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**Public Opinion and Immigration in Europe:
Can Regional Migration Flows Predict Public
Attitudes to Immigration?**

Lenka Dražanová and Jérôme Gonnot

European University Institute
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Abstract

This article investigates how European public opinion has responded to short-term variations in regional foreign-born immigration over the past decade (2010-2019). Combining data from the European Social Survey and the European Union Labour Force Survey, we test how natives' opinions over migration policy and the contribution of immigrants to society have changed with the net rate of international migrants in 183 EU regions from 21 countries. We find that while European Union natives living in regions with a higher share of foreign-born populations are generally less anti-immigrant, a short-term increase in the number of immigrants within a given region is associated with more negative attitudes in Western Europe only. Moreover, our gender and origin decomposition indicate that male immigrants and those born outside of the European Union are driving most of the negative association between public opinion and changes in the level of immigration in Western European countries, while the educational attainment of migrants makes little difference. The scope of our analysis for Central and Eastern Europe is more limited due to the smaller share of foreign-born immigrants living in those regions. Despite this caveat, our analysis suggests that inflows of European migrants in Central and Eastern Europe are generally associated with more positive views towards immigration, regardless of their skill level. Our findings demonstrate the importance of temporal dynamics for attitudes to immigration. They also point to the need to analyse not only cross-country differences but also regional differences in those attitudes.

Keywords

Attitudes to immigration; migration flows; public opinion; regions

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1. Introduction

Attitudes to immigration are becoming part of a new political cleavage in many countries (Kriesi et al., 2012). While a growing share of foreign-born residents is viewed positively by those stressing the benefits of immigration, others regard these demographic changes with suspicion. Especially in the aftermath of the so-called “migration crisis”, governments of Western as well as Central and Eastern European countries, though historically on the sending side of immigration, have faced public resentment against immigrants among their domestic population.

Against this backdrop, opposition to immigration has gained a lot of attention from social scientists. While the majority of studies have focused on individual drivers of attitudes to immigration (see Dražanová et al., 2022 for a meta-analysis), the scientific literature has shown that contextual drivers, and in particular, the real or perceived size of immigration can have a significant influence on public opinion (see for instance Alesina et al., 2018). At the same time, several recent studies have documented the role played by immigrants’ characteristics as potential drivers of attitudes towards migration in Europe (Markaki and Longhi, 2013; Bridges and Mateut, 2014; Weber, 2015; Hale Williams and Chasapopoulos, 2019). This work contributes to this literature by exploring the link between the size and composition of international migration flows on individuals’ attitudes towards immigration in European regions and deepening our understanding of the macro-level drivers of attitudes to migration in European countries. It provides original and valuable insight into how the regional temporal changes of foreign-born immigrants predict attitudes towards immigration. More specifically, it has been for instance documented that the public response to the arrival of Syrian and Ukrainian refugees has been very different, as Europeans in most countries appear to be much more welcoming of the latter (see for example Dražanová and Geddes, 2022). Our study helps unpack some of the possible origin, educational and gender-based drivers behind these differences.

Previous empirical research has examined the impact of regional factors on attitudes towards immigrants in Europe, and in particular how the size of immigration and the characteristics of immigrants predict attitudes to immigration. In this regard, our paper is similar to Markaki and Longhi (2013) and Hale Williams and Chasapopoulos (2019). However, we differentiate ourselves from these studies in several ways. While these works focus on the effect of between-region variations in the share of foreign-born immigrants, we primarily consider how short-term, within-region variations predict attitudes to immigration. Traditionally, the share of the foreign-born population residing in a territory is usually the product of long-term changes and migration history, whose effects can be hard to disentangle from other macro-level, contextual drivers of attitudes to immigration such as economic conditions, cultural and religious beliefs, as well as national or regional policies. In this regard, we believe the predictive power of immigration on public opinion is better identified by focusing on migration pressure, or how natives’ attitudes towards immigration change with the recent arrival of foreign-born immigrants. In particular, we focus our attention on within-region, short-term temporal variations in the regional share of foreign-born immigrants.

A few studies have examined the impact of migration flows on natives’ attitudes towards preferences for redistribution (see for instance Murard, 2017) or voting behaviour (Moriconi et al., 2019). Others have studied more specifically their effect on support for far-right parties (Halla, Otto and Steinhardt, 2014; Brunner and Kuhn, 2018; Dustmann et al., 2019; Moriconi et al., 2018). Only a handful of papers, however, investigate the relationship between natives’ exposure to short-term variations in the presence of foreign-born individuals and their attitudes towards immigrants. Among them, Karreth et al. (2015) find that increasing diversity is associated with negative attitudes toward immigrants among natives on the political right, while Newman and Velez (2014) document how rapidly growing immigration can lead to increased hostility when immigrants are perceived as a threat by the native population. Our paper extends this line of research by looking at the predictive power of regional migration flows on attitudes towards immigration at the European level, which has not yet been studied. One exception is Murard (2017), who examines the impact of immigration on preferences

for redistribution and attitudes towards migration policy, finding a positive correlation between the arrival of migrants and anti-immigration attitudes between 2002 and 2012. Unlike him, we focus our attention on the past decade (2010-2019), a period when European countries experienced major economic turbulences and rising immigration. We also analyse the composition of these migration flows, distinguishing between migrants' origin and skill level, and review differences between Western and Central and Eastern European countries from a comparative perspective. Finally, our analysis is one of the first to investigate how natives' attitudes vary with the gender composition of migration flows. The differential effects of immigration on public opinion based on migrants' gender, ethnicity, and education are important to study because they can provide insights into how certain groups may experience unique challenges or opportunities in the host society. In particular, if certain groups of immigrants are facing greater discrimination, policymakers may need to take steps to address this issue and ensure that all immigrants have access to equal opportunities and develop more informed policies that are tailored to the specific needs and experiences of different immigrant groups.

We ask the following research question: How do regional temporal variations in flows of foreign-born migrants predict changes in natives' attitudes about migration policy and their assessment of migrants' economic, cultural and overall contribution to society?

Our analysis combines individual-level information with regional-level data from various sources. To measure immigration attitudes, we use the European Social Survey (ESS) data from rounds 5 to 9 and build two indices about natives' attitudes to immigration. Firstly, their policy preference regarding levels of immigration. Secondly, their assessment of the economic, cultural, and overall contribution of immigration to their country. The data cover 97 193 individual respondents surveyed between 2010 and 2019 in 183 regions across 21 European countries. Our measure of regional migrant flows captures short-term variations in the share of foreign-born individuals at the NUTS2 regional level, obtained from the European Labour Force Survey. We also build on the recent literature on the determinants of public attitudes to immigration and control for individual drivers as well as contextual, region-specific factors such as GDP, unemployment rate and population density.

Our goal is to explain the differences in individual attitudes to immigration through variations in the share of immigrants within European regions and across time. The complexity of our design requires an accurate specification of influential factors at each level of analysis. In the present research, the data has a four-level hierarchical structure with individuals (micro-level) nested in region-years, regions and countries (macro-level). When, as here, nested data across multiple levels of analysis are present, it is appropriate, both theoretically and statistically, to employ multilevel models. We apply four-level random effects multilevel models that allow the estimation of effects based on intra-regional differences over time and stable differences between regions (Fairbrother, 2014; Bell et al., 2019). Immigration in Europe occurs not only across countries but also across regions within countries. To maximize the variation in immigrant shares across regions at the highest possible level of granularity, we focus on NUTS2 regions whenever possible.

Our findings reveal a statistically significant and positive association between attitudes to immigration and immigrants' historical presence in the European Union – as measured through the share of the foreign-born population over the past decade.¹ This pattern holds in both Western and Central and Eastern Europe. In contrast, short-term increases in the share of foreign-born immigrants are correlated with more negative attitudes on both migration policy as well as natives' assessment of immigrants' contribution to the country, but only in Western European regions. What's more, our results indicate that the extent to which immigrants' arrival negatively correlates with attitudes to immigration largely depends on their origin and gender. Male immigrants and those born outside of the European Union appear to be driving most of the negative association between changes in the level of foreign-born population and public opinion towards immigration policy and immigrants' contribution. On the other hand, we find no significant differences between the effects of tertiary

¹ The UK is included in our sample despite having left the European Union in 2020. However, our period of investigation ranges from 2010 until 2019, a period during which the UK was still a member of the EU.

educated and non-tertiary educated migrants on attitudes towards immigration after accounting for their origins. In fact, when using temporal changes in regional shares of the foreign-born population to predict changes in attitudes to immigration, our findings indicate that the effect of origin trumps education.

The scope of our analysis for Central and Eastern Europe is more limited due to the smaller share of the foreign-born population living in those regions. Despite this caveat, our analysis suggests that inflows of European migrants are generally associated with more positive views towards immigration, regardless of their skill level. However, given data limitations, we remain cautious as to the general validity of this claim.

Our paper makes a direct contribution to the studies looking at the relationship between immigrants' presence and public opinion on immigration in Europe. Hatton (2016) finds that pro-immigration opinion is negatively related to the share of immigrants living in a country. At the regional level, several empirical papers examine the impact of immigrants' presence on attitudes towards immigrants (Rustenbach, 2010; Green et al., 2010; Markaki and Longhi, 2013; Bridges and Mateut, 2014; Weber, 2015; and Hale Williams and Chasapopoulos, 2019). For instance, Weber (2015)'s results show a negative correlation between the national proportion of immigrants and perceived threat. Across European NUTS1 regions, both Markaki and Longhi (2013) and Hale Williams and Chasapopoulos (2019) find that regions with a higher percentage of immigrants born outside the EU have a higher probability that natives express negative attitudes to immigration. Among the few papers investigating local migration flows, Kawalerowicz (2021) finds that anti-immigrant attitudes in the UK are more likely to be expressed by natives who live in constituencies where there has been a large change in diversity between 2001 and 2011. On the same topic, Karreth et al. (2015) show that increasing and visible diversity in Austria, Germany, and Switzerland is associated with negative attitudes toward immigrants, but only among natives on the political right. Like us, Murard (2017) studies the effect of regional flows of international migrants on preferences regarding migration policy. He finds that where immigrants tend to compete with natives for jobs due to similar skills or occupations, natives prefer policies that support welfare and put restrictions on migration. Finally, it is worth stressing there is a paucity of theoretical and applied work studying the specific implications of gender-specific migration. On that issue, only a handful of surveys and laboratory experiments - with limited external validity - have been carried out (Ward, 2018; Gerete et al., 2020), finding that male immigrants or out-group subjects are usually met with more negative attitudes.

Our paper also contributes to the growing literature studying the effect of immigration on political preferences. In this field, the link between immigration and redistribution is a major topic (see Elsner and Concannon, 2020 for a recent review). Previous sociological works (Senik et al., 2009) have documented the negative association between exposure to immigrants and support for welfare spending. Exploiting within-country variations in the share of immigrants at the regional level, Alesina et al. (2021) find that native respondents display lower support for redistribution when the share of immigrants in their residence region is higher (see also Eger and Breznau, 2017). The link between immigration and support for redistribution is further documented by Moriconi et al. (2019), who find that larger inflows of highly educated immigrants are associated with European citizens shifting their votes toward parties that favour an expansion of the welfare state. On the other hand, inflows of less-educated immigrants induce European parties to endorse platforms less favourable to social welfare. Finally, Gonnot (2021) explores how the presence of immigrants and their vote on redistribution policies affect citizens' attitudes towards immigration. Recently, several studies have also investigated the connection between support for populist and far-right political parties and immigration in various countries. Dustmann et al. (2018) analyse refugee resettlement and voting behaviour in Denmark. Otto and Steinhardt (2014) study the effect of immigration on the vote for the German People's Union in Hamburg and Halla et al. (2017) look at votes for the Freedom Party of Austria. At the European level, Moriconi et al. (2018)'s study of NUTS2 regions concludes that an

inflow of less-skilled immigrants increases the propensity of natives to vote for populist parties, while an inflow of highly skilled immigrants reduces that propensity. In the same vein, recent works have shown that immigration was one of the key factors in the decision of the UK to leave the European Union (Portes, 2021). Barone et al. (2014) conclude against the contact hypothesis at the city level, finding that immigration generated a sizable causal increase in votes for the centre-right coalitions with a political platform less favourable to immigrants in Italy.

Finally, this work is related to a recent working paper by Di Iasio and Wahba (2021), which proposes a symmetric approach to ours and studies the causal impact of attitudes to immigration on migration flows. Their findings indicate a negative causal relationship between anti-immigration attitudes and migration inflows to the EU. If natives' hostility acts as a deterrent for migrants, this reinforces concerns about the self-selection of immigrants to areas where natives have more positive views on immigration.

The next section briefly introduces the theoretical framework on which we build to explore the relationship between regional migration and public opinion. We then present the data and our empirical strategy in Section 3. Our findings are discussed in Section 4. We conclude and discuss some opportunities for further research in Section 5.

2. Theoretical Background

This paper builds on the large body of literature on the determinants of attitudes to immigration. Natives' fears over immigration are usually regarded as a mix of economic and cultural concerns.

The theory of economic competition posits that natives and immigrants are economic rivals. In the labour market, this implies that immigration is perceived by natives as a threat to wages and job security (Citrin et al., 1997; Facchini et al. and Mayda, 2012; Scheve and Slaughter, 2001). Negative perceptions about immigrants also appear to be driven by the fear that foreigners represent a net fiscal burden (Dustmann and Preston, 2006, 2007; Boeri, 2010), leading to restrictive preferences about redistribution and effectively lower public spending in some instances (Razin et al., 2002; Speciale, 2012). Several works have shown that the perceived economic threat from immigrants plays a substantial part in driving natives' attitudes (Slaughter, 2001; Hanson et al., 2007; Facchini and Mayda, 2009; Hainmueller and Hiscox, 2010; Pardos-Prado and Xena, 2019). Besides labour market competition, a study by Naumann et al. (2018) documents that highly skilled European natives prefer highly skilled over low-skilled immigrants as a result of tax concerns, especially when fiscal exposure to migration is high. Card et al. (2012) find that concerns about changes in local amenities such as the composition of the neighbourhood and workplace are more important in explaining variation in natives' attitudes toward immigration than concerns about economic factors such as wages and taxes. Hoxhaj and Zuccotti (2021) also find that the positive association between a higher concentration of immigrants and attitudes towards them decreases as the socioeconomic conditions of neighbourhood areas worsen.

The cultural threat, or conflict, theory, postulates that natives perceive immigrants as a challenge to their ethnicity and values. It holds that observable differences lead to discrimination and often hostility between groups with a preference for their own ethnicity (Gorodzeisky and Semyonov, 2016; Hainmueller and Hiscox, 2007; Malhotra, 2013). As a result, where immigrants are socio-ethnically different, their arrival may upset the demographic and social structure of society and elicit more negative responses (see for instance Hainmueller and Hangartner, 2013) or increased support for xenophobic, far-right parties (see for instance Barone et al., 2014). Symmetrically, it is important to highlight how the context of immigration can also improve public opinion: According to the contact theory, a larger immigrant group can increase the incidence of contact between natives and newcomers at the local level, therefore reducing prejudice and the perception of threat in the long run.

In this regard, the work of Coenders and Scheepers (2008) and Hopkins (2010) suggest that negative reactions to immigrants are most likely in response to competition from recent foreign arrivals, rather than existing ethnic diversity. Therefore, natives who have been recently exposed to immigrants, and experienced a rapid increase in the number of immigrants living around them are likely to be immune to prejudice-reducing contact with immigrants, while feelings of economic or/and ethnic competition are then more likely to emerge.

Considering the previous discussion, we expect attitudes to immigration to vary based on immigrants' ethnicity and education. In particular, if the public generally prefers highly educated immigrants as they are seen as more desirable and less likely to be a burden on the host society (Mayda, 2006; Naumann, Stoetzer and Pietrantuono, 2018) economic concerns among European natives are more likely to be activated by inflows of immigrants with lower skills and education. Second, to the extent that cultural distance between natives and immigrants drives public opinion response (Gorodzeisky and Semyonov, 2016), the arrival of non-European immigrants should be associated with more negative attitudes to immigration.

The relative importance of economic and cultural channels also matters. For instance, Dustmann and Preston (2007) show that welfare concerns play a more important role in the determination of attitudes to further immigration than labour market concerns in the UK. Mayda (2006) finds that both economic and non-economic factors significantly influence anti-immigration attitudes. A recent decomposition analysis by Mueller et al. (2020) establishes that economic mechanisms are significant determinants of attitudes, but that other non-economic factors play a more decisive role. Against this backdrop, comparing the predictive power of immigrants' gender and ethnicity will contribute to testing whether non-economic factors are relatively more or less important than economic ones in explaining variations in public opinion.

A third channel driving public opinion regards security threats. These concerns are known drivers of anti-immigration attitudes (Erisen and Kentmen-Cin, 2017; Lahav and Courtemanche, 2012) and include fears of terrorism, sexual assault, theft, and other violence. Although scarce, existing gendered-specific studies corroborate the intuition that these security risks are more prominent among male immigrants. Ward's results (2018) show that groups of immigrants with a large share of young men receive substantially less public support and are perceived as likely to pose security and cultural threats. Ji et al. (2021) found that attitudes toward male immigrants from a violent ecology were more negative than attitudes toward female immigrants from the same ecology. If outgroup men and women are not perceived as posing equal levels of risks, a differentiated analysis based on the gender composition of migration flows should reveal greater hostility against inflows of foreign-born with larger shares of men.

Finally, when it comes to attitudes to immigration, the EU area may not be regarded as a homogeneous set of countries. In fact, despite being all part of the EU, regions from Western and Central and Eastern Europe hold distinct traditions and distinct migration histories that are likely to shape their reaction to inflows of foreign-born immigrants. For instance, Central and Eastern European regions are located in countries that were members of the Communist Bloc for the better part of the second half of the XXth century and only recently joined the European Union. As such, they share political, economic, and cultural path dependencies that are different to those of Western democracies. More importantly, Central and Eastern European countries were historically mostly on the sending side of migration, while most Western democracies in Europe are immigration countries. Within the EU, these differences are reflected by more negative attitudes toward immigration in Central and Eastern European countries (Eurobarometer, 2019, Dennison and Dražanová, 2018). What's more, the dynamics of migration attitudes in Western and Central and Eastern Europe have diverged since 2008: Negative attitudes towards immigrants have decreased in Western Europe, whereas they have increased significantly in Central and Eastern Europe (Bell et al., 2021).

Recent works have also shown that the mechanisms through which political preferences are formed in Western Europe do not necessarily apply to Central and Eastern European citizens (see for example Dražanová, 2017). In terms of public opinion on immigration, media consumption (Meltzer et al., 2021), religion, life satisfaction and political conditions (Bell et al., 2021) influence attitudes towards immigration in Western and Central and Eastern European countries in specific ways. In light of this evidence, we explore the role played by migration flows separately for Western and Central and Eastern regions

3. Data and methods

In this paper, we combine data from multiple sources to create a dataset that includes individual-level information on native individuals' attitudes toward immigration and several regional variables.

At the individual level, the present analysis relies on biannual data from the European Social Survey (ESS). It contains 97 193 respondents from 21 European countries across 183 regions. Because our primary objective is to identify how public opinion reacts to short-term, within-region changes in attitudes to immigration, we only include in our analysis countries surveyed by the ESS at least twice over the time period under scrutiny (2010-2019).² Our analysis also distinguishes between Western and Central and Eastern European regions on account of their historical, economic, cultural, and social differences, as well as their respective migration history. We classify as Western countries Austria, Belgium, Denmark, Germany, Finland, France, Ireland, Italy, Norway, Portugal, Spain, Sweden, and the United Kingdom. On the other hand, we classify Bulgaria, Croatia, the Czech Republic, Hungary, Lithuania, Poland, Slovakia, and Slovenia as Central and Eastern European countries. Using the ESS allows us to disentangle attitudes to immigration across a number of European regions and within regions across time because people of the same region are observed at different time periods. Table A.1 in the Appendix shows the number of respondents for each region and each ESS round included in the sample.

ESS respondents were selected by means of strict probability samples of the resident populations aged 15 years and older at the country level. Respondents also provided information on their socio-demographic characteristics that we use as control measures in our model. We included a set of demographic variables such as age, gender, educational attainment, type of community the respondent resides in (urban versus rural), subjective income difficulties, and minority and citizenship status as controls. These are the factors found most commonly affecting attitudes to immigration (Dražanová et al., 2022). We restrict our sample to natives (defined as respondents born in the country where they were interviewed). We integrate the micro-attitudinal data from the ESS with contextual data at the regional and region-year level to capture the size and composition of the foreign-born population as well as differences in their origin and skill level. These regional-level variables are gathered from various sources, particularly EULFS and the OECD's database, which are described in more detail below.

3.1. Attitudes to immigration

The ESS survey instrument has been widely used by scholars to measure attitudes towards immigration (Hainmueller and Hopkins, 2014). We distinguish between two types of attitudes to immigration in our analysis – *attitudes toward policy preferences regarding the level of immigration* and *the evaluation of the contribution and consequences of immigration on society*. These two dependent variables complement each other. The first one mostly deals with policy debates regarding immigration inflows and captures individuals' preferences for the future. The second one represents opinions on whether immigration is beneficial to the community in the present.

² We discuss the implication of this modelling strategy in section 3.3 (Empirical strategy)

Distinguishing between different types of attitudes to immigration has not always been the case in previous research. While these attitudes co-vary, they are not necessarily the same. For example, it is possible for a respondent to want to reduce the inflow of immigrants, but at the same time recognize their social and democratic rights once admitted. In this study, we specifically analyse attitudes toward allowing immigrants into the country and the perceptions of the effect of immigration. These are different, although strongly connected, dimensions of attitudes to immigration.

3.1.1. Policy variable

Our policy dependent variable is a composite index that measures the overall willingness to allow only a few or many different types of immigrants into the country. Respondents were asked three questions: (1) To what extent do you think [country] should allow people of the same race/ethnic group as the majority to come and live here? (2) To what extent do you think [country] should allow people of different races/ethnic groups as the majority to come and live here? And (3) To what extent do you think [country] should allow people from the poorer countries outside Europe to come and live here? The answers are coded on a four-point scale ranging from (1) allowing many to come and live here to (4) allowing none. We created an average index and rescaled it so that it ranges from 0 to 1.³ The original coding has been reversed so that higher numbers mean more positive attitudes. We included all respondents that have answered at least two of the three items comprising our dependent variable.

3.1.2. Contribution variable

Our contribution dependent variable is a composite index that measures a person's overall assessment of the impact of immigration on their society. Respondents were asked three questions: (1) Would you say it is generally bad or good for [country]'s economy that people come to live here from other countries? (2) Would you say that [country]'s cultural life is generally undermined or enriched by people coming to live here from other countries? and (3) Is [country] made a worse or a better place to live by people coming to live here from other countries? Answers are coded on an eleven-point scale where 0 is the most negative and 10 is the most positive reply. As with the policy variable, we created an average index ranging from 0 to 1, so that the two dependent variables are directly comparable.⁴ We included all respondents that have answered at least two of the three items comprising our dependent variable.

Attitudes of immigration measured in a form of indices comprising several related questions have been widely used by scholars studying attitudes to immigration (see for example Davidov and Meuleman, 2012; Solheim, 2021; Just and Anderson, 2015 for the use of the policy index and Gorodzeisky and Semyonov, 2018; McLaren and Paterson, 2019 for the contribution index).

3.2. Regional migration data

We use repeated, cross-sectional data from the European Labour Force Survey (EULFS) to construct variables that capture the average and the short-term variations in the regional share of migrants at the NUT2 level.⁵ These level and change variables are assigned to each ESS respondent based on the year they were interviewed and his or her region of residence.⁶ Besides demographic information, the EULFS also reports the birthplace of each individual, distinguishing fifteen different regions of

³ The Cronbach's Alpha for the three items is 0.89, thus confirming that the three questions measure the same underlying concept.

⁴ The Cronbach's Alpha is 0.86, thus confirming that the three items measure a similar underlying concept.

⁵ We use the intermediate geographic level, NUTS2, commonly referred to as "regions" in our analysis.

⁶ As a general rule, respondents surveyed between July of year t and June of year $t+1$ are assigned the share of foreign-born in year S_t and respective average avg_t .

origin⁷. We use all foreign-born individuals to compute a measure of the share of immigrants as a share of the total population at the regional level:

$$S_{r,t}^s = \frac{M_{r,t}^s}{Pop_{r,t}}$$

where M is the total stock of migrants in region r born in a foreign country, with skills (tertiary educated or not) and/or origin (Europe or non-European) s, or gender (male or female) in year t.⁸ Thus, S represent that group of immigrants as a share of the total population. The average immigration variable is then constructed as:

$$avg_r^s = \frac{\sum_{t \in T} S_{r,t}^s}{|T|}$$

and represent the average share of immigrants with skills and/or origins in region r over the time period T under investigation. For each region r, T corresponds to the period of time between the first and last year an individual was surveyed by the ESS in region r.

There are two ways to operationalize these regional demographics of interest, and we employ a longitudinal as well as a cross-sectional perspective for each (see methods section). Longitudinally, our main variable of interest captures how Europeans react to shares of (non-)European (non-)tertiary educated foreign-born individuals that are below or above the regional average during the period of investigation.

Table 1 presents basic statistics for the variables we include in the model. Variables are averaged over the considered period at the individual level, region-year level and regional level. The left panel presents the statistics for the full sample of regions. The average share of foreign-born living in the regions is 8.96 %, most of whom are of EU origin and less than tertiary educated. The middle panel contains summary statistics for Western European regions and the right one for Central and Eastern European regions. Several disparities are noticeable. First, the aggregate share of foreign-born immigrants is much lower in Central and Eastern Europe, where 2.15 % of the population are born outside of their country of residence against 11.39 % in Western European regions. Moreover, the composition of immigration is different between the two EU areas. The share of non-European immigrants living in Central and Eastern regions is extremely small (0.09 %), while it stands at 5.09 % in Western Europe. The share of tertiary educated immigrants is also very small in Central and Eastern Europe (0.44 %). In contrast, immigrants' presence in Western Europe is slightly more balanced in terms of skill level and educational attainment.

Figure 1.a and 1.b compares the mean attitudinal trends among Western and Central and Eastern European regions between 2010 and 2019. Although natives' attitudes to immigrants' contribution show less variability than their views on migration policy, we can notice a general pattern: Except for Italy and to a lesser extent Ireland, anti-immigration attitudes in Western Europe have consistently improved or to the least remained stable over the time period considered. In contrast, attitudes in most Central and Eastern European regions have worsened during that same period. Moreover, Western European natives hold generally more positive attitudes compared to their Central and Eastern counterparts, both on matters of migration policy and immigrants' contribution to their destination country.

In light of these differences, we reckon our differentiated approach separating Western from Central and Eastern European regions is appropriate.

7 These regions are the country-groups/regions of residence separately identified: EU15 country different from the country of residence, EU country that joined the EU in 2004, EU country that joined EU in 2007/2013, EFTA, Other European country, North Africa, Other Africa, Near and Middle East, East Asia, South and Southeast Asia, North America, Central America and Caribbean, South America and Australia and Oceania. Germany does not provide information on the birthplace of its foreign-born population. Accordingly, we impute the birthplace of the foreign-born population using information on the nationality of immigrants.

8 European immigrants also include North America and Australia as those immigrants are culturally, ethnically and socio-economically closer to immigrants originating from European countries.

Table 1. Summary statistics

	Full sample					Western Europe					Central and Eastern Europe				
	N	Mean	S.D.	Min	Max	N	Mean	S.D.	Min	Max	N	Mean	S.D.	Min	Max
<i>Outcome variables</i>															
Contribution	94110	0.505	0.217	0	1	62154	0.531	0.214	0	1	31956	0.458	0.216	0	1
Policy	94474	0.529	0.273	0	1	61829	0.561	0.263	0	1	32645	0.468	0.283	0	1
<i>Individual level</i>															
age	96919	49.973	18.799	14	104	62885	50.10	19.01	14	104	34034	49.74	18.40	15	99
university	94909	0.273	0.445	0	1	60798	0.31	0.46	0	1	34111	0.21	0.41	0	1
tertiary without degree	94909	0.054	0.225	0	1	60798	0.06	0.23	0	1	34111	0.05	0.22	0	1
Upper secondary	94909	0.389	0.488	0	1	60798	0.33	0.47	0	1	34111	0.50	0.50	0	1
Lower secondary	94909	0.174	0.379	0	1	60798	0.16	0.37	0	1	34111	0.20	0.40	0	1
female	97146	0.53	0.499	0	1	63055	0.51	0.50	0	1	34091	0.56	0.50	0	1
Living in urban area	97193	0.294	0.456	0	1	63068	0.29	0.45	0	1	34125	0.30	0.46	0	1
Income difficulty	96052	0.235	0.424	0	1	62476	0.16	0.37	0	1	33576	0.37	0.48	0	1
minority	95967	0.091	0.287	0	1	61675	2.63	0.87	1	4	32472	2.31	0.95	1	4
non citizen	97137	0.003	0.056	0	1	62483	0.08	0.28	0	1	33484	0.10	0.30	0	1
<i>Region-year level</i>															
Change in share of foreign-born	580	-0.059	1.257	-7.037	5.439	433	-0.076	1.437	-7.037	5.439	147	-0.009	0.396	-1.927	1.178
Change in share of foreign-born from Europe	580	-0.020	0.683	-3.467	3.62	433	-0.024	0.762	-3.467	3.620	147	-0.008	0.367	-1.754	1.178
Change in share of foreign-born outside Europe	580	-0.039	0.874	-4.991	4.011	433	-0.051	1.011	-4.991	4.011	147	-0.001	0.060	-0.342	0.349
Change in share of tertiary educated foreign-born	580	-0.028	0.619	-4.296	3.202	433	-0.037	0.709	-4.296	3.202	147	-0.001	0.178	-1.136	0.741
Change in share of non-tertiary educated foreign-born	580	-0.036	0.911	-5.623	3.646	433	-0.050	1.040	-5.623	3.646	147	-0.005	0.290	-1.273	0.766
Change in share of tertiary educated European foreign-born	580	-0.016	0.377	-2.457	1.875	433	-0.021	0.427	-2.457	1.875	147	-0.003	0.158	-1.025	0.615
Change in share of tertiary educated non-European foreign-born	580	-0.014	0.302	-1.837	1.591	433	-0.018	0.350	-1.837	1.591	147	-0.001	0.024	-0.130	0.112

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Change in share of non-tertiary educated European foreign-born	580	-0.004	0.475	-2.792	1.874	433	-0.003	0.527	-2.792	1.874	147	-0.005	0.272	-1.180	0.816
Change in share of non-tertiary educated non-European foreign-born	580	-0.024	0.701	-4.068	3.305	433	-0.033	0.811	-4.068	3.305	147	-0.002	0.051	-0.243	0.301
Change in share foreign-born women	580	-0.032	0.671	-3.645	2.979	433	-0.046	0.764	-3.645	2.979	147	0.006	0.239	-1.281	0.769
Change in share of foreign-born men	580	-0.031	0.697	-3.401	3.371	433	-0.041	0.799	-3.401	3.371	147	-0.002	0.192	-0.826	0.772
<i>Regional level</i>															
Share of foreign-born	183	8.966	6.702	0.129	42.499	135	11.389	5.999	2.085	42.500	48	2.151	2.651	0.128	10.910
Share of foreign-born from Europe	183	5.183	4.094	0.129	21.778	135	6.298	3.958	0.787	21.78	48	2.058	2.588	0.128	10.910
Share of foreign-born outside Europe	183	3.780	3.829	0	22.353	135	5.091	3.64	0.497	22.353	48	0.092	0.183	0	0.852
Share of tertiary educated foreign-born	183	2.124	2.170	0.045	14.303	135	2.722	2.217	0.287	14.302	48	0.443	0.555	0.045	2.382
Share of non-tertiary educated foreign-born	183	6.895	4.895	0.105	29.470	135	8.725	4.239	1.683	29.470	48	1.748	2.209	0.104	9.528
Share of tertiary educated European foreign-born	183	1.263	1.264	0.034	8.433	135	1.569	1.312	0.150	8.432	48	0.402	0.509	0.033	2.104
Share of tertiary educated non-European foreign-born	183	0.849	1.050	0	8.206	135	1.141	1.081	0.060	8.206	48	0.026	0.057	0.00	0.265
Share of non-tertiary educated European foreign-born	183	3.914	3.099	0.091	13.839	135	4.718	2.985	0.363	13.838	48	1.652	2.166	0.091	9.451
Share of non-tertiary educated non-European foreign-born	183	2.926	2.953	0	16.083	135	3.943	2.804	0.443	16.082	48	0.065	0.129	0.00	0.585
Share of women foreign-born	183	4.807	3.525	0.101	22.094	135	6.090	3.141	1.124	22.094	48	1.199	1.402	0.101	5.353
Share of men foreign-born	183	4.231	3.227	0.046	20.545	135	5.380	2.915	0.991	20.545	48	1.000	1.284	0.046	5.711
GDP per capita (PPS)	177	24674	9008.3	7007	57365	135	27038	7567	16500	57365	42	17073	9144	7007	49136
% unemployed 15+	181	10.152	4.808	2.6	31.9	134	10.148	5.304	2.6	31.9	47	10.163	3.019	3.7	18.50
Population density	177	361.415	939.455	3.3	6957.2	135	396.034	1016.1	3.30	6957.2	42	250.14	630.211	39.9	3433.6

Figure 1.a. Trends in attitudes towards immigrants' contribution

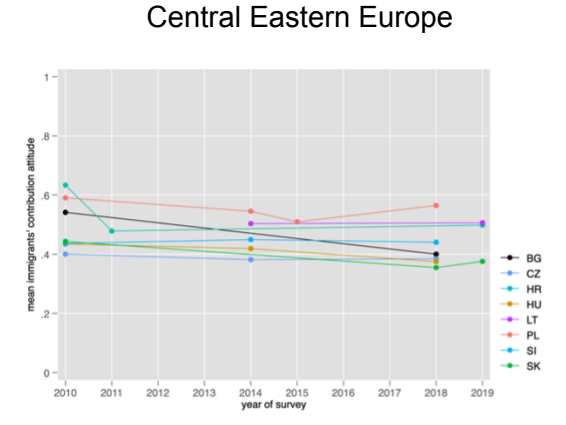
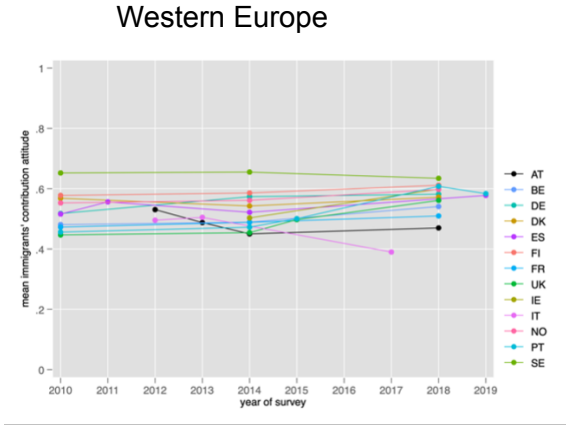
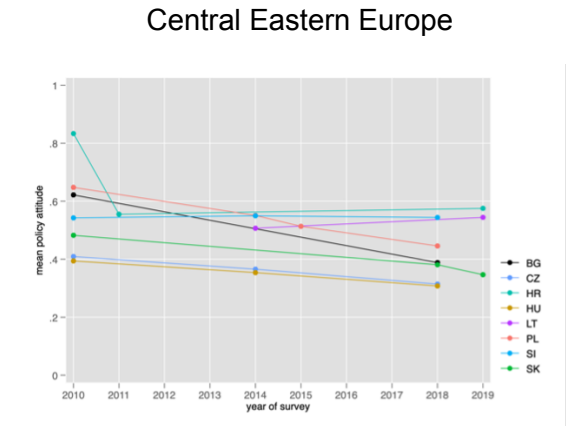
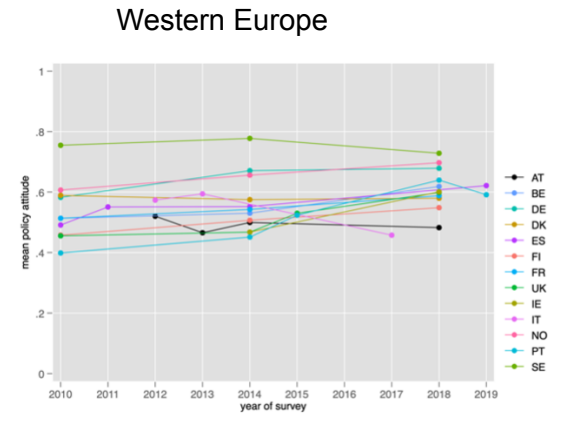


Figure 1.b. Trends in attitudes towards migration policy



3.3. Empirical strategy

As an empirical strategy, we employ random effects multilevel modelling tailored to the structure of repeated cross-sectional data that allows us to decompose the variance of the outcome (immigration attitudes) into a within- and between-region part (Fairbrother 2014; Bell et al., 2019). These models are four-level hierarchical linear models, with individuals nested in region-years nested in regions nested in countries respectively (Schmidt-Catran and Fairbrother, 2016).

The four-level random intercept multilevel models are estimated using restricted maximum likelihood (*reml*).

Our final four-level model⁹ is defined as:

$$Y_{ijkc} = \beta_{0ijkc} + \beta_1 X_{ijkc} + \beta_2 S_{jk}^s + \beta_3 avg_{kc}^s + \beta_4 W_{jkc} + \beta_5 Z_c + f_c + \mu_{kc} + v_{jkc} + e_{ijkc}$$

where, within each region-year j , region k and country c , respondents' attitudes to immigration (Y) are a function of their individual characteristics (vector X), the demeaned version of the variable capturing the annual share of immigrants S , whether at the aggregate level or distinguishing between skill level, origin and/or gender, the average regional share of immigrants avg – also skill level, origin and/or gender specific - over the whole time period considered, region-year characteristics (vector W) and Western/Eastern country-year binary combinations (vector Z). β_{0ijkc} is the mean of attitudes to immigration of individuals in region-year j , region k , and country c , β_1 is the level-1 fixed effects, β_2 and β_4 are the level-2 fixed effects, β_3 is the level-3 fixed effects. In the random part of the model f_c is the residual random effect of country c , μ_{kc} is the residual random effect of region k , v_{jkc} is the residual random effect of region-year j and e_{ijkc} is the random individual variation. The random effects μ_{kc} , v_{jkc} and f_c are assumed normally distributed with mean 0 and variance τ_μ , τ_v and τ_f respectively.

A series of individual sociodemographic controls are included. We control for a person's age (in years), gender (female), and education (four categories with less than lower secondary as reference). Dummy variables are included to control for individuals who live in urban areas (urban area=1) and report having income difficulties (income difficulty=1). We also include a minority dummy for respondents whose at least one parent was born outside of the country and/or is part of an ethnic minority (minority=1). Finally, we also control for respondents' citizenship status (non-citizens=1), since our sample is restricted to respondents who were born in the country but might not be citizens.

The demeaned variable for immigration S yields within regional effects or, in other words, the longitudinal within-region change component (WE) (previously referred to as inflows or short-term variations) for each observation at region-year, while the mean variable avg captures cross-sectional between regional effects (BE). The advantage of this four-level multilevel model is that it distinguishes between-regional effects and within-regional change while controlling for compositional differences at the individual level (see Fairbrother, 2014). Within-effects automatically control for all regional characteristics that are time-invariant and are not afflicted by omitted variable bias due to any time-constant aspects on the regional level such as stable differences in political, historical or legal factors. Between effects are, in turn, based only on time-stable differences between regions.

Apart from controlling for within and between regional effects, we also control for clustering at the country level since possible clustering at the country level might still occur (Schmidt-Catran and Fairbrother, 2016). We employ Western/Eastern country-year dummies to model a general geography-time trend in the full sample and year controls in the split samples to model general time trends.

9 A classic four-level model would also feature level-4 fixed effects and country level characteristics. However, we do not control for any country-level characteristics in our model.

We also collect data about GDP and unemployment rate from the OECD database and Eurostat to use as controls for time-varying differences across regions that could influence individuals' attitudes to immigration. A contextual variable regarding regional population density was also added to the model. Since these are not of our primary interest, only between-region (and not also within-region) macro indicators are included. A similar approach has been used by McLaren (2012) and Jeannet (2020) for country-level controls.

We do not control specifically for any country-level characteristics apart from countries being either part of Western or Central and Eastern Europe. Nevertheless, we assume that individuals from the same country are significantly more similar in their attitudes to immigration than individuals from different countries. This is confirmed by the likelihood ratio (LR) tests comparing a three-level model (individuals nested within region-year and region) to a four-level model (individuals nested within region-year, region and country) ($\chi_1^2 = 174.94$, $p < 0.001$ for contribution and $\chi_1^2 = 223.85$, $p < 0.001$ for policy). Thus, respondents from the same country are significantly more alike in their attitudes to immigration than respondents from different countries.

Clustering at the country level also distinguishes our analysis from the one conducted by Hale Williams and Chasapopoulos (2019). While Hale Williams and Chasapopoulos (2019) employ multilevel modelling, they do not cluster regions within countries. As shown in Table 2 in the two null models, when including countries as a level-4 cluster, they represent the most important clustering factors on immigration attitudes and the regional variation becomes negligible.

It is important to incorporate four-level structures in the models when they arise in the data and lead the higher-level clusters to differ substantially from one another on the response variable. Fitting models with a lower number of levels to data with, in fact, more hierarchical clusters could lead to misattributing response variation to only the included levels. This in turn may lead to drawing misleading conclusions about the relative importance of different sources of influence on the response. For example, it likely leads Hale Williams and Chasapopoulos (2019) to overstate the importance of regions as a source of variation in attitudes to immigration. That is, much of the variation that they attribute to regions may be driven by country-to-country differences in attitudes to immigration (i.e. country policies, practices, context and compositional effects). They thus run the risk of making incorrect inferences and drawing misleading conclusions about the relationships between regional effects on attitudes to immigration.

Table 2 shows two null (or so-called "empty") models in order to partition the variance of our two dependent variables of interest across the four levels. This model provides information on the variance components of immigration attitudes at each level of analysis (Level 1 - individual, Level 2 - region-year, Level 3 - region and Level 4 - country). It includes only an intercept, region-year random effects, region random effects, country random effects and an individual level residual error term. The overall mean attitude toward immigrants' contribution across all countries, all regions, all region-years and all respondents is estimated to be 0.505 on a scale of 0-1, whereas the overall mean attitude toward immigration policy across countries, all regions, all region-years and all respondents is estimated to be 0.533 on a scale 0-1.¹⁰

The null model shows that 86.6 % of the variation in attitudes toward immigrants' contribution lies between individuals within region-years, 3.8 % lies between region-years within regions, 1 % lies between regions within countries and 8.6 % lies between countries. On the other hand, 83,6 % of the variation in attitudes toward immigration policy lies between individuals within region-years, 6 % lies between region-years within regions and 10.4 % lies between countries. There is no variation between regions within countries for attitudes toward immigration policy. However, as we are interested mostly in the effect of region-year variations, this shall not pose a problem for our models. At first, 3.8 and 6 percent might seem small, but the longitudinal variance excludes all variation that

¹⁰ β_0 is strictly a precision weighted mean of the supercluster means which typically gives more weight to small superclusters than would a simple weighted average of these means (see, for example, Raudenbush and Bryk, 2002, page 40).

is due to time-invariant idiosyncrasies between regions as well as between countries. The resulting within (WE) effects in further models thus exclude the impact of all-time stable confounding aspects, which is an advantage of our modelling strategy compared to usual cross-sectional estimates.

Most of the variation in attitudes to immigration is found at the individual level, which is consistent with previous literature regarding differences in immigration attitudes. However, there is also a modest variation at the country, region (for attitude toward immigrants' contribution) and region-year level, thus justifying a multilevel approach.

Table 2. Multilevel regressions of attitudes toward immigrants, individual controls only

	Attitude Toward Immigrants' Contribution				Attitude Toward Policy			
	Model 0		Model 1		Model 0		Model 1	
	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Individual level effects</i>								
age			0.0007***	(0.000)			0.002***	(0.0001)
university			0.131***	(0.0026)			0.146***	(0.0032)
tertiary without degree			0.069***	(0.0036)			0.081***	(0.0045)
Upper secondary			0.047***	(0.0025)			0.057***	(0.0031)
Lower secondary			0.030***	(0.0027)			0.042***	(0.0033)
female			-0.001	(0.0013)			0.006***	(0.0016)
Living in urban area			0.015***	(0.0015)			0.018***	(0.0019)
Income difficulty			-0.050***	(0.0017)			-0.048***	(0.0021)
minority			0.035***	(0.0023)			0.039***	(0.0029)
non citizen			0.015	(0.012)			0.010	(0.0149)
Intercept	0.505***	(0.014)	0.482***	(0.013)	0.533***	(0.019)	0.545***	(0.018)
<i>Random effects</i>								
country	0.004	(0.001)	0.003	(0.0011)	0.007	(0.002)	0.0064	(0.002)
region	0.0005	(0.001)	0.002	(0.0001)	1.30e-14	(4.71e-13)	3.16e-17	(1.64e-13)
Region-year	0.0018	(0.001)	0.002	(0.0001)	0.004	(0.0003)	0.0039	(0.0002)
Individual	0.412	(0.002)	0.037	(0.0001)	0.062	(0.0002)	0.0578	(0.0002)
N respondents	94 110		89 634		94 474		90 036	
N countries	21		21		21		21	
N regions	183		183		183		183	
N region-years	580		574		580		574	

4. Results

Our baseline analysis captures how public opinion varies with the average and short-term variations in the regional share of foreign-born individuals over the 2010-2019 period. All models presented hereafter include individual controls mentioned above as well as regional, time-varying variables that are likely to influence public opinion towards immigration over time such as GDP, unemployment, and the density of population.

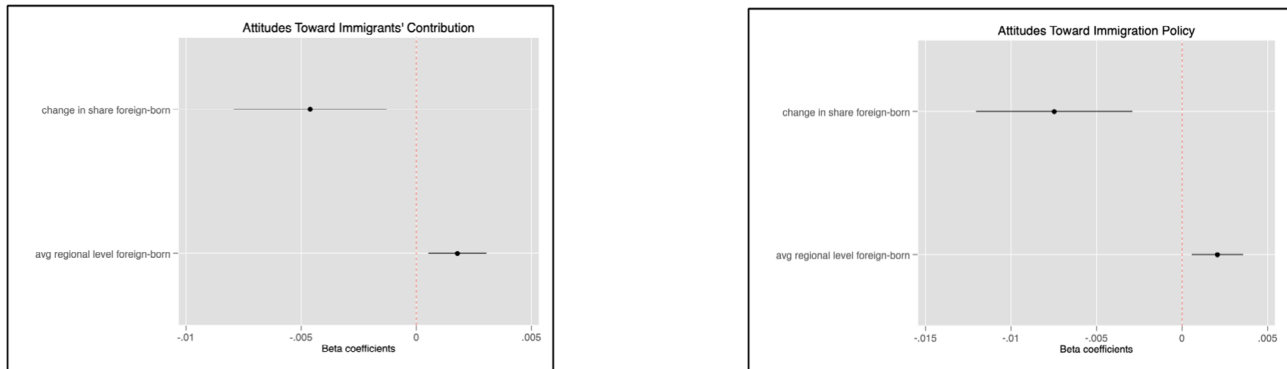
Figure 2 presents the results for the full sample estimated using multi-level restricted likelihood and four levels of nesting (country, region, region-year and individuals). By including both the average level of foreign-borns' presence and the short-term variations due to migration pressure measured as deviations from this mean (inflows or outflows, see section 3.2), we are able to disentangle between the channels that are driving the relationship between the size of immigration and public attitudes. In particular, while the *avg* variable measures variations in opinion on immigration that are imputable to differences between regions, the *change* variable captures the reaction of individuals with respect to within-region changes in the share of immigrants over time.

Our results indicate that on aggregate, the share of immigrants in a given region is associated with more positive attitudes towards immigrants in matters of both migration policy and individual feelings about immigrants' contribution.¹¹ This result is in line with the contact theory, which posits that prolonged interaction with high levels of immigration at the local level increases the incidence of contact between natives and newcomers and therefore reduces prejudice and the perception of threat in the long run. The coefficient measuring attitudes towards immigrants' contribution suggests that, *ceteris paribus*, a 10 % increase in the average share of immigrants (in absolute terms) across regions is associated with an increase in positive attitudes by 1,8 percentage points on the contribution scale.¹² This effect is slightly larger (2,1 %) and still very significant when respondents are asked about their opinion on migration policy. Moreover, our analysis suggests a negative association between a short-term increase in the share of immigrants and attitudes towards immigration. Controlling for differences in the average share of immigrants across European regions, we find that a 10 % increase in the share of immigrants is associated with a decrease in support for allowing more immigrants by 7,5 % within a given region. This negative association (- 4,6 %) is also significant for attitudes towards migrants' contribution.

These results are in line with the findings of Coenders and Scheepers (2008) and Hopkins (2010), who suggest that negative reactions to immigrants are more likely to occur in response to competition from recent foreign arrivals, rather than existing diversity.

11 Coefficients for individual and regional control variables are reported in Table A.2 in the Appendix.

12 Both dependent variables are standardized on a 0-1 scale. A 1,8 percentage increase is therefore equivalent to a coefficient of 0,018. We report results in percentage points in the rest of the paper.

Figure 2. Multi-level coefficients with confidence intervals (full sample)

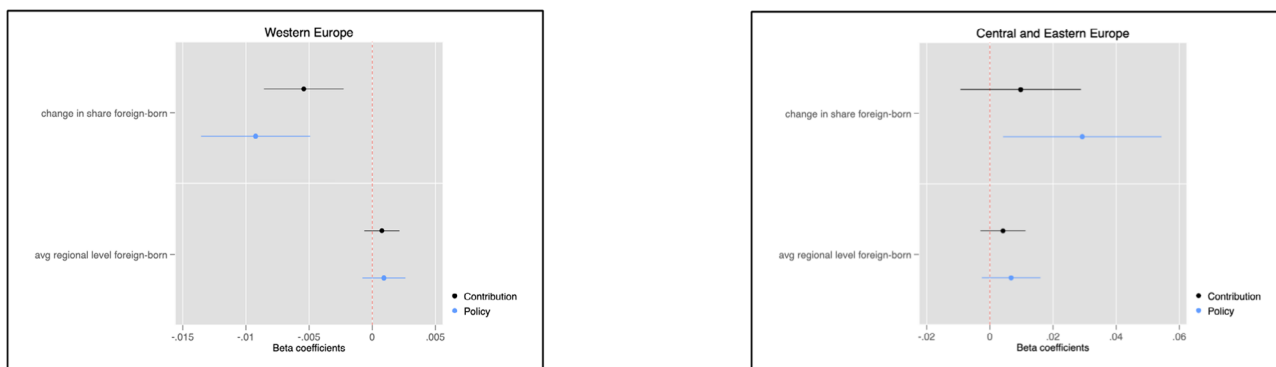
Yet, while they lend support to the existing literature, these findings remain virtually impossible to interpret at face value without exploring in greater detail the composition of immigrant flows, which can have separate and even opposing consequences on natives' attitudes towards immigration. In particular, we expect inflows of less skilled and non-European immigrants to have a relatively more negative effect on natives' attitudes, in line with the cultural and economic threat channels discussed in the Introduction.

In addition, this baseline analysis includes the full sample of regions, which, as discussed before, differ in various respects on attitudes toward migration despite being located in EU countries. We, therefore, differentiate in the rest of the paper between Western and Central and Eastern European regions on account of these fundamental differences.

Figure 3 presents the baseline analysis separately for Western and Central or Eastern European regions. Unsurprisingly, considering the larger share of respondents living in Western Europe in our aggregate sample, the coefficients estimated for Western European countries closely match those presented in Fig 2. In particular, we find that an increase in the share of foreign-born individuals is associated with a large and significant negative effect on Western European natives' perception of migrants' contribution and their views on migration policy. A 10 % increase in the share of foreign-born predicts, *ceteris paribus*, attitudes that are respectively 5,4 % (on a 0-1 scale) and 9,2 % lower regarding migrants' contribution and policy preferences.

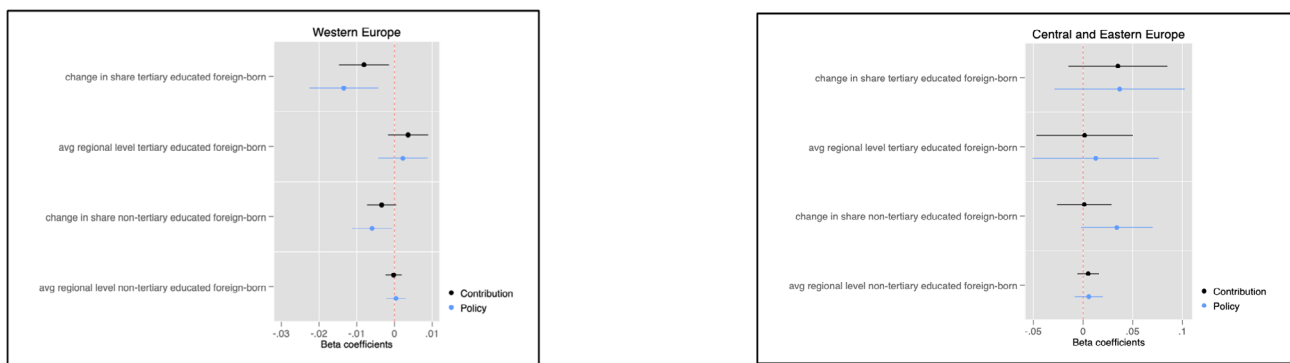
Our estimates report larger confidence intervals for the coefficients of Central and Eastern Europe, which is most likely due to the relatively small share and inflows of the foreign-born population in these regions over the time period under investigation (see Table 1). However, we find that an increase in the share of foreign-born migrants is associated with more positive views regarding migration policy in these countries. This suggests that the drivers of public opinion and perception of immigration may differ significantly across Europe, in line with the findings of Bell et al. (2021) on attitudes towards Muslim immigrants.

Figure 3. Multi-level coefficients with confidence intervals (Western and Central & Eastern samples)



We next focus our attention on immigrants' educational attainment. Previous works have shown that highly educated immigrants are usually associated with a more positive public opinion (see for instance Murard (2017) on immigration to Europe between 2002 and 2012). Yet, as can be seen in Figure 4, we find no evidence that this is the case in Western Europe. For both migrants' contribution and policy views, the coefficient associated with changes in the share of tertiary-educated and non-tertiary educated migrants follows the same pattern. They are both negative and statistically significant, but the effect is larger for skilled migrants. This finding is at odds with predictions of the theoretical literature and recent empirical findings. However, there is a possibility that natives fail to perceive the nature of immigration correctly, especially in the short run and with regard to educational attainment. Indeed, unlike for example ethnicity, tertiary education is not readily observable from distant contact with immigrants. We investigate later in the paper whether the inclusion of origin as one of the migrants' distinctive characteristics can shed light on this result. Moreover, media framing has been shown to play a large part in distorting the reality of immigration and negatively biasing attitudes towards immigrants (see for instance Benesch et al., 2019; Schneider-Strawczynski and Valette, 2021; Agovino et al., 2022). In this regard, natives' biased perception could be driving the negative correlation between the arrival of highly educated migrants and negative changes in attitudes. While largely unable to detect the skill level of those immigrants, it is possible that natives may regard them a priori as fundamentally low-skilled.

Turning to Central and Eastern Europe, the coefficients are imprecise. However, it is worth stressing that the partial correlation between inflows of less than tertiary educated foreign-born migrants and attitudes towards migration policy is positive and significant at the conventional level: A 10 % increase in the share of less than tertiary educated migrants is associated, ceteris paribus, with a large increase (34 %) in positive attitudes towards migration policy. Although this goes against our intuition that less-skilled immigrants are usually perceived as an economic threat, this result must be contextualized. First, competition for welfare benefits, which is usually offered as one of the drivers of hostility towards unskilled immigration (Facchini and Mayda, 2009; Dustmann and Preston, 2007), is arguably less of a concern in Central and Eastern Europe, where welfare schemes are less generous on average. Second, as shown in Table 1, the vast majority of foreign-born residing in Central and Eastern European countries are of European origin (European foreign-born represent 2 % of the population living in Central and Eastern European regions, against 0.1 % of foreign-born from outside Europe), and this proximity with natives could play out in favour of immigrants.

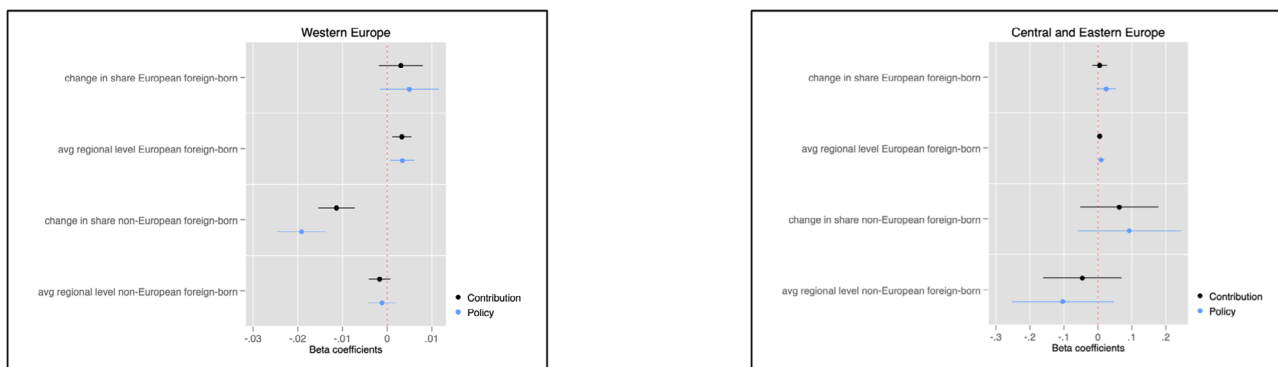
Figure 4. Multi-level coefficients by education level (Western and Central & Eastern samples)

Next, we turn to the predictive power of migrants' origin. Figure 5 distinguishes between the flows of European and non-European immigrants. Again, the existing literature points to a negative bias towards immigrants that are ethnically and culturally more distant (Murard, 2017; Moriconi, 2019), a characteristic that in the present analysis largely applies to non-European immigrants. This intuition is verified for both policy and contribution dependent variables: The coefficients are negative and statistically significant, suggesting that a 10 % increase in the share of non-European immigrants at the regional level is associated with respectively an 11 % and 19 % decrease in Western European natives' opinion about the contribution of immigrants and support for immigration. Moreover, we find no significant negative correlation between the arrival of European immigrants and natives' attitudes. In fact, these coefficients, although not significant, point towards a positive relationship. Therefore, the aggregate effect from Figure 2 is entirely driven by immigration from outside the European Union.

Likewise, the coefficients of the *avg* variable suggest that views about immigration are more positive in regions that host a higher share of EU immigrants. This could suggest that the contact hypothesis only has traction where migrants are ethnically closer to natives.

Unsurprisingly, given the extremely small share of non-EU foreigners in Central and Eastern Europe, the coefficients for non-European immigrants are extremely imprecise. Focusing our attention on European immigration, we find that inflows of European immigrants are positively associated with greater support for further immigration, with the coefficient being significant at the 10% level. This result corroborates our previous intuition that the positive partial correlation between the flows of foreign-born with less than tertiary education and attitudes towards migration policy is largely driven by the ethnic composition of these flows.

Figure 5. Multi-level coefficients by region of origin (Western and Central & Eastern samples)

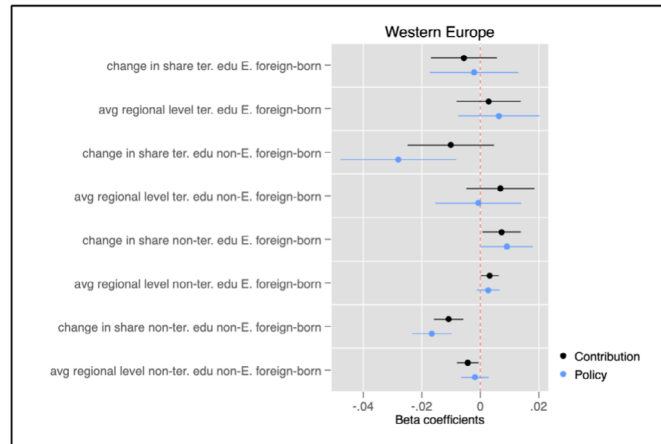


Although the small share of immigrants living in Central and Eastern Europe does not allow us to properly test this intuition, we can study the interplay between migrants’ education and their origin in Western European regions. Figure 6 confirms that the origin of immigrants is paramount to explaining the association between short-term within-region variations in the share of the foreign-born population and natives’ attitudes to immigration. More importantly, it suggests that when investigating migration flows, the origin of immigrants greatly influences the predictive power of variations in the share of less-educated migrants on attitudes towards both migration policy and immigrants’ contribution. On both policy preferences and contribution assessment, inflows of non-European immigrants with less than tertiary education are significantly associated with more negative views towards immigration at the regional level, while this association is positive for European immigrants with less than tertiary education. Although less clear, the same pattern can be observed for tertiary-educated migrants: An increase in the share of skilled, non-European migrants is associated with native respondents’ more negative opinion about immigration policy, while we find no significant correlation between attitudes and the arrival of European immigrants with tertiary education.

One possible explanation behind this result is that origin trumps education when it comes to attitudes to immigration. In other words, natives may care more about migrants’ origin than their education when forming opinions about them. An alternative explanation could be that natives cannot, based on random contact, easily determine migrants’ skill level but can more easily guess their origin, for instance through attributes that are more readily observable such as ethnicity. At any rate, this would suggest that cultural factors outweigh economic ones as drivers of attitudes to immigration, in line with the recent literature (see for instance Müller, 2020).

What’s more, our results indicate that the extent to which immigrants’ origin is correlated with attitudes to immigration varies with their level of education. More specifically, the cultural prejudice against migrants decreases with their educational attainment, as if immigration’s skill level was less of a concern to natives when migrants are coming from other European countries. Although we cannot test this hypothesis with the data at our disposal, we reckon this deserves further investigation from academia.

Figure 6. Multi-level coefficients by education level and region of origin (Western sample)

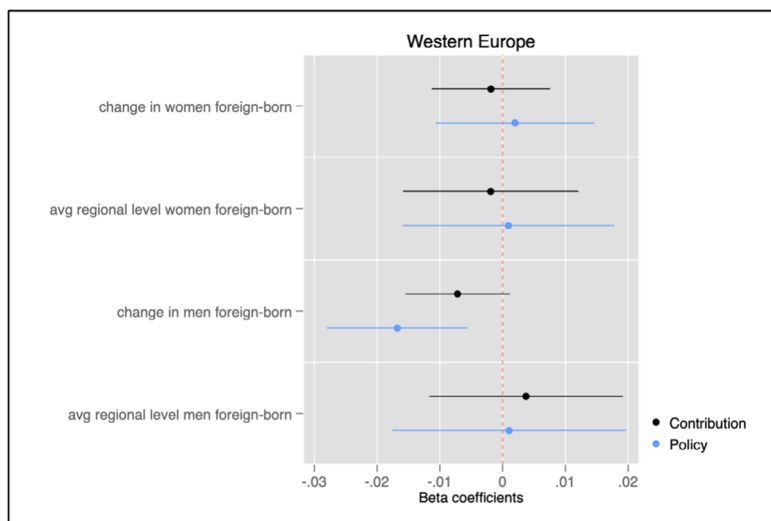


Finally, we investigate how the gender composition of migration flows influences the association between attitudes and short-term changes in the share of foreign-born migrants at the regional level. Figure 7 shows that the negative correlation with respondents' views towards migrants is mainly driven by the arrival of male migrants. Indeed, for policy and contribution, both coefficients are statistically significant, while the estimates for women are both very small and not significant.

One possible channel behind this finding is that negative attitudes towards migrants form as a result of perceived physical threats, crimes and violence, which are more often associated with men than women. In the absence of previous work on this issue, this is to the best of our knowledge the first large-scale evidence documenting the differential impact of migration flows based on gender composition. This can help shed critical light on the public opinion response to the latest migration waves in Europe. Indeed, since most of the Ukrainian refugees are women and children, while most Ukrainian men aged 18 to 60 are banned from leaving the country, one could expect a more positive response from Western European natives than that witnessed during previous migration events, such as the 2015 Syrian refugee crisis.¹³

Finally, given data limitations, our coefficients are imprecise and we are unable to provide similar insights for Central and Eastern European countries.¹⁴ This should not, however, discourage researchers from further investigating this direction using appropriate data.

Figure 7. Multi-level coefficients by gender (Western sample)



¹³ Although we are not able to repeat the analysis for Central and Eastern Europe, recent works have shown that public opinion is also very favourable to Ukrainians in these countries (see for instance Dražanová and Geddes, 2022).

¹⁴ Results are available from the authors upon request.

5. Discussion and Conclusion

In recent years, European countries have experienced a surge in migration flows and public resentment against immigrants among their domestic population.

This paper proposes a novel empirical design to study how public attitudes to immigration reacted to increased migration pressure across European regions over the past decade. We explore the nature of this relationship beyond cross-region differences and focus our attention on the predictive power of within-region, short-term migration flows. Controlling for important individual cofounders and contextual drivers of attitudes to immigration, we examine how variations in migration pressure correlate with public opinion towards natives' support for immigration and their views of immigrants' contribution to their destination country. Our analysis is informed by theories of economic competition between natives and immigrants, cultural backlash, and the contact hypothesis, which are all part of the canonical framework developed by social scientists to study public opinion towards immigration. Furthermore, because the European Union covers territories with distinct migration histories, our analysis distinguishes between Western and Central and Eastern European regions within the EU.

At the aggregate level, across all European regions contained in the sample, our findings indicate that immigration is positively correlated with natives' attitudes regarding migration policy and opinions about immigrants' contribution, in line with the contact hypothesis. Further analysis concerning the composition of migration flows is consistent with theories of economic and ethnic competition in Western European regions. In particular, we find that inflows of EU-origin and tertiary-educated immigrants in Western Europe are positively correlated with natives' attitudes. What's more, our results indicate that the extent to which immigrants' origin is correlated with attitudes to immigration varies with their level of education. In contrast, our results are less meaningful for Central and Eastern Europe, which hosts much fewer foreign-born immigrants, but suggest nonetheless that the inflow and presence of European immigrants are correlated with more positive attitudes towards immigration.

We must stress that our empirical design does not permit us to make causal predictions about the role played by immigrant inflows on public opinion and predict with certainty the risks of tensions that may arise from increased migration pressure. Indeed, exploring the causal relationship between migration flows and attitudes towards immigration would require accounting for endogeneity biases such as the self-selection of migrants into areas with better economic conditions or where natives happen to be less hostile to immigrants. For instance, tertiary-educated migrants may choose their destination more freely, with fewer constraints than their less-educated counterparts. Likewise, European immigrants are likely to face fewer constraints in the choice of destination when migrating because of their greater freedom of movement. To the extent that further immigration tends to polarize attitudes to immigration, whereby regions with more positive (resp. negative) opinions tend to become more positive (resp. negative) with the arrival of new immigrants, the correlation found in our study could thus be artificially inflated.

Finally, it is possible that natives with the most negative attitudes simply move out of regions receiving more immigrants, and that our results are driven by a crowding-out effect (Dustmann and Preston, 2001).

That said, we believe our analysis informs the current political debate about the consequences of short-term migration flows on public attitudes to immigration in several ways. First, we establish that natives living in Western European regions are likely to respond more positively to future inflows of immigrants that are more educated and closer in origin to them. Second, an important implication of our findings is the need to pay attention to both the origin and education of immigrants simultaneously

when investigating the potential consequences of immigrants' presence on public opinion towards immigration, at least in Western Europe. In particular, at a time when economic systems are increasingly reliant on migrant labour and millions of Ukrainians are displaced across Europe, our findings have important implications for the assimilation of new immigrants in host societies, their integration into the labour market, as well as political consequences in terms of support for anti-immigration and xenophobic political movements. Third, our study of regional migration flows furthers our understanding of how European public opinion may respond to different types of local migration and can help policymakers and practitioners anticipate potential risks of tensions as a result of future migration. In this regard, further research remains necessary to investigate whether migration pressure has a direct and causal impact on attitudes to immigration.

Finally, under the current circumstances, we cannot stress enough the paucity of academic work focusing on Central and Eastern European countries and the need for more research in this direction.

References

- Alesina, A., Murard, E., & Rapoport, H. (2021). Immigration and preferences for redistribution in Europe. *Journal of Economic Geography*, 21(6), 925-954.
- Alesina, A., Miano, A., & Stantcheva, S. (2018). *Immigration and redistribution* (No. w24733). National Bureau of Economic Research.
- Agovino, M., Carillo, M. & Spagnolo, N. Effect of Media News on Radicalization of Attitudes to Immigration. *J Econ Race Policy* 5, 318–340 (2022).
- Bell, A., Fairbrother, M., & Jones, K. (2019). Fixed and Random Effects Models: Making an Informed Choice. *Quality and Quantity*, 53(2): 1051–1074.
- Bell, D. A., Valenta, M., & Strabac, Z. (2021). A comparative analysis of changes in anti-immigrant and anti-Muslim attitudes in Europe: 1990–2017. *Comparative Migration Studies*, 9(1), 1-24.
- Benesch, C., Loretz, S., Stadelmann, D., & Thomas, T. (2019). Media coverage and immigration worries: Econometric evidence. *Journal of Economic Behavior & Organization*, 160, 52-67.
- Boeri, T. (2010). Immigration to the Land of Redistribution. *Economica*, 77(308), 651-687.
- Bridges, S., & Mateut, S. (2014). Should they stay or should they go? Attitudes towards immigration in Europe. *Scottish Journal of Political Economy*, 61(4), 397-429.
- Brunner, B., & Kuhn, A. (2018). Immigration, cultural distance and natives' attitudes towards immigrants: Evidence from Swiss voting results. *Kyklos*, 71(1), 28-58.
- Burgoon, B. (2014). Immigration, integration, and support for redistribution in Europe. *World Politics*, 66(3), 365-405.
- Card, D., Dustmann, C., & Preston, I. (2012). Immigration, wages, and compositional amenities. *Journal of the European Economic Association*, 10(1), 78-119.
- Citrin, J., Green, D. P., Muste, C., & Wong, C. (1997). Public opinion toward immigration reform: The role of economic motivations. *The Journal of Politics*, 59(3), 858-881.
- Coenders, M., & Scheepers, P. (2008). Changes in resistance to the social integration of foreigners in Germany 1980–2000: Individual and contextual determinants. *Journal of Ethnic and Migration Studies*, 34(1), 1-26.
- Davidov, E. & Meuleman, B. (2012). Explaining Attitudes Towards Immigration Policies in European Countries: The Role of Human Values. *Journal of Ethnic and Migration Studies*, 38(5), 757-775.
- Di Iasio, V., & Wahba, J. (2021). Natives' Attitudes and Immigration Flows to Europe. *Changes*, 1, 15.
- Dennison, J., & Dražanová, L. (2018). Public attitudes on migration: rethinking how people perceive migration: an analysis of existing opinion polls in the Euro-Mediterranean region. European University Institute.
- Dražanová, L. (2017). Education and Tolerance: A Comparative Quantitative Analysis of the Educational Effect on Tolerance. Berlin, Germany: Peter Lang Verlag.
- Dražanová, L., Gonnnot, J., Heidland, T. and Krüger, F. (2022). Understanding differences in attitudes to immigration: A meta-analysis of individual-level factors. Kiel Working Paper 2022/2235. ISSN: 1862–1155.

- Dražanová, L. And Geddes, A. 2022. Attitudes towards Ukrainian refugees and governmental responses in 8 European countries. Forum on the EU Temporary Protection Responses to the Ukraine War. <https://www.asileproject.eu/attitudes-towards-ukrainian-refugees-and-governmental-responses-in-8-european-countries/>
- Dustmann, C., Vasiljeva, K., & Piil Damm, A. (2019). Refugee migration and electoral outcomes. *The Review of Economic Studies*, 86(5), 2035-2091.
- Dustmann, C., & Preston, I. P. (2007). Racial and economic factors in attitudes to immigration. *The BE Journal of Economic Analysis & Policy*, 7(1).
- Eger, M. A., & Breznau, N. (2017). Immigration and the welfare state: A cross-regional analysis of European welfare attitudes. *International Journal of Comparative Sociology*, 58(5), 440-463.
- Elsner, B., & Concannon, J. (2020). Immigration and redistribution.
- Facchini, G., & Mayda, A. M. (2012). Individual attitudes towards skilled migration: An empirical analysis across countries. *The World Economy*, 35(2), 183-196.
- Facchini, G., & Mayda, A. M. (2009). Does the welfare state affect individual attitudes toward immigrants? Evidence across countries. *The review of economics and statistics*, 91(2), 295-314.
- Fairbrother, M. (2014). Two Multilevel Modeling Techniques for Analyzing Comparative Longitudinal Survey Datasets. *Political Science Research and Methods*, 2(1), 119–40.
- Gereke, J., Schaub, M., & Baldassarri, D. (2020). Gendered discrimination against immigrants: experimental evidence. *Frontiers in sociology*, 5, 59.
- Gonnot, J. (2021). Taxation with representation: Understanding natives' attitudes to foreigners' voting rights. *European journal of political economy*, 102060.
- Gorodzeisky, A. & Semyonov, M. (2016). Not only Competitive Threat but also Racial Prejudice: Sources of Anti-Immigrant Attitudes in European Societies. *International Journal of Public Opinion Research* 28 (3): 331–354.
- Gorodzeisky, A. & Semyonov, M. (2018). Competitive threat and temporal change in anti-immigrant sentiment: Insights from a hierarchical age-period-cohort model. *Social Science Research* 73, 31–44.
- Gorodzeisky, A., & Semyonov, M. (2009). Terms of exclusion: Public views towards admission and allocation of rights to immigrants in European countries. *Ethnic and Racial Studies*, 32(3), 401-423.
- Green, E. G., Fasel, N., & Sarrasin, O. (2010). The more the merrier? The effects of type of cultural diversity on exclusionary immigration attitudes in Switzerland. *International Journal of Conflict and Violence (IJCV)*, 4(2), 177-190.
- Hale Williams, M., & Chasapopoulos, P. (2019). Immigrants' Origin and Skill level as Factors in Attitudes toward Immigrants in Europe. *Journal of Identity & Migration Studies*, 13(2).
- Hainmueller, J. & Hopkins, D. J. (2014). Public Attitudes Toward Immigration. *Annual Review of Political Science* 17 (1): 225-249.
- Hainmueller, J., & Hangartner, D. (2013). Who gets a Swiss passport? A natural experiment in immigrant discrimination. *American political science review*, 107(1), 159-187.

- Hanson, G. H., Scheve, K., & Slaughter, M. J. (2007). Public finance and individual preferences over globalization strategies. *Economics & Politics*, 19(1), 1-33.
- Hatton, T. J. (2016). Immigration, public opinion and the recession in Europe. *Economic Policy*, 31(86), 205-246.
- Hoxhaj, R., & Zuccotti, C. V. (2021). The complex relationship between immigrants' concentration, socioeconomic environment and attitudes towards immigrants in Europe. *Ethnic and racial studies*, 44(2), 272-292.
- Hopkins, Daniel J. "Politicized places: Explaining where and when immigrants provoke local opposition." *American political science review* 104, no. 1 (2010): 40-60.
- Jeannet, A-M. (2020). A threat from within? Perceptions of immigration in an enlarging European Union. *Acta Sociologica* 63(4),343-360.
- Ji, T., Tybur, J. M., & van Vugt, M. (2021). Gendered outgroup prejudice: An evolutionary threat management perspective on anti-immigrant bias. *Group Processes & Intergroup Relations*, 24(1), 177-192.
- Just, A. & Anderson, C. J. (2015). Dual Allegiances? Immigrants' Attitudes toward Immigration. *The Journal of Politics* 77(1), 188-201.
- Karreth, J., Singh, S. P., & Stojek, S. M. (2015). Explaining attitudes toward immigration: The role of regional context and individual predispositions. *West European Politics*, 38(6), 1174-1202.
- Kawalerowicz, J. (2021). Too many immigrants: How does local diversity contribute to attitudes toward immigration?. *Acta Sociologica*, 64(2), 144-165.
- Kentmen-Cin, Cigdem, and Cengiz Erisen. "Anti-immigration attitudes and the opposition to European integration: A critical assessment." *European Union Politics* 18.1 (2017): 3-25.
- Kriesi, Hanspeter, Edgar Grande, Martin Dolezal, Marc Helbling, Dominic Höglinger, Swen Hutter and Bruno Wüest (2012). *Political Conflict in Western Europe*. Cambridge: Cambridge University Press.
- Markaki, Y., & Longhi, S. (2013). What determines attitudes to immigration in European countries? An analysis at the regional level. *Migration Studies*, 1(3), 311-337.
- McLaren, L. (2012) The cultural divide in Europe: Migration, multiculturalism, and political trust. *World Politics* 64(2),199–241.
- McLaren, L. & Paterson, I. (2020). Generational change and attitudes to immigration. *Journal of Ethnic and Migration Studies* 46(3), 665-682.
- Meltzer, C. E., Eberl, J. M., Theorin, N., Heidenreich, T., Strömbäck, J., Boomgaarden, H. G., & Schemer, C. (2021). Media effects on policy preferences toward free movement: evidence from five EU member states. *Journal of Ethnic and Migration Studies*, 47(15), 3390-3408.
- Moriconi, S., Peri, G., & Turati, R. (2019). Immigration and voting for redistribution: Evidence from European elections. *Labour Economics*, 61, 101765.
- Moriconi, S., Peri, G., & Turati, R. (2022). Skill of the immigrants and vote of the natives: Immigration and nationalism in European elections 2007–2016. *European Economic Review*, 141, 103986.
- Müller, T., & Tai, S. H. T. (2020). Individual attitudes towards migration: A re-examination of the evidence. *Canadian Journal of Economics/Revue canadienne d'économique*, 53(4), 1663-1702.

- Murard, E. (2017). Less welfare or fewer foreigners? Immigrant inflows and public opinion towards redistribution and migration policy.
- Otto, A. H., & Steinhardt, M. F. (2014). Immigration and election outcomes—Evidence from city districts in Hamburg. *Regional Science and Urban Economics*, 45, 67-79.
- Naumann, E., Stoetzer, L. F. & Pietrantuono, G. (2018). Attitudes towards highly skilled and low-skilled immigration in Europe: A survey experiment in 15 European countries. *European Journal of Political Research*, 57(4), 1009-1030.
- Newman, B. J., & Velez, Y. (2014). Group size versus change? Assessing Americans' perception of local immigration. *Political Research Quarterly*, 67(2), 293-303.
- Pardos-Prado, Sergi and Carla Xena. (2019). Skill Specificity and Attitudes toward Immigration. *American Journal of Political Science* 63: 286-304.
- Pickup, M., de Rooij, E. A., van der Linden, C., & Goodwin, M. J. (2021). Brexit, COVID-19, and attitudes toward immigration in Britain. *Social science quarterly*, 102(5), 2184-2193.
- Portes, J. (2021). Between the Lines: Immigration to the UK between the Referendum and Brexit. *Brexit Institute, WP*, (12-2020).
- Razin, A., Sadka, E., & Swagel, P. (2002). Tax burden and migration: a political economy theory and evidence. *Journal of Public Economics*, 85(2), 167-190.
- Rustenbach, E. (2010). Sources of negative attitudes toward immigrants in Europe: A multi-level analysis. *International migration review*, 44(1), 53-77.
- Scheepers, P., Gijsberts, M., & Coenders, M. (2002). Ethnic exclusionism in European countries. Public opposition to civil rights for legal migrants as a response to perceived ethnic threat. *European sociological review*, 18(1), 17-34.
- Scheve, K. F., & Slaughter, M. J. (2001). Labor market competition and individual preferences over immigration policy. *Review of Economics and Statistics*, 83(1), 133-145.
- Senik, C., Stichnoth, H., & Van der Straeten, K. (2009). Immigration and natives' attitudes towards the welfare state: evidence from the European Social Survey. *Social indicators research*, 91(3), 345-370.
- Schmidt-Catran, A.W., & Fairbrother, M. (2016). The Random Effects in Multilevel Models: Getting Them Wrong and Getting Them Right. *European Sociological Review* 32(1), 23–38.
- Schneider-Strawczynski, S. & Valette, J. (2021). « Media Coverage of Immigration and the Polarization of Attitudes », PSE Working Paper, n° 202146
- Solheim, Ø. B. (2021). Are we all Charlie? How media priming and framing affect immigration policy preferences after terrorist attacks. *West European Politics* 44(2), 204-228.
- Speciale, B. (2012). Does immigration affect public education expenditures? Quasi-experimental evidence. *Journal of public economics*, 96(9-10), 773-783.
- Ward, D. G. (2019). Public attitudes toward young immigrant men. *American Political Science Review*, 113(1), 264-269.
- Weber, H. (2015). National and regional proportion of immigrants and perceived threat of immigration: A three-level analysis in Western Europe. *International journal of comparative sociology*, 56(2), 116-140.

Appendix

Table A.1. Number of observations per region and year

Country	Region	2010	2012	2014	2016	2018	Total
Austria (AT)	AT1	863	0	615	0	916	2394
	AT2	435	0	332	0	518	1285
	AT3	724	0	637	0	791	2152
Belgium (BE)	BE10	74	0	89	0	66	229
	BE21	281	0	224	0	255	760
	BE22	147	0	133	0	145	425
	BE23	207	0	195	0	195	597
	BE24	159	0	140	0	140	439
	BE25	194	0	217	0	210	621
	BE31	49	0	57	0	67	173
	BE32	154	0	199	0	178	531
	BE33	137	0	168	0	131	436
	BE34	42	0	50	0	41	133
	BE35	72	0	70	0	61	203
Bulgaria (BG)	BG31	366	0	0	0	285	651
	BG32	334	0	0	0	271	605
	BG33	322	0	0	0	290	612
	BG34	403	0	0	0	305	708
	BG41	537	0	0	0	544	1081
	BG42	450	0	0	0	487	937
Czech Republic (CZ)	CZ01	277	0	254	0	319	850
	CZ02	230	0	249	0	276	755
	CZ03	262	0	250	0	251	763
	CZ04	235	0	256	0	266	757
	CZ05	345	0	347	0	328	1020
	CZ06	388	0	281	0	375	1044
	CZ07	310	0	191	0	256	757
	CZ08	293	0	275	0	267	835
Germany (DE)	DE1	255	0	295	0	228	778
	DE2	371	0	355	0	356	1082
	DE3	89	0	140	0	73	302
	DE4	224	0	179	0	62	465
	DE5	22	0	22	0	6	50
	DE6	21	0	41	0	42	104
	DE7	162	0	162	0	124	448
	DE8	116	0	120	0	51	287
	DE9	168	0	222	0	244	634
	DEA	487	0	427	0	414	1328
	DEB	117	0	112	0	97	326
	DEC	19	0	30	0	23	72
	DED	248	0	261	0	133	642
	DEE	177	0	146	0	66	389
DEF	77	0	78	0	79	234	
DEG	192	0	156	0	58	406	
Denmark (DK)	DK01	364	0	354	0	172	890

	DK02	200	0	201	0	351	752
	DK03	332	0	341	0	349	1022
	DK04	382	0	346	0	393	1121
	DK05	197	0	142	0	204	543
Spain (ES)	ES11	97	0	133	0	125	355
	ES12	42	0	51	0	37	130
	ES13	23	0	30	0	23	76
	ES21	75	0	89	0	74	238
	ES22	27	0	24	0	15	66
	ES23	6	0	16	0	9	31
	ES24	55	0	58	0	49	162
	ES30	265	0	211	0	169	645
	ES41	110	0	105	0	86	301
	ES42	77	0	85	0	88	250
	ES43	52	0	52	0	45	149
	ES51	208	0	222	0	180	610
	ES52	159	0	181	0	142	482
	ES53	23	0	35	0	21	79
	ES61	374	0	336	0	295	1005
	ES62	42	0	50	0	35	127
	ES63	0	0	4	0	4	8
	ES64	2	0	5	0	3	10
	ES70	56	0	69	0	60	185
Finland (FI)	FI19	484	0	544	0	437	1465
	FI1B	454	0	504	0	446	1404
	FI1C	416	0	424	0	363	1203
	FI1D	459	0	502	0	421	1382
	FI20	0	0	13	0	4	17
France (FR)	FR10	209	0	216	0	213	638
	FRB0	55	0	75	0	75	205
	FRC1	37	0	48	0	55	140
	FRC2	42	0	19	0	38	99
	FRD1	46	0	51	0	49	146
	FRD2	49	0	47	0	50	146
	FRE1	114	0	84	0	122	320
	FRE2	34	0	78	0	70	182
	FRF1	41	0	58	0	54	153
	FRF2	45	0	17	0	31	93
	FRF3	88	0	42	0	56	186
	FRG0	103	0	104	0	118	325
	FRH0	91	0	130	0	122	343
	FRI1	90	0	111	0	110	311
	FRI2	28	0	45	0	24	97
	FRI3	84	0	40	0	51	175
	FRJ1	54	0	77	0	71	202
	FRJ2	68	0	125	0	85	278
	FRK1	35	0	44	0	44	123
	FRK2	169	0	126	0	185	480
	FRL0	92	0	157	0	146	395
Croatia (HR)	HR03	493	0	0	0	586	1079

	HR04	989	0	0	0	1042	2031
Hungary (HU)	HU11	0	0	294	0	203	497
	HU12	0	0	225	0	227	452
	HU21	181	0	176	0	210	567
	HU22	160	0	151	0	155	466
	HU23	170	0	154	0	103	427
	HU31	183	0	207	0	217	607
	HU32	255	0	259	0	296	810
	HU33	183	0	205	0	231	619
Ireland (IE)	IE04	0	0	533	0	424	957
	IE05	0	0	725	0	636	1361
	IE06	0	0	819	0	763	1582
Italy (IT)	ITC1	0	62	0	206	0	268
	ITC2	0	0	0	32	0	32
	ITC3	0	24	0	38	0	62
	ITC4	0	79	0	335	0	414
	ITF1	0	35	0	26	0	61
	ITF3	0	80	0	217	0	297
	ITF4	0	22	0	230	0	252
	ITF5	0	43	0	50	0	93
	ITF6	0	70	0	59	0	129
	ITG1	0	121	0	185	0	306
	ITG2	0	35	0	66	0	101
	ITH1	0	15	0	19	0	34
	ITH2	0	10	0	10	0	20
	ITH3	0	60	0	204	0	264
	ITH4	0	5	0	69	0	74
	ITH5	0	55	0	257	0	312
	ITI1	0	68	0	97	0	165
	ITI2	0	13	0	37	0	50
	ITI3	0	19	0	87	0	106
	ITI4	0	74	0	171	0	245
Lithuania (LT)	LT01	0	0	527	0	409	936
	LT02	0	0	1648	0	1370	3018
Norway (NO)	NO01	273	0	282	0	301	856
	NO02	102	0	93	0	79	274
	NO03	272	0	256	0	219	747
	NO04	222	0	155	0	177	554
	NO05	252	0	227	0	238	717
	NO06	143	0	130	0	109	382
	NO07	132	0	124	0	134	390
Poland (PL)	PL12	227	0	225	0	174	626
	PL21	141	0	162	0	152	455
	PL22	204	0	175	0	220	599
	PL41	146	0	139	0	107	392
	PL42	79	0	64	0	51	194
	PL43	39	0	43	0	34	116
	PL51	109	0	85	0	102	296
	PL52	50	0	31	0	33	114

	PL61	101	0	96	0	77	274
	PL62	64	0	50	0	62	176
	PL63	115	0	80	0	78	273
	PL71	125	0	129	0	118	372
	PL72	69	0	62	0	48	179
	PL81	112	0	96	0	83	291
	PL82	95	0	105	0	103	303
	PL84	50	0	57	0	46	153
Portugal (PT)	PT11	818	0	456	0	332	1606
	PT15	80	0	60	0	37	177
	PT16	368	0	289	0	221	878
	PT17	663	0	256	0	231	1150
	PT18	75	0	109	0	103	287
Sweden (SE)	SE11	212	0	347	0	276	835
	SE12	247	0	220	0	192	659
	SE21	125	0	155	0	113	393
	SE22	196	0	205	0	185	586
	SE23	280	0	301	0	260	841
	SE31	128	0	137	0	129	394
	SE32	58	0	87	0	61	206
	SE33	78	0	102	0	98	278
Slovenia (SI)	SI03	761	0	687	0	669	2117
	SI04	507	0	439	0	494	1440
Slovakia (SK)	SK01	218	0	0	0	75	293
	SK02	594	0	0	0	360	954
	SK03	455	0	0	0	317	772
	SK04	539	0	0	0	313	852
United Kingdom (UK)	UKC	103	0	107	0	106	316
	UKD	257	0	230	0	226	713
	UKE	211	0	159	0	190	560
	UKF	166	0	159	0	149	474
	UKG	197	0	166	0	125	488
	UKH	204	0	188	0	199	591
	UKI	120	0	116	0	114	350
	UKJ	295	0	275	0	288	858
	UKK	177	0	180	0	187	544
	UKL	134	0	121	0	90	345
	UKM	227	0	192	0	169	588
	UKN	60	0	54	0	62	176
	Total	31879	890	29382	2395	32647	97193

Online Appendix

Table A.2. Multi-level estimation results, total immigration - Attitudes toward immigrants' contribution

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Attitude Toward Immigrants' Contribution												
age	-0.0007***	(0.00003)	-0.0017***	(0.0004)	-0.0006***	(0.00004)	-0.00062***	(0.00004)	-0.0010***	(0.0006)	-0.001***	(0.00006)
university	0.1316***	(0.0263)	0.146***	(0.0032)	0.1479***	(0.0028)	0.1487***	(0.0028)	0.0590***	(0.00710)	0.0586***	(0.00703)
tertiary without degree	0.0694***	(0.0367)	0.0808***	(0.0045)	0.0753***	(0.0041)	0.0757***	(0.0041)	0.0297***	(0.0084)	0.0294***	(0.00836)
Upper secondary	0.0472***	(0.0257)	0.057***	(0.003)	0.0478***	(0.0028)	0.0484***	(0.0028)	0.0128	(0.0067)	0.0129	(0.00672)
Lower secondary	0.0307***	(0.0277)	0.0416***	(0.003)	0.0284***	(0.0030)	0.0285***	(0.0030)	0.00224	(0.0070)	0.0022	(0.0696)
female	-0.0012	(0.0132)	0.006***	(0.0131)	-0.0003*	(0.0001)	-0.0034*	(0.0159)	0.00476*	(0.0023)	0.0048*	(0.002)
Living in urban area	0.0149***	(0.0159)	0.0181***	(0.0019)	0.0203***	(0.0019)	0.0205***	(0.0019)	0.00819**	(0.0028)	0.008**	(0.0028)
Income difficulty	-0.0497***	(0.0172)	-0.048***	(0.002)	-0.0613***	(0.0022)	-0.0617***	(0.0022)	-0.040***	(0.0026)	-0.040***	(0.00265)
minority	0.0347***	(0.0237)	0.0389***	(0.0029)	0.0342***	(0.0029)	0.034***	(0.0029)	0.0321***	(0.0039)	0.0321***	(0.00391)
non citizen	0.0156	(0.121)	0.0102	(0.0149)	0.0229	(0.0123)	0.023	(0.0123)	-0.0335	(0.048)	-0.033	(0.493)
change in share foreign-born	-0.0046**	(0.0016)	-0.006**	(0.0023)	-0.0054**	(0.0016)	-0.00496**	(0.0016)	0.009	(0.0097)	0.012	(0.008)
avg regional level foreign-born	0.0017**	(0.0067)	0.0020***	(0.0005)	0.0007	(0.0007)	0.00173***	(0.0004)	0.0041	(0.003)	0.002	(0.003)
regional gdp per capita	7.29e-06	(4.29e-06)			1.12e-06**	(4.55e-07)			4.99e-07	(8.65e-07)		
regional unemployment	-0.006	(0.0072)			-0.0014*	(0.0007)			-0.00058	(0.002)		
regional density	-5.45e-05	(3.93e-05)			-6.68e-07	(4.03e-06)			-0.0002	(0.0001)		
<i>Random effects</i>												
country	0.003	0.001	0.005	0.001	0.0023	(0.001)	0.0021	(0.0009)	0.004	(0.002)	0.0039	(0.002)
region	0.0003	0.001	0.0003	8.23e-06	0.0003	(0.0001)	0.0004	(0.0001)	5.67e-10	(4.28e-09)	0.00007	(0.0001)
Region-year	0.007	0.001	0.0016	0.00019	0.0006	(0.0008)	0.0006	(0.00008)	0.001	(0.0001)	0.0010	(0.0002)
Individual	0.0379	0.001	0.057	0.0004	0.0364	(0.0002)	0.0364	(0.0002)	0.0437	(0.00032)	0.0401	(0.00032)
Intercept	0.428***	(0.0230)	0.560***	(0.0287)	0.450***	(0.0217)	0.458***	(0.157)	0.518***	(0.042)	0.522***	(0.027)
N respondents	89,001		89,634		58,781		58,798		30,220		30,836	
N countries	21		21		13		13		8		8	
N regions	182		182		134		135		48		48	
N region-years	566		566		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** p<0.001, ** p<0.01, * p<0.05

Table A.3. Multi-level estimation results, total immigration - Immigration policy

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Attitude Toward Policy</i>												
age	-0.002***	(4.56e-05)	-0.0017***	(4.54e-05)	-0.0017***	(5.45e-05)	-0.00175***	(5.45e-05)	-0.00171***	(8.32e-05)	-0.0017***	(8.22e-05)
university	0.146***	(0.00323)	0.146***	(0.00322)	0.155***	(0.00344)	0.155***	(0.00344)	0.106***	(0.00869)	0.106***	(0.00859)
tertiary without degree	0.080***	(0.00453)	0.0809***	(0.00452)	0.0828***	(0.00508)	0.0831***	(0.00508)	0.0596***	(0.0105)	0.0598***	(0.0103)
Upper secondary	0.057***	(0.00315)	0.0578***	(0.00315)	0.0576***	(0.00343)	0.0578***	(0.00343)	0.0386***	(0.00827)	0.0390***	(0.00818)
Lower secondary	0.041***	(0.00339)	0.0416***	(0.00338)	0.0377***	(0.00375)	0.0379***	(0.00375)	0.0279**	(0.00858)	0.0273**	(0.00848)
female	0.006***	(0.00163)	0.0061***	(0.00162)	0.00457*	(0.00193)	0.00458*	(0.00193)	0.0105***	(0.00297)	0.0102***	(0.00293)
Living in urban area	0.018***	(0.00196)	0.0181***	(0.00195)	0.0235***	(0.00235)	0.0236***	(0.00234)	0.0108**	(0.00354)	0.0108**	(0.00348)
Income difficulty	-0.048***	(0.00211)	-0.0489***	(0.00210)	-0.0590***	(0.00276)	-0.0595***	(0.00276)	-0.0404***	(0.00338)	-0.0406***	(0.00334)
minority	0.039***	(0.00291)	0.0390***	(0.00290)	0.0311***	(0.00361)	0.0311***	(0.00361)	0.0478***	(0.00493)	0.0477***	(0.00491)
non citizen	0.010	(0.0149)	0.0102	(0.0149)	0.0237	(0.0150)	0.0235	(0.0150)	-0.0776	(0.0622)	-0.0778	(0.0621)
change in share foreign-born	-0.007**	(0.00233)	-0.0068**	(0.00233)	-0.0092***	(0.00220)	-0.00860***	(0.00222)	0.0293*	(0.0128)	0.0271*	(0.0114)
avg regional level foreign-born	0.002**	(0.0007)	0.0020***	(0.00055)	0.000920	(0.00086)	0.00197***	(0.00058)	0.00673	(0.00473)	0.00223	(0.00380)
regional gdp per capita	8.10e-07	(4.73e-07)			1.49e-06**	(5.76e-07)			-6.79e-07	(1.13e-06)		
regional unemployment	-0.00156	(0.00095)			-0.00195	(0.00101)			-5.73e-05	(0.00273)		
regional density	-7.42e-06	(4.53e-06)			-3.60e-06	(4.90e-06)			-5.85e-06	(1.31e-05)		
<i>Random effects</i>												
country	0.005	(0.001)	0.005	(0.001)	0.0048	(0.002)	0.004	(0.002)	0.006	(0.003)	0.007	(0.004)
region	0.0002	(0.001)	0.0003	(8.23e-06)	0.0004	(0.0001)	0.0006	(0.0001)	9.86e-22	(5.92e-21)	1.04e-20	(6.09e-20)
Region-year	0.016	(0.001)	0.001	(0.0001)	0.0013	(0.001)	0.0013	(0.0001)	0.0019	(0.0003)	0.001	(0.0003)
Individual	0.057	(0.0002)	0.057	(0.0004)	0.053	(0.0003)	0.053	(0.0003)	0.065	(0.0005)	0.065	(0.0005)
Intercept	0.562***	(0.032)	0.560***	(0.028)	0.491***	(0.0291)	0.504***	(0.021)	0.583***	(0.054)	0.588***	(0.036)
N respondents	89,378		90,036		58,511		58,528		30,867		30,836	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** p<0.001, ** p<0.01, * p<0.05

Table A.4. Multi-level estimation results, immigration by origin - Attitudes toward immigrants' contribution

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
Attitude Toward Contribution												
age	-0.0007***	(3.71e-05)	-0.0007***	(3.69e-05)	-0.0006***	(4.48e-05)	-0.00063***	(4.48e-05)	-0.00101***	(6.62e-05)	-0.0010***	(6.54e-05)
university	0.131***	(0.00263)	0.131***	(0.00262)	0.148***	(0.00283)	0.148***	(0.00283)	0.0590***	(0.00710)	0.0589***	(0.00703)
tertiary without degree	0.0691***	(0.00367)	0.0691***	(0.00366)	0.0750***	(0.00417)	0.0752***	(0.00417)	0.0297***	(0.00845)	0.0297***	(0.00836)
Upper secondary	0.0470***	(0.00257)	0.0472***	(0.00257)	0.0479***	(0.00282)	0.0480***	(0.00282)	0.0129	(0.00679)	0.0133*	(0.00672)
Lower secondary	0.0305***	(0.00277)	0.0303***	(0.00276)	0.0286***	(0.00309)	0.0286***	(0.00309)	0.00225	(0.00705)	0.00151	(0.00696)
female	-0.00117	(0.00132)	-0.00116	(0.00131)	-0.00340*	(0.00158)	-0.00343*	(0.00158)	0.00482*	(0.00235)	0.00484*	(0.00233)
Living in urban area	0.0151***	(0.00159)	0.0154***	(0.00158)	0.0207***	(0.00192)	0.0209***	(0.00192)	0.00805**	(0.00280)	0.0090***	(0.00276)
Income difficulty	-0.0498***	(0.00172)	-0.0502***	(0.00171)	-0.0614***	(0.00227)	-0.0618***	(0.00227)	-0.0400***	(0.00268)	-0.0404***	(0.00265)
minority	0.0347***	(0.00237)	0.0347***	(0.00236)	0.0341***	(0.00297)	0.0342***	(0.00297)	0.0322***	(0.00393)	0.0322***	(0.00391)
non citizen	0.0152	(0.0121)	0.0150	(0.0121)	0.0228	(0.0123)	0.0226	(0.0123)	-0.0334	(0.0489)	-0.0334	(0.0487)
change in share European foreign-born	0.00380	(0.00260)	0.00387	(0.00262)	0.00307	(0.00250)	0.00309	(0.00256)	0.00533	(0.0111)	0.00971	(0.00995)
avg regional level European foreign-born	0.00364***	(0.00110)	0.0043***	(0.00106)	0.00329**	(0.00110)	0.00442***	(0.00111)	0.00526	(0.00404)	0.00736*	(0.00368)
change in share non-European foreign-born	-0.0110***	(0.00226)	-0.0102***	(0.00228)	-0.0113***	(0.00208)	-0.0106***	(0.00211)	0.0629	(0.0587)	0.0477	(0.0560)
avg regional level non-European foreign-born	0.000297	(0.00115)	-0.0138	(0.0983)	-0.00169	(0.00123)	-0.000521	(0.00101)	-0.0458	(0.0590)	-0.0634*	(0.0296)
regional gdp per capita	6.57e-07	(3.77e-07)			1.21e-06**	(4.43e-07)			5.47e-07	(8.72e-07)		
regional unemployment	-0.00147	(0.000757)			-0.00157*	(0.00078)			-0.000625	(0.00209)		
regional density	-4.73e-06	(3.82e-06)			4.40e-07	(4.03e-06)			-8.95e-06	(1.52e-05)		
<i>Random effects</i>												
country	0.0034	(0.0012)	0.032	(0.001)	0.0031	(0.00145)	0.0028	(0.0012)	0.0045	(0.002)	0.0044	(0.00253)
region	0.0003	(0.00009)	0.0003	(0.00009)	0.0003	(0.0001)	0.0004	(0.0001)	4.43e-12	(3.25e-11)	0.00001	(0.0001)
Region-year	0.0007	(0.00008)	0.0007	(0.00008)	0.0005	(0.00008)	0.0005	(0.00008)	0.001	(0.0001)	0.0010	(0.000214)
Individual	0.0379	(0.0001)	0.037	(0.0001)	0.0364	(0.00021)	0.0364	(0.0002)	0.0403	(0.00033)	0.040	(0.00032)
Intercept	0.472***	(0.257)	0.462***	(0.022)	0.442***	(0.023)	0.450***	(0.017)	0.518***	(0.042)	0.512***	(0.0284)
N respondents	89,001		89,634		58,781		58,781		30,867		30,836	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** p<0.001, ** p<0.01, * p<0.05

Table A.5. Multi-level estimation results, immigration by origin – Immigration policy

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Attitude Toward Policy</i>												
age	-0.0017***	(4.56e-05)	-0.0017***	(4.54e-05)	-0.0017***	(5.45e-05)	-0.00175***	(5.45e-05)	-0.00171***	(8.32e-05)	-0.0017***	(8.22e-05)
university	0.146***	(0.00323)	0.146***	(0.00322)	0.155***	(0.00344)	0.155***	(0.00344)	0.106***	(0.00869)	0.106***	(0.00859)
tertiary without degree	0.0810***	(0.00453)	0.0810***	(0.00452)	0.0830***	(0.00508)	0.0832***	(0.00508)	0.0596***	(0.0105)	0.0597***	(0.0103)
Upper secondary	0.0577***	(0.00315)	0.0579***	(0.00315)	0.0577***	(0.00343)	0.0579***	(0.00343)	0.0385***	(0.00827)	0.0389***	(0.00818)
Lower secondary	0.0419***	(0.00339)	0.0417***	(0.00338)	0.0379***	(0.00375)	0.0380***	(0.00375)	0.0279**	(0.00858)	0.0273**	(0.00848)
female	0.00626***	(0.00163)	0.0061***	(0.00162)	0.00460*	(0.00193)	0.00461*	(0.00193)	0.0105***	(0.00297)	0.0102***	(0.00293)
Living in urban area	0.0181***	(0.00196)	0.0182***	(0.00195)	0.0237***	(0.00235)	0.0238***	(0.00235)	0.0108**	(0.00354)	0.0113**	(0.00349)
Income difficulty	-0.0486***	(0.00211)	-0.0490***	(0.00210)	-0.0590***	(0.00276)	-0.0595***	(0.00276)	-0.0403***	(0.00338)	-0.0406***	(0.00334)
minority	0.0391***	(0.00291)	0.0390***	(0.00290)	0.0311***	(0.00361)	0.0311***	(0.00361)	0.0477***	(0.00493)	0.0476***	(0.00491)
non citizen	0.0104	(0.0149)	0.0100	(0.0149)	0.0235	(0.0150)	0.0233	(0.0150)	-0.0775	(0.0622)	-0.0777	(0.0621)
change in share European foreign-born	0.00676	(0.00352)	0.00665	(0.00353)	0.00496	(0.00336)	0.00506	(0.00340)	0.0243	(0.0146)	0.0206	(0.0130)
avg regional level European foreign-born	0.00407**	(0.00133)	0.0048***	(0.00128)	0.00341*	(0.00138)	0.00498***	(0.00142)	0.00946	(0.00516)	0.00779	(0.00467)
change in share non-European foreign-born	-0.0184***	(0.00306)	-0.0172***	(0.00307)	-0.0192***	(0.00278)	-0.0181***	(0.00280)	0.0924	(0.0773)	0.0924	(0.0735)
avg regional level non-European foreign-born	0.000726	(0.00138)	-0.000275	(0.00118)	-0.00117	(0.00154)	-0.000499	(0.00128)	-0.103	(0.0765)	-0.0691	(0.0382)
regional gdp per capita	7.34e-07	(4.71e-07)			1.57e-06**	(5.72e-07)			-6.32e-07	(1.14e-06)		
regional unemployment	-0.00184	(0.000954)			-0.00209*	(0.00100)			1.28e-05	(0.00274)		
regional density	-7.80e-06	(4.63e-06)			-3.73e-06	(5.02e-06)			1.50e-05	(1.98e-05)		
<i>Random effects</i>												
country	0.005	(0.002)	0.0057	(0.001)	0.005	(0.002)	0.005	(0.002)	0.0064	(0.003)	0.006	(0.003)
region	0.003	(0.0001)	0.0004	(0.0001)	0.0005	(0.0001)	0.0007	(0.0001)	1.18e-19	(8.59e-19)	1.10e-22	(7.06e-22)
Region-year	0.0014	(0.0001)	0.0014	(0.0001)	0.001	(0.0001)	0.001	(0.0001)	0.0019	(0.0003)	0.001	(0.0003)
Individual	0.0578	(0.0002)	0.0578	(0.0002)	0.0537	(0.003)	0.0537	(0.0003)	0.065	(0.0005)	0.065	(0.0005)
Intercept	0.562***	(0.0334)	0.552***	(0.029)	0.482***	(0.0304)	0.495***	(0.0233)	0.582***	(0.0542)	0.577***	(0.0346)
N respondents	89,378		90,036		58,511		58,528		31,508		31,508	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** p<0.001, ** p<0.01, * p<0.05

Table A.6. Multi-level estimation results, immigration by education level- Attitudes toward immigrants' contribution

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Attitude Toward Contribution</i>												
age	-0.0007***	(3.71e-05)	-0.0007***	(3.69e-05)	-0.0006***	(4.48e-05)	-0.00063***	(4.48e-05)	-0.00101***	(6.62e-05)	-0.0010***	(6.54e-05)
university	0.131***	(0.00263)	0.131***	(0.00262)	0.148***	(0.00283)	0.148***	(0.00283)	0.0590***	(0.00710)	0.0590***	(0.00703)
tertiary without degree	0.0690***	(0.00367)	0.0690***	(0.00366)	0.0749***	(0.00417)	0.0751***	(0.00417)	0.0297***	(0.00845)	0.0297***	(0.00836)
Upper secondary	0.0470***	(0.00257)	0.0471***	(0.00257)	0.0479***	(0.00282)	0.0480***	(0.00282)	0.0129	(0.00679)	0.0133*	(0.00672)
Lower secondary	0.0304***	(0.00277)	0.0302***	(0.00276)	0.0285***	(0.00309)	0.0286***	(0.00309)	0.00223	(0.00705)	0.00147	(0.00696)
female	-0.00119	(0.00132)	-0.00118	(0.00131)	-0.00344*	(0.00158)	-0.00346*	(0.00158)	0.00483*	(0.00235)	0.00482*	(0.00233)
Living in urban area	0.0149***	(0.00159)	0.0152***	(0.00158)	0.0205***	(0.00193)	0.0206***	(0.00192)	0.00810**	(0.00280)	0.00897**	(0.00276)
Income difficulty	-0.0499***	(0.00172)	-0.0502***	(0.00171)	-0.0614***	(0.00227)	-0.0618***	(0.00227)	-0.0401***	(0.00268)	-0.0404***	(0.00265)
minority	0.0347***	(0.00237)	0.0347***	(0.00236)	0.0341***	(0.00297)	0.0342***	(0.00297)	0.0322***	(0.00393)	0.0323***	(0.00391)
non citizen	0.0154	(0.0121)	0.0151	(0.0121)	0.0230	(0.0123)	0.0228	(0.0123)	-0.0338	(0.0489)	-0.0338	(0.0487)
change in share tertiary educated	-0.00578	(0.00358)	-0.00509	(0.00360)	-0.00809*	(0.00339)	-0.00698*	(0.00342)	0.0351	(0.0254)	0.0377	(0.0225)
avg regional level tertiary educated	0.00584*	(0.00263)	0.00467*	(0.00226)	0.00360	(0.00272)	0.00467*	(0.00233)	0.00160	(0.0247)	-0.0129	(0.0120)
change in share non-tertiary educated	-0.00325	(0.00209)	-0.00297	(0.00210)	-0.00341	(0.00197)	-0.00340	(0.00200)	0.00127	(0.0140)	0.00121	(0.0135)
avg regional level non-tertiary educated	0.000369	(0.00107)	0.000682	(0.00109)	-0.000233	(0.00109)	0.000392	(0.00112)	0.00516	(0.00554)	0.00801	(0.00510)
regional gdp per capita	5.83e-07	(3.92e-07)			9.94e-07*	(4.76e-07)			2.86e-07	(1.08e-06)		
regional unemployment	-0.00143	(0.00076)			-0.00159*	(0.00080)			-0.00103	(0.00215)		
regional density	-6.40e-06	(3.88e-06)			-1.56e-06	(4.17e-06)			-1.49e-05	(1.11e-05)		
<i>Random effects</i>												
country	0.00295	(0.001)	0.0027	(0.0009)	0.0022	(0.001)	0.0020	(0.0009)	0.0042	(0.0024)	0.004	(0.0024)
region	0.0003	(0.00009)	0.0003	(0.00009)	0.0003	(0.0001)	0.0004	(0.00011)	0.00007	(0.0001)	0.00007	(0.00015)
Region-year	0.0007	(0.00008)	0.0007	(0.00008)	0.0006	(0.00008)	0.0006	(0.00009)	0.001	(0.0002)	0.001	(0.0002)
Individual	0.3793	(0.0001)	0.03788	(0.00017)	0.03641	(0.00021)	0.0364	(0.0002)	0.04016	(0.00033)	0.04016	(0.00032)
Intercept	0.480***	(0.0246)	0.471***	(0.0204)	0.454***	(0.0220)	0.460***	(0.0156)	0.527***	(0.0449)	0.518***	(0.0281)
N respondents	89,378		90,036		58,511		58,528		31,508		31,508	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** p<0.001, ** p<0.01, * p<0.05

Table A.7. Multi-level estimation results, immigration by education level– Immigration policy

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Attitude Toward Policy</i>												
age	-0.0017***	(4.56e-05)	-0.0017***	(4.54e-05)	-0.0017***	(5.45e-05)	-0.00175***	(5.45e-05)	-0.00171***	(8.32e-05)	-0.0017***	(8.22e-05)
university	0.146***	(0.00323)	0.146***	(0.00322)	0.155***	(0.00344)	0.155***	(0.00344)	0.106***	(0.00869)	0.106***	(0.00859)
tertiary without degree	0.0809***	(0.00453)	0.0809***	(0.00452)	0.0829***	(0.00508)	0.0831***	(0.00508)	0.0596***	(0.0105)	0.0597***	(0.0103)
Upper secondary	0.0577***	(0.00315)	0.0578***	(0.00315)	0.0576***	(0.00343)	0.0578***	(0.00343)	0.0386***	(0.00827)	0.0390***	(0.00818)
Lower secondary	0.0418***	(0.00339)	0.0416***	(0.00338)	0.0378***	(0.00375)	0.0379***	(0.00375)	0.0279**	(0.00858)	0.0273**	(0.00848)
female	0.00624***	(0.00163)	0.0061***	(0.00162)	0.00456*	(0.00193)	0.00457*	(0.00193)	0.0105***	(0.00297)	0.0101***	(0.00293)
Living in urban area	0.0179***	(0.00196)	0.0181***	(0.00195)	0.0235***	(0.00235)	0.0236***	(0.00235)	0.0109**	(0.00354)	0.0111**	(0.00349)
Income difficulty	-0.0486***	(0.00211)	-0.0489***	(0.00210)	-0.0590***	(0.00276)	-0.0595***	(0.00276)	-0.0404***	(0.00338)	-0.0406***	(0.00334)
minority	0.0391***	(0.00291)	0.0390***	(0.00290)	0.0311***	(0.00361)	0.0311***	(0.00361)	0.0477***	(0.00493)	0.0476***	(0.00491)
non citizen	0.0105	(0.0149)	0.0102	(0.0149)	0.0237	(0.0150)	0.0235	(0.0150)	-0.0776	(0.0622)	-0.0777	(0.0621)
change in share tertiary educated	-0.0106*	(0.00494)	-0.00981*	(0.00494)	-0.0134**	(0.00464)	-0.0120**	(0.00466)	0.0369	(0.0334)	0.0248	(0.0297)
avg regional level tertiary educated	0.00439	(0.00313)	0.00283	(0.00267)	0.00223	(0.00332)	0.00324	(0.00290)	0.0128	(0.0324)	-0.0153	(0.0149)
change in share non-tertiary educated	-0.00469	(0.00287)	-0.00433	(0.00287)	-0.00595*	(0.00270)	-0.00591*	(0.00271)	0.0340	(0.0184)	0.0304	(0.0176)
avg regional level non-tertiary educated	0.00120	(0.00127)	0.00169	(0.00129)	0.000388	(0.00132)	0.00137	(0.00140)	0.00582	(0.00720)	0.00843	(0.00637)
regional gdp per capita	7.29e-07	(4.88e-07)			1.43e-06*	(6.06e-07)			-1.10e-06	(1.42e-06)		
regional unemployment	-0.00166	(0.00096)			-0.00201	(0.00103)			-0.000610	(0.00282)		
regional density	-8.03e-06	(4.66e-06)			-3.79e-06	(5.07e-06)			-4.22e-06	(1.45e-05)		
<i>Random effects</i>												
country	0.005	(0.0019)	0.005	(0.001)	0.0048	(0.002)	0.0043	(0.0019)	0.006	(0.004)	0.007	(0.004)
region	0.0002	(0.0001)	0.0003	(0.0001)	0.0004	(0.0001)	0.0006	(0.0001)	3.42e-17	(2.06e-20)	3.23e-21	(2.06e-20)
Region-year	0.0016	(0.0001)	0.0016	(0.0001)	0.0013	(0.0001)	0.0013	(0.0001)	0.0019	(0.0003)	0.001	(0.0003)
Individual	0.0578	(0.00027)	0.057	(0.0002)	0.0537	(0.0003)	0.053	(0.0003)	0.065	(0.0005)	0.065	(0.0005)
Intercept	0.566***	(0.0330)	0.560***	(0.0284)	0.493***	(0.0296)	0.505***	(0.0218)	0.597***	(0.0578)	0.583***	(0.0363)
N respondents	89,378		90,036		58,511		58,528		31,508		31,508	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

Table A.8. Multi-level estimation results, immigration by origin and education level– Attitudes toward immigrants' contribution

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Attitude Toward Policy</i>												
age	-0.0007***	(3.71e-05)	-0.0007***	(3.69e-05)	-0.0006***	(4.48e-05)	-0.00063***	(4.48e-05)	-0.00101***	(6.62e-05)	-0.0010***	(6.54e-05)
university	0.131***	(0.00263)	0.131***	(0.00262)	0.148***	(0.00283)	0.148***	(0.00283)	0.0590***	(0.00710)	0.0589***	(0.00703)
tertiary without degree	0.0691***	(0.00367)	0.0691***	(0.00366)	0.0750***	(0.00417)	0.0752***	(0.00417)	0.0297***	(0.00845)	0.0297***	(0.00836)
Upper secondary	0.0470***	(0.00257)	0.0472***	(0.00257)	0.0479***	(0.00282)	0.0480***	(0.00282)	0.0129	(0.00679)	0.0133*	(0.00672)
Lower secondary	0.0305***	(0.00277)	0.0302***	(0.00276)	0.0286***	(0.00309)	0.0286***	(0.00309)	0.00223	(0.00705)	0.00148	(0.00696)
female	-0.00117	(0.00132)	-0.00116	(0.00131)	-0.00341*	(0.00158)	-0.00343*	(0.00158)	0.00483*	(0.00235)	0.00484*	(0.00233)
Living in urban area	0.0150***	(0.00159)	0.0153***	(0.00158)	0.0206***	(0.00192)	0.0208***	(0.00192)	0.00803**	(0.00280)	0.0090***	(0.00276)
Income difficulty	-0.0499***	(0.00172)	-0.0502***	(0.00171)	-0.0614***	(0.00227)	-0.0618***	(0.00227)	-0.0400***	(0.00268)	-0.0404***	(0.00265)
minority	0.0347***	(0.00237)	0.0347***	(0.00236)	0.0342***	(0.00297)	0.0343***	(0.00297)	0.0322***	(0.00393)	0.0323***	(0.00391)
non citizen	0.0153	(0.0121)	0.0150	(0.0121)	0.0228	(0.0123)	0.0226	(0.0123)	-0.0339	(0.0489)	-0.0338	(0.0487)
change in share tertiary edu European foreign-born	-0.00118	(0.00602)	-0.00117	(0.00606)	-0.00562	(0.00574)	-0.00499	(0.00587)	0.0319	(0.0305)	0.0388	(0.0275)
avg regional level tertiary edu European foreign-born	0.00250	(0.00560)	0.000124	(0.00499)	0.00284	(0.00559)	0.00243	(0.00530)	0.0663	(0.0426)	0.0666	(0.0357)
change in share tertiary edu non-European foreign-born	-0.0114	(0.00814)	-0.00942	(0.00822)	-0.0101	(0.00753)	-0.00772	(0.00771)	0.191	(0.163)	0.175	(0.159)
avg reg level tertiary edu non- European foreign-born	0.0121*	(0.00588)	0.0148*	(0.00591)	0.00684	(0.00594)	0.0119	(0.00610)	-0.828	(0.424)	-0.689*	(0.337)
change in share non-tertiary edu European foreign-born	0.00640	(0.00352)	0.00646	(0.00355)	0.00726*	(0.00335)	0.00685*	(0.00343)	-0.00624	(0.0151)	-0.00333	(0.0144)
avg regional level non-tertiary edu European	0.00356*	(0.00156)	0.00479**	(0.00153)	0.00317*	(0.00157)	0.00441**	(0.00160)	-0.00151	(0.00676)	-0.000818	(0.00649)
change in share non-tertiary edu non-European	-0.0105***	(0.00281)	-0.0099***	(0.00283)	-0.0108***	(0.00257)	-0.0105***	(0.00262)	0.00161	(0.0765)	-0.0213	(0.0745)
avg regional level non-tertiary edu non-European	-0.00338	(0.00191)	-0.00435*	(0.00185)	-0.00431*	(0.00189)	-0.00431*	(0.00187)	0.127	(0.103)	0.113	(0.102)
regional gdp per capita	5.18e-07	(3.83e-07)			1.06e-06*	(4.58e-07)			2.96e-07	(1.07e-06)		
regional unemployment	-0.00160*	(0.00075)			-0.00176*	(0.00078)			-0.00101	(0.00214)		
regional density	-4.33e-06	(4.05e-06)			6.84e-07	(4.29e-06)			5.64e-06	(1.77e-05)		
<i>Random effects</i>												
country	0.0034	(0.0012)	0.003	(0.001)	0.003	(0.001)	0.002	(0.001)	0.005	(0.002)	0.0045	(0.0027)
region	0.0003	(0.00009)	0.0003	(0.00009)	0.0003	(0.0001)	0.0004	(0.0001)	1.75e-12	(4.46e-13)	9.29e-06	(0.0001)

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Region-year	0.0007	(0.00008)	0.0007	(0.00008)	0.0005	(0.00008)	0.0005	(0.00008)	0.0011	(0.0001)	0.001	(0.0002)
Individual	0.037	(0.0001)	0.037	(0.0001)	0.036	(0.0002)	0.0364	(0.0002)	0.0403	(0.0003)	0.040	(0.0003)
Intercept	0.477***	(0.0259)	0.463***	(0.0220)	0.446***	(0.0235)	0.451***	(0.0175)	0.521***	(0.0454)	0.508***	(0.0289)
N respondents	89,001		90,036		58,511		58,528		30836		30836	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** p<0.001, ** p<0.01, * p<0.05

Table A.9. Multi-level estimation results, immigration by origin and education level– Immigration policy

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Attitude Toward Policy</i>												
age	-0.0017***	(4.56e-05)	-0.0017***	(4.54e-05)	-0.0017***	(5.45e-05)	-0.00175***	(5.45e-05)	-0.00172***	(8.32e-05)	-0.0017***	(8.22e-05)
university	0.146***	(0.00323)	0.146***	(0.00322)	0.155***	(0.00344)	0.155***	(0.00344)	0.106***	(0.00869)	0.106***	(0.00859)
tertiary without degree	0.0810***	(0.00453)	0.0810***	(0.00452)	0.0830***	(0.00508)	0.0832***	(0.00508)	0.0596***	(0.0105)	0.0597***	(0.0103)
Upper secondary	0.0577***	(0.00315)	0.0579***	(0.00315)	0.0577***	(0.00343)	0.0579***	(0.00343)	0.0386***	(0.00827)	0.0390***	(0.00818)
Lower secondary	0.0419***	(0.00339)	0.0417***	(0.00338)	0.0379***	(0.00375)	0.0380***	(0.00375)	0.0279**	(0.00858)	0.0273**	(0.00848)
female	0.00626***	(0.00163)	0.0061***	(0.00162)	0.00460*	(0.00193)	0.00460*	(0.00193)	0.0105***	(0.00297)	0.0102***	(0.00293)
Living in urban area	0.0180***	(0.00196)	0.0182***	(0.00195)	0.0236***	(0.00235)	0.0237***	(0.00235)	0.0108**	(0.00354)	0.0113**	(0.00349)
Income difficulty	-0.0486***	(0.00211)	-0.0490***	(0.00210)	-0.0590***	(0.00276)	-0.0595***	(0.00276)	-0.0403***	(0.00338)	-0.0406***	(0.00334)
minority	0.0391***	(0.00291)	0.0390***	(0.00290)	0.0311***	(0.00361)	0.0311***	(0.00361)	0.0478***	(0.00493)	0.0477***	(0.00491)
non citizen	0.0104	(0.0149)	0.0101	(0.0149)	0.0235	(0.0150)	0.0233	(0.0150)	-0.0775	(0.0622)	-0.0777	(0.0621)
change in share tertiary edu European foreign-born	0.00257	(0.00813)	0.00211	(0.00815)	-0.00214	(0.00771)	-0.00156	(0.00779)	0.0266	(0.0405)	0.0214	(0.0365)
avg regional level tertiary edu European foreign-born	0.00469	(0.00686)	0.000211	(0.00612)	0.00634	(0.00706)	0.00294	(0.00692)	0.0825	(0.0563)	0.0485	(0.0470)
change in share tertiary edu non-European foreign-born	-0.0285**	(0.0110)	-0.0255*	(0.0110)	-0.0280**	(0.0101)	-0.0245*	(0.0102)	0.177	(0.217)	0.135	(0.211)
avg reg level tertiary edu non-European foreign-born	0.00600	(0.00717)	0.00961	(0.00723)	-0.000685	(0.00751)	0.00715	(0.00795)	-0.847	(0.556)	-0.485	(0.444)
change in share non-tertiary edu European foreign-born	0.00968*	(0.00474)	0.00987*	(0.00476)	0.00906*	(0.00450)	0.00898*	(0.00455)	0.0237	(0.0200)	0.0189	(0.0191)
avg regional level non-tertiary edu European	0.00372	(0.00191)	0.00563**	(0.00188)	0.00268	(0.00199)	0.00514*	(0.00209)	0.000434	(0.00892)	0.00216	(0.00849)
change in share non-tertiary edu non-European	-0.0158***	(0.00378)	-0.0150***	(0.00380)	-0.0166***	(0.00344)	-0.0162***	(0.00347)	0.0767	(0.102)	0.0774	(0.0991)
avg regional level non-tertiary edu non-European	-0.00113	(0.00233)	-0.00273	(0.00227)	-0.00183	(0.00238)	-0.00270	(0.00242)	0.0183	(0.137)	0.0311	(0.135)
regional gdp per capita	6.50e-07	(4.86e-07)			1.52e-06*	(5.97e-07)			-1.07e-06	(1.41e-06)		
regional unemployment	-0.00198*	(0.00096)			-0.00229*	(0.00102)			-0.000250	(0.00283)		
regional density	-7.84e-06	(4.98e-06)			-4.15e-06	(5.40e-06)			2.97e-05	(2.29e-05)		
<i>Random effects</i>												
country	0.0059	(0.002)	0.0057	(0.0019)	0.0057	(0.020)	0.005	(0.002)	0.0065	(0.003)	0.0063	(0.003)
region	0.0003	(0.0001)	0.0004	(0.0001)	0.0005	(0.0001)	0.0007	(0.0001)	1.98e-22	(4.46e-13)	2.77e-22	(3.68e-21)

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Region-year	0.001	(0.0001)	0.0014	(0.00015)	0.0010	(0.0001)	0.0011	(0.0001)	0.001	(0.0003)	0.0019	(0.003)
Individual	0.057	(0.0002)	0.0578	(0.002)	0.053	(0.0003)	0.0537	(0.0003)	0.065	(0.0005)	0.065	(0.0008)
Intercept	0.566***	(0.0337)	0.553***	(0.0291)	0.481***	(0.0309)	0.493***	(0.0234)	0.586***	(0.0571)	0.574***	(0.0349)
N respondents	89,378		90,036		58,511		58,528		31,508		31,508	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** p<0.001, ** p<0.01, * p<0.05

Table A.10. Multi-level estimation results, immigration by gender - Attitudes toward immigrants' contribution

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Attitude Toward Contribution</i>												
age	-0.0007***	(3.71e-05)	-0.0007***	(3.69e-05)	-0.0006***	(4.48e-05)	-0.00063***	(4.48e-05)	-0.00101***	(6.62e-05)	-0.0010***	(6.54e-05)
university	0.131***	(0.00263)	0.131***	(0.00262)	0.148***	(0.00283)	0.148***	(0.00283)	0.0591***	(0.00710)	0.0590***	(0.00703)
tertiary without degree	0.0690***	(0.00367)	0.0690***	(0.00366)	0.0749***	(0.00417)	0.0751***	(0.00417)	0.0297***	(0.00845)	0.0298***	(0.00836)
Upper secondary	0.0470***	(0.00257)	0.0471***	(0.00257)	0.0479***	(0.00282)	0.0480***	(0.00282)	0.0130	(0.00679)	0.0134*	(0.00672)
Lower secondary	0.0304***	(0.00277)	0.0302***	(0.00276)	0.0285***	(0.00309)	0.0286***	(0.00309)	0.00229	(0.00705)	0.00153	(0.00696)
female	-0.00118	(0.00132)	-0.00117	(0.00131)	-0.00343*	(0.00158)	-0.00345*	(0.00158)	0.00483*	(0.00235)	0.00484*	(0.00233)
Living in urban area	0.0150***	(0.00159)	0.0153***	(0.00158)	0.0206***	(0.00192)	0.0207***	(0.00192)	0.00808**	(0.00280)	0.00867**	(0.00275)
Income difficulty	-0.0498***	(0.00172)	-0.0502***	(0.00171)	-0.0614***	(0.00227)	-0.0618***	(0.00227)	-0.0401***	(0.00268)	-0.0404***	(0.00265)
minority	0.0347***	(0.00237)	0.0347***	(0.00236)	0.0341***	(0.00297)	0.0342***	(0.00297)	0.0322***	(0.00393)	0.0323***	(0.00391)
non citizen	0.0154	(0.0121)	0.0151	(0.0121)	0.0230	(0.0123)	0.0228	(0.0123)	-0.0334	(0.0489)	-0.0333	(0.0487)
change in share women foreign-born	-0.000952	(0.00496)	0.00134	(0.00493)	-0.00187	(0.00481)	0.000646	(0.00481)	-0.000100	(0.0240)	-0.00507	(0.0235)
avg regional level women foreign-born	-0.00118	(0.00674)	-0.00140	(0.00677)	-0.00190	(0.00713)	-0.00240	(0.00734)	-0.00890	(0.0173)	0.000633	(0.0178)
change in share men foreign-born	-0.00658	(0.00446)	-0.00787	(0.00445)	-0.00719	(0.00425)	-0.00876*	(0.00426)	0.0267	(0.0308)	0.0401	(0.0296)
avg regional level men foreign-born	0.00508	(0.00744)	0.00559	(0.00749)	0.00372	(0.00786)	0.00629	(0.00809)	0.0212	(0.0217)	0.00460	(0.0216)
regional gdp per capita	6.94e-07	(3.85e-07)			1.09e-06*	(4.61e-07)			3.66e-07	(8.83e-07)		
regional unemployment	-0.00128	(0.00076)			-0.00146	(0.00080)			-0.000591	(0.00211)		
regional density	-4.93e-06	(3.81e-06)			-5.26e-07	(4.08e-06)			-1.75e-05	(1.03e-05)		
<i>Random effects</i>												
country	0.0030	(0.0010)	0.0028	(0.0009)	0.0023	(0.0010)	0.0021	(0.0009)	0.0049	(0.0028)	0.0041	(0.00233)
region	0.0003	(0.00009)	0.0003	(0.00009)	0.0004	(0.0001)	0.00048	(0.00012)	3.19e-11	(1.76e-10)	0.00009	(0.0001)
Region-year	0.0007	(0.00008)	0.0007	(0.00008)	0.0006	(0.00008)	0.00064	(0.00009)	0.0011	(0.00018)	0.0010	(0.000212)
Individual	0.0379	(0.0001)	0.037	(0.0001)	0.0364	(0.00021)	0.03640	(0.0002)	0.0403	(0.00033)	0.0401	(0.00032)
Intercept	0.475***	(0.0247)	0.469***	(0.0207)	0.452***	(0.0219)	0.459***	(0.0157)	0.518***	(0.0441)	0.524***	(0.0276)
N respondents	89,001		89,634		58,781		58,781		30,867		30,836	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Table A.11. Multi-level estimation results, immigration by gender – Immigration policy

	Full sample				Western Europe				Central and Eastern Europe			
	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.	β	S.E.
<i>Attitude Toward Policy</i>												
age	-0.0017***	(4.56e-05)	-0.0017***	(4.54e-05)	-0.0017***	(5.45e-05)	-0.00175***	(5.45e-05)	-0.00171***	(8.32e-05)	-0.0017***	(8.22e-05)
university	0.146***	(0.00323)	0.146***	(0.00322)	0.155***	(0.00344)	0.155***	(0.00344)	0.106***	(0.00869)	0.106***	(0.00859)
tertiary without degree	0.0809***	(0.00453)	0.0810***	(0.00452)	0.0829***	(0.00508)	0.0831***	(0.00508)	0.0596***	(0.0105)	0.0598***	(0.0103)
Upper secondary	0.0577***	(0.00315)	0.0578***	(0.00315)	0.0576***	(0.00343)	0.0578***	(0.00343)	0.0386***	(0.00827)	0.0390***	(0.00818)
Lower secondary	0.0419***	(0.00339)	0.0416***	(0.00338)	0.0378***	(0.00375)	0.0379***	(0.00375)	0.0279**	(0.00858)	0.0273**	(0.00848)
female	0.00625***	(0.00163)	0.0061***	(0.00162)	0.00458*	(0.00193)	0.00458*	(0.00193)	0.0105***	(0.00297)	0.0101***	(0.00293)
Living in urban area	0.0180***	(0.00196)	0.0181***	(0.00195)	0.0235***	(0.00235)	0.0236***	(0.00234)	0.0109**	(0.00354)	0.0108**	(0.00348)
Income difficulty	-0.0486***	(0.00211)	-0.0489***	(0.00210)	-0.0590***	(0.00276)	-0.0594***	(0.00276)	-0.0404***	(0.00338)	-0.0406***	(0.00334)
minority	0.0391***	(0.00291)	0.0390***	(0.00290)	0.0310***	(0.00361)	0.0311***	(0.00361)	0.0477***	(0.00493)	0.0477***	(0.00491)
non citizen	0.0106	(0.0149)	0.0103	(0.0149)	0.0238	(0.0150)	0.0236	(0.0150)	-0.0776	(0.0622)	-0.0778	(0.0621)
change in share women foreign-born	0.00584	(0.00667)	0.00930	(0.00658)	0.00197	(0.00644)	0.00588	(0.00639)	0.0319	(0.0316)	0.0312	(0.0307)
avg regional level women foreign-born	0.00127	(0.00795)	-0.000589	(0.00797)	0.000915	(0.00860)	-0.000945	(0.00903)	0.00235	(0.0226)	0.00260	(0.0220)
change in share men foreign-born	-0.0172**	(0.00605)	-0.0194**	(0.00599)	-0.0168**	(0.00572)	-0.0194***	(0.00569)	0.0355	(0.0407)	0.0284	(0.0384)
avg regional level men foreign-born	0.00305	(0.00878)	0.00505	(0.00882)	0.00104	(0.00949)	0.00523	(0.00997)	0.0123	(0.0281)	0.00136	(0.0270)
regional gdp per capita	7.64e-07	(4.75e-07)			1.45e-06*	(5.82e-07)			-9.40e-07	(1.16e-06)		
regional unemployment	-0.00153	(0.00095)			-0.00186	(0.00102)			-0.000463	(0.00278)		
regional density	-7.27e-06	(4.55e-06)			-3.59e-06	(4.95e-06)			-3.44e-06	(1.36e-05)		
<i>Random effects</i>												
country	0.0056	(0.001)	0.0054	(0.0018)	0.0048	(0.002)	0.0043	(0.0019)	0.0069	(0.004)	0.008	(0.004)
region	0.0002	(0.0001)	0.0003	(0.0001)	0.0004	(0.0001)	0.0006	(0.0001)	1.98e-17	(1.68e-18)	2.03e-19	(1.68e-18)
Region-year	0.0016	(0.0001)	0.0016	(0.0001)	0.0013	(0.0001)	0.0013	(0.0001)	0.0019	(0.0003)	0.0019	(0.003)
Individual	0.0578	(0.0002)	0.0578	(0.0002)	0.0537	(0.003)	0.0537	(0.0003)	0.065	(0.0005)	0.065	(0.0005)
Intercept	0.563***	(0.0327)	0.560***	(0.0282)	0.493***	(0.0293)	0.506***	(0.0216)	0.593***	(0.0559)	0.591***	(0.0373)
N respondents	89,378		90,036		58,511		58,528		31,508		31,508	
N countries	21		21		13		13		8		8	
N regions	182		183		134		135		48		48	
N region-years	566		574		425		427		141		147	

All full sample models control for Western/Eastern Europe-year dummy variables. The split samples include year dummies. *** p<0.001, ** p<0.01, * p<0.05

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