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Political Economy of Populism in Europe

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by

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To all the people out there
thinking, building, and fighting —
for a better Europe and world.
Thank you.

Acknowledgements

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Robbert, thank you for your critical mind and for challenging me when I was tempted to take shortcuts. That is exactly how one grows into an academic and thinker, and I am grateful to have learned these lifelong skills from you. I know you and Sjoerd made a bet on where I am going to end up in the future. You never tell me the details, but I am so curious to see how accurate your predictions will be. On my end, I promise to do my best not to disappoint you.

I thank the members of the assessment committee — Milena Nikolova, Niclas Berggren, and Theresa Kuhn — for taking the time to read my thesis and for providing excellent comments and suggestions to sharpen it. *Milena*, thank you for being an example of success in a field that is not always easy for female academics. *Theresa*, thank you for being an inspiring academic who openly engages with and contributes to public discourse.

My almost three years in Groningen were special because of the great friendships I made along the way. Franzi Fastje and Celine Odding, my paranymphs — where do I even begin? I feel immensely lucky that we started as colleagues on the 9th floor of the Duisenberg building in September 2021 and grew into close friends. Thank you for the beautiful moments

we created together over these past years: jumping out of an airplane, visiting me in Frankfurt, going to Hamburg just for one night out, holidaying at Franzi's parents' place, attending oil painting sessions and celebrating my birthday in Groningen and Amsterdam.

Franzi, I vividly remember the day we met for the first time — in front of our house on Herman Colleniusstraat, right after we had signed a one-year rental agreement, having somehow convinced the landlord we had known each other for years. I am so thankful for the many deep conversations we shared on that big blue sofa at home, and for your empathy, support, and care. I love reflecting on how our friendship has evolved over time, just as we have grown up ourselves. *Celine,* I admire your calm and nurturing energy, your curiosity to dig deep into the essence of things, and your unwavering authenticity. I am grateful for our never shallow conversations about life, relationships, and well-being. And thank you for giving me a few rides on your bike — I know that was a good workout.

I am thankful to many people from our PhD community for bringing fun and joy into this journey. Thank you, *Hagen,* for encouraging me to institutionalise my craft beer tasting club (you are a lifetime member) and for showing me the world of Washington DC; *Romina,* for career advice when I needed it most and fun talks about the Brussels bubble; *Lieke,* for coffee dates and cozy home parties; *Hester,* for concerts and dinners out; *Gilian,* for the laughs and chats over lunch; *Robin,* for bringing me countless cups of coffee and gossip; *Viliana,* for our exchanges about fashion and lifestyle; *Ina,* for always having something sweet in the office and our meiden trips; *Ryan,* for political chats and sharing The Economist articles with me; *Jocelyne,* for your kind energy; *Mirle,* for your compassion and inspiration to make bold moves. Thank you, Daniele, Juliette, Nikos, Maite, Maria Cristina, Ahmed, and other GEM staff for being part of this journey.

I must admit I was lucky to be conducting academic research on topics that speak deeply to my heart. It is a privilege for someone who seriously nerds out on politics to observe political developments and turn those ideas into regressions the next morning. Some paragraphs of this PhD were written right after PVV, a Dutch far-right party, won the general elections in November 2023 — or while I was watching President Macron dissolve the French parliament live on 2024 European election day, following a far-right surge. Some paragraphs were born after speaking to people on the streets of South Carolina and staying in Washington DC to witness the 2024 US elections bring Trump 2.0.

My passion for politics and societal change has transformed me from a hardcore-trained economist (I earned my Research Master's degree at the institution where Adam Smith wrote The Wealth of Nations) into a social scientist. I have come to appreciate the beauty of methods and approaches in political science, sociology, psychology, and other social sciences that economists at times ignore.

I must admit I began working on political polarization and populism almost by accident. In my final year as an Economics undergraduate, convinced I was headed for a lifelong career at a central bank, I landed an internship at the Kiel Institute for the World Economy. On my first day, Christoph Trebesch and Manuel Funke approached me with Cas Mudde's book on populism in hand; they were looking for an assistant for a new, ambitious project. I jumped in. That project eventually became an American Economic Review publication, and the internship kick-started the journey that led to this PhD thesis. *Christoph* and *Manuel*, thank you for being there at my very first steps as a researcher.

My traineeship at the European Central Bank turned out to be another life-changing experience (you see, I did make it to a central bank eventually). Not only was it the one and only time the ECB lifted its EU nationality restriction — admitting the first 17 Ukrainian nationals ever, including me, in solidarity with Ukraine suffering from russian aggression — but it also gave me the chance to engage in extremely policy-relevant work and form lasting connections. I am deeply grateful to my colleagues from DG-I External Developments and beyond: *Michael, Bernd, Stelios, Adrian, Katalin, Alex, Martino, Ferdinand, Viktoria, Kristina,* and others. Thank you to our Ukrainian community at the ECB — *Liliia, Mariia, Iryna* and others — for your emotional support through the darkest days of the war and for the friendships we built. We stood stronger together.

Speaking of the war. Almost all of my PhD journey unfolded in parallel with russia's full-scale invasion of Ukraine, my home country. It was difficult at times to stay focused on clustering standard errors in regressions while russian missiles and artillery were raining down on Kharkiv, the city where I was born and where my family and close friends live. The passion for my topic and the unwavering support of my supervisors kept me going. Some pages of this thesis were drafted during my two trips to Ukraine, where I witnessed the horrors of war and the scale of destruction and devastation firsthand. *Ukrainian people* will always be my inspiration, a benchmark of resilience, bravery, and perseverance in the face of unimaginable uncertainty.

Contents

1 Introduction

Introduction

This thesis addresses several key issues related to the impact of socio-economic factors on electoral behaviour. Specifically, the three empirical projects that form its core study how the values and attitudes held by individuals across European societies and their socio-economic backgrounds translate into the decision to vote for populist political parties in national elections. As countries, firms, and individuals have become increasingly mobile and interconnected due to globalization over the past two decades, not everyone has equally benefited from these developments, leaving some groups feeling economically and culturally marginalized (Rodrik, 2021). These disparities have fuelled resentment towards the societal transformations brought about by exposure to global markets, and created space for polarization and the subsequent rise of populist parties on both ends of the political spectrum (Kriesi et al., 2008; Bornschier, 2010).

Until the late 1990s, populism was widely regarded as a predominantly Latin American phenomenon of the 20th century. Over the past two decades, it has spread globally, gaining considerable traction even in the world's most established democracies. Research underscores this dramatic rise: the share of populists in government worldwide increased from 10% in the early 2000s to over 25% by 2020 (Funke et al., 2023). The 2024 re-election of Donald Trump as US President and the European elections, where populist parties secured 263 of 720 seats — one-third of the total — further illustrate the momentum of the new populist wave in representative systems (Ivaldi & Zankina, 2024; Popa et al., 2024).

The European populist landscape is particularly diverse. Political parties such as the PVV in the Netherlands, AfD in Germany, Rassemblement National in France, Fratelli d'Italia in Italy, FPÖ in Austria, and Fidesz in Hungary have achieved electoral success at both national and European levels. Today, every third European votes for an anti-establishment party — a substantial increase from approximately 20% in the early 2000s and just 12% in the early 1990s (Figure 1.1).

Given these developments, academic research on the demand side — uncovering why people support populist parties — has become increasingly relevant. This thesis makes a contribution to the ongoing debate by zooming into economic insecurity, cultural threat, and climate skepticism among the European electorate, showing how each shapes populist support in nuanced ways, with implications for welfare policy, social cohesion, and climate policy.

Figure 1.1 Cumulative vote shares of populist parties in Europe over time.
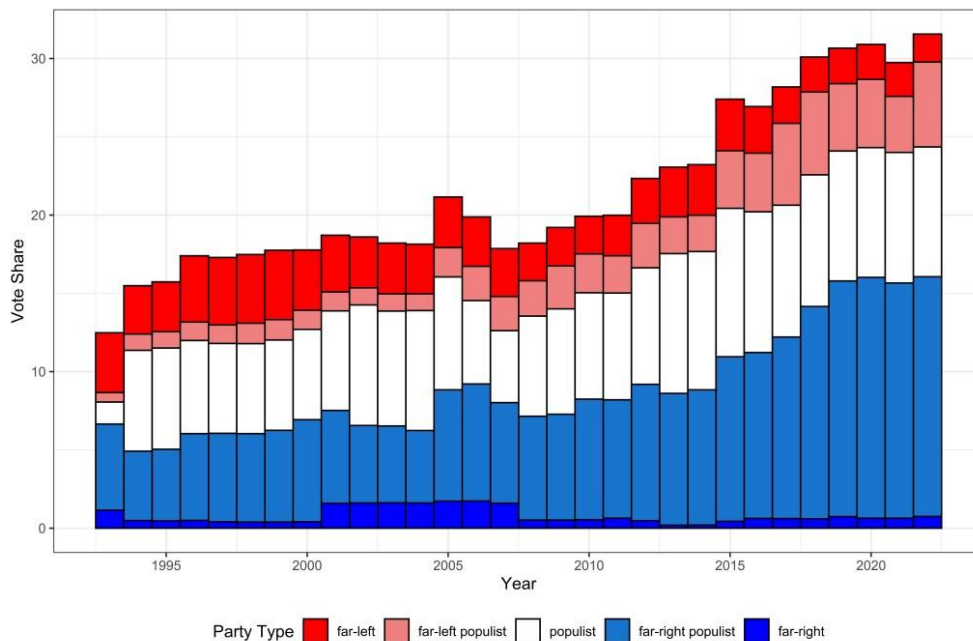
1.1 What is populism?

According to today's workhorse definition, populism is a political style centred around the perceived struggle between 'the people' and 'the establishment' (Mudde, 2004). Populists place the antagonistic narrative of 'people versus elites' at the heart of their political agenda, claiming to be the sole legitimate representatives of 'the people' (Mudde & Rovira Kaltwasser, 2018; Müller, 2017). This definition has become increasingly dominant and is now widely used by economists and other social scientists (Guriev & Papaioannou, 2022).

Populist rhetoric often combines external threats to national identity, such as immigrants, with internal adversaries — the elites — into a vague and ambiguous 'they'. This portrayal of 'the elite' typically includes economic, cultural, and media figures, such as 'untrustworthy bankers', 'snobby intellectuals', and 'fake news-spreading journalists' (Rooduijn, 2019; Kriesi, 2014; Bornschier & Kriesi, 2012).

Populism spans both ends of the political spectrum. Left-wing populism often emphasizes inclusivity, focusing on economic inequality and advocating for significant redistribution. Right-wing populism typically centres on identity issues, promoting the exclusion of minority groups, whether ethnic (immigration), regional (European integration), or national (minority nationalism). Both share the common ground of anti-establishment

rhetoric and the claim to represent the 'true people' against a perceived corrupt establishment, despite diverging in their ideological focus and policy goals (Rooduijn, 2014; Rodrik, 2018).

This anti-establishment sentiment shapes populists' critique of mainstream parties and institutions, which they argue fail to address the needs of ordinary citizens. Populists often distil complex political, social, and economic issues into overly simplistic narratives, offering seemingly straightforward solutions to inherently complex problems. These movements are typically led by a charismatic leader who is portrayed as uniquely capable of representing and fulfilling 'the will of the people' (Tormey, 2019). A notable feature of modern populism is its direct engagement with supporters, with politicians frequently using social media platforms to bypass traditional media channels (Postill, 2018).

While populism does not constitute a distinct ideology, certain characteristics of modern populism have raised concerns about its impact on democracy (Levitsky & Ziblatt, 2019; Tormey, 2019). First, populists often tend to challenge democratic institutions and erode checks and balances. Kyle & Mounk (2018) examine 46 populist leaders and parties that held office across 33 countries between 1990 and 2018 and find that populists stay in office about twice as long as non-populist elected leaders, are four times more likely to trigger democratic backsliding, and are much more likely to leave office due to a scandal or impeachment rather than through electoral defeat.

Second, populists impose significant economic costs when in office. Funke et al. (2023) analyse the macroeconomic history of populist governments, drawing on data from 51 populist presidents and prime ministers between 1900 and 2020. Their findings show that, over a 15-year period, real GDP per capita is, on average, 10 percent lower than in a non-populist counterfactual — a synthetic control economy not subjected to populist 'treatment'. Populist rule is typically marked by trade and financial disintegration, declining macroeconomic stability, and institutional erosion. Moreover, many populists rise to power in the aftermath of financial crises or recessions (Funke et al., 2016), further straining the economic and institutional stability typically associated with democratic institutions (Acemoglu et al., 2019; Berggren et al., 2012).

1.2 Societal changes and populist rise

The recent surge in populism has become a key focus for social scientists who seek to understand its underlying drivers. One substantial factor that has contributed to it is the rapid societal transformations brought about by globalization. The kind of hyper-globalization —

characterized by the rapid acceleration of international trade, capital flows, and human mobility — has profoundly reshaped economies and societies worldwide (Wolf, 2004). While it has fostered innovation, economic growth, and connectivity, it has also deepened inequalities, creating clear winners and losers from exposure to global markets (Rodrik, 2017).

Globalization has deepened both economic and cultural divides in society. Higher-educated elites have benefited from global opportunities, the rise of advanced service industries, and the concentration of wealth and innovation in cities. These changes have reinforced cosmopolitanism and support for liberal values among these groups (Norris & Inglehart, 2016). On the other hand, lower-skilled workers have faced job insecurity, declining incomes due to deindustrialization and global competition, and the disruption of traditional community structures caused by increased migration (Maxwell, 2019).

Europe has further embraced globalization through the EU single market, facilitating the free movement of goods, services, capital, and people across member states. This integration has also highlighted regional disparities (Hooghe & Marks, 2009), with urban centres and highly educated populations reaping most of the benefits, intensifying societal tensions between cosmopolitan urban elites and more traditional, locally rooted communities (Beugelsdijk et al., 2022).

Amidst these fundamental societal shifts, European countries have faced a series of crises that have further deepened the divides. The economic crisis of 2008, the Eurozone sovereign debt crisis, and subsequent austerity policies caused material deprivation in many European societies (Figure 1.2), leaving lasting scars on vulnerable populations (Jenkins et al., 2012; Blanchet et al., 2019). The COVID-19 pandemic once again exposed economic fragilities (Demertzis et al., 2020), highlighting the uneven resilience of healthcare systems, labour markets, and social safety nets across the region. Most recently, the 2022 Russian invasion of Ukraine has triggered a geopolitical and energy crisis, placing additional demand on public resources and testing European solidarity.

At the same time, automation and digitalization have profoundly reshaped Europe's labour force, reducing demand for routine and manual jobs while increasing the need for highly skilled workers, thereby exposing a growing divide between those equipped with advanced technological skills and those in low-skill, automatable roles, who face job displacement and the challenge of adapting to a rapidly evolving labour market (Autor & Salomons, 2018; Acemoglu & Restrepo, 2019). These changes carry not only economic implications but also

political and social consequences. For instance, Anelli et al. (2019) show individuals more vulnerable to the negative consequences of industrial robot adoption are more likely to vote for both radical right- and left-wing parties in Western Europe. Nikolova et al. (2024) further find that robotisation negatively affects work meaningfulness and autonomy, ultimately impacting workers' well-being.

Figure 1.2 Share of households at risk of poverty or social exclusion, selected countries.
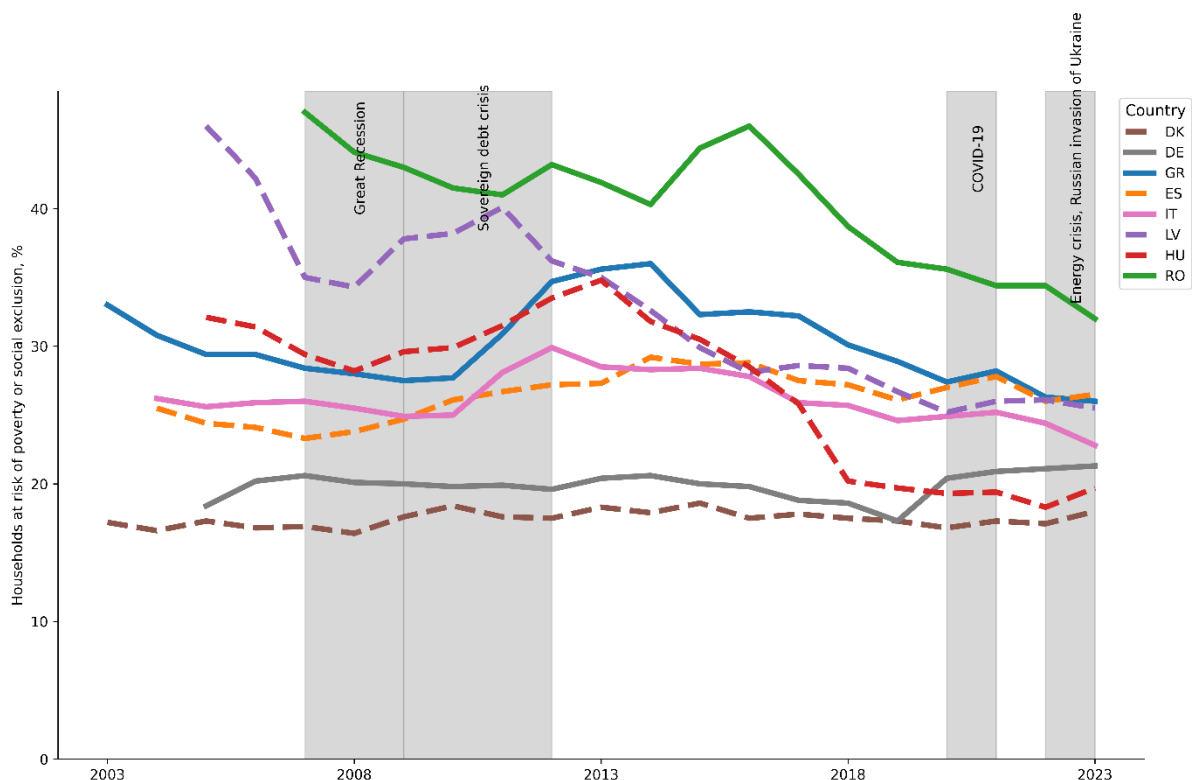
Note. The data for 2003–2014 are from the EU-SILC (ilc_peps03) series, while the data for 2015–2023 are from an updated version of the EU-SILC (ilc_peps03n) series.
Source: Eurostat, EU-SILC, author's calculations.

Another significant societal change resulting from globalization is the rise of immigration. In Europe, both the diversity and volumes of immigrant flows have increased substantially over the past decades (IOM, 2024). Recent Eurostat data show that up to 12% of the EU's population is foreign-born — excluding the recent influx from Ukraine — marking a rise from 7% two decades ago. Figure 1.3 illustrates these compositional changes in European countries.

Figure 1.3 Foreign-born population as a share of total population in European countries.
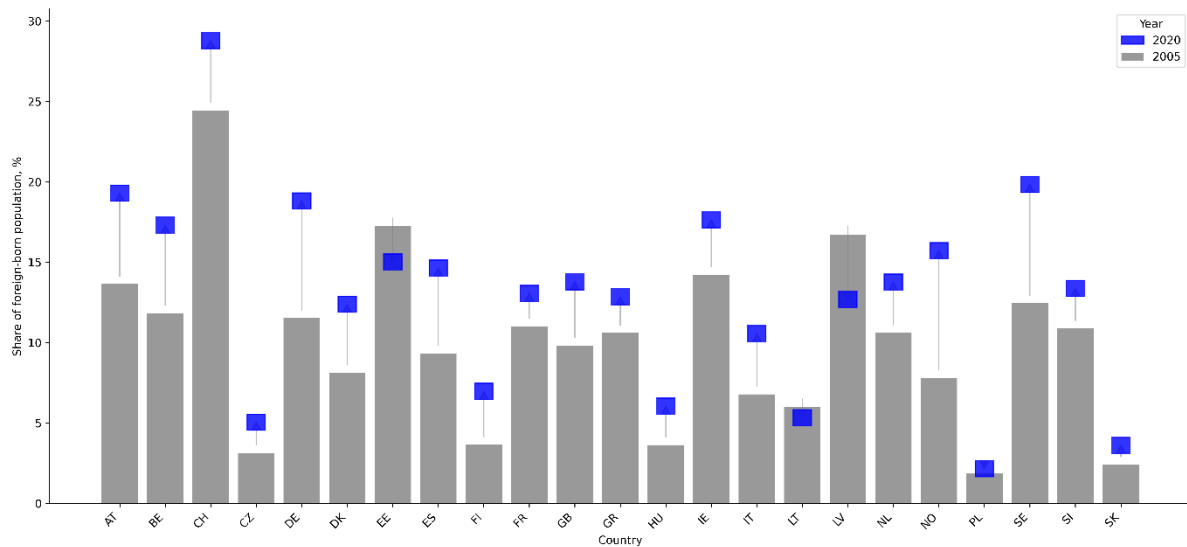
Source: UN International migrant stock database, author' calculations.

Adapting to these societal dynamics has been particularly challenging for individuals who feel economically and culturally threatened by immigration. Although immigrants have brought long-term economic benefits to European economies (Caselli et al., 2024), the increasing scale and diversity of immigrant populations have triggered a backlash in many societies (Card, 2012; Czaika & Di Lillo, 2018). Immigration has emerged as a focal point of political debate, rapidly becoming a core issue for right-wing nationalist populist parties (Kriesi et al., 2012), especially in the aftermath of the 2015 refugee crisis (Hutter & Kriesi, 2022).

Academic literature has therefore predominantly focused on these two key societal divides — economic and cultural — to explain the recent rise of populism (Mudde & Rovira Kaltwasser, 2018; Rodrik, 2021; Gidron & Hall, 2020). The economic perspective argues that structural changes such as globalization, automation, and the multiple crises have reshaped labour markets in post-industrial countries. These shifts have caused widespread economic dislocation, leading those most disadvantaged to turn to populist parties for support. Empirical evidence from survey data and voting outcomes consistently links populist support to economic insecurity (Guiso et al., 2017, 2024), declining social and economic status (Gidron & Hall, 2017; Burgoon et al., 2019), and exposure to adverse trade shocks (Autor et al., 2017; Colantone & Stanig, 2018).

The cultural argument, sometimes viewed as orthogonal to economic explanations, suggests that populism represents a backlash against the post-materialist progressive values and beliefs championed by liberal elites (Inglehart & Norris, 2016; Margalit, 2019; Schäfer,

2022). While globalization has been shown to foster important social values such as tolerance (Berggren & Nilsson, 2015), human rights protection (Dreher et al., 2012), and gender equality (Potrafke & Ursprung, 2012), these changes have left traditionally dominant groups, such as white men, feeling culturally and socially marginalized (Margalit, 2024). As a result, individuals with conservative values who are concerned about the ethno-cultural changes brought about by globalization tend to gravitate toward populist leaders who reject liberal ideals and political correctness (Gidron & Hall, 2020).

Both arguments have separately found support in the empirical literature. One challenge with treating these arguments independently is that culture alone, being relatively persistent over time (Beugelsdijk et al., 2015), cannot explain a sudden change (Rodrik, 2019). This evidence has led scholars to argue that the rise of populism is best understood as a product of the interplay between culture and economics, where cultural shifts combined with unfavourable economic developments trigger a perceived loss of social status (Guriev & Papaioannou, 2022). Gidron and Hall (2017) argue and provide compelling evidence that status anxiety, shaped by the interplay of economic and cultural developments, is a key factor driving support for populism. Using microdata from 20 democracies, they demonstrate that a decline in self-reported social status, particularly among men without a college education, are associated with voting for right-wing populist parties.

A distinct feature of European politics — and, by extension, populism — is its frequent focus on European integration and often the criticism thereof (Kuhn, 2019). Euroskepticism remains a hallmark of European populist parties, with 85% of them adopting this position (Rooduijn et al., 2024). While European integration provides lasting benefits to new member states, including non-economic advantages such as increased life satisfaction (Nikolova & Nikolaev, 2017), Euroskepticism and distrust in EU institutions have gained significant traction in many European societies, amplified by 2009 Eurozone debt crisis (Dustmann et al., 2017) and growing income inequality (Kuhn et al., 2016). One striking example is the 2016 Brexit referendum, which embodied populist anti-EU sentiment and led to far-reaching socio-economic consequences (Hobolt, 2016; Fetzer, 2019).

One grand societal challenge that cannot be overlooked at the time of completing this thesis is climate change. According to the World Meteorological Organization, global temperatures have risen by 1.2°C since pre-industrial times, with 2023 recorded as the warmest year since monitoring began in 1850. The critical 1.5°C threshold could be reached by mid-decade, posing severe risks to ecosystems, economies, and human well-being, particularly in

developing countries. Scientific consensus overwhelmingly attributes this warming to human activities, including greenhouse gas emissions, deforestation, and industrialization (Cook et al., 2016).

An urgent transition to a more sustainable way of producing and consuming often clashes with entrenched energy systems, industries, and lifestyles made possible by use of fossil fuels (Markard, 2018). These tensions have fuelled resistance, particularly among citizens reluctant to change their way of life, creating an opening for populist parties and leaders to exploit these new societal divides (Lockwood, 2018). Dickson & Hobolt (2024), for example, analyse press releases from 13 European radical right-wing parties and show that since 2010, they have changed their approach from largely ignoring climate policy to actively politicizing climate change, capitalizing on the broad consensus among mainstream parties and discontent among certain voters. By appealing to those who question climate science (Huber et al., 2020) or oppose the perceived impacts of climate policies (Huber et al., 2021; Kulin et al., 2021), populists create and amplify resistance to urgent sustainability efforts.

It is not surprising that the combination of societal challenges and crises has intensified polarization, particularly in the political sphere. Dalton's polarization index, which measures the distribution of votes among political parties — with higher values indicating a greater concentration of votes on fewer parties — has increased in most European countries since the 2010s (Figure 1.4). Europeans have increasingly shifted their support to challenger parties on both the right and left, often at the expense of traditional centrist parties (De Vries & Hobolt, 2020). This growing fragmentation underscores the changing political landscape in Europe, where traditional parties struggle to address the complex challenges driving voters toward more polarized alternatives, such as populists.

Figure 1.4 Changes in Dalton's polarization index in European countries.
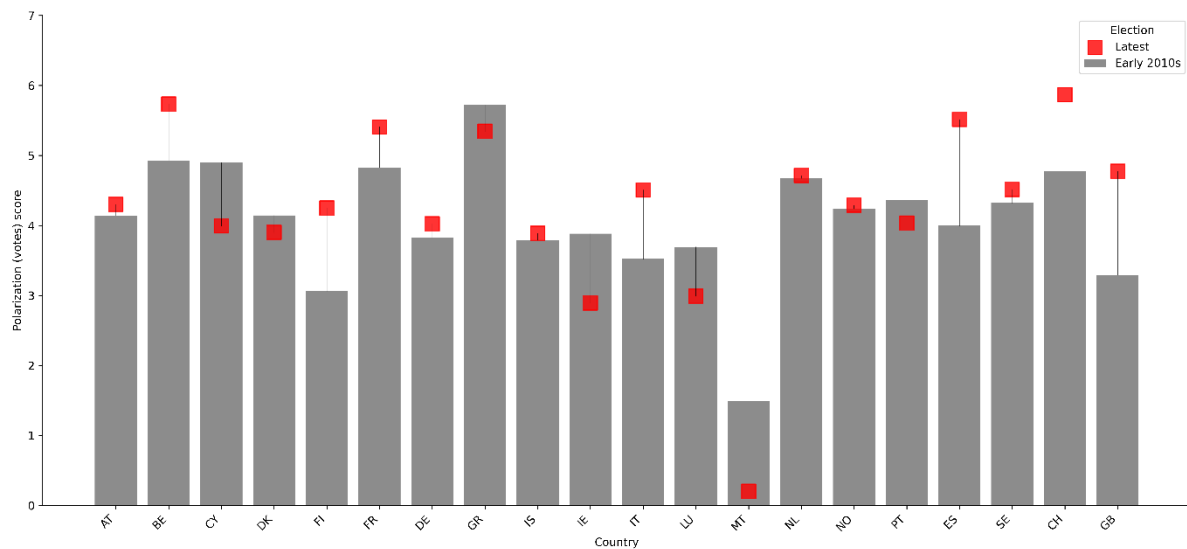
Note: Polarization in votes index based on Dalton (2008); latest election data 2021.
Source: Data from Emanuele & Marino (2023), author's calculations.

1.3 Thesis overview and reading guide

The contribution of this thesis lies in offering an analysis of the nuanced ways in which economic insecurity, cultural threat, and climate skepticism relate to populist support among the European electorate by exploring three distinct yet interconnected questions. The three empirical studies that constitute this thesis reflect the evolution of the thought on what has contributed the populist support in Europe. I pick up from the debate in the literature on the cultural and economic origins of populist voting, then explore in detail these arguments on the least obvious populist target audience – immigrants themselves, and conclude with the relevance of climate change as a new dividing cleavage that has been increasingly politicized by populist parties. Figure 1.5 provides the framework of the three analytical chapters.

The three research projects comprising this thesis are grounded in empirical analysis. The primary data source for the analytical chapters is the European Social Survey (ESS), a recurring cross-national survey that tracks shifts in values and attitudes across Europe. A key advantage of this open-access dataset is its wealth of individual-level observations with detailed socio-economic information and, crucially for this thesis, voting records, allowing for robust statistical inference. Among alternative cross-national surveys such as the World Values Survey and European Values Study that meet these criteria, I chose the ESS because it offers the richest coverage of individual political attitudes, is conducted consistently every two years,

and provides the broadest country coverage over a longer time span, all of which are important for drawing inferences about the dynamic landscape of elections in Europe.

Figure 1.5 Conceptual framework of the thesis.
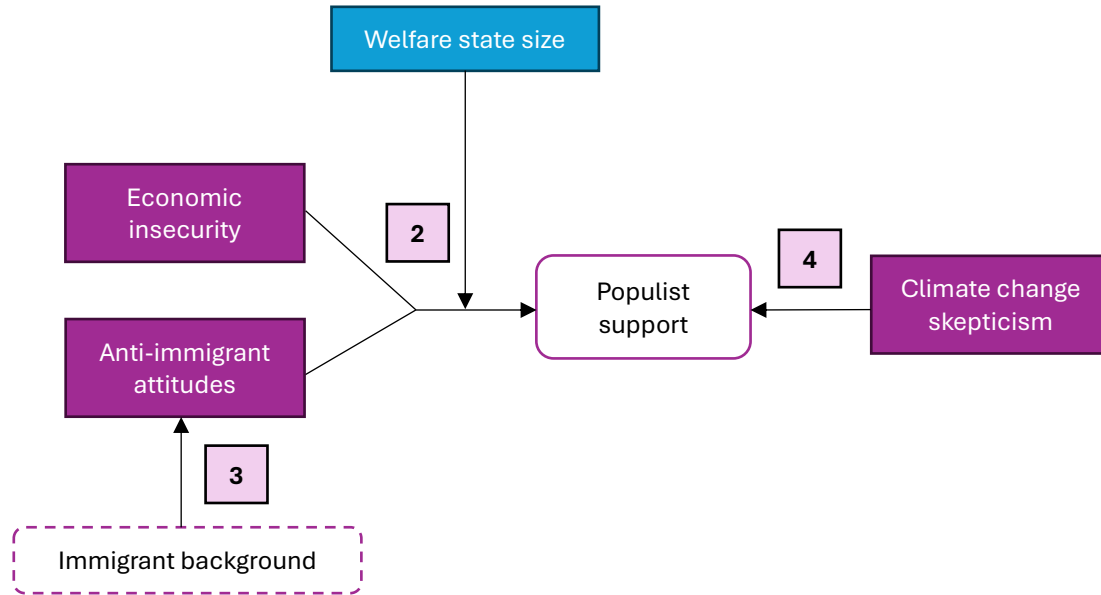
Note: Numbers refer to the respective chapters in this thesis. Figures in purple indicate individual-level attitudes; a figure is blue indicates a society-level factor.

The empirical methods utilized across the studies include various regression techniques (ordinary least squares, logistic, and multilevel) and post-estimation methods (marginal effects), and factor analysis. Each chapter begins with a discussion of the theoretical background, followed by the empirical analysis. The summaries of the three chapters are presented below.

Chapter 2. Is populist support in Europe contingent on the welfare state size?

Chapter 2 revisits the determinants of populism in Europe, presenting theoretical and empirical evidence that the relationship between individual experiences of economic insecurity, perceived cultural threats, and populist voting is contingent on the size of the welfare state. We propose that a more extensive welfare state serves as a safety net for the economically insecure (the bail-out effect), while also heightening tensions over resource distribution to outgroups like immigrants (the anti-solidarity effect). To test this theory, we analyse individual-level data from the ESS (2004-2022) integrated with a panel of societal indicators from 22 European countries. The results reveal that the link between economic insecurity and populist support is stronger in societies with more generous social spending. At the same time, higher welfare

spending amplifies the effect of negative attitudes towards immigrants on populist support. These nuanced findings contribute to the discussion on policy implications such as tailoring welfare programs to support economically vulnerable groups without triggering cultural divides and promoting inclusive narratives around welfare to reduce resource-related tensions between non-immigrant and immigrant populations.

Chapter 3. When in Rome, do as the Romans do? Exploring the determinants of attitudes towards immigrants among immigrants in Europe

Chapter 3 combines the economic and cultural origins of anti-immigrant attitudes and examines them in a less obvious target group for populists — immigrants themselves — who are mostly overlooked in studies on this topic. We argue that understanding immigrants' perspectives on immigration is important, given the growing diversity and size of immigrant populations. Using data from the ESS (2004-2022) across 21 European societies, we find that immigrants, especially first-generation and those of non-European origin, hold on average more pro-immigrant views and prefer more liberal immigration policies compared to non-immigrants. While economic insecurity contributes to anti-immigrant attitudes among immigrants, its impact is notably smaller than for non-immigrants. We also identify a cultural threat mechanism among immigrants, showing that larger cultural gaps between established and newer immigrant groups are associated with opposition to immigration. This analysis not only challenges the simplistic dichotomy between immigrants and non-immigrants in understanding anti-immigrant attitudes but also highlights social and political implications for policies in increasingly diverse societies.

Chapter 4. Climate change skepticism and populist support in Europe

Chapter 4 examines the role of climate skepticism, a widely unexplored but emerging populist tool, in shaping support for populist parties across Europe. As climate change becomes a central focus of European policy, populist parties increasingly frame it as an elite-driven agenda rather than an urgent, human-caused crisis. We study whether climate skepticism serves as an independent source of populist support or if it merely reflects broader discontent fuelling traditional populist appeal, such as opposition to immigration, Euroskepticism, and institutional distrust. Using data from 17,449 individuals across 217 European regions in the 2016/2017 ESS round, we show that climate skepticism is associated with populist support independently of these other established determinants. However, its effect on populist voting is six times smaller. Complimented by data on regional populist vote shares from the EU-NED

database, the findings show that climate-skeptical citizens alone do not expand the populist voter base.

1.4 General implications

The findings presented in this thesis have confirmed existing insights, such as economic insecurity and cultural threat as determinants of populist support, nuanced these by showing that cultural distance to immigrant groups is associated with anti-immigrant attitudes, even among immigrants themselves, and established new insights, positioning climate change as an emerging cleavage for populism.

For the theoretical discussion on demand-side studies of populism, these contributions underscore the need to identify the specific mechanisms of electoral behavior driven by the 'us' versus 'them' mentality — the core feature of populism, as described in Mudde's (2004) widely accepted definition — and to ensure that the underlying concepts are measured with precision and theoretical clarity. Economic research on social identity (e.g., Shayo, 2009) demonstrates how culture can be treated as an independent variable for systematic analysis by formalizing in-group bias and conformity to group norms. For example, cultural threat, the core concept behind the populist voting mechanism explored in this thesis, is often measured through anti-immigrant sentiments, which is one possible way to capture it (see, e.g., Margalit et al., 2024). Chapter 2 of this thesis advances this theoretical agenda by testing different approaches to measuring the broader concept of cultural threat, including various anti-immigrant sentiments, and examining their implications for populist voting. The empirical explorations in Chapters 3 and 4 build on existing theoretical frameworks and measures of cultural threat from previous studies, encouraging future research to derive and formalize theoretical insights from the empirical findings presented here.

The findings in this thesis carry several practical implications. Because both economic and cultural factors have contributed to populist support in Europe, and these determinants sometimes relate to different segments of society, policymakers should carefully consider the effects of new policies on both fronts. Second, with immigrants and individuals of immigrant backgrounds now comprising a significant share of the European population, understanding their attitudes, values, and how these evolve over time is crucial for assessing social cohesion and its implications for electoral outcomes. Third, as populists adapt their messages to the *zeitgeist*, they capitalize on emerging issues to connect with public concerns, often shifting or combining their focus to maximize impact. This adaptability suggests that new socio-economic

and cultural challenges will likely open up new cleavages for populists to exploit. Recognizing early signs of these trends is crucial to preventing further polarization.

The future electoral gains of populist parties will largely depend on the challenges Europe faces in the years ahead. While we cannot predict specific crises, early developments offer some clues. With the rapid advancement of AI and its integration into social media platforms, populist parties and leaders are likely to increasingly leverage these tools to disseminate fake and polarizing messages that sow distrust. Their growing presence on social media — targeting new voter audiences such as young people — poses a significant challenge for mainstream parties, which often struggle to keep pace in these digital arenas. An example is Germany's AfD, a far-right populist party, which appears to be the most present German party on TikTok, creating a 'parallel universe' that particularly targets the platform's young user base.

It is likely that polarization around climate change and climate policies will intensify in the near future as the EU advances its Green Deal and other industrial initiatives aimed at achieving climate neutrality. Early signs of this trend are evident in the political messaging of certain far-right populist parties, which intertwine climate policy skepticism with anti-EU rhetoric. One such example comes from the PVV, a Dutch far-right populist party, whose 2024 EU election manifesto declares: *En of je vlees eet, het vliegtuig pakt of een brandstof auto rijdt, dat bepalen we zelf wel. Niet Brussel"* ("Whether you eat meat, take the plane, or drive a petrol car, we decide that ourselves. Not Brussels").

Another likely development is generational polarization, with young and first-time voters increasingly resonating with populist narratives, amplified by the strong presence of populists on social media platforms used by younger audiences. For example, recent polling data from the 2024 European elections (Popa et al., 2024) show that the 16-to-24 age group in France, the Netherlands, and Germany is as drawn to populist parties as older, more conservative voters who have traditionally been the core demographic for populists. This trend challenges the common 'nostalgia for a great past' explanation of populism. Whether this represents a temporary anomaly, or the emergence of a new political culture remains to be seen. The concern lies in research showing that political preferences formed during impressionable years tend to persist throughout life.

A very concise summary of the implications in this thesis might read as: while crises themselves are difficult to predict, their political consequences are not (Levitsky & Ziblatt, 2019, p. 93).

2 Is populist support in Europe contingent on the welfare state size?

Is populist support in Europe contingent on the welfare state size?

Abstract

This chapter revisits the determinants of populist support in Europe, presenting theoretical and empirical evidence that the relationship between individual experiences of economic insecurity, perceived cultural threats, and populist voting is contingent on the welfare state size. We hypothesize that a more extensive welfare state serves as a safety net for the economically insecure (the bail-out effect), while simultaneously heightening tensions over resource distribution to outgroups like immigrants (the anti-solidarity effect). To test this theory, we analyze individual-level data from the European Social Survey (2004-2022) integrated with a panel of socio-economic indicators from 22 European countries. The findings show that the link between economic insecurity and populist support strengthens in societies with greater social spending, and that increased welfare spending amplifies the effect of negative attitudes towards immigrants on populist support. These nuanced findings for two distinct societal segments carry important implications for policy design.

Key words: populism; welfare state; economic insecurity; cultural threat.

2.1 Introduction

The phenomenon of populism, with far-right and far-left political movements gaining traction, has manifested itself in varying degrees of intensity and at different points in time across most European societies. Populism emphasizes an antagonistic relationship between 'us', 'the (true) people', 'the ingroup', and 'them', 'the elite', 'the outgroup' (Mudde, 2007), where 'them' ranges from 'untrustworthy bankers' (economic elites) to 'snobby intellectuals' (cultural elites) and 'fake news spreading journalists' (media elites) (Rooduijn, 2019).

Academic literature in the past decade has predominantly focused on two key cleavages to explain this trend: economic and cultural (Mudde & Rovira Kaltwasser, 2018; Rodrik, 2021). The economic argument is based on the idea that the various consequences of globalization have led to rising income inequalities (Han, 2016; Fetzer et al., 2019), personal financial struggles (Hobolt & Tilley, 2016; Burgoon et al., 2019), and post-structural change job dislocation (Anelli et al., 2019; Im et al., 2019; Algan et al., 2017; Colantone & Stanig, 2018). Such developments have exacerbated a sense of economic insecurity, or anxiety, among certain segments of society that perceive that their social status is being eroded, economic interests are not being represented and worries not being addressed by mainstream political parties.

The culture argument posits that the economic affluence experienced in post-war Western Europe facilitated a transformation in cultural norms, moving away from traditional materialist values (economic stability, physical safety) towards post-material values such as self-expression, equality, tolerance, autonomy and quality of life (Norris & Inglehart, 2016; Schäfer, 2022). Thus, individuals holding traditional values feel more marginalized as these values are no longer reflected in elite and media discourse (Welzel & Inglehart, 2009). As a result, those who relied on conventional ethnic and gender hierarchies for their social status may feel particularly affected by the shift in cultural frameworks and therefore more drawn to populism (Gidron & Hall, 2020; Oesch, 2008).

While recent studies have examined individual voting patterns, providing evidence supporting both economic and cultural explanations for the rise of populism, these approaches sometimes overlook the fact that individual behavior, decisions, and interactions are influenced by the broader context in which they are embedded. Moreover, these orthogonal views may not fully encapsulate the heterogeneous nature of European populism, which varies considerably across national contexts. The spectrum of populist parties in Europe spans from right-leaning groups with a focus on national identity to left-leaning ones concentrating on economic

disparities. In countries like Germany, Slovenia, Greece and the Netherlands, societies with distinctive institutional and socioeconomic contexts, both have been present in parliaments.

One such important dimension of contextual diversity in Europe is the size of the welfare state. In this study, we reexamine the two determinants of populist voting and explore how variations in the generosity of safety net systems interact with them to shape individual voting choices. We propose that a more extensive welfare state leads to two distinct effects: (1) *a bail-out effect*, or the effect of a safety net, and (2) *an anti-solidarity effect*, or the effect of perceived resource competition. Building on social identity theory, our theoretical arguments further suggest that the magnitude of these two effects relates to the main arguments why people vote for populist parties, economic insecurity and cultural threat. Economically insecure individuals are more likely to experience the bail-out effect, while those individuals experiencing cultural threats are more susceptible to the anti-solidarity effect. Our logic is that for economically insecure individuals, more extensive welfare programs — such as increasing benefits or extending coverage — reduces their propensity to support populist parties. A larger welfare state addresses some of their economic concerns, making populist parties less appealing to them. In contrast, individuals perceiving their cultural values as threatened tend to lean more towards populist political parties out of fear for resource competition with the outgroup such as immigrants. This propensity grows with a more generous welfare state. We therefore hypothesize opposing effects of the size of the welfare state on the determinants of individual populist support.

To test our hypotheses, we employ a set of multi-level regressions, combining individual observations from the European Social Survey and society-level indicators across 22 European countries (2004-2022). We classify votes for populist parties using the generally accepted PopuList 2.0 classification (Rooduijn et al., 2019). We operationalize economic insecurity by aggregating four indicators contributing to various economic insecurity sources (self-reported financial struggles, employment in a job classified as low-skilled, prolonged unemployment experiences, and no or limited employment contract) and capture cultural threat by perceptions of immigrants' impact on a respondent country's culture, life and economy, and preferred levels of immigration policies. The welfare state size is proxied by the share of GDP spent on public social policies (OECD's SOCX indicator).

We find mixed support for our hypotheses. In societies with a more extensive welfare state, the effects of both individually experienced economic insecurity and anti-immigrant sentiments on support for populism are amplified. That is, increased public social spending is

associated with a strengthening, rather than the hypothesized weakening, of the relationship between economic insecurity and populist support. Our results also suggest that more culturally threatened individuals are marginally more likely to vote for a populist party in a more extensive welfare state. These findings are theoretically important and relevant for policy making. Theoretically, our results do not support the argument that a more extensive welfare state prevents economically insecure people from turning to populism. This is important because popular discourse often presents a more extensive welfare state as a response to the rise of populism and its associated polarizing effects. This also matters because our findings suggest that a larger welfare state is associated with an anti-solidarity effect, especially among those individuals who feel culturally threatened.

If the goal is to counter the effects of economic insecurity and cultural threat on populist support, an interpretation of the results for policy design implies several strategies. These include offering targeted economic relief for economically vulnerable groups with a focus on the root causes of economic insecurity rather than providing post-factum compensations, fostering public dialogue on shared values and solidarity, and implementing integration policies that might reduce cultural threat perceptions while preserving the welfare state integrity.

2.2 Theoretical background and hypotheses

2.2.1 Individual drivers of populist support: a social identity approach

Social identity and group identification. We first theorize on the mechanisms underpinning an individual's propensity to support a populist party employing social identity theory. The theory posits that an individual's sense of self in society (social identity) is partially derived from their membership in social groups (Tajfel, 1978; Turner et al., 1979; Shayo, 2009). Individuals categorize themselves into groups based on salient markers such as nationality, ethnicity, and socio-economic status and derive benefits from such affiliations (Vaughan et al., 1981). By doing so, individuals seek positive distinctiveness for their ingroup to feel a sense of pride and belonging. This need for positive social identity drives the process of self-categorization.

Ingroup-outgroup dynamics. As social groups are embedded in the broader society, interactions between the groups with which individuals identify shape the way they perceive and interact with those around them shaping the ingroup-outgroup dynamics. An ingroup refers to a group to which an individual identifies and feels a sense of belonging, while an outgroup encompasses those who fall outside of this circle. These dynamics are characterized by the

tendency to favor and show positive attitudes towards members of one's ingroup (ingroup favoritism), whereas outgroup members are often subject to biases and stereotypes (outgroup bias), which tends to result in (often perceived) differences, competition and potential intergroup conflicts (Tajfel et al., 1979; Vaughan et al., 1981; Scheepers et al., 2006).

Threats triggering social status erosion. As individuals use their ingroups to increase self-worth, they often feel better about themselves when they can associate with a group that has a higher social status. Belonging to a successful or positively regarded ingroup boosts self-worth of group members through the process of social intergroup comparisons (Tajfel, 1978). Individuals engage in them to track their group's social status relative to other groups. When individuals compare their ingroup's position to that of outgroups, disparities in resources, recognition, or opportunities may become evident (Reicher, 2004). If the group's status is perceived (let alone objectively observed) as diminished or threatened, individuals may experience a sense of relative deprivation – the feeling that their social group is not receiving its fair share (Crosby, 1976).

A threat in this context refers to the extent to which group members subjectively perceive the existence of threats due to the presence of the outgroup; they are often classified into those of realistic (economic) and symbolic (cultural) nature (Stephan & Stephan, 2000; Schmuck & Matthes, 2017; Lucassen & Lubbers, 2012). Symbolic (or cultural) threats involve the perception that one's cultural identity, values and norms are being devalued or marginalized resulting from the involvement of immigrants or other members of outgroups (Stephan & Stephan, 2000). This type of threat is usually referred to as the cultural threat channel in the political economy literature of populism, e.g., in Norris & Inglehart (2016). Realistic (economic) threats, in turn, involve tangible changes that directly impact individuals' economic well-being. These threats are linked to shifts in employment, job competition, and inequality in access to resources and opportunities and are usually referred to as the economic insecurity channel in the political economy literature on populist voting, e.g., in Guiso et al. (2017, 2024). This threat further triggers a sense of personal status insecurity, and a potential loss of positive self-concept derived from the ingroup's affiliation and status.

The salience of threats, be they of symbolic (cultural) or realistic (economic) nature, is contingent on the specific outgroup that triggers the threat response. Outgroups associated with economic power of individuals tend to evoke economic (realistic) threats, whereas socially marginalized outgroups like immigrants tend to provoke symbolic threats (Stephan et al., 2005). In practice, the two types of threats can be intertwined and reinforce each other in

complex ways (Guriev & Papaioannou, 2022; Gidron & Hall, 2020). Cultural threats might intensify the perception of an economic challenge, and vice versa, the most notable example being the fear that the arrival of immigrants might lead to increased local job competition, wage suppression, and strain on public resources (Lucassen & Lubbers, 2012; Schneider, 2008; Burgoon & Rooduijn, 2021).

The threats of a potential social status loss evoke negative feelings and anxiety that stems from the fear of losing one's sense of identity, respect and belonging within a social hierarchy (Osborne et al., 2012). The perceptions of threat and relative group's status deprivation erodes one's sense of identity and significance and can trigger various psychological and behavioral responses aimed at upholding and protecting it (Kruglanski et al, 2014).

Populist voting. We argue that both types of threats influence an individual sense of social standing, causing fear, insecurity, and anxiety, leading to efforts to reaffirm identity and group status. This mechanism is central to our exploration of how these threats relate to populist voting. Individuals who feel their values and lifestyle are threatened by 'outsiders' often develop a stronger identification with their own group and turn to political parties and candidates that pledge to protect and restore their group's standing (Shayo, 2009; Van Prooijen & Krouwel, 2017).

Populist parties specifically tend to amplify and capitalize on both cultural and economic threats to a group's (and consequently, individual) social status, creating a sense that one's group contribution to society is no longer acknowledged or valued, status is eroded, and lifestyles are marginalized (Mudde & Rovira Kaltwasser, 2018; Margalit, 2019; Gidron, 2022). Populist discourse, marked by a stark 'us versus them' dichotomy (Mudde, 2004), often acts as a remedy to uncertainty by offering simple explanations for the root causes of people's concerns. These narratives trigger intergroup comparisons (Müller, 2017; Gidron & Hall, 2020) and create cognitive closure for those feeling threatened (Miglietta & Molinengo, 2023; Magnus, 2022).

This is particularly evident in immigration issues, where demographic and cultural shifts are seen as threats to the in-group's social identity. Notably in Western European societies, right-wing populist parties address these concerns by advocating for restricted immigration, stricter border controls, less globalization, and promoting national pride as defenses against these changes (Rodrik, 2021). Job dislocation insecurities and concerns about

an individual's economic misfortune that result in a status loss is another such field for populists. These individuals often blame 'economic elites' for their struggles, and populist parties respond with policies promoting protectionism, economic nationalism, and anti-globalization (Mols & Jetten, 2016; Rodrik, 2021).

Populism differs from general anti-incumbent sentiment in that it directly addresses potential status loss through politically crafted narratives. While anti-incumbent sentiments often arise from broad dissatisfaction, populists attract voters by linking perceived threats to social status with specific, time-relevant issues such as globalization, immigration, and, more recently, climate change (Lockwood, 2018). By using simple, black-and-white narratives that resonate with voters' personal experiences and struggles, populists offer simple but concrete solutions. This strategy highlights how populist parties leverage social identity dynamics, providing clear explanations for grievances (cognitive closure) and fostering a sense of empowerment to counteract perceived status loss (Guiso et al., 2019).

Figure 2.1 Summary of theoretical arguments underpinning the microeconomic determinants of populist voting.

| Identification with a social group in search of identity/self-worth | → | Engagement in intergroup comparisons | → | Threats triggering a sense of social status loss | → | Social identity voting through endorsement of a populist party to restore social/personal status |
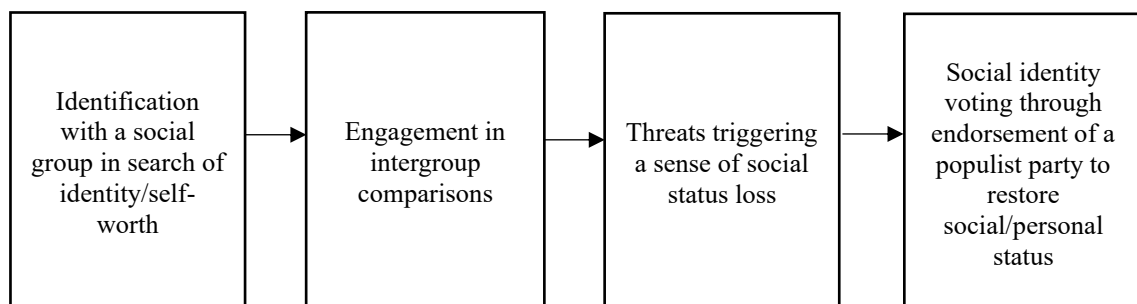
Source: Compiled by the authors based on the section discussion.

Empirical research finds support for the proposed theoretical considerations that link individual threats of potential social status erosion to populist voting. Qualitative research, for example, documents a sense of declining social standing among right-wing populist supporters in a series of interviews (e.g., Hochschild, 2018). Gidron & Hall (2017) propose that status anxiety is the core factor of support for populism, and that both economic and cultural concerns interact to form it. The authors propose that these concerns that have depressed the social status of men without a college education and show that the relative social status decline is associated with support for right-wing populist parties. Engler & Weisstanner (2021) provide further evidence by showing that increasing income inequality has created a perception of potential social decline among individuals with high subjective social status and lower-middle incomes.

Mutz (2018) reaches a similar conclusion empirically showing that it was the fear among white Americans of losing the dominant group status that drew them to vote for Trump in 2016.

2.2.2 Role of institutional context

Building up on the discussion of the individual threats that result in populist voting, we further contend that both of those channels are contingent on the specific institutional context in which voters are embedded. Individuals do not operate in a vacuum; their behavior, decisions and interactions are shaped by the broader institutional context in which they occur (Bandura, 1986; Coleman, 1990). These rules of the game shape individual behaviour by setting incentives, forming expectations, and defining the costs and benefits of various actions.

Welfare state. One such core example of the institutional context is a welfare state. It serves as a social solidarity mechanism; a welfare state pools resources from its members, typically through taxation and other means, and redistributes these resources to individuals or groups in need. These distributional effects of the welfare state can act on distinct margins. As individuals are embedded in the context over which the welfare state extends in a particular polity, it influences how they form political preferences and make political choices.

On the one hand, a welfare state is a deprivation absorber, serving as a safety net to economically vulnerable individuals by providing essential support and thereby preventing from falling into further impoverishment. When concerns of a voter experiencing economic insecurity are better cushioned by the welfare state, the impact of their situation is less triggering (Mau et al., 2012; Kurer, 2020). In other words, their economic insecurity does not immediately translate into status loss because the welfare state is there to bail them out. We therefore argue that this bail-out effect is likely to be more relevant for individuals experiencing economic insecurity. Research shows, for instance, that people facing economic difficulties often favor a broader welfare state and wealth redistribution, as these policies provide relief and a safety net, easing economic worries and boosting their social status (Anderson & Pontusson, 2007; Margalit, 2013).

On the other hand, a more extensive welfare state can trigger an anti-solidarity effect based on the fears for a disproportionate allocation of resources towards foreigners at the expense of locals. This argument is rooted in the realistic conflict theory, which posits competition between ingroups (locals) and outgroups (immigrants) over limited resources (Rydgren, 2007). Following this argument, we propose that a more extensive welfare state amplifies these concerns for those who perceive immigrants as competitors for economic

resources and a threat to the economic prosperity of native members. Empirical studies suggest that immigrants are often *perceived* as recipients of welfare programs at a disproportionate rate, straining the fiscal sustainability of welfare redistribution (Boeri et al., 2002; Facchini & Mayda, 2012; Mayda & Rodrik, 2005; Mau & Burkhardt, 2009; Burgoon & Rooduijn, 2021). Our argument therefore posits that the anti-solidarity effect counteracts the bail-out effect for the segment of society that experiences these concerns.

2.2.3 Conceptual framework and hypotheses

Building upon the above theoretical discussion of the mechanisms, we formulate our set of hypotheses. Our arguments are summarized in Figure 2.2.

Figure 2.2 Conceptual model.
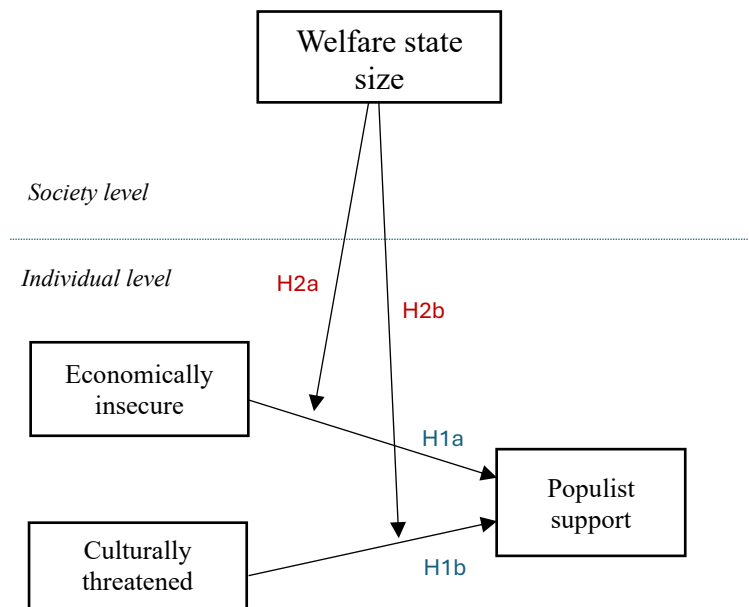
Hypotheses:

H1: Populist party support is positively associated with (a) higher economic insecurity and (b) higher cultural threat.

A more extensive welfare state triggers a *bail-out* and an *anti-solidarity effects* on populist support, such that:

H2a: A more extensive welfare state *dampens* the effect of economic insecurity on populist support,

and

H2b: A more extensive welfare state *amplifies* the effect of cultural threat on populist support.

2.3 Data and methodology

2.3.1 Sample

Our primary individual-level data come from the European Social Survey (ESS). The ESS systematically tracks changes in values and attitudes of residents across all European countries by face-to-face interviews. Each wave is a random representative sample of individuals, with the sample size varying by country between 1,000 and 3,000 respondents.

Our sample consists of 188,402 individual records observed over the years 2004-2022 across 22 European societies: Austria, Belgium, Switzerland, Czechia, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Hungary, Ireland Italy, Latvia, Netherlands, Norway, Poland, Sweden, Slovenia and Slovakia. During the data cleaning process for the ESS's tenth round, we encountered a missing variable that typically indicates the interview year for each respondent. To address this and maintain the integrity of our sample, we assigned all observations from the tenth round to the year 2021.[1]

We limit the sample to the individuals aged between 18 (voting eligibility criterion) and 90. Additionally, we exclude any data points where the total years of education exceed 30, as these are considered outliers. We also exclude observations from Bulgaria, Cyprus, Croatia, Lithuania, and Romania due to limited public social spending data availability in the OECD database. For statistical reasons, we further take out observations from Luxembourg and Portugal as we could not identify individuals that have ever supported a populist party there over the sample years.[2] We further exclude some observations as we merge the ESS dataset with country-level data from different sources that run until and including 2021. Finally, we remove all missing observations.

Table 2.1 presents summary statistics of the final sample, and Table 2.2 shows correlations. 13.1% of those who declared to cast a vote in the last national elections did that in favor of one of the 57 political parties identified as populist (for the full list of populist

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[1] Reassigning observations to 2020, 2022 or randomly does not affect the results.

[2] In Portugal, *Chega*, a (far-right) populist party as classified by PopuList 2.0, was established in 2019 and garnered 1.3% of votes in that year's elections. However, due to its minimal representation in the Assembly of the Republic, it was challenging to identify individual supporters from our dataset. Similarly, in Luxembourg, *Alternativ Demokratesch Reformpartei (AD*R), labeled as (far-right) populist, despite its steady presence in the Chamber of Deputies with a voter share of 6.5-9% from 2004-2018, the identification of individual ADR supporters in our dataset of 1,812 ESS-polled individuals was not feasible, likely due to the limitations of the sample size in Luxembourg.

parties, see Table A2.1 in the Appendix). The populist vote share ranges from the minimum of 2.6% in the UK and a maximum of in 43.7% in Slovakia. On average, Greece and Lithuania have the highest proportion of economically insecure voters, with 73.9% in Greece and 71.7% in Lithuania reporting at least some level of economic insecurity. In contrast, the most economically secure voters are in Switzerland (36.1% are somewhat insecure), Norway (44.4%), and the Netherlands (46.9%). Greece and Hungary have the highest average levels of perceived cultural threat, while Sweden, Switzerland, and Norway are at the opposite end of the spectrum. The levels of public social spending vary significantly, with the lowest average at 16.8% in Slovakia and the highest average at 30.5% in France.

Table A2.2 in the Appendix lists all variables, their description and data sources. Figures A2.1 and A2.2 in the Appendix display the distribution of the economic insecurity and cultural threat indexes by country; Figure A2.3 in the Appendix does the same for public social spending.

2.3.2 Dependent variable

Populist support; One of the biggest advantages of the ESS core module is that it asks a representative sample of respondents across Europe which party they voted for in the last national elections. It is one of the few cross-cultural datasets that cover individuals' voting behavior. We then assign a value of 1 if a person reportedly voted for a party that is classified as populist in PopuList 2.0 (Rooduijn et al., 2019), and 0 otherwise. The PopuList is a database of European populist parties that gained at least 2% of votes in at least one national election since 1998. We use this classification because, in contrast to other frequently employed classifications (e.g., Van Kessel, 2015), it sorts parties into populist and non-populist based on anti-elite and pro-people rhetoric, echoing the widely accepted in political science definition of populism by Mudde (2004).

2.3.3 Individual-level independent variables

Our theoretical framework is centered around the social status loss mechanism. We hypothesize that it operates through the activation of threats of economic and cultural origin related to status, therefore acting as an intermediary between them and voting behavior. Acknowledging that measuring a sense of one's potential status loss directly across societies and years poses an empirical challenge, we follow the existing literature (e.g., Norris & Inglehart, 2016; Guiso et al., 2017, 2024) and focus on measuring the underlying threats instead as a reasonable proxy.

Economic insecurity; To operationalize economic insecurity, we employ four separate indicators from the ESS survey that represent the distinct sources of one's economic fragility, following previous studies (e.g., Guiso et al., 2017, 2024). The first indicator captures one's self-reported perception of current financial struggles. The specific survey item reads 'Feeling about household's income today', with answers ranging from 1 (Living comfortably on present income) to 4 (Living extremely difficult on present income). We construct a dummy variable that takes a value of one if the self-reported perception reads as 'Difficult' or 'Extremely difficult'. We proxy one's position in the labour market using information on their job and previous long-term unemployment experiences. First, we assign a value of one to individuals who work in occupations classified as low-skilled.[3] Second, we create a dummy indicating whether an individual ever experienced unemployment that lasted longer than three months (Gallie et al., 2017). Finally, we proxy one's employment security by contract type, with a value of one indicating a limited or no contract. We take a sum of the four binary-coded measures to construct our (formative) index of economic insecurity.

Cultural threat; We operationalize the latent construct of a threat to the 'us' cultural segment through individual attitudes towards immigrants. In our choice of proxy, we are guided by the observation that hostile sentiments directed at immigrants, asylum seekers, and multiculturalism in general have become a defining concern for many populist parties in Europe. To construct our measure, we utilize six interrelated attitudinal questions from the ESS concerning the societal impact of immigrants and preferred immigration policies. In our choice of ESS items, we follow Norris & Inglehart (2016). The questions about immigrants' societal impact explore perceptions on whether immigration benefits or harms the country's economy and cultural life, and if immigrants improve or worsen the living conditions in the country. Responses range from 0 (Bad for …) to 10 (Good for …). Regarding immigration policies, the questions focus on preferences for allowing varying numbers of immigrants from similar or different racial/ethnic backgrounds or from poorer countries. Answers range from 1 (Allow many to come here) to 4 (Allow none). The six items reliably measure the same latent dimension, as indicated by the Cronbach's alpha of 0.84. Our exploratory factor analysis on the six items revealed a single factor with an eigenvalue above 1.0 (Kaiser criterion). This suggests a strong underlying dimension represented by these items. To reduce dimensionality

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[3] Low-skilled workers are those with jobs in sales and services and elementary occupations (occupation groups 5 and 9, as per ISCO classification, versions 1988 and 2008), as in OECD (2019).

to one index, we rescale the items so that higher values represent higher hostility and take their first principal component.

2.3.4 Society-level independent variable

Welfare state size; We operationalize the size of the welfare state through public expenditures on social policies. Specifically, we employ the SOCX indicator from the OECD Social Expenditure Database that encompasses spending on various social programs expressed as a share of GDP.[4] This indicator is commonly used in comparative welfare state research (e.g., Castles, 2003; Adema et al., 2011). We distinguish between the different social programs in the robustness checks.

2.3.5 Control variables

We employ a set of individual-level and country level controls. At the individual level, we control for a set of socio-demographic indicators, such as respondent's age, education and gender. We use the voter's type of residence to control for the geographical differences between 'cosmopolitan cities and nationalist countryside', the well documented divide across European societies (Maxwell, 2019; Beugelsdijk et al., 2022). We also account for immigrant and ethnic minority backgrounds.

Additionally, we control for six interrelated (Cronbach's alpha = 0.88) measures of institutional and political trust (trust in national and European parliament, politicians, political parties, police and legal system) to construct an index of institutional trust. The first principal component explains 65% of the variance. We do so to control for in individual perceptions that those institutions fulfill expectations of a polity, reflecting substantial empirical evidence on the effect of growing institutional distrust on the populist rise (Guiso et al., 2017, 2024; Dustmann et al., 2017; Geurkink et al., 2020). Additionally, we control for attention to political developments and political informedness, captured by a self-reported interest in politics (Zhuravskaya et al., 2020).

At the country level, we control for standard socio-economic indicators by including the level of economic prosperity and general economic condition of a country proxied by GDP per capita, income inequality proxied by the Gini coefficient, wealth inequality proxied by the share of wealth held by top 1% population and unemployment rates as a percentage of labour force. We also control for the presence of foreign-born and foreign population in a society to

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[4] Public social spending, overseen by the General Government (encompassing various government levels and social security funds), includes expenditures like public spending on labour market, unemployment and incapacity, social benefits to households and families, and pension spending.

account for its confounding effect on both the economic and cultural channels (Della Posta, 2013). Lastly, we control for the country's type of the welfare state regime to account for benefits allocation differences as per the classification of Esping-Andersen (1990).[5]

2.3.6 Empirical strategy

ESS respondents are nested within countries in which they reside and respectively vote in national elections. We therefore conjecture that two random persons from one country are more similar than two random persons from two different countries due to the context in which they are embedded. Neglecting to consider the hierarchical data structure, where observations are dependent due to data clustering, can result in biased outcomes, particularly concerning predictor coefficients measured at the group level (in our case, country level) (Rabe-Hesketh et al., 2005). To account for this, we introduce country random effects, assuming that the differences across countries captured by the random effects are not systematically related to the predictors upon which we hypothesize. We further assume that any time-specific unobserved factors are constant across countries. For that we introduce ESS survey year dummies to control for unobserved heterogeneity what is constant within a year but varies across years.

Our baseline specification therefore is a two-level mixed-effects logit model with survey year fixed effects and country random effects. The estimation equation takes the following form:

$$\log \left(\frac{P(V_{icw} = 1)}{1 - P(V_{icw} = 1)} \right) = \gamma_{00} + \gamma_{01} S_{cw} + \gamma_{02} \boldsymbol{C}_{cw} + \gamma_{10} \boldsymbol{X}_{icw} + \gamma_{11} \boldsymbol{D}_{icw} \, \gamma_{12} \left(S_{cw} \cdot \boldsymbol{X}_{icw} \right) + t_w + a_c + e_{icw}$$

where V_{icw} represents whether respondent i in country c interviewed in year w voted for a populist party in the latest national elections. $\boldsymbol{X}_{icw}$ is a vector of individual-level predictor variables including economic insecurity and cultural threat, while S_{cw} is a society-level variable representing the welfare state size. $\boldsymbol{D}_{icw}$ and $\boldsymbol{C}_{cw}$ are vectors of individual and society-level controls, respectively. t_w denotes the survey year effects, a_c represents the random intercept for each country, capturing the unobserved heterogeneity at the country level, and e_{icw} is the error term accounting for unexplained variability in the outcome.

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[5] Esping-Andersen (1990) welfare state regime classification. Liberal: UK, Ireland. Conservative: Austria, Belgium, France, Germany, Italy, Netherlands, Switzerland. Social democratic: Denmark, Finland, Norway, Sweden. Other: Greece, Spain, Czech Republic, Estonia, Latvia, Poland, Slovakia, Slovenia, Hungary.

We log-transform the GDP per capita, unemployment rate, and immigrant stock to account for the differences in levels across the sample countries. We further assess multicollinearity using variance inflation factors (VIFs) and find that all variables have VIFs within the range 1-3, which is below the critical threshold of 10.

2.4 Results

2.4.1 Main results

Table 2.3 provides the baseline estimation results for the first part of the analysis on individual-level effects. We start with a simple model and gradually introduce the variables to understand the impact of each component on the outcome. In the null specification, 35% of variance in voting for populist parties can be attributed to differences between countries (intraclass correlations (ICC)). This justified our choice of the regression model. Model 1 in Table 2.3 shows that the economic insecurity index is positively and significantly related to the probability to support a populist party. As the level of insecurity increases, so does the probability to vote populist. In Model 2, we add the cultural threat index capturing attitudes towards immigrants. The estimations reveal a strong statistically significant positive association between the cultural threat index and the propensity to vote populist. That is, one's likelihood to support a populist party increases with greater hostility towards immigrants. Including the cultural threat index does not change the direct effects of economic insecurity on the outcome, although the magnitude of the economic insecurity coefficients slightly decreases. Our results are robust to the inclusion of individual-level (Model 3) and society-level controls (Model 4), survey year fixed effects (Model 5), and country random effects (Model 6).

Model 6 in its full specification reveals that a 1-point increase in the economic security index is associated with an increase in the log odds of voting for a populist party by 0.100. For culturally threatened individuals, the magnitude of the effect is even higher: a 1-point increase in the cultural threat index is associated with an increase in the log odds of voting for a populist party by 0.189. These two pieces of evidence therefore provide support for our Hypotheses 1a and 1b.

[Insert Table 2.3 about here]

We briefly discuss the control variables. Less education is a strong predictor of populist support, so is lower trust in institutions, which is in line with previous research (Guiso et al., 2017, 2024; Dustmann et al, 2017; Geurkink et al., 2020). Age comes out as a weak yet statistically significant negative predictor. Non-immigrants are more likely to be populist

supporters, while those who belong to an ethnic minority are less so. Interest in politics is positively related to casting a vote for a populist party, although one would expect the opposite (see, for example, Spruyt et al., 2016). Type of domicile does not seem to be a significant covariate.

We further report a negative association between public social spending and the likelihood of voting for a populist party. In more economically developed societies and those with lower unemployment rates, individuals are slightly more likely to vote for a populist party, supporting vast evidence on populism rising in good times, or 'the paradox of well-being' (Rooduijn & Burgoon, 2018). Only income inequality comes out as a strong positive covariate. The welfare state regime that is other than Conservative or Social democratic predicts slightly higher populist support, relative to the Liberal type. Foreign and foreign-born population stock is a weak yet negative covariate with higher populist vote shares.

Adding the interaction terms to our latest model specification allows us to explore how the reported relationships between economic insecurity and cultural threat and the likelihood to vote for a populist party change across different levels of public social spending. Table 2.4 provides the estimation results for separately estimated interaction terms. As our results are robust to the inclusion of survey year fixed effects (Model 2, Model 5) and country random effects (Model 3, Model 6), we look at Model 3 and Model 6 to discuss our results in more detail.

[Insert Table 2.4 about here]

In Model 3, Table 2.4, the statistically significant coefficient (0.006, p<0.001) for the interaction term between the economic insecurity index and public social spending suggests that the relationship between one's degree of economic insecurity and populist support changes with the level of public social spending. The coefficient comes out with a positive sign, implying that in a welfare state with larger public social policies spending, the effect of economic insecurity on populist support also increases. This is the opposite of the dampening effect we theorize upon in Hypothesis 2a. To better understand the nature of this interaction, we compute predicted probabilities and plot this relationship at three levels of public social spending. Figure 2.3 corroborates the positive interaction effect as the lines in the plot (each representing different levels of public social spending) show an increasing trend with higher degrees of economic insecurity.

[Insert Figure 2.3 about here]

Model 6 in Table 2.4 further reveals that there is a positive statistically significant interaction (0.011, p<0.001) between the cultural threat index and public social spending. This implies that in countries with a more extensive welfare state, negative attitudes towards immigrants (which we use as a proxy for cultural threat) have a stronger effect on populist support. This result therefore supports our Hypothesis 2b. In a similar fashion, we explore the interaction graphically. Figure 2.4 reveals that while initially individuals are less likely to support populist parties in societies that allocate more resources on social policies, the positive moderating effect becomes more pronounced as one becomes more culturally threatened. That is, the probability to support a populist party increases more steeply when the level of public social spending is higher as one's views towards immigrants become more negative.

[Insert Figure 2.4 about here]

2.4.2 Robustness tests

2.4.2.1 Testing individual items of the economic insecurity index

The economic insecurity index is additive, meaning that each of the four separate indicators equally contributes a specific meaning to the underling latent construct. We therefore test whether each component that constitutes it delivers the same effects as baseline.

[Insert Table 2.5 about here]

Table 2.5 displays our findings. Among the components of the economic insecurity index, three out of four indicators show positive and statistically significant correlations with populist support (Models 1-4), which is in line with our baseline results in support of Hypothesis 1a. We further report a positive statistically significant interaction between income struggles and public social spending, while for the remaining three indicators, the interaction terms lose their statistical significance, suggesting a more ambiguous relationship.

2.4.2.2 Exploring the argument on the origin of cultural threat

In research on populist voting, culture-related threats are often linked to negative attitudes towards immigrants, a concept we use in our baseline analysis. This cultural threat also includes resistance to cosmopolitan elites and outsiders, driven by a clash between liberal views on immigration, gender, and sexual minorities, and traditional national and religious values (Norris & Inglehart, 2019). We therefore adopt an alternative measure of the cultural threat construct , attitudes towards LGBTQ+ , using a specific survey item from the ESS: 'Gays and lesbians free to live life as they wish', with responses ranging from (1) Agree strongly to (5) Disagree strongly.

[Insert Table 2.6 about here]

Table 2.6 reports our findings. Negative views on LGBTQ+ correlate with higher populist voting, mirroring the pattern of the effects of negative attitudes towards immigrants, which supports our Hypothesis 1b. As we further estimate the interaction term, the coefficient, although of much lower magnitude, comes out positive and statistically significant, which is in line with our baseline results and supports Hypothesis 2b. An alternative operationalization of cultural threat therefore does not alter our main findings.

2.4.2.3 Employing an alternative estimation method

We aim to model variations across countries and perform an extra robustness check by estimating a set of models using logistic regression with fixed effects. These fixed effects include two separate sets of dummies: ESS survey years and countries; we calculate robust standard errors.

[Insert Table 2.7 about here]

Table 2.7 displays the results, showing that our baseline estimates on both direct and moderation effects remain robust to an alternative estimation method.

2.4.2.4 Testing the effects of distinct welfare programs

The SOCX public indicator from the OECD Social Expenditure Database that we employ as a proxy for the welfare state size represents the cumulative public social spending across six key social welfare program areas: expenditures on labour market support, unemployment and incapacity benefits, social assistance to households and families, and pension expenditures (Table A2.3 in the Appendix summarizes the characteristics of these welfare programs). As a robustness check, we employ our baseline specification to assess the effects of these welfare spending indicators separately.

[Insert Table 2.8 about here]

Table 2.8 summarizes the estimation results, revealing some heterogeneity in moderation effects. For example, we observe a positive statistically significant interaction between the economic insecurity index and labour-market related expenditures (public spending on labour markets and public spending on unemployment), suggesting that as spending on these social programs increases, the effects of one's income insecurity on populist support becomes more pronounced. Similar to the baseline findings, this does not provide

support for the Hypothesis 2a. At the same time, the moderation effect of pension spending is inversely related.

We further observe positive and statistically significant moderation effects of the four key policy areas (expenditures on labour market policies, incapacity benefits, social payments to households, and family benefits) for the culturally threatened segment of society, which is in support of the Hypothesis 2b. For other policy areas, however, the interactions are insignificant, suggesting a more ambiguous relationship.

2.5 Conclusion and discussion

Across Europe, populist parties have been on the rise, which encouraged extensive research on the factors explaining their success. These range from economic issues, such as income inequalities and globalization-induced labour market changes, to cultural shifts, such as reactions against cosmopolitanism and multiculturalism (often framed as the Economics versus Culture debate in the academic literature).

Our research re-examines the factors that have driven the populist rise in Europe, presenting both theoretical and empirical evidence that the connection between personal experiences of economic insecurity, perceived cultural threat, and casting a vote for a populist party are contingent on how much the state spends on welfare programs. We argue that a more extensive welfare state not only offers support and security against economic deprivation (the bail-out effect), but can also trigger perceived conflicts about distributing resources, especially against groups like immigrants (the anti-solidarity effect).

We first show that more economically insecure individuals are more likely to support a populist party. Previous studies show that residing in a society with a more extensive welfare state is associated with reduced subjective socio-economic insecurity (e.g., Mau et al., 2012), and we further draw the link between that and populist support. We find, however, contrary to our theoretical considerations, the association between one's greater economic insecurity and propensity to support a populist party intensifies, rather than weakens, in a more extensive welfare state. That is, a larger welfare state becomes less mitigating for economically insecure individuals.

This surprising finding could suggest several things. One interpretation might be that those at the highest end of economic insecurity are often not the core constituency of populists. For instance, Gidron & Hall (2020) and Kurer (2020) show that populist radical right backers do not typically belong to the lowest income strata truly dependent on a welfare state but rather

fall slightly above that level. We nevertheless show that economic insecurity plays a role in driving populist support regardless of the level of welfare state spending. Alternatively, our results might point to other underlying factors not captured in our theoretical model and empirical test that influence the relationship.

We further show that culturally threatened individuals, that is, those holding more negative views towards immigrants, are more likely to support populists. We show that in societies with a more extensive welfare state, negative attitudes towards immigrants are more strongly associated with populist support. We theorize that this effect is rooted in perceived competition for limited economic resources with the outgroup such as immigrants. The mechanism is highlighted, for example, in Borgoon & Rooduijn (2021), who show that in societies with high immigration and generous welfare states, anti-immigrant sentiments lead to more decreased support for redistribution.

The moderating effects we report in this chapter are likely to be more nuanced as voting behavior is to a certain degree shaped by the supply side of populism. European populist partiers, especially those on the right, have various stances on welfare policies (Afonso, 2015). Some suggest reducing it, arguing that immigrants unfairly benefit from it and tapping into the economic insecurities of locals (welfare chauvinism, as described by Andersen & Bjørklund, 1990). Others argue for a more generous welfare state to shield locals from labour market competition caused by immigration (see Busemeyer et al., 2022). Loxbo (2022) explores this two-sided mechanism, showing that support depends on whether a (right-wing) populist party combines nativist beliefs with plans to expand or partially reduce the welfare state.

2.5.1 Limitations

One of the shortcomings of our study stems from measurement constraints. Specifically, we were unable to empirically capture and thereby validate the explicit social status loss mechanism, which we theorize as an intermediary link between the threats of economic or cultural nature and populist electoral outcome. This shortcoming opens a methodological debate. For example, Gidron & Hall (2020) use responses to a question on one's place in society from a rotating section 'Personal and social well-being' (not repeated across survey rounds) from the sixth round of the European Social Survey (2012/2013) to construct a measure of subjective social status and link that to right-wing populist voting. In this study, we make an informed empirical choice in favor of larger sample coverage across time and societies. To reinforce the connections we have identified, it would be beneficial to empirically measure the

perceived decline in an individual's social status across societies and temporal spans in future research.

2.5.2 Implications for future research

Our study elaborates on the well-established literature focused on explaining the European populist rise. While literature has thoroughly examined direct causes, the moderating effects of the context remain relatively underexplored. We enrich theoretical discussions by merging insights from social and political psychology and creating a framework of how the institutional context, in particular the welfare state, influences electoral behavior. By explicitly accounting for a range of contextual variables, our empirical results reveal that economic insecurity and cultural threat, often viewed separately in research, are intertwined. We therefore show theoretically and empirically that both channels can be moderated by the same context-shaping formal institutional arrangement. Our approach therefore connects research on party politics and voting behavior with studies on comparative political economy and welfare state research.

The results of our study accentuate the interplay between social and individual levels in the context of populist support. Despite the limitations discussed above, our study reaffirms established mechanisms and provides insights into emerging ones, notable that populist support at the individual level is contingent on the size of the welfare state. As the political and economic landscapes continue to evolve, understanding such dynamics becomes more important. Our research sets the stage for more explorations in the future, especially in teasing out the nuances of how welfare state policies might influence, mitigate, or magnify populist support among different segments of society while accounting for the factors on the supply side of populism.

Another methodological advancement to our research would involve a transition from the cross-sectional approach we employed to a more dynamic longitudinal analysis. By observing individuals across various institutional contexts, cultures, and over extended periods, we could gain more granular insights into the factors that drive populist support. Moreover, a longitudinal setting could provide more robust evidence of the dynamic interplay between institutional context, particularly the welfare state, and the evolution of individual political preferences, possibly pinpointing causality.

2.5.3 Policy implications

Our findings offer several policy implications. Given that a more extensive welfare state appears to amplify the effects of economic insecurity and cultural threat on populist support, policymakers might need to reassess how welfare benefits are perceived and distributed. If the goal is to lessen the effect of economic insecurity on populist voting, one potential reading of the results is that a more extensive welfare state is a blunt mechanism for achieving this, and increasing the size of the welfare state to address concerns associated with the rise of populism may actually achieve the opposite. More economically insecure individuals gravitate towards populist candidates, indicating that merely compensating them post factum may not fully address the root of their concerns. Instead of focusing public policies on the compensation side, one might consider prioritizing pre-emptive labour market strategies that target the underlying causes of economic insecurity, including employment programs, skills training tailored to changing job markets, as well as more inclusive policies that ensure all segments of society are economic growth beneficiaries. The populist sympathies among immigration opponents in countries with a more extensive welfare state highlight the importance of targeted communication strategies that emphasize the universal and inclusive nature of welfare provisions while avoiding triggering perceptions of resource competition.

Tables and figures

Table 2.1 Summary statistics.

	N	Mean	SD	Min	Max
Dependent variable					
Populist support	188402	.13	0.34	0	1
Individual predictors					
Economic insecurity index	188402	.81	0.93	0	4
Cultural threat index	188402	-.06	1.96	-4.31	4.94
Economic insecurity index components					
Struggles on present income	188402	.17	0.37	0	1
In low-skilled job	188402	.21	0.41	0	1
Ever unemployed >3 months	188402	.27	0.44	0	1
No/limited employment contract	188402	.17	0.37	0	1
Cultural threat index components					
Allow many/none culturally similar immigrants to come	188402	2.11	0.82	1	4
Allow many/none culturally different immigrants to come	188402	2.41	0.87	1	4
Allow many/none poorer immigrants to come	188402	2.49	0.89	1	4
Immigrants are good/bad for economy	188402	5.86	2.40	1	11
Cultural life enriched/undermined by immigrants	188402	5.28	2.52	1	11
Immigrants make country better/worse place to live	188402	5.93	2.29	1	11
Society predictor					
Public social spending	396	23.25	4.68	12.37	34.88
Individual controls					
Age	188402	51.04	16.69	18	90
Education	188402	13.37	3.92	0	30
Gender	188402	.49	0.50	0	1
City resident	188402	.31	0.46	0	1
Town resident	188402	.31	0.46	0	1
Born in country	188402	.95	0.22	0	1
Belongs to ethnic minority	188402	.03	0.16	0	1
Interest in politics	188402	2.62	0.85	1	4
Institutional trust	188402	.17	1.92	-4.61	5.35
Society controls					
GDP per capita	396	42194.12	19135.66	6681.31	103554
Gini coefficient	396	30.22	3.15	23.2	38
Wealth 1%	396	23.17	4.98	12.13	33.46
Unemployment rate	396	7.81	3.85	2.02	26.12
Immigrant stock	396	11.24	5.24	1.61	28.79
Welfare regime: Liberal	396	11.76	0.32	0	1
Conservative	396	36.91	0.48	0	1
Social democratic	396	21.08	0.41	0	1
Other	396	30.25	0.46	0	1

2.2 Correlations matrix.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
Populist support (1)	1.00	0.06	0.16	-0.10	-0.02	-0.07	0.04	-0.03	-0.00	0.03	-0.01	-0.03	-0.10	-0.13	-0.09	-0.02	-0.01	-0.16	0.14
Economic vulnerability index (2)	0.06	1.00	0.12	-0.01	-0.12	-0.15	-0.11	-0.01	0.02	-0.04	0.05	-0.15	-0.17	-0.11	0.08	-0.05	0.16	-0.07	0.07
Cultural threat index (3)	0.16	0.12	1.00	-0.05	0.13	-0.31	-0.01	-0.08	-0.00	0.06	-0.02	-0.25	-0.32	-0.21	0.03	-0.08	0.08	-0.12	0.11
Public social spending (4)	-0.10	-0.01	-0.05	1.00	0.01	0.01	0.02	0.01	0.01	0.02	-0.06	0.03	0.03	0.06	-0.04	-0.03	0.15	-0.02	-0.10
Age (5)	-0.02	-0.12	0.13	0.01	1.00	-0.30	0.00	-0.05	0.01	-0.01	-0.04	0.11	-0.00	0.05	0.00	0.02	-0.05	0.04	-0.07
Education (6)	-0.07	-0.15	-0.31	0.01	-0.30	1.00	0.00	0.14	0.01	-0.02	0.01	0.21	0.13	0.07	-0.04	0.03	-0.06	0.01	-0.07
Gender (7)	0.04	-0.11	-0.01	0.02	0.00	0.00	1.00	-0.01	-0.01	0.01	0.00	0.15	0.02	0.04	-0.01	0.01	-0.01	0.01	-0.01
City resident (8)	-0.03	-0.01	-0.08	0.01	-0.05	0.14	-0.01	1.00	-0.44	-0.05	0.05	0.07	0.04	-0.02	0.01	0.01	0.01	-0.02	0.06
Town resident (9)	-0.00	0.02	-0.00	0.01	0.01	0.01	-0.01	-0.44	1.00	-0.01	-0.00	0.01	-0.01	-0.03	0.02	0.04	-0.02	-0.04	-0.02
Born in country (10)	0.03	-0.04	0.06	0.02	-0.01	-0.02	0.01	-0.05	-0.01	1.00	-0.25	-0.02	-0.02	-0.04	-0.01	-0.02	0.02	-0.09	0.05
Belongs to ethnic minority (11)	-0.01	0.05	-0.02	-0.06	-0.04	0.01	0.00	0.05	-0.00	-0.25	1.00	0.00	-0.01	-0.02	0.02	0.01	-0.01	0.02	0.01
Interest in politics (12)	-0.03	-0.15	-0.25	0.03	0.11	0.21	0.15	0.07	0.01	-0.02	0.00	1.00	0.22	0.17	-0.03	0.07	-0.13	0.12	-0.14
Institutional trust (13)	-0.10	-0.17	-0.32	0.03	-0.00	0.13	0.02	0.04	-0.01	-0.02	-0.01	0.22	1.00	0.30	-0.16	-0.01	-0.22	0.09	-0.10
GDP per capita (14)	-0.13	-0.11	-0.21	0.06	0.05	0.07	0.04	-0.02	-0.03	-0.04	-0.02	0.17	0.30	1.00	-0.14	0.04	-0.40	0.50	-0.56
Gini coefficient (15)	-0.09	0.08	0.03	-0.04	0.00	-0.04	-0.01	0.01	0.02	-0.01	0.02	-0.03	-0.16	-0.14	1.00	0.30	0.39	0.30	-0.24
Wealth 1% (16)	-0.02	-0.05	-0.08	-0.03	0.02	0.03	0.01	0.01	0.04	-0.02	0.01	0.07	-0.01	0.04	0.30	1.00	-0.16	0.36	-0.03
Unemployment rate (17)	-0.01	0.16	0.08	0.15	-0.05	-0.06	-0.01	0.01	-0.02	0.02	-0.01	-0.13	-0.22	-0.40	0.39	-0.16	1.00	-0.10	0.27
Immigrant stock (18)	-0.16	-0.07	-0.12	-0.02	0.04	0.01	0.01	-0.02	-0.04	-0.09	0.02	0.12	0.09	0.50	0.30	0.36	-0.10	1.00	-0.47
Welfare regime (19)	0.14	0.07	0.11	-0.10	-0.07	-0.07	-0.01	0.06	-0.02	0.05	0.01	-0.14	-0.10	-0.56	-0.24	-0.03	0.27	-0.47	1.00

Table 2.3 Individual-level effects of economic insecurity and cultural threat on propensity to vote populist.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Individual predictors						
Economic insecurity index	0.171***	0.112***	0.085***	0.108***	0.094***	0.100***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cultural threat index		0.237***	0.211***	0.205***	0.209***	0.189***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Society predictor						
Public social spending				-0.059***	-0.077***	-0.042***
				(0.000)	(0.000)	(0.000)
Individual controls						
Age				-0.009***	-0.008***	-0.011***	-0.009***
				(0.000)	(0.000)	(0.000)	(0.000)
Education				-0.032***	-0.040***	-0.052***	-0.037***
				(0.000)	(0.000)	(0.000)	(0.000)
Gender				0.222***	0.238***	0.236***	0.235***
				(0.000)	(0.000)	(0.000)	(0.000)
Town resident				-0.069***	-0.101***	-0.085***	-0.004
				(0.000)	(0.000)	(0.000)	(0.833)
City resident				-0.137***	-0.120***	-0.084***	0.007
				(0.000)	(0.000)	(0.000)	(0.678)
Born in country				0.274***	0.101**	0.094**	0.091**
				(0.000)	(0.010)	(0.018)	(0.012)
Belongs to ethnic minority				-0.214***	-0.322***	-0.387***	-0.305***
				(0.000)	(0.000)	(0.000)	(0.000)
Interest in politics				0.101***	0.141***	0.163***	0.123***
				(0.000)	(0.000)	(0.000)	(0.000)
Institutional trust				-0.082***	-0.072***	-0.080***	-0.076***
				(0.000)	(0.000)	(0.000)	(0.000)
Society controls						
Ln(GDP per cap)				-0.087**	-0.394***	-0.113
				(0.019)	(0.000)	(0.281)
Gini coefficient				-0.075***	-0.068***	-0.018**
				(0.000)	(0.000)	(0.011)
Wealth 1%				0.027***	0.009***	0.009**
				(0.000)	(0.000)	(0.032)
Ln(Unemployment)				-0.035	0.061**	-0.144***
				(0.127)	(0.024)	(0.000)
Ln(Immigrant stock)				-0.685***	-0.608***	0.123*
				(0.000)	(0.000)	(0.077)
Welfare regime = Liberal (base)						
Conservative				0.949***	1.126***	1.179*
				(0.000)	(0.000)	(0.065)
Social democratic				0.409***	0.792***	1.031
				(0.000)	(0.000)	(0.137)
Other				0.494***	0.424***	1.427**
				(0.000)	(0.000)	(0.025)
Constant	-2.041***	-2.054***	-1.718***	3.163***	6.097***	-0.453
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.744)
Var(cons)						0.633***

						(0.001)
Observations	188,402	188,402	188,402	188,402	188,402	188,402
Individual controls	No	No	Yes	Yes	Yes	Yes
Society controls	No	No	No	Yes	Yes	Yes
Year FEs	No	No	No	No	Yes	Yes
Country REs	No	No	No	No	No	Yes
Number of groups						22

Note: DV: 1 = Voted for a populist party; 0 = Voted for a non-populist party. Two-level mixed-effects logit models. Based on sample of respondents from European countries where populist voting was ever recorded. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2.4 Moderation effects of social policies spending on the relationship between economic insecurity, cultural threat and propensity to vote populist.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Individual predictors						
Economic insecurity index	-0.131***	-0.110***	-0.029	0.110***	0.095***	0.101***
	(0.001)	(0.004)	(0.436)	(0.000)	(0.000)	(0.000)
Cultural threat index	0.204***	0.209***	0.189***	-0.144***	-0.125***	-0.050***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.009)
Society predictor						
Public social spending	-0.068***	-0.085***	-0.048***	-0.065***	-0.083***	-0.046***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Interaction terms						
Economic insecurity index x Public social spending	0.011***	0.009***	0.006***			
	(0.000)	(0.000)	(0.000)			
Cultural threat index x Public social spending				0.016***	0.015***	0.011***
				(0.000)	(0.000)	(0.000)
Individual controls						
Age	-0.008***	-0.011***	-0.009***	-0.008***	-0.010***	-0.009***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education	-0.040***	-0.052***	-0.037***	-0.038***	-0.050***	-0.036***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gender	0.239***	0.236***	0.235***	0.236***	0.233***	0.232***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Town resident	-0.101***	-0.085***	-0.004	-0.102***	-0.086***	-0.007
	(0.000)	(0.000)	(0.822)	(0.000)	(0.000)	(0.699)
City resident	-0.122***	-0.086***	0.006	-0.117***	-0.083***	0.008
	(0.000)	(0.000)	(0.731)	(0.000)	(0.000)	(0.650)
Born in country	0.102***	0.096**	0.091**	0.100**	0.093**	0.089**
	(0.009)	(0.016)	(0.012)	(0.011)	(0.020)	(0.013)
Belongs to ethnic minority	-0.313***	-0.379***	-0.301***	-0.329***	-0.393***	-0.306***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Interest in politics	0.142***	0.164***	0.123***	0.145***	0.166***	0.125***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Institutional trust	-0.072***	-0.080***	-0.076***	-0.068***	-0.075***	-0.073***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Society controls						
Ln(GDP per cap)	-0.099***	-0.403***	-0.113	-0.148***	-0.459***	-0.179*
	(0.008)	(0.000)	(0.280)	(0.000)	(0.000)	(0.085)
Gini coefficient	-0.076***	-0.069***	-0.018**	-0.079***	-0.072***	-0.019***
	(0.000)	(0.000)	(0.012)	(0.000)	(0.000)	(0.010)
Wealth 1%	0.027***	0.009***	0.008**	0.028***	0.009***	0.011***
	(0.000)	(0.000)	(0.037)	(0.000)	(0.000)	(0.006)
Ln(Unemployment)	-0.035	0.064**	-0.141***	-0.058**	0.035	-0.177***
	(0.132)	(0.018)	(0.001)	(0.013)	(0.192)	(0.000)
Ln(Migrant stock)	-0.685***	-0.608***	0.124*	-0.662***	-0.584***	0.177**
	(0.000)	(0.000)	(0.076)	(0.000)	(0.000)	(0.011)
Welfare regime: Liberal (base)						
Conservative	0.935***	1.112***	1.175*	0.913***	1.096***	1.151*
	(0.000)	(0.000)	(0.066)	(0.000)	(0.000)	(0.076)
Social democratic	0.400***	0.782***	1.033	0.433***	0.824***	1.087
	(0.000)	(0.000)	(0.136)	(0.000)	(0.000)	(0.122)
Other	0.475***	0.405***	1.426**	0.472***	0.402***	1.440**
	(0.000)	(0.000)	(0.025)	(0.000)	(0.000)	(0.025)
Constant	3.524***	6.397***	-0.328	4.014***	6.988***	0.210

		(0.000)	(0.000)	(0.812)	(0.000)	(0.000)	(0.879)
Var(cons)				0.633***			0.653***
				(0.001)			(0.001)
Observations		188,402	188,402	188,402	188,402	188,402	188,402
Individual controls		Yes	Yes	Yes	Yes	Yes	Yes
Society controls		Yes	Yes	Yes	Yes	Yes	Yes
Year FEs		No	Yes	Yes	No	Yes	Yes
Country REs		No	No	Yes	No	No	Yes
Number of groups				22			22

Note: DV: 1 = Voted for a populist party; 0 = Voted for a non-populist party. Two-level mixed-effects logit models. Based on sample of respondents from European countries where populist voting was ever recorded. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2.5 Robustness analysis testing separate components of the economic insecurity index.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Individual predictors								
Struggles on present income	0.123***	0.112***	0.081***	0.082***	-0.117	0.083***	0.083***	0.082***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.195)	(0.000)	(0.000)	(0.000)
Employed in low-skilled job		0.137***	0.121***	0.123***	0.123***	0.044	0.123***	0.123***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.596)	(0.000)	(0.000)
Ever unemployed > 3 months			0.181***	0.184***	0.183***	0.184***	-0.125	0.184***
			(0.000)	(0.000)	(0.000)	(0.000)	(0.115)	(0.000)
Limited/no employment contract				-0.025	-0.026	-0.025	-0.026	-0.046
				(0.208)	(0.195)	(0.207)	(0.196)	(0.637)
Cultural threat index	0.190***	0.189***	0.190***	0.190***	0.190***	0.190***	0.190***	0.190***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Society predictor								
Public social spending	-0.042***	-0.042***	-0.042***	-0.042***	-0.044***	-0.043***	-0.046***	-0.042***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Interaction terms								
Struggles on present income x Public social spending					0.009**			
					(0.021)			
Employed in low-skilled job x Public social spending						0.004		
						(0.325)		
Ever unemployed > 3 months x Public social spending							-0.125	
							(0.115)	
Limited/no contract x Public social spending								0.001
								(0.823)
Constant	-0.124	-0.362	-0.374	-0.350	-0.259	-0.337	-0.261	-0.349
	(0.928)	(0.794)	(0.787)	(0.801)	(0.852)	(0.808)	(0.851)	(0.801)
Var(cons)	0.628***	0.631***	0.635***	0.635***	0.637***	0.636***	0.630***	0.636***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	188,402	188,402	188,402	188,402	188,402	188,402	188,402	188,402
Number of groups	22	22	22	22	22	22	22	22
Individual controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country REs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: DV: 1 = Voted for a populist party; 0 = Voted for a non-populist party. Two-level mixed-effects logit models. Based on sample of respondents from European countries where populist voting was ever recorded. Coefficients reported; standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 2.6. Robustness analysis testing an alternative measure of cultural threat.

	Model 1	Model 2	Model 3	Model 4	Model 5
Individual predictors					
Economic insecurity index	0.124***	0.124***	0.125***	0.111***	0.110***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Alternative cultural threat index		0.165***	0.018	0.014	0.053
		(0.000)	(0.572)	(0.660)	(0.101)
Society-level predictor					
Public social spending	-0.054***	-0.051***	-0.065***	-0.086***	-0.040***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Interaction terms					
Alternative cultural threat index x Public social spending			0.007***	0.008***	0.003**
			(0.000)	(0.000)	(0.026)
Constant	4.881***	3.271***	3.720***	6.954***	-1.160
	(0.000)	(0.000)	(0.000)	(0.000)	(0.407)
Var(cons)					0.692***
					(0.001)
Observations	188,402	188,402	188,402	188,402	188,402
Number of groups	Yes	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes	Yes
Society controls	No	No	No	Yes	Yes
Year FEs	No	No	No	No	Yes
Country REs					22

Note: DV: 1 = Voted for a populist party; 0 = Voted for a non-populist party. Two-level mixed-effects logit models. Based on sample of respondents from European countries where populist voting was ever recorded. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2.7 Robustness analysis employing an alternative estimation method.

	Model 1	Model 2	Model 3	Model 4	Model 5
Individual predictors					
Economic insecurity index	0.108***	0.094***	0.114***	-0.001	0.114***
	(0.000)	(0.000)	(0.000)	(0.980)	(0.000)
Cultural threat index	0.205***	0.209***	0.209***	0.209***	-0.016
	(0.000)	(0.000)	(0.000)	(0.000)	(0.413)
Society predictor					
Public social spending	-0.059***	-0.077***	-0.041***	-0.046***	-0.043***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Interaction terms					
Economic insecurity index x Public social spending				0.005***	
				(0.002)	
Cultural threat index x Public social spending					0.010***
					(0.000)
Observations	188,402	188,402	188,402	188,402	188,402
Individual controls	Yes	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes	Yes
Year FEs	No	Yes	Yes	Yes	Yes
Country FEs	No	No	Yes	Yes	Yes
Standard errors	Robust	Robust	Robust	Robust	Robust

Note: DV: 1 = Voted for a populist party; 0 = Voted for a non-populist party. Survey year and country fixed effects logit models. Robust standard errors. Based on sample of respondents from European countries where populist voting was ever recorded. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 2.8 Robustness analysis of the direct and total effects for six distinct welfare programs.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Individual predictors												
Economic insecurity index	0.048***	0.115***	0.131***	0.090***	0.162***	0.095***	0.109***	0.113***	0.110***	0.108***	0.111***	0.108***
	(0.004)	(0.000)	(0.002)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Cultural threat index	0.192***	0.199***	0.204***	0.197***	0.204***	0.202***	0.122***	-0.078***	0.095***	0.213***	0.188***	-0.065***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Society predictors												
Public labour markets spending	0.559***						0.570***					
	(0.000)						(0.000)					
Public spending on incapacity		-0.307***						-0.380***				
		(0.000)						(0.000)				
Social benefits to household			0.203***						0.195***			
			(0.000)						(0.000)			
Public unemployment spending				0.247***						0.284***		
				(0.000)						(0.000)		
Pension spending					0.185***						0.177***	
					(0.000)						(0.000)	
Family benefits public spending						0.012						-0.004
						(0.774)						(0.916)
Interaction terms												
Economic insecurity index x												
Public labour markets spending	0.036***											
	(0.000)											
Public spending on incapacity		-0.002										
		(0.844)										
Social benefits to household			-0.001									
			(0.608)									
Public unemployment spending				0.017**								
				(0.042)								
Pension spending					-0.006**							
					(0.043)							

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Family benefits public spending						0.007						
						(0.549)						
Cultural threat index x												
Public labour markets spending							0.043***					
							(0.000)					
Public spending on incapacity								0.114***				
								(0.000)				
Social benefits to household									0.007***			
									(0.000)			
Public unemployment spending										-0.017***		
										(0.000)		
Pension spending											0.002	
											(0.226)	
Family benefits public spending												0.119***
												(0.000)
Constant	14.976***	13.301***	10.191***	11.617***	12.063***	11.295***	15.519***	14.182***	10.556***	11.583***	12.166***	11.213***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Var(cons)	0.769***	0.724***	0.518***	0.648***	0.661***	0.599***	0.765***	0.725***	0.517***	0.651***	0.660***	0.620***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Observations	157,880	157,880	157,880	157,880	157,880	157,880	157,880	157,880	157,880	157,880	157,880	157,880
Individual controls	21	21	21	21	21	21	21	21	21	21	21	21
Society controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country REs	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Number of groups	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: DV: 1 = Voted for a populist party; 0 = Voted for a non-populist party. Two-level mixed-effects logit models. Based on sample of respondents from European countries where populist voting was ever recorded. Coefficients reported; standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Figure 2.3 Predicted probability of voting for a populist party across different values of the economic insecurity index, shown at three levels of public social spending.
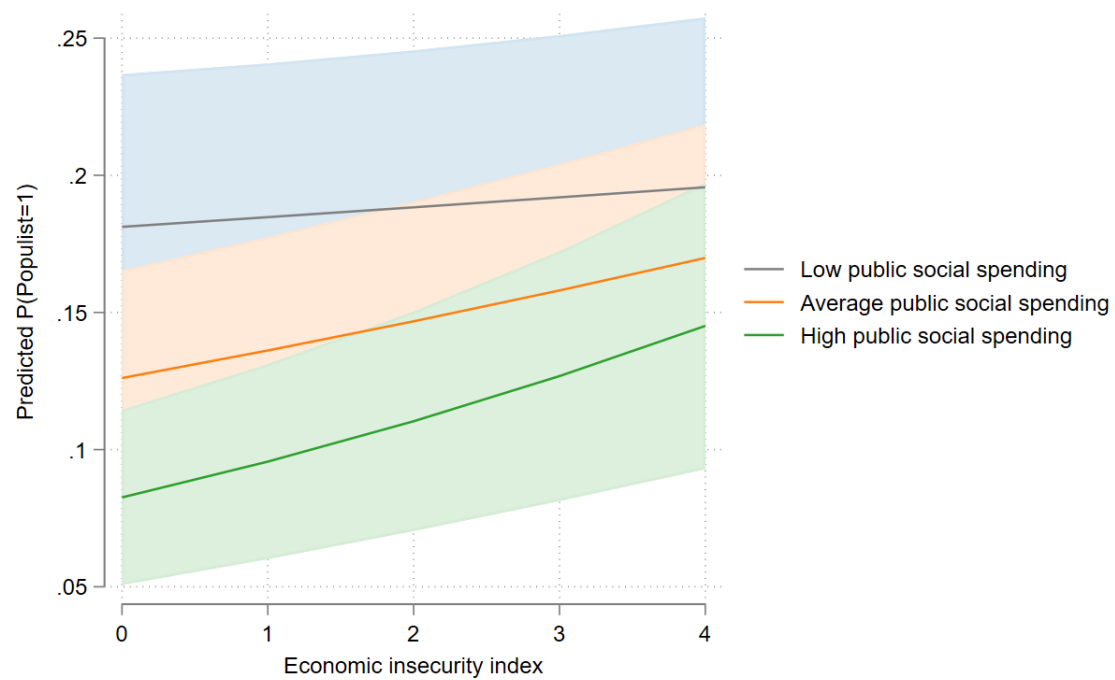
Note: Predictive margins based on Models 3, Table 2.4 with other attributes of individuals held at their means. Estimated on a subsample of N=94,201. Low, average, and high public social policies spending levels, measured as % of GDP, correspond to the values of 12.4%, 23.2%, and 34.9% of GDP, respectively.

Figure 2.4 Predicted probability of voting for a populist party across different values of the cultural threat index, shown at three levels of public social spending.
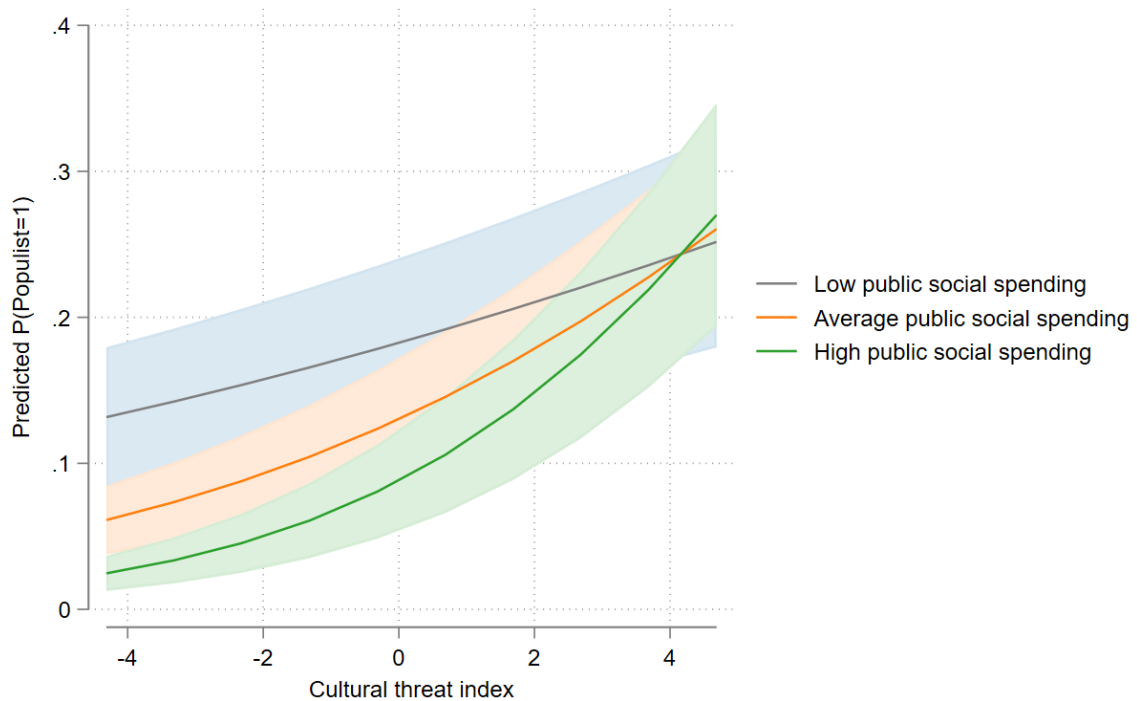
Note: Predictive margins based on Models 6, Table 2.4 with other attributes of individuals held at their means. Estimated on a subsample of N=94,201. Low, average, and high public social policies spending levels, measured as % of GDP, correspond to the values of 12.4%, 23.2%, and 34.9% of GDP, respectively.\

Appendix A2

Table A2.1 List of populist parties.

Country	Party name abbreviation	Party name in English
Austria	FPÖ	Freedom Party of Austria
Austria	TS	Team Stronach
Austria	BZÖ	Alliance for the Future of Austria
Belgium	VB	Flemish Interest
Belgium	LDD	Libertarian, Direct, Democratic
Belgium	FN	National Front
Belgium	Pp	People's Party
Czech Republic	VV	Public Affairs
Czech Republic	ANO	Action of Dissatisfied Citizens
Denmark	FrP	Progress Party
Denmark	DF	Danish People's Party
Estonia	EKRE	Estonian Conservative People's Party
Finland	Ps	Finns Party
France	FN / RN	National Front/Rally
Germany	Linke	The Left (Germany)
Germany	AfD	Alternative for Germany
Greece	SYN	Synaspismos - The Coalition of the Left
Greece	DIKKI	Democratic Social Movement
Greece	LAOS	Popular Orthodox Rally
Greece	SYRIZA	Syriza - The Coalition of the Radical Left
Hungary	Jobbik	Jobbik, the Movement for a Better Hungary
Hungary	Fidesz	Fidesz
Ireland	SF	Sinn Féin
Italy	M5S	Five Star Movement
Italy	FdI	Brothers of Italy
Italy	LN	Northern League
Latvia	KPV LV	Who owns the state?
Netherlands	LPF	Fortuyn List
Netherlands	CD	Centre Democrats
Netherlands	LN	Livable Netherlands
Netherlands	PVV	Party for Freedom
Netherlands	SP	Socialist Party
Netherlands	CD	Centre Democrats
Norway	Kp	Coastal Party
Norway	FrP	Progress Party
Poland	PiS	Law and Justice
Poland	SRP	Self-Defense of the Republic Poland
Poland	Kukiz '15	Kukiz '15
Poland	LPR	League of Polish Families
Slovakia	SNS	Slovak National Party
Slovakia	ANO	Alliance of the New Citizen
Slovakia	Smer	Direction - Social Democracy
Slovakia	OLaNO	Ordinary People
Slovenia	SDS	Slovenian Democratic Party
Slovenia	SNS	Slovenian National Party

Slovenia	ZdLe / L	United Left / The Left
Spain	Podemos	Podemos
Spain	ECP	In Common We Can
Spain	EM	In Tide
Sweden	SD	WSSden Democrats
Switzerland	EDU-UDF	Federal Democratic Union of Switzerland
Switzerland	LdT	Ticino League
Switzerland	SVP	Swiss People's Party
Switzerland	FPS	Automobile Party	Freedom Party of Switzerland
Switzerland	MCR	Geneva Citizens' Movement
United Kingdom	UKIP	United Kingdom Independence Party
United Kingdom	SF	Sinn Fein

Source: PopuList 2.0 (Rooduijn et al., 2019).

Table A2.2 Variables description and data sources.

Variable	Description	Source
Dependent variable		
Populist support	Binary variable: (1) if voted for a party classified as populist in Rooduijn et al. (2019), and (0) otherwise.	ESS item(s): prtvt* (Party voted for in last national election in * [country]). Classification of populist parties based on PopuList 2.0.
Individual predictors		
Economic insecurity index	Economic insecurity is an additive index ranging between (1) Economically secure to (5) Economically insecure composed of four binary indicators: (1) Income struggles: (1) if a respondent finds it hard or extremely hard to live on present income, (0) otherwise; (2) Long-term unemployment: (1) if a respondent was ever unemployed and seeking work for a period more than three months, (0) otherwise; (3) Employment in low-skilled job: (1) if a respondent declares to be employed in an occupation that is classified as low-skilled, (0) otherwise; (4) Employment contract type: (1) if a respondent is employed with a limited or no contract, (0) otherwise.	ESS items: (1) hincfel (Feeling about household income nowadays); (2) uemp3m (Ever unemployed and seeking work for a period more than three months); (3) iscoco (Occupation, ISCO88, Rounds 1-5), isco08 (Occupation, ISCO08, Rounds 6-10); Classification of low-skilled occupations based on OECD (2019), ISCO groups 5 and 9; (4) wrkctra (Employment contract unlimited or limited duration).
Cultural threat index	Cultural threat is an index based on the first principal component of six interrelated reversed measures of anti-immigrant sentiments.	ESS items: (1) imbgeco (Immigration bad or good for country's economy); (2) imueclt (Country's cultural life undermined or enriched by immigrants); (3) imwbcnt (Immigrants make country worse or better place to live); (4) imsmetn (Allow many/few immigrants of same race/ethnic group as majority); (5) imdfetn (Allow many/few immigrants of different race/ethnic group from majority); (6) impcntr (Allow many/few immigrants from poorer countries outside Europe).
Society predictor		
Public social spending	Public spending on social programs expressed as a share of GDP.	OECD Social Expenditure Database (SOCX)
Individual controls		
Age	Respondent's age in years, [18; 90].	ESS item: agea.
Education	Years of full-time education completed by respondent, [0; 30].	ESS item: eduyrs.
Gender	Respondent's gender: (1) if male, (0) female.	ESS item: gndr.
Town resident	Resident of a city: (1) if a respondent declares to reside in a big city or city suburbs, (0) otherwise.	ESS item: domicil.

City resident	Resident of a city: (1) if a respondent declares to reside in a big city or city suburbs, (0) otherwise.	ESS item: domicil.
Born in country	Non-immigrant background: (1) if a respondent declared to be born in the country where they reside, (0) otherwise.	ESS item: brncntr.
Belongs to ethnic minority	Ethnic minority background: (1) if a respondent declares to be an enthnic minority in the country of residence, (0) otherwise.	ESS item: blgetmg.
Interest in politics	How interested in politics: from (1) no to (4) strong interest in politics.	ESS item: polintr.
Institutional trust	Institutional trust is an index based on the first principal component of six reversed interrelated measures of institutional and political trust: (1) trust in national parliament; (2) trust in the European Parliament; (3) trust in politicians; (4) trust in political parties; (5) trust in the police; (6) trust in the legal system.	ESS items: (1) trstprl; (2) trstep; (3) trstplt; (4) trstprt; (5) trstplc; (6) trstlgl.
Society controls		
GDP per capita	GDP per capita in current USD	World Bank World Development Indicators Database
Gini coefficient	Gini coefficient, %	World Bank World Development Indicators Database
Wealth 1%	Share of wealth held by top 1%	World Inequality Database
Unemployment rate	Unemployment rate (as share of labour force), %	OECD Statistics
Immigrant stock	Share of foreign-born and foreign population, % of population	UN International Migrant Stock Database
Welfare regime	Classification of country's welfare state regime as: 1 = Liberal, 2 = Conservative, 3 = Social democratic, 4 = Other.	Esping-Andersen's (1990) classification.

Source: Compiled by the authors.

Table A2.3 Overview of six major welfare programs that constitute the SOCX indicator.

Welfare programme	Welfare programme description	SOCX Database indicator
Public spending on labour markets	Public spending on labour market programmes includes public employment services (PES), training, hiring subsidies and direct job creations in the public sector, as well as unemployment benefits. This indicator is measured in percentage of GDP.	publmpexp
Public spending on incapacity	Public spending on incapacity refers to spending due to sickness, disability and occupational injury. This indicator is measured in percentage of GDP.	pubexpincapacity
Social benefits to households	In national accounts social benefits to households are broken down into two distinct categories: social benefits other than social transfers in kind; and social transfers in kind. The former transfers are typically in cash and so allow households to use the cash indistinguishably from other income, whereas transfers in kind are always related to the provision of certain goods or services (predominantly health care and education), and so households have no discretion over their use. This indicator is measured in percentage of GDP.	socbenhh
Public unemployment spending	Public unemployment spending is defined as expenditure on cash benefits for people to compensate for unemployment. This includes redundancy payments from public funds, as well as the payment of pensions to beneficiaries before they reach the standard pensionable age, if these payments are made because the beneficiaries are out of work or for other labour market policy reasons. This indicator is measured in percentage of GDP.	pubunempexp
Pension spending	Pension spending is defined as all cash expenditures (including lump-sum payments) on old-age and survivors pensions. Old-age cash benefits provide an income for persons retired from the labour market or guarantee incomes when a person has reached a 'standard' pensionable age or fulfilled the necessary contributory requirements. This indicator is measured in percentage of GDP.	pensionexp
Family benefits public spending	Family benefits spending refer to public spending on family benefits, including financial support that is exclusively for families and children. Spending recorded in other social policy areas, such as health and housing, also assist families, but not exclusively, and it is not included in this indicator. This indicator is measured in percentage of GDP.	fampubexp

Source: OECD SOCX Social Expenditure Database.

Figure A2.1 Economic insecurity index distribution by country.
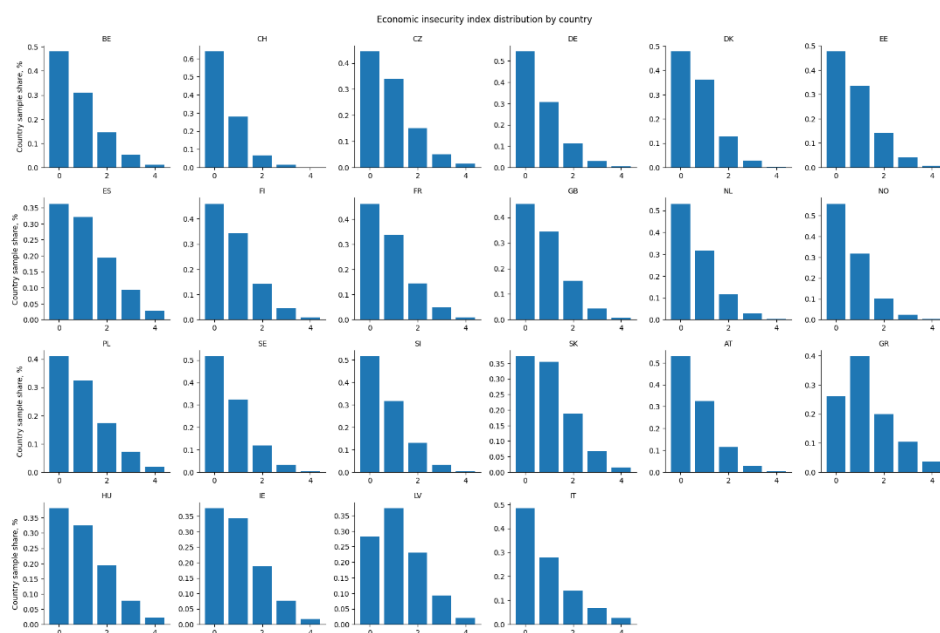
Source: Authors calculations based on the ESS sample.

Figure A2.2 Cultural threat index distribution by country.
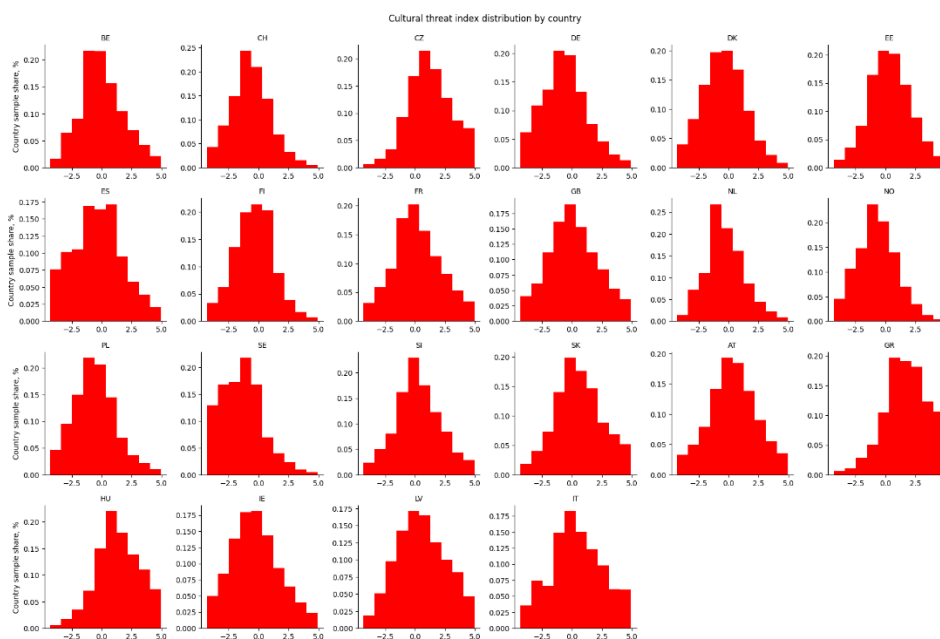
Source: Authors calculations based on the ESS sample.

Figure A2.3 Public social spending as % of GDP by country over time.
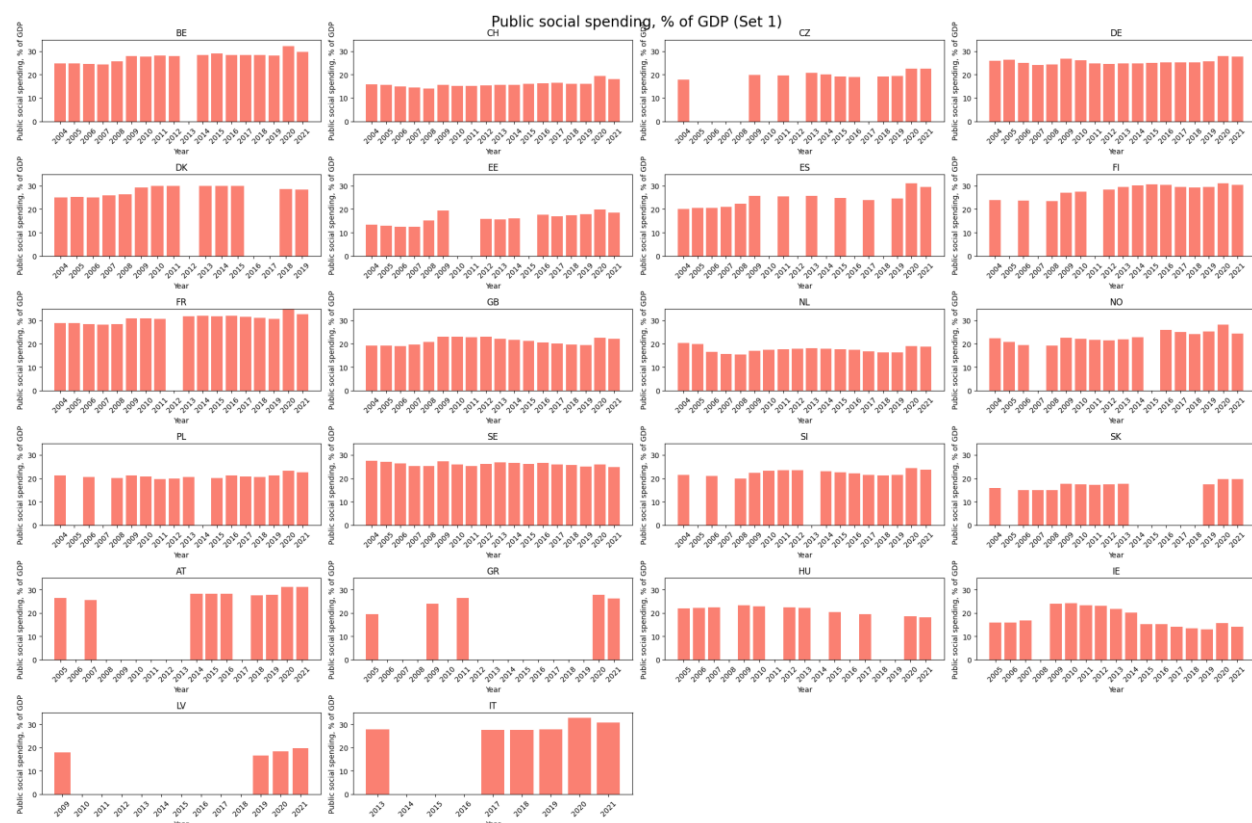
Note: Gaps in public social spending data represent gaps in ESS survey years (years in which no survey was conducted in the respective country).
Source: Authors calculations based on OECD SOCX data.

3 When in Rome, do as the Romans do? Exploring the determinants of attitudes towards immigrants among immigrants in Europe

When in Rome, do as the Romans do?
Exploring the determinants of attitudes towards immigrants among immigrants in Europe

Abstract

Anti-immigration attitudes are explained by theories emphasizing economic insecurity and cultural threat. In this chapter we show that the arguments traditionally used to explain anti-immigration attitudes only partially apply to immigrants themselves – a group typically excluded in empirical research on anti-immigration attitudes. What immigrants think of immigrants matters because of the growing size and diversity of the immigrant population. We use data from the European Social Survey (2004-2022) across 21 European societies to show that immigrants, especially first-generation and those of non-European origin, are more pro-immigrant and favor more liberal immigration policies, compared to non-immigrants. Just like for non-immigrants, economic insecurity contributes to negative attitudes among immigrants, but the extent to which economic insecurity explains anti-immigration attitudes among immigrants is much smaller. Similar to non-immigrants, we find support for a cultural threat mechanism, showing that large cultural differences between established and incoming immigrant groups increase opposition to immigration. These patterns persist after controlling for individual and contextual factors. We discuss how our analysis extends existing research as well as the social and political implications. Our study shows why a dichotomization between immigrants and non-immigrants is too simplistic when it comes to our understanding of anti-immigration attitudes.

Key words: immigration; cultural differences; economic insecurity, cultural threat; first generation migrants; second generation migrants

3.1 Introduction

An extensive body of social science research is devoted to understanding the factors that shape attitudes towards immigrants. Both material (economic) and non-material (cultural) threats, whether objective or perceived, foster exclusionary attitudes towards immigrants and immigration policies (Stephan et al., 1998; Fetzer, 2000; McLaren, 2003; McLaren & Johnson, 2007; Scheibner & Morrison, 2009). We also know that individuals with strong views against immigrants are more likely to support populist parties that promote restrictive immigration policies and nationalist rhetoric (Kriesi et al., 2012; Hobolt, 2016; Margalit, 2019). In this paper we extend this line of research on attitudes towards immigrants to immigrants themselves. The key question we ask here is whether the same theoretical arguments that explain anti-immigrant attitudes among non-immigrants help us understand those attitudes among immigrants. This is new because most studies exclude immigrants from the analysis.

The context of our analysis is Europe, where an estimated 12% of population is foreign-born (IOM, 2024). The increased scale and diversity of the immigrant population in recent years has come with an anti-immigration backlash in many European countries (Card, 2012; Czaika & Di Lillo, 2018). Anti-immigrant attitudes influence electoral preferences. In Europe, immigration has become a focal point of political polarization, particularly following the waves of asylum seekers arriving during 2015-16. According to the European Social Survey, a cross-country poll of public attitudes, around a third of the population residing in 27 European societies hold negative attitudes towards immigrants.[6] Not surprisingly, populist nationalist parties have been on the rise there (Rooduijn et al., 2024). Interestingly, 11% of the poll respondents holding these negative attitudes towards immigrants have an immigrant background themselves. Whereas there is a vast literature across social sciences that has explored what explains anti-immigrant attitudes, our literature review shows that immigrants themselves are typically excluded from these analyses.

We analyze whether the economic insecurity and cultural threat arguments that have been put forward as key drivers of anti-immigration attitudes can explain anti-immigration attitudes among immigrants too. This is not obvious for a couple of reasons. Shared experiences of relocation and assimilation challenges may foster a sense of solidarity among immigrants. Moreover, established immigrants - especially second-generation immigrants - share certain values with the non-immigrant population (Gonnot & Lo Polito, 2023), yet may also identify

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[6] The average share of people responding negatively to the statement "Immigrants make country worse or better place to live" in Rounds 2-10 (2004-2022) of the European Social Survey.

63

with new immigrants. The traditional cultural argument centers around the fear of diluting 'native' culture and national identity but becomes ambiguous when applied to immigrants, especially when taking into account the cultural diversity of the immigrant population.

We use the European Social Survey (2004-2022) to explore anti-immigrant attitudes among immigrants. Our sample consists of 33,502 immigrants living in 21 European countries, of which 16,595 are first generation immigrants, and 16,908 are second generation immigrants. We find that economic insecurity and cultural threat can explain anti-immigration attitudes among immigrants, but with crucial differences when compared to non-immigrants. First, we find that the economic insecurity argument applies less to immigrants than to non-immigrants. The effect sizes we report across our analyses are approximately 50% smaller for immigrants than the effect sizes for non-immigrants. Second, we find that the cultural threat arguments apply, but that the cultural differences associated with stronger anti-immigration attitudes among immigrants are not those between host and immigrant cultures, but between the cultures of established immigrants and of new incoming groups. We borrow a cultural distance measure from the field of cross-cultural analysis to operationalize cultural differences between immigrant groups. Third, we find that the attitudes of second-generation immigrants are closer to the attitudes of the non-immigrant population when it comes to anti-immigration attitudes.

What immigrants think of immigrants matters because of the growing size and diversity of the immigrant population. As current or future voters, they play a role in electoral outcomes and policy shaping in their respective host societies (Simon et al., 2013). Hostile attitudes held by immigrants eligible to vote or soon to be eligible can translate into electoral outcomes and contribute to polarization. Examples include the former Soviet immigrants in Germany who disproportionately support AfD, a far-right anti-immigrant political party (Spies et al., 2022), or the political orientation of many Indo-Dutch immigrants in the Netherlands (Leeuwen, 2008).

Our study contributes to the vast area of research across social sciences on anti-immigration attitudes by extending it to immigrants themselves (Mayda & Facchini, 2006; Brenner & Fertig, 2006). Specifically, we show that the arguments traditionally used to explain anti-immigration attitudes cannot simply be extended to immigrants themselves. We show that the diversity in immigration backgrounds affects anti-immigration attitudes of immigrants, such that a larger cultural distance is associated with stronger anti-immigration attitudes. This result speaks to the literature on the role of cultural differences in intergroup relations (Pettigrew, 1998; Verkuyten, 2005; Kende et al., 2018). The current debate on anti-immigration

attitudes tends to distinguish between immigrants and non-immigrants only, but our analysis shows that dichotomization is too simplistic. Our findings on second-generation immigrants also illustrates this complexity: they become more like non-immigrants when it comes to anti-immigration attitudes. Our paper shows that a better understanding of why immigrants have anti-immigrant attitudes is important for research in this area and for our improved understanding of the social and political implications of a growing and an increasingly diverse immigrant population across Europe.

3.2 Theoretical background

3.2.1 Attitudes towards immigrants among the majority population

Previous studies have thoroughly explored the determinants of negative views towards immigrants. The key argument builds on the notions of perceived material (economic) and non-material (cultural, social) threats over competition for national resources, which lead to exclusionary attitudes (Stephan et al., 1998; Fetzer, 2000; McLaren, 2003; McLaren & Johnson, 2007; Scheibner & Morrison, 2009). Grounded in realistic conflict and social identity theories (Stephan et al., 2015), the argument suggests that hostile sentiments among non-immigrants (the ingroup) arise from perceived competition with foreigners (the outgroup) for resources such as economic benefits and social, cultural, and political influence (Tajfel, 1978; Tajfel & Turner 1979; Mummendey et al., 2001). This perception of competition and threat is amplified by increasing outgroup sizes (Quillian, 1995; Gorodzeisky & Semyonov, 2018; Schneider, 2008) and by increasing scarcity of the resources in question. For instance, housing shortages or overall depressed economic situations, triggering labour market competition and pressure on incomes, may strengthen hostility to outsiders (Kuntz et al., 2017).

The material (economic) threat argument proposes that immigrants may be perceived as potential competitors for material resources, such as jobs, housing, or welfare benefits (Hainmueller & Hiscox, 2010; Hanson et al., 2007; Facchini & Mayda, 2006). This mechanism explains, for instance, why individuals with specific skills oppose immigrants who possess those same skills or higher (Ortega & Polavieja, 2012; Scheve & Slaughter, 2001; Mayda, 2006; Semyonov et al., 2006; O'Rourke & Sinnott, 2006). While economic explanations receive a lot of attention, several studies suggest that economic concerns are rather a marginal factor in shaping attitudes towards immigrants once cultural factors are considered (Tabellini, 2020; Card et al., 2012; Hainmueller & Hiscox, 2007; Müller & Tai, 2010).

In the non-material variant of the argument, immigrants may be perceived as a threat to cultural homogeneity, national and cultural identity, lifestyle, or purity of local language

(Sniderman et al., 2004; Akerlof & Kranton, 2010; Fetzer, 2000; Stephan et al., 1999). This identity might be challenged by the presence of immigrants with different sets of norms and identities. Ensuing competition over public space fuels hostility towards outsiders. The strength of this response partially depends on the degree to which immigrants are acquainted with the host country's customs and identity. The threat becomes more salient as the cultural distance between immigrants and the majority group increases, fostering more hostile views (Card et al., 2012; Brunner & Kuhn, 2014; Dustmann & Preston, 2007; Mendez & Cutillas, 2014; Gorodzeisky & Semyonov, 2018). Empirical studies across contexts show that the cultural heterogeneity of residential neighborhoods, school and classes are associated with negative sentiments towards foreigners (Card et al., 2012; Saiz & Wachter, 2011; Cascio & Lewis, 2012).

3.2.2 Attitudes towards immigrants among immigrants

Our review of well-cited studies across economics, political science, sociology, and social and political psychology that examine the determinants of negative attitudes towards immigrants shows that these are largely based on surveys dominated by majority populations. We have categorized these studies into two primary sources of resentment: economic (including worries about material resource competition with immigrants) and cultural concerns (including threats to cultural homogeneity and national identity posed by immigrants) at both individual and society levels. Table 3.1 highlights several widely cited papers addressing key drivers shaping attitudes towards immigrants, with an extensive literature review summarized in Table A3.1 in the Appendix.

[Insert Table 3.1 about here]

Zooming in on the sample composition, we find that the samples—derived from cross-national individual-level large-scale surveys, and to a lesser extent from administered surveys and experiments — often deliberately exclude individuals with an immigrant background (in particular, first-generation immigrants, those not born in the country of residence) and non-citizens (those with no voting rights). It is often the case that the sample composition is not discussed at all (see Column 4 in Table 3.1).

Only a handful of emerging studies across social sciences has attempted to document and analyze the attitudinal differences between non-immigrants and immigrants. For example, Maxwell (2010) explores differences in the levels of political trust and satisfaction between immigrants and the majority population in Europe, while Dinesen (2012) extends this to over-

time convergence in generalized trust levels among immigrants to that of the host country; Reeskens & Oorschot (2015) show that immigrants have somewhat stronger pro-welfare preferences than non-immigrants, although the differences are largely explained by their more disadvantaged position in society and more depressed opinions about the state of the host economy. De Rooij (2012) further documents that differences in attitudes and beliefs between non-immigrant and immigrant cohorts have implication for immigrants' levels and means of political participation and mobilization. To the best of our knowledge, only a few papers document the gaps in views towards immigrants between the majority population and foreigners (Gonnot & Lo Polito, 2023; Just & Anderson, 2015).

What drives attitudes towards immigrants among immigrants, and whether these mechanisms are different from majority populations remains an open question. In this study, we are specifically interested in how the economic and cultural drivers apply to immigrants. Economically, immigrants are usually a more disadvantaged group in comparison to locals. Immigrant households in Europe, for example, on average earn less wage, hold less wealth, are in general more financially stretched and face greater risks of poverty and social exclusion (Dossche et al., 2022). Just as locally born populations may develop negative attitudes towards immigrants due to perceived competition for economic resources (McLaren, 2003; Stephan et al., 2015), we argue that similar dynamics may occur within immigrant communities, where settled immigrants view newer arrivals as competitors for limited economic resources and opportunities.

Applying the cultural argument specifically to the context of immigrants is less straightforward. It focuses on the perceived threat to national identity due to immigrants speaking different languages, having distinct lifestyles, and adhering to different cultural values and beliefs. There is evidence that immigrants acculturate to the values and attitudes of the host society (Alesina et al., 2013; Gonnot & Lo Polito, 2023) or retain them from the home cultures (Tabellini et al., 2010). Yet immigrants harboring negative views towards other immigrants presents a rather puzzling situation. While the common experiences of moving and integrating could create a sense of solidarity among them, the varying levels of connection with the local culture and cultures of other immigrant groups could limit such bonding.

Extending this idea and utilizing evidence from the previous literature on attitudes towards immigrants, we propose that immigrants' opinions on immigrants depend on their cultural closeness to the largest arriving immigrant group, thus mirroring patterns observed within the majority population (e.g., Brunner & Kuhn, 2014; Card et al., 2012; Tabellini, 2020).

We are therefore interested whether the cultural distance between established and arriving groups of immigrants can help us understand how immigrants themselves shape attitudes towards immigrants and immigration policies.

Based on our discussion, we formulate a broader research question to explore:

Do individual- and society-level factors, as proposed by economic and cultural arguments, play the same role in shaping attitudes towards immigrants and immigration policies in both immigrant and non-immigrant populations?

3.3 Data and methodology

3.3.1 Sample

We use data from the European Social Survey (ESS), a cross-country repeated survey designed to track changes in the values and attitudes of individuals across Europe. We use rounds 2-10 of the ESS, covering the years of 2004-2022[7] across 21 European countries (Austria, Belgium, Switzerland, Czechia, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Ireland, Italy, Latvia, Lithuania, Netherlands, Norway, Sweden, Slovenia and Slovakia). The ESS is particularly valuable for our purposes due to its detailed questions regarding the immigration status of respondents and their parents.

We restrict our analysis to adults between 18 and 90 years. We exclude first-generation individuals who relocated to their country of residence before turning 18 years old. We further omit any records where the total years of education surpass 30, identifying these as outliers. We omit country-years with an insufficient number of observations, setting the cut-off point at 10 individuals for each of the two immigrant generations (first- and second-generation). We exclude Bulgaria, Hungary, Iceland, Luxembourg, Poland, and Romania where, following our criterion for representativeness, there was no single year with representative data.[8] Our final dataset is a sample of 221,368 individuals, of which 33,503 (15.1%) have an immigrant background, of whom 16,595 are first- and 16,908 are second-generation immigrants; 8,055

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[7] To link individual polling data to annual immigration flows in our analysis, we assigned all ESS round 10 respondents polled between 2020-2022 to the year 2021, as interview years were unavailable in that survey wave. Reassigning them to 2020, 2022 or randomly does not affect the results.

[8] We exclude the following country-year observations: Austria (2014), Belgium (2015), Switzerland (2015, 2017, 2019), Cyprus (2006, 2013, 2019), Czech Republic (2014, 2015, 2019, 2020), Denmark (2005, 2007, 2009, 2015, 2019), Estonia (2013), Spain (2005, 2009, 2020), Finland (2006, 2009, 2013, 2015-2022), United Kingdom (2007, 2009, 2011, 2017), Greece (2020, 2021, 2022), Croatia (2008), Ireland (2016), Italy (2018, 2020, 2022), Lithuania (2011, 2017, 2020, 2021, 2022), Latvia (2020), Netherlands (2015, 2017, 2019, 2020), Norway (2005, 2009, 2011, 2013, 2017, 2020), Portugal (2004, 2006, 2010, 2012, 2016, 2020), Sweden (2005, 2009, 2015, 2017, 2018, 2019), Slovenia (2004, 2009, 2015, 2017, 2019, 2020), Slovakia (2009). This dataset cleanup routine reduces the sample by 21.7%.

come from non-European and non-European offshoots societies. These figures are comparable to national statistics on immigrant presence across European countries.

The sample in some of our analyses is smaller than 221,368 because of missing data. Missing country of origin data in the OECD International Migration Database reduces the sample by 22,945 observations when analyzing the country of origin of immigrants.[9] Similarly, we were restricted when calculating the cultural distance between immigrant groups, because cultural scores for some countries are not available. Our cultural distance analysis includes 134,517 observations, 16.9% of which are immigrants coming or originating from 83 different societies (47 of them – non-European), residing across 19 European countries: Austria, Belgium, Switzerland, Czechia, Germany, Denmark, Estonia, Spain, Finland, France, United Kingdom, Greece, Italy, Latvia, Netherlands, Norway, Sweden, Slovakia and Slovenia).

We recognize the inherent methodological challenges in capturing the immigrant population within population surveys. Common difficulties, such as language barriers, can hinder effective outreach to immigrant communities. While the sampling method used by ESS reliably reflects the proportion of foreign-born individuals and the actual origin countries of immigrants in European societies (Castles & Miller, 2005), we acknowledge that it might oversample immigrants with a high proficiency in the language of the destination country in which the survey is conducted (Tegegne & Glanville, 2019). We hope to overcome this potential bias by controlling for a variety of individual socio-demographic factors in our analysis which we discuss below.

3.3.2 Dependent variables

The ESS contains six attitudinal questions related to the topic of immigration. Following prior studies (Card et al., 2012; Kuntz et al., 2017; Just & Anderson, 2015), we employ all of them to measure anti-immigrant sentiments. We distinguish between two latent constructs, (1) the perceived impact of immigrants for society and (2) preferred levels of immigration, and use both as well as the underlying individual questions (items). We run an exploratory factor analysis on the six ESS items and identify two factors which correspond to these constructs. Throughout the text that follows, we refer to the first construct as the immigrants' impact index, and to the second as the immigration policy index.

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[9] We were unable to match immigrant flows with observations from Lithuania. We further exclude observations from Ireland due to missing information on origin of immigrant flows, except for immigrants originating from the UK.

Immigrants' impact index; The first factor is based on the three ESS items that gauge public opinion about impact of immigrants' presence on society. The specific ESS items explore perceptions on whether immigration benefits or harms the country's economy and cultural life, and if immigrants improve or worsen the living conditions in the country. Responses range from 0 (Bad for …) to 10 (Good for …). The three measures are interrelated and highly internally consistent, as indicated by a Cronbach's alpha value of 0.86. To compile a single index, we extract the first principal component. To facilitate comparison and interpretation, we reverse and rescale the index to range from 1 (More positive views) to 10 (More negative views).

Immigrant policy index; The second construct is based on three survey items that capture preferences for immigration policies: the extent to which respondents believe their host country should allow people of the same race or ethnicity, people of a different race or ethnicity, and people from poorer countries outside Europe to come and live there. The three items offer a high degree of reliability demonstrating a strong internal consistency with Cronbach's alpha 0.89. Using the response categories 'Allow none', 'Allow a few', 'Allow some', and 'Allow many' for each of these questions, we created an index that represents a principal component of the three items. We similarly reverse and rescale the index to vary between 1 (Prefers more liberal immigration policies) and 10 (Prefers stricter immigration policies).

3.3.3 Key independent variables

Immigrant background; We code non-immigrants as individuals that (1) were born in the current country of residence, and (2) both of their parents come from that same country. Individuals that do not satisfy the two criteria are labeled as immigrants. We then distinguish between first-generation immigrants, identified as individuals not born in their current country of residence, and second-generation immigrants, those born in the current country but with at least one parent born elsewhere. Furthermore, we distinguish between immigrants of European/European offshoots and non-European origins.[10] We identify the origin culture of a

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[10] The term 'European offshoots' in this context refers to populations derived from European ancestry but established in regions outside of Europe. These include descendants of European emigrants who have settled in areas such as North America, Australia, and New Zealand. Immigrants are classified as being of European or European offshoots origin if they (first-generation) or their parents (second-generation) come from one of the following countries and regions: Albania, Armenia, Austria, Australia, Åland Islands, Azerbaijan, Bosnia and Herzegovina, Belgium, Bulgaria, Belarus, Canada, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, Faroe Islands, France, United Kingdom, Georgia, Gibraltar, Croatia, Hungary, Ireland, Isle of Man, Iceland, Italy, Jersey, Liechtenstein, Lithuania, Luxembourg, Latvia, Monaco, Moldova, Montenegro, North Macedonia, Malta, Netherlands, Norway, New Zealand, Poland, Portugal, Romania, Serbia, Russia, Sweden, Slovenia, Slovakia, San Marino, Ukraine, United States, and Kosovo.

major immigrant group in a society by computing the largest proportion of immigrants that have arrived in a sample country in the survey year. We use data on by-country immigrant inflows from the OECD International Migration Database. We prioritize the analysis of immigrant flows over immigrant stocks for two reasons. First, our theoretical argument is related to the media coverage channel, which previous studies have demonstrated to influence the rise in anti-immigrant sentiments (Alba et al., 2005). News reports on the arrival of immigrants inform and shape the perception and attitude of the general population towards immigrants. Second, the origins of immigrant flows tend to remain relatively stable over time (see Table A3.2 in the Appendix for major immigrant groups and their shares by country and year). Unlike immigrant stocks, which encompass large diasporas of assimilated immigrants, flows act as a form of societal shock, which is the focus of our analysis.

Economic insecurity; We proxy economic insecurity with five binary indicators: (1) struggles on present income, where we assign a value of one if a respondent finds it 'Difficult' or 'Extremely difficult' to live on present income; (2) employment in a low-skilled job, where we assign a value of one if a respondent's job is classified as low-skilled based on its ISCO code (OECD, 2019); (3) limited or no employment contract; (4) reliance on social benefits as the main income source; and (5) history of unemployment lasting over three months.

Cultural distance; We proxy cultural threat by a cultural distance index. This index captures how distant or close two national cultures are (Alesina et al., 2011; Beugelsdijk et al., 2020). We employ the cultural distance scores from Beugelsdijk et al. (2015). Following Hofstede's (1980) original approach, the authors utilize World Values Survey data to calculate country mean value scores, which they then use to construct measures for the various dimensions of national culture for 84 societies. These measures are converted into one-dimensional country-pair scores using the Mahalanobis' technique.

We assign a cultural distance value between Society A and Society B to immigrants in our sample based on their country of origin (first-generation immigrant) or that of their parents (second-generation immigrant). Society A represents the origin culture of an ESS-polled immigrant, and Society B represents the culture of the major immigrant group that arrived in that immigrant's residence country in the year they answered the ESS survey. For example, a second-generation immigrant born in France to Armenian parents was polled in 2018; in that year, Algerians formed the largest immigrant group arriving in France (10.4%). The cultural distance between Armenia and Algeria is 12.4, which is the value we assign to an individual

drawn from the sample. Figure A3.3 in the Appendix illustrates the distribution of cultural distance values.

3.3.4 Control variables

We use an array of individual and contextual indicators from the vast literature on the drivers of sentiments towards immigrants. At the individual level, we include the following control variables: age, education, gender, minority status, religion, and domicile type (urban/rural). At the country level, we control for economic development (GDP per capita), income (Gini coefficient) and wealth (the share of wealth held by 1%) inequality, unemployment rate, immigrant stock and welfare state generosity (share of GDP spent on public social policies). We apply a logarithmic transformation to GDP per capita, unemployment rate, and immigrant stock. Table 3.2 summarizes all our variables, the way we measure them, the data source, as well as previous studies in which these variables have been used.

[Insert Table 3.2 about here]

Table 3.3 provides summary statistics of the dependent variables, the independent variables as well as our control variables. Table 3.4 shows the correlations between the variables. We check for multicollinearity through variance inflation factors (VIFs) and observe that all variables display VIFs ranging from 1 to 2, well under the critical threshold of 10.

[Insert Table 3.3 and Table 3.4 about here]

3.4 Results

3.4.1 Main results

Figure 3.1 displays the average values of the two dependent variables we constructed: immigrant attitude index and immigrant policy index. These indices range from 1 (indicating a more positive view) to 10 (indicating a more negative view).

Immigrants hold more positive attitudes towards immigrants in general and favor more liberal immigration policies, compared to non-immigrants. First-generation immigrants and those with non-European backgrounds tend to be less hostile to immigrants compared to second-generation immigrants and those of European origin. As shown in Figure 3.2, these differences vary across countries. The trend of non-immigrants being both more negative towards immigrants and favoring more restrictive immigration policies is particularly

prominent in some countries (e.g., Italy, the UK, Ireland, Spain) compared to others (e.g., Estonia, Finland, Czechia).

[Insert Figures 3.1 and 3.2 about here]

We proceed by analyzing the attitudinal gap towards immigrants between individuals with and without an immigrant background. We run an OLS regression with the immigrant impact index as the dependent variable. Our key independent variable is a dummy variable that denotes whether a person has an immigrant background. We sequentially add a set of individual- and society-level controls, and survey-year and country fixed effects. We repeat this analysis using the immigration policy index as the dependent variable. Results are shown in Table 3.5.

[Insert Table 3.5 about here]

We find that immigrants are, on average, less negative towards other immigrants than non-immigrants, with the coefficient's magnitude decreasing only slightly after accounting for control variables and adding fixed effects. Both first- and second-generation immigrants tend to be less hostile towards immigrants than non-immigrants, but second-generation immigrants are more hostile than those who arrived as foreigners, showing an almost three-fold difference in magnitude of the coefficients. As shown in Table 3.6, immigrants from non-European societies are more positive towards immigrants than those with a European background, again revealing a persistent three-fold difference in the magnitude. We observe a similar pattern in attitudinal gaps when using the immigration policy index as the outcome variable.

[Insert Table 3.6 about here]

We explore the statistical significance as well as the effect size of economic insecurity and cultural distance on attitudes towards immigrants. We split the sample into non-immigrants and immigrants and test the predictors for each subsample. The results are shown in Table 3.7 (non-immigrants and the immigrant impact index) and Table 3.8 (immigrants and the immigrant impact index). Table 3.9 and Table 3.10 do the same for non-immigrants and immigrants respectively but use the immigrant policy index as the dependent variable. We also perform a Shorrocks-Shapley decomposition (Shorrocks, 1999) using the shapely2 package for Stata (Wendelspiess Chávez Juárez, 2015) to analyze the variance. This method involves an additive breakdown of the R-squared statistic from an OLS model, allowing us to assess the relative contribution of each group of regressors to the explained variance.

[Insert Tables 3.7-3.10 about here]

We consistently find that two indicators of economic insecurity—struggling on present income and employment in a low-skilled job—are positive and significant predictors of negative attitudes towards immigrants for both immigrants and non-immigrants. The magnitude of the coefficients and their economic impact differ. Among non-immigrants, those struggling on their present income have attitudes that are, on average, 0.479 points more negative ($p<0.001$) on a 1-10 scale compared to those not struggling (Model (5), Table 3.7). For immigrants, this negative shift in attitudes is slightly smaller but still highly significant, averaging 0.302 points ($p<0.001$) (Model (5), Table 3.8).

Together, the five economic insecurity factors account for nearly 14% of the explained variance in anti-immigrant sentiment among non-immigrants, but this effect drops by half, to 7%, for immigrants, implying that economic insecurity plays a significantly stronger role in shaping negative attitudes towards immigrants among non-immigrants compared to immigrants (see Figure 3.3 for the proportional contributions by factor group). This suggests that other factors may be more influential in driving these attitudes. We observe comparable effect sizes for the immigration policy index.

[Insert Figure 3.3 about here]

Greater cultural distance between an individual, regardless of their immigrant background, and the major incoming immigrant group is associated with more negative attitudes towards immigrants. As shown in Tables 3.7 and 3.8, the direction of the effect persists as we account for economic insecurity, add individual- and society-level controls as well as fixed effects. Although the coefficients for the immigrant subgroup initially come out statistically insignificant, they gain significance once a full set of controls and fixed effects are incorporated. That is, a 1-point increase in cultural distance between an individual with an immigrant background and the major incoming immigrant group is associated with a 0.008-point ($p<0.001$) increase in anti-immigrant attitudes as measured by the immigrant impact index (Model 5, Table 3.8). More incoming immigrants from countries that are culturally distant from the established immigrants in a country is associated with more negative attitudes towards immigrants by these established immigrants. We similarly observe that greater cultural distance is associated with preferences for more restrictive immigration policies (Tables 3.9-3.10), with the effects being twice as strong for non-immigrants than for immigrants (Models 5, Tables 3.9 and 3.10). The variance decomposition analysis for both indexes further shows that the contribution of cultural distance is stronger for immigrants than for non-immigrants.

We also find that among immigrants, second-generation immigrants are more sensitive to the effects of greater cultural gaps (see Table 3.11).

[Insert Table 3.11 about here]

Our control variables align with those used in previous studies, and we find that most individual socio-demographic factors display a similar direction and comparable magnitude of effects in both immigrants and non-immigrants. For example, older, less educated residents of non-urban settlements hold more hostile views towards immigrants regardless of their immigrant background. At the societal level, we find that individuals living in countries with higher levels of wealth inequality and a more generous welfare state are more likely to express anti-immigrant sentiments, again regardless of their immigrant background.

3.4.2 Robustness tests

We perform a series of robustness tests. First, we re-estimate the regressions using an alternative specification. Considering the nested structure of our data (individuals within European countries), we apply multi-level models with survey year fixed effects and country random terms, showing that the effects of economic insecurity are similar to the main findings reported earlier.

For the series of additional analyses of the cultural distance effect, we also find that results are qualitatively similar to the results reported earlier. The robustness tests include augmenting cultural distance with the relative size of the major immigrant group, accounting for nationalistic sentiments using emotional affinity with the country, redefining cultural distance based on respondent's residence culture, using an alternative cultural distance measure, measuring the distance between the origin culture and the second-largest immigrant group, and excluding immigrants from the same country as the largest incoming group. Table 3.12 summarizes the results of these additional checks.

[Insert Table 3.12 about here]

3.5 Conclusion and discussion

Our study shows that, first, immigrants, particularly first-generation and those of non-European origin, are on average less anti-immigrant than non-immigrants. Second, factors related to individual sources of economic insecurity in income and job, which are established drivers of anti-immigrant sentiments among non-immigrants, are also associated with hostile views among immigrants. However, these factors contribute only half to hostility in immigrants compared to non-immigrants. Third, large cultural differences between immigrant groups

within a society increase opposition to immigration, mirroring previous findings on how cultural differences drive hostility towards immigrants among the majority population. Additionally, we show that these effects are slightly more pronounced among second-generation immigrants than first-generation immigrants.

3.5.1 Contribution to the literature

Our results speak to several patterns established in previous studies. First, we extend a limited strain of the literature on the determinants of anti-immigrant sentiment specifically among immigrants. Our study complements earlier work by Just and Anderson (2015) who show that foreign-born individuals support immigration more than locals but become more hostile after acquiring citizenship of the host society. Similarly, Gonnot & Lo Polito (2023) demonstrate that significant gaps persist in attitudes between immigrants and non-immigrants, evident not only in views towards immigrants but also in trust in institutions and redistribution preferences.

Second, we show that second-generation immigrants, that is, locally born children of immigrant parents, are more hostile to immigrants than those who arrived in a new country as adults. The studies that are closest to ours tend to overlook this important group. People born to an immigrant parent and socialized in the culture that is somewhat foreign to their household opens a discussion on the role of acculturation of these attitudes (Cavalli-Sforza & Feldman, 1981; de Palo et al., 2006). Culture influences a wide range of values and outcomes among second-generation immigrants who often resemble locals more than representatives of their parents' origin culture. This is evidenced by outcomes in, e.g., fertility, entrepreneurship, labour participation, political empowerment, preferences for redistribution and even dietary habits (Blau et al., 2013; Kleinhempel et al., 2023; Alesina et al., 2013; Bozzano, 2017; Luttmer & Singhal, 2011; Lee et al., 2013). Although we do not test explicitly for acculturation to make such a claim, our findings on the substantial attitudinal gap between first- and second-generation immigrants speak to this literature.

Third, we show that immigrants, much like non-immigrants, are hostile to immigrants that are culturally more different from them. Our finding complements Stephan et al. (1998) who find that Israelis are more negative to immigrants from Ethiopia than from Russia. Cultural distance is a predictor of negative attitudes to immigrant groups. Our analysis of immigrants residing in 19 European countries and originating from 83 different societies corroborates the results established in single country studies.

While children of immigrants born locally are subject to acculturation to the local culture, individuals who arrived in the new country as adults adopt elements of the new culture

to a much lesser extent. Gonnot & Lo Polito (2023) show that the longer one has lived in the host society as a first-generation immigrant, the more hostile one becomes towards other immigrants. While we show that first-generation immigrants are the least hostile towards immigrants, hostility does increase with cultural distance. One potential explanation for this pattern might be the mimic effect, where immigrants deliberately adapt elements or engage in behaviors of the majority culture, often stereotypical, to be perceived more like 'them'. For example, experimental studies show that Westerners of Asian descent often emphasize their assimilation into the national culture to assert their Western identity, ranging from denying their Asian ancestry (Cheryan & Monin, 2005) to adopting typical American dietary habits (Guendelman et al., 2011). Thai et al. (2020) further show that individuals of Asian background depicted as stereotypically Australian in behavior and views are perceived as more Australian than Asians without these attributes. Data limitations do not allow us to unpack this possible mechanism further.

3.5.2 Limitations

Our use of the ESS, a large cross-national, cross-time survey, allows us to explore cross-country patterns, but also comes with limitations. First, we do not directly observe respondents' exposure to immigrant flows. Ideally, we would have data on respondents' self-reported contacts with immigrants at work and in social settings to better proxy such exposure. An alternative would be to incorporate administrative data on the settlement of new immigrants at a more granular level than a country. This type of data is however not (yet) available for a large sample of countries. Second, we lack information on respondents' attitudes toward specific origins of immigrant groups. Ideally, for studies using a similar identification approach, a survey would ask each respondent about their views on the major immigrant group, or more extensively, their views on the second and potentially the third largest immigrant groups. Existing cross-country surveys do not have such information, for the simple reason that the number of questions to be included in such a survey becomes unrealistic.

3.5.3 Future research

Our study points to several directions for further research. One promising direction is to study the attitudes of immigrants towards new arrivals based on their motivations to immigrate, differentiating between economic immigrants and forcibly displaced individuals seeking refuge. A similar distinction can be drawn based on the individuals reporting these attitudes. While we use proxies like education, job, and other objective characteristics to classify immigrant types, an extension of this research would benefit from self-reported

identities, such as being a high-skilled expat, a lower-skilled economic immigrant, a refugee, or a member of the diaspora reunited with family.

Furthermore, while our study does not make a specific claim about the acculturation channel, we encourage further research into whether anti-immigrant sentiments are a product of cultural retention, cultural assimilation, or both. This calls for studying how factors such as immigrant tenure, language proficiency, and engagement with local culture shape attitudes. A step in this direction could involve using Berry's (1992) acculturation strategies model, which differentiates between integrated, assimilated, separated, and marginalized immigrant groups. Additionally, it would be informative to examine how anti-immigrant attitudes develop among immigrant groups through personal contact, such as in the workplace, friendships, and romantic relationships with representatives of the local culture. Formal integration, achieved through obtaining citizenship (e.g., naturalization or registered partnership), grants individuals voting rights and access to the full range of state services. Just and Anderson (2015) provide correlational evidence that immigrants who have acquired citizenship in the host country are more skeptical about other immigrants and prefer stricter immigration policies than immigrants with no local citizenship. In this context, it would be interesting to examine whether competition for public resources, which naturalized immigrants gain access to, affects attitudes towards immigrants by comparing their views before and after naturalizing. To put this into the European context, Eurostat reports that the EU granted around 857,200 citizenships to non-EU citizens in 2022, with a naturalization rate of 2.6, meaning 2.6 residents per hundred non-national citizens were naturalized, a process requiring 5 to 10 years of continuous residence in most EU countries. While naturalization favorably impacts the social and political integration of immigrants (Hainmueller et al., 2015, 2017), it remains to be explored how anti-immigrant attitudes translate into the voting behavior of new citizens with an immigrant background.

3.5.4 Policy implications

The political debate about immigration has traditionally largely centered on the attitudes of non-immigrant majority populations towards immigrants. However, the growth in size and diversity of the group of first- and second-generation immigrants implies that the attitudes of immigrant communities warrant more attention. Our paper shows that attitudes towards immigration are prevalent among immigrants as well, even if to a lesser extent than among non-immigrants. These sentiments inform electoral outcomes; consider the voting patterns of immigrants from the former Soviet Union who have resided in Germany for decades and who disproportionately support AfD, a far-right populist anti-immigrant party (Spies et al.,

2022). Immigration is not just a topic for non-immigrants. What immigrants think of immigrants matters.

This finding is exacerbated by the growing diversity in origins of the immigrant population. We find that in the same way that cultural differences contribute to negative attitudes towards immigrants among the non-immigrant population, immigrants from different culturally distant backgrounds are less positive about each other. While the current political debate tends to distinguish between immigrants and non-immigrants only, this dichotomization appears too simplistic. Not all immigrants are the same, and this fact matters. More recognition of immigrant heterogeneity, and the potential tensions that may arise between culturally distant immigrant communities, is due.

Finally, our findings have repercussions for potential strategies to reduce tensions between communities within society. Existing literature suggests that hostility between groups can decrease, even amidst large cultural gaps, through long-term exposure to each other. For instance, Bursztyn et al. (2024) find that prolonged contact between Americans and Arab Muslims reduces both explicit and implicit prejudice against them, decreases support for policies and political candidates hostile to this ethnic group, increases charitable donations to Arab countries, and promotes personal contact. We find that second-generation immigrants, having been exposed more to their host society, similarly grow closer to the non-immigrant population in terms of attitudes. However, this also means that their attitude towards other immigrants becomes more negative. The upshot is that immigrant acculturation may have negative effects on average attitudes towards immigrants. Such complexities, rooted in the heterogeneity of the immigrant population, are important to take into account when drafting policies.

Tables and figures

Table 3.1 A brief overview of key literature on the economic and cultural drivers of attitudes towards immigrants.

Study	Driver	Level	Immigrants in sample?
Scheve & Slaughter (2001)	Economic	Individual	Yes
O'Rourke & Sinnott (2006)	Economic	Individual	Not specified
Ortega & Polavieja (2012)	Economic	Individual	Partially excluded
Sniderman et al. (2004)	Cultural	Individual	Not specified
Card et al. (2012)	Cultural	Individual	No
Facchini & Mayda (2006)	Economic	Society	Partially excluded
Hainmueller & Hiscox (2010)	Economic	Society	Not specified
Lahav (2004)	Cultural	Society	Not speficied
Semyonov et al. (2006)	Cultural	Society	Partially excluded

Note. Selected papers only. Studies that have been most frequently referenced in other studies and literature reviews. For an extensive literature review, we refer to Table A3.1 in the Appendix.

Table 3.2 Variables used in the study.

Variable	Description	Source	Studies that use a similar measure
Dependent variables			
Immigrants impact index	Index based on first principal component of three questions related to perceptions of immigrants' impact on country's economy, culture, and quality of life, reversed and rescaled to range from 1 (More positive views) to 10 (More negative views).	ESS items: imbgeco (Immigration bad or good for country's economy), imueclt (Country's cultural life undermined or enriched by immigrants), imwbcnt (Immigrants make country worse or better place to live).	Kuntz et al. (2017), Schotte & Winkler, (2018), Card et al. (2012), Bohman & Hjerm (2013), Pellegrini et al. (2021), Hainmueller & Hiscox (2007), Just & Anderson, Gonnot & Lo Polito (2023).
Immigration policy index	Index based on first principal component of three questions related to preferred level of immigration to the country, reversed and rescaled to range between 1 (Prefers more liberal immigration policies) and 10 (Prefers stricter immigration policies).	ESS items: imdfetn (Allow many/few immigrants of different race/ethnic group from majority), imsmetn (Allow many/few immigrants of same race/ethnic group as majority), impcntr (Allow many/few immigrants from poorer countries outside Europe).	
Independent variables			
Immigrant background			
Immigrant	Dummy: (1) If born in country to parents that were both born in country, (0) otherwise	ESS items: brncntr; facntr; mocntr.	De Rooij (2012), Dinesen (2012), Maxwell (2010), Reeskens & Oorschot (2015), Just & Anderson, Gonnot & Lo Polito (2023), Wimmer & Soehl (2014).
First-generation immigrant	Dummy: (1) If not born in current country of residence, (0) otherwise.		
Second-generation immigrant	Dummy: (1) born in the current country but with at least one parent born elsewhere, (0) otherwise.		
Economic insecurity			
Struggles on present income	Dummy: (1) If a respondent finds it difficult or extremely difficult to live on present income, (0) otherwise.	ESS item: hincfel (Feeling about household income nowadays).	Sniderman et al. (2004); Kehrberg (2007); Kuntz et al. (2017), Norris & Inglehart (2019), Guiso et al. (2017, 2024).
In low-skilled job	Dummy: (1) If a respondent declares to be employed in an occupation that is classified as low-skilled, (0) otherwise	ESS items: iscoco (Occupation, ISCO88, Rounds 2-5), isco08 (Occupation, ISCO08, Rounds 6-10). Classification of low-skilled occupations based on OECD (2019), ISCO groups 5 and 9.	Dustmann & Preston (2007); McLaren & Johnson (2007); Ortega & Polavieja (2012); O'Rourke & Sinnott (2006).
No/limited employment contract	Dummy: (1) If a respondent is employed with a limited or no contract, (0) otherwise.	ESS item: wrkctra (Employment contract	Ersanilli & Präg (2023).

		unlimited or limited duration).	
Social/unemployment benefits main income source	Dummy: (1) If a respondent declared social/unemployment benefits as their main income source, (0) otherwise.	ESS item: hincsrc* (Main source of household income).	Hanson et al. (2007); McLaren & Johnson (2007); Burgoon & Rooduijn (2021).
Ever unemployed >3 months	Dummy: (1) If a respondent was ever unemployed and seeking work for a period more than three months, (0) otherwise.	ESS item: uemp3m (Ever unemployed and seeking work for a period more than three months).	Schlueter & Scheepers (2010); Dustmann & Preston (2007).
Cultural threat			
Cultural distance	Pairwise distance in culture (broadly defined) between societies.	Beugelsdijk et al. (2015).	Brunner & Kuhn (2014), Chapman et al. (2008).
Major immigrant group	Share of the largest group of immigrants arriving in a country.	OECD International Migration Database.	Brunner & Kuhn (2014), Tabellini (2020).
Individual controls			
Age	[18; 90].	ESS item: agea.	Kehrberg (2007); Schlueter & Scheepers (2010), Dustmann & Preston (2007).
Education	[0; 30].	ESS item: eduyrs (Years of full-time education completed).	Mayda & Facchini (2006); Scheve & Slaughter (2001); Dustmann & Preston (2007); Kunivoch (2004), Schlueter & Scheepers (2010); Kehrberg (2007), Schlueter & Scheepers (2010); Hainmueller & Hiscox (2007).
Gender	Dummy: (1) If male, (0) female.	ESS item: gndr.	Kehrberg (2007); Müller & Tai (2010); Kuntz et al. (2017).
Ethnic minority	Dummy: (1) If a respondent declares to be an enthnic minority in the country of residence, (0) otherwise.	ESS item: blgetmg.	Stephan et al. (2005).
Urban resident	Dummy: (1) If a respondent declares to reside in an urban settlement (big city, city suburbs, town), (0) otherwise.	ESS item: domicil.	Dustmann & Preston (2007); Kuntz et al. (2017).
Religion	Three dummy variables indicating belonging to one of the religious groups: Christian, Muslim, or Other religion. Non-religious is the base category.	ESS items: rlgblg (Belonging to particular religion or denomination), rlgdnm (Religion or denomination belonging to at present).	Dustmann & Preston (2007); Schlueter & Scheepers (2010); O'Rourke & Sinnott (2006), Kuntz et al. (2017).
Society controls			
GDP per capita	GDP per capita in current prices, USD.	World Bank World Development Indicators Database	Gorodzeisky & Semyonov (2018).
Gini coefficient	Gini income inequality index.	World Bank World Development Indicators Database.	
Wealth 1%	Share of wealth held by top 1% population, %.	World Inequality Database.	

Unemployment	Annual unemployment rate, %.	OECD Statistics.	Kehrberg (2007); Dustmann & Preston (2007); Gorodzeisky & Semyonov (2018), Kuntz et al. (2017).
Immigrant stock	Share of foreign-born and foreign population, %.	UN International Migrant Stock Database.	Kehrberg (2007); Schneider (2008), Schlueter & Scheepers (2010); Gorodzeisky & Semyonov (2018), Kuntz et al. (2017).
Public social spending	Public spending on social policies, % of GDP.	OECD Social Expenditure Database (SOCX).	Burgoon & Rooduijn (2021); Jaime-Castillo (2016).

Table 3.3 Summary statistics.

	N	Mean	SD	Min	Max
Dependent variables					
Immigrants impact index	221368	5.32	1.93	1	10
Immigration policy index	221368	5.04	2.36	1	10
Independent variables					
Immigrant status					
Immigrant	221368	.15	0.36	0	1
First-generation immigrant	221368	.07	0.26	0	1
Second-generation immigrant	221368	.08	0.27	0	1
Immigrant of European origin	221368	.11	0.32	0	1
Immigrant of non-European origin	221368	.04	0.19	0	1
Economic insecurity					
Struggles on present income	221368	.19	0.39	0	1
In low-skilled job	221368	.23	0.42	0	1
No/limited employment contract	221368	.18	0.39	0	1
Social/unemployment benefits main income source	221368	.05	0.23	0	1
Ever unemployed >3 months	221368	.27	0.45	0	1
Cultural threat					
Cultural distance (unique country pairs)	805	16.55	8.61	0	55.37
Major immigrant group	323	19.91	10.50	7	84.8
Individual controls					
Age	221368	49.45	17.64	18	90
Education	221368	13.04	3.90	0	30
Gender	221368	.48	0.50	0	1
Ethnic minority	221368	.04	0.19	0	1
Urban resident	221368	.61	0.49	0	1
Christian	221368	.53	0.50	0	1
Muslim	221368	.01	0.12	0	1
Other religion	221368	.01	0.09	0	1
Society controls					
Ln(GDP per cap)	357	10.6	0.48	9.1	11.53
Gini coefficient	357	30.55	3.23	23.7	37.4
Wealth 1%	357	23.41	4.87	12.14	33.01
Ln(Unemployment)	357	1.94	0.44	.82	3.26
Ln(Immigrant stock)	357	2.41	0.49	.77	3.36
Public social spending	357	22.84	5.01	12.37	32.66

Table 3.4 Correlations matrix.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)
Immigrants impact index (1)	1.00	0.63	-0.09	-0.10	-0.02	-0.05	-0.09	0.15	0.10	0.01	0.04	0.02	0.04	0.06	0.10	-0.27	-0.03	-0.04	-0.07	0.05	-0.08	-0.03	-0.16	0.06	0.00	0.07	-0.06	0.02
Immigration policy index (2)	0.63	1.00	-0.05	-0.05	-0.02	-0.02	-0.05	0.13	0.09	-0.01	0.03	-0.00	-0.03	0.06	0.16	-0.27	-0.01	-0.01	-0.06	0.04	-0.05	-0.03	-0.15	0.06	-0.04	0.09	-0.07	-0.05
Immigrant (3)	-0.09	-0.05	1.00	0.66	0.69	0.86	0.44	0.11	0.04	0.02	0.02	0.06	-0.21	0.12	-0.07	0.01	-0.02	0.34	0.11	-0.05	0.28	0.07	-0.04	0.01	0.08	-0.03	0.16	-0.07
First-generation immigrant (4)	-0.10	-0.05	0.66	1.00	-0.09	0.51	0.39	0.10	0.05	0.02	0.01	0.05	-0.14	0.08	-0.02	-0.00	-0.02	0.32	0.09	-0.01	0.25	0.06	-0.01	0.02	0.02	-0.00	0.11	-0.05
Second-generation immigrant (5)	-0.02	-0.02	0.69	-0.09	1.00	0.65	0.21	0.05	0.00	0.00	0.01	0.04	-0.14	0.08	-0.08	0.01	-0.00	0.14	0.06	-0.05	0.13	0.03	-0.04	-0.01	0.08	-0.04	0.10	-0.05
Immigrant of European origin (6)	-0.05	-0.02	0.86	0.51	0.65	1.00	-0.08	0.08	0.02	-0.00	-0.00	0.04	-0.25	0.14	-0.03	0.01	-0.02	0.23	0.08	-0.01	0.01	0.01	-0.05	-0.01	0.12	-0.05	0.16	-0.12
Immigrant of non-European origin (7)	-0.09	-0.05	0.44	0.39	0.21	-0.08	1.00	0.07	0.04	0.04	0.04	0.05	0.03	-0.03	-0.09	-0.00	0.00	0.26	0.08	-0.08	0.53	0.11	0.01	0.03	-0.06	0.03	0.02	0.06
Struggles on present income (8)	0.15	0.13	0.11	0.10	0.05	0.08	0.07	1.00	0.12	0.10	0.22	0.18	-0.05	0.07	-0.01	-0.16	-0.05	0.10	0.03	-0.02	0.07	0.01	-0.17	0.10	0.01	0.16	-0.02	-0.02
In low-skilled job (9)	0.10	0.09	0.04	0.05	0.00	0.02	0.04	0.12	1.00	0.16	0.07	0.11	0.00	-0.01	-0.04	-0.20	-0.19	0.03	-0.00	-0.01	0.04	0.00	-0.03	0.04	-0.03	0.05	-0.03	0.00
No/limited employment contract (10)	0.01	-0.01	0.02	0.02	0.00	-0.00	0.04	0.10	0.16	1.00	0.13	0.15	0.02	-0.02	-0.16	-0.02	-0.05	0.02	0.01	-0.03	0.03	0.00	-0.02	0.03	-0.07	0.06	-0.06	0.02
Social/unemployment benefits main income source (11)	0.04	0.03	0.02	0.01	0.01	-0.00	0.04	0.22	0.07	0.13	1.00	0.16	-0.01	-0.05	-0.07	-0.05	-0.01	0.02	0.05	-0.07	0.05	0.01	0.00	-0.01	-0.07	0.01	-0.05	0.01
Ever unemployed >3 months (12)	0.02	-0.00	0.06	0.05	0.04	0.04	0.05	0.18	0.11	0.15	0.16	1.00	0.01	-0.02	-0.12	0.01	0.01	0.05	0.04	-0.08	0.05	0.01	-0.10	0.04	-0.00	0.12	-0.07	0.10
Cultural distance (13)	0.04	-0.03	-0.21	-0.14	-0.14	-0.25	0.03	-0.05	0.00	0.02	-0.01	0.01	1.00	0.02	0.00	-0.03	0.01	-0.12	-0.09	0.14	-0.02	-0.01	0.00	-0.23	-0.43	0.17	-0.27	0.32
Major immigrant group (14)	0.06	0.06	0.12	0.08	0.08	0.14	-0.03	0.07	-0.01	-0.02	-0.05	-0.02	0.02	1.00	-0.02	-0.05	-0.02	0.06	-0.02	0.00	-0.03	-0.01	-0.26	-0.25	0.06	-0.10	0.12	-0.34
Age (15)	0.10	0.16	-0.07	-0.02	-0.08	-0.03	-0.09	-0.01	-0.04	-0.16	-0.07	-0.12	0.00	-0.02	1.00	-0.27	-0.02	-0.06	-0.04	0.20	-0.09	-0.02	0.01	0.01	0.02	-0.02	0.01	0.03
Education (16)	-0.27	-0.27	0.01	-0.00	0.01	0.01	-0.00	-0.16	-0.20	-0.02	-0.05	0.01	-0.03	-0.05	-0.27	1.00	0.02	-0.01	0.14	-0.10	-0.03	0.03	0.03	-0.07	0.01	-0.07	-0.05	0.03
Gender (17)	-0.03	-0.01	-0.02	-0.02	-0.00	-0.02	0.00	-0.05	-0.19	-0.05	-0.01	0.01	0.01	-0.02	-0.02	0.02	1.00	0.00	-0.02	-0.07	0.01	-0.00	0.04	-0.01	0.00	-0.01	-0.01	0.02
Ethnic minority (18)	-0.04	-0.01	0.34	0.32	0.14	0.23	0.26	0.10	0.03	0.02	0.02	0.05	-0.12	0.06	-0.06	-0.01	0.00	1.00	0.08	-0.02	0.22	0.07	-0.08	0.03	0.08	-0.00	0.05	-0.10
Urban resident (19)	-0.07	-0.06	0.11	0.09	0.06	0.08	0.08	0.03	-0.00	0.01	0.05	0.04	-0.09	-0.02	-0.04	0.14	-0.02	0.08	1.00	-0.10	0.06	0.02	-0.07	0.05	0.02	0.01	-0.07	0.03
Christian (20)	0.05	0.04	-0.05	-0.01	-0.05	-0.01	-0.08	-0.02	-0.01	-0.03	-0.07	-0.08	0.14	0.00	0.20	-0.10	-0.07	-0.02	-0.10	1.00	-0.14	-0.09	0.03	0.05	-0.01	0.07	0.02	0.11
Muslim (21)	-0.08	-0.05	0.28	0.25	0.13	0.01	0.53	0.07	0.04	0.03	0.05	0.05	-0.02	-0.03	-0.09	-0.03	0.01	0.22	0.06	-0.14	1.00	-0.01	0.01	-0.01	-0.03	-0.00	0.02	0.06
Other religion (22)	-0.03	-0.03	0.07	0.06	0.03	0.01	0.11	0.01	0.00	0.00	0.01	0.01	-0.01	-0.01	-0.02	0.03	-0.00	0.07	0.02	-0.09	-0.01	1.00	0.02	0.00	0.01	-0.02	0.02	0.00
Ln(GDP per cap) (23)	-0.16	-0.15	-0.04	-0.01	-0.04	-0.05	0.01	-0.17	-0.03	-0.02	0.00	-0.10	0.00	-0.26	0.01	0.03	0.04	-0.08	-0.07	0.03	0.01	0.02	1.00	-0.25	-0.03	-0.51	0.28	-0.08
Gini coefficient (24)	0.06	0.06	0.01	0.02	-0.01	-0.01	0.03	0.10	0.04	0.03	-0.01	0.04	-0.23	-0.25	0.01	-0.07	-0.01	0.03	0.05	0.05	-0.01	0.00	-0.25	1.00	0.34	0.43	0.28	0.05
Wealth 1% (25)	0.00	-0.04	0.08	0.02	0.08	0.12	-0.06	0.01	-0.03	-0.07	-0.07	-0.00	-0.43	0.06	0.02	0.01	0.00	0.08	0.02	-0.01	-0.03	0.01	-0.03	0.34	1.00	-0.08	0.60	-0.11
Ln(Unemployment) (26)	0.07	0.09	-0.03	-0.00	-0.04	-0.05	0.03	0.16	0.05	0.06	0.01	0.12	0.17	-0.10	-0.02	-0.07	-0.01	-0.00	0.01	0.07	-0.00	-0.02	-0.51	0.43	-0.08	1.00	-0.16	0.28
Ln(Immigrant stock) (27)	-0.06	-0.07	0.16	0.11	0.10	0.16	0.02	-0.02	-0.03	-0.06	-0.05	-0.07	-0.27	0.12	0.01	-0.05	-0.01	0.05	-0.07	0.02	0.02	0.02	0.28	0.28	0.60	-0.16	1.00	-0.38
Public social spending (28)	0.02	-0.05	-0.07	-0.05	-0.05	-0.12	0.06	-0.02	0.00	0.02	0.01	0.10	0.32	-0.34	0.03	0.03	0.02	-0.10	0.03	0.11	0.06	0.00	-0.08	0.05	-0.11	0.28	-0.38	1.00

Table 3.5 Gaps in attitudes towards immigrants between non-immigrants and immigrants.

	Immigrants impact index				Immigration policy index			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Immigrant = 1	-0.633***	-0.480***	-0.434***	-0.429***	-0.540***	-0.395***	-0.317***	-0.329***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	221,368	221,368	221,368	221,368	221,368	221,368	221,368	221,368
R-squared	0.014	0.093	0.135	0.179	0.007	0.081	0.117	0.174
Individual controls	No	Yes	Yes	Yes	No	Yes	Yes	Yes
Society controls	No	No	Yes	Yes	No	No	Yes	Yes
Country & year FEs	No	No	No	Yes	No	No	No	Yes
SE	Robust	Robust	Robust	Robust	Robust	Robust	Robust	Robust

Note: Summary of coefficients for dummy Immigrant = 1. DVs: Immigrants impact index captures attitudes towards presence of immigrants in society, from more positive to more negative. Immigration policy index captures preferences for more liberal to more restrictive immigration policies. OLS models. Coefficients reported; standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 3.6 Gaps in attitudes towards immigrants between non-immigrants and immigrants. Immigrant generation and origin analysis.

	Immigrants impact index		Immigration policy index	
	(1)	(2)	(3)	(4)
Generational analysis				
First-generation immigrant = 1	-0.682***		-0.418***	
	(0.000)		(0.000)	
Second-generation immigrant = 1	-0.217***		-0.255***	
	(0.000)		(0.000)	
Origin analysis				
Immigrant of non-European origin = 1		-0.682***		-0.370***
		(0.000)		(0.000)
Immigrant of European origin = 1		-0.378***		-0.321***
		(0.000)		(0.000)
Observations	221,368	221,368	221,368	221,368
R-squared	0.181	0.179	0.174	0.174
Individual controls	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes
Country & year FEs	Yes	Yes	Yes	Yes
SE	Robust	Robust	Robust	Robust

Note: Summary of coefficients for dummies indicating an immigrant background. DVs: Immigrants impact index captures attitudes towards presence of immigrants in society, from more positive to more negative. Immigration policy index captures preferences for more liberal to more restrictive immigration policies. OLS models. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.7 Effects of economic insecurity and cultural distance on attitudes towards immigrants' impact on society among non-immigrants.

	Immigrants impact index				
	(1)	(2)	(3)	(4)	(5)
Economic insecurity					
Struggles on present income		0.493***		0.493***	0.479***
		(0.000)		(0.000)	(0.000)
In low-skilled job		0.214***		0.214***	0.208***
		(0.000)		(0.000)	(0.000)
No/limited employment contract		-0.002		-0.002	0.006
		(0.902)		(0.890)	(0.696)
Social/unemployment benefits main income source		0.187***		0.193***	0.121***
		(0.000)		(0.000)	(0.000)
Ever unemployed >3 months		-0.008		-0.009	0.033***
		(0.511)		(0.478)	(0.008)
Cultural threat					
Cultural distance			0.004***	0.005***	0.002
			(0.000)	(0.000)	(0.185)
Individual controls					
Age	0.001*	0.002***	0.001**	0.002***	0.002***
	(0.074)	(0.000)	(0.038)	(0.000)	(0.000)
Education	-0.130***	-0.117***	-0.130***	-0.116***	-0.115***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gender	-0.039***	0.011	-0.040***	0.010	0.023**
	(0.000)	(0.287)	(0.000)	(0.355)	(0.027)
Ethnic minority	0.126**	0.072	0.128**	0.074	0.045
	(0.013)	(0.160)	(0.012)	(0.145)	(0.373)
Urban resident	-0.135***	-0.148***	-0.133***	-0.145***	-0.179***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Christian	0.003	0.024**	-0.006	0.013	0.113***
	(0.788)	(0.030)	(0.571)	(0.246)	(0.000)
Muslim	-1.458***	-1.535***	-1.454***	-1.530***	-1.431***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Non-religious	-0.307***	-0.348***	-0.312***	-0.354***	-0.312***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Society controls					
Ln(GDP per cap)	-0.839***	-0.802***	-0.827***	-0.788***	0.094
	(0.000)	(0.000)	(0.000)	(0.000)	(0.246)
Gini coefficient	0.024***	0.020***	0.027***	0.024***	-0.003
	(0.000)	(0.000)	(0.000)	(0.000)	(0.555)
Wealth 1%	-0.025***	-0.024***	-0.021***	-0.019***	0.011***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.004)
Ln(Unemployment)	-0.318***	-0.343***	-0.323***	-0.349***	0.162***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ln(Immigrant stock)	0.158***	0.178***	0.131***	0.146***	-0.079
	(0.000)	(0.000)	(0.000)	(0.000)	(0.148)
Public social spending	0.027***	0.028***	0.024***	0.024***	0.046***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	111,850	111,850	111,850	111,850	111,850
R-squared	0.114	0.127	0.114	0.127	0.160
Individual controls	Yes	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes	Yes
Country & year FEs	No	No	No	No	Yes
SE	Robust	Robust	Robust	Robust	Robust

Note: DV: Immigrants impact index capturing attitudes towards presence of immigrants in society, from more positive to more negative. OLS models. Non-immigrants subsample. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.8 Effects of economic insecurity and cultural distance on attitudes towards immigrants impact on society among immigrants.

	Immigrants impact index				
	(1)	(2)	(3)	(4)	(5)
Economic insecurity					
Struggles on present income		0.353***		0.354***	0.302***
		(0.000)		(0.000)	(0.000)
In low-skilled job		0.108***		0.107***	0.140***
		(0.000)		(0.000)	(0.000)
No/limited employment contract		-0.129***		-0.129***	-0.084***
		(0.000)		(0.000)	(0.008)
Social/unemployment benefits main income source		0.079		0.079	0.050
		(0.164)		(0.161)	(0.375)
Ever unemployed >3 months		-0.018		-0.017	0.005
		(0.508)		(0.518)	(0.849)
Cultural threat					
Cultural distance			0.001	0.001	0.008***
			(0.453)	(0.306)	(0.000)
Individual controls					
Age	0.010***	0.009***	0.010***	0.009***	0.008***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education	-0.085***	-0.077***	-0.084***	-0.076***	-0.074***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gender	-0.116***	-0.092***	-0.116***	-0.092***	-0.078***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Ethnic minority	-0.271***	-0.299***	-0.270***	-0.299***	-0.409***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Urban resident	-0.153***	-0.169***	-0.153***	-0.168***	-0.216***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Christian	0.063**	0.059**	0.062**	0.058**	0.106***
	(0.017)	(0.024)	(0.018)	(0.027)	(0.000)
Muslim	-0.627***	-0.667***	-0.628***	-0.668***	-0.584***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Non-religious	-0.213**	-0.209**	-0.214***	-0.211**	-0.158*
	(0.010)	(0.012)	(0.010)	(0.012)	(0.053)
Society controls					
Ln(GDP per cap)	-0.928***	-0.890***	-0.930***	-0.893***	0.382**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.022)
Gini coefficient	-0.027***	-0.030***	-0.028***	-0.030***	-0.003
	(0.000)	(0.000)	(0.000)	(0.000)	(0.790)
Wealth 1%	0.002	0.003	0.002	0.004	0.032***
	(0.553)	(0.344)	(0.444)	(0.239)	(0.000)
Ln(Unemployment)	-0.388***	-0.424***	-0.384***	-0.420***	-0.181**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.013)
Ln(Immigrant stock)	-0.001	0.005	-0.001	0.006	0.367***
	(0.978)	(0.891)	(0.985)	(0.881)	(0.005)
Public social spending	0.014***	0.016***	0.014***	0.015***	0.055***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	22,667	22,667	22,667	22,667	22,667
R-squared	0.122	0.129	0.122	0.129	0.164
Individual controls	Yes	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes	Yes
Country & year FEs	No	No	No	No	Yes
SE	Robust	Robust	Robust	Robust	Robust

Note: DV: Immigrants impact index capturing attitudes towards presence of immigrants in society, from more positive to more negative. OLS models. Immigrants subsample Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.9 Effects of economic insecurity and cultural distance on attitudes towards immigration policies among non-immigrants.

	Immigration policy index				
	(1)	(2)	(3)	(4)	(5)
Economic insecurity					
Struggles on present income		0.469***		0.467***	0.477***
		(0.000)		(0.000)	(0.000)
In low-skilled job		0.208***		0.206***	0.196***
		(0.000)		(0.000)	(0.000)
No/limited employment contract		-0.041**		-0.040**	-0.048***
		(0.024)		(0.027)	(0.007)
Social/unemployment benefits main income source		0.168***		0.145***	0.075**
		(0.000)		(0.000)	(0.029)
Ever unemployed >3 months		-0.053***		-0.051***	-0.007
		(0.001)		(0.001)	(0.638)
Cultural threat					
Cultural distance			-0.020***	-0.019***	0.013***
			(0.000)	(0.000)	(0.000)
Individual controls					
Age	0.011***	0.012***	0.010***	0.011***	0.011***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education	-0.141***	-0.129***	-0.143***	-0.131***	-0.127***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gender	0.022*	0.069***	0.029**	0.075***	0.095***
	(0.085)	(0.000)	(0.027)	(0.000)	(0.000)
Ethnic minority	-0.024	-0.071	-0.035	-0.081	-0.089
	(0.702)	(0.251)	(0.573)	(0.190)	(0.146)
Urban resident	-0.161***	-0.172***	-0.173***	-0.183***	-0.216***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Christian	-0.038***	-0.022	0.006	0.020	0.142***
	(0.005)	(0.110)	(0.670)	(0.144)	(0.000)
Muslim	-1.215***	-1.277***	-1.236***	-1.295***	-1.131***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Non-religious	-0.489***	-0.525***	-0.466***	-0.502***	-0.443***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Society controls					
Ln(GDP per cap)	-0.523***	-0.488***	-0.580***	-0.542***	0.571***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gini coefficient	0.036***	0.033***	0.021***	0.018***	-0.006
	(0.000)	(0.000)	(0.000)	(0.000)	(0.383)
Wealth 1%	-0.017***	-0.016***	-0.036***	-0.035***	0.027***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ln(Unemployment)	0.164***	0.144***	0.190***	0.169***	0.419***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Ln(Immigrant stock)	-0.372***	-0.355***	-0.244***	-0.231***	0.154**
	(0.000)	(0.000)	(0.000)	(0.000)	(0.026)
Public social spending	-0.028***	-0.027***	-0.015***	-0.015***	0.013*
	(0.000)	(0.000)	(0.000)	(0.000)	(0.057)
Observations	111,850	111,850	111,850	111,850	111,850
R-squared	0.117	0.124	0.120	0.127	0.154
Individual controls	Yes	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes	Yes
Country & year FEs	No	No	No	No	Yes
SE	Robust	Robust	Robust	Robust	Robust

Note: DV: Immigration policy index capturing attitudes towards immigration policies, from less to more restrictive. OLS models. Non-immigrants subsample. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.10 Effects of economic insecurity and cultural distance on attitudes towards immigration policies among immigrants.

	Immigration policy index				
	(1)	(2)	(3)	(4)	(5)
Economic insecurity					
Struggles on present income		0.366***		0.364***	0.303***
		(0.000)		(0.000)	(0.000)
In low-skilled job		0.163***		0.165***	0.188***
		(0.000)		(0.000)	(0.000)
No/limited employment contract		-0.213***		-0.211***	-0.166***
		(0.000)		(0.000)	(0.000)
Social/unemployment benefits main income source		0.103		0.101	0.055
		(0.135)		(0.142)	(0.422)
Ever unemployed >3 months		-0.048		-0.049	-0.027
		(0.133)		(0.121)	(0.390)
Cultural threat					
Cultural distance			-0.006***	-0.005***	0.005***
			(0.001)	(0.001)	(0.001)
Individual controls					
Age	0.018***	0.018***	0.018***	0.017***	0.015***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education	-0.091***	-0.082***	-0.091***	-0.082***	-0.082***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gender	-0.068**	-0.036	-0.069**	-0.037	-0.018
	(0.018)	(0.215)	(0.017)	(0.208)	(0.531)
Ethnic minority	-0.125***	-0.155***	-0.127***	-0.156***	-0.304***
	(0.001)	(0.000)	(0.001)	(0.000)	(0.000)
Urban resident	-0.100***	-0.116***	-0.104***	-0.120***	-0.186***
	(0.003)	(0.000)	(0.002)	(0.000)	(0.000)
Christian	0.129***	0.124***	0.134***	0.128***	0.196***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Muslim	-0.303***	-0.345***	-0.299***	-0.340***	-0.240***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Non-religious	-0.140	-0.137	-0.133	-0.131	-0.052
	(0.180)	(0.192)	(0.202)	(0.213)	(0.616)
Society controls					
Ln(GDP per cap)	-0.784***	-0.746***	-0.773***	-0.736***	0.950***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gini coefficient	0.009	0.008	0.011*	0.010	-0.006
	(0.136)	(0.208)	(0.074)	(0.124)	(0.719)
Wealth 1%	-0.004	-0.003	-0.007**	-0.006*	0.057***
	(0.242)	(0.331)	(0.049)	(0.085)	(0.000)
Ln(Unemployment)	-0.176***	-0.211***	-0.193***	-0.228***	-0.195**
	(0.001)	(0.000)	(0.000)	(0.000)	(0.025)
Ln(Immigrant stock)	-0.302***	-0.299***	-0.304***	-0.301***	0.793***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Public social spending	-0.024***	-0.022***	-0.022***	-0.020***	0.015
	(0.000)	(0.000)	(0.000)	(0.000)	(0.352)
Observations	22,667	22,667	22,667	22,667	22,667
R-squared	0.112	0.118	0.112	0.119	0.156
Individual controls	Yes	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes	Yes
Country & year FEs	No	No	No	No	Yes
SE	Robust	Robust	Robust	Robust	Robust

Note: DV: Immigration policy index capturing attitudes towards immigration policies, from less to more restrictive. OLS models. Immigrants subsample. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.11 Effects of cultural distance on attitudes towards immigrants: immigrant generation and origin analysis.

	Immigrants impact index		Immigration policy index	
	(1)	(2)	(3)	(4)
Main effects				
Cultural distance	0.009***	0.009***	0.005**	0.006***
	(0.000)	(0.000)	(0.028)	(0.006)
Generational effects				
Cultural distance x First-generation	-0.005**		-0.001	
immigrant = 1	(0.033)		(0.805)	
Origin effects				
Cultural distance x Immigrant of		0.003		-0.001
non- European		(0.309)		(0.720)
origin = 1				
Observations	22,677	22,677	22,677	22,677
R-squared	0.174	0.165	0.157	0.157
Economic insecurity	Yes	Yes	Yes	Yes
Individual controls	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes
Year FEs	Yes	Yes	Yes	Yes
Country FEs	Yes	Yes	Yes	Yes
SE	Robust	Robust	Robust	Robust

Note: DVs: Immigrants impact index capturing attitudes towards presence of immigrants in society, from more positive to more negative, and index separate components. Immigration policy index capturing attitudes towards immigration policies, from less to more restrictive, and index separate components. Cultural distance is from Beugelsdijk et al. (2015). OLS models. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 3.12 Summary of robustness tests.

	Non-immigrants		Immigrants	
	(1) Immigrants impact index	(2) Immigration policy index	(5) Immigrants impact index	(6) Immigration policy index
Economic insecurity				
Baseline				
Struggles on present income	0.479***	0.477***	0.302***	0.303***
	(0.000)	(0.000)	(0.000)	(0.000)
In low-skilled job	0.208***	0.196***	0.140***	0.188***
	(0.000)	(0.000)	(0.000)	(0.000)
No/limited employment contract	0.006	-0.048***	-0.084***	-0.166***
	(0.696)	(0.007)	(0.008)	(0.000)
Social/unemployment benefits main income source	0.121***	0.075**	0.050	0.055
	(0.000)	(0.029)	(0.375)	(0.422)
Ever unemployed >3 months	0.033***	-0.007	0.005	-0.027
	(0.008)	(0.638)	(0.849)	(0.390)
(1) Alternative model specification				
Struggles on present income	0.479***	0.464***	0.198***	0.166**
	(0.000)	(0.000)	(0.008)	(0.039)
In low-skilled job	0.198***	0.206***	0.072	0.022
	(0.000)	(0.000)	(0.401)	(0.734)
No/limited employment contract	-0.034	-0.066*	-0.146*	-0.109
	(0.396)	(0.080)	(0.086)	(0.292)
Social/unemployment benefits main income source	0.211***	0.201*	0.270**	0.320*
	(0.002)	(0.076)	(0.010)	(0.070)
Ever unemployed >3 months	0.211***	0.201*	0.270**	0.320*
	(0.002)	(0.076)	(0.010)	(0.070)
Cultural threat				
Baseline				
Cultural distance	0.002	0.013***	0.008***	0.005***
	(0.185)	(0.000)	(0.000)	(0.001)
(2) CD adjusted for size of major immigrant group	0.000***	0.000***	0.000***	0.000***
	(0.004)	(0.000)	(0.000)	(0.000)
(3) CD adjusted for nationalistic sentiments	0.004	0.017**	0.005**	0.004
	(0.431)	(0.012)	(0.046)	(0.211)
(4) Culture of residence distance	0.002	0.013***	0.014***	0.015***
	(0.192)	(0.000)	(0.002)	(0.004)
(5) Inglehart-Welzel CD measure	0.011	0.017	0.064***	0.016
	(0.515)	(0.452)	(0.000)	(0.288)
(5) CD to second-largest immigrant group	0.000	0.008***	0.001	0.001
	(0.785)	(0.000)	(0.585)	(0.731)
(6) CD = 0 cases excluded	0.002	0.013***	0.006***	0.002
	(0.191)	(0.000)	(0.008)	(0.336)

Note: DVs: Immigrants impact index captures attitudes towards presence of immigrants in society, from more positive to more negative. Immigration policy index captures preferences for more liberal to more restrictive

immigration policies. Unless specified otherwise, OLS models with all controls, country and year FEs. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Summary of robustness checks: (1) Multilevel model with country random terms and year fixed effects, estimated on a 20% subsample. (2) CD multiplied by the relative size of the major immigrant group. (3) Nationalistic sentiments are proxied by self-reported affinity with home country (host country for immigrants). (4) Cultural distance is redefined as the one between the respondent's place of residence (also for immigrants) and the culture of the major arriving immigrant group. (5) Alterative cultural distance measure based on the Inglehart-Welzel Cultural Map (Inglehart & Baker, 2000; Inglehart & Welzel, 2005). (6) We exclude 5,140 immigrants across 18 out of 19 sample countries who originate from the same societies as the largest incoming immigrant groups and for whom cultural distance to the major immigrant group is zero.

Figure 3.1 Average values of immigrants' impact and immigration policy indexes by (a) immigrant generation and (b) immigrant origin.
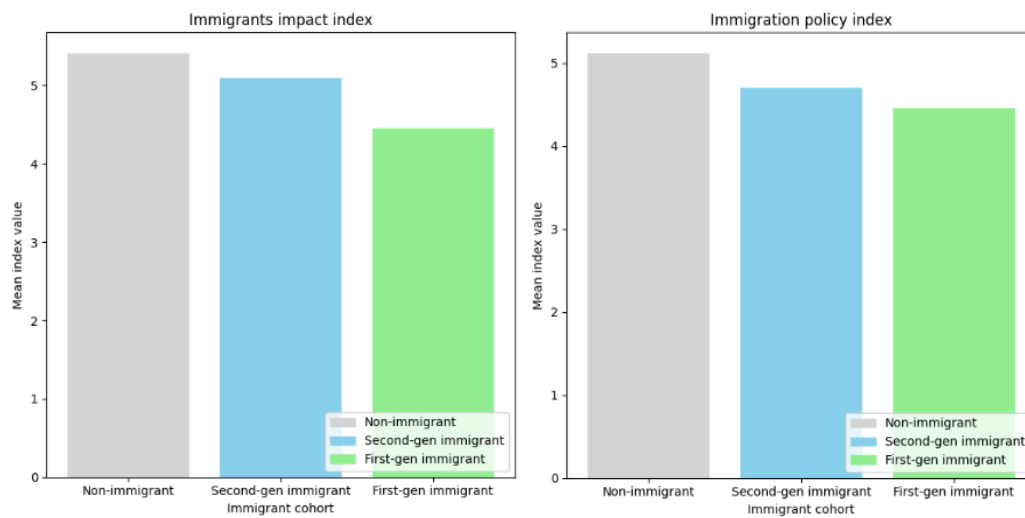
(a) by immigrant generation
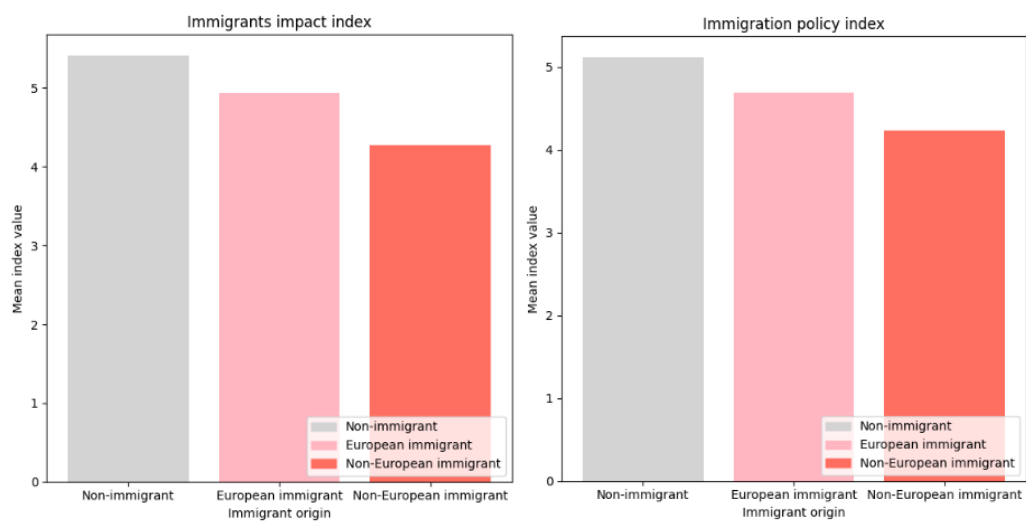
(a) by immigrant origin

Figure 3.2 Average values of immigrants' impact and immigration policy indexes by immigrant status across countries.
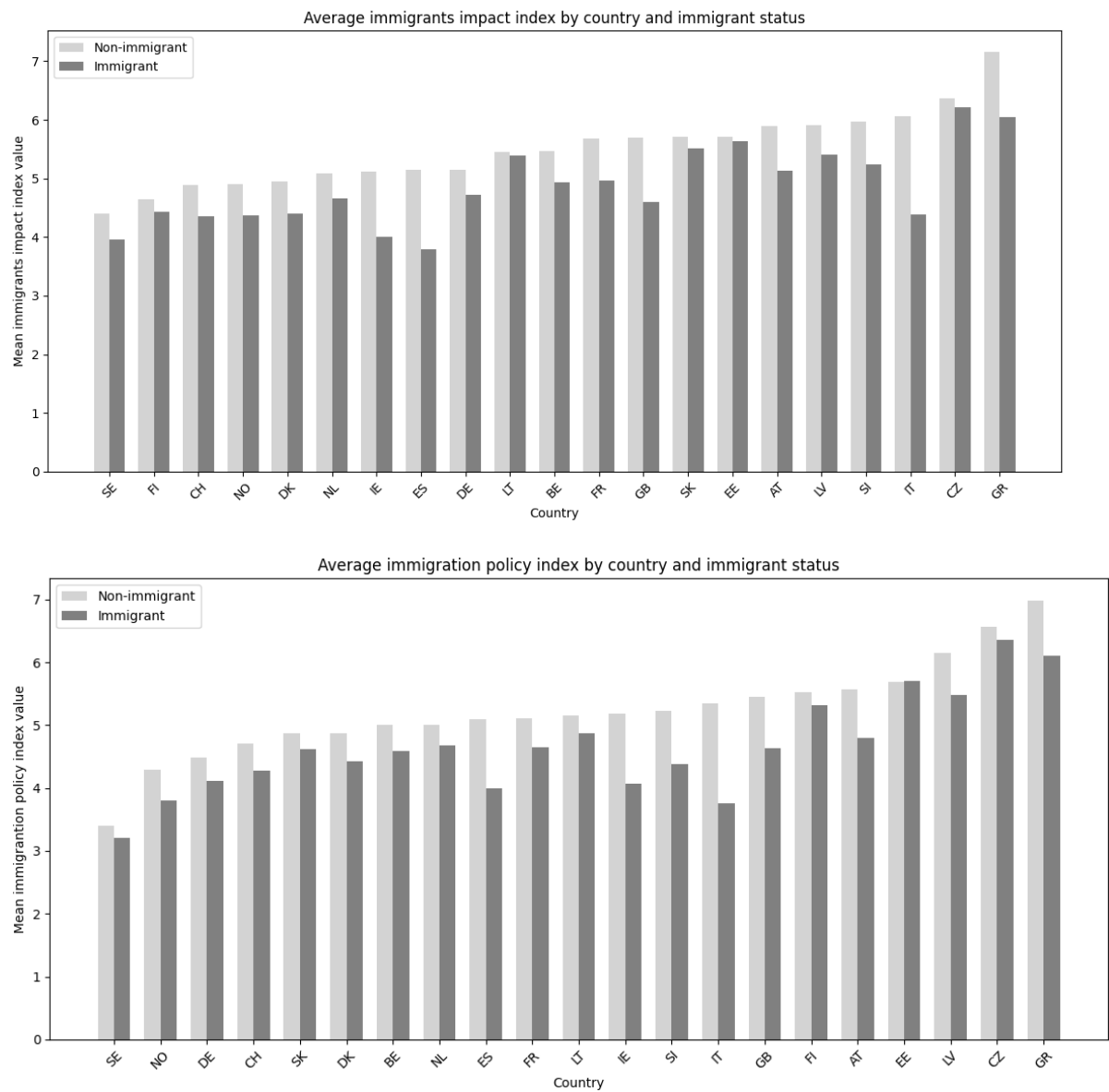
Figure 3.3 Proportional contribution to the explained variance by factor group.

(a) Immigrants impact index

(b) Immigrantion policy index
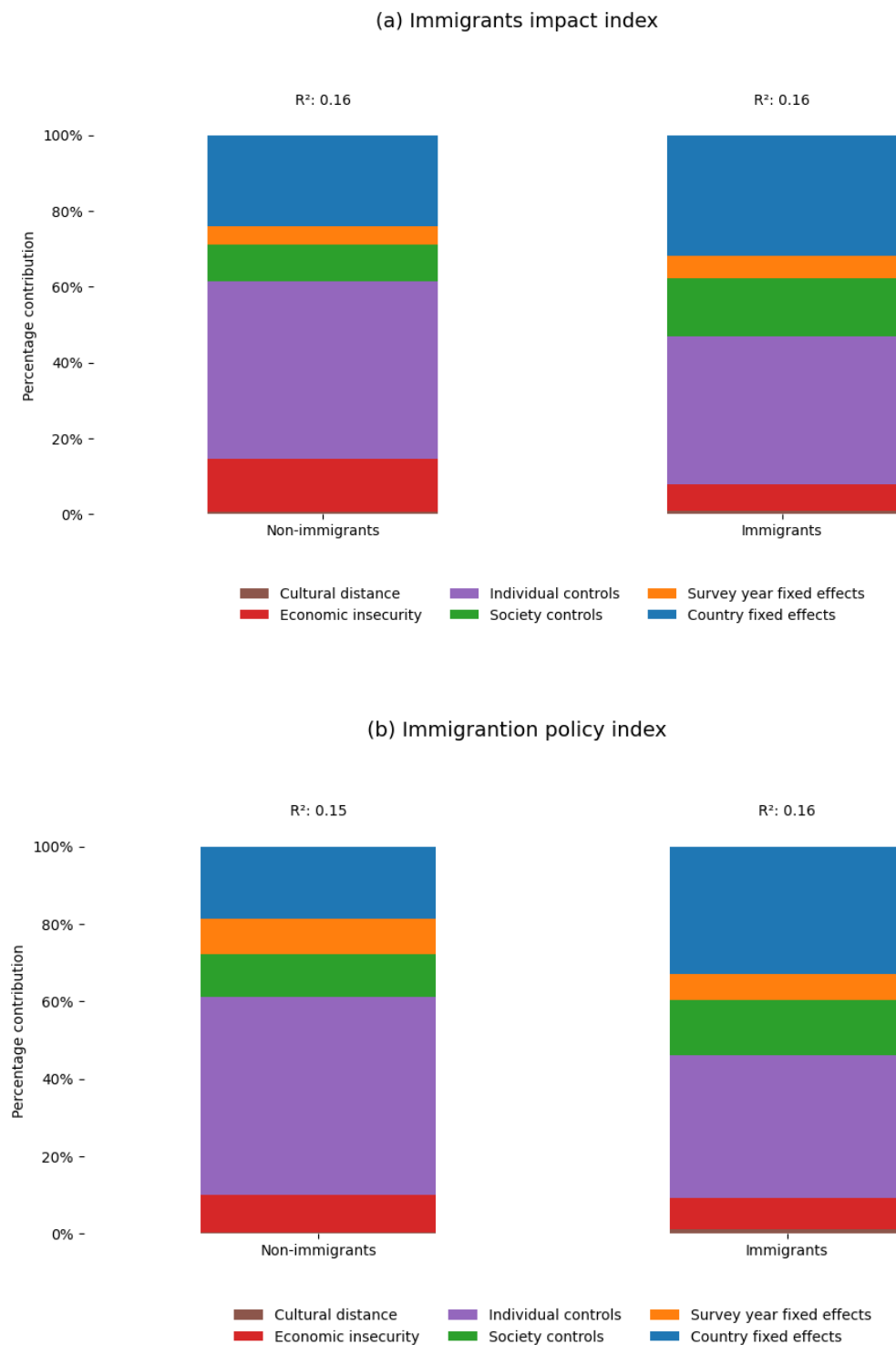
Notes. Shorrocks-Shapley decomposition of the explained variance. Non-immigrants subsample: N = 111,850. Immigrants subsample: N = 22,667. R-squared indicated the proportion of variance explained by the models for the respective subsample. Estimates performed with the shapley2 module in Stata developed by Chavez Juarez (2015). See Modes (5) in Tables 3.7-3.10 for full results.

Appendix A3

Table A3.1 Review of key literature on drivers of anti-immigrant sentiments.

Driver	Argument	Studies	Sample and context	Results	Immigrants included in sample?
Individual level					
Economic	Less skilled individuals are more anti-immigrant	Mayda (2006), Review of Economics and Statistics.	ISSP (1995), 23 countries; WVS (1995-1997), 44 countries.	Individuals with higher skill levels are more pro-immigrant in more affluent countries and less pro-immigrant in poorer countries.	Not specified.
		Scheve and Slaughter (2001), Review of Economics and Statistics	American National Election Studies (1992-1996), US	Workers with lower skill levels are significantly more likely to prefer limiting the number of immigrants entering the United States, regardless of whether they reside in high-immigrant or low-immigrant communities.	Yes; not differentiated from non-immigrants.
		O'Rourke & Sinnott (2006), European Journal of Political Economy	ISSP (1995), 24 countries	Highly skilled individuals in labour force are less opposed to immigration compared to those with lower skills, and this disparity is more pronounced in wealthier societies.	Not specified.
		Ortega & Polavieja (2012), Labour Economics	ESS (2004-2005), 19 European countries	Individuals in manual jobs display more anti-immigration views, while those in jobs that require communication skills and specific human capital are more pro-immigrant.	Partially; non-citizens excluded regardless of immigrant background.
		Brenner & Fertig (2006), RWI Discussion Paper No. 47	ESS (2002), 22 European countries	Educational attainment and parental education are key factors in shaping attitudes. Higher education levels of both respondents and their parents positively influence views on foreigners.	No; immigrants excluded.
		Müller & Tai (2010), Swiss Society of Economics and Statistics	Series of administered surveys VoxIT by FORS (1993-2008), Switzerland	For individuals from the majority population in the labour market, the impact of education on attitudes is stronger, indicating a significant role of labour-market competition, with those having academic education being more favorable towards immigrant integration than those with vocational training.	Not specified.
		Hainmueller & Hiscox	Experiment, administered	Non-immigrants are most opposed to immigrants	Not specified.

98

		(2010), American Political Science Review	survey (2007-2008), US	who have similar skill levels to their own.	
		Hainmueller & Hiscox (2007), International Organization	ESS (2010-2013), 22 European countries	Higher education and skills correlate with increased support for all types of immigration, driven largely by cultural values and beliefs rather than fears about labour-market competition; more educated individuals tend to value cultural diversity, hold less racist views, and believe that immigration benefits the host economy.	Not specified.
	Economically deprived individuals are more anti-immigrant	Pellegrini et al. (2021), Social Indicators Research	ESS (2016), 23 European countries	Individuals that experience social exclusion (income struggles, low social and political participation) display more hostile attitude towards immigrants.	Not specified.
Cultural	More religious individuals are more anti-immigrant	Bohman & Hjerm (2013), Ethnic and Racial Studies	ESS (2002-2008), 27 European countries	Strongly religious people are less opposed to immigrants, especially in Protestant and religiously diverse countries, compared to Catholic and homogenous ones.	Partially; first-generation immigrants excluded.
	Individuals that express cultural homogeneity (threats to common customs and traditions, lifestyle) concerns are more anti-immigrant	Card et al. (2012), Journal of European Economic Association	ESS (2002), 21 European countries	Concerns about threats to cultural homogeneity in society (compositional amenities) are 2-5 times more important in explaining variation in individual attitudes toward immigration policy than concerns over wages and taxes.	Yes; not differentiated from non-immigrants.
		McLaren & Johnson (2007), Political Studies	British Social Attitudes Survey (2003), UK	Self-interest has little influence on opposition to immigration; instead, individuals with no immigrant background are primarily concerned with threats to shared customs and traditions (particularly from Muslims) and ingroup resources.	No; immigrants excluded.
		Sniderman et al. (2004), American Political Science Review	Exteriment, administred survey (Netherlands)	Considerations of national culture/identity take precedence over economic benefits in triggering exclusionary responses towards immigrant minorities in the Netherlands.	Not specified.

	Individuals that identify more with their national community are more anti-immigrant	Pehrson et al. (2009), Social Psychology Quarterly	ISSP (2003), 31 countries	A sense of national identification is positively associated with negative attitudes towards immigrants, especially in countries where national belonging is defined by language rather than citizenship.	Not specified.
	Individuals are more opposed to immigrants originating from societies that are ethnically more distant	Dustmann & Preston (2007), B.E. Journal of Economic Analysis & Policy	British Social Attitudes Survey (1983-1990), UK	Opposition to further immigration is strongly influenced by the proposed origin of immigrants, with much greater resistance when the immigrant population is more ethnically distant from the majority population.	Partially; ethnic minority individuals excluded. . .
Miscellaneous	Intergroup anxiety and negative stereotypes about the outgroup (immigrants) foster negative attitudes towards immigrants	Stephan et al. (2005), International Journal of Intercultural Relations	Experiment, administrated survey, US	The formation of a negative stereotype (attributing qualities such as hostility and disrespect) about an immigrant group results in unfavorable attitudes toward that group.	Yes; not differentiated from non-immigrants.
		Stephan et al. (1999), Journal of Applied Social Psychology	Experiment, administrated survey, US	Intergroup anxiety (feelings of discomfort when interacting with an immigrant group) and negative stereotypes (attributing negative qualities such as dishonesty and aggressiveness to immigrants) collectively explain much of the variance in Americans' attitudes toward three distinct immigrant groups: Cubans, Mexicans, and Asians.	Yes; not differentiated from non-immigrants.
	Older individuals are more anti-immigrant	Schotte & Winkler, (2018), International Migration Review	ESS (2002-2014), 25 European countries	The elderly are more averse to open immigration policies than their younger peers, but the negative correlation between age and pro-immigration attitudes is primarily explained by cohort or generational changes.	Partially; non-citizens are excluded regardless of immigrant background.
	Personal contact with an immigrant (friendship, workplace) reduces negative attitudes towards immigrants	McLaren (2003), Social Forces	Eurobarometer (1997), 17 European countries	Interacting closely with minority group members tends to foster positive attitudes toward immigrants.	Not specified.
		Kehrberg (2007), Comparative European Politics	Eurobarometer (1997), 15 European countries	The number of minority friends an individual has is a strong predictor of their attitudes towards immigration.	Not specified.

	Exposure to refugees is associated with more hostile attitudes towards immigrants	Hangartner et al. (2019), Americal Political Science Review	Administered survey (2017), Greece	Exposure to the refugee crisis affects attitudes at both extensive and intensive margins, meaning that natives' hostility towards refugee and immigrant outgroups increases proportionally with the number of refugee arrivals.	Not specified.
Society level					
Economic	Depressed economic conditions are associated with an increase in anti-immigrant attitudes	Kuntz et al. (2017), International Journal of Comparative Sociology	ESS (2006-2010), 14 Western European countries	Anti-immigrant sentiments rise in countries where perceived economic insecurity increase and decrease where it decline, while changes in objective economic conditions, like unemployment rates, do not show the same effects.	No; immigrants are excluded.
	Anti-immigrant sentiments are stronger in societies where immigrants are perceived as net negative to the welfare state/ are fiscal burden	Facchini & Mayda (2006), CESifo Working Paper No. 1768	ISSP (1995), 18 European high-income countries	High-income individuals from the majority population oppose immigration in countries where it is unskilled and considered a net burden to the welfare state. However, when immigration is skilled, the correlation between income and pro-immigration preferences is positive, suggesting that immigrants are perceived as a net contribution to the welfare state.	Partially; non-citizens excluded regardless of immigrant background.
		Hanson et al. (2007), Economics & Politics	American National Election Studies (1992, 2000), US	High exposure to fiscal pressures from immigrants decreases support for more open immigration policies among native citizens, particularly among the more skilled individuals.	Partially; non-citizens excluded regardless of immigrant background.
Cultural	Higher outgroup size (share of foreign population) is associated with an increase in anti-immigrant attitudes	Gorodzeisky & Semyonov (2018), Social Science Research	ESS (2002-2014), 14 Western European countries	A higher share of non-European ethnic minorities in the country's population is associated with a higher level of anti-immigrant attitudes.	Partially; non-citizens and first-generation immigrants excluded.
		Semyonov et al. (2006), European Sociological Review	Eurobarometer (1988-2000), 12 European countries	Attitudes toward out-group populations are influenced by both the size of the out-group population and economic conditions: anti-foreigner sentiment tends to increase with the size of the foreign population and decrease with economic prosperity.	Not specified.

		Lahav (2004), Comparative Political Studies	Eurobarometer (1990-1998), 16 European countries	The proportion of non-EU foreigners plays a more significant role in shaping attitudes toward immigration levels compared to the proportion of EU foreigners.	Not specified.
		Schlueter & Scheepers (2010), Social Science Research	Dutch Society Survey (2000), Netherlands	Subjective perceptions of a larger immigrant group size are associated with perceptions of threatened group interests, which in turn relate to anti-immigrant attitudes.	No; non-citizens and immigrants excluded.

Note: Literature on anti-immigrant attitudes drivers is extensive. We selected widely cited papers where the outcome variables capture attitudes towards immigrants or immigration policies.

Source: Compiled by the authors.

**Table A3.2** Major incoming immigrant groups by country and year.

Destination country	Year	Origin of major immigrant group	Share (%)	Destination country	Year	Origin of major immigrant group	Share (%)
AT	2004	DE	14.4	FI	2011	EE	23.4
AT	2005	DE	17.2	FI	2012	EE	26.5
AT	2006	DE	21.2	FI	2013	EE	25.1
AT	2007	DE	19.7	FI	2014	EE	20.2
AT	2008	DE	20.4	FI	2015	EE	16.2
AT	2009	DE	19.5	FI	2016	IQ	12.1
AT	2010	DE	18.8	FI	2017	IQ	11.4
AT	2011	DE	16.0	FI	2018	EE	8.9
AT	2012	DE	14.3	FI	2019	RU	9.6
AT	2013	DE	13.3	FI	2021	RU	10.0
AT	2014	RO	13.7	FR	2004	DZ	20.1
AT	2015	SY	11.6	FR	2005	DZ	18.5
AT	2016	RO	10.6	FR	2006	DZ	19.8
AT	2017	RO	13.0	FR	2007	DZ	18.7
AT	2018	RO	14.7	FR	2008	MA	17.0
AT	2019	RO	15.2	FR	2009	DZ	15.6
AT	2021	DE	14.0	FR	2010	DZ	14.8
BE	2004	FR	15.6	FR	2011	DZ	15.1
BE	2005	FR	15.9	FR	2012	DZ	15.9
BE	2006	FR	16.2	FR	2013	DZ	9.5
BE	2007	FR	15.4	FR	2014	DZ	9.3
BE	2008	FR	13.4	FR	2015	DZ	9.3
BE	2009	FR	12.0	FR	2016	DZ	9.0
BE	2010	FR	10.8	FR	2017	DZ	8.9
BE	2011	FR	9.9	FR	2018	DZ	8.7
BE	2012	FR	10.8	FR	2019	MA	8.4
BE	2013	FR	12.0	FR	2021	MA	8.8
BE	2014	FR	11.4	GB	2004	IN	19.0
BE	2015	FR	9.4	GB	2005	PL	19.0
BE	2016	FR	10.8	GB	2006	PL	19.2
BE	2017	RO	11.0	GB	2007	PL	27.9
BE	2018	RO	11.4	GB	2008	PL	18.8
BE	2019	RO	11.2	GB	2009	IN	19.5
BE	2021	RO	10.7	GB	2010	IN	18.8
CH	2004	DE	28.4	GB	2011	IN	14.0
CH	2005	DE	31.5	GB	2012	CN	11.4
CH	2006	DE	34.6	GB	2013	CN	11.6
CH	2007	DE	39.5	GB	2014	IN	9.6
CH	2008	DE	38.6	GB	2015	RO	12.0
CH	2009	DE	35.7	GB	2016	RO	14.9
CH	2010	DE	23.3	GB	2017	CN	13.6
CH	2011	DE	21.8	GB	2018	IN	16.5
CH	2012	DE	19.2	GB	2019	IN	21.1
CH	2013	DE	17.5	GR	2005	AL	73.7
CH	2014	DE	15.9	GR	2006	AL	76.3
CH	2015	DE	15.0	GR	2007	AL	84.2
CH	2016	DE	14.9	GR	2008	AL	85.6
CH	2017	DE	14.6	GR	2009	AL	84.8
CH	2018	DE	14.7	GR	2010	AL	81.9
CH	2019	DE	14.4	GR	2011	AL	74.1
CH	2021	DE	14.8	IT	2004	RO	17.3

CZ	2004	UA	32.1	IT	2005	RO	16.6
CZ	2005	UA	40.9	IT	2006	RO	16.3
CZ	2006	UA	45.8	IT	2007	RO	53.1
CZ	2007	UA	38.6	IT	2008	RO	35.6
CZ	2008	UA	24.8	IT	2009	RO	26.0
CZ	2009	UA	21.3	IT	2010	RO	21.7
CZ	2010	SK	18.3	IT	2011	RO	25.6
CZ	2011	SK	21.9	IT	2012	RO	25.6
CZ	2012	UA	20.9	IT	2013	RO	21.0
CZ	2013	SK	23.3	IT	2014	RO	20.6
CZ	2014	UA	22.0	IT	2015	RO	18.7
CZ	2015	SK	21.2	IT	2016	RO	17.3
CZ	2016	SK	19.3	IT	2017	RO	14.5
CZ	2017	UA	23.8	IT	2018	RO	14.1
CZ	2018	UA	30.1	IT	2019	RO	14.9
CZ	2019	UA	36.2	IT	2021	RO	11.8
CZ	2021	UA	47.9	LV	2005	LT	20.3
DE	2004	PL	21.6	LV	2006	RU	35.4
DE	2005	PL	26.4	LV	2007	RU	15.9
DE	2006	PL	28.5	LV	2008	RU	16.5
DE	2007	PL	25.2	LV	2009	RU	33.4
DE	2008	PL	21.3	LV	2010	RU	42.2
DE	2009	PL	18.8	LV	2014	RU	35.5
DE	2010	PL	17.2	LV	2017	RU	19.3
DE	2011	PL	19.9	LV	2018	UA	23.3
DE	2012	PL	18.7	LV	2019	UA	25.1
DE	2013	PL	17.5	LV	2021	UA	26.2
DE	2014	RO	15.2	NL	2004	DE	9.3
DE	2015	SY	16.5	NL	2005	DE	10.3
DE	2016	RO	14.0	NL	2006	DE	11.5
DE	2017	RO	17.2	NL	2007	PL	12.6
DE	2018	RO	18.6	NL	2008	PL	14.1
DE	2019	RO	18.6	NL	2009	PL	13.6
DE	2021	RO	18.3	NL	2010	PL	14.5
DK	2004	NO	7.0	NL	2011	PL	16.9
DK	2005	DE	6.9	NL	2012	PL	16.7
DK	2006	PL	10.9	NL	2013	PL	17.7
DK	2007	PL	14.0	NL	2014	PL	17.6
DK	2008	PL	18.0	NL	2015	PL	15.0
DK	2009	PL	10.8	NL	2016	SY	14.3
DK	2010	PL	8.8	NL	2017	PL	13.3
DK	2011	PL	9.2	NL	2018	PL	13.5
DK	2012	PL	9.4	NL	2019	PL	12.8
DK	2013	PL	8.9	NL	2021	PL	12.2
DK	2014	SY	11.1	NO	2004	SE	9.0
DK	2015	SY	20.4	NO	2005	PL	10.7
DK	2016	SY	16.6	NO	2006	PL	20.2
DK	2017	RO	8.5	NO	2007	PL	26.7
DK	2018	RO	9.2	NO	2008	PL	25.0
DK	2019	RO	9.3	NO	2009	PL	18.9
DK	2021	RO	11.9	NO	2010	PL	17.7
EE	2004	RU	32.6	NO	2011	PL	18.3
EE	2005	RU	25.2	NO	2012	PL	16.5
EE	2006	RU	23.9	NO	2013	PL	15.8
EE	2007	RU	22.7	NO	2014	PL	16.3
EE	2008	RU	22.8	NO	2015	PL	14.1
EE	2009	RU	23.0	NO	2016	SY	19.5
EE	2010	RU	30.5	NO	2017	SY	14.2
EE	2011	RU	55.9				

104

EE	2012	RU	42.7	NO	2018	PL	11.2
EE	2013	RU	34.1	NO	2019	PL	11.3
EE	2014	RU	32.1	NO	2021	PL	17.5
EE	2015	RU	18.9	SI	2007	BA	45.4
EE	2016	RU	17.7	SI	2008	BA	50.5
EE	2017	RU	14.7	SI	2009	BA	54.3
EE	2018	UA	16.6	SI	2010	BA	40.9
EE	2019	UA	17.8	SI	2011	BA	35.5
EE	2021	UA	45.3	SI	2012	BA	37.0
ES	2004	RO	16.0	SI	2013	BA	36.4
ES	2005	RO	15.9	SI	2014	BA	33.7
ES	2006	RO	16.4	SI	2015	BA	42.2
ES	2007	RO	21.5	SI	2016	BA	39.2
ES	2008	MA	12.7	SI	2017	BA	43.7
ES	2009	RO	12.1	SI	2018	BA	54.1
ES	2010	RO	15.7	SI	2019	BA	57.0
ES	2011	RO	15.1	SI	2021	BA	51.7
ES	2012	RO	10.0	SK	2004	CZ	21.1
ES	2013	RO	9.2	SK	2005	CZ	15.3
ES	2014	RO	11.3	SK	2006	CZ	17.4
ES	2015	RO	9.9	SK	2007	RO	32.5
ES	2016	MA	8.5	SK	2008	RO	28.0
ES	2017	MA	8.8	SK	2009	CZ	18.6
ES	2018	MA	10.9	SK	2010	CZ	17.8
ES	2019	CO	11.6	SK	2011	HU	17.2
ES	2021	MA	14.0	SK	2012	HU	24.0
FI	2004	RU	17.3	SK	2013	CZ	16.2
FI	2005	RU	16.7	SK	2014	HU	21.1
FI	2006	EE	18.2	SK	2015	CZ	15.6
FI	2007	EE	16.7	SK	2016	HU	16.8
FI	2008	EE	15.5	SK	2017	CZ	16.3
FI	2009	EE	17.9	SK	2018	CZ	16.9
FI	2010	EE	21.9	SK	2019	CZ	16.4
				SK	2021	CZ	21.5

Source: OECD International Migration Database; authors calculations.

Table A3.3 Distribution of the cultural distance index values.

Cultural distance scores based on Beugelsdijk et al. (2015)
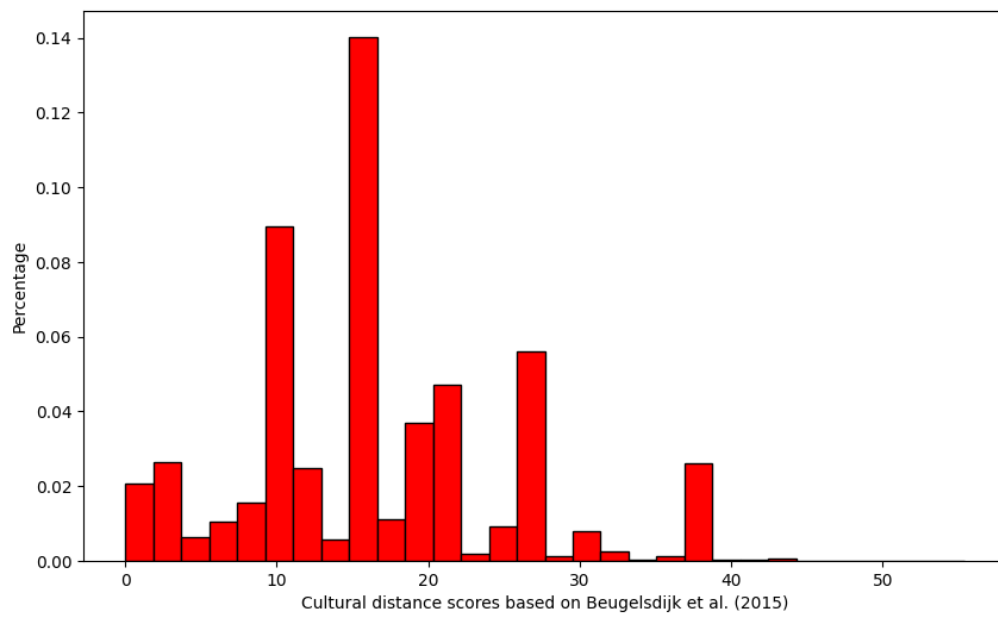
4 Climate change skepticism and populist support in Europe

Climate change skepticism and populist support in Europe

Abstract

As climate change takes center stage in European policy, populist parties increasingly portray it as an elite-driven issue rather than as an urgent, human-caused crisis. With climate-skepticism thus becoming part of the populist agenda, this chapter investigates whether climate skepticism an independent source of support for populist parties or is merely a new manifestation of a general discontent that fuels traditional populist appeal, such as opposition to immigration, EU skepticism, and distrust in institutions. Using data from 17,449 individuals across 217 European regions in the 2016/2017 European Social Survey, we find that climate skepticism is associated with populist support independently of more established determinants. However, its effect on populist voting is six times smaller than that of these other factors. Complimented by data on regional populist vote shares from the EU-NED database, we show that, at the aggregate level, climate skeptical citizens alone do not expand the populist voter base.

Key words: populist voting; climate change skepticism; anti-immigrant attitudes; Euroskepticism; institutional distrust.

4.1 Introduction

Climate change has become a central issue in the European policy debate. As populist parties rise again in Europe, they increasingly question its human-driven causes and the urgency for action (Dickson & Hobolt, 2024; Buzogány & Mohamad-Klotzbach, 2021; Huber, 2020; Forchtner, 2019), often framing climate change an 'elite' issue (Lockwood, 2018). This green cleavage in populist discourse is new. Historically, populist parties have leveraged concerns about the economic and cultural consequences of globalization, targeting 'the winners' and appealing to 'the losers' from such changes (Rydgren, 2008; Rodrik, 2021; Hutter & Kriesi, 2022; Guriev & Papaioannou, 2022).

Populists now seem to have identified a new electorate: while many citizens accept the reality of climate change, a large portion remains skeptical (Drews & Van den Bergh, 2016; Harring et al., 2019). A recent Eurobarometer survey (July 2023) reveals that 7% of EU-27 citizens believe climate change is not a serious problem, while another 16% believe it is only fairly serious. By dismissively framing climate change as a 'leftist hobby'[11], populist parties aim to tap into these emerging and polarizing concerns.

Two distinct strands of literature — one on the drivers of climate skepticism and the other on populist voting — have developed largely in isolation. We bridge these areas by asking: Are climate skeptical attitudes a source of populist support, and are climate skeptics a target electorate for populist parties? On the one hand, climate skepticism aligns with other anti-sentiments in that climate change is often seen as a distant, elite-driven concern, backed by scientific institutions, with policies that have redistributional impacts affecting everyday citizens (Lockwood, 2018; White, 2023). On the other hand, the determinants of climate skeptical views include factors such as a lack of personal exposure to climate-induced natural events (Carlton et al., 2016; Sloggy et al., 2021; Osberghaus & Fugger, 2022), which are difficult to link to traditional populist narratives.

The questions we pose are important to explore for two reasons. First, the salience of the green cleavage is likely to intensify in the coming years, with populist parties and leaders skilfully steering the discourse on climate change (Dickson & Hobolt, 2024). Second, attitudes held by individuals translate into voting behavior, and the electoral outcomes shape policy directions with lasting effects on development and welfare. Understanding and countering this emerging populist hostility to climate action is crucial for advancing climate mitigation and

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[11] As stated by the leader of PVV, a far-right populist party in the Netherlands.

adaptation policies, as well as sustaining existing initiatives such as the EU Green Deal (Huber et al., 2021).

We use 17,449 individual records from 217 European regions across 17 countries polled in Round 8 (2016/2017) of the European Social Survey to test how climate-skeptical attitudes, alongside more established determinants such as hostility toward immigrants, EU skepticism, and institutional distrust, translate into populist support at individual and aggregate levels. First, we find that climate skepticism is a distinct source of populist support, independent from these other 'anti-sentiments'. Second, while climate-skeptical attitudes are directly linked to voting for populist parties, they are marginal factors compared to other anti-sentiments, with a six-fold difference in the effect size. Third, we show that, at the aggregate level, climate skeptical citizens alone do not expand the populist voter base.

4.2 Theoretical background

4.2.1 Traditional determinants of populist support

Populist support in Europe is determined by various factors, often rooted in disenfranchisement and distrust in mainstream parties and institutions, especially regarding their management of the consequences of globalization (Rodrik, 2021; Guriev & Papaioannou, 2022). Populist parties in Europe have historically capitalized on concerns about immigration, framing it as a threat to national culture and economic stability and appealing to voters who feel their way of life is at risk (Inglehart & Norris, 2016; Hutter & Kriesi, 2022; Margalit et al., 2024). Euroskepticism is another common factor, with populists portraying the EU as an elite, distant institution enforcing policies disconnected from citizens' daily concerns. According to PopuList 3.0 classification of political parties (Rooduijn et al., 2024), 85% of European populist parties are also Euroskeptical. In contrast to sheer EU criticism, Euroskeptical populism exploits opposition to the European Union, portraying it as a remote, elitist, free-trade institution, as part of broader anti-establishment sentiment. Populist parties highlight the failures of EU institutions, citing governance issues in the Eurozone, and mismanagement of sovereign debt and migration crises, fueling grievances (Dustmann et al., 2017).

This sense of alienation is often compounded by frustration with national institutions, seen by many as ineffective in addressing their needs amid rapid socio-economic changes (Algan et al., 2017; Dustmann et al., 2017). Strong institutions build trust and establish legitimacy, which is essential in times of crisis when confidence in their ability to address economic challenges is most needed (Greif & Laitin, 2004). Since the onset of the Euro crisis in 2009, Europeans' confidence in political institutions and mainstream parties has dropped

110

(Foster & Frieden, 2017; Hooghe & Marks, 2018). By tapping into these interconnected grievances, populist parties leverage 'anti' attitudes — or a state of opposition — to position themselves as defenders of 'the people', channeling voter discontent into support for their anti-establishment agendas (Rydgren, 2008; Spruyt et al., 2016). Table 4.1 summarizes these arguments and related studies.

[Insert Table 4.1 about here]

4.2.2 Populism and climate change

4.2.2.1 Supply side: What makes climate change a populist issue?

Many European populist parties have rebranded themselves as outspoken critics of climate action, framing it as an anti-elitist position (Lockwood, 2018). Climate change a suitable target for populists because, like the more traditional populist narratives, it is abstract, elite-driven, threatening, temporally and cognitively distant, and has distributional consequences (White, 2023). As a publicly discussed topic, it relies on technical input from the scientific community, requires globalist thinking and international cooperation, and calls for an alternative post-modernist way of living. It has been framed as an emergency by international organizations like the UN's IPCC and through COP meetings, as well as by social movements such as Extinction Rebellion and Fridays for Future. Populists often appeal to emotions and personal beliefs over factual evidence (Tormey, 2019), aligning their backlash against climate action with 'post-truth politics', where the scientific consensus is challenged, and scientists are cast as part of the elite (Mede & Schäfer, 2020; Merkey, 2020).

These constitutive features of populism — anti-elitism, appeals to 'the people,' and the celebration of ordinary wisdom (Mudde, 2004; Mudde & Rovira Kaltwasser, 2018) — find significant traction in the climate change issue. As a result, climate change becomes an ideal target for those who claim to represent the welfare of ordinary people, emphasize commonsense, and celebrate more traditional views over the cosmopolitan innovations of the elite. Vihma et al. (2021) explicitly examine the discourses of populist radical right-wing parties in the Nordic context (Denmark, Sweden, Finland). Their discourse analysis shows that all three parties have consistently portrayed climate policy as a battle between 'the urban elite' and 'the people' living outside city centers, aligning with a traditional populist approach.

Another aspect of climate change is that it is framed in politics and media as an urgent issue that requires immediate action. Populist parties reject this framing, offering an alternative perspective where individuals have a sense of choice rather than an imposed need, especially

in emergency contexts. This rejection of the politics of necessity distinguishes populist parties on the issue of climate change from the political mainstream (White, 2023; Dickson & Hobolt, 2024). Populists challenge elite notions of necessity, claiming to represent a collective body guided by its own commonsense, willing to decide its own ideas and priorities. The critique is often expressed as a form of denialism. The reality of global warming, its anthropogenic causes, or even the idea that it constitutes a bad thing, are rejected (Lockwood, 2018).

Populist parties on both sides of the political spectrum have turned climate change into a battleground. Right-wing populists more frequently oppose climate action, emphasizing perceived threats and redistribution impacts, while rejecting 'liberal script' values like environmentalism (Börzel & Zürn, 2021). Schwörer & Fernández-García (2024) examine the stances of populist radical right-wing parties on climate change in detail by analyzing party manifestos from 10 Western European countries. Their study reveals that, although the parties are not unified in their positions, they are generally less inclined to advocate for climate protection compared to other political parties. Left-wing populists follow this criticism but are less clear-cut on the issue, sometimes aligning with green parties and framing climate action as a fight against elites who disregard scientists and marginalized groups (Buzogány & Mohamad-Klotzbach, 2022; Marquardt & Lerder, 2022).

Most existing European context studies on the supply side of anti-climate populism have therefore focused on right-wing populist parties, which also dominate the European populist landscape. Dickson & Hobolt (2024) analyze 50,000 press releases from 13 radical right-wing parties across nine Western democracies, providing evidence that these parties use climate change policies as a wedge issue to broaden their appeal among voters who feel conflicted about the topic. The study also shows that since 2010, radical right parties in Europe have changed their approach from largely ignoring climate policy to actively politicizing climate change. They are now using it as a wedge issue, capitalizing on the broad consensus among mainstream parties and discontent among certain voters.

Schaller and Carius (2019) analyze the positions on climate change of 21 populist radical right-wing parties across Europe by examining their public communication materials, including national electoral programs, public statements from party leaders and spokespersons, press releases, and news sources. They find that while most of the parties oppose climate and energy transition policies, there are notable differences among them. The authors categorize seven parties (e.g., Austria's FPÖ, Netherlands' PVV, Germany's AfD, and UK's UKIP) as 'Denialist/Skeptical,' eleven as 'Disengaged/Cautious' (e.g., Belgium's VB, Italy's Lega Nord,

Poland's PiS), and three as 'Affirmative' (Finland's Finns Party, Latvia's National Alliance, and Hungary's Fidesz).

4.2.2.2 Demand side: What makes populist parties attractive to climate skeptics?

The appeal of populist parties to climate skeptics remains only somewhat understood. Research shows climate skeptical attitudes are determined by demographic, socio-economic, and attitudinal factors. Older individuals and men are more likely to be skeptical (Poortinga et al., 2011; Whitmarsh, 2011). Skepticism also correlates with lower education, economic vulnerability, and distrust in institutions (McCright et al., 2016; Lübke, 2022). Personal experiences with climate events, like floods and hurricanes, increase belief in climate change happening (Carlton et al., 2016; Sloggy et al., 2021; Osberghaus & Fugger, 2022), though preexisting beliefs may shape interpretations of these events more than the events themselves (Goebbert et al., 2012; Myers et al., 2013).

A very recent and emerging branch of literature connects climate attitudes and electoral behavior. Meta-analyses and literature surveys on the determinants of climate skepticism find political orientation to be one of the strongest determinants (Hornsey et al., 2016; Beiser-McGrath & Huber, 2018). Early studies in the field originate from the United States, where research finds that individuals with conservative (Republican) political views are more likely to be skeptical about climate change and are less supportive of climate action (Hamilton & Saito, 2015; McCright & Dunlap, 2011). In the European context, studies demonstrate that conservative and right-wing leaning individuals are more likely to be skeptical about climate change and oppose climate policies, particularly in Western European societies (McCright et al. 2016; Poortinga et al. 2019; Kulin et al., 2021) and the UK (Poortinga et al., 2011; Clements, 2012). We summarize the key studies on the link between climate skepticism and political orientation in Table 4.2.

[Insert Table 4.2 about here]

Brulle et al. (2012) further argue that climate change being framed as an elite issue shapes public disbelief about it. Empirical evidence relates such anti-establishment, or populist, attitudes to climate skepticism. Populist attitudes, a strong predictor of actual populist voting, typically involve a distrust of established elites and a belief in the virtuousness of 'ordinary people' (Akkerman et al., 2014). Populist supporters often view climate issues as being promoted by liberal elites, accusing them of prioritizing international climate goals at the expense of national issues (Fraune & Knodt, 2018; Lockwood, 2018; White, 2023). Huber

(2020), using UK data, and Huber et al. (2022), using Australian data, demonstrate that individuals with strong populist attitudes, regardless of their position on the political spectrum, are consistently less likely to believe that climate change is caused by human activity compared to those with weaker populist attitudes. Krange et al. (2021) further report the association between right-wing populist attitudes, operationalized through anti-immigrant views, and climate denial in the Norwegian context.

The empirical evidence on the direct link between climate skeptical views and populist voting is scarce. Understanding whether climate skeptical attitudes are an independent source of populist support can help clarify whether populist parties are strategically leveraging climate skepticism as a tool to expand their voter base or if these attitudes merely reflect broader anti-elite sentiment. Given the rich evidence on the supply side that populist parties are increasingly incorporating anti-climate narratives into their rhetoric, thereby targeting voters who resonate with these views, we aim to address the following broader research question:

Is climate skepticism an independent source of populist support, or is it part of a broader set of the populist voting determinants?

4.3 Data and methodology

4.3.1 Sample

Our primary data source is Round 8 of the European Social Survey (ESS), a recurring cross-country survey that monitors shifts in values and attitudes across Europe. This round, conducted between 2016 and 2017, includes a module that surveyed individuals from European societies on their attitudes toward climate change. The final sample of individual records includes 17,449 observations from 17 countries (Austria, Belgium, Switzerland, Czechia, Germany, Estonia, Spain, Finland, France, United Kingdom, Hungary, Italy, Lithuania, Netherlands, Norway, Poland, and Sweden). We limit the sample to adults aged 18-90 that voted in the latest national elections. Summary statistics and correlations for individual records are presented in Tables 4.3 and 4.4.

[Insert Tables 4.3 and 4.4 about here]

We aggregate attitudes of individuals at the regional level, using respondents' data on where they reside (spanning NUTS1 to NUTS3 region levels), and those records to regional populist vote shares obtained from the European NUTS-Level Election Database (Schraff et al., 2023; eu-ned.com). This external electoral database minimizes potential bias from using a single data source, such as aggregated ESS individual records. Of the original 21 ESS countries,

we exclude Ireland, Iceland, and Slovenia due to mismatches between ESS-reported NUTS levels and available EU-NED electoral data. For Germany and the UK, we manually aggregate electoral data from NUTS-2 to NUTS-1. As national elections were typically not conducted during the period captured by ESS Round 8, we use the latest electoral results preceding 2016. Table A4.1 in the Appendix provides details on election years and the NUTS level of aggregation for each country.

Our regional analysis focuses on the areas where populism is present, therefore excluding two regions — ES51 (Catalonia, Spain) and FI200 (Åland, Finland) — where populist vote share was zero. The final regional sample includes 217 regions across the same 17 countries. Tables 4.5 and 4.6 provide summary statistics and correlations for observations at the regional level.

[Insert Tables 4.5 and 4.6 about here]

4.3.2 Dependent variable

Populist support; We measure populist support at both the individual and regional levels. For individual-level support, we use the ESS question asking which party the respondent voted for in the last national election. At the regional level, we use regional vote shares of parties sourced from the EU-NED electoral database. To distinguish between populist and non-populist parties, we rely on the PopuList 3.0 classification (Rooduijn et al., 2024), which identifies European populist parties that have received at least 2% of votes in any national election since 1998. This classification is preferred over alternatives (e.g., Van Kessel, 2015) because it defines populism through anti-elite and pro-people rhetoric, aligning with Mudde's (2004) widely accepted definition.

4.3.3 Key independent variables

Anti-immigrant attitudes; We measure hostility towards immigrants using the ESS item, 'Immigrants make the country a worse or better place to live', with responses ranging from 0 (Worse place to live) to 10 (Better place to live). We reverse the measure so that greater values reflect more hostility towards immigrants.

Euroskepticism; We operationalize the Euroskeptic position using a single ESS item that asks respondents whether the European unification (0) Has gone too far to (10) Can go further. We reverse the measure so that higher values reflect a higher degree of anti-EU sentiment.

Institutional distrust; The ESS item 'Trust in country's parliament', ranging from (0) No trust at all to (10) Complete trust, serves as a measure of skepticism towards institutions. We reverse the measure so that higher values reflect greater distrust.

Climate change skepticism; Following the conceptualization of climate skeptical attitudes by Poortinga et al. (2023; 2019), we examine disbelief about climate change across three dimensions. We employ three ESS items to assess respondents' beliefs regarding whether the earth's climate is changing (trend skepticism), whether this change is human made (attributional skepticism), and whether it has negative consequences (impact skepticism). The specific ESS items read:

- Climate trend skepticism: 'Do you think the world's climate is changing?', with answers 1 (Definitely changing), 2 (Probably changing) 3 (Probably not changing) and 4 (Definitely not changing).

- Climate attribution skepticism: 'Do you think climate change is caused by natural processes, human activity, or both?', with answers 1 (Entirely by natural processes), 2 (Mostly by natural processes), 3 (About equally by natural processes and human activity), 4 (Mostly by human activity), and 5 (Entirely by human processes). We exclude the sixth answer option, 'I do not believe the climate is changing', which accounted for 0.4% of respondents (N=142) in the final sample, to avoid overlap with the trend skepticism measure. The attributional skepticism measure is reversed so that higher values indicate a greater degree of attibutional skepticism.

- Climate impact skepticism: 'How good or bad do you think the impacts of climate change will be across the world?', with answers 0 (Extremely bad) to 10 (Extremely good).

4.3.4 Control variables

We include both individual-level and country-level controls. At the individual level, we control for respondents' age, education, gender, religion, immigrant background and type of residence. Acknowledging the substantial role a deteriorating economic standing play is driving populist support (see Guiso et al., 2017, 2024), we account for this channel using three common indicators from the ESS survey: (1) struggles on present income, where we assign a value of one if a respondent finds it 'Difficult' or 'Extremely difficult' to live on present income; (2) employment in a low-skilled job, where we assign a value of one if a respondent's job is classified as low-skilled based on its ISCO code (OECD, 2019); and (3) history of

unemployment lasting over three months. Following electoral behavior studies, we control for political awareness through self-reported interest in politics and subjective placement on the right-left political spectrum (Coffé & Michels, 2014; Spruyt et al., 2016).

We account for differences in economic development between European countries (regions) by including log-transformed national (regional) GDP per capita. We also control for large metropolitan areas in regions by including population density. At the country-level, we include a dummy for Western European societies. Table A4.2 in the Appendix lists all variables used in the analysis and their sources.

4.4 Results

4.4.1 Two components of anti-attitudes

The six selected factors reflect different dimensions of skepticism towards issues that populist parties tend to capitalize on, which may result in correlations between them. To uncover underlying latent constructs and reduce dimensionality, we conduct a factor analysis on these six predictors. We run the model without restricting the number of factors with a varimax rotation.[12] Table 4.7 presents a clear pattern of the two-factor model. Both the scree test (Figure A4.1 in the Appendix) and the Kaiser criterion (eigenvalues greater than 1.0) indicate two factors, which we retain for further analysis.[13]

Factor 1 consists of anti-immigrant and Euroskeptical attitudes, and institutional distrust. After varimax rotation, the factor loadings exceed 0.4, indicating that this factor explains a significant portion of the variation in the measures. Factor 2 clearly captures the three measures of climate skepticism. The factor loadings exceed 0.4 after varimax rotation, reflecting a substantial amount of variation in trend, attribution, and impact skepticism, in line with other studies (Kulin et al., 2021; Fairbrother et al., 2019). Figure 4.1 plots these loadings by dominant factor to reiterate their structure.

[Insert Table 4.7 and Figure 4.1 about here]

We obtain each respondent's overall score on 'anti-attitudes' by extracting the first principal component of the items loading on Factor 1, which we label *Anti-sentiment*. Similarly, we extract the first principal component of the items loading on Factor 2 to represent each

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[12] An oblique rotation that allows for correlated factors yields a similar pattern.
[13] We repeat the factor analysis on the broader sample, including individuals regardless of whether they voted in the last national elections (N = 21,435). This analysis yields the same two-factor result.

respondent's level of skepticism about climate change, labeling this construct *Climate skepticism*. Both measures are standardized.

4.4.2 Relationship between anti-sentiment, climate skepticism and populist support

Now that we reduced dimensionality of attitudes to two, we test how they are associated with the propensity to support a populist party. Table 4.8 presents the results of a multilevel regression analysis where the two latent factors serve as independent variables, and the choice to support a populist party is an outcome. Our choice of estimation method is justified by the high intraclass correlation coefficient (ICC) values, indicating that 16% of the variance is attributable to country-level differences between individuals. We find that both constructs are positively associated with the populist vote, even when included simultaneously in the model (Model 4, Table 4.8).

We further interact *Anti-sentiment* and *Climate skepticism* (Model 5, Table 4.8). The non-significant interaction term indicates that anti-sentiments neither strengthen nor weaken the effect of climate skepticism on populist voting, meaning climate skepticism effects on populist support is consistent regardless of anti-sentiment levels. We further perform the likelihood ratio test to assess the contribution of the interaction term to the model fit. The result shows that the difference in model fit between the additive model and the interaction model is not statistically significant ($p = 0.88$). This suggests that the interaction term does not improve the model. In other words, the two factors, *Anti-sentiment* and *Climate skepticism*, are associated with populist voting independent of each other.

[Insert Table 4.8 about here]

While *Anti-sentiment* and *Climate skepticism* are associated with populist support independently, their effect size on the outcome differs substantially. Figure 4.2 illustrates the average marginal effects of the two factors on populist voting. *Anti-sentiment* has a significant six-fold stronger effect (0.510, $p<0.001$) on the likelihood of voting for a populist party compared to *Climate skepticism* (0.083, $p<0.001$).

While we observe that attitudes related to hostility towards immigration, the EU, institutions, and climate change are each linked to a higher likelihood of supporting a populist party, this evidence alone does not clarify the specific contribution of climate skepticism to populist support when stronger drivers are excluded.

To examine this relationship more closely, we shift the unit of analysis from individuals to regions. In this analysis, regional populist vote share in the latest national elections is the

dependent variable, while the shares of individuals with specific anti-sentiment or climate-skeptical views serve as independent variables. To isolate the specific role of climate skepticism, we categorize the regional population into four mutually exclusive segments, based on combinations of anti-sentiment and climate-skeptical attitudes. Each individual is assigned a value of 1 if their *Anti-sentiment* (or *Climate skepticism*) factor score is above (below) the regional median, and 0 otherwise. Figure A4.2 illustrates this segmentation process. For instance, individuals scoring above the regional median on *Anti-sentiment* but below the regional median on *Climate skepticism* fall into the segment 'Anti but not climate skeptical'. We then calculate the proportion of each segment within each region's population.

In this analysis, we chose an OLS specification over a multilevel model due to substantial variation in the number of regions clustered within each country, ranging from a minimum of 5 to a maximum of 27 regions. This uneven clustering makes multilevel estimation challenging, as models may produce biased estimates or have difficulty converging. We revisit the multilevel specification in the robustness analysis. Table 4.9 shows that regions with a higher proportion of individuals holding strong anti-sentiments have a larger populist vote share. However, the share of climate skeptics who are not anti-immigrant, Euroskeptical, or distrustful of institutions does not correlate with a higher populist vote share. Climate believers, although holding other anti-sentiments, even distance themselves from populism, as evidenced by the slight decrease in the coefficient magnitude between predictors in lines 1 and 3. These tentative results suggest that adding climate skepticism to the 'populist package' does not have an effect on expanding the populist voter base.

[Insert Table 4.9 about here]

4.4.3 Robustness tests

We do a series of robustness checks. First, we replicate the factor analysis using alternative measures of anti-sentiment. Specifically, we employ two items from the ESS related to immigrants' impact on the country's culture and economy as proxies for anti-immigrant attitudes, along with two items on trust in politicians and political parties to proxy institutional distrust. Since the ESS survey includes only a single question related to the EU, we could not use an alternative measure for Euroskepticism. Figure 4.5 presents the factor loadings using these alternative measures and their combinations. Our findings indicate that the two-factor structure — comprising *Anti-sentiments* and *Climate skepticism* — remains consistent regardless of the measures used to capture these underlying attitudes.

119

Second, we test how each of the six attitudes individually associates with populist support. Figure 4.3 shows that the average marginal effects for all predictors retain their direction and significance even when combined in one model, indicating that anti-immigrant sentiments, Euroskepticism, institutional distrust, and climate skepticism each correlate with populist support. The populist support is primarily driven by anti-immigrant sentiments, followed by Euroskepticism and institutional distrust, with climate skepticism playing a smaller role, thus preserving the hierarchy observed in the main results.

Third, we examine whether the hierarchical relationship observed in our pooled regression — where anti-sentiments appear to be associated with populist support more strongly than climate-skeptical attitudes — holds when analyzed by individual countries. To do this, we run separate regressions for 11 countries with representative sample sizes (N > 1,000) and plot the average marginal effects of the two factors. Figure 4.4 demonstrates this relationship. Dots positioned to the right of the 45-degree line indicate that *Anti-sentiment* consistently has a stronger association with populist support than *Climate skepticism* across these European societies, suggesting that this hierarchy is robust both in the pooled sample and at the country level.

Fourth, we repeat the empirical tests at both the individual and regional levels using an alternative model specification. Table 4.10 reports the results. At the individual level, both *Anti-sentiment* and *Climate skepticism* are positive and statistically significant predictors of populist support, regardless of the estimation method. At the regional level, we find that a larger share of climate-skeptical individuals alone does not drive populist support, reaffirming our baseline finding that climate skepticism by itself is insufficient to expand the populist base at an aggregate level.

4.5 Conclusion and discussion

Climate change is among the most pressing societal issues, remaining high on the political agendas worldwide. It poses severe challenges globally, such as floods, heatwaves, and extreme weather events, making transitions toward sustainability crucial. These transitions, however, increasingly clash with established energy systems, industries and lifestyles made possible using fossil fuels (Markard, 2018). It is not surprising that such changes have faced resistance from citizens reluctant to alter their way of life, creating opportunities for populist parties and leaders to leverage a new societal cleavage and exploit fears through climate debates.

This cleavage around the topic of climate change is new. Historically, populist parties have capitalized on concerns about the consequences of globalization — such as cultural and economic effects from immigration, dissatisfaction with the EU, and a sense of abandonment by national institutions — while more recently shifting focus to climate change, questioning its human-driven causes and the urgency of action. Although research on both populist support and climate skepticism is well-developed, these fields remain largely disconnected. This study questions whether climate skepticism is an independent source of populist support, or if it is part of a broader array of the traditional anti-sentiments populist parties capitalize on. It also examines whether climate skepticism alone is sufficient to garner populist appeal.

We first show that climate skepticism is indeed associated with populist voting, and it is a distinct source, independent from other more traditional anti-sentiments from the 'populist package' such as hostility towards immigrants, skepticism about the EU, and distrust in institutions. Second, we find that climate skeptical views play a marginal role compared to these other anti-sentiments, revealing a six-fold difference in the effect size on the likelihood to vote for a populist party. Third, we show that, at the aggregate level, a larger share of climate skeptical citizens alone does not expand the populist voter base.

4.5.1 Limitations

We identify several limitations to our findings. First, our cross-sectional data come from a single round of a social survey collected between 2016 and 2017, with some electoral results dating back to 2012 and 2013. Since that period, the anti-climate stance of populist parties has become increasingly salient. Dickson and Hobolt (2024) demonstrate that climate-related topics in the manifestos of Europe's radical right-wing parties (most of which are populist) have rapidly gained salience since late 2020. On the other hand, using data from a period when anti-climate populism was still at the infant stage reduces concerns about reverse causality, such as populist narratives around climate change influencing voters' climate beliefs. In addition, as our data extends back to before climate change became heavily politicized at the EU level, such as with the adoption of the EU Green Deal in 2019, it provides an opportunity to examine these associations in a less polarized context.

Another limitation of the study is that, since our data capture respondents' answers at a single point in time, we are unable to determine whether the observed relationships result from evolving attitudes over time or simply reflect pre-existing levels of those attitudes. Consequently, we are also unable to examine switch voters — those who move to populist

parties (or away from them) due to changes in their views on climate change — thereby limiting our ability to pinpoint causality.

4.5.2 Future research and implications

The limitations of our study highlight several avenues for future research. First, while the direct association between climate-skeptical attitudes and support for populist parties is an important finding, the broader question of whether widespread climate skepticism inherently aids populist electoral success remains nuanced. This is particularly relevant given the diverse climate positions among populist parties in Europe. Populist parties vary in their focus of anti-climate rhetoric (Schaller & Carius, 2019), with Huber et al. (2021) and Schwörer & Fernández-García (2024) demonstrating significant variations in positions, both between and within parties over time. Controlling for the specific issues central to their political messages — such as fossil fuel use, tariffs and taxes, or agricultural regulations — could help identify which topics most effectively mobilize climate skeptics. However, such an analysis would require substantial input from political scientists to classify and monitor the often dynamic climate stances of political parties. This presents a challenging trade-off between conducting cross-country panel studies and more focused single-country research. To date, no comprehensive database of political stances has been released. Addressing this gap would be crucial for understanding how populist parties influence public opinion and gain voter support, enabling the development of targeted policy responses and counter-narratives that address climate skepticism without exacerbating political polarization.

Second, while our study shows that targeting climate-skeptical citizens is not effective for expanding the populist voter base, this relationship might evolve with newer data, as climate change gains salience in populist rhetoric. Polarization around climate change is expected to increase, with populists skilfully leveraging social media to disseminate messages and amplify discourse (Engesser et al., 2017). Research shows that social media plays a key role in deepening polarization over climate change (Bail et al., 2018; Williams et al., 2015). As populists continue to co-opt polarizing topics and amplify them through these platforms, the link between skeptical views on climate change and voting for populist parties could strengthen over time. Expanding the sample to cover a longer timeframe, including recent years when climate issues have become even more prominent for populist parties in Europe (Dickson & Hobolt, 2024), would provide further insights into the evolving relationship between climate skepticism and populism.

Another promising avenue for future research lies in exploring voters' positions on climate action. While our analysis focuses on skepticism about whether climate change is occurring and whether it is human-driven, other studies (e.g., Kulin et al., 2021) have examined preferences for climate policies, such as support for fossil fuel taxes, changes in consumption habits, or willingness to pay for environmental protection, and their link to populist support. Investigating these policy preferences entails a different set of assumptions, as they are closely tied to the potential redistributive effects of such measures on income and employment (e.g., Arndt et al., 2023; Bez et al., 2023; Meijers et al., 2023; Vona, 2019; Tvinnereim & Ivarsflaten, 2016). We leave this promising line of inquiry for future research.

We contribute to the literature by bridging two previously disconnected fields — the determinants of populist support and the determinants of climate skepticism — by demonstrating how climate-skeptical views are linked to populist voting. This offers new evidence on the role of climate attitudes within the broader framework of populism. By showing that climate skepticism is a marginal factor compared to stronger drivers of populist support — such as hostility toward immigrants, Euroskepticism, and institutional distrust — this paper provides insight into the hierarchy of anti-establishment sentiments shaping populist voting behavior. For policymakers, one potential reading of these findings might be that addressing these core voter grievances should be a priority, while acknowledging that climate skepticism, though less influential, can still serve as a polarizing tool for populist discourse.

Tables and figures

Table 4.1 Overview of literature on the three determinants of populist support.

Determinant	Argument	Related studies
Anti-immigrant attitudes	Populists claim immigrants harms the labour market by lowering wages, taking jobs from natives, and straining the welfare system. They also argue that immigrants pose a threat to cultural and social homogeneity, increase crime, and put pressure on resources like housing.	Inglehart & Norris (2016); Guiso et al. (2017; 2024); Margalit et al. (2024); Alesina & Tabellini (2024).
Euroskepticism	Populists target the EU for being distant from the public. The Union is a cosmopolitan entity that promotes values like tolerance and diversity that clash with nationalist identities, while its transnational nature limits national policy autonomy. Combined with declining economic performance, failed refugee integration, and border control, the EU is accused of lacking 'output legitimacy', failing to deliver visible policy success.	Dustmann et al. (2017), Hobolt & De Vries (2016), Hobolt & Tilley (2016); Katsanidou & Otjes (2016).
Institutional distrust	Populists exploit deep mistrust in political and governmental institutions, which are seen as failing to represent or protect ordinary citizens. They present themselves as outsiders challenging corrupt, elitist establishments. Many voters feel that institutions neglect key issues like economic inequality, globalization, and immigration, serving only the privileged. Crises, such as economic downturns or immigration, intensify this distrust by exposing institutional failures.	Dustmann et al. (2017), Algan et al. (2017), Geurkink et al. (2020), Guiso et al., (2019), Ivanov (2023).

Source: Compiled by the authors.

Table 4.2 An overview of studies on climate skeptical attitudes and political orientation.

Study	Context and sample	Findings
Hamilton & Saito (2015)	US, Granite State Poll (GSP) (2010-2014)	US respondents with more conservative political preferences (identify as Tea Party movement Republicans) are significantly less likely to believe that climate change is happening or that it is caused by human activities.
McCright & Dunlap (2011)	US, Gallup surveys (2001-2010)	Liberals and Democrats are more likely to align with the scientific consensus and express personal concern about global warming compared to conservatives and Republicans.
McCright et al. (2016)	25 European countries, Eurobarometer 69.2 (2008)	In 14 Western European countries, citizens on the left consistently reported stronger belief in climate change and greater support for action to mitigate it compared to citizens on the right; this pattern does not hold in 11 former Communist countries.
Clements (2012)	UK, Eurobarometer 71.1 (2009)	British respondents who identify with the right report greater skepticism about climate change compared to those who identify with the left.
Poortinga et al., (2011)	UK, administered survey (N = 1,822)	British respondents identifying with the Conservative Party express greater climate change skepticism than undecided respondents, while those intending to vote for Labour, Liberal Democrats, or other parties do not significantly differ from the undecideds.
Kvaløy et al. (2012)	47 countries, World Values Survey (2005-2009)	Respondents on the extreme left perceive global warming as more serious than those in the political center, while respondents on the moderate and extreme right perceive it as less serious than those in the center.
Hornsey et al. (2018)	Administered survey (N=5,323), 25 societies	There is a link between conservative ideologies and climate skepticism, which is particularly strong and consistent in the United States compared to other countries.
Kulin et al. (2021)	23 European countries, European Social Survey (2016)	Respondents that hold attitudes consistent with nationalist ideology are more skeptical about climate change.

Source: Compiled by the authors.

Table 4.3 Summary statistics. Sample of individual records.

	N	Mean	SD	Min	Max
Dependent variable					
Voted for a populist party	17449	.19	0.39	0	1
Anti-sentiment					
Factor Anti-sentiment	17449	-.1	0.98	-2.85	2.68
Anti-immigrant	17449	-.05	0.95	-2.14	2.1
Euroskeptical	17449	-.05	1.00	-1.92	1.83
Institutional distrust	17449	-.16	0.96	-2.15	1.81
Climate skepticism					
Factor Climate skepticism	17449	-.02	1.00	-2	4.2
Climate trend skeptical	17449	-.07	0.88	-.76	2.3
Climate attribution skeptical	17449	-.06	0.98	-2.04	3.12
Climate impact skeptical	17449	-.01	0.98	-1.49	3.12
Individual controls					
Age	17449	52.45	16.65	18	90
Education	17449	13.59	3.79	0	30
Gender	17449	.5	0.50	0	1
Immigrant background	17449	.12	0.33	0	1
Urban resident	17449	.61	0.49	0	1
Non-religious	17449	.45	0.50	0	1
Struggles on present income	17449	.14	0.35	0	1
In low-skilled job	17449	.21	0.41	0	1
Ever unemployed >3 months	17449	.28	0.45	0	1
Interest in politics	17449	2.68	0.84	1	4
Placement on left-right scale	17449	5.12	2.21	0	10
Society controls					
Ln(GDP per cap)	17449	10.47	0.45	9.42	11.32
Western Europe	17449	.78	0.41	0	1

Table 4.4 Correlations table for the sample of individual records.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Voted for a populist party (1)	1.00	0.17	0.15	0.11	0.10	0.04	0.04	0.03	0.02	-0.00	-0.07	0.05	-0.04	-0.02	0.02	0.04	0.01	0.01	-0.01	0.12	-0.11	-0.11
Factor Anti-sentiment (2)	0.17	1.00	0.79	0.72	0.67	0.05	0.06	0.05	-0.01	0.07	-0.25	0.00	-0.07	-0.06	0.01	0.18	0.09	0.08	-0.25	0.08	-0.16	-0.13
Anti-immigrant (3)	0.15	0.79	1.00	0.36	0.33	0.07	0.07	0.05	0.02	0.06	-0.23	0.01	-0.08	-0.05	-0.02	0.16	0.07	0.03	-0.21	0.12	-0.16	-0.15
Euroskeptical (4)	0.11	0.72	0.36	1.00	0.21	0.06	0.06	0.05	0.01	0.07	-0.15	0.02	-0.01	-0.06	0.01	0.08	0.05	0.03	-0.09	0.09	0.06	-0.00
Institutional distrust (5)	0.10	0.67	0.33	0.21	1.00	-0.04	-0.02	0.00	-0.06	0.01	-0.15	-0.03	-0.05	-0.02	0.03	0.16	0.08	0.11	-0.24	-0.05	-0.27	-0.13
Factor Climate skepticism (6)	0.04	0.05	0.07	0.06	-0.04	1.00	0.72	0.71	0.73	0.14	-0.16	0.02	-0.02	-0.03	-0.00	0.01	0.03	-0.07	-0.09	0.17	-0.05	-0.14
Climate trend skepticism (7)	0.04	0.06	0.07	0.06	-0.02	0.72	1.00	0.26	0.28	0.07	-0.11	0.04	-0.03	-0.02	-0.00	0.01	0.02	-0.05	-0.09	0.12	-0.08	-0.14
Climate attribution skepticism (8)	0.03	0.05	0.05	0.05	0.00	0.71	0.26	1.00	0.28	0.13	-0.10	0.02	-0.01	-0.01	0.00	0.02	0.01	-0.04	-0.04	0.10	-0.04	-0.12
Climate impact skepticism (9)	0.02	-0.01	0.02	0.01	-0.06	0.73	0.28	0.28	1.00	0.11	-0.14	-0.01	-0.01	-0.04	-0.01	-0.01	0.04	-0.05	-0.07	0.14	0.01	-0.04
Age (10)	-0.00	0.07	0.06	0.07	0.01	0.14	0.07	0.13	0.11	1.00	-0.29	-0.01	-0.05	-0.04	-0.17	0.02	-0.02	-0.12	0.14	0.04	0.04	0.05
Education (11)	-0.07	-0.25	-0.23	-0.15	-0.15	-0.16	-0.11	-0.10	-0.14	-0.29	1.00	-0.01	0.04	0.13	0.07	-0.17	-0.21	0.01	0.22	-0.05	-0.01	0.06
Gender (12)	0.05	0.00	0.01	0.02	-0.03	0.02	0.04	0.02	-0.01	-0.01	-0.01	1.00	-0.01	-0.02	0.08	-0.05	-0.18	0.00	0.14	0.06	0.03	0.03
Immigrant background (13)	-0.04	-0.07	-0.08	-0.01	-0.05	-0.02	-0.03	-0.01	-0.01	-0.05	0.04	-0.01	1.00	0.08	-0.01	0.03	0.01	0.05	0.03	-0.06	0.09	0.05
Urban resident (14)	-0.02	-0.06	-0.05	-0.06	-0.02	-0.03	-0.02	-0.01	-0.04	-0.04	0.13	-0.02	0.08	1.00	0.07	0.03	-0.02	0.03	0.04	-0.03	-0.12	-0.11
Non-religious (15)	0.02	0.01	-0.02	0.01	0.03	-0.00	-0.00	0.00	-0.01	-0.17	0.07	0.08	-0.01	0.07	1.00	-0.01	-0.01	0.05	-0.03	-0.08	-0.01	-0.06
Struggles on present income (16)	0.04	0.18	0.16	0.08	0.16	0.01	0.01	0.02	-0.01	0.02	-0.17	-0.05	0.03	0.03	-0.01	1.00	0.12	0.17	-0.15	-0.06	-0.17	-0.16
In low-skilled job (17)	0.01	0.09	0.07	0.05	0.08	0.03	0.02	0.01	0.04	-0.02	-0.21	-0.18	0.01	-0.02	-0.01	0.12	1.00	0.10	-0.15	-0.02	-0.03	-0.02
Ever unemployed >3 months (18)	0.01	0.08	0.03	0.03	0.11	-0.07	-0.05	-0.04	-0.05	-0.12	0.01	0.00	0.05	0.03	0.05	0.17	0.10	1.00	-0.06	-0.08	-0.04	0.04
Interest in politics (19)	-0.01	-0.25	-0.21	-0.09	-0.24	-0.09	-0.09	-0.04	-0.07	0.14	0.22	0.14	0.03	0.04	-0.03	-0.15	-0.15	-0.06	1.00	-0.02	0.22	0.22
Placement on left-right scale (20)	0.12	0.08	0.12	0.09	-0.05	0.17	0.12	0.10	0.14	0.04	-0.05	0.06	-0.06	-0.03	-0.08	-0.06	-0.02	-0.08	-0.02	1.00	-0.03	-0.08
Ln(GDP per cap) (21)	-0.11	-0.16	-0.16	0.06	-0.27	-0.05	-0.08	-0.04	0.01	0.04	-0.01	0.03	0.09	-0.12	-0.01	-0.17	-0.03	-0.04	0.22	-0.03	1.00	0.74
Western Europe (22)	-0.11	-0.13	-0.15	-0.00	-0.13	-0.14	-0.14	-0.12	-0.04	0.05	0.06	0.03	0.05	-0.11	-0.06	-0.16	-0.02	0.04	0.22	-0.08	0.74	1.00

Table 4.5 Summary statistics. Sample of European regions.

	N	Mean	SD	Min	Max
Dependent variable					
Regional populist vote share	217	.21	0.11	.02	.56
Segments of society					
Regional share of Anti but not climate skeptical	217	.27	0.13	.06	.78
Regional share of Not anti but climate skeptical	217	.21	0.11	0	.72
Regional share of Anti-everything	217	.15	0.09	0	.41
Regional share of Neither anti not climate skeptical	217	.37	0.14	.07	.78
Society controls					
Ln(Regional GDP per capita)	217	29393.84	15211.18	5200	90500
Regional population density	217	286.69	761.39	1.9	7454.6
Western Europe	217	.75	0.44	0	1

Table 4.6 Correlations table for the sample of European regions.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Regional populist vote share (1)	1.00	0.29	-0.09	0.27	-0.36	-0.18	-0.13	-0.25
Regional share of Anti but not climate skeptical (2)	0.29	1.00	-0.61	0.05	-0.48	-0.36	-0.01	-0.17
Regional share of Not anti but climate skeptical (3)	-0.09	-0.61	1.00	-0.02	-0.20	0.08	-0.08	-0.11
Regional share of Anti-everything segment (4)	0.27	0.05	-0.02	1.00	-0.65	-0.32	-0.14	-0.31
Regional share of Neither anti nor climate skeptical (5)	-0.36	-0.48	-0.20	-0.65	1.00	0.47	0.16	0.44
Ln(Regional GDP per capita) (6)	-0.18	-0.36	0.08	-0.32	0.47	1.00	0.28	0.68
Regional population density (7)	-0.13	-0.01	-0.08	-0.14	0.16	0.28	1.00	0.11
Western Europe (8)	-0.25	-0.17	-0.11	-0.31	0.44	0.68	0.11	1.00

Table 4.7 Anti-sentiments and climate skepticism as two dimensions of attitudes.

Attitude	Factor 1	Factor 2	Uniqueness
Anti-immigrant	0.490	0.060	0.756
Euroskeptical	0.744	0.070	0.442
Institutional distrust	0.443	-0.068	0.799
Climate trend skeptical	0.047	0.517	0.731
Climate attribution skeptical	0.037	0.505	0.744
Climate impact skeptical	-0.041	0.564	0.680

Note. Factor outcomes are rotated using a varimax rotation. N = 17,449.
Factor variance explained: Factor 1: 0.166 (16.6% cumulative), Factor 2: 0.142 (30.8% cumulative).

Table 4.8 Relationship between Anti-sentiment and Climate skepticism constructs and populist vote.

	(1) Voted populist	(2) Voted populist	(3) Voted populist	(4) Voted populist	(5) Voted populist
Factor Anti-sentiment		0.501***		0.505***	0.505***
		(0.000)		(0.000)	(0.000)
Factor Climate skepticism			0.058***	0.083***	0.082***
			(0.007)	(0.000)	(0.000)
Factor Anti-sentiment x					0.003
Factor Climate skepticism					(0.879)
Individual controls					
Age	-0.007***	-0.008***	-0.007***	-0.009***	-0.009***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Education	-0.057***	-0.040***	-0.056***	-0.038***	-0.038***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Gender	0.265***	0.235***	0.261***	0.228***	0.228***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Immigrant background	-0.021	0.035	-0.019	0.038	0.038
	(0.753)	(0.615)	(0.780)	(0.578)	(0.578)
Urban resident	-0.024	0.011	-0.020	0.016	0.016
	(0.587)	(0.810)	(0.647)	(0.723)	(0.722)
Non-religious	0.373***	0.352***	0.374***	0.351***	0.351***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Struggles on present income	0.259***	0.100*	0.263***	0.103*	0.104*
	(0.000)	(0.093)	(0.000)	(0.082)	(0.082)
In low-skilled job	0.179***	0.166***	0.177***	0.164***	0.164***
	(0.001)	(0.002)	(0.001)	(0.002)	(0.002)
Ever unemployed >3 months	0.235***	0.171***	0.239***	0.176***	0.176***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Interest in politics	0.052*	0.128***	0.057**	0.134***	0.134***
	(0.053)	(0.000)	(0.036)	(0.000)	(0.000)
Placement on left-right scale	0.169***	0.151***	0.166***	0.146***	0.147***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Society controls					
Ln(GDP per cap)	-0.216	-0.024	-0.221	-0.028	-0.027
	(0.717)	(0.968)	(0.713)	(0.963)	(0.964)
Western Europe	-0.692	-0.868	-0.676	-0.849	-0.850
	(0.330)	(0.222)	(0.344)	(0.238)	(0.237)
Observations	17,449	17,449	17,449	17,449	17,449
Number of groups	17	17	17	17	17
Individual controls	Yes	Yes	Yes	Yes	Yes
Society controls	Yes	Yes	Yes	Yes	Yes
Country REs	Yes	Yes	Yes	Yes	Yes

Note: DV=1 if voted for a political party classified as populist. Multilevel models with country random effects. The ICC value is 16%. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Table 4.9 Relationship between segments of society with anti-attitudes and regional populist vote share.

	(1) Regional populist vote share	(2) Regional populist vote share	(3) Regional populist vote share
Regional share of Anti but not climate skeptical	0.231***	0.260***	0.281***
	(0.000)	(0.000)	(0.000)
Regional share of Not anti but climate skeptical		0.053	0.075
		(0.502)	(0.336)
Regional share of Anti-everything			0.255***
			(0.002)
Regional share of Neither anti not climate skeptical (base)			
Society controls			
Regional GDP per capita	0.000*	0.000*	0.000**
	(0.076)	(0.079)	(0.027)
Regional population density	-0.000**	-0.000**	-0.000*
	(0.028)	(0.033)	(0.054)
Western Europe	-0.071***	-0.068***	-0.058***
	(0.001)	(0.002)	(0.009)
Observations	217	217	217
R-squared	0.142	0.144	0.183
Regional controls	Yes	Yes	Yes
West/East Europe controls	Yes	Yes	Yes

**Note:** DV: Regional populist vote share. Predictors are shares of individuals scoring above or below the regional median on Anti-sentiment and Climate skepticism; mutually exclusive groups: the shares of each segment of society in a region add up to 100%. OLS regressions with regional and society controls. Coefficients reported; standard errors in parentheses. *** $p<0.01$, ** $p<0.05$, * $p<0.1$.

Table 4.10 Replication of main results using an alternative estimation method on (a) the sample of individual records, and (b) the sample of European regions.

(a) Sample of individual records

	(2) Voted populist	(3) Voted populist	(4) Voted populist	(5) Voted populist
Baseline				
Factor Anti-sentiment	0.501***		0.505***	0.505***
	(0.000)		(0.000)	(0.000)
Factor Climate skepticism		0.058***	0.083***	0.082***
		(0.007)	(0.000)	(0.000)
Factor Anti-sentiment x				0.003
Factor Climate skepticism				(0.879)
Alternative estimation method				
Factor Anti-sentiment	0.501***		0.506***	0.506***
	(0.000)		(0.000)	(0.000)
Factor Climate skepticism		0.060***	0.084***	0.084***
		(0.006)	(0.000)	(0.000)
Factor Anti-sentiment x				0.004
Factor Climate skepticism				(0.853)

Note: DV=1 if voted for a political party classified as populist. Baseline: multilevel models with country random effects; individual and society control included; Full baseline results are reposted in Table 4.8. Alternative: OLS models with country fixed effects; individual and society control included. N = 17,449.Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

(b) Sample of European regions

	(1) Regional populist vote share	(2) Regional populist vote share	(3) Regional populist vote share
Baseline			
Regional share of Anti but not climate skeptical	0.231***	0.260***	0.281***
	(0.000)	(0.000)	(0.000)
Regional share of Not anti but climate skeptical		0.053	0.075
		(0.502)	(0.336)
Regional share of Anti-everything			0.255***
			(0.002)
Regional share of Neither anti not climate skeptical (base)			
Alternative estimation method			
Regional share of Anti but not climate skeptical	-0.016	-0.050	-0.023
	(0.658)	(0.227)	(0.604)
Regional share of Not anti but climate skeptical		-0.072	-0.053
		(0.112)	(0.248)
Regional share of Anti-everything			0.091*
			(0.083)
Regional share of Neither anti not climate skeptical (base)			

Note: DV: Regional populist vote share. Predictors are shares of individuals scoring above or below the regional median on Anti-sentiment and Climate skepticism; mutually exclusive groups: the shares of each segment of society in a region add up to 100%. *Baseline:* OLS regression models; regional and society controls included. Full baseline results are reposted in Table 4.9. *Alternative:* Multilevel regressions with country random terms; regional and society controls included. ICC value is 76%. N = 217. Coefficients reported; standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1.

Figure 4.1 Plotted factor loadings of anti-sentiments and climate skepticism as two dimensions of attitudes.
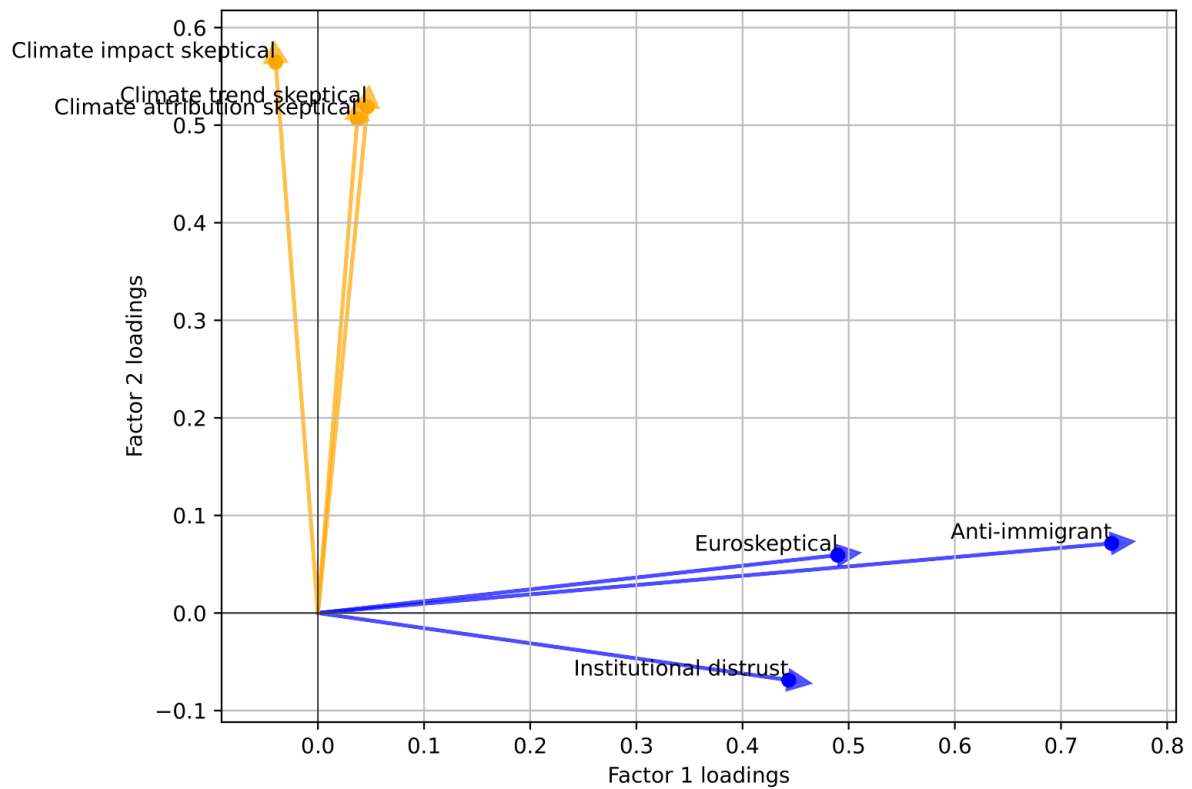
Note. Factor outcomes are rotated using a varimax rotation. N = 17,449.
Factor variance explained: Factor 1: 0.166 (16.6% cumulative), Factor 2: 0.142 (30.8% cumulative).

Figure 4.2 Plotted average marginal effects (AME) on the likelihood to vote for a populist party.
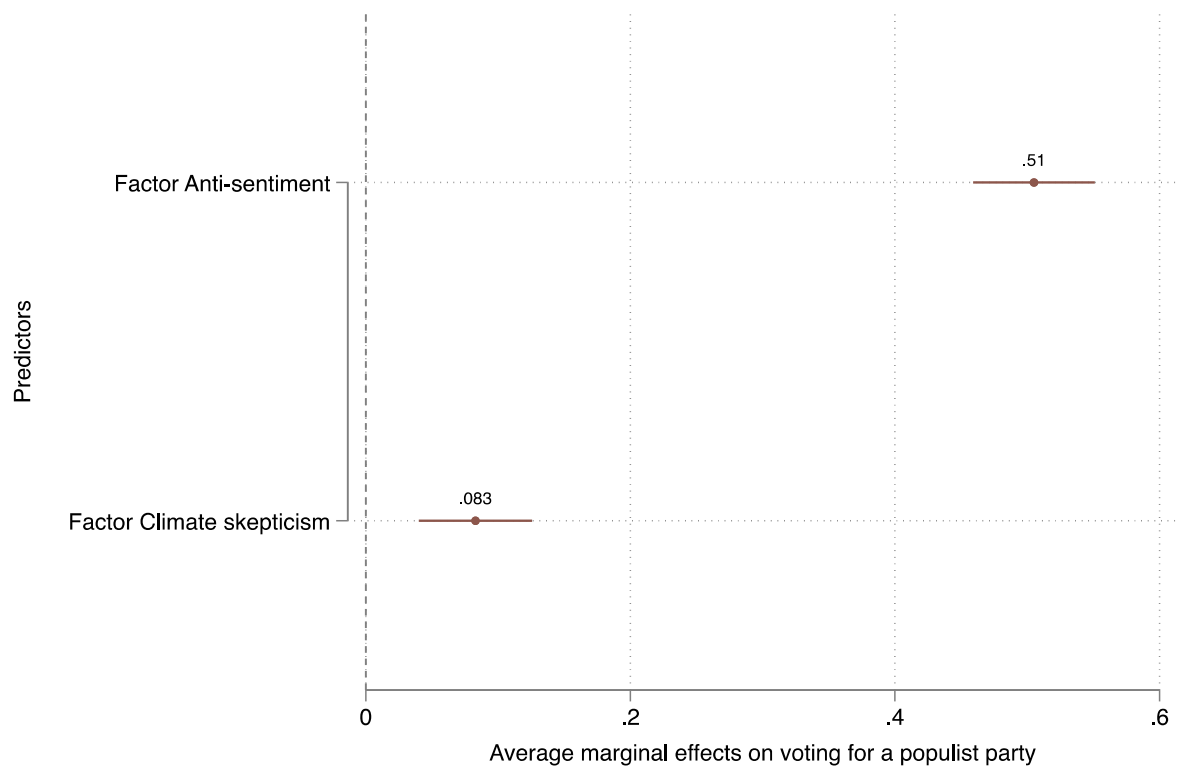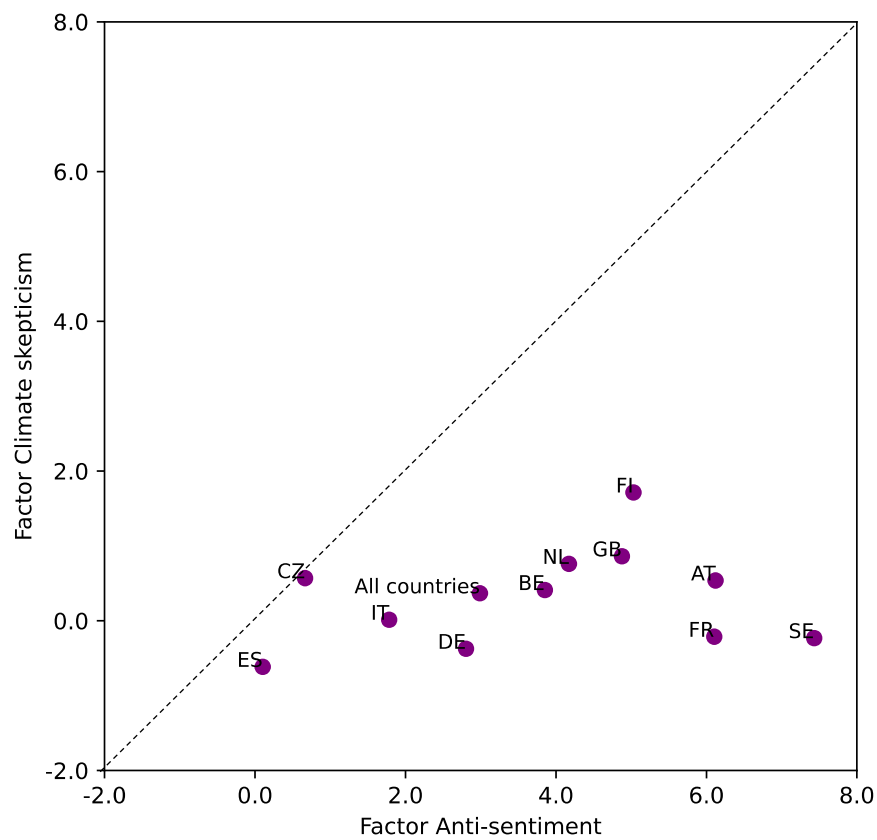

Note: Average marginal effects (AME) based on multilevel regression (DV = 1 if voted for a populist party; individual and country-level controls included; country random effects). N = 17,449.

Figure 4.3 Plotted average marginal effects (AME) of anti-attitudes on the likelihood to vote for a populist party.
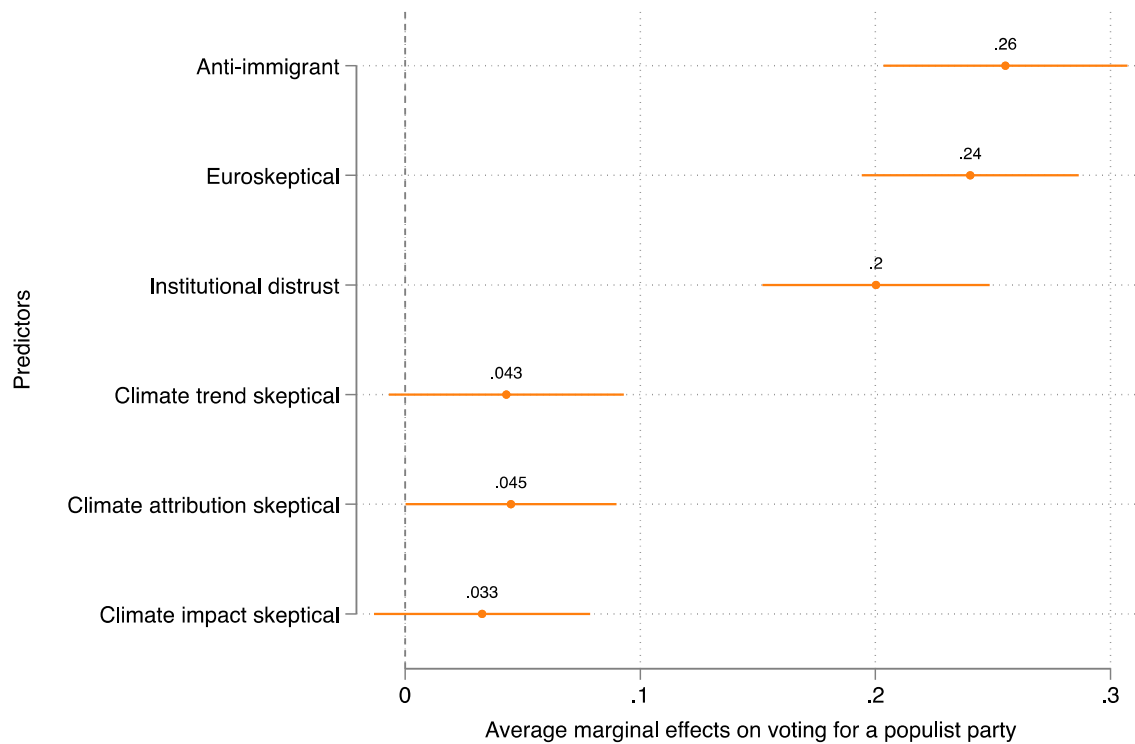
Note: Average marginal effects (AME) based on multilevel regression (DV = 1 if voted for a populist party; individual and country-level controls included; country random effects). N = 17,449.

Figure 4.4 Average marginal effects Anti-sentiment and Climate skepticism on the likelihood of voting for a populist party by country.

Note: Each dot represents the average marginal effects of *Anti-sentiment* and *Climate skepticism* on the propensity to vote for a populist party based on a country-specific multilevel regression (DV = 1 if voted for a populist party; individual and country-level controls included; region random effects). Countries with representative number of records (N>1,000) only.

Figure 4.5 Factor analyses using alternative measures of anti-immigrant attitudes and institutional distrust.
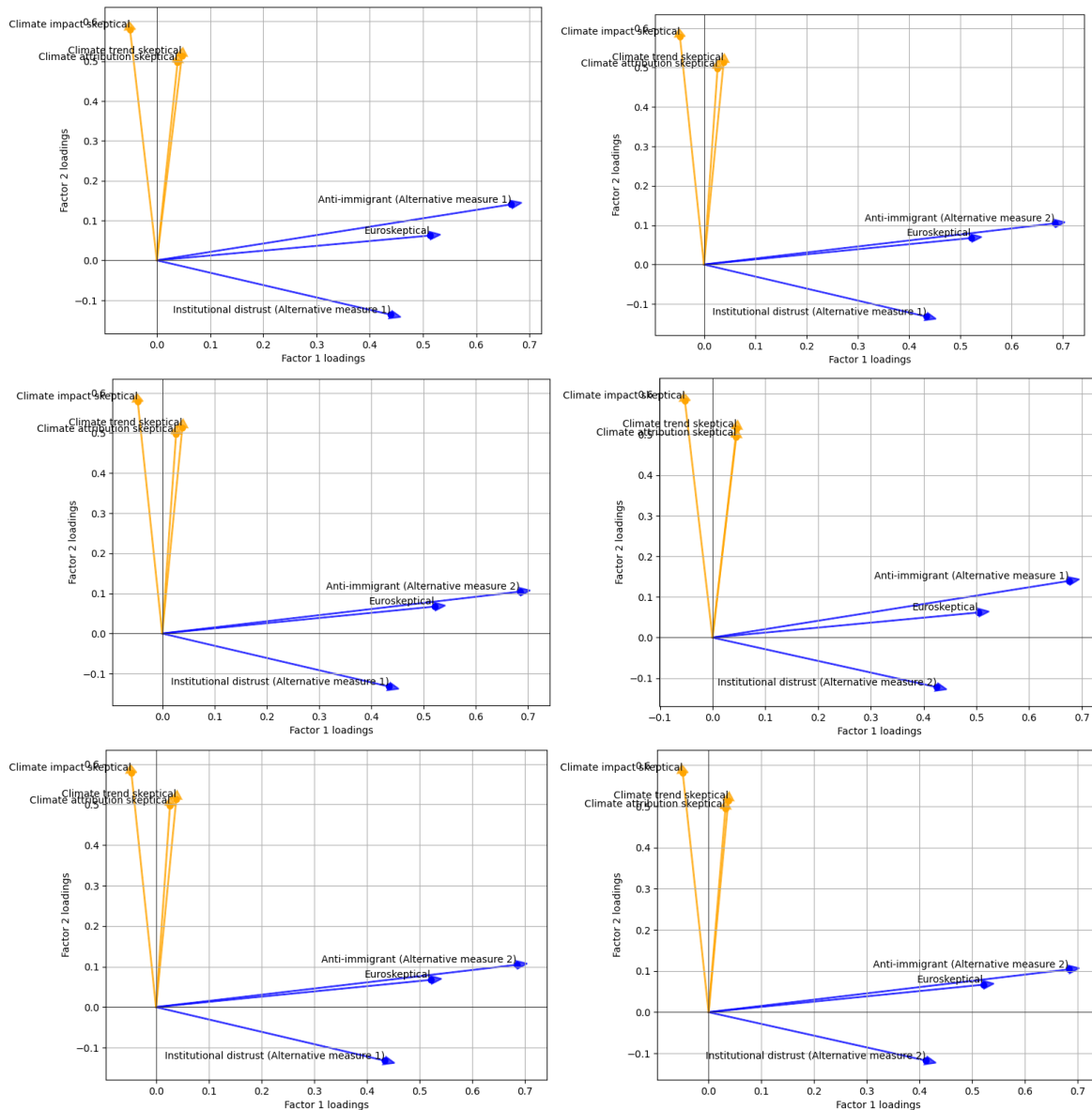
Note: *Anti-immigrant:* Country's cultural life undermined or enriched by immigrants (Alternative measure 1); Immigration good or bad for country's economy (Alternative measure 2). *Institutional distrust:* Distrust in politicians (Alternative measure 1), Distrust in political parties (Alternative measure 2). All measures z-standardized. N = 17,449.

Appendix A4

Table A4.1 Sample countries and election years.

Country	NUTS level of aggregation	N of regions	National elections year	Cumulative populist vote share, %	Notes
Austria	NUTS-2	9	2013	29.70	
Belgium	NUTS-2	11	2014	25.45	
Czechia	NUTS-3	14	2013	25.53	
Estonia	NUTS-3	5	2015	32.96	
Finland	NUTS-3	19	2015	17.65	
France	NUTS-2	27	2012	13.60	Legislative elections were held in France on 11 and 18 June 2017, but 70% of French respondents of ESS Round 8 survey were polled throughout 2016, thus we use the 2012 results.
Germany	NUTS-1	14	2013	13.30	
Hungary	NUTS-3	20	2014	65.09	
Italy	NUTS-2	21	2013	77.75	
Lithuania	NUTS-3	11	2016	16.75	
Netherlands	NUTS-2	12	2012	19.73	General elections were held in the Netherlands on Wednesday 15 March 2017, but 87% of Dutch respondents of ESS Round 8 survey were polled throughout 2016, thus we use the 2012 results.
Norway	NUTS-2	7	2013	17.40	
Poland	NUTS-2	18	2015	46.39	
Portugal	NUTS-2	7	2015	0.00	
Spain	NUTS-2	19	2016	21.15	
Sweden	NUTS-3	21	2014	12.86	
Switzerland	NUTS-2	7	2015	30.71	
United Kingdom	NUTS-1	11	2015	13.25	

Note: Cumulative populist vote shares based on authors' calculations using ParlGov and PopuList 3.0 databases.

Table A4.2 Variables description and data sources.

Variable	Description	Source
Dependent variables		
Individual level		
Voted for a populist party	Binary variable encoded as (1) if a party an individual voted for is classified as populist in PopuList 3.0, and (0) otherwise.	ESS item(s): prtvt* (Party voted for in last national election in * [country]). Classification of populist parties based on PopuList 3.0.
Regional level		
Regional populist vote share	Cumulative regional vote share obtained by parties classified as populist in PopuList 3.0.	NUTS-Level Election Database (eu-ned.com), PopuList 3.0 (2023).
Independent variables		
Individual level		
Anti-immigrant attitudes	Sentiments towards immigrants. Reversed so that higher values reflect greater hostility towards immigrants; standardized.	ESS item: imwbcnt (Immigrants make country worse or better place to live).
Euroskepticism	Degree of Euroskepticism. Reversed so that higher values reflect a greater degree of Euroskepticism; standardized.	ESS item: euftf (European Union: European unification go further or gone too far).
Institutional distrust	Reversed so that higher values reflect a greater degree of distrust; standardized.	ESS item: trstprl (Trust in country's parliament).
Climate trend skepticism	Beliefs about climate change happening; standardized.	ESS item: clmchng (Do you think world's climate is changing?).
Climate attribution skepticism	Beliefs about the human nature of climate change. The answer option 'I do not believe the climate is changing' is excluded to avoid overlap with the trend skepticism measure. Reversed so that higher values indicate a greater degree of skepticism; standardized.	ESS: ccnthum (Do you think climate change caused by natural processes, human activity, or both?).
Climate impact skepticism	Beliefs about the impact of climate change; standardized.	ESS: ccgdbd (Climate change good or bad impact across world).
Age	Respondent's age.	ESS item: agea.
Education	Years of full-time education completed.	ESS item: eduyrs.
Gender	Dummy: (1) if male, (0) female.	ESS item: gndr (Gender).
Immigrant background	Dummy: (1) if first- or second-generation immigrant, (0) otherwise.	ESS item: brncntr; facntr; mocntr.

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Urban resident	Dummy: (1) if a respondent declares to reside in an urban settlement (big city, city suburbs, town), (0) otherwise.	ESS item: domicil.
Non-religious	Dummy: (1) if reported to be non-religious, (0) otherwise.	ESS items: rlgblg (Belonging to particular religion or denomination); rlgdnm (Religion or denomination belonging to at present).
Struggles on present income	Dummy: (1) if a respondent finds it hard or extremely hard to live on present income, (0) otherwise;	ESS item: hincfel (Feeling about household income nowadays).
In low-skilled job	Dummy: (1) if a respondent declares to be employed in an occupation that is classified as low-skilled, (0) otherwise.	ESS items: iscoco (Occupation, ISCO88, Rounds 1-5), isco08 (Occupation, ISCO08, Rounds 6-10); Classification of low-skilled occupations based on OECD (2019), ISCO groups 5 and 9.
Ever unemployed >3 months	Dummy: (1) if a respondent was ever unemployed and seeking work for a period more than three months, (0) otherwise.	ESS item: uemp3m (Ever unemployed and seeking work for a period more than three months).
Interest in politics	Interest in politics: from (1) no to (4) strong interest in politics.	ESS item: polintr (How interested in politics).
Placement on left-right scale	Subjective placement on the left-right political spectrum on a scale from 0 (left) to 10 (right).	ESS item: lrscale (Placement on left right scale).
Country level		
GDP per capita	Gross domestic product at current market prices in Euros per inhabitant.	World Bank World Development Indicators Database.
Western Europe	Dummy: (1) if country is in Western Europe, (0) otherwise.	Countries in the sample classified as Western Europe: Austria, Belgium, Switzerland, Germany, Spain, Finland, France, United Kingdom, Ireland, Iceland, Italy, Netherlands, Norway, Portugal, Sweden.
Regional level		
Regional GDP per capita	Gross domestic product at current market prices in Euros per inhabitant by NUTS region. Figures for the UK are converted at EUR/GBP 2016 rate of 1.2233.	Eurostat; UK Office for National Statistics.
Regional population density	Population density per squared kilometre by NUTS region.	Eurostat.

Figure A4.1 Scree plot of eigenvalues.
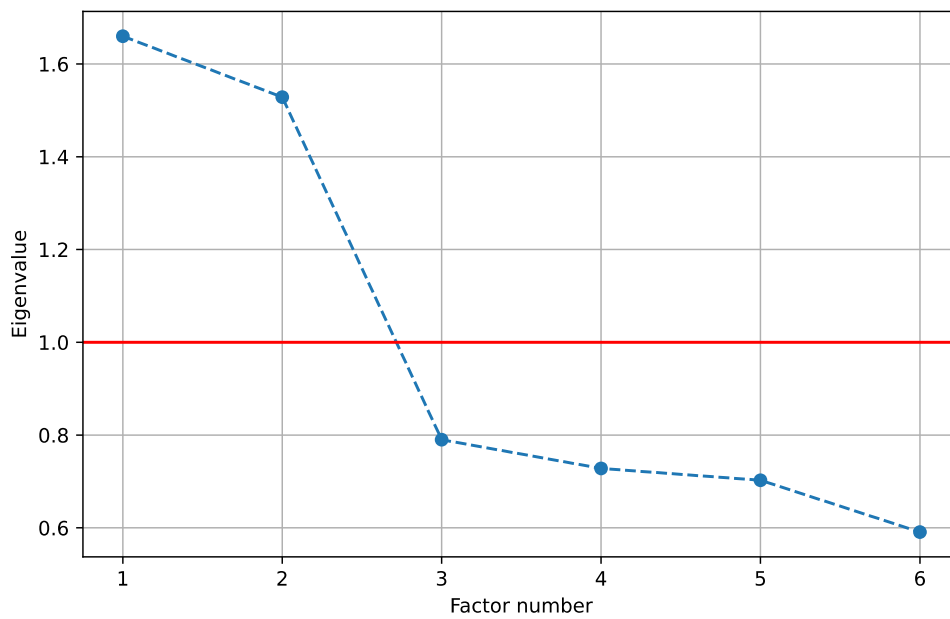
Figure A4.2 Scheme of societal segments.

		Anti-sentiment	
		Below median	*Above median*
Climate skepticism	*Below median*	Neither anti nor climate skeptical	Anti but not climate skeptical
	Above median	Not anti but climate skeptical	Anti-everything

Summary

This thesis examines how individual values, attitudes, and socio-economic backgrounds shape electoral behavior. It contributes to the literature by analyzing how economic insecurity, cultural threat, and climate skepticism influence support for populist parties across European countries. Through three interconnected empirical studies, the thesis traces the evolution of populist support in Europe: it revisits the economic and cultural foundations of populist voting, examines how the cultural channel operates among a less obvious populist audience—immigrants—and investigates the role of climate skepticism as an emerging dividing line in European politics.

Globalization has brought deep economic and cultural changes to European societies. While it has created new opportunities, it has also left certain groups behind — economically vulnerable, culturally anxious, or both. These dynamics have created fertile ground for populist movements, which present themselves as voices for 'the people' against distant 'elites' and unwelcome social change. Scholars typically explain this populist surge through two lenses: economic insecurity and cultural backlash. Yet these explanations often operate in parallel, offering only partial views of what drives populist support. This thesis contributes by showing how these forces interact — and how new dividing lines, like climate change, are becoming politicized in similar ways.

All three studies draw on high-quality, cross-national data from the European Social Survey (ESS), which captures attitudes, socio-economic backgrounds, and voting decisions of thousands of Europeans over the past two decades, and are complemented by country-level economic indicators in Chapter 2 and regional vote shares from the EU-NED database in Chapter 4. **Chapter 2** revisits the economic and cultural roots of populism, but adds a new dimension: the role of the welfare state. It theorizes and tests two opposing effects. On one hand, generous welfare systems can cushion economic hardship, reducing the appeal of populist platforms (a bail-out effect). On the other, they may exacerbate resentment toward perceived 'outsiders' benefiting from redistribution (an anti-solidarity effect). The analysis finds that both mechanisms are at play. Economic insecurity increases populist support more strongly in countries with larger welfare states, while welfare generosity also strengthens the link between anti-immigrant attitudes and populist voting. These findings suggest that well-designed welfare policies must navigate both social protection and perceptions of fairness to avoid unintended political consequences.

Chapter 3 shifts the focus to a group often overlooked in social science research on migration attitudes and populism: immigrants themselves. It asks how economic and cultural drivers of anti-immigrant attitudes play out among immigrant populations themselves. Using rich individual data from 21 European countries, the study finds that immigrants — especially first-generation and non-European origin — tend to hold more pro-immigration views than non-immigrants. It also shows that economic insecurity is associated with anti-immigrant attitudes among immigrants, though its contribution is smaller than for non-immigrants. At the same time, larger cultural gaps between established and newer immigrant groups similarly correlate with greater opposition to immigration among both immigrants and non-immigrants. These findings challenge binary thinking about immigrant and non-immigrants attitudes and show how cultural concerns can emerge even within diverse populations, carrying implications for social cohesion and policy design.

Chapter 4 explores an emerging frontier of populist discourse: climate change. Populist parties increasingly frame climate policy as a top-down agenda that ignores ordinary people's concerns. This chapter examines whether climate skepticism independently drives populist support or simply reflects broader discontent — such as anti-immigrant sentiment, Euroskepticism, or institutional distrust. Using rich individual data across 217 Euroepan regions, the analysis finds that climate skepticism is linked to populist voting, but its effect is modest and secondary to more established drivers. Regional-level analysis further shows that climate skepticism alone does not expand the populist vote base.

Across all chapters, the findings contribute new empirical insights to demand-side theories of populism. They confirm the relevance of both economic and cultural explanations, but emphasize that their interaction is central to understanding populist support. Methodologically, this thesis contributes to the literature by testing more precise and varied measures of cultural threat (Chapter 2) and applying these to diverse population segments in (Chapters 3 and 4). It also brings in emerging themes, such as climate change polarization, offering direction for future research and theory-building.

In summary, this thesis broadens the understanding of what has fueled populist support in Europe on the demand (voter) side. It shows that economic and cultural anxieties are deeply intertwined, and that new issues—like climate change—are increasingly framed in populist terms. These findings offer timely insights into the political consequences of the social changes Europe continues to navigate.

Samenvatting

Dit proefschrift onderzoekt hoe individuele waarden, opvattingen en sociaaleconomische achtergronden het stemgedrag beïnvloeden. Het draagt bij aan de literatuur door te analyseren hoe economische onzekerheid, culturele dreiging en klimaatscepsis samenhangen met steun voor populistische partijen in Europese landen. Aan de hand van drie onderling verbonden empirische studies volgt het proefschrift de evolutie van populistische steun in Europa: het herbeoordeelt de economische en culturele fundamenten van populistisch stemgedrag, onderzoekt hoe het culturele kanaal werkt onder een minder voor de hand liggend populistisch publiek — immigranten — en analyseert de rol van klimaatscepsis als een opkomende scheidslijn in de Europese politiek.

Globalisering heeft ingrijpende economische en culturele veranderingen teweeggebracht in Europese samenlevingen. Hoewel het nieuwe kansen heeft gecreëerd, heeft het ook bepaalde groepen achtergelaten — economisch kwetsbaar, cultureel onzeker, of beide. Deze dynamiek heeft vruchtbare grond gecreëerd voor populistische bewegingen, die zichzelf presenteren als de stem van 'het volk' tegenover 'de elite' en ongewenste maatschappelijke veranderingen. In de literatuur worden deze populistische verschijnselen doorgaans verklaard aan de hand van twee invalshoeken: economische onzekerheid en culturele backlash. Deze verklaringen opereren echter vaak naast elkaar, en bieden slechts gedeeltelijk inzicht in de oorzaken van populistische steun. Dit proefschrift laat zien hoe deze krachten elkaar beïnvloeden — en hoe nieuwe breuklijnen, zoals klimaatverandering, op vergelijkbare wijze worden gepolitiseerd.

Alle drie de studies maken gebruik van data uit het internationaal vergelijkende European Social Survey (ESS), waarin de houdingen, sociaaleconomische achtergronden en stemkeuzes van duizenden Europeanen gedurende de afgelopen twintig jaar in kaart gebracht worden. Deze gegevens worden in hoofdstuk 2 aangevuld met economische indicatoren op landenniveau en in hoofdstuk 4 met regionale stemresultaten uit de EU-NED-database. **Hoofdstuk 2** her-analyseert de economische en culturele wortels van populisme en voegt daar een nieuwe dimensie aan toe: de rol van de verzorgingsstaat. Twee tegengestelde effecten worden theoretisch onderbouwd en empirisch getest. Enerzijds kunnen genereuze welvaartsstelsels economische tegenspoed verzachten en daarmee de aantrekkingskracht van populistische partijen verminderen (het 'bail-out'-effect). Anderzijds kunnen ze ook wrevel opwekken jegens 'buitenstaanders' die vermeend profiteren van herverdeling (het anti-

147

solidariteitseffect). De analyse toont aan dat beide mechanismen een rol spelen. Economische onzekerheid vergroot de steun voor populistische partijen sterker in landen met een ruimhartige verzorgingsstaat, terwijl deze ruimhartigheid ook het verband versterkt tussen anti-immigratiehoudingen en populistisch stemgedrag. Deze bevindingen suggereren dat zorgvuldig ontworpen sociaal beleid zowel sociale bescherming als rechtvaardigheidspercepties moet balanceren om ongewenste politieke effecten te voorkomen.

Hoofdstuk 3 verlegt de focus naar een groep die vaak wordt overgeslagen in sociaalwetenschappelijk onderzoek naar migratiehoudingen en populisme: immigranten zelf. Het hoofdstuk onderzoekt hoe economische en culturele drijfveren van anti-immigratiehoudingen zich manifesteren onder immigranten zelf. Aan de hand van rijke individuele gegevens uit 21 Europese landen blijkt dat immigranten — vooral eerst generatie immigranten en mensen van niet-Europese herkomst — gemiddeld genomen positiever staan tegenover immigratie dan niet-immigranten. Ook blijkt dat economische onzekerheid bijdraagt aan anti-immigratiehoudingen onder immigranten, zij het in mindere mate dan bij niet-immigranten. Tegelijkertijd correleren grotere culturele verschillen tussen gevestigde en nieuwere immigrantengroepen met een sterkere oppositie tegen immigratie bij beide groepen. Deze bevindingen gaan in tegen het binaire denken over de houding van immigranten en niet-immigranten en tonen aan hoe culturele spanningen ook binnen diverse bevolkingsgroepen kunnen ontstaan, met gevolgen voor sociale cohesie en beleidsontwikkeling.

Hoofdstuk 4 onderzoekt een opkomend thema binnen populistische retoriek: klimaatverandering. Populistische partijen framen klimaatbeleid steeds vaker als een top-down agenda die geen rekening houdt met de zorgen van gewone burgers. Dit hoofdstuk analyseert of klimaatscepsis op zichzelf leidt tot populistische steun, of slechts een uiting is van bredere onvrede — zoals anti-immigratiegevoelens, euroscepsis of institutioneel wantrouwen. Aan de hand van individuele gegevens uit 217 Europese regio's laat de analyse zien dat klimaatscepsis weliswaar samenhangt met populistisch stemgedrag, maar dat dit effect klein is en ondergeschikt aan meer gevestigde determinanten. Analyse op regionaal niveau toont bovendien aan dat klimaatscepsis op zichzelf de populistische achterban niet vergroot.

Over alle hoofdstukken heen leveren de bevindingen nieuwe empirische inzichten op voor vraagkant-verklaringen van populisme. Ze bevestigen het belang van zowel economische als culturele verklaringen, maar benadrukken dat hun onderlinge wisselwerking essentieel is om populistische steun te begrijpen. Methodologisch draagt dit proefschrift bij aan de literatuur door meer verfijnde en diverse meetmethoden van culturele dreiging te testen (hoofdstuk 2) en

deze toe te passen op uiteenlopende bevolkingsgroepen (hoofdstukken 3 en 4). Daarnaast introduceert het opkomende thema's, zoals de polarisatie rond klimaatverandering, en biedt het richting voor toekomstig onderzoek en theorieontwikkeling.

Kortom, dit proefschrift verdiept het inzicht in wat populistische steun in Europa aanwakkert aan de vraagzijde (de kiezer). Het laat zien dat economische en culturele angsten nauw met elkaar verweven zijn, en dat nieuwe kwesties — zoals klimaatverandering — in toenemende mate in populistische termen worden geframed. Deze bevindingen bieden relevante inzichten in de politieke gevolgen van de sociale veranderingen waarmee Europa vandaag de dag wordt geconfronteerd.

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