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Immigrants' Origin and Skill level as Factors in Attitudes toward Immigrants in Europe[1]

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Abstract. The issue of immigration, and policy responses to it, is driving key political debates in most European countries. A growing backlash appears to be manifest on several levels including the attitude of individual members of the public, organized political parties or factions, and governmental policy. While existing research has tended to examine public attitudes toward immigrants with a focus on the individual characteristics of those holding the views (e.g. age, gender, education), few studies have considered characteristics of the immigrants themselves as a driving factor in attitudes toward immigration. This study examines characteristics of immigrants as independent variables, differentiating immigrants' origin (EU/non-EU) and immigrants' skill level (low/highly-educated). It utilizes data from the European Labour Force Survey (EU-LFS) and the European Social Survey (ESS) to evaluate the extent to which characteristics of immigrants drive anti-immigrant public sentiment. This investigation finds that for immigrants living in a European region, their origin is a significant determinant of attitudes toward immigration. In addition, our empirical results do not reveal any direct effect of immigrants' skill level on attitudes toward them. Nevertheless, we find some moderating effect between the size and the skill level of immigrant population in shaping natives' attitudes toward immigration.

Keywords: *Immigration, European regions, anti-immigrant attitudes, multi-level analysis*

Introduction

Immigration poses a significant policy-making challenge for advanced industrial countries in the 21st Century. Civil wars and conflicts along with economic underdevelopment, instability, and political corruption are among the many factors driving ethnic nationals to seek relocation in foreign lands. Several factors have made Western Europe among the top destinations for immigrants. These include democratic political stability, relative prosperity and higher standards of living, comparatively sizable social welfare states, perceived social opportunity, and central geographic location relative to many areas that emigrants presently flee.

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Governments across the advanced industrial world, and especially those of Western Europe, have confronted rising tides of immigration in recent years amidst a backdrop of increased public resentment of immigrants entering their societies. This has made the challenge of policy response especially difficult.

This study examines public attitudes toward immigrants in 78 European regions. Much existing research on Western Europe and beyond has tended to investigate the phenomenon of immigration by linking attitudes toward immigrants to the individual characteristics of those holding particular viewpoints, whether positive or negative (Mayda, 2006; O'Rourke and Sinnott, 2006; Facchini and Mayda, 2008; Pardos-Prado, 2011). However, this study flips the focus by turning attention to the characteristics of immigrants living in a European region. Using existing theories regarding how economic conditions, cultural identity frameworks, and interaction or contact with immigrants may affect perceptions of and attitudes toward them, this paper differentiates itself from much of the past literature by placing weight on the traits of the immigrants themselves as highly determinative of attitudes toward immigration. We do this in our analysis by controlling for individual traits such as age, gender, or employment status that may account for some of the more idiosyncratic factors shaping sentiment toward immigrants.

This study builds on previous empirical research that examines the impact of regional factors on European attitudes towards immigrants (Schlueter and Wagner, 2008; Rustenbach, 2010; Markaki and Longhi, 2013; Bridges and Mateut, 2014; Weber, 2015) and attempts to investigate how the characteristics of immigrants drive public sentiment to be more or less anti-immigrant. Utilizing data from the European Labour Force Survey (EU-LFS) (2012) and the European Social Survey (ESS) (2012) over the period 2004-2012, we evaluate the extent to which origin (EU/Non-EU) and skill level (low/high-educated) of immigrants living in a given region affect natives' attitudes toward them. Our work is similar to the study conducted by Markaki and Longhi (2013), yet we differentiate ourselves from the authors in several ways, primarily by distinguishing non-EU immigrants into six broad groups of origin which is the main empirical contribution of this study.

Our results indicate that the proportion of foreigners in a given region does not appear to be a significant factor in shaping attitudes toward immigration. However, when we distinguish between different groups of immigrants, we find that immigrants' origin seems to play a key role. In addition, although we do not find any direct effect of immigrants' skill level as measured by level of educational attainment

in shaping attitudes toward them, our empirical results reveal some evidence that immigrants' skill level might interact with the size of the immigrant population to influence the portrayal of immigrants in the minds of natives.

Factors Shaping the Attitudes of Natives toward Immigrants

Traditionally, it is the person holding the attitude and factors shaping it that have been the focus of attempts to account for attitudes toward immigrants. Demographic factors such as one's age or gender, social factors including one's level of education, income or social class status i.e. level of wealth, or cultural identity factors that manifest themselves in cultural protectionism and racial prejudice have been considered. Much debate has played out over the relative weight of contextual factors in absolute conditions where economic versus socio-cultural or socio-political factors are weighed against one another (Card, Dustmann, and Preston, 2012; Dustmann and Preston, 2007; Gang, Rivera-Batiz, and Yun 2013; Rydgren, 2007). Here crime, economic prosperity, and other social milieu variables are tested in relation to attitudes toward immigrants. Some studies have moved away from demographics and contextual factors or added to those in order to consider transitory and variable beliefs that individuals hold, in other words how certain attitudes held, in turn, affect attitudes toward immigrants (Rustenbach, 2010; Masso, 2009). For instance, trust in government and trust in other people can be considered for how they affect attitudes toward immigrants. Other scholars have focused on politics shaping attitudes toward immigrants, where political actors foment fear to scapegoat immigrants for perceived threats (Norris, 2005; Williams, 2006).

Existing scholarship provides several competing frameworks for understanding the way that attitudes toward immigrants are shaped, both directly by individual conditions and local context but also indirectly by politics and intermediate ideology or values.

Competition Theory / Economic determinants

Competition theory suggests that economic conditions drive attitudes toward immigrants (Malchow-Moeller et al., 2008; Huber and Oberdabernig, 2015; Kazaqi, 2015; Scheve and Slaughter, 2001; Schneider, 2008; Strabac and Listhaug, 2007). A common notion is that economic downturn fuels anti-immigrant sentiment (Facchini and Mayda, 2008; Goldstein and Peters 2014; Hatton, 2016). Immigrants

may be viewed as a drain on welfare states extracting a disproportionate share of limited resources (Facchini and Mayda, 2009). Labour market threat has been considered where natives appear to view immigrants as their main competition for scarce jobs (Kunovich, 2013). Some work has considered the difference that the level of education and skill level of the attitude holder make in their attitude toward immigrants (Hainmueller and Hiscox, 2007).

Conflict Theory / Identity and Values determinants

The idea that race and racial prejudice drives some people toward visceral negative attitudes toward immigrants has also been evaluated in the literature. This theory tends to reflect a clash of cultures logic, whereby individuals recognize in-group and out-group markers differentiating people according to race and physical features, religious practices and customs, and distinctive traditions or observable cultural practices. It holds that observable difference leads to discrimination and often animosity between groups with a preference for their own race (Gorodzeisky and Semyonov, 2016; Hainmueller and Hiscox, 2007; Pehrson and Green, 2010; Malhotra, 2013). Some work in this area has drawn upon Ronald Inglehart's (1990) logic in asserting post-industrial society changes to account for conditions of economic prosperity being correlated with increasing levels of anti-immigrant sentiment in many instances – a paradox given the logic of economic condition and competition theory arguments that suggest the opposite. Such work claims that economic prosperity and security can lead to a focus on identity and culture, or to more emphasis on political preferences and ideology, in structuring attitudes, especially negative attitudes, toward immigrants (O'Connell, 2005; Pardos-Prado, 2011). This logic is used, for instance, to account for advanced industrial societies currently appearing to be prone to the rise of radical-right wing parties and increasing anti-immigrant sentiment.

Contact Theory / Interaction determinants

Contact theory holds that direct experience and interaction between the national population and the immigrants that it hosts tends to build bridges and lead to common understandings. Some contingencies for contact theory have been tested, such as effects of national versus regional effects (Kauffman and Harris, 2015; Weber, 2015), region or city size (urban vs. mid-range population, vs. small / rural) as a factor (Barone et al., 2014), and the role of size and concentrations of immigrant populations (Green et al., 2010; Dustmann and Preston, 2001; Schlueter and

Wagner, 2008; Barone et al., 2014). Notably, some studies have drawn decisive conclusions that contradict contact theory, suggesting instead that interaction with immigrants breeds resentment rather than harmony or is not strong enough to overcome other driving factors that produce anti-immigrant sentiment (Careja, 2016; Karreth et al., 2015).

Theoretical considerations and related empirical research

This study situates itself among those studies investigating whether certain characteristics of immigrants affect public attitudes toward them. In particular, we contribute to the literature on attitudes formation by evaluating the extent to which the origin and the skill level of immigrants drive public sentiment to be more or less anti-immigrant. To date, a few studies at European level have emerged that consider the characteristics of the immigrant population as determinative.

A few studies using ESS, Eurobarometer, and the British Social Attitudes Survey data have considered the ethnic origin of immigrants suggesting that immigrants from a different race are perceived more negatively and as a greater threat (Bridges and Mateut, 2014; Dustmann and Preston, 2007). Non-European and non-westernern immigrants produce heightened negative attitudes (Gorodzeisky and Semyonov, 2009; Scheepers *et al*., 2002). However, the relationship between immigrant presence and threat is complex. Schneider (2008) demonstrated this finding that the effect is not linear as the quadratic term of the variable is found to be negative and statistically significant, suggesting that above a threshold level, the average perception of ethnic threat decreases with an increasing share of non-western immigrants (Schneider, 2008). Existing studies examining immigrant skill level have found little causal connection with anti-immigrant attitudes (Schneider, 2008; Hainmueller and Hiscox, 2007; Facchini and Mayda, 2012; O'Connell, 2011).

There have been a few more studies that, like our own, examine natives' attitudes toward immigrants at the European regional level. With respect to the impact of the size of the immigrant population on attitudes toward immigration, the results of this research seem to be mixed. Trying to explain immigrant derogation between European regions, and using data from the first round of the ESS, Schuelter and Wagner (2008) find that the greater the size of the regional non-national workforce, the greater both intergroup contact and perceived group threat. Yet, others utilize ESS or EVS data at various NUTS levels 1-3 concluding that the number

of immigrants in a region does not appear to affect natives' attitudes towards immigration (Rustenbach, 2010; Karreth *et al*., 2015). Moreover, using information from the ESS for Swiss municipalities, Green *et. al* (2010) note that a higher proportion of Northern/Western European immigrants increases intergroup contact which in turn indirectly decreases anti-immigrant attitudes. These findings confirm the hypothesis of the authors that the presence of 'culturally similar' immigrants from rich countries should diminish negative attitudes towards immigration. However, a high proportion of Muslim immigrants in a Swiss municipality is found to increase the perceived threat of immigration. In addition, also drawing data from the ESS, Markaki and Longhi (2013) show that a higher percentage of immigrants in the region increases the probability that the native population perceives immigrants as a threat to the country's economy, culture and quality of life. Their empirical results reveal that these negative attitudes towards immigration are driven by the number of non-EU immigrants in the region. Finally, contrary to the labour market competition theory, the authors find that a higher proportion of immigrants with low education decreases the perceived economic threat of immigration.

Our research is influenced by the fact that attitudes toward immigrants cannot be adequately explained by economic factors, social factors, political factors, racial prejudice or even the attitude-holder's own milieu, when these are taken in isolation. Instead, all of these seem to come together and interact to generate anti-immigrant attitudes in much the same way that voting studies have long been frustrated by a lack of clear causal factors driving the outcome. We assert, therefore, that no single theory with corresponding discrete variables captures what is happening and can account for anti-immigrant sentiment, but rather each contributes an aspect of it. For this reason, we build our models in the analysis drawing variables from each of the three theoretical approaches discussed before, also following the design of the few existing studies mentioned above in the literature review where attitudes toward immigrants are shaped not only by individual conditions of the attitude-holder but also by the characteristics of the immigrants.

Several assumptions from the existing literature inform our analysis. First, we may observe that economic conditions correlate positively with attitudes toward immigrants so that better economic conditions correspond to more positive attitudes toward immigrants, as suggested by economic competition theory. Second, we expect that cultural difference correlates negatively with attitudes toward

immigrants whereby attitudes become more negative as cultural difference increases, which is consistent with conflict and identity theory. Third, we may see that increasing contact with immigrants produces more positive attitudes toward them, as predicted by contact theory. We do not set out to test these theories, however their logic and assumptions inform our framework and understanding of anti-immigrant attitudes including how we determine variables for our models.

Data and Methods

We use explanatory variables at two different levels, the individual and the regional. Our central research question focuses on regional level factors that shape attitudes held by natives toward immigrants living within the same geographic region. In particular, we investigate how origin and skill level of immigrants within a given region affect native attitudes toward them. While the focus is on regional level determinants, we use individual level data in order to control for the more idiosyncratic factors of individual anti-immigrant attitudes. We do present the individual level determinants in summary form but treat it as a step in controlling for factors that could offset our regional level focus.

The structure of our investigation combines individual-level information with regional-level data from a number of sources. In particular, for our dependent variables and individual-level predictors we use survey data from the European Social Survey (ESS). In addition, regionally aggregated indicators are computed from the European Union Labour Force Survey (EU-LFS). Finally, data on regional control variables are provided by the Regional Database of Cambridge Econometrics and the Regional Statistics Database of Eurostat. We restrict our sample to five rounds (2004-2012) of the ESS and focus on respondents from 78 regions of 16 European countries.

The regional level we use is based on the Nomenclature of Units for Territorial Statistics (NUTS) of the EU, which classifies countries into regions according to demographic and socioeconomic characteristics. The NUTS are divided into three hierarchical levels, where the NUTS-3 level represents a more detailed classification of regions and NUTS-1 level a broader one. We use data at the NUTS-1 level at which regions are geographically large enough to minimize any potential bias due to self-selection of natives in their location choices (Dustmann and Preston,

2001).[2] However, the NUTS-2 level is used in those cases where the NUTS-1 level corresponds to the whole country and data at the NUTS-2 level are available.

Finally, because this study examines natives' attitudes towards immigrants, we exclude from the sample all individuals without national citizenship and those who were born outside the country. Nevertheless, similarly to Markaki and Longhi (2013) we include in the analysis ethnic minorities and second-generation immigrants, but controlling for both, to capture differences between individuals who have immigrant background and those who have not. Table 1 in the Appendix presents the structure of the pooled cross-sectional sample.

Dependent variable

The dependent variable, anti-immigrant attitudes, is measured using the respondents' answers to three different questions in the ESS. More specifically, we construct our dependent variable based on the following questions:

*"Would you say it is generally bad or good for the **country's economy** that people come to live here from other countries?"*

*"Would you say that the **country's cultural life** is generally undermined or enriched by people coming to live here from other countries?"*

*"Is the **country** made a worse or a better place to live by people coming to live here from other countries?"*

To evaluate attitudes toward immigrants the questions use a scale that ranges from 0 to 10. The original question items are reverse recoded so that higher values indicate greater anti-immigrant attitudes. The three distinct measures allow us to compare natives' attitudes towards immigrants in relation to, respectively, the country's economy, culture and life in general. Alternatively, we argue that these measures represent the economic, cultural and overall perceived threat of immigration. For summary statistics on the average regional attitudes towards immigrants see Table 2 in the Appendix.

Individual predictors

We build our individual-level independent variables based on the existing empirical literature on attitudes towards immigration (Mayda, 2006; O'Rourke and

[2] It is more likely that those natives who dislike immigrants will respond to an increasing concentration of foreigners within their region of residence by relocating to areas where fewer immigrants live.

Sinnott, 2006; Rustenbach, 2010; Facchini and Mayda, 2012; Markaki and Longhi, 2013). The first set of individual-level predictors consist of the demographic background characteristics of the ESS respondents. We add controls for individuals who have one or both parents born abroad, and for those who belong to an ethnic minority. In addition, we include dummy variables for people who live in big cities, suburbs of big cities and rural areas to compare them with those who are residents of small cities or towns. The education level of respondents is measured using two binary indicators, one for people with primary education (ISCED 0-1) and another for those who have tertiary education (ISCED 5-6). Labour market characteristics are operationalized using various dummies: whether the person is employed or unemployed, whether she or he has supervisory duties, whether the respondent has ever been a member of a union, and finally whether the person has ever worked abroad.

With regard to a household's economic situation and general satisfaction with the country's economy two additional variables are used. The first is a dummy variable that indicates whether people find it difficult or not to cope with their current income while the second one measures how dissatisfied respondents feel with the present condition of the economy in the country using a scale ranging from 0 to 10. Furthermore, a set of social indicators are added that measure how religious the respondents are, how important it is to them to follow traditions and customs, how much trust they show in others and, as a proxy for an area's security, how safe they feel walking alone in their neighborhood after dark. Finally, our analysis includes a variable which evaluates the political ideology of the person based on their self-placement on a left-right scale. Table 3 in the Appendix provides summary statistics for individual-level variables and Table 4 presents their correlation matrix.

Regional predictors

To investigate the effect of regional factors on natives' attitudes toward immigrants we also utilize regional-level variables in our analysis. The regional indicators are aggregates of individual-level data derived from the EU-LFS. We merge the regional-level information from the EU-LFS with the individual-level dataset of the ESS to examine the impact that the share of the foreign population has on natives' anti-immigrant attitudes.

The EU-LFS provides information on the nationality and country of birth of each respondent. This information can be used to measure the foreign and foreign-born population in each region respectively. The foreign population consists of

people who have a different nationality from that of their current country of residence, while the foreign-born population includes all those who have migrated from their country of birth to another host country. Both measures have pros and cons and therefore it is difficult to find a perfect measure to identify the size of the regional 'outgroup' population (Coenders, 2001). This is probably the reason that some previous studies in the literature have used the regional percentages of foreign-born (Markaki and Longhi, 2013; Weber, 2015), while other studies prefer to use the proportions of non-nationals in a region (Schlueter and Wagner, 2008; Bridges and Mateut, 2014).

We choose to calculate the share of foreign population in each region on the basis of both individuals' nationality and country of birth.[3] By focusing on both criteria simultaneously we actually measure all persons born abroad who have not yet been naturalized, and thus are likely to be more salient in affecting current attitudes of natives toward immigration. However, we also use the separate shares of foreign nationals and foreign-born as alternative measures, the results of which are presented in the robustness analysis section that follows.

In a similar fashion to previous studies (Markaki and Longhi, 2013; Weber, 2015), apart from the total share of foreigners in a region we also compute the proportions of EU foreigners and those from countries outside the EU. However, attitudes toward immigrants might be affected by the composition of the non-EU foreigners in the country, due to significant cultural and socioeconomic status differences among them. Therefore, the main contribution of this study is that we additionally distinguish the non-EU foreigners into six broad groups of origin[4]: Other Europe, Middle East & North Africa, Other Africa, East & South Asia, North America & Australia and Latin America.[5]

In order to measure the direct effect of foreigners' skill level on natives'

[3] Because the EU-LFS lacks information for Germany on individuals born abroad, we measure the share of foreign population in the German regions based only on individuals' nationality.

[4] We categorize the foreign population of our sample into seven broad groups of origin following Dohse and Gold (2014).

[5] For those few individuals in the EU-LFS dataset who are foreign nationals and born outside the host country but whose nationality does not match with their country of birth, we choose to categorize them into a group of origin according to the nationality they hold. We argue that a different nationality indicates that the individual has been naturalized in a country other than his/her country of birth or reveals some preference of the person to be identified as a member of that nation and its culture Therefore, we suggest that in this case, between the two measures, nationality would be a more appropriate measure of individual's origin.

attitudes toward immigrants, the proportions of economically active foreigners with primary or lower secondary education and with tertiary education are included in our model. In addition, we include interaction terms between the share of foreigners in a region and the proportion of them with primary or lower secondary education as well as with tertiary education, in order to capture any potential moderating effects between the size of and the skill level of immigrant population. Finally, in line with previous literature (Rustenbach, 2010; Markaki and Longhi, 2013; Weber, 2015) we add controls for the unemployment rate at the regional level as well as a measure of regional economic performance, using the Gross Domestic Product (GDP) per capita of each region as a proxy for the latter. Table 6 in the Appendix provides summary statistics for regional-level variables and Table 7 presents the corresponding correlation matrix.

Multilevel model

To analyze differences in natives' attitudes toward immigrants across regions we follow a multilevel approach similarly to previous studies (Rustenbach, 2010; Weber, 2015). Because each of our three dependent variables is an 11-category ordinal variable where the different categories are evenly spaced, we treat all of them as continuous. Thus, we estimate the following multilevel linear[6] regression model:

$$Y_{ijt} = X'_{ijt}\beta + Z'_{jt}\gamma + Fshare_{jt} \times Low_{jt}\delta + Fshare_{jt} \times High_{jt}\theta + u_j + \eta_t + \varepsilon_{ijt}$$

where i indicates respondents, j indicates regions within which respondents are nested and t indicates year. The dependent variable Y_{ijt} represents natives' attitudes toward immigrants. X' is a vector that contains variables summarizing the individual characteristics of the respondents and Z' is a vector which contains variables that summarize the regional indicators. The interaction terms $Fshare_{jt} \times Low_{jt}$ and $Fshare_{jt} \times High_{jt}$ capture any moderating effect between the total share of foreigners[7] in a region $Fshare_{jt}$ and the proportion of them with primary or lower secondary education Low_{jt} as well as with tertiary education $High_{jt}$,

[6] Additionally, we also checked the non-linear effect of the shares of foreigners on anti-immigrant attitudes but we did not find any significant evidence for that.

[7] We estimate the interaction effect only for the total share of foreigners, because the average cohort size of the rest of the foreign groups becomes too small to receive reliable results if we distinguish them according to their education.

respectively. Region-specific effects u_j, year-specific effects η_t and unobserved individual effects ε_{ijt} are also included in this two-level mixed model. Regional random effects are used to adjust for correlations across observations within the same region. Year-specific effects are treated as fixed to control for unobserved effects of time. We run a multilevel regression on each dependent variable. In each case, four different model specifications are estimated. The first model specification includes only the individual-level predictors. The following three contain, apart from the regional control variables, respectively the total share of foreigners, the shares of EU and non-EUs and the share of foreigners by each specific group of origin in a region. Finally, all model specifications are estimated by using the *-mixed-* command in the statistical analysis software package Stata14.

Our work is similar to that conducted by Markaki and Longhi (2013), yet we differentiate ourselves from the authors in several ways. First, with respect to our sample, although we include in our analysis respondents from a smaller number of European regions than Markaki and Longhi (2013)[8], we use data from more recent rounds of the ESS. Second, in their study the authors decide to recode the ESS dependent variables which are measured on a scale from 0 to 10 into binary variables. However, we prefer not to alter the original variables in order not to lose the valuable information that they contain. Moreover, our study differs by distinguishing non-European immigrants living in a region into six different groups of origin as mentioned above, and this is our main empirical contribution to the literature. In addition, as discussed earlier in this section, we choose to measure the share of the foreign population in a region based simultaneously on both individuals' nationality and country of birth. This is contrary to Markaki and Longhi (2013) who use the share of foreign-born residents in their analysis. Furthermore, with respect to the modelling strategy, the authors follow a two-step modelling technique by first estimating the models at the individual level and then attempting to explain any regional differences in a second stage. Nevertheless, as previous studies have done (Rustenbach, 2010; Weber, 2015), we apply a multilevel model to analyze differences in natives' attitudes toward immigrants across regions. Finally, we extend our analysis by including an interaction term in our model to capture any moderating effect between the size and the skill level of immigrant population.

[8] Due to data unavailability for some countries in the LFS about the detailed origin of immigrants in a region.

Empirical results

Tables 8 and 9 report the estimated effects of individual and regional variables on the three different measures of anti-immigrant attitudes, respectively. In what follows, we refer to the empirical findings of these models as the results of the economic, cultural and overall threat models respectively. The results of individual and regional predictors are presented separately in this section.

Individual characteristics

We introduce individual level factors as controls to allow focus on regional level determinants as discussed in the description of our methods. We present a summary of those findings here (Table 8). Our individual level findings are consistent overall with what other studies have found (Mayda, 2006; O'Rourke and Sinnott, 2006; Rustenbach, 2010; Facchini and Mayda, 2012; Markaki and Longhi, 2013).

With respect to demographic features, males have a greater negative attitude towards immigrants than females do in relation to culture and quality of life overall, and a lesser anti-immigrant attitude than females with regard to a country's economy. Furthermore, older people have a more negative opinion on immigration than the youth population, although age does not present itself as a significant predictor in the economic threat model. In addition, we find that individuals with one or both parents born outside the country and those who belong to a minority ethnic group are more positive about immigration. Our final demographic background variables reveal that respondents living in big cities exert less negative attitudes towards immigrants than those living in small cities or towns, while the results are opposite for the residents of rural areas.

As we expected, our results show that individuals educated to primary level have stronger anti-immigrant attitudes than those with a tertiary level of education. Regarding labour market characteristics, the empirical findings are mixed across the different models. The employment status of individuals does not appear to be statistically significant, neither in the cultural threat nor in the overall threat model. However, the respondents who are employed seem to believe that immigrants might be bad for the country's economy. Similarly, although being a union member currently or in the past is not an important predictor in the overall threat model, the variable has a negative and statistically significant effect on anti-immigrant attitudes in relation to economy and culture. Moreover, having a permanent job contract does

not play an important role in explaining natives' attitudes toward immigrants. Nevertheless, managers and senior officials or people who shoulder supervisory responsibilities are clearly less negative toward immigrants, while the opposite is true for those in elementary occupations. Additionally, the respondents who have worked abroad for a period of more than six months during the last ten years are found to carry less negative attitudes toward immigrants across all the models.

With regard to economic indicators, our empirical results in all three models indicate that people who find it more difficult to cope with their present income and those who feel more dissatisfied with the current condition of the economy in their country have higher anti-immigrant attitudes. The results move in the opposite direction for those who are more religious, feel safe in the dark and believe that most people can be trusted. Finally, we find evidence of a positive association between opposition to immigration and the variable measuring the importance of following traditions and customs. The same holds in case of an individual's political affiliation with the right.

Regional determinants

The primary focus of this investigation is on the regional level. More specifically, the study focuses on those factors shaping the attitudes held by natives toward immigration that are conditioned by the origin and the skill level of immigrants living within the same region. Table 9 reports the empirical results of the regional determinants.

As the variance components at the bottom of the table show most of the variance of natives' anti-immigrant attitudes is explained by individual level factors. This is similar to previous studies (Rustenbach, 2010; Weber, 2015). For instance, in the third specification of our economic threat model, where we distinguish between different groups of immigrants, the intraclass correlation coefficient (ICC) is r=0.055 [0.247/(0.247+4.24)]. This indicates that 5.5 per cent of the total variance of the dependent variable is due to regional differences, which offers empirical support for applying a multilevel model. The ICC for the corresponding specification of the cultural threat and overall threat models is r=0.084 and r=0.042 respectively. This suggests that the observed variance of the dependent variable in these models can be attributed to differences at the regional level by 8.4 per cent and 4.2 per cent respectively. Therefore, while natives' attitudes toward immigrants can mainly be explained by individual characteristics, the regional factors seem to play an important role as well.

The first specification of each model includes the total share of foreigners in a region. At the regional level, the total share of foreigners does not present itself as a significant factor in any of our models. The second specification of each model distinguishes between EU and non-EU foreigners. In the economic threat model, the regional percentage of EU foreigners has a negative impact and is found to be statistically significant at the 5 per cent level. More precisely, a one percentage point increase in the percentage of EU foreigners decreases the perceived economic threat by 0.59 percentage points.[9] The coefficient of this variable is almost fifty per cent larger and statistically significant at the 1 per cent level in the cultural threat model; while in the overall threat model the effect of the percentage of EU foreigners is a bit larger in magnitude than in the economic threat model and statistically significant at the 5 per cent level.

To the contrary, the proportion of non-EU foreigners in the economic threat model has a positive and statistically significant effect on anti-immigrant attitudes at the 5 per cent level. More specifically, a one percentage point increase in the percentage of non-EU foreigners in the region increases the perceived economic threat of immigration by 0.43 percentage points. The size effect of this variable is more than fifty per cent larger and statistically significant at the 5 per cent level for the perceived cultural threat of immigration. However, the number of non-EU foreigners in the region does not seem to increase the overall perceived threat of immigration at any level of significance.

Furthermore, the third model specification in the table separates non-EU foreigners into six broad groups of origin. This further distinction allows us to take into account any possible influence on attitudes derived from cultural or socioeconomic status differences between the native population and various groups of foreigners. Our empirical results indicate that proportions of non-EU foreigners by group of origin explain anti-immigrant attitudes in more detail and provide us with useful information. In particular, we find that natives living in regions with higher percentages of foreigners coming from European countries outside of the EU are more likely to believe that the cultural life in their country is undermined. Our estimated coefficient suggests that a one percentage point increase in the percentage of Europeans other than EU living in

[9] If changing the independent variable by one unit, the dependent variable changes by γ (coefficient) units. Thus, a one percentage point increase in the regional percentage of EU foreigners decreases the perceived economic threat by 0.046 points in the 10-point scale or differently by 0.46 percentage points.

the region increases perceived cultural threat by 0.76 percentage points. This effect is statistically significant at the 1 per cent level. However, we do not find any significant impact of this group of foreigners in the economic threat and overall threat models.

Additionally, our findings show that the presence of a larger-sized foreign population from the Middle East and North African countries in a given region increases the perceived economic threat of immigration. A one percentage point increase in the percentage of Middle East and North African foreigners increases anti-immigrant attitudes in the region with respect to economy by more than 2 percentage points. The results for the same foreign group in the cultural threat model are similar. Finally, the regional category Other African has a positive impact on anti-immigrant attitudes with respect to perceived undermining of a country's culture. The coefficient of this group is a bit smaller than that of Middle East and North African foreigners and it is statistically significant at the 10 per cent level. The Other African foreign group is the only one found to have a positive and statically significant effect at the 10 per cent level in the overall threat model. Consequently, the results confirm our expectation that cultural distance and different values increase anti-immigrant attitudes.

Our findings concerning the skill level of immigrants do not reveal any significant direct effect of immigrants with high-level qualifications on anti-immigrant attitudes. Nevertheless, the last specification of our first model show that immigrants with low-level qualifications have a small but statistically significant effect on natives' attitudes towards immigrants with respect to the country's economy. However, the proportion of low-educated immigrants in a region does not seem to have any significant effect on anti-immigrant attitudes in the rest of the models. With regard to our control variables, we find no evidence that regional GDP per capita is significantly associated with anti-immigrant attitudes. Our results regarding the unemployment rate at the regional level are mixed. Although we find that a higher unemployment rate in a region increases the perceived economic threat of immigration, our results indicate that in the cultural threat model the regional unemployment rate has a negative and strongly statistically significant effect on attitudes toward immigrants. In the overall threat model, we do not find any significant effect of the regional rate of unemployment.

Finally, Table 10 presents the moderating effects between the size and the skill level of the immigrant population for each of our three dependent variables. As already mentioned above, we estimate an interaction effect only for the total share of foreigners in a region because the average cohort size of the rest of the foreign groups

becomes too small to allow us a further separation. Our results do not reveal a significant moderating effect between the share of foreigners in a region and the proportion of them with tertiary education in any of our models. However, we find that the proportion of low-educated immigrants positively moderates the effect of the total share of foreigners on natives' attitudes toward immigrants with respect to the country's economy, at the 1 percent level of significance.

In particular, our results indicate that when the proportion of low-skilled immigrants in a region is low (one standard deviation below the mean) increasing the total share of foreigners from one standard deviation below the mean to one standard deviation above the mean decreases perceived economic threat by 5.3 per cent. On the contrary, when the proportion of low-skilled immigrants in a region is high (one standard deviation above the mean) our results indicate that increasing the total share of foreigners from one standard deviation below the mean to one standard deviation above the mean increases perceived economic threat by 4.0 percent.

Similarly, in the cultural threat model we find a significant moderating effect, at the 5 per cent level, between the total share of foreigners in a region and the proportion of them with primary or lower secondary education. More specifically, our results show that when the proportion of low-skilled immigrants in a region is low (one standard deviation below the mean) increasing the total share of foreigners from one standard deviation below the mean to one standard deviation above the mean decreases perceived cultural threat by 2.7 percent. On the other hand, when the proportion of low-skilled immigrants in a region is high (one standard deviation above the mean) our results indicate that increasing the total share of foreigners from one standard deviation below the mean to one standard deviation above the mean increases perceived cultural threat by 2.9 per cent.

Figures 1 and 2 in the Appendix present the predictive margins with a 95 percent confidence interval for the total share of foreigners between low and high proportions of immigrants with primary or lower secondary education, for the economic threat and cultural threat models respectively. The graphs illustrate that the positive effect of the total share of foreigners on anti-immigrant attitudes, with respect to the country's economy and culture, is stronger in regions where the percentage of low-educated immigrants is higher. However, we do not find any significant moderating effect between the size and the skill level of the immigrant population in the overall threat model.

Discussion and Conclusion

The purpose of this study is to investigate factors affecting national attitudes toward immigrants based on the characteristics of the immigrants living in the region. Our empirical results show that the total share of foreigners is not a significant predictor in any of our models. These findings are consistent with the empirical studies of Rustenbach (2010) and Karreth *et al*. (2015). Neither study found evidence that the regional proportion of immigrants has an impact on anti-immigrant attitudes. However, the results of previous research are mixed. Some studies show that a larger population of immigrants in the region increases perceived threats (Schlueter and Wagner, 2008; Markaki and Longhi, 2013) in contrast to others which find that the perceived threat from immigrants decreases with the percentage of immigrants present at regional level (Weber, 2015).

Moreover, we find that a higher regional percentage of EU foreigners decreases the natives' anti-immigrant attitudes in both economic and cultural threat models. As the EU foreigners mainly represent the highly-educated immigrants in a region, these findings could be explained by economic theory which suggests that natives might favour highly-skilled immigration that benefits the country's economy. However, we find that the proportion of highly-skilled immigrants in a region has no significant effect on anti-immigrant attitudes. Thus, some other plausible economic explanations of these findings could be that there are lower unemployment rates among EU immigrants or that they are likely to depend less on the welfare state. In addition, since the EU foreigners have values more similar to those of natives, allowing them to integrate better into the social life of host communities, our findings can also be supported by conflict theory.

Furthermore, the results of our analysis support our assumption that where immigrants to a region come from outside the EU both the perceived economic and cultural threat from immigration increase, with the latter threat perceived to be greater. These results are consistent with the findings of Markaki and Longhi (2013). Moreover, our results indicate that greater cultural distance between nationals and immigrants living in the region produces stronger negative attitudes toward immigrants. Perceptions of cultural distance or difference in common values may derive from observed physical difference or from more ideological and behavioral differences, including religious beliefs and practices. In particular, our findings show that natives living in regions with higher percentages of foreigners coming from

European countries outside of the EU are more likely to believe that the cultural life in their country is undermined. Additionally, we find that a larger-sized foreign population from the Middle East and North African countries increases both the perceived economic and cultural threat from immigration. Considering that the Middle East and North African foreign group geographically represents the Muslim communities, these findings are similar to those of Green *et. al* (2010) who find that a high proportion of Muslim immigrants in a Swiss municipality increases the perceived threat from immigration. Finally, the foreign group Other African has a positive impact on anti-immigrant attitudes with respect to perceived undermining of a country's culture but also on overall life satisfaction.

Regarding the skill level of immigrants, our findings do not reveal any significant direct effect of immigrants with high-level qualifications on anti-immigrant attitudes. Similarly, in his empirical analysis about Western Europe, Weber (2015) finds that the percentage of highly educated immigrants at the national level has no significant impact on the perceived threat of immigration. However, we find some evidence that immigrants with low-level qualifications have a small but statistically significant effect on natives' attitudes towards immigrants with respect to country's economy. Therefore, we confirm the results of Markaki and Longhi (2013) who also find that a higher proportion of immigrants with low education decreases the perceived economic threat of immigration in European regions. A plausible explanation for this finding could be that immigrants with low qualifications might be perceived by the natives more as a cheap labour force rather than as a substitute for their own low-skilled segment.

Nevertheless, the proportion of low-educated immigrants in a region does not seem to have any significant effect on anti-immigrant attitudes in the rest of the models. Thus, our findings are partly consistent with those of Schneider (2008) who found that, in European countries, a higher percentage of low-educated immigrants does not increase the negative attitudes of natives towards immigration. Finally, our empirical results reveal some moderating effects between the size and the skill level of the immigrant population. More specifically, we find that the positive effect of the total share of foreigners on natives' attitudes toward immigrants, with respect to the country's economy and culture, is stronger in regions where the percentage of low-educated immigrants is higher.

An important insight from our study emerges in the finding that the origin of immigrants living in a European region appears to be key in natives' attitudes toward

immigration. A higher proportion of EU foreigners in a region decreases anti-immigrant attitudes while a larger non-EU foreign population is found to increase them. By looking at the proportion of non-EU foreigners in a region in a finer grain, where we are able to separate them according to region of origin, we discern a hierarchy in terms of the preferability of foreigners from one region relative to those of another region. We find Middle East and North African concentrations of non-EU foreigners, which geographically represent the Muslim communities, to elicit the most negative attitudes toward immigrants. This suggests that a greater degree of perceived cultural distance and difference proves decisive in shaping anti-immigrant attitudes. In other words, Muslims are perceived as more divergent in values from European attitude-holders than are Asians or Latin Americans. The more that the values of the immigrants present in a region diverge from those of the nationals of that region, the more an immigrant threat is perceived and this produces a stronger anti-immigrant attitude.

Of course, this study is not without limitations. First, as described before in the data and methods section, using the EU-LFS data we are not able to actually measure the second-generation immigrants, neither by the share of foreign-born nor by the share of foreign nationals in a region. However, many second-generation immigrants are not fully integrated into the local communities and might be discriminated against although they have been naturalized. Moreover, our study examines anti-immigrant attitudes without focusing on a specific segment of the native population. Thus, an interesting extension of this work will be to examine cross-level interaction effects and investigate how origin or skill level of immigrants interacts with the education level, employment status or political affiliation of natives. Finally, following the main results of this study, future work may examine degrees of cultural distance and identify the factors that comprise cultural differences. It may be interesting to know if it is ideology, traditions, experiences, religious practice or other traits that prove most important in the mind of the attitude holder who perceives cultural distance. More in-depth knowledge of the immigrant traits that drive anti-immigrant attitudes could help to shape integration policies and strategies.

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Appendix

Table 1 Pooled cross-sectional sample

Country (ID)	Regions	NUTS-Level	Round 2	Round 3	Round 4	Round 5	Round 6	Total
Austria (AT)	3	NUTS-1	1420	1557	-	-	-	**2977**
Belgium (BE)	3	NUTS-1	1276	1349	1300	1266	1388	**6579**
Cyprus (CY)	1	NUTS-1	-	661	754	541	602	**2558**
Czech Republic (CZ)	1	NUTS-1	1561	-	1461	1755	1225	**6002**
Germany (DE)	16	NUTS-1	2089	2114	2140	2286	2324	**10953**
Denmark (DK)	1	NUTS-1	1232	1252	1369	1325	1377	**6555**
Spain (ES)	7	NUTS-1	987	1272	1549	1277	-	**5085**
Finland (FI)	3	NUTS-2	1527	1484	1712	1471	1912	**8106**
France (FR)	8	NUTS-1	-	1540	1591	1331	1499	**5961**
Greece (GR)	4	NUTS-1	1405	-	1234	1330	-	**3969**
Hungary (HU)	3	NUTS-1	876	1041	986	1095	1378	**5376**
Netherlands (NL)	1	NUTS-0	1467	1516	1387	1463	1495	**7328**
Norway (NO)	7	NUTS-2	1391	1333	-	1275	1345	**5344**
Portugal (PT)	5	NUTS-2	978	1128	1187	1184	1202	**5679**
Sweden (SE)	3	NUTS-1	1358	1233	1270	1170	1440	6471
United Kingdom (UK)	12	NUTS-1	1408	1732	1762	1682	1543	8127
Total	**78**		**18975**	**19212**	**19702**	**20451**	**18730**	**97070**

Notes: The NUTS-2 level is used in the cases of Finland, Norway and Portugal where the NUTS-1 level corresponds to the whole country and data at the NUTS-2 level are available. For the Netherlands data are available only at the country level (NUTS-0). The two autonomous regions of Portugal, the Azores and Madeira, are excluded. For Austria, Cyprus, Czech Republic and Greece, ESS does not provide information for the missing rounds. For Norway (Round 4), Spain (Round 6) and France (Round 2) there are too many missing observations in our dataset that the samples could not be representative of the entire regions for that particular year and thus we exclude them from our analysis.

Table 2 Dependent variables summary statistics

Dependent Variable	Mean	Std. Dev.	Min	Max
Average Regional Economic Threat	5.17	.722	3.23	7.19
Average Regional Cultural Threat	4.47	.909	2.51	7.20
Average Regional Overall Threat	5.30	.741	3.15	7.65

Note: This table presents summary statistics for the average regional attitudes towards immigrants in our three models. The number of observations for all variables is N=349.

Table 3 Individual level summary statistics

Individual Variable	Mean	Std. Dev.	Min	Max
Demographic Features				
Male	.497	.499	0	1
Under 25 years old	.078	.268	0	1
Over 60 years old	.286	.452	0	1
Big City Resident	.191	.393	0	1
Suburbs of Big CityResident	.133	.340	0	1
Rural Area Resident	.359	.480	0	1
Foreign Parent(s)	.062	.242	0	1
Belong to Minority	.017	.129	0	1
Qualification Level				
Primary Education	.138	.345	0	1
Tertiary Education	.286	.452	0	1
Labour Market Characteristics				
Employed	.583	.493	0	1
Unemployed	.038	.191	0	1
Supervisor Duties	.307	.461	0	1
Member of a Union	.494	.499	0	1
Have Worked Abroad	.042	.202	0	1
Economic Indicators				
Difficult to Cope on Income	.198	.398	0	1
Dissatisfied with Economy	5.32	2.50	0	10
Social Indicators				
Trust in Others	5.32	2.36	0	10

Individual Variable	Mean	Std. Dev.	Min	Max
Religious	4.32	2.95	0	10
Feel Safe in Dark	.796	.402	0	1
Believe Traditions are Important	.717	.450	0	1
Political Affiliation				
Right-wing Ideology	5.10	2.16	0	10

Note: The above table presents summary statistics for all individual level variables included in our empirical analysis. The number of observations for all variables is N=97,070.

Table 4 Correlation matrix of individual level variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
(1) Economic Threat	1.00																								
(2) Cultural Threat	0.62	1.00																							
(3) Overall Threat	0.65	0.69	1.00																						
(4) Male	-0.06	0.02	0.00	1.00																					
(5) Under 25 years old	-0.00	-0.03	-0.03	0.01	1.00																				
(6) Over 60 years old	0.05	0.10	0.08	0.01	-0.18	1.00																			
(7) Big City Resident	-0.04	-0.03	-0.02	-0.01	0.01	-0.02	1.00																		
(8) Suburbs of Big CityResident	-0.04	-0.04	-0.04	-0.00	0.00	0.01	-0.19	1.00																	
(9) Rural Area Resident	0.05	0.04	0.04	0.03	-0.02	0.01	-0.36	-0.29	1.00																
(10) Foreign Parent(s)	-0.03	-0.04	-0.04	-0.01	0.04	-0.03	0.03	0.03	-0.05	1.00															
(11) Belong to Minority	0.00	-0.00	-0.00	0.01	0.02	-0.03	0.02	0.00	-0.02	0.13	1.00														
(12) Primary Education	0.13	0.16	0.15	-0.01	-0.08	0.31	-0.04	-0.02	0.06	-0.03	0.00	1.00													
(13) Tertiary Education	-0.24	-0.24	-0.22	-0.01	-0.10	-0.12	0.09	0.06	-0.10	0.01	-0.00	-0.25	1.00												
(14) Employed	-0.09	-0.11	-0.11	0.07	-0.04	-0.58	0.01	0.01	-0.00	0.00	-0.00	-0.26	0.20	1.00											
(15) Unemployed	0.05	0.02	0.04	0.00	0.04	-0.11	0.01	-0.00	-0.01	0.02	0.03	-0.01	-0.04	-0.22	1.00										
(16) Supervisor Duties	-0.10	-0.06	-0.07	0.18	-0.11	0.04	-0.02	0.04	-0.01	0.01	-0.01	-0.11	0.18	0.06	-0.06	1.00									
(17) Member of a Union	-0.07	-0.11	-0.11	0.06	-0.18	0.10	-0.05	0.04	-0.02	-0.02	-0.03	-0.10	0.10	0.01	-0.05	0.07	1.00								
(18) Have Worked Abroad	-0.04	-0.04	-0.04	0.06	-0.02	-0.07	0.02	-0.00	-0.02	0.01	0.00	-0.03	0.07	0.06	0.00	0.05	-0.02	1.00							
(19) Difficult to Cope on Income	0.18	0.17	0.19	-0.05	-0.02	0.00	0.05	-0.04	-0.01	0.01	0.05	0.14	-0.17	-0.16	0.17	-0.14	-0.09	-0.01	1.00						
(20) Dissatisfied with Economy	0.30	0.27	0.31	-0.07	-0.05	-0.00	0.04	-0.03	-0.03	0.02	0.04	0.13	-0.13	-0.07	0.10	-0.08	-0.16	-0.02	0.30	1.00					
(21) Trust in Others	-0.30	-0.32	-0.34	0.01	0.02	-0.03	-0.02	0.04	-0.00	-0.02	-0.03	-0.13	0.19	0.09	-0.06	0.07	0.14	0.02	-0.22	-0.38	1.00				
(22) Religious	0.01	0.03	0.03	-0.16	-0.08	0.18	-0.01	-0.02	0.07	-0.00	0.03	0.17	-0.02	-0.13	-0.03	-0.02	-0.03	-0.04	0.03	-0.04	0.01	1.00			
(23) Feel Safe in Dark	-0.17	-0.17	-0.19	0.21	0.00	-0.11	-0.08	-0.02	0.12	-0.00	-0.02	-0.10	0.10	0.14	-0.01	0.07	0.05	0.03	-0.15	-0.18	0.20	-0.05	1.00		
(24) Believe Traditions are Important	0.08	0.11	0.09	-0.06	-0.10	0.14	-0.02	-0.02	0.05	-0.02	0.01	0.08	-0.05	-0.09	-0.03	0.00	0.02	-0.02	0.03	0.01	-0.04	0.29	-0.05	1.00	
(25) Right-wing Ideology	0.07	0.11	0.08	0.03	-0.02	0.06	-0.04	0.00	0.04	-0.03	-0.01	-0.00	-0.00	-0.00	-0.04	0.06	-0.04	0.01	-0.05	-0.12	0.03	0.15	0.01	0.10	1.00

Table 5 Classification of individuals as foreigners

Country (ID)	Country of birth	Nationality	Both criteria
Austria (AT)	13.98	9.91	8.25
Belgium (BE)	12.07	8.30	6.70
Cyprus (CY)	16.77	14.39	13.33
Czech Republic (CZ)	2.38	0.88	0.84
Denmark (DK)	7.62	4.73	3.96
Spain (ES)	11.36	9.57	9.14
Finland (FI)	2.76	1.70	1.46
France (FR)	10.35	5.11	4.71
Greece (GR)	6.69	6.25	5.19
Hungary (HU)	1.72	0.57	0.53

Netherlands (NL)	10.15	3.72	3.03
Norway (NO)	9.00	4.92	4.55
Portugal (PT)	6.30	2.95	2.72
Sweden (SE)	15.19	5.28	4.88
United Kingdom (UK)	10.91	6.61	6.25

Notes: This table presents the share of individuals by country in our sample that, according to the EU-LFS, are classified as foreigners based on their country of birth, nationality and on both criteria.

Table 6 Regional level summary statistics

Regional Variable	Mean	Std. Dev.	Min	Max
% Total Foreigners	4.59	3.73	.225	25.20
% EU Foreigners	1.93	1.87	0	15.58
% Non-EU Foreigners	2.66	2.24	.035	12.74
% Other Europe	.973	1.29	0	10.51
% Middle East & Northern Africa	.475	.557	0	4.56
% Other Africa	.297	.521	0	3.69
% East & South Asia	.462	.637	0	4.99
% Northern America & Australia	.106	.161	0	1.82
% Latin America	.344	.991	0	8.41
%Foreigners with low qualifications	30.80	13.55	5.27	66.39
%Foreigners with high qualifications	27.45	9.53	5.22	60.77
% Unemployment	7.60	3.63	2.60	28.6
GDP per capita (000s)	28.07	11.66	5.54	77.57

Notes: This table presents summary statistics for regional level indicators and controls included in all different model specifications. The number of observations for all variables is N=97,070.

Table 7 Correlation matrix of regional level variables

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
(1) Economic Threat	1.00															
(2) Cultural Threat	0.62	1.00														
(3) Overall Threat	0.65	0.69	1.00													
(4) % Total Foreigners	-0.05	0.02	-0.02	1.00												
(5) % EU Nationals	-0.03	0.03	-0.02	0.89	1.00											
(6) % Non-EU Nationals	-0.06	0.02	-0.01	0.92	0.64	1.00										
(7) % Other Europe	-0.02	0.03	0.02	0.50	0.30	0.59	1.00									
(8) % Middle East & Northern Africa	-0.05	-0.03	-0.05	0.63	0.54	0.60	0.12	1.00								
(9) % Other Africa	-0.05	-0.01	0.00	0.35	0.17	0.44	-0.08	0.18	1.00							
(10) % East & South Asia	0.00	0.07	-0.02	0.65	0.69	0.50	0.13	0.26	0.19	1.00						
(11) % Northern America & Australia	-0.04	0.00	-0.04	0.43	0.38	0.40	0.13	0.07	0.34	0.56	1.00					
(12) % Latin America	-0.06	-0.02	-0.01	0.40	0.17	0.53	-0.11	0.37	0.29	-0.02	-0.01	1.00				
(13) % Non-Nationals with low qualifications	-0.00	0.03	0.07	0.22	0.03	0.35	0.29	0.31	0.25	-0.17	-0.24	0.26	1.00			
(14) % Non-Nationals with high qualifications	-0.07	-0.11	-0.14	-0.08	0.12	-0.24	-0.38	0.01	-0.07	0.19	0.23	-0.16	-0.55	1.00		
(15) % Unemployment	0.09	0.03	0.10	0.06	-0.05	0.14	0.01	0.16	0.06	-0.13	-0.19	0.28	0.29	-0.25	1.00	
(16) GDP per capita	-0.20	-0.21	-0.22	0.32	0.31	0.26	0.12	0.27	0.19	0.29	0.40	-0.06	-0.12	0.38	-0.44	1.00

Table 8 Individual determinants of anti-immigrant attitudes

Individual Variable	Economic threat		Cultural threat		Overall threat	
Fixed-effects						
Demographic Features						
Male	-.153***	(.026)	.211***	(.036)	.104***	(.026)
Under 25 years old	-.005	(.045)	-.139***	(.033)	-.180***	(.041)
Over 60 years old	.007	(.029)	.281***	(.034)	.223***	(.034)
Big City Resident	-.168***	(.038)	-.170***	(.045)	-.136***	(.034)
Suburbs of Big City Resident	-.025	(.035)	-.063*	(.034)	-.011	(.028)
Rural Area Resident	.145***	(.030)	.148***	(.034)	.143***	(.033)
Foreign Parent(s)	-.311***	(.055)	-.378***	(.055)	-.329***	(.062)
Belong to Minority	-.204***	(.075)	-.233***	(.078)	-.387***	(.109)
Qualification Level						
Primary Education	.428***	(.043)	.480***	(0.52)	.340***	(.045)
Tertiary Education	-.767***	(.028)	-.786***	(0.32)	-.622***	(.038)
Labour Market Characteristics						
Employed	.050*	(.027)	.026***	(.032)	-.006	(.028)
Unemployed	.115**	(.055)	-.047	(.063)	.014	(.053)
Supervisor Duties	-.107***	(.022)	-.110***	(.024)	-.079***	(.023)
Member of a Union	-.104***	(.023)	-.101***	(0.30)	-.038***	(.024)
Have Worked Abroad	-.247***	(.045)	-.125***	(.036)	-.155***	(.036)
Economic Indicators						

Individual Variable	Economic threat	Cultural threat	Overall threat
Difficult to Cope on Income	.211*** (.030)	.176*** (.038)	.216*** (.033)
Dissatisfied with Economy	.222*** (.007)	.138*** (.010)	.173*** (.008)
Social Indicators			
Trust in Others	-.174*** (.005)	-.189*** (.007)	-.183*** (.006)
Religious	-.024*** (.005)	-.023*** (.006)	-.031*** (.005)
Feel Safe in Dark	-.429*** (.034)	-.492*** (0.40)	-.525*** (.028)
Believe Traditions are Important	.199*** (.027)	.280** (.034)	.193*** (.030)
Political Affiliation			
Right Ideology	.128*** (.011)	.186*** (.014)	.156*** (.012)
Constant	4.93 (.105)	4.10 (.114)	5.03 (.095)
Random-effect Parameters			
Individual variance component	4.24 (.084)	4.69 (.122)	3.77 (.067)
Regional variance component	.184 (.027)	.423 (0.61)	.160 (.033)
Log-likelihood	-200,639	-206,282	-195,577
Observations	95,099	95,314	95,260

Notes: The table reports coefficient estimates for multilevel mixed linear regressions. Robust standard errors, clustered by region, are presented in parentheses; *p ≤ 0.10, **p ≤ 0 .05, ***p ≤ 0 .01. Our estimations use both design and population size weights provided by the ESS. All regressions in this table control for time fixed effects.

Table 9 Regional determinants of anti-immigrant attitudes

Regional Variable	Economic threat (1)	Economic threat (2)	Economic threat (3)	Cultural threat (1)	Cultural threat (2)	Cultural threat (3)	Overall threat (1)	Overall threat (2)	Overall threat (3)
Fixed-effects									
% Total Foreigners	.000 (.014)			.004 (.018)			-.013 (.014)		
% EU Foreigners		-.059** (.025)	-.056* (.031)		-.088*** (.032)	-.081*** (.031)		-.065** (.027)	-.061** (.026)
% Non-EU Foreigners		.043** (.019)			.066*** (.025)			.022 (.023)	
% Other Europe			.042 (.029)			.076*** (.025)			.030 (.025)
% Middle East & Northern Africa			.212** (.091)			.242** (.099)			.134 (.087)
% Other Africa			.010 (.080)			.183* (.109)			.151* (.084)
% East & South Asia			-.060 (.065)			-.032 (.077)			-.073 (.069)
% Northern America & Australia			.076 (.206)			.279 (.224)			.090 (.195)

Regional Variable	Economic threat (1)	Economic threat (2)	Economic threat (3)	Cultural threat (1)	Cultural threat (2)	Cultural threat (3)	Overall threat (1)	Overall threat (2)	Overall threat (3)
% Latin America			.010			-.050			-.046
			(.042)			(.056)			(.053)
% Foreigners with low qualifications	-.004	-.004	-.006*	-.001	-.002	-.003	.000	-.000	-.001
	(.003)	(.003)	(.003)	(.003)	(.002)	(.003)	(.002)	(.002)	(.003)
% Foreigners with high qualifications	-.002	-.001	-.001	-.002	-.001	-.001	.001	.002	.002
	(.003)	(.003)	(.003)	(.003)	(.003)	(.003)	(.002)	(.002)	(.002)
% Unemployment	.034***	.034***	.032***	-.024***	-.024***	-.025***	-.010	-.010	-.011
	(.010)	(.009)	(.009)	(.007)	(.007)	(.007)	(.008)	(.008)	(.007)
GDP per capita (000s)	.001	.002	.000	-.004	-.002	-.008	-.001	-.001	-.004
	(.006)	(.006)	(.007)	(.007)	(.007)	(.008)	(.005)	(.005)	(.006)
Constant	4.86	4.81	4.86	4.44	4.35	4.45	5.16	5.12	5.18
	(.254)	(.263)	(.253)	(.224)	(.224)	(.242)	(.170)	(.178)	(.189)
Random-effect parameters									
Individual var. component	4.24	4.24	4.24	4.69	4.69	4.68	3.77	3.76	3.76
	(.083)	(.083)	(.083)	(.122)	(.122)	(.122)	(.068)	(.068)	(.068)
Region var. component	.206	.240	.247	.394	.429	.430	.154	.168	.165
	(.039)	(.048)	(.056)	(.057)	(.064)	(.068)	(.034)	(.035)	(.036)
Log-likelihood	-200,587	-200,578	-200,566	-206,259	-206,242	-206,224	-195,569	-195,562	-195,548
Observations	95,099	95,099	95,099	95,314	95,314	95,314	95,260	95,260	95,260

Notes: The table reports coefficient estimates for multilevel mixed linear regressions. Robust standard errors, clustered by region, are presented in parentheses; *p ≤ 0.10, **p ≤ 0 .05, ***p ≤ 0 .01. Our estimations use both design and population size weights provided by the ESS. All regressions in this table control for individual characteristics and time fixed effects.

Table 10 Interaction effect between immigrant values and the skill level of immigrants

Variable	Economic threat (1)	Cultural threat (1)	Overall threat (1)
Fixed-effects			
% Total Foreigners	-.086*** (.032)	-.023 (.039)	-.014 (.027)
% Foreigners with low qualifications	-.014*** (.004)	-.006 (.004)	-.001 (.004)
% Foreigners with high qualifications	-.002 (.003)	.001 (.004)	.004 (.003)
% Total Foreigners X % Foreigners with low qualifications	.002*** (.001)	.001** (.000)	.000 (.000)
% Total Foreigners X % Foreigners with high qualifications	.000 (.000)	-.000 (.000)	-.000 (.000)
% Unemployment	.031*** (.008)	-.026*** (.007)	-.011 (.008)
GDP per capita (000s)	.002 (.006)	-.003 (.008)	-.001 (.005)
Constant	5.15 (.245)	4.49 (.300)	5.13 (.220)
Random-effect parameters			
Individual var. component	4.24 (.083)	4.69 (.121)	3.77 (.068)
Region var. component	.206 (.040)	.410 (.058)	.160 (.034)
Log-likelihood	-200,566	-206,248	-195,565
Observations	95,099	95,314	95,260

Notes: The table reports coefficient estimates for multilevel mixed linear regressions. Robust standard errors, clustered by region, are presented in parentheses; *p ≤ 0.10, **p ≤ 0 .05, ***p ≤ 0 .01. Our estimations use both design and population size weights provided by the ESS. All regressions in this table control for individual characteristics and time fixed effects.

Figure 1 Margins plot of total share of foreigners and proportion of low-educated immigrants (Economic threat)

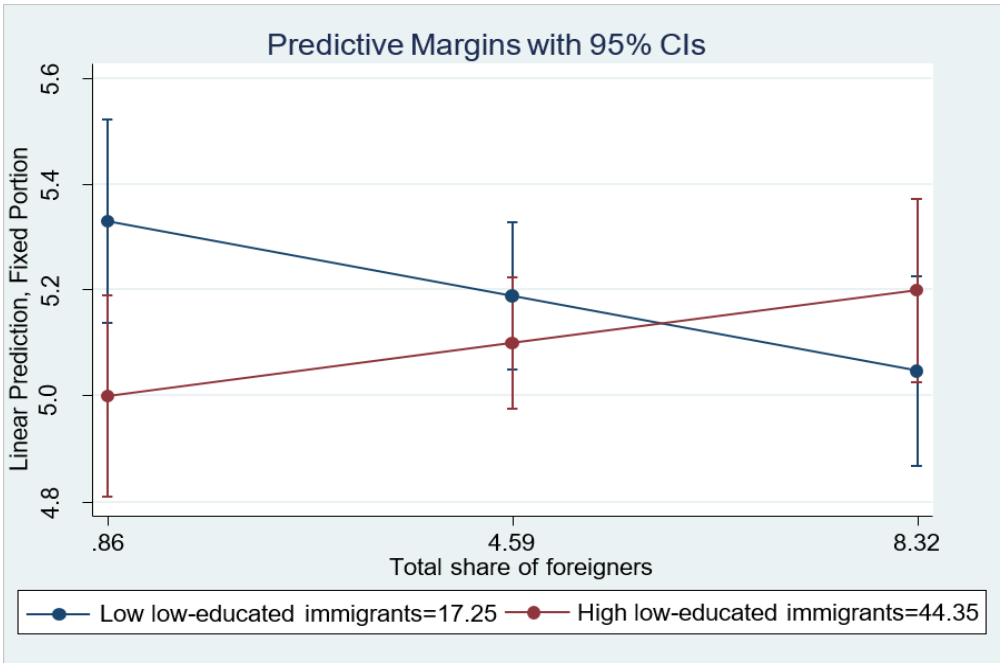

Figure 2 Margins plot of total share of foreigners and proportion of low-educated immigrants (Cultural threat)