environment, by country (weighted) – ISSP 2020



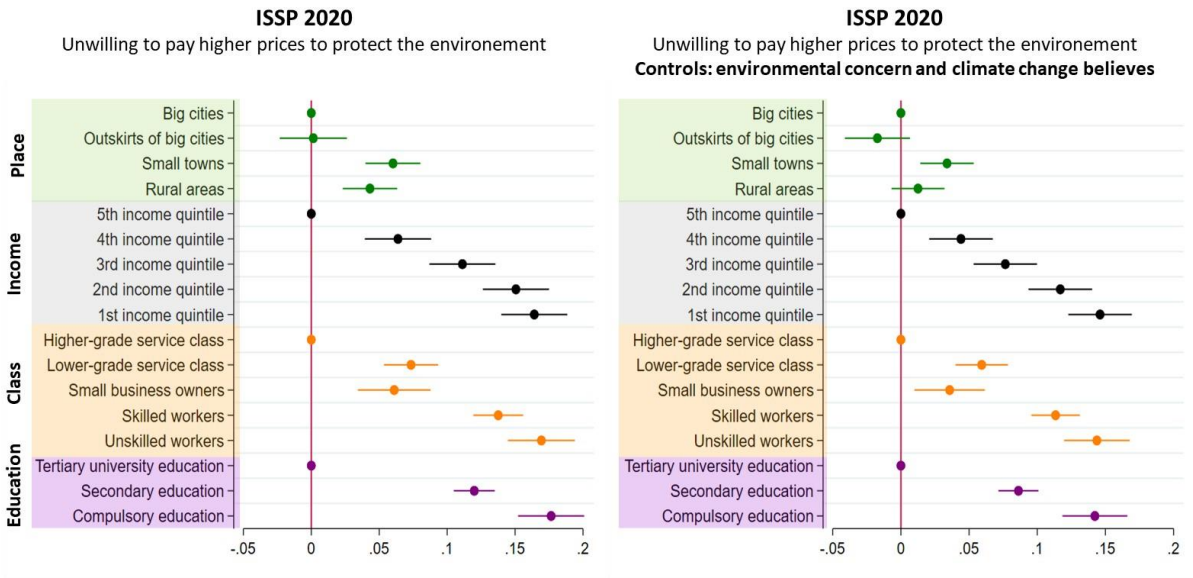
*The sample is restricted to the respondents who declare to be very concerned with environmental issues and who believe that climate change is happening and that human activities are at least partly responsible for it.

Table D.6. Linear probability models: the probability of being unwilling to pay higher prices to protect the environment (ISSP 2020).

		Model 1	Model 1b	Model 2	Model 2b	Model 3	Model 3b	Model 4	Model 4b
Gender	Male (ref. female)	0.02***	-0.01	0.03***	0.00	0.03***	-0.00	0.02***	-0.01
Age group	18-35 (ref.)								
	36-50	0.03***	0.03***	0.04***	0.03***	0.04***	0.04***	0.03***	0.02**
	51-65	0.04***	0.03***	0.03**	0.02*	0.04***	0.04***	0.02*	0.02*
	More than 65	0.03***	0.02**	0.02	0.01	0.04***	0.03***	0.01	0.00
Country	fixed effects	X omitted	X omitted	X omitted	X omitted	X omitted	X omitted	X omitted	X omitted
Env. concern	1-Not at all (ref.)								
	2		-0.08***		-0.03		-0.07**		-0.07**
	3		-0.25***		-0.23***		-0.25***		-0.25***
	4		-0.43***		-0.41***		-0.42***		-0.41***
	5-Very concerned		-0.48***		-0.48***		-0.48***		-0.47***
Cli. change believes	1-No cl. Change		0.03		0.03		0.02		0.02
	2-Cl. change for natural processes		0.11***		0.11***		0.10***		0.11***
	3-Natural processes and human act.		0.08***		0.05***		0.08***		0.07***
	4- Human activities (ref.)								
Place	Big cities (ref.)								
	Outskirts of big cities	0.00	-0.02						
	Small cities	0.06***	0.03***						
	Rural areas	0.04***	0.01						
Household income	1st quintile (ref.)								
	2nd quintile			0.06***	0.04***				
	3rd quintile			0.11***	0.08***				
	4th quintile			0.15***	0.12***				
	5th quintile			0.16***	0.15***				
Class	Higher-grade service (ref.)								
	Lower-grade service class					0.07***	0.06***		
	Small business owners					0.06***	0.04***		
	Skilled workers					0.14***	0.11***		
	Unskilled workers					0.17***	0.14***		
Education	Tertiary (ref.)								
	Secondary							0.12***	0.09***
	Compulsory							0.18***	0.14***
_cons		0.33***	0.69***	0.25***	0.61***	0.25***	0.61***	0.27***	0.62***
N		17,396	16,925	14,033 [c]	13,733 [c]	17,396	16,925	17,396	16,925
Adj. R2		0.04	0.13	0.05	0.15	0.06	0.14	0.06	0.14

[c] The models testing differences between household income quintiles rely on a smaller number of observation, because of numerous missing values in the income variable. The observations missing values only in that variable were not excluded from the other models.
*** p<0.01, ** p<0.05, * p<0.1

Figure D.4. Differences between groups in the probability of opposing higher prices to protect the environment



Note: every colour corresponds to a separate linear probability model including gender, age, country fixed effects and weights. 95% confidence intervals are represented.

Figure D.5. Differences between groups in the probability of opposing higher prices by country with 95% confidence intervals (gender, age groups and weights included as controls)