# Working Paper



Cultural Transmission and Political Attitudes: Explaining Differences between Natives and Immigrants in Western Europe

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## Highlights

- We study the role of horizontal cultural transmission on immigrants' political assimilation in Western Europe.
- We analyze five key political issues: redistribution, gay rights, EU integration, immigration policy and trust in political institutions.
- Controlling for individual socio-economic characteristics, we document that immigrants show identical support for redistribution as natives, display more conservative attitudes towards gay rights and more liberal views on the other three issues.
- Our results strongly point towards the transmission of cultural values from natives to immigrants on matters of immigration policy and political trust, whereas attitudes towards redistribution seem immune to cultural influences at destination.



## Abstract

This paper uses data on individual political opinions from the European Social Survey to study the role of horizontal cultural transmission on immigrants' political assimilation in Western Europe. We analyze five key political issues: redistribution, gay rights, EU integration, immigration policy and trust in political institutions. Controlling for individual socio-economic characteristics, we document that immigrants show identical support for redistribution as natives, display more conservative attitudes towards gay rights and more liberal views on the other three issues. These differences widen with the cultural and religious distance between immigrants' background and Western European norms, and decrease with the number of years since migration. Among immigrants that have spent at least 10 years in their host country, attitudes towards migration policy catch up with those of natives and the migrant-to-native gap on political trust is reduced by 80\%. In contrast, differences on EU integration and gay rights remain stable while immigrants' views on redistribution becomes relatively more conservative. These attitude-specific patterns are also salient when studying political preferences at the regional and sub-regional level. Our results strongly point towards the transmission of cultural values from natives to immigrants on matters of immigration policy and political trust, whereas attitudes towards redistribution seem immune to cultural influences at destination.

# Keywords

Immigration, Assimilation, Political Attitudes, Cultural Transmission.



D72, J15, P16, R23, Z1.

## Working Paper



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#### 1 Introduction

Immigration is one of the most controversial issues in European politics. In the last few years, and particularly since the 2015 refugee crisis, European citizens have increased their support for right-wing nationalist parties that promote stronger anti-immigrant platforms (Campo et al., 2021; Otto and Steinhardt, 2014; Barone et al., 2016; Dustmann et al., 2019; Becker and Fetzer, 2016; Halla et al., 2017). Some studies (see e.g. Edo et al., 2019) point to labor market competition and redistributive concerns of natives, who fear that migrants may "steal" their jobs or congest local public services and compositional amenities. Others instead have identified anxiety over cultural change, ethnic diversity or weakened social norms as the main drivers behind this growing opposition (see Hainmueller and Hiscox (2014) for a review of this literature).<sup>1</sup>

Against this backdrop, the economic and social integration of immigrants in their host society represents a crucial challenge for Western European governments. In this paper, we provide new evidence on the political assimilation of immigrants, an important but often overlooked aspect of integration in the economic literature. More specifically, we explore differences between immigrants and natives' attitudes towards issues that are relevant to the political and public debate and study whether and how these differences are influenced by cultural transmission at destination. Indeed, while a large body of literature has documented the influence of immigrants' cultural background on their political attitudes, little is known about the role played by cultural transmission at destination as a vector of political integration.

Previous studies have shown that immigrants are often subject to a form of vertical transmission that can have and persistent impact on their political beliefs. Origin culture - whether acquired in the origin country or inherited from parents - is an important determinant of immigrants' preferences regarding redistribution (Luttmer and Singhal, 2011; Hammar, 2019), family and social values (Fernandez and Fogli, 2006), living arrangements (Giuliano, 2007), economic behaviour (Guiso et al., 2006; Tabellini et al., 2010; Henrich, 2000), political and civic participation (Aleksynska, 2011), trust (Algan and Cahuc, 2010), electoral choices (Just and Anderson, 2010), tax morale (Kountouris, 2013), or environmental issues (Litina et al. 2016).

Instead, it is still unclear whether horizontal transmission of political culture in receiving societies has a substantial influence on the political attitudes of immigrants and their children.<sup>2</sup>

<sup>&</sup>lt;sup>1</sup>This can be illustrated by the recent momentum of "the great replacement" conspiracy theory, which posits that non-European migration flows are contributing to demographic and cultural changes to the point of replacing the white European majority with non-white, non-European populations.

<sup>&</sup>lt;sup>2</sup>The dichotomy between vertical and horizontal transmission is borrowed from the seminal contribution of Bisin and Verdier (2001), who distinguish between vertical transmission, that occurs from parents to children, and the

Although a few studies highlight the convergence of foreign-born residents to country-specific norms of trust in political institutions (Maxwell, 2010), social and economic preferences (Algan et al., 2012; Reeskens and van Oorschot, 2015; Schmidt-Catran and Careja, 2017), and civic participation (Aleksynska, 2011), the public debate remains ill-informed about the influence of local culture on immigrants' political opinions and, consequently, about immigrants' political assimilation in Western Europe. This paper advances our understanding of these issues by proposing new descriptive evidence from the study of migrant-to-native differences in political attitudes.<sup>3</sup> We use data from 9 rounds of the European Social Survey, which provides information on more than 20,000 first-generation immigrants and 250,000 natives living in 16 European countries between 2002 and 2018. The ESS data not only include information about foreign-born individuals' migration status (time of migration, country of origin etc.), but also a number of individual characteristics and information on political preferences. We thus measure political attitudes through individual opinions on a range of policy-relevant issues: redistribution, gay rights, European integration, immigration policy, and trust in political institutions.

As a preliminary step, we provide some descriptive evidence on the migrant-to-native gap, i.e. on the differences in political attitudes between immigrants and natives. In particular, we elaborate on the overall differences in attitudes and on how these are influenced by immigrants' inherited culture - proxied by religion and country of origin - and time at destination. The latter is a variable of great interest to our study, since more time spent at destination - also referred to as tenure - allows learning about and adapting to the culture and norms of the host country, which is precisely the cultural transmission process we are interested in. For this purpose, as a second step, we propose a more detailed investigation of how the migrant-to-native gap varies with immigrants' tenure. In this analysis, we address some of the caveats present in the existing literature to estimate more accurately the impact of tenure on political opinions. Finally, we analyze immigrants' adoption of subnational political culture at destination. Indeed, if immigrants' political opinions are subject to horizontal cultural transmission, this is likely to happen through the adoption of local norms and through contact with native peers. For this reason, we first study the impact of regional political culture - proxied by natives' average opinions - on the attitude gap, and then we perform a peer-effects analysis, where we identify native peers and study the influence of their opinions on those of natives.

We show that immigrants are on average similar to natives from the same country when asked about redistribution. However, they hold significantly more restrictive views on gay rights, display greater levels of trust in national parliaments and are more supportive of EU integration

oblique-horizontal transmission, from peers.

<sup>&</sup>lt;sup>3</sup>Hereafter, we use the terms political opinions, attitudes and preferences interchangeably, although we are aware that subtle differences may exist between these terminologies.

and open immigration policies. Our results also suggest that immigrants' political attitudes are largely driven by their origin country and religious beliefs, reflecting large cultural underpinnings in line with the segmented assimilation theory (Gordon, 1964; Portes and Zhou, 1994; Dinesen, 2010).

Moreover, the study of migrant-to-native differences highlights the existence of three attitudespecific patterns, which we interpret as a reflection of the specific role played by cultural transmission on these issues. We find that immigrants become more conservative than natives about redistribution with the time spent in their host country. This suggests that lower access to welfare and prolonged discrimination tied with immigrants' condition at destination may be more important in shaping the evolution of their preferences over time than cultural assimilation. Also, immigrants' attitudes towards redistribution show no signs of cultural assimilation at the regional or local level and are more likely to be shaped by opportunities that influence both natives and immigrants than cultural transmission. In contrast, among immigrants that have lived 10 years or more at destination, opinions on immigration policy show almost no differences with those of natives and the gap in trust in political institutions is reduced by 80%. Immigrants' views about immigration policy and trust in political institutions are also significantly and strongly predicted by those of native peers living in the same region and with whom immigrants are more likely to interact, corroborating the hypothesis that immigrants are acculturating to political norms through contact with their native peers. Evidence for gay rights and European integration shows no signs of assimilation but remains inconclusive overall.

Our paper contributes to the existing literature on immigration and immigrants' assimilation in several ways.

First, our study is directly related to the empirical research that analyzes the political preferences of immigrants in their host environment. Within this literature, the issue of preferences for redistribution has probably received the most attention. Alesina and Giuliano's seminal contribution (2011) finds that both cultural beliefs and economic self-interest might drive individual preferences for redistribution. With what regards differences between foreign-born and natives, Dancygier and Saunders. (2006) show that immigrants in the UK are not more likely to support increased social spending or redistributive measures than natives, while Reeskens and van Oorschot (2015) and Schmidt-Catran and Careja (2017) provide evidence consistent with the claim that immigrants' welfare preferences are aligned with those of their host societies.<sup>4</sup>

<sup>&</sup>lt;sup>4</sup>Reeskens and van Oorschot (2015) analyze the 2008 "Welfare Attitudes" module of the European Social Survey and find that immigrants' views on welfare closely follow those of the non-migrant population of the country they are living in, suggesting strong social integration at the opinion level. Using German longitudinal survey, the findings of Schmidt-Catran and Careja (2017) are also consistent with the claim that immigrants' welfare preferences are subject to the influence of their host societies.

Maxwell (2010) and Algan et al. (2012) study immigrants' trust in political institutions,<sup>5</sup> highlighting the differences between first and second generation immigrants, the former holding more positive attitudes while the latter being more negative and similar to natives. Finally, Roeder (2015) finds that immigrants hold overall more negative attitudes towards homosexuality than natives, and provides evidence of both intra and inter-generational acculturation of these attitudes with declining importance of origin country context. To the best of our knowledge, our study is the first to investigate migrant-to-native differences on the issues of immigration policy and EU integration, uncovering an interesting assimilation pattern for the former. Moreover, our study advances our knowledge on the determinants behind immigrants' political attitudes by showing how trust in political institutions is highly sensitive to cultural transmission while attitudes towards redistribution seem to immune to this mechanism and thus most likely driven by social opportunities and economic considerations.

Second, we speak to the literature that studies the evolution of immigrants' preferences over time (Algan et al., 2012; Dinesen, 2010; Roeder, 2015; Luthra et al, 2018). In this regard, we contribute by addressing several empirical caveats that often bias estimates on the effect of tenure. On the one hand, we focus on adult migrants, i.e excluding immigrants who migrated to their country of residence at an early age: while this distinction is mostly absent from the literature, it is however critical to the study of assimilation over time. When using survey data, the political opinion of early migrants, who have hardly been exposed to the culture and institutions of their country of origin and benefited from increased contact with their host society through schooling and education, can only be observed after several years spent at destination. This creates a structural bias that prevents from correctly estimating the effect of time since migration on political preferences. On the other hand, we deal with immigrants' self-selection in order to address concerns about out-migration and use cohort effects to control for possible variations in the political opinion of newly arrived immigrants.

Our work is also related to studies of immigrants' cultural assimilation, like Abramitzky et al., (2016) - which use US Census Record for the age of Mass Migration and show how immigrants integrate in the American society through intermarriage and the choice of less foreign names - or Giavazzi et al. (2019), which establish that attitudes towards politics and redistribution, sexuality, abortion and religious values show a lower degree of convergence to the prevailing cultural norms than attitudes towards cooperation such as trustworthiness, helpfulness and

<sup>&</sup>lt;sup>5</sup>Maxwell (2010) finds that first-generation immigrants have more positive attitudes to national governments in Europe while native-origin and second-generation migrant-origin individuals have similar levels of trust in political institutions and satisfaction scores. Using the same data, Algan et al. (2012) documents that the gap the level of trust in political institutions between first-generation immigrants and natives is exclusively driven by foreign-born individuals with less than 20 years of residence, while second-generation immigrants hold more negative opinions of national political institutions

fairness. In this sense, our work is the first cross-country study of immigrants' political attitudes that investigates cultural transmission by exploiting within-country variations at the regional and subregional levels.<sup>6</sup>

Finally and on a minor note, we speak to the literature on immigrants' voting behaviour and electoral participation. Within this literature, our paper builds from Aleksynska (2011), which documents immigrants' political participation in their destination country. It is also closely related to Moriconi et al. (2022), which studies second-generation immigrants' voting choices, and Chevalier et al. (2018), which studies the impact of national immigrants' voting decisions on public policy setting, exploiting as a natural experiment the sudden arrival of eight million forced migrants in West Germany after World War II.

The rest of the paper is organized as follows. Section 2 describes the data used in our study. Section 3 discusses baseline migrant-to-native differences. In section 4 we study the immigrants' assimilation by focusing on the role of tenure. In section 5 and 6 we present, respectively, our regional and peer-effects analysis. Section 7 concludes.

#### 2 Data and Variables

We use 9 rounds of the European Social Survey (2002, 2004, 2006, 2008, 2010, 2012, 2014, 2016, 2018). The European Social Survey (ESS) was conducted bi-annually between 2002 and 2018 in several European countries. It provides information on individual socio-economic characteristics and various types of political preferences. It also contains information on individuals' migration status and background, including country of birth, allowing to distinguish between native and foreign-born, and the amount of time spent in the destination country for foreign-born.

We focus our analysis on Western European, OECD member states, which represent a relatively homogeneous set of countries in terms of political preferences. The sample is restricted to respondents who were older than 15 years old at the time of the interview <sup>7</sup>.

<sup>&</sup>lt;sup>6</sup>It is worth stressing that so far, and throughout the paper, cultural transmission is regarded as a uni-directional process whereby immigrants are subject to the influence of natives, where the former progressively acquire the norms and beliefs of the latter. There is however some evidence in the economic literature that the opposite could be true, at least in the American context (see Giuliano and Tabellini, 2020): in the long run, immigrants can influence their host society via cultural transmission from immigrants to natives. Against this backdrop, one may be concerned that if acculturation exists at the political level, it is because natives and immigrants' mutually influence each other. While the data at our disposal does not allow to answer this question, we regard the native-to-migrant channel to be more likely to drive our results given i) the relative size of the two groups and ii) the recent findings in the literature that while immigrants do act as vectors of cultural diffusion, this is mostly to export the host country culture back home (see Rapoport et al., 2020).

<sup>&</sup>lt;sup>7</sup>Individuals who migrated before 15 years of age are more similar to second-generation immigrants than to

We identify natives as respondents born in their country of residence with parents also born in their country of residence. Regarding immigrants, second-generation are excluded from our study: being born in their country of residence, we expect their political attitudes lie somewhere between that of natives and foreign-born individuals<sup>8</sup> and their integration to be significantly different from that of first-generation immigrants. To avoid the potentially confounding effects of second-generation immigrants on our analysis, we therefore concentrate on first-generation immigrants, identified as individuals born outside of their country of residence.

We also choose to leave out immigrants born in a foreign country but with one or both parents born in their country of residence as members of this group are very likely to be influenced by their parents' cultural origins and therefore likely to hold preferences that are significantly closer to native peers than immigrants with no prior contact with their host society.

This leads to an overall sample size of 272,000 observations, of which 23,880 first-generation immigrants, in 16 countries: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. Table S.1 contains a description of this sample. While it is worth noting that the ESS has not been designed to include or oversample immigrants, which might decrease the power of our general analysis, previous studies have shown that the ESS sampling method is reliable in reflecting the proportion of foreign-born and natives in the population and the actual origin countries of immigrants (Castles and Miller, 2005).

Individual political and policy preferences on five different issues are measured through an ordinal scale.

The first one is redistribution. We use respondents' opinion to the following statement: "The government should take measures to reduce differences in income levels", to which respondents are asked if they strongly agree, agree, neither agree nor disagree, disagree, or disagree strongly. We recode this question on an ascending 4-point scale in the following way: 0 from strongly disagree to 4 for strongly agree. Using an identical scale, the second variable captures political attitudes to gay rights through respondents' opinion about the following statement "Gay men and lesbians should be free to live their own life as they wish". We use the same rescaling method as for redistribution to construct the associated dependent variable. Third, we investigate attitudes towards European Union through respondents' position about greater

first-generation. See Table A.1

<sup>&</sup>lt;sup>8</sup>This is indeed confirmed by descriptive statistics available from the authors upon request.

<sup>&</sup>lt;sup>9</sup>While the 2008 and 2016 ESS rounds have specific modules on welfare preferences, we choose to use the only question capturing policy preferences for redistribution that is present in all rounds of the survey to maximize the number of first-generation immigrants in the sample.

unification of the EU from 0 - "Unification already gone too far" to 10 - "Unification must go further". Fourth, we look at migrants' attitudes to immigration policy through respondents' opinion about the following statement on a 0-3 scale: "To what extent do you think [country] should allow people of the same race or ethnic group as most [country] people to come and live here". Last, we study trust in political institutions using respondents' level of trust in their residence country's parliament, on a scale from 0 - "No trust at all" to 10 - "Complete trust". Before moving to the empirical analysis, we perform an additional transformation and harmonize political preferences in order to have variables ranging from 0 to 1. This will allow an easier comparison of the results.

Table S.2 and S.3 summarizes the distribution of political preferences for foreign-born and native individuals. Although differences between them are modest in absolute terms, these descriptive statistics suggest that immigrants are slightly more opposed to redistribution and gay rights than Western European natives. They also show markedly higher levels of trust in national parliaments and support for EU unification, and are in favour of more open immigration policies.<sup>11</sup>

#### 3 The migrant-to-native gap

The point of departure of our analysis is a description of the general differences in political attitudes between immigrants and natives and how these differences vary with immigrants' inherited cultural traits and time spent at destination.

On the one hand, we expect immigrants' distinctive cultural background, which we proxy through region of origin and religious affiliation, to be associated with significant differences in political opinions with respect to Western European natives.

On the other hand, changes with years since migration are commonly regarded as a sign of immigrants' responsiveness to the destination culture in the literature (see Dinesen, 2010; Roeder, 2015; Soelh, 2018). Indeed, more time spent at destination allows learning about and adapting to the culture and norms of the host country, a process which favours immigrants' integration. Before we study this topic in greater detail in the next section, we first provide descriptive evidence regarding the assimilation of immigrants' political opinions by measuring differences in

<sup>&</sup>lt;sup>10</sup>The ESS asks in every round several other questions about individuals' perception of the level of immigration, with mentions to migrants' relative economic position and place of origin. In practice, individual answers to these questions are strongly correlated, and we therefore choose the most neutral of these statements as the reference variable.

<sup>&</sup>lt;sup>11</sup>It is worth stressing that the correlation between the five policy items is relatively small: The highest pair-wise correlation among all 5 variables is equal to 0.26 for European integration and immigration policy.

attitudes between natives and immigrants with various lengths of residence at destination.

We estimate the following linear model:

$$Pref_{icr} = \beta_0 + \beta_1 Firstgen_i + \sum_k \beta_{2,k} Firstgen_i \times Characteristic_{ik} + \delta X_i + \mu_{c,r} + \epsilon_{icr}$$
 (1)

where the dependent variable Pref is the preference of individual i surveyed in country c and ESS round r on a specific political issue. The variable Firstgen is a variable that takes value one for first-generation immigrants and zero for natives. Characteristic represents a categorical variable capturing an immigrant-specific characteristic (region of origin, religion, years since migration) entered as interaction. These variables are constructed with natives as the reference category.  $^{12}$ 

We control in vector X for several individual socio-economic characteristics, namely gender, age, whether or not the respondent is married and has children, education level, whether the individual lives in an urban area, the respondent's assessment of his or her financial situation, the size of the respondent's household, individual employment status, the level of education and employment status of the respondent's partner, and whether the respondent has ever been unemployed for a period of more than 3 months.  $^{13}$ 

We also control for family background based on father's education (tertiary and not tertiary) and whether the father was employed when the individual was fourteen. We include a dummy for citizenship to account for changes in immigrants' socio-economic opportunities tied to their status and experience at destination that may influence political attitudes<sup>14</sup>. Finally, we include a full set of country-ESS round fixed effects  $\mu$  to control for time-variant country-specific factors

<sup>&</sup>lt;sup>12</sup>To construct the region of origin fixed effects, we use respondents' country of origin variable available in the ESS. Regions of origin include the following categories: Africa, East and South-East Asia, Central Asia, MENA, EU-15 and North America and Oceania, Eastern Europe, Latin America and the Caribbean. Regarding religion, we look at the most prevalent affiliations in our sample, i.e. Muslim and Christians. Finally, we use the following categories included in the ESS survey to record foreign-born individuals' length of stay at destination until 2008: Within a year since migration, 2-5 years since migration, 6-11 years, and 11-20 years, more than 20 years. For later rounds, we use information provided by the ESS about foreign-born respondents' year of arrival in their host country. Specifically, we use the difference between the year respondents were surveyed and the year they claimed to have arrived in the country as a measure of time since migration

<sup>&</sup>lt;sup>13</sup>While being important in predicting political preferences, particularly with what regards redistribution, household income level is missing for almost one fifth of the sample. We instead control for household's main income source, employment status, as well as individuals' assessment of their financial situation instead.

<sup>&</sup>lt;sup>14</sup>For instance, holding the citizenship of their host country can provide full rights and access to welfare services to immigrants. It is also quite relevant for immigrant's attitudes towards European integration and immigration policy to the extent that citizenship grants de facto permanent residency and protects against future tightening of policies governing mobility and the rights of foreign-born individuals

(e.g. GDP per capita, unemployment, global macroeconomic conditions or immigration flows) that might influence political preferences or simply the way in which respondents answer the survey questions. Summary statistics for natives and immigrants are available in the appendix, in Table S.4 and Table S.5.<sup>15</sup>

Panel A of Table 1 displays results for model 1 without the interactions, and captures the overall migrant-to-native gap. With the exception of support for redistribution, we find significant differences in political attitudes between natives and immigrants. The average gap is larger for attitudes towards gay rights, where foreign-born are much more conservative and score 0.13 points lower on a 0-1 scale than natives from the same country. This difference is three (four) times that which exists between a man and a woman (between a person with tertiary education and one without).

Male respondents score .044 lower than female respondents on gay rights, while respondents with tertiary education score .035 higher than those without. As discussed below, this gap is driven by immigrants from non-European countries, which make up the majority of foreign-born individuals in our sample and are more socially conservative than natives from Western Europe.

More modest, although significant differences are also found for attitudes regarding European integration, immigration policy, and trust in political institutions. The opinion gap on these issues is equivalent to respectively 0.75, 0.5, and 1.5 times the marginal effect of tertiary education. To the extent that immigrants are or have been primarily concerned with migration policies, it comes as no surprise that they show greater support for European integration and allowing more immigrants to come and live in their destination country than natives. Moreover, these results are in line with existing research, which has documented that first-generation migrants are more optimistic and positive about the government of the country where they have consciously chosen to emigrate in hopes of improving their lives (Roder et al., 2012; Maxwell, 2010).

Finally, a plausible explanation behind the absence of differences in support for redistribution is that the role played by socio-economic opportunities, which our model controls for, as compared to cultural influences is relatively greater than for other political matters.

Panel B displays figures from running the full specification, which studies immigrants' political attitudes based on their cultural background and time spent at destination. Political attitudes vary significantly with immigrants' cultural background. For instance, attitudes towards gay

<sup>&</sup>lt;sup>15</sup>All results from Table 1 are robust to using an ordered probit model on the unstandardized outcome variables, as shown in Table A.2 in Appendix.

rights are much more positive among European and South American immigrants, as compared to foreign-born individuals from MENA or Africa. Immigrants from Southern Europe and South American also share identical views about European integration, while the rest of immigrants hold more conservative opinions about it.

Interestingly, a clearcut gap is visible between Muslim immigrants and other foreign-born individuals. The former show greater support for European integration and open immigration policy, and are also significantly more conservative on gay rights, particularly when compared to immigrants without any stated religious affiliation (-.15 difference on a 0-1 scale). The cultural roots of trust in political institutions also show from the results of column 5, where religious immigrants - both Christians and Muslims - place higher levels of trust in the government of their destination country than immigrants with non stated religious affiliations. Region of origin also matters for political trust: non-European immigrants score consistently and significantly higher when asked about trust in political institutions than their European counterparts, where democracy is more developed.

We also observe significant, even if modest, differences between immigrants from different regions when it comes to support for redistribution, in line with the existing literature on the matter (Luttmer, 2011): Immigrants from Asia, MENA and Eastern Europe are less supportive of government redistribution than other immigrants.

As anticipated, differences between immigrants and natives seem to narrow down with time spent at destination, suggesting cultural assimilation could be at play. However, the pace at which these differences decrease vary across political attitudes. Judging from the statistical significance of the estimates, the catching-up process takes at least 10 years. While immigrants with more 10 years at destination display political attitudes that are significantly closer to those of natives than less tenured immigrants on issues regarding migration policy and trust in political institutions, no statistically significant convergence is observed for immigrants with less than 20 years at destination when asked about gay rights and European integration. Moreover, the magnitude of these changes is sizable: based on the coefficients for immigrants with the longest tenure (20 + years), the reduction of the migrant-to-native gap is greater than the average gap observed between migrant and natives in panel A for immigration, European integration and trust in political institutions, and half of that obtained for attitudes towards gay rights.

#### 4 Political differences and time spent at destination

We now focus specifically on the role of time spent at destination in explaining immigrants' political attitudes.

Previous research using cross-sectional survey data has shown that time at destination - hereafter oftern referred to as tenure - is usually associated with a significant reduction in the migrant-to-native gap in political opinions (see Algan et al., 2012; Dinesen, 2010; Roeder, 2015; Soelh, 2018), which is sometimes interpreted as a sign that immigrants assimilate to the political norms of their receiving society - a process we refer to in the rest of the paper as *acculturation*. However, these works fails to address a number empirical caveats regarding the identification of the effect of time since migration in cross-sectional data. In this section, we try to address these caveats and build from the literature on immigrants' adoption of cultural values in their host country in order to estimate more precisely the effect of tenure on immigrants' relative political preferences.

Section 4.1 describes these econometric caveats and how we deal with them in our empirical strategy. Section 4.2 presents our results.

#### 4.1 Econometric Issues and Empirical Strategy

A first empirical issue regards the nature of the ESS data. Studying immigrants' assimilation ideally requires panel data, which allow to track individuals over time. The ESS, though, is a repeated cross-sectional survey, which limits our analysis for a number of reasons.

First, as political preferences at the time of migration are likely to vary across migrants' arrival cohorts, we are unable to say whether the migrant-to-native gap is constant across arrival cohorts. A constant gap - or at least a gap whose direction remains constant - is a commonly verified assumption in most assimilation studies, such as studies on labour market integration, political participation or cultural assimilation. Moreover, the drivers of this gap tend to be known. In our analysis, although it is possible that the initial migrant-to-native gap follows a consistent pattern for the most recent cohorts, there is no certainty that this is true of older cohorts who came to live to Western Europe a long time ago, especially since both the composition of migrant cohorts and the culture in their origin countries might have changed over the past decades. As a result, any claims we make about convergence in what follows are always conditional on a preliminary analysis of the evolution of the initial migrant-to-native gap over time.

<sup>&</sup>lt;sup>16</sup>One can think of discrimination, the lack of human capital and language barriers preventing access to the labour market, or the lack of opportunities for civic participation (see for instance Algan et al. (2012), Aleksynska (2011), Lee et al.(2022))

Secondly, if the initial migrant-to-native gap varies across arrival cohorts, it is harder to distinquish between the tenure effect and the cohort effect, which captures migrants' specific preferences upon arrival in their destination country. It is well known that migrants are prone to self-select into migration. While time-invariant selection into migration itself is not generally a problem (the initial migrant-to-native gap would just be lower or higher), it becomes a threat to the identification of the tenure effect if the extent to which migrants self-select on political opinions varied over time. 17 In the absence of longitudinal data, our empirical analysis cannot include individual fixed effects and we therefore need to control for migrants' time of arrival in order to disentangle differences related to the length of stay at destination from those caused by a possible cohort effect. Unfortunately, the time period covered in the ESS data (2000-2020) implies that the length of stay and year of arrival are highly correlated for migrants with the longest tenure, <sup>18</sup> and there is therefore not enough variation to identify the effect of tenure while controlling for the year of arrival of individuals who migrated more than 30 years ago. To tackle these issues, we propose the following solution: we restrict our sample to migrants that have lived in their host country for less than 20 years and migrated after 1995, and build three migration arrival cohorts: 1995-2005, 2005-2010, post-2010. Within each arrival cohort, immigrants are then distributed over four tenure groups based on their length of stay at destination: Within a year since migration, 2-5 years since migration, 6-11 years, and 11-20 years - as in the previous section. Limiting the sample to immigrants who migrated after 1995 and surveyed less than 20 years after they migrated forces us to leave out a large share of first-generation immigrants, thereby limiting the scope of our analysis and our ability to investigate long-term assimilation. However, this method limits the correlated regressor problem arising from the inclusion of controls for the time of migration, while making sure that the sample contains sufficiently many observations per arrival and tenure cohorts. The restricted sample contains 10,092 immigrants, for which detailed information about tenure and cohort of arrival are available from Table S.7.

A second caveat of previous studies regards the absence of distinction between first-generation immigrants who grew up in their country of residence and those who did not. As previously mentioned, this is problematic when studying assimilation because migrants who migrated at an early age are not only much less exposed to the culture and institutions of their country of origin but also have increased contact with native society through schooling and education. Therefore, as confirmed by Table 1, they hold political opinions closer to those of second-generation immigrants than to those of fellow first-generation immigrants who came to live in that same country

<sup>&</sup>lt;sup>17</sup>For instance, Docquier et al. (2020) have shown that the degree of cultural selection among individuals from MENA migrating to OECD, high-income countries has decreased in the past ten years.

<sup>&</sup>lt;sup>18</sup>The ESS has interviewed respondents between 2000 and 2020.

later in life. Although being educated in the destination country is something we can control for based on migrants' age of arrival, a more serious issue arises from the fact that the ESS only surveys individuals aged 15 and older. This leads mechanically to an over-representation of those "young" migrants among immigrants with longer tenure. In fact, our data show a strong correlation between immigrants' tenure (length of stay at destination) and going to school in the destination country. Because we expect both channels (time at destination and education at destination) to have a positive effect on assimilation, i.e bringing immigrants' preferences closer to natives', the interpretation of the tenure effect could suffer from a compositional bias as migrants educated at destination have systematically longer tenure. We therefore choose to exclude immigrants who migrated before the age of 15 in this section.

A final concern with our interpretation of the tenure effect is the potential threat of selection into out-migration, i.e the possibility that migrants' political preferences are driven by unobserved characteristics that are correlated with their length of stay at destination.<sup>20</sup>. In particular, immigrants that choose to stay longer in their country of residence could do so because of specific political attitudes. This raises a potential identification problem if out-migrants are selected on the basis of characteristics that are directly or indirectly affecting their political preferences, as our estimation would then capture the effect of tenure but also that of unobservable characteristics correlated with the time of residence. This issue is discussed at length in Abramitzky et al. (2016), where authors test the labour market assimilation of US immigrants using repeated cross-sectional and panel data.<sup>21</sup>

In the absence of panel data, we partially address the potential threat driven by the selection of out-migrants by exploiting the correlation between immigrants' probability of outmigration and their observable characteristics.<sup>22</sup> In particular, we apply Oster's (2019) methodology, based on the seminal paper by Altonji et al. (2005). Under the assumption that the relation between the treatment (in our case, migrants' length of stay at destination) and unobservable factors responsible for out-migration can be retrieved from the relationship between migrants' length of stay at destination and immigrants' observable characteristics, Oster's technique allows to

<sup>&</sup>lt;sup>19</sup>For instance, the proportion of migrants surveyed 10 years or more after they arrived in their host country in the full sample is 60%, against 86% among first-generation migrants who migrated before the age 15

<sup>&</sup>lt;sup>20</sup> In a recent report, the OECD (2008) estimates that, depending on the countries and time periods considered, 20 to 50 percent of immigrants leave their host country within the first five years after arrival. In 2011, for some of the countries under consideration in this study, foreign-born outflows stood respectively at a ratio of 41 percent, 64 percent, and 76 percent for the United Kingdom, Germany, and Spain. In the case of Europe, close to 50 percent of the original arrival cohort has left the destination country ten years after arrival.

<sup>&</sup>lt;sup>21</sup>In particular, they show that the results obtained from a repeated cross-sectional dataset differ from those obtained by panel data, and identify out-migration as a concern that arises specifically with the use of the former.

<sup>&</sup>lt;sup>22</sup>We provide corroborating evidence for this correlation in a dedicated paragraph on outmigration and return rates in subsection 4.2.2

compute the degree of selection on unobservables  $\delta$  relative to observables for which the estimated coefficient of migrants' length of stay at destination is equal to zero . A  $\delta$  greater than 1 in absolute value is commonly interpreted in the literature as a sign that the potential threat of selection on unobservables is minimised.<sup>23</sup>

To estimate the effect of tenure on immigrants' political preferences, we construct two new variables. Tenure is a set of dummy variables capturing migrants' tenure/length of stay at destination, whereas Cohort is a set of dummy variables for each arrival cohort, capturing the cohort-specific initial gap between natives and immigrants who migrated less than two years before they were interviewed. In both cases, natives are the reference group and have therefore Tenure = 0 and Cohort = 0.

We then estimate the following models:

$$Pref_{icr} = \beta_0 + \beta_t Tenure_{it} + \delta X_{icr} + \mu_{cr} + \epsilon_{icrt}$$
 (2)

and

$$Pref_{icr} = \beta_0 + \beta_t Tenure_{it} + \gamma_k Cohort_{ik} + \delta X_{icr} + \mu_{cr} + \epsilon_{ijrkt}$$
(3)

where we regress the preferences of individual i, in country c, in round r on his tenure t. The difference between the two models is that in model 3 we also include controls for cohort effects, in order to disentangle these from the effect of tenure. For reasons described previously, the models are estimated on a sample including natives and only those first-generation immigrants who migrated after 1995 and have spent less than 20 years at destination. We control for country-round fixed effects ( $\mu_{cr}$ ) and the same individual socio-economic variables ( $X_i$ ) as in section 3, including region of origin and religious affiliation, which as section 3 has showed are influential drivers of immigrants' political attitudes.

 $<sup>^{23}</sup>$ To give some insight behind this estimator, if  $\delta=2$ , then unobserved factors should be twice as important as observed characteristics to produce a partial correlation between migrants' length of stay at destination and political preferences equal to zero. A value of  $\delta=1$  implies that selection on unobservables is as important as selection on observables to produce estimates equal to 0. A value close to 0 indicates implies that an insignificant selection on unobservables compared to observed covariates makes the estimated effect equal to zero, and indicates a higher threat from selection on unobservables. The value of  $\delta$  can also be negative, given the relation between observables and unobservables. The intuition related to the estimator then remains the same: if  $\delta<-1$ , then the threat on unobservables is minimized.

#### 4.2 Results and Discussion

For each policy variable, we report the results of model (2) in columns 1, 3, 5, 7, and 9 of Table 2. When controlling for socio-economic characteristics and immigrants' cultural background, the average initial gap (the coefficient for immigrants with less than 2 years of tenure - *Less than 2 yrs*) across all cohorts indicates that migrants are more supportive of European integration, immigration, and have higher level of trust in political institutions upon arrival, while their views on redistribution and gay rights are not significantly different from those of natives. Model (3) - columns 2, 4, 6, 8, and 10 - shows the initial gap with natives in preferences for each arrival cohort.

We can see that the direction of the average gap between natives and migrants with less than two years at destination is stable across arrival cohorts for all issues but redistribution and gay rights. Although not statistically significant, the cohort coefficients in column 2 suggest that between 1995 and 2010, immigrants were likely to hold more liberal views than natives upon arrival but that this difference no longer exists for migrants who migrated in the past 10 years, possibly because of an increase in support for redistributive policies among Western natives in the wake of the global financial crisis. Moreover, the latest migrant cohorts held significantly more conservative views on gay rights than natives living in the same country.

In contrast, columns 6, 8, and 10 indicate that those who arrived after 1995 were significantly and consistently more supportive of EU integration and immigration, and held higher levels of trust in political institutions, regardless of their time of arrival in their country of residence.

Turning to the effect of time since migration, at least one of the tenure coefficients in model (3) is statistically significant for preferences for redistribution, immigration policy, and political trust. For instance, estimates from column 2 imply that the immigrants that have spent between 11 and 20 years at destination have redistribution preferences that are, ceteris paribus 0,047 lower on a 0-1 scale as compared to immigrants with less than 2 years of tenure (the omitted tenure group).

Combining estimates from column (1) and (2), we can compute the migrant-to-native preference gap. For redistribution, it is equal to 0.017 - 0.020= - 0.003 after 2 to 5 years, 0.017 - 0.033= - 0.016 after 6 to 10 years, and 0.017 - 0.047= - 0.03 after 11 to 20 years. The coefficients for other policy variables and other tenure groups can be interpreted in a similar fashion.<sup>24</sup> Regarding immigration policy, the difference in support for immigration between newly arrived immigrants with less than 2 years at destination and those with 11 to 20 years of tenure (-0.113) is equiv-

<sup>&</sup>lt;sup>24</sup>Table A.3 in the Appendix shows that these results are robust to the inclusion of origin-cohort fixed effects to control for possible region of origin-cohorts specificities.

alent to 0,34 SD or one and a half times the marginal effect of tertiary education. Further, we observe strong convergence in political attitudes, as no significant differences remain between natives and immigrants that have spent between 11 and 20 years at destination. For a clearer interpretation, we graph the preference gap between natives and migrants with different tenures for each policy variable in Figure 1.

It seems rather counterintuitive to find that foreign-born attitudes towards migration policy become more negative overtime and converge to those of natives. Indeed, rather than showing solidarity with future immigrants, they become more favourable to "closing the door" on immigration from the very first years after their arrival. This "club" effect could however be explained by the fact that immigrants' tenure is correlated with access to socio-economic opportunities - e.g jobs in specific sectors where immigrants are particularly represented - for which they might fear competition from potential new immigrants. This could explain why immigrants with only two to five years spent at destination are already more hostile to immigration and closer to natives. At the same time, since our specification controls for citizenship status, which captures a sizable share of these socio-economic opportunities, we cannot rule out the possibility that immigrants' views catch up with natives' as a result of the slow adoption of cultural norms about immigration, all the more so if we consider that full convergence with natives takes at least 10 years at destination to complete.

The effect of tenure is also significant for trust in political institutions. For immigrants with 11 to 20 years spent at destination, trust level is on average 0,043 lower on a 0-1 scale (0.2 SD) and the migrant-to-native initial gap is reduced by more than 80 %. Convergence operates however at a slower rate than for immigration policy. Immigrants show relatively few signs of convergence in the first few years after migration (the coefficients for migrants with less than 10 years of tenure are negative but statistically insignificant). Instead, our estimates suggest that only migrants with at least 10 years of residence at destination can be considered significantly closer to natives in terms of trust in political institutions. This pattern is consistent with existing cultural theories, which hypothesize that trust in political institutions originates outside the political sphere and is instead rooted in cultural beliefs (see Inglehart, 1997; Putnam, 1993) that take several years to evolve.

We find no statistically significant evidence of assimilation for preferences towards European integration and gay rights: the tenure coefficients are sizable in relative terms but not significant at any conventional level. With what regards migrants' political views on gay rights, it is worth stressing that we do not observe any assimilation even when running model (3) on a subsample of migrants from low-income countries, whose views are significantly more conservative

than natives upon arrival<sup>25</sup>. This result is at odds with previous studies (Roeder, 2015; Soelh, 2018), which found that immigrants with greater tenure hold significantly closer views to natives. However, several methodological differences can explain this result. First, for reasons detailed previously, we concentrate on immigrants who have lived less than 20 years in their host country, and it is possible that assimilation occured only among migrants with longer tenure. Second, we do not include first-generation immigrants who migrated when aged less than 15, which are very likely to drive the assimilation pattern observed in previous studies. Last, we control for potential heterogeneous political opinions among migrants at the time of arrival.

Finally, we find that redistribution preferences follow a diverging pattern: first-generation immigrants with greater tenure are relatively more conservative than natives. The negative coefficient for immigrants who spent 11 to 20 years spent at destination is equivalent to 0.14 standard deviation, and corresponds to one and half time the reduction in preferences that exists between an individual with at least a 3-month long unemployment experience and one without. This resonates with the findings from section 4.1 that foreign-born individuals who migrated before the age of 15 - i.e. those with longer tenure - are relatively more likely to oppose redistribution than those who did so aged 15 or more. This pattern does not corroborate the presence of cultural assimilation. Rather, it is possible that migration experience for individuals with longer tenure is associated with discrimination in access to welfare services which makes them less likely to support government redistribution than natives.

As mentioned previously, these results might suffer from immigrants' selection on unobservables that are correlated with out-migration and political preferences, which we address using Oster's methodology (2019). Given the amount of variation in the dependent variable  $R_{max} \in [0,1]$  that we want to explain with our model, Oster's methodology allows us to compute the degree of selection on unobservables  $\delta$  relative to observables for which the estimated coefficient of tenure is equal to zero.

Following Turati (2021), we compute the degree of selection on unobservable  $\delta$  using Oster's suggested bounded value ( $R_{max}=1.3\tilde{R}$ ), where  $\tilde{R}$  is the R-squared of the model with all controls (model 3).<sup>26</sup>. We find that  $\delta$  is higher that the cut-off value of 1 for all preferences but political trust. On that issue, the value of  $\delta$  remains however close to 1 (0.916) for migrants with the longest tenure (more than 10 years), which are driving the interpretation of our results. Overall, these tests provide reassurance about the potential threat of selection on unobservables.

<sup>&</sup>lt;sup>25</sup>Results are available from the authors upon request.

 $<sup>^{26}</sup>$ Oster (2019) defines the proper bounds of  $R_{max}$  on a set of randomized results from top journals. The cutoff of  $R_{max}$  should allow at least 90% of randomized results to be robust to selection on unobserved factors. The suggested cutoff is 1.3 times the estimated R-squared.

Moreover, the existing literature identifies several individual characteristics of return migrants in Europe suggesting that we should not be too concerned with the possibility that our results are driven by self-selection of less integrated foreign-born individuals into out-migration. First, immigrants from poorer countries outside Europe are less likely to depart.<sup>27</sup> and our robustness tests (see Table A.3) show that our results hold for the subsample of migrants from low-income countries, which are the least subject to return migration. Second, the return rate in OECD countries after five years is not much higher than the return rate after three years among working-age immigrants, indicating that immigrants who leave their country of destination do so relatively shortly after arrival.<sup>28</sup> This result is largely explained by the fact that, in many European countries, an immigrant can obtain a long-term residence permit after five years of residence, or even take out the nationality of the host country. More generally, the longer a migrant stays in the host country, the less likely he or she is to return home or emigrate to a third country (OECD, 2008; Nekby, 2006). In this regard, our findings show that the changes in migrant-to-native differences are not concentrated during the first years of tenure but rather take place over a longer time period (this can been seen by looking at the differences between immigrants with 2 to 5 years and those with 11 to 20 years in the full model).<sup>29</sup>

The country-level analysis presented in this section suggests that immigrants are indeed subject to some cultural transmission, since they seem to assimilate to the views of natives on at least two political issues, i.e. immigration policy and trust in political institutions. We cannot make similar claims for the remaining three issues, but the fact that attitudes of natives and immigrants on redistribution diverge with time spent at destination could indicate that they are influenced by other factors such as experience and opportunities at destination.

#### 5 Political differences at the subnational level

Our final sections further explore the potential *acculturation* mechanism we have introduced above by looking at convergence of immigrants and natives' political attitudes at the sub-national level. Indeed, if immigrants' political opinions are subject to horizontal cultural transmission, this is likely to happen through contact with native peers. We test this hypothesis in two ways.

Following Tabellini (2010), we first conduct a regional analysis, exploiting within-country varia-

<sup>&</sup>lt;sup>27</sup>For instance, in Norway, although the average re-emigration rate after five years is about 50%, the retention rate of immigrants from OECD countries is below 30% while that of immigrants from non-Western countries is above 75% (Bratsberg et al., 2007). Likewise, in Sweden, the probability that an immigrant will leave the country is lower amongst immigrants from Africa, Asia and Eastern Europe (Nekby, 2006)

<sup>&</sup>lt;sup>28</sup>International Migration Outlook (OECD, 2008).

<sup>&</sup>lt;sup>29</sup>This would be more problematic, however, if most of the changes in political preferences took place among immigrants with less than 10 years at destination

tion in political preferences to isolate regional culture while controlling for the effect of common national institutions. Specifically, we test how well natives' attitudes at the regional level - which we use as a proxy for political culture - predict those of immigrants, as compared with other regional characteristics such as economic prosperity, unemployment or immigration density.<sup>30</sup> Second, we replicate the same analysis at a finer geographical level, i.e. within region, by comparing immigrants to natives with whom they are most likely to interact: we test the correlation between immigrants' political attitudes and the attitudes of native *peers*, defined as individuals residing in the same area and who share identical age and occupational traits. The latter analysis will actually be presented in section 6. This section, instead, presents the regional analysis.

#### 5.1 Regional analysis

There is ample evidence that political preferences vary across regions, reflecting local differences in political and economic history. One can think of sub-national cultural norms and ethnoregional identities such as the Catalonia region, in northeastern Spain, or the ethno-linguistic divide in Belgium between Flemings and Walloons. Another telling example in recent history is the German reunification, which has incorporated a large population from the former Soviet block whose political preferences were massively different from West German natives.<sup>31</sup>

In this sub-national analysis, we test how well natives' attitudes at the regional level - which we use as a proxy for political culture - predict those of immigrants, as compared with other regional characteristics such as economic prosperity, unemployment, immigration density, or the quality of local politicians.<sup>32</sup>

The analysis presented here uses the information provided by the ESS about the place of residence of the respondents, reported at the NUTS1 or NUTS2 level. In some instances, we pool respondents from several NUTS2 regions into a single NUTS1 aggregate in some countries for the purpose of representativeness, <sup>33</sup> so that a sufficiently high number of foreign-born individuals is included in each region to allow for a meaningful estimation of their regional preferences.

<sup>&</sup>lt;sup>30</sup>Recent studies have indeed shown that the cross-region variation in both the actual and perceived level of these characteristics are able to explain large differences in preferences for redistribution (Alesina et al., 2019), anti-immigration and nationalistic sentiment (Moriconi et al., 2019), or trust in political institutions (Algan et al., 2017).

<sup>&</sup>lt;sup>31</sup>In fact, Dancygier et al. (2006) suggest that regional differences in attitudes towards welfare spending between East and West Germans could be more important than differences between natives and immigrants in modern day Germany.

<sup>&</sup>lt;sup>32</sup>Recent studies have indeed shown that the cross-region variation in both the actual and perceived level of these characteristics are able to explain large differences in preferences for redistribution (Alesina and Murard, 2019), anti-immigration and nationalistic sentiment (Moriconi et al., 2019), or trust in political institutions (Algan et al., 2017).

<sup>&</sup>lt;sup>33</sup>A list of all regions is available in Table S.8

We start by checking whether our outcome variables display enough variation at the regional level to perform a meaningful analysis. Table 3 reports cross-region (within) and cross-country (between) variations in political preferences. We find significant within-country regional variation in natives' political preferences: with the exception of trust in political institutions, within variation is close to 50 % of the between variation, indicating the existence of region-specific political attitudes in the European countries under study.

We now turn to our empirical strategy. Because of the limited number of regions in the study, using a regression such as model (1) on the immigrant sample and including regional explanatory variables could be problematic. If included one at a time, these measures would capture all other unobserved regional effects, and their own effect will not be identified. If, instead, they are included into regressions together, collinearity is a potential problem.

To tackle this issue, we adopt the two-stage methodology formalized by Card and Krueger (1992), and applied to studying culture transmission by Blau (1992), Fernandez and Fogli (2009), and Aleksynska (2011), as well as labour market integration (Lee et al., 2022). In the first stage, we estimate the following regression on the foreign-born sample with host region fixed effects:

$$Pref_{ijr} = \alpha + \beta X_i + \delta_j + \mu_r + \epsilon_{icr}$$
(4)

where  $Pref_{ijr}$  are political preferences measured at individual-region-round level. The X vector includes all individual controls from model (1), but it additionally includes controls for for immigrants' citizenship status, time since migration, region of origin and religious background as these characteristics have a significant impact on political preferences and are likely to be correlated with the geographical distribution of immigrants across Europe. We control for survey round fixed effects  $\mu_r$  and for host-region fixed effects  $\delta_j$ . Errors are clustered at the country level to allow for spatial correlation.

In some regions, the total number of immigrants is small and hence the estimates are noisy. In order to address this issue, we exclude from the sample regional units in which too few migrants were surveyed to permit meaningful analysis.<sup>34</sup>.

In the second stage, the vectors of coefficients on host region effects  $\delta_j$  are regressed on natives' mean political preferences:

<sup>&</sup>lt;sup>34</sup>Following Fernandez and Fogli (2009), regions where fewer than 25 first-generation migrants were surveyed are therefore excluded. Results are robust in magnitude and statistical significance to the inclusion of these regions.

$$\delta_i = \beta_0 + \beta \overline{Pref}_i + \mu_c + \epsilon_{ic} \tag{5}$$

where  $\delta_j$  is the coefficient associated with the fixed effect for region j estimated in equation (4),  $\overline{Pref}$  represents the average political preferences of natives in region j, and  $\mu_c$  is a set of country-fixed effects controlling for common national institutions. We proxy political preferences in each region with the average across native respondents using survey weights. Regressions are estimated by weighted least squares, using first-stage inverse sampling variances of the estimated region fixed-effects in (4) as weights to allow for different measurement errors across regions. Coefficient  $\beta$  captures the correlation between natives' mean political preferences on the preferences of immigrants in their host region.

The first row of Table 4 summarizes second-stage results for the full sample of immigrants. Coefficients for redistribution, immigration policy and trust in political institutions are significant, suggesting that regional culture plays a role in explaining the variation in the host-region fixed effects capturing immigrants' preferences <sup>37</sup>. If we assume that our model specification correctly controls for the influence of national institutions in driving these preferences, a possible interpretation of our findings is that immigrants acculturate to the political preferences of natives.

Yet, if immigrants are indeed subject an acculturation mechanism, we should observe a stronger association between native preferences and those migrants that have had prolonged contact with natives in their host region. To test whether this is the case, we run the previous analysis accounting for immigrants' tenure: we include tenure-based first-stage coefficients in model (4), which allows us to distinguish between immigrants that have stayed more or less than 10 years

<sup>&</sup>lt;sup>35</sup>According to the European Social survey, statistical inference is possible for most of the NUTS1 / NUTS2 regions in the sample. We check nonetheless that our results are robust to using an epidemiological approach, where natives' political preferences are measured by running model (4) on the sample of native respondents. Results are available from the Authors upon request.

<sup>&</sup>lt;sup>36</sup>It is worth stressing that linking immigrants with their region of residence at the time of the survey could be problematic for immigrants with longer tenure, since we do not observe past mobility and cannot control for the possibility that some immigrants may have lived in different regions of his or her destination country. However, under reasonable assumptions, it would only bias the estimated coefficients downward. Indeed, if anything, migrants who had moved across regions were less exposed to the influence of natives' political preferences in the region where they lived at the time of the survey, and the predicting power of the coefficient should then be smaller for these migrants.

<sup>&</sup>lt;sup>37</sup>The magnitude and statistical significance of these coefficients hold when we run the analysis on a subsample of migrants from low-income countries. Likewise, excluding one country at a time from model (5) to control for possible outlier countries does not change neither the magnitude nor significance of our results.

at destination.

Table 4.bis shows results for this specification. We see that the partial correlation between migrants and natives' political preferences on trust and immigration policy is largely, if not exclusively, driven by immigrants with longer tenure. For both of these issues, the results are in line with section 4 and, thus, with our theory of acculturation. In contrast, the coefficient for preferences for redistribution is only slightly larger for migrants that have spent more than 10 years at destination, and a Chow test on differences in coefficients indicates that it is not significantly different from that reported for immigrants with shorter tenure. Regional convergence on that issue is therefore hardly sensitive to the time spent at destination, suggesting that migrants do not adopt local attitudes towards redistribution by adjusting to cultural norms.

Instead, to test whether the correlation between natives and immigrants' convergence can be explained by region-specific macro-level factors, we substitute natives' preferences in model (5) with a set of potentially relevant regional characteristics. These variables include GDP per capita, GDP growth rate, numbers of years in recession, unemployment rate, share of foreignborn population, share of people at risk of poverty, rate of net migration, tertiary education attainment, broadband access, the number of active physicians per 1000 people and the homicide rate<sup>38</sup>. These variables are averaged across the period of analysis and included one regional factor at a time given the small number of observations in each regression. With the exception of log GDP and GDP growth, which are correlated with immigrants' preferences on gay rights and redistribution, coefficients in the bottom panel of Table 4 are mostly not significant and very small in magnitude. We suspect that this may be because these macroeconomic variables are averaged over several years, which offsets short-and medium-term fluctuations, while attitude variables are in general more persistent and are less likely to fluctuate during the period of interest. It is also possible that factors that affect the general native population at the regional level may not necessarily affect immigrants in the same way. Interestingly, it is worth stressing that average GDP growth and GDP per capita play a significant part in explaining immigrants' preferences towards redistribution at the regional level. This indicates that the positive and significant coefficient for Regional culture could be driven by economic context and opportunities driving support for redistribution of both natives and immigrants, rather than acculturation.

<sup>&</sup>lt;sup>38</sup>The number of active physicians in a given area is used as a proxy for social (healthcare) expenditure, while broadband access is included as the use of internet can have a significant impact on the formation of political preferences. Homicide rate can be regarded as a proxy for social capital. Data for GDP, growth rate, recessions, homicide rate and number of active physicians comes from the OECD regional statistics database. Data on the remaining variables are taken from the European Regional Database of the European Commission. More information is available from the Appendix

#### **5.2 Contact with Native Peers**

As mentioned in the beginning of section 5, the last step in the investigation of our acculturation hypothesis looks at the correlation in political attitudes between immigrants and their native peers at the sub-regional level.

The ESS provides some information to identify immigrants' native peers based on geographical and socio-demographic characteristics. We thus select a few of these characteristics that we deem relevant in defining peer group. Given that these variables are chosen arbitrarily, we acknowledge some degree of imprecision in the following analysis. That said, we assume that immigrants interact primarily with individuals residing in the same area and who share identical traits along age and occupation, and define peer natives along these lines.

Within regions, we first divide individuals based on the type of area where they live: big city, medium-size or small city and country village/countryside. Secondly, we define three age bands (15-35, 35-45, over 50) and three occupational groups based on the International Standard Classification of Occupations (ISCO)<sup>39</sup>. Peer groups are therefore defined as clusters of native individuals from the same region and type of urban area - defined at the subregional level -, in the same age band and with similar occupations.

We pool together individuals from multiple survey rounds, and account for time-varying differences in the empirical model using survey-round fixed effects. We also include in the analysis only those regions included in model (4) as well as native peer groups for which we have sufficiently many peer observations (i.e those containing at least 25 native individuals)<sup>40</sup>. Based on this selection, 2001 peer-group clusters are used in the subsequent analysis.

We estimate the following model on the immigrant sample:

$$Pref_{ijp} = \alpha + \beta X_{ijp} + \gamma \overline{Pref}_{jp} + \nu_j + \mu_p + \epsilon_{ijp}$$
 (6)

where we regress preferences of individual i in region j and peer group p on our proxy of local culture. Specifically, we again proxy local culture with average natives' preferences  $\overline{Pref}$ , constructed as the weighted average across native respondents in the corresponding peer cluster.

<sup>&</sup>lt;sup>39</sup>More details about the construction of peer-groups can be found in Appendix

<sup>&</sup>lt;sup>40</sup>Running model (4) and (5) on this new sample yields very similar results to those contained in Table 4 and 4.bis: The magnitude and significance of coefficients are left unchanged. Our results are also robust to increasing this threshold and therefore the precision of the measurement of peer-group preferences, which increases with the number of native observations in each peer group.

The X vector includes all individual socio-economic controls - including immigrants' time since migration, region of origin and religious affiliation - as well as survey round fixed effects.

As we try to isolate cultural transmission between the native community and immigrants within regions, the main challenge is to adequately capture peer effects while accounting for regional clustering, i.e regional drivers of political preferences. To do this, we include region fixed effects  $\nu_j$ . In this way our results are not attributable to variations in regional characteristics and preferences. However, labelling our estimates "peer effects" also requires that  $\gamma$  does not capture the influence of the individual characteristics we have used to construct peer groups. We thus control for the possibility that individuals with similar age, occupation, and dwelling type may share common political preferences across Europe by using group fixed effects  $\mu_p$ .

Results are presented in Table 5. For each political variable, the baseline panel contains the peer-effect coefficient estimated in model (6). Following the same logic used in the previous analysis, the influence of native peers on migrants' political views should be stronger for those immigrants that have had longer interactions with natives. To test whether this is the case, we report in the lower panel of Table 5 separate peer-effect coefficients based on immigrants' time since migration (less or more than 10 years).

Regardless of the time spent at destination, we find no significant correlation between immigrants' redistributive preferences and the preferences of those natives with whom they are most likely to interact. We interpret this as yet another sign that immigrants' views on redistribution are not subject to an acculturation process, in line with results from previous sections.

In contrast, the coefficients for immigration policy and trust in political institutions support our theory that migrants acquire the political views of peer natives through an acculturation process. This finding is also consistent with evidence from previous sections. The bottom panel of Table 5 further corroborates our findings, indicating that the correlation between immigrants' preferences and their peers is primarily driven by the population that has spent more time at destination and therefore had increased contact with natives.

Surprisingly, we also find a positive and significant association between peer natives' and migrants' political preferences on gay rights and European integration, while no such association had been detected at the regional level and in relation to tenure. While not easily interpretable within our framework, further analysis reveals that the coefficient on gay right is driven by younger immigrants, who seem to hold similar views to their native peers on this issue.

This last section documents the correlation between first-generation immigrants and natives'

preferences at the sub-regional level. We interpret the coefficients as indicative of the influence of native peers on immigrants' political attitudes. In this regard, we find that political attitudes towards immigration policy and trust in political institutions are likely to be at least partly subject to acculturation, while support for redistribution seems immune to cultural transmission at destination and possibly the product of opportunities at destination. Evidence for gay rights and EU integration remain inconclusive.

It is worth stressing, though, that our interpretation might be erroneous in the presence of unobserved regional drivers of political preferences that are both peers and region specific. If regional factors - such as, for instance, the degree of discrimination in the regional labor market - are (i) correlated with political preferences, and (ii) affecting one peer group more than another, we may then incorrectly attribute the effect of these unobserved variables to the influence of native peers. Note, however, that in the presence of group fixed effects  $\mu_p$  in model (6), these unobserved characteristics must vary across regions for this to become problematic. Finally, to the extent that our analysis plausibly estimates peer effects, it is clear however that those may operate through a number of channels, such as explicit attitudes or revealed behavior. We leave it to further research to distinguish between these different mechanisms.

#### 7 Conclusion

As the proportion of immigrants is growing in developed countries, they increasingly influence the scope, shape, and directions of the political life of receiving communities. This paper presents a descriptive analysis of the differences in political attitudes between natives and immigrants in Western Europe, and investigates how immigrants' cultural assimilation mitigates these differences.

At the country level, we show that immigrants are no different from natives with the same similar socio-economic characteristics in terms of support for redistribution. They however hold more restrictive views on gay rights, show greater levels of trust in national parliaments and are more supportive of EU unification and open immigration policies. These differences are largely driven by the presence of immigrants' with a distinctive religious and cultural background with respect to Western European political norms, but they also vary significantly with the time that immigrants have spent in their destination country.

Against this backdrop, we focus on understanding the role played by cultural transmission, i.e.

<sup>&</sup>lt;sup>41</sup>In other words, it is plausible that peer-group opportunities could be driving our results. However, testing this hypothesis would require information that is specific to every peer-group in every region, and cannot be performed with the data at our disposal.

the transmission of values from natives to immigrants, in shaping immigrants' political attitudes. Under this hypothesis, we expect migrant-to-native differences to decrease over time and immigrants' political attitudes to reflect the influence of regional and local native culture. Our analysis reveals the presence of attitude-specific patterns regarding cultural assimilation.

First, we find that immigrants become more conservative than natives about redistribution with the time spent in their host country, suggesting that lower access to welfare and prolonged discrimination tied with immigrants' condition at destination may be more important in shaping the evolution of their preferences over time than cultural assimilation. Findings from the subnational analysis go in the same direction: immigrants' attitudes towards redistribution show no signs of cultural assimilation at the regional or local level and are more likely to be shaped by opportunities that influence both natives and immigrants than cultural transmission.

In contrast, among immigrants that have lived 10 years or more at destination, opinions on immigration policy show almost no differences with those of natives and the gap in trust in political institutions is reduced by 80%. Immigrants' views on these two issues are also significantly and strongly predicted by those of native peers living in the same region and with whom immigrants are more likely to interact, corroborating the hypothesis of acculturation to local political norms. Evidence for gay rights and European integration remain inconclusive at this stage.

Although our study cannot provide a causal interpretation of the role of cultural transmission on immigrants' political opinions, we find substantial evidence in support of cultural assimilation for some political attitudes. These results do not call for normative recommendations but nonetheless inform the current policy debate about the integration of foreign-born individuals. By documenting the evolution of immigrants' relative political attitudes over time and the extent to which these attitudes are sensitive to cultural assimilation, we provide meaningful insights into the potential consequences of immigrants' naturalization and enfranchisement on electoral and political outcomes.<sup>42</sup>

Finally, while this paper and the vast extant literature document the influence of European political norms on the preferences of first-generation immigrants from outside Europe, one may ask symmetrically whether immigrants who bring with them the culture of their origin country are in a position to influence natives at destination. Rapoport et al. (2020) and Giuliano and Tabellini (2020) - who found that immigration left its footprint on American ideology via cultural transmission at the time of the New Deal - go some way towards answering this question. This

<sup>&</sup>lt;sup>42</sup>In practice, second-generation immigrants born in Western Europe are de facto eligible to naturalization before they reach the age of voting, both in *ius soli* countries and those with a mixed citizenship regime. The consequences of immigrants' political integration are therefore directly and substantially impacted by citizenship policies through the size and composition of the foreign-born population that they add to the franchise.

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paper neither intends to, nor can provide an answer in the European context. However, whether such influence exists is an important issue for further research.

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### **Tables and Figures**

Table 1: Migrant-to-Native Gap					
	Redistribution	Gay rights	EU attitudes	Immigration	Political trus
	(0-1)	(0-1)	(0-1)	(0-1)	(0-1)
Panel A: Overall Gap					
Immigrant (more than 15yo)	-0.0033	-0.1261***	0.0376***	0.0352***	0.0607***
	(0.0041)	(0.0048)	(0.0050)	(0.0040)	(0.0040)
R-squared	0.1085	0.1642	0.1030	0.1579	0.1356
Observations	237,527	236,899	177,892	235,825	235,898

Panel B: Cultural Background and Time at Destination

Area of origin		A 1=A1444			
Immigrant × Africa	0.0016	-0.1721***	0.0169	0.0096	0.0759***
	(0.0125)	(0.0147)	(0.0154)	(0.0115)	(0.0122)
Immigrant × Central Asia	-0.0112	-0.1885* <sup>*</sup> *	0.0105	-Ò.0344* <sup>*</sup> *	0.1031***
–	(0.0144)	(0.0158)	(0.0182)	(0.0144)	(0.0142)
Immigrant × East and South-East Asia	-0.0549* <sup>*</sup> *	-0.1044***	0.0043	-0.0471* <sup>*</sup> *	0.0290*
	(0.0173)	(0.0156)	(0.0188)	(0.0168)	(0.0164)
Immigrant × Eastern Europe	-0.0266* <sup>*</sup> *	-0.1311* <sup>*</sup> *	0.0075	-0.0206* <sup>*</sup> *	0.0549***
	(0.0082)	(0.0080)	(0.0106)	(0.0075)	(0.0079)
Immigrant × MENA	-0.0440* <sup>*</sup> *	-0.1628***	0.0050	-0.0409* <sup>*</sup> *	0.0542***
	(0.0122)	(0.0126)	(0.0141)	(0.0109)	(0.0114)
Immigrant × South America	-0.0009	-0.0394***	0.0398***	0.0099	0.0491***
	(0.0101)	(0.0103)	(0.0125)	(0.0103)	(0.0103)
Immigrant × Southern Europe	0.0286**	-0.0348* <sup>*</sup> *	$0.0253^{*}$	-0.0116	0.0185
	(0.0116)	(0.0114)	(0.0145)	(0.0114)	(0.0123)
Religion					
Immigrant × No religion	0.0018	0.0551***	0.0162	0.0192	-0.0682***
g g	(0.0142)	(0.0172)	(0.0183)	(0.0143)	(0.0144)
Immigrant × Christian	-0.0095	`-0.0114´	`0.0202´	Ò.0333* <sup>*</sup>	-0.0377* <sup>*</sup> *
•	(0.0142)	(0.0173)	(0.0184)	(0.0144)	(0.0143)
Immigrant × Muslim	0.0100	-0.0972* <sup>*</sup> *	0.0621***	0.0731***	-0.0034
	(0.0146)	(0.0189)	(0.0194)	(0.0154)	(0.0150)
Time at Destination					
Immigrant × Less than 1 year	0.0271	-0.0497*	0.0400	0.0885***	0.1043***
ů ,	(0.0255)	(0.0256)	(0.0314)	(0.0275)	(0.0258)
Immigrant $\times$ 2-5 years	-0.0219 <sup>´</sup>	`0.0037	-0.0105	-0.0234 <sup>´</sup>	-0.0182
3	(0.0208)	(0.0196)	(0.0254)	(0.0229)	(0.0213)
Immigrant $\times$ 6-10 years	-0.0137	`0.0204´	`-0.0139 <sup>´</sup>	-0.0354 <sup>´</sup>	-0.0209
3 ,	(0.0208)	(0.0196)	(0.0251)	(0.0230)	(0.0211)
Immigrant × 11-20 years	-0.0168	0.0224	-0.0254	-0.0545**	-0.0489**
3	(0.0206)	(0.0193)	(0.0250)	(0.0229)	(0.0209)
Immigrant × More than 20 years	-0.0039	0.0699***	-0.0519**	-0.0845***	-0.0720***
	(0.0206)	(0.0191)	(0.0250)	(0.0228)	(0.0209)
Degrand	0.4004	0.4700	0.4000	0.4500	0.4200
R-squared	0.1091	0.1766	0.1038	0.1590	0.1386
Observations	237,527	236,899	177,892	235,825	235,898

Notes: immigrants are respondents born outside of country of residence and whose parents are born outside country of residence, i.e. first-generation immigrants. Dependent variables are normalized political preferences. All specifications include controls for age, dummy for male, a dummies for education, a dummy for marital status, dummy for urban resident, dummy for father  $\Box$  employment status, dummy for partner's education, dummy for partner's employment status a dummy for log of household size. Specifications also include country-survey round fixed effects and account for survey design and population weights. Robust standard errors. \* p < .10, \*\* p < .05, \*\*\* p < .01

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Table 2: Assimilation over tir	ne									
Tenure	(1) Redistribution	(2) Redistribution	(3) Gay rights	(4) Gay rights	(5) EU	(6) EU	(7) Immigration	(8) Immigration	(9) Pol. trust	(10) Pol. trust
Less than 2 yrs (all cohorts)	0.017 (0.024)		-0.020 (0.021)		0.058** (0.028)		0.107*** (0.026)		0.054** (0.024)	
Less than 2 yrs (1995 - 2005)		0.040 (0.025)		0.030 (0.024)		0.043 (0.031)		0.141*** (0.027)		0.045* (0.025)
Less than 2 yrs (2005 - 2010)		0.033 (0.025)		-0.016 (0.023)		0.058* (0.030)		0.117*** (0.026)		0.048** (0.024)
Less than 2 yrs (post-2010)		-0.000 (0.024)		-0.042** (0.021)		0.061** (0.029)		0.089*** (0.026)		0.061** (0.025)
2-5 years	-0.018 (0.021)	-0.020 (0.021)	0.012 (0.020)	0.009 (0.020)	-0.017 (0.027)	-0.016 (0.027)	-0.039* (0.023)	-0.042* (0.023)	-0.022 (0.022)	-0.021 (0.022)
6-10 years	-0.017 (0.021)	-0.033 (0.022)	0.008 (0.020)	-0.019 (0.021)	-0.026 (0.026)	-0.019 (0.027)	-0.050** (0.023)	-0.070*** (0.024)	-0.015 (0.021)	-0.009 (0.022)
11-20 years	-0.024 (0.022)	-0.047** (0.023)	0.026 (0.020)	-0.020 (0.023)	-0.042 (0.026)	-0.028 (0.028)	-0.081*** (0.024)	-0.113*** (0.025)	-0.052** (0.022)	-0.043* (0.023)
Observations R-squared	220790 0.114	220790 0.114	220123 0.184	220123 0.184	164171 0.105	164171 0.105	219215 0.163	219215 0.163	219422 0.149	219422 0.149
Oster's δ: 2-5 years 6-10 years		1.876 -2.791		-3.665 1.730		-0.552 13.093		-1.243 7.055		-0.881 -0.214
11-20 years		-2.791 -1.642		-2.373		3.570		-3.219		0.9

Notes: immigrants are respondents born outside of country of residence and whose parents are born outside country of residence, i.e. first-generation immigrants. Sample includes first-generation immigrants who migrated after 1995 and have spent less than 20 years at destination. Dependent variables are normalized political preferences. For each political attitudes, the first specification computes the initial migrant-to-native gap pooling all cohorts of arrival together, while the second specification includes cohort effects. All specifications include controls for age, dummy for male, a dummies for education, a dummy for marital status, dummy for urban resident, dummy for father' $\square$ s employment status, dummy for partner's education, dummy for partner's enployment status a dummy for log of household size. Specifications also include country-survey round fixed effects, controls for migrants' $\square$  legal status (citizenship), region of origin and religious affiliation, and they account for survey design and population weights. Robust standard errors. \* p < .10, \*\*\* p < .05, \*\*\*\* p < .05, \*\*\*\* p < .05

Table 3: Between and Within Country Variation of Selected	d Variable	s	
	Overall	Between	Within
Political preferences			
Attitudes towards Redistribution Attitudes towards Gay rights Attitudes towards EU Attitudes towards Immigration Trust in political institutions	0.078 0.090 0.071 0.091 0.085	0.077 0.079 0.057 0.082 0.090	0.029 0.034 0.032 0.038 0.030
Macro variables			
Unemployment rate GDP per capita (log) Average GDP growth (2002-2019) Number of years in recession People at risk of poverty Crude rate of net migration Share of foreigners Tertiary Educational Attainment Household with broadband access Active Physicians Rate (physicians for 1000 population) Intentional Homicide Rate (homicides for 100000 population)	4.892 0.304 0.007 2.282 5.856 3.291 4.915 8.270 10.388 1.002 0.419	3.673 0.224 0.006 1.925 3.419 2.198 4.225 8.105 10.642 0.621 0.439	2.395 0.210 0.005 1.377 4.802 2.529 3.223 4.870 3.847 0.744 0.276

Notes: Authors' own calculations using ESS data. Column "Overall" reports the overall variation whereas column 3 and 4 report, respectively, the between country and within country variation of each variables.

Explaining Differences between Natives and Immigrants in Western Europe

Table 4: Regional acculturation	n				
	Redistribution	Gay rights	EU attitudes	Immigration	Trust
Regional culture	0.4334***	0.0217	-0.0047	0.3771***	0.5071***
•	(0.1179)	(0.1264)	(0.1478)	(0.1030)	(0.1348)
Unemployment rate	0.0029	0.0025	0.0003	-0.0013	-0.0040* <sup>*</sup>
. ,	(0.0020)	(0.0017)	(0.0020)	(0.0018)	(0.0018)
log GDP per capita (PPP)	-Ò.0426* <sup>*</sup> *	-0.0160 <sup>°</sup>	-0.0103 <sup>°</sup>	-0.0025	`0.0307
	(0.0211)	(0.0211)	(0.0213)	(0.0191)	(0.0194)
GDP average growth (%)	Ò.0184* <sup>′</sup>	Ò.0141*	-0.0002	`0.0020´	-0.0021´
3 3 · · · /	(0.0680)	(0.0758)	(0.1968)	(0.0574)	(0.1861)
Number of years in recession	`-0.0037´	-0.0069	`-0.0268 <sup>´</sup>	`-0.0084 <sup>´</sup>	-0.0150
•	(0.0100)	(0.0112)	(0.0290)	(0.0082)	(0.0267)
Risk of poverty	`0.0034´	`0.0031	`-0.0088 <sup>´</sup>	`0.0016´	`0.0057´
. ,	(0.0035)	(0.0042)	(0.0121)	(0.0034)	(0.0106)
Net rate of migration	-0.0068	-0.0097	-0.0107	`0.0001	-0.0060
G	(0.0059)	(0.0065)	(0.0171)	(0.0048)	(0.0158)
Share of foreigners	-0.0015	-0.0025 <sup>*</sup>	-0.0023 <sup>*</sup>	-0.0008	0.0004
<b>G</b>	(0.0014)	(0.0013)	(0.0013)	(0.0011)	(0.0012)
Tertiary Education	-0.0003	0.0042	0.0055	0.0017	0.0072
•	(0.0028)	(0.0031)	(0.0083)	(0.0023)	(0.0075)
Access to Broadband	-0.0059	0.0029	-0.0058	- 0.000 <b>2</b>	-0.0075
	(0.0041)	(0.0048)	(0.0124)	(0.0029)	(0.0109)
Active physician	-0.0124´	`0.0013´	`0.0597´	`0.0207	`0.0910
. ,	(0.0209)	(0.0240)	(0.0636)	(0.0174)	(0.0558)
Homicide rate	0.0345	-0.0022	0.1233	0.0395	-0.1780
	(0.0519)	(0.0588)	(0.1529)	(0.0433)	(0.1400)
Observations	115	115	115	115	115

Notes: Impact of regional culture on political preferences of foreign born individuals. Dependent variable: destination region fixed effect from first stage. Independent variables: regional culture measured as natives average preference (first row) or regional socio-economic variables. Sample includes regions from table S.8 with a few exceptions: A total of 10 regions across Greece, Spain and France are omitted because too few observations precludes from a meaningful analysis. Estimation method: weighted least squares, with first-stage inverse sampling variances of the estimated fixed effects as weights. Regressors are included one at a time. All specifications include controls for age, dummy for male, a dummies for education, a dummy for marital status, dummy for urban resident, dummy for father a□□s employment status, dummy for father'□□s employment status, dummy for partner's education, dummy for partner's employment status a dummy for log of household size. Specifications also include country-survey round fixed effects, controls for migrants' [ legal status (citizenship), region of origin, religious affiliation and time at destination. Robust standard errors clustered at the country level. \* p < .10, \*\* p < .05, \*\*\* p < .01

Table 4.bis: Regional acculturation with tenure at destination								
	Redistribution (0-1)	Gay rights (0-1)	EU attitudes (0-1)	Immigration (0-1)	Political trust (0-1)			
Tenure								
Regional culture (Less than 10 yrs)	0.3789** (0.1814)	-0.0537 (0.2310)	-0.2060 (0.2249)	0.1557 (0.1655)	-0.0732 (0.2048)			
Regional culture (More than 10 yrs)	0.4606*** (0.1416)	0.0547 (0.1531)	0.2103 (0.1805)	0.4409*** (0.1246)	0`.6982*** (0.1639)			
Observations	115	115	115	115	115			

Notes: Impact of regional culture on political preferences of foreign born individuals. Dependent variable: destination region fixed effect from first stage. Independent variables: regional culture measured as natives average preference interacted with tenure of immigrants. Sample includes regions from table S.8 with a few exceptions: 10 regions form Greece, Spain and France are omitted because too few observations precludes from a meaningful analysis. Estimation method: weighted least squares, with first-stage inverse sampling variances of the estimated fixed effects as weights. Regressors are included one at a time. All specifications include controls for age, dummy for male, a dummies for education, a dummy for marital status, dummy for urban resident, dummy for father' $\square$ s employment status, dummy for partner's education, dummy for partner's employment status a dummy for log of household size. Specifications also include country-survey round fixed effects, controls for migrants' $\square$  legal status (citizenship), region of origin, religious affiliation and time at destination. Robust standard errors clustered at the country level. \* p < .10, \*\* p < .05, \*\*\* p < .05, \*\*\*

Table 5: Peer effects					
	Redistribution (0-1)	Gay rights (0-1)	EU attitudes (0-1)	Immigration (0-1)	Political trust (0-1)
Baseline	(- )	(- /	,	(- )	(- /
Peer preference	0.1278 (0.0869)	0.1874** (0.1101)	0.3172*** (0.0901)	0.1275* (0.0776)	0.1784** (0.0822)
Tenure					
Peer pref. (Less than 10 yrs)	0.1156	-0.0082	0.2199**	0.0062	0.1743
Peer pref. (More than 10 yrs)	(0.1021) 0.1331 (0.0916)	(0.1367) 0.2563** (0.1146)	(0.1077) 0.3513*** (0.0967)	(0.1265) 0.1685** (0.1090)	(0.0914) 0.3539*** (0.0855)
R-squared Observations	0.1029 15377	0.2110 15410	0.1102 11904	0.1044 15289	0.1217 14725
Individual controls Time and Region FE Peer-group FE	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes

Notes: Immigrants are respondents born outside of country of residence and whose parents are born outside country of residence, i.e. first-generation immigrants. Dependent variables are normalized political preferences. All specifications include controls for age, dummy for male, a dummies for education, a dummy for marital status, dummy for urban resident, dummy for father's employment status, dummy for partner's education, dummy for partner's employment status and the log of household size. Specifications also include country-survey round fixed effects and account for survey design and population weights. All regressions include survey round fixed effects and account for survey design and population weights. Robust standard errors in parentheses. \* p < .10, \*\* p < .05, \*\*\* p < .01

Figure 1

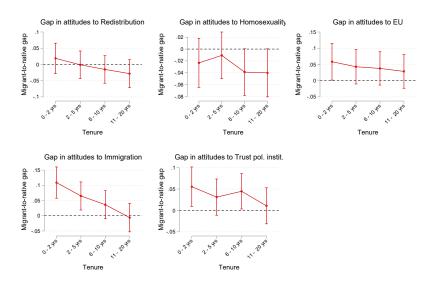
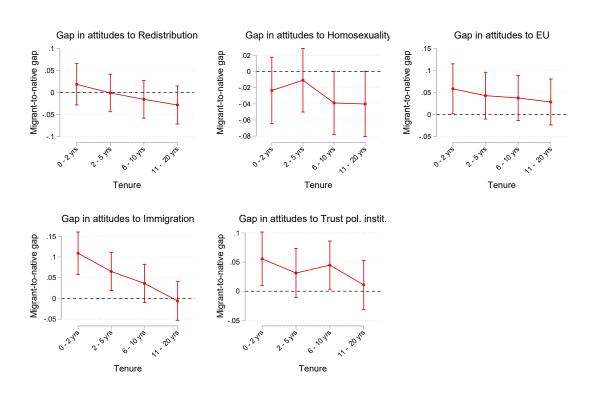


Figure 1



# Appendix A - Alternative analyses

Table A.1: Foreign-born to native gap, 15yo								
	Redistribution (0-1)	Gay rights (0-1)	EU attitudes (0-1)	Immigration (0-1)	Political trust (0-1)			
Age at time of migration	,	, ,	,	,	( /			
Immigrant less 15yo at migration	-0.0152**	-0.1016***	0.0221***	0.0456***	0.0468***			
	(0.0066)	(0.0071)	(0.0077)	(0.0062)	(0.0062)			
Immigrant over 15yo at migration	-0.0057*	-0.1356* <sup>*</sup> *	0.0687***	0.0594***	0.0762***			
	(0.0032)	(0.0039)	(0.0040)	(0.0032)	(0.0033)			
Observations	237,487	236,854	177,778	235,783	235,858			
R - squared	0.1084	0.1646	0.1030	0.1573	0.1351			

Notes: Immigrants are respondents born outside of country of residence and whose parents are born outside country of residence, i.e. first-generation immigrants. Dependent variables are political preferences. All specifications include controls for age, dummy for male, a dummies for education, a dummy for marital status, dummy for urban resident, dummy for father' $\Box$ s employment status, dummy for partner's education, dummy for partner's employment status a dummy for log of household size. Specifications also include country-survey round fixed effects and account for survey design and population weights. Robust standard errors. \* p < .10, \*\* p < .05, \*\*\* p < .01

Table A.2: Migrant-to-Native Gap, Ordered Probit								
	Redistribution (0-1)	Gay rights (0-1)	EU attitudes (0-1)	Immigration (0-1)	Political trust (0-1)			
Panel A: Overall Gap								
Immigrant (more than 15yo)	-0.0185 (0.0180)	-0.5718*** (0.0199)	0.1498*** (0.0202)	0.1426*** (0.0181)	0.2812*** (0.0180)			
R-squared Observations	0.1085 237,527	0.1642 236,899	0.1030 177,892	0.1579 235,825	0.1356 235,898			

Panel B: Cultural Background and Time at Destination

Area of origin					
Immigrant × Africa	0.0168	-0.8367***	0.0687	0.0221	0.3481***
	(0.0575)	(0.0630)	(0.0627)	(0.0539)	(0.0565)
Immigrant × Central Asia	`-0.0747´	-Ò.8896* <sup>*</sup> *	`0.0305´	-Ò.1696* <sup>*</sup> *	0`.4742**
Immigrant × East and South-East Asia	(0.0604)	(0.0650)	(0.0740)	(0.0651)	(0.0660)
	-0.2488***	-0.5699***	0.0116	-0.2378***	0.1344*
Immigrant × Eastern Europe	(0.0720)	(0.0772)	(0.0754)	(0.0748)	(0.0736)
	-0.1244***	-0.6339***	0.0356	-0.1154***	0.2574***
illilligrant × Lastern Europe	(0.0355)	(0.0390)	(0.0430)	(0.0358)	(0.0362)
Immigrant × MENA	-0.1922* <sup>*</sup> *	-0.7833* <sup>*</sup> *	0.0194	-0.2055***	0.2537***
	(0.0537)	(0.0557)	(0.0573)	(0.0495)	(0.0528)
Immigrant × South America	0.0050	-0.2495* <sup>*</sup> *	0.1662***	`0.0132´	0.2250***
$\textbf{Immigrant} \times \textbf{Southern Europe}$	(0.0468)	(0.0531)	(0.0515)	(0.0476)	(0.0469)
	0.1312**	-0.1905***	0.1087*	-0.0642	0.1034*
	(0.0542)	(0.0585)	(0.0593)	(0.0523)	(0.0553)
Religion					
Immigrant × No religion	0.0248	0.2639***	0.0653	0.0923	-0.3177***
	(0.0611)	(0.0717)	(0.0742)	(0.0633)	(0.0675)
$Immigrant \times Christian$	-0.0308	-0.0628	`0.0779´	Ò.1507* <sup>*</sup>	-0.1795* <sup>*</sup> *
$\text{Immigrant} \times \text{Muslim}$	(0.0611)	(0.0714)	(0.0748)	(0.0638)	(0.0671)
	0.0435	-0.3458***	0.2508***	0.3228***	-0.0076
	(0.0641)	(0.0752)	(0.0788)	(0.0680)	(0.0712)
Time at Destination					· ·
Immigrant × Less than 1 year	0.0706	-0.2313*	0.1525	0.4199***	0.4703***
	(0.1086)	(0.1203)	(0.1281)	(0.1357)	(0.1198)
Immigrant $\times$ 2-5 years	-0.0720	`0.0440´	-0.0291	`-0.1196 <sup>´</sup>	-0.0679
	(0.0885)	(0.0961)	(0.1046)	(0.1177)	(0.0990)
Immigrant $\times$ 6-10 years	`-0.0300´	`0.1058´	-0.0517	-0.1834	`-0.0826´
Immigrant × 11-20 years	(0.0891)	(0.0963)	(0.1030)	(0.1177)	(0.0980)
	-0.0318	0.1415	-0.0958	-0.2649**	-0.2135**
	(0.0880)	(0.0950)	(0.1025)	(0.1170)	(0.0967)
$Immigrant \times More \ than \ 20 \ years$	0.0228	0.3695***	-0.2019**	-0.3975***	-0.3203***
	(0.0878)	(0.0945)	(0.1024)	(0.1167)	(0.0967)
Observations	237,527	236,899	177,892	235,825	235,898

Notes: immigrants are respondents born outside of country of residence and whose parents are born outside country of residence, i.e. first-generation immigrants. Dependent variables are normalized political preferences. All specifications include controls for age, dummy for male, a dummies for education, a dummy for marital status, dummy for urban resident, dummy for father  $\Box$  employment status, dummy for partner's education, dummy for partner's employment status a dummy for log of household size. Specifications also include country-survey round fixed effects and account for survey design and population weights. Robust standard errors. \* p < .10, \*\* p < .05, \*\*\* p < .01

	Main results with origin-cohort FE				Low-income countries' immigrants					
	Redistribution (1)	Gay rights (2)	Europe (3)	Immig. (4)	Pol. trust (5)	Redistribution (6)	Gay rights (7)	Europe (8)	Immig. (9)	Pol. trust (10)
Immig × 2-5 years ago	-0.011	0.015	-0.018	-0.044*	-0.025	-0.028	0.007	0.004	-0.035	-0.024
	(0.021)	(0.020)	(0.027)	(0.023)	(0.022)	(0.026)	(0.028)	(0.034)	(0.028)	(0.026)
Immig $\times$ 6-10 years ago	`-0.024´	`-0.016´	`-0.024´	-0.075* <sup>*</sup> *	-0.014	-Ò.053* <sup>*</sup> *	-0.019	`-0.007´	-Ò.067* <sup>*</sup> *	-0.013
	(0.022)	(0.021)	(0.027)	(0.024)	(0.022)	(0.027)	(0.029)	(0.034)	(0.029)	(0.026)
Immig × 11-20 years ago	-0.039*	-0.016	-0.034	-0.117***	-0.046**	-0.056**	-0.014	-0.017	-0.116***	-0.047 <sup>*</sup>
	(0.023)	(0.023)	(0.029)	(0.025)	(0.023)	(0.027)	(0.031)	(0.035)	(0.030)	(0.027)
Observations	220790.000	220123.000	164171.000	219215.000	219422.000	218962.000	218274.000	162696.000	217395.000	217769.00
R-squared	0.115	0.184	0.105	0.163	0.149	0.114	0.184	0.105	0.163	0.149
Arrival cohort FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Origin and religion FE Origin-cohort and religion FE	No	No	No	No	No	Yes	Yes	Yes	Yes	Yes
	Yes	Yes	Yes	Yes	No	No	No	No	No	No

Notes: immigrants are respondents born outside of country of residence and whose parents are born outside country of residence, i.e. first-generation immigrants. Sample includes first-generation immigrants who migrated after 1995 and have spent less than 20 years at destination. Dependent variables are normalized political preferences. All specifications include controls for age, dummy for male, a dummies for education, a dummy for marital status, dummy for urban resident, dummy for father a  $\square$  s employment status, dummy for partner's employment status a dummy for log of household size. Specifications also include country-survey round fixed effects, controls for migrants'  $\square$  legal status (citizenship), region of origin and religious affiliation, and they account for survey design and population weights. Robust standard errors. \* p < .10, \*\* p < .05, \*\*\* p < .01

# **Appendix B - Supplementary tables**

Table S.1: Full sam	ple, Destinatior	countries		
Destination country	Total number	Native-born	Foreign-born	Number of
	of obs.	obs.	obs.	ESS rounds
Austria	19,370	17,657	1,713	7
Belgium	16,635	14,841	1,794	9
Denmark	11,975	11,386	589	8
Finland	19,225	18,738	487	9
France	17,776	16,215	1,551	9
Germany	26,598	24,255	2,343	9
Greece	9.136	8,479	657	4
Ireland	21,264	19,096	2,168	9
Italy	13,009	12,251	758	5
Netherlands	17,736	16,403	1,333	9
Norway	15,463	14,235	1,228	9
Portugal	15,392	14,766	626	9
Spain	16,744	15,406	1,338	9
Sweden	15,242	13,533	1,709	9
Switzerland	15,670	12,138	3,532	9
UK	20,711	18,650	2,061	9

	Redistribution		Gay rights		Political trust		EU attitudes			Immigration				
Scale	Natives	Foreign-born	Scale	Natives	Foreign-born	Scale	Natives	Foreign-born	Scale	Natives	Foreign-born	Scale	Natives	Foreig
0	2.44 %	2.52 %	0	3.07 %	7.15 %	0	7.78 %	5.08 %	0	6.74 %	5.32 %	0	7.08 %	2.6
0.25	11.59 %	11.82 %	0.25	5.36 %	9.30 %	0.1	3.80 %	3.80 %	0.1	4.17 %	3.18 %	0.33	24.54 %	16.6
0.5	14.92 %	15.85 %	0.5	10.33 %	12.30 %	0.2	7.05 %	7.05 %	0.2	7.44 %	5.63 %	0.66	48.31 %	52.2
0.75	44.57 %	45.17 %	0.75	39.83 %	37.08 %	0.3	10.31 %	10.31 %	0.3	10.04 %	7.53 %	1	20.08 %	28.
1	26.48 %	24.65 %	1	41.41 %	3 %	0.4	10.69 %	10.69 %	0.4	9.61 %	7.06 %			
						0.5	19.24 %	19.24 %	0.5	23.24 %	21.58 %			
						0.6	13.26 %	13.26 %	0.6	10.42 %	10.49 %			
						0.7	13.78 %	13.78 %	0.7	10.96 %	12.48 %			
						0.8	9.62 %	9.62 %	0.8	9.43 %	12.96 %			
						0.9	2.81 %	2.81 %	0.9	3.21 %	5.22 %			
						1	1.65 %	1.65 %	1	4.73 %	8.55 %			

Notes: Distribution of political preferences, normalized on a scale 0 to 1. Cross-tabulations account for survey design and population weights. The categories for all dependent variables have been reordered to run from conservative to liberal or negative to positive attitudes.

Table S.3: Political preferences - Natives and first-generation immigrants							
	Redistribution (0-1)	Gay rights (0-1)	EU attitudes (0-1)	Immigration (0-1)	Trust (0-1)		
Natives	0.703	0.778	0.495	0.605	0.483		
Foreign-born	0.694	0.707	0.560	0.689	0.544		

Notes: Own calculations based on the ESS using survey design and population weights. For all dependent variables, the table presents the weighted average. T-tests show that differences in mean values are significant at 1% between foreign-born and natives, and between foreign-born individuals with less than 20 years and more than 20 years of residency.

Table S.4: Summary statistics - Natives			
Variable	Obs	Mean	Std. Dev
Demographics: Age Male Married or living with partner In the labour force and employed Partner with tertiary ed. Father working when respondent 14 Father with tertiary ed. Ever unemployed and seeking work for more than 3 months Lives in rural area Log household size Feeling about household's income nowadays	248,570	48.67	18.44
	248,051	0.48	0.50
	241,715	0.39	0.49
	248,051	0.53	0.50
	248,046	0.17	0.38
	242,240	0.91	0.28
	234,969	0.15	0.36
	247,072	0.26	0.44
	247,698	0.71	0.45
	247,820	0.80	0.53
	242,994	1.83	0.80
Political attitudes: Redistribution Homosexuality EU Immigration Trust pol. instit.	244,410	0.70	0.26
	243,793	0.78	0.25
	180,510	0.50	0.26
	242,454	0.60	0.28
	243,389	0.483	0.247

Notes: Authors'  $\square$  calculation on ESS data. Natives are individuals born in their country of residence whose parents were also born in the country of residence.

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Table S.5: Balance table - Immigrants									
	Full : Obs	sample - Mean	- sect. 3 Std. Dev.		cted sam Mean	ple 1 - sect. 4 Std. Dev.	Restric Obs	ted sam Mean	ple 2 - sect. 5+6 Std. Dev.
Age Male Married In labour force Partner tert. educ. Father working Father tert. educ. Ever unemp 3 months Rural area Log hh size Feeling hh income Low-income origin No religion Christians Muslims Other religion Common language	23,887 23,887 23,887 23,887 22,958 21,788 23,753 23,846 23,846 23,846 23,426 23,171 23,171 23,171 23,171 23,171 23,171 23,171	44.46 0.47 0.48 0.58 0.21 0.87 0.22 0.37 0.57 0.91 2.05 0.73 0.35 0.44 0.17 0.04 1.29	16.10 0.50 0.50 0.49 0.40 0.33 0.41 0.48 0.50 0.56 0.89 0.45 0.48 0.50 0.38	8,914 8,790 8,914 8,914 8,616 8,111 8,860 8,897 8,901 8,833 8,914 8,914 8,914 8,914 8,914 8,914 8,914	37.89 0.46 0.54 0.64 0.26 0.88 0.27 0.42 0.56 0.96 2.11 0.77 0.33 0.45 0.17 0.04 1.31	9.91 0.50 0.50 0.48 0.44 0.33 0.44 0.49 0.50 0.54 0.90 0.42 0.47 0.50 0.38 0.20 0.46	19,185 19,185 18,766 19,185 19,185 17,641 19,073 19,146 19,153 18,559 18,559 18,559 17,894	46.93 0.47 0.51 0.59 0.23 0.88 0.22 0.37 0.56 0.88 2.05 0.71 0.35 0.45 0.16 0.04	15.12 0.50 0.50 0.49 0.42 0.33 0.42 0.48 0.50 0.56 0.89 0.45 0.48 0.50 0.36
Political attitudes Redistribution Homosexuality EU Immigration Political trust	23,029 23,100 17,728 22,940 22,087	0.694 0.706 0.560 0.689 0.544	0.257 0.30 0.267 0.248 0.246	8,518 8,556 6,634 8,557 7,880	0.68 0.71 0.58 0.71 0.6 0	0.26 0.30 0.26 0.24 0.24	18,457 18,509 14,263 18,384 17,576	0.70 0.69 0.56 0.69 0.55	0.28 0.30 0.27 0.25 0.25

Notes: Authors' calculation on ESS data. Immigrants refers to first generation immigrants, that is all individuals born outside of their country of residence and whose parents were not born in the country of residence. Section 4.1 uses the full sample of immigrants; restricted sample 1, used in section 4.2, only includes first-generation immigrants who migrated after 1995 at age 15 or older, and have spent less than 20 years at destination; restricted sample 2, used in section 4.3, only includes regions (NUTS1 or NUTS2) where more than 25 foreign-born individuals were surveyed.

Table S.6: Correlation of immigrants' characteristics								
	Income at origin	Religious	Language ties	Network	Age at migration	Citizenship		
Income at origin	1.0000	-	-	-	-	- '		
Religious	-0.2003	1.0000	-	-	-	-		
Language ties	0.2422	-0.0244	1.0000	-	-			
Community size	-0.0388	0.0026	0.0945	1.0000	-			
Age at migration	0.0843	0.0131	0.0719	-0.0368	1.0000			
Citizenship	-0.1532	0.0052	0.0269	0.0820	-0.1710	1.0000		

Notes: Correlation of immigrants' individual characteristics coded as dummy variables. Religious distinguishes between self-declared non-religious immigrants and religious immigrants. The rest of the variables are coded as detailed in section 2.

Table S.7: Cohort of arrival and tenure - Immigrants (restricted sample 1)								
Cohort of arrival / Tenure group	Less than one year	2-5 years	6-10 years	11-20 years	# of obs			
1995 - 2005	55	515	1,631	2,462	4,663			
2005 - 2010	118	1,026	1,037	350	2,531			
Post 2010	224	1,167	329	0	1,825			
Total # of obs.	397	2,708	2,997	2,812	8,914			

Notes: Allocation of immigrants to different cohort groups (rows) and tenure groups (columns). Restricted sample 1, used in section 4.2, only includes first-generation immigrants who migrated after 1995 at age 15 or older, and have spent less than 20 years at destination.

Table S.8: List of NUTS regions									
Country	Region	NUTS level	Country	Region	NUTS level				
Austria	AT11	2 2 2 2 2 2 2 2 2 2 2	Finland	FI19	2				
Austria	AT12	2	Finland	FI1B	2				
Austria	AT13	2	Finland	FI1C	2 2 2				
Austria	AT21	2	<u>F</u> inland	FI1D					
Austria	AT22	2	France	FR1	1				
Austria	AT31	2	France	FR2	1				
Austria	AT32	2	France	FR3	1				
Austria	AT33	2	France	FR4	1				
Austria	AT34	2	France	FR5	1				
Belgium	BE1		France	FR6	1				
Belgium	BE2	1	France	FR7	1				
Belgium	BE3	1	France	FR8	1				
Switzerland	CH01	2	Ireland	IE04	2				
Switzerland	CH02	2	Ireland	IE05	2				
Switzerland	CH03	2	Ireland	IE06	2				
Switzerland	CH04	2	Italy	ITC	1				
Switzerland	CH05	2 2 2 2 2 2	Italy	ITF	1				
Switzerland	CH06	2	Italy	ITG	1				
Switzerland	CH07		Italy	ITH	1				
Germany	DE1	1	Italy	ITI	1				
Germany	DE2	1	Netherlands	NL11	2				
Germany	DE3	1	Netherlands	NL12	2				
Germany	DE4	1	Netherlands	NL13	2				
Germany	DE6	1	Netherlands	NL21	2				
Germany	DE7	1	Netherlands	NL22	222222222222222222222222222222222222222				
Germany	DE8	1	Netherlands	NL23	2				
Germany	DE9	1	Netherlands	NL31	2				
Germany	DEA	1	Netherlands	NL32	2				
Germany	DEB	1	Netherlands	NL33	2				
Germany	DEC	1	Netherlands	NL34	2				
Germany	DED	1	Netherlands	NL41	2				
Germany	DEF	1	Netherlands	NL42	2				
Germany	DEG	1	Norway	NO01	2				
Denmark	DK01	222222222222222222222222222222222222222	Norway	NO02	2				
Denmark	DK02	2	Norway	NO03	2				
Denmark	DK03	2	Norway	NO04	2				
Denmark	DK04	2	Norway	NO05	2				
Denmark	DK05	2	Norway	NO06	2				
Greece	EL30	2	Portugal	PT11	2				
Greece	EL41	2	Portugal	PT15	2				
Greece	EL42	2	Portugal	PT16	2				
Greece	EL43	2	Portugal	PT17	2				
Greece	EL51	2	Portugal	PT18	2				
Greece	EL52	2	Sweden	SE11	2				
Greece	EL53	2	Sweden	SE12	2				
Greece	EL54	2	Sweden	SE21	2				
Greece	EL61	2	Sweden	SE22	2				
Greece	EL62	2	Sweden	SE23	2				
Greece	EL63	2	Sweden	SE31	2				
Greece	EL64	2	Sweden	SE32	2				
Greece	EL65	2	Sweden	SE33	2				
Spain	ES11		Sweden	SE23					
Spain	ES12	2	United Kingdom	UKC	1				
Spain	ES13	2	United Kingdom	UKD	1				
Spain	ES21	2	United Kingdom	UKE	1				
Spain	ES22	2	United Kingdom	UKF	1				
Spain	ES23	2	United Kingdom	UKG	1				
Spain	ES24	2	United Kingdom	UKH	1				
Spain	ES30	2	United Kingdom	UKI	1				
Spain	ES41	2	United Kingdom	UKJ	1				
Spain	ES42	2	United Kingdom	UKK	1				
Spain	ES43	2	United Kingdom	UKL	1				
Spain	ES51	2	United Kingdom	UKM	1				
Spain	ES52	2	United Kingdom	UKN	1				
Spain	ES53	2							
Spain	ES61	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2							
Spain	ES62	2							
Spain	ES70	2							

Notes: List of NUTS region in our data. Columns 1 and 4 indicate the country of reference; Columns 2 and 5 indicate the code of the region; Columns 3 and 6 indicate the level of NUTS coding.

### Notes on the regional analysis

In this section, we provide the description of the variables, and their underlying sources, which are used as explanatory variables in the regional and subregional analysis in Section 4.3.

### Regional level variables

This regional analysis relies on within country information aggregated at the regional level. Natives' political culture at the regional level is computed using the European Social Survey (ESS). Macroeconomic indicators in European countries at the NUTS1 and NUTS2 levels are derived from Eurostat and the OECD regional statistics database. The table below summarizes the core information related to the data used in the analysis.

Variable name	Classification	Period	Construction	Source
Regional cul- ture	Political	2002-2018	Individual responses among the native population living in said region averaged over the period using design and population weights	European Social Survey
Unemployment rate (%)	Macroeconomic	2002-2018	Annual values averaged over the period	Eurostat
GDP per capita (PPP)	Macroeconomic	2002-2018	Annual values averaged over the period	OECD regional statistics database
GDP average growth (%)	Macroeconomic	2002-2018	Annual values averaged over the period	OECD regional statistics database
Number of years in recession	Macroeconomic	2002-2018	Number of years with negative GDP growth rate	OECD regional statistics database
Risk of poverty	Macroeconomic	2014-2018	Share of people at risk of poverty averaged over the period	Eurostat
Net rate of in- ternational mi- gration	Demographic	2002-2018	Annual values averaged over the period	Eurostat
Share of for- eigners	Demographic	2002-2018	Annual values averaged	Eurostat
Tertiary Educa- tion	Social	2002-2018	Share of people with tertiary education averaged over the period	Eurostat
Access to Broadband	Social	2006-2018	Share of households with broadband access averaged over the period	Eurostat
Active physician	Social	2006-2018	Number of physicians for 1000 population averaged over the period	OECD regional statistics database
Homicide rate	Social	2006-2018	Number of homicides for 100000 population averaged over the period	OECD regional statistics database

#### Subregional analysis

The subregional analysis uses peer groups based on the following natives' characteristics:

Age: Three age bands: 15-35, 35-45, and over 50. are created using respondents' age.

**Occupation**: This variable is constructed based on the ESS variables *iscoco* (for the period 2002 - 2010) and *isco08* (for the period 2012 - 2018) listing individuals' occupation or former occupations based on the ISCO08 classification. We use the 10 major groups from this classification to build a 3-way categorical variable including low-skill, medium-skill, and high-skill occupational groups. Armed forces occupations, Craft and related trades workers, Plant and machine operators, and assemblers, and Elementary occupations are coded as low-skill occupations. Clerical support workers, Service and sales workers, Skilled agricultural, forestry and fishery workers are coded as medium-skill occupations. Managers, Professional, and Technicians and associate professionals are coded as high-skill occupation.

**Dwelling**: This variable is constructed based on the variable *domicil* describing respondents' dwelling and available from all rounds of the European Social Survey (2002-2018). We use respondents' answer to create subregional geographical clusters from the more to the least urban. Respondents living in a Big city or in the Suburbs or outskirts are coded 1, those living in a Town or a small city are coded 2, and those living in a Country village, in the countryside or in a farm are coded as 3.

**Region**: We use the same combination of NUTS1 and NUTS2 regions as in the regional analysis. The detailed list of these regions can be found in Table S.8.