Immigrants' Tolerance and Integration into Society

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A B S T R A C T

We highlight a new factor behind integration: tolerance in the immigrants' background culture. We hypothesize that it is easier to partake of economic, civic-political and social life in a new country for a person stemming from a culture that embodies tolerance towards people who are different. We test this by applying the epidemiological method, using a tolerance index based on two indicators from the World Values Survey – the share that thinks it important to teach children tolerance and the share that considers homosexuality justified – as our main independent variable. Our outcomes are indices of individual-level economic, civic-political and cultural integration outcomes for immigrants of the second generation with data from the European Social Survey. The results indicate that tolerance in the background culture is a robust predictor of integration among children of immigrants in European societies.

JEL Classification: F22, F66, J15, Z13, Z18

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1. Introduction

According to Eurostat (2016), 11.5% of the EU population was foreign-born in 2014, while 6.0% were second-generation immigrants (defined as having a least one foreign-born parent). Both shares have undoubtedly increased in recent years, following the refugee waves from the Middle East and Africa to Europe (UNHCR, 2019). Immigration raises the issue of integration – defined by Penninx and Garcés-Mascareñas (2016, p. 14) as "the process of becoming an accepted part of society".[1] From a research perspective, this involves identifying factors that affect how those with a foreign background can gain access to and participate in various spheres or arenas in society.[2]

We offer a contribution to the existing literature by studying how a cultural trait, *tolerance* (defined as a preference for non-interference with other people irrespective of their beliefs, actions, or characteristics)[3], affects economic, civic-political and cultural integration in Europe. We do not focus on the tolerance of the native population towards immigrants, but rather *the tolerance embedded in the background culture of the immigrants*.[4] This variable can be interpreted as an indicator of the degree to which the background culture, and by implication the migrants stemming from it, adhere to one of the most distinguishing features of Western culture from at least the 1600s onwards (Forst, 2012).[5] Our hypothesis is that the more tolerant immigrant cultural backgrounds are, the easier it will be to integrate in the country of birth and residence, due to three mechanisms: that tolerance makes the immigrants themselves open to interacting with the surrounding society by not minding people being different, that tolerance makes people more cooperative, thus making productive use of the

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[1] For indicators of a lack of integration, see, e.g., Eurostat (2021) and Fasani et al. (2022), who document how especially refugees in Europe face a severe problem in the labor market.

[2] We use the concept of integration in an analytical and a non-normative sense. As defined, integration does not necessarily imply assimilation, the giving up of features of life rooted in the country of origin; rather, it is compatible with retaining ties to several countries and cultures, i.e., transnationalism (Dunn, 2005). On the concept of integration, see Penninx and Garcés-Mascareñas (2016).

[3] While this definition is compatible with a classical definition of tolerance, which stipulates a disapproval of the actions, beliefs, or characteristics that the non-interference concerns, it is wider as it allows for non-interference on the basis of either indifference or approval (Von Bergen and Bandow, 2009).

[4] Others have, in contrast, studied the role of attitudes of natives towards immigrants – see, e.g., Bansak et al. (2016), Lundborg and Skedinger (2016), Grajzl et al. (2018), and Aksoy et al. (2021).

[5] Akaliyski (2019) notes that countries in the European Union are converging culturally over time, which makes it relevant to talk of a "Western" or "European culture".

openness to interact also with people who are different, and that tolerance sends a signal to natives, e.g., employers, that someone will fit in more easily.

We investigate this matter empirically by applying the epidemiological method (Fernández, 2011), a main advantage of which is the ability to rule out reverse causality. Our sample consists of up to 15,000 second-generation immigrants in 32 European countries with parents stemming from 73 countries. We relate an index of tolerance based on two indicators from the countries of origin –the share that thinks that homosexuality is justified and the share of the population that state it is important to teach children tolerance and respect – to various integration outcomes of the second-generation immigrants. In effect, we are comparing whether differences in integration outcomes among such immigrants, born and residing in the same country, can be explained by differences in the tolerance levels of their countries of origin. We apply a multidimensional perspective and look at indices of economic, civic-political, and cultural integration.

Our main finding is that tolerance plays a positive role for integration. The more tolerant the background culture, the higher the individual degree of economic, civic-political and cultural integration. The results are robust to a number of sensitivity analyses, e.g., with respect to model specification, variable definitions, selection and sample.

This study brings together and extends two literatures: one on tolerance, and one on integration. As regards tolerance, this literature is one of the more recent additions to the emerging field of culture in economics (Guiso et al., 2006; Fernández, 2011; Storr, 2013; Alesina and Giuliano, 2015; de Jong, 2021). A recent study by Berggren et al. (2019) looked at the roots of tolerance towards gay people among second-generation immigrants in Europe. They showed that three factors in the countries of origin were especially important: the share of religious Muslims (negative); fair and effective institutions (positive); and a willingness to teach children tolerance and respect (positive). Other studies have linked tolerance to the economic-legal institutions in place, finding a positive effect of the quality of the legal system and monetary stability and that the relationship is stronger the more social trust there is (Berggren and Nilsson, 2013, 2014), and that social and economic globalization promotes a willingness of parents to teach their children tolerance and respect, since they expect them to do better in a globalized world with an open attitude towards others (Berggren and Nilsson, 2015). A pioneering study was conducted by Corneo and Jeanne (2009), who also developed a theory of how parents may induce tolerance as a kind of insurance mechanism in settings where it is uncertain in what contexts children will find themselves in life and what their

identities will be.[6] To our knowledge, no one has explicitly investigated how tolerance among immigrants (or tolerance in their background culture) affects their success at becoming integrated, which is where our study contributes.[7]

This brings us to the second strand of literature, that on integration, which is vast and which, in economics, primarily focuses on labor-market integration. Previous work has, e.g., looked at the role of education and language skills, which tend to be beneficial for integration (Delander et al., 2005; Hartog and Zorlu, 2009; De Paola and Brunello, 2016; Lochmann et al., 2019). Institutional factors have also been studied, e.g., high minimum-wage laws, strict employment protection regulation, and labor-market access (Kahn, 2007; Skedinger, 2010; Slotwinski et al., 2019), as well as excluding immigrants from voting (Slotwinski et al., 2017; Ferwerda, 2020) and what the effects of acquiring citizenship are (Heinmueller et al., 2015, 2019; Gathmann and Keller, 2018). Research also shows that access to social networks (Bethoui, 2007; Hammarstedt and Miao, 2020), job-searching methods (Carlsson et al., 2017) and discrimination (Aldén and Hammarstedt, 2016; Arai et al. 2016; Neumark, 2018; Nesseler et al., 2019; Ahmed and Hammarstedt, 2020; Esses, 2021) are of importance for integration.[8]

The literature highlighting the role of cultural factors in the integration process is, in contrast, relatively small and has not heretofore investigated the role of immigrants' tolerance. Algan et al. (2013) provide an overview of integration for several European countries with a particular focus on cultural factors such as language, religiosity, social and institutional trust, and satisfaction with democracy. Not least, they identify gaps in these variables between

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[6] There is also a small literature on outcomes of tolerance, linking it to economic dynamism, technological progress, higher incomes and economic growth (Ottaviani and Peri, 2006; McGranahan and Wojan, 2007; Das et al., 2008; Florida et al., 2008; Boschma and Fritsch, 2009; Berggren and Elinder, 2012a,b) and recently, to cooperative attitudes and behavior (Eriksson et al., 2021) and to less climate skepticism (Johansson et al., 2022).

[7] Additionally, there is often a dynamic aspect to values and attitudes. While immigrants are often strongly shaped by their background culture, there also tends to be an adaptation to some extent towards the culture of the country of residence. This points at a possibility for tolerance to increase over time for immigrants moving from low- to high-tolerance settings, possibly because of, among other things, integration, thus enabling further integration, and creating a virtuous circle (should integration be regarded as desirable). For studies indicating the presence of this kind of adaptation for trust, life satisfaction, social preferences, risk attitudes and gender views, see, e.g., Ljunge (2014), Nannestad et al. (2014), Cameron et al. (2015), Helliwell et al. (2016), Bergh and Öhrvall (2018), Dinesen and Sønderskov (2018), Berggren et al. (2020) and Ericsson (2020).

[8] For a broad analysis of various policy alternatives that affect labor-market integration in the Nordic countries, see Calmfors and Sánchez Gassen (2019).

natives, first-generation immigrants, and second-generation immigrants, and discuss how to bridge these gaps on the premise that they help explain the degree of integration. Bisin et al. (2011) find, among other things, that second-generation immigrants in Europe have a smaller chance of finding a job than natives if they have a strong ethnic identity, while Carillo et al. (2021) present evidence from Italy that immigrants with strong feelings of belonging to both the country of origin and the country of residence have higher employment rates than those who primarily identify with the country of origin. Blau (2015) and Neuman (2018) study the role of gender values in the countries of origin for immigrant women's labor-market participation and find such values to be important. Koopmans (2016) investigates how language proficiency, interethnic social ties and gender values influence labor-market outcomes for immigrants of Muslim origin and find that these cultural factors offer explanatory value. Lundborg (2013) notes that the region of the world immigrants come from affect how well they do in the labor market, but without quantifying culture as such.

A couple of recent studies on Germany offer further indication of the importance of culture to integration. Aksoy et al. (2020) study how local labor-market conditions and attitudes towards immigrants affect different dimensions of integration, and both factors are found to be as important. In a similar vein, Schilling and Stillman (2021) identify a negative effect on social and economic integration from the share voting for the far-right party Alternative for Germany in a municipality. Our study is similar to these two in that we also examine more types of integration outcomes than the purely economic ones; but instead of looking at the role of attitudes of the native population, we focus on attitudes in the background culture of the immigrants themselves.

2. Theoretical framework

Penninx and Garcés-Mascareñas (2016) present analytical tools for the study of integration. Their general model features two parties (immigrants and the receiving society), three levels (individuals, collectives/groups, and institutions), and three dimensions (legal/political, socio-economic, and cultural/religious). Integration thus depends on aspects of the immigrants themselves and their organizations, as well as on aspects of people and organizations in the receiving country, who interact, under formal and informal institutions, in the legal/political arena, in markets, and in civil society, in the country in which they jointly reside. The key question is what factors – among immigrants and among natives – that

influence how immigrants gain acceptance and access to, and decide to participate in, these dimensions of society.

We apply a modified version of this general model for second-generation immigrants. We retain an interest in the three dimensions, i.e., integration outcomes of a political, economic and cultural kind. We focus on the individual immigrants and their cultural background as a determinant of integration. According to Guiso et al. (2006, p. 23), culture can be defined as "those customary beliefs and values that ethnic, religious, and social groups transmit fairly unchanged from generation to generation." This transmission can, in line with Bisin and Verdier (2011), take place in the family (i.e., vertically) or through interaction with the surrounding society (i.e., horizontally, e.g., through friends, colleagues, and media). This implies that an attitude like tolerance, which can be said to consist of both beliefs about others and values about how to treat them, can arise both as a consequence of tolerance in the background culture – transmitted "from generation to generation", including from the parents of second-generation immigrants to their children – and from the surrounding society in which an individual grows up.[9] To connect to the model of Penninx and Garcés-Mascareñas (2016), tolerance is seen as an individual second-generation immigrant characteristic that affects how interaction with people in politics, markets and civil society works out. Tolerance is, in turn, shaped both by other individuals, groups and institutions both in the country of origin and in the country of residence.[10]

As indicated in the literature review, it is quite common to study integration as a function of the attitudes *of natives*, to which our study provides a complement. It is quite straightforward to expect integration to be more successful if the people with whom immigrants interact are tolerant – but why expect the tolerance of the immigrants themselves to matter?

Consider the two-dimensional model of Berry (1997, p. 10), as presented in Fig. 1, and how tolerance affects the adopted strategies of acculturation. We take a primary interest in the upper right-hand strategy, *integration*, which means that one holds on to important aspects of one's background culture while also striving to participate politically, economically

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[9] Intergenerational transmission of traits, values, and behavior has been documented, e.g., with regard to religion (Bisin and Verdier, 2001), risk preferences and trust (Dohmen et al., 2012; Ljunge, 2014), the environment (Grønhøj and Thøgersen, 2009), female labor-force participation (Fernández et al., 2004), work ethic (Bogt et al., 2005), and party choice (Settle et al., 2009).

[10] Our empirical method infers the individual tolerance level of second-generation immigrants from the tolerance level of the country from which the parents migrated. See Section 3.2 for details.

and culturally in the society in which one lives – and perhaps adopting beliefs and values of the surrounding society over time. The other three combinations are: *assimilation*, where the background culture is not retained and where the "new" society is fully embraced; *separation* (if voluntary) or *segregation* (if involuntary), where one's background culture is retained but where the there is little or no involvement in the surrounding society; and *marginalization*, where there is basically no connection to either the "old" or "new" societies and their cultures.

[Fig. 1 about here]

We argue that tolerance among immigrants, all else equal, makes integration more plausible than the other three combinations – and the more tolerance, the more integration. First, tolerance among immigrants stimulates openness to others in their country of residence, including natives and other minorities, which makes it more likely that they themselves are willing to interact more and become part of society in the various dimensions under study.[11] Second, new research indicates that tolerance predicts a willingness to cooperate with others (Eriksson et al., 2021). Hence, tolerance is not only about preferring not to interfere with others but also about actively being willing to interact and "do business" with them. This has straightforward implications for integration. Third, tolerance among immigrants sends a signal to others that they are willing to partake in economic, political, and social life, which can generate a welcoming attitude in return. For example, an employer considering employing someone where the workforce or clientele consists of people with differing characteristics will be more interested in hiring a person who is tolerant, as this will facilitate creating a sense of community and camaraderie, which is arguably good for business (cf. Storr and Choi, 2020). Berry (1997, p. 10) points out that "a mutual accommodation is required for integration to be attained", and tolerance is closely related to making such accommodation come about on both sides.

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[11] Indeed, Berggren and Nilsson (2015) show that economic and social globalization make people more willing to teach children tolerance because they believe it will benefit the children, e.g., by making them more willing and better equipped for socializing and working with people who are different from them, at home and abroad.

3. Data and empirical approach

3.1. Data

To test the hypothesis that tolerance in the background culture improves integration, we use a sample consisting of up to 15,000 individuals, all of them second-generation immigrants in 32 European countries covered by the European Social Survey (ESS), waves 2– 6. Their parents have migrated from 73 countries all over the world.

The dependent variables are four indices of individual-level integration, which aim at covering key dimensions of integration, using data from the ESS. The basis of the indices are seven indicators. For economic integration, we use income (the question was: "[P]lease tell me which letter describes your household's total income, after tax and compulsory deductions, from all sources?", where the letters correspond to deciles); whether the individual is self-employed (the reply choice was: "In your main job are/were you self-employed?"); and whether the individual has a university degree (the reply choice was either "lower tertiary education" or "higher tertiary education" to the question "What is the highest level of education you have successfully completed?").[12] As indicators of civic-political integration, we use whether respondents in the past twelve months participated in at least one of the following activities: a demonstration, signed a petition, wore or displayed a campaign badge/sticker or worked in an organization, and as a separate item voting in elections (the respondent replied "yes" to the question of whether they voted in the last national election). As a first indicator of cultural integration, we use language. The variable is coded as 1 if the respondent if the respondent did not list a second language in addition to the dominant language of the country of residence when asked "What language or languages do you speak

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[12] We regard self-employment as an indicator of the *absence* of integration, based on the idea that it indicates a difficulty in entering the regular labor market. This means that self-employment among a large share of immigrants can be understood as having arisen out of necessity. Moreover, if such self-employment primarily takes place in ethnic enclaves, in the form of small businesses catering to the own ethnic group, this is a further indication of a lack of integration. Lastly, it could also be that self-employment negatively impacts the chance of entering the labor market at a later stage, which is also negative for integration. For studies supporting these interpretations, see, e.g., Hjerm (2004), Hammarstedt (2006), Baycan-Levent and Nijkamp (2009), Blume et al. (2009), Andersson and Hammarstedt (2015), Aldén et al. (2021, 2022) and Lens (2022).

most often at home?"; 0 otherwise.[13] As a second indicator of cultural integration, we use tolerance towards gay people (asking to what degree respondents agree with the statement "gay men and lesbians should be free to live their own life as they wish", with answers ranging from "Disagree strongly", coded as 1, to "Agree strongly", coded as 5). It is also an indicator of the degree of transmission from the culture of the country of origin to the second-generation immigrant. The economic and civic-political indices were constructed by means of principal-components analysis, as was the overall index (covering the three different areas and the underlying seven survey questions). The cultural index was constructed as a simple normalized average of the replies to the two indicators.

The main explanatory variable is tolerance in the country of origin, which is the average of two indicators from the World Values Survey (WVS) and European Values Study (EVS), measured as average values for the countries of origin in waves 3 and 4.[14] We do not include waves 1 and 2 of the WVS/EVS since there is a clear time trend toward more tolerance across these waves, and a small set of countries is included. Tolerance is stable in waves 3 and 4, and these waves cover a wide set of countries, which makes them suitable for our analysis.

The first tolerance measure is the share of the population that replies 6–10, on a 10-point scale, to the instruction "Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between", with "homosexuality" being the statement in question. The second measure is the share of people who answer "Tolerance" when being asked the question: "Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important?". While the measure on tolerance towards gay people concerns a specific minority (at the center of much cultural and political debates in Europe in recent decades), the latter is

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[13] One could consider this indicator being about assimilation rather than integration, but for three reasons we consider it adequate to see it as an indicator of the latter: (i) the question concerns what languages are *most often* spoken at home, and it does not preclude the language of the country of origin also being spoken a great deal; (ii) if the choice of language is voluntary, it arguably reflects integration more than assimilation, and we think it reasonable to regard the choice of language in the home as mostly voluntary; and (iii) even if the language of the "new" country is mostly spoken at home, this does not necessarily negate the cultural heritage from the country of origin in other dimensions.

[14] By the country of origin is meant the birth country of the immigrant parent(s). If both parents are immigrants, the individual's tolerance measure is computed as the mean of the tolerance of the mother's and father's birth countries.

a more general tolerance measure. We chose these two exactly for offering this breadth – having one specific and one general indicator – and the use of an index reduce the risk of multiple-testing bias by not including a large number of treatment and outcome variables (cf. Kling et al., 2007).

In addition, we carry out a sensitivity analysis where we add two additional tolerance indicators from the WVS/EVS: the shares in the countries of origin that do not pick "people of a different religion" and who do *not* pick "unmarried couples living together" when asked which groups they do not want to have as neighbors. A further sensitivity test interacts our baseline tolerance measure which an indicator from the ESS of tolerance among natives in the country of residence: the degree to which they wish to allow immigrants of different race/ethnic groups than the majority (with four reply options). In one exercise, we also replace Tolerance with two indicators of the absence of discrimination. The first measure is called the Gay Travel Index (Spartacus, 2021), which an assessment of countries by LGBT people themselves about how this group is treated. It consists of 17 categories, ranging from gay marriage to death penalty for homosexuals, and a country is given points in accordance with how much non-discrimination there is. We use the first available data from 2012. The second measure is the Global Index on Legal Recognition of Homosexual Orientation from Badgett et al. (2019). This indicator goes back further in time, and we use data from around 1980.[15] The total score for each assessed country ranges from 0 to 8. Lastly, we use a dummy variable of discrimination from the ESS as an alternative outcome variable, which takes the value 1 if the respondent indicated that he or she is a member of a group that is being discriminated against in the country of residence.

The main control variables used are, on the one hand, individual-level ones pertaining to our sample of second-generation immigrants in the ESS and, on the other hand, an aggregate-level one pertaining to the countries of origin. As the former, we use age, age squared, and whether the respondent is female. These controls may influence integration outcomes and are exogenous. In a sensitivity analysis, we add married, never married, religious (answering the question "Regardless of whether you belong to a particular religion,

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[15] Its eight categories are: (1) Legality of consensual homosexual acts between adults; (2) Equal age limits for consensual homosexual and heterosexual acts; (3) Explicit legal prohibition of sexual orientation discrimination in employment; (4) Explicit legal prohibition of sexual orientation discrimination regarding goods and/or services; (5) Legal recognition of the non-registered cohabitation of same-sex couples; (6) Availability of registered partnership for same-sex couples; (7) Possibility of second-parent and/or joint adoption by same-sex partners; and (8) Legal option of marriage for same-sex couples.

how religious would you say you are?" on a scale from 0 to 10), Muslim, the degree of social trust, the degree to which one finds it important to make own decisions and be free, the degree to which one finds it important to follow traditions and customs and disagreement with the statement that men should have more right to a job than women when jobs are scarce. We also add individual controls for the parents: whether the father and mother have a university degree, whether they were working when the respondents were 14 years old (a dummy variable) and a range of occupation dummies.

We use real GDP per capita (in logarithmic form, from the World Development Indicators) to control for the level of material well-being in the country of origin. In a sensitivity analysis, we add two indicators of institutional quality and five cultural variables for the countries of origin. As for the institutional indicators, we include a measure of democracy (Polity2, measuring countries on a scale from –10 to +10, from autocracy to democracy; Center for Systemic Peace, 2022) and a measure of the rule of law (from Worldwide Governance Indicators, measuring the quality of the legal system on a scale from –2.5 to +2.5; World Bank, 2022), to capture whether formal institutions in the country of origin matters for integration and whether tolerance retains an influence when these factors are accounted for. It could be that tolerance captures institutional quality (see, e.g., Berggren and Nilsson, 2013, 2015, and Berggren et al., 2019). As for the cultural variables, they are individualism (the extent to which people feel independent, as opposed to being interdependent as members of larger wholes; from http://www.geerthofstede.nl/dimension-data-matrix), social trust (the share that thinks that most people can be trusted; from the WVS/EVS), the share of Muslims (from Barro and McCleary, 2006), the share regarding themselves as a religious person (from the WVS/EVS) and the female labor participation rate (which can be seen as a reflection of gender equality; from World Development Indicators).

Descriptive statistics are presented in Table 1. The sample sizes, along with Tolerance values, by country of origin are presented in Table A1 in the Online Appendix.

[Table 1 about here]

3.2. Empirical approach and model

We use the epidemiological method pioneered by Fernández and Fogli (2006, 2009); cf. Fernández (2011). The idea is to study second-generation immigrants and relate some individual-level outcome variable (integration, in our case) to a characteristic of their country

of origin (tolerance, in our case). This avoids any problem of reverse causality, since individual outcomes in one country arguably cannot affect the culture of another country, especially not when measured beforehand.

The method is illustrated in Fig. 2. The dashed lines, from tolerance in the country of origin to individual tolerance, and from individual tolerance to individual integration, feature the proposed mechanism. A cultural trait (tolerance) in a country is absorbed by the individuals being born, brought up and living in that country. Some of these individuals emigrate to a new country and bring with them cultural traits from their country of origin. When they have children in the destination country, they bring them up in line with the background culture – what Bisin and Verdier (2001, 2011) call vertical transmission of values takes place – and the children are also characterized by, in this case, the tolerance of the parents' birth country. This individual-level trait (along with various country-of-birth and individual characteristics) then affects these children's integration outcomes. However, this two-stage mechanism is *not* directly studied here, for two reasons: there are no data on the tolerance of the migrant parents, and even if there were, the results could suffer from reverse causality, as the tolerance of parents can be influenced both by the tolerance and the integration of their children.

Instead, we study the fully drawn lines – how the tolerance in the background culture of the family relates to individual integration outcomes of second-generation immigrants, on the assumption that vertical transmission takes place.[16] This allows us to avoid the problem of reverse causality. Since the country of residence can also exert an influence, we control for this using region by ESS-wave fixed effects, effectively comparing how individuals in the same European region of a country (as defined in the ESS) with immigrant parents from different countries integrate in relation to the tolerance levels of their background countries. The regional level of comparison is one approach to account for sorting. One might be concerned that more tolerant individuals would locate in a region of a country with more tolerant inhabitants, which could facilitate integration. With regional comparisons this issue should be of less concern. We also control for individual-level characteristics with a potential to shape integration.

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[16] One of our integration outcomes is the individual tolerance of the second-generation immigrants, but by relating it to the measure of tolerance in the country of origin, we in effect present a test of vertical transmission as well. The positive and significant point estimate is indicative of individual tolerance being influenced by tolerance in the background culture. However, we refrain from using individual tolerance as an explanatory factor of integration outcomes due to the distinct risk of reverse causality.

[Fig. 2 about here]

We estimate equation (1) using OLS:

$$\text{Integration}_{ica} = \beta_0 + \beta_1\, X_a + \beta_2\, \mathbf{Q}_a + \beta_3\, \mathbf{Z}_{ica} + \gamma_r + \varepsilon_{ica}, \tag{1}$$

where *Integration$_{ica}$* is an indicator of integration of second-generation immigrant i, born and residing in country c with parents born in country a, where $a \neq c$. The variable X_a is a measure of tolerance in country a. $\mathbf{Q}_a$ is a vector of controls for country a. $\mathbf{Z}_{ica}$ is a vector of individual controls, γ_r is second-generation immigrant i's region-of-residence by survey-wave fixed effects (which control for culture, institutions and other stable, unobserved characteristics of region r in country c in each year), and ε_{ica} is the error term. Standard errors are clustered by country a to allow for arbitrary correlations of the error terms among second-generation immigrants from that same country.

4. Results

4.1. Baseline results

Our main finding is that tolerance promotes integration, as suggested by the unconditional relationships between Tolerance and the integration outcomes in Fig. A1 in the Online Appendix. Adding control variables, Table 2 presents our baseline results. All three dimensions of integration, as well as the overall index, are positively and significantly related to Tolerance (country of origin). To get an understanding of the estimated effect sizes, an increase in Tolerance by one standard deviation is associated with an increase in Integration with 13% of a standard deviation, in Economic integration with 7% of a standard deviation, in Civic integration with 14% of a standard deviation and in Cultural integration with 15% of a standard deviation. In the case of Cultural integration, which is the average of two shares, we can moreover say that if the share of tolerant people in the country of origin increases by 10 p.p., the probability of being culturally integrated (in terms of language and of being tolerant) increases by 2.7 p.p., which is an increase of 3.6%. To summarize, second-generation

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immigrants in Europe appear more integrated – economically, politically and culturally – if they emanate from cultures that put a value on being tolerant.

[Table 2]

In Table A2, we show results when replacing the indices of integration with the seven components on which they are based. Five are related to Tolerance in a statistically significant way (Self-employment and Language are not). Notably, Tolerance in the country of origin predicts individual tolerance, in support of our theory of vertical transmission.

4.2. Robustness checks and extended analysis

In order to examine how robust our baseline findings are, and to extend our analysis, we present results from eleven instances of further testing.

Our first exercise involves adding two indicators of tolerance from the countries of origin in addition to our baseline Tolerance measure: the shares that do not pick "people of a different religion" and who do *not* pick "unmarried couples living together" when asked which groups they do not want to have as neighbors. The idea is to see whether other aspects of tolerance than those of our baseline indicator likewise predict individual tolerance. As seen in Table A3 in the Online Appendix, it turns out that the new variables are not robustly associated with individual tolerance, unlike our baseline tolerance measure, indicating no evidence of vertical transmission of these alternative tolerance measures. One can furthermore note that when adding the new measures to the baseline specification, as seen in Tables A4a,b in the Online Appendix, they are not robustly related to integration either, while Tolerance still is. Thus, it seems as if our baseline indicator captures the features of tolerance that is transmitted vertically and that make it easier to enter different spheres of society well.

Second, we add two categories of variables for the countries of origin: two indicators of institutional quality and five cultural variables, while still controlling for GDP per capita. The reason for adding these variables is that tolerance may capture other elements of these countries that relate to integration. Indeed, previous research, e.g., Berggren et al. (2019), indicates that tolerance is related to both institutions and culture in the countries of origin of second-generation immigrants in Europe. With regard to the institutional variables, we add an indicator of the degree of democracy and an indicator of the rule of law. When it comes to the cultural variables, which are the share of religious persons, individualism, social trust, share

of Muslims and the female labor participation rate, there are conceptual similarities between these and tolerance, but also differences, and sufficiently clear such differences to justify studying consequences of tolerance. To investigate the empirical case for this view, we provide two tests, shown in Tables A5 and A6 in the Online Appendix. The first table shows results when adding these seven new variables at the same time, whilst the second shows results when adding them one at a time (taking the potential problem of multicollinearity seriously). The tables give a clear picture: Tolerance is robust to the inclusion of the seven institutional and cultural variables from the country of origin of our respondents. This holds for the overall integration outcome, as well as for economic, civic and cultural integration. This exercise can hopefully assuage concerns that it is other cultural or some basic institutional variables, rather than tolerance, that drive the result. That being said, some of the added variables matter as well for certain kinds of integration – for example, the rule of law and social trust both seems beneficial for civic integration, while the female labor participation rate appears conducive to both economic and cultural integration.

Third, we add new individual-level control variables from the ESS to the exogenous ones of the baseline model (age, age squared and gender). Although there is a risk for endogeneity, it may still be instructive to see whether individual traits might relate to integration and, not least, whether Tolerance in the country of origin retains its strong association with our integration outcomes when adding more individual control variables, some of them roughly corresponding to the country-of-origin variables added in the previous robustness analysis. Thus, we expand the baseline model by adding: married, never married, religious, Muslim, the degree of social trust, the degree to which one finds it important to make own decisions and be free, the degree to which one finds it important to follow traditions and customs and disagreement with the statement that men should have more right to a job than women when jobs are scarce. In Tables A7 and A8 in the Online Appendix, we add them altogether in the first case and one by one in the second case. The tables suggest that our tolerance indicator is almost fully robust to the inclusion of this battery of additional individual-level control variables. In the latter table, Tolerance (country of origin) is strongly statistically significant in all regressions. Quite a few of the new individual controls are significant here as well, and mostly with the expected sign. These results overall strengthen our basic starting point, that cultural traits among immigrants are important for integration. Notably, tolerance retains its position as a strong explanatory factor.

Fourth, we add the available individual-level control variables for the parents of the respondents, whether they have a university degree, whether they were working when the

respondents were 14 years old and dummy variables for their occupation. It could be that these are correlated with tolerance in their countries of origin and that tolerance primarily reflects parental education and work experience. The results are reported in Table A9 in the Online Appendix. The results show that the tolerance estimates remain significant throughout as the parental controls are included. The main relationship with integration is for the parents having a university education, which is positively related to civic integration. The exercise lends further credence to tolerance being a factor of importance for integration.

Fifth, we restrict the sample to second-generation immigrants whose parents were born in a European country but in a different one than the one the second-generation immigrants themselves were born in and reside in. The idea behind this exercise is that we create a sample with more homogeneous countries of origin, thus reducing the risk for outlier influences. Moreover, it could be that integration is generally easier for European immigrants and that factors like tolerance matter less for various reasons. It is certainly the case that there is less variation in tolerance within Europe. However, the results are very similar, as can be seen in Table A10 in the Online Appendix.[17]

Sixth, we have undertaken an analysis for second-generation immigrants where both parents are immigrants – see Table A11 in the Online Appendix. This entails using a considerably smaller sample. Yet, the results are similar to our baseline results, the main difference being that the point estimates for Tolerance (country of origin) is clearly larger for Integration and Economic integration, arguably due to a stronger vertical cultural transmission from Tolerance in the country of origin to the individual's tolerance if both parents are immigrants. The somewhat weaker effect on cultural integration may be understood as a higher likelihood of speaking a second language at home if both parents are immigrants.

Seventh, the sample size by country of origin is specified in Table A1 in the Online Appendix. The most notable thing is that Russia is quite strongly represented, with 1,578 respondents being of Russian ancestry. However, an outlier test based on the baseline model in Table 2 with Russia removed from the sample is presented in Table A12 in the Online Appendix. It shows that the results are robust.

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[17] We do not include regressions for the sample where both parents have non-European countries of origin, since the number of observations is low (ranging from 300 to 500, depending on the outcome studied), yielding quite large standard errors on the estimates. However, we have undertaken the regressions, and the results are qualitatively in line with those for the European sample, with all estimates being positive.

Eighth, we remarked above that previous work on integration has studied the role of natives being tolerant. What happens to our results when we take the tolerance of natives into account? We do so by using a question in the ESS capturing the degree to which respondents wish to allow immigrants of different race/ethnic groups than the majority. When interacting Tolerance (country of origin) with this new measure, Tolerance (country of residence), the interaction variable does not attain statistical significance for any integration measure – see Table A13 in the Online Appendix. This suggests that there is neither substitutability nor complementarity between the tolerance of the second-generation immigrants and the tolerance of the native population in the country where all of them reside. Tolerance (country of origin) can thus, also after this exercise, be seen to be positive for integration, irrespective of the tolerance of the natives.

Ninth, one might wonder what the role of discrimination in the country of origin is in relation to integration. It is reasonable to see the absence of discrimination (which is an action or state of affairs) as conceptually and perhaps empirically related to tolerance (which is a social attitude). Two separate issues involving discrimination are worth considering. The first one is whether discrimination in the country of origin rather than (in)tolerance affects integration. The second one is whether a tolerant background implies less discrimination in the region of residence. To test whether discrimination influences integration, we have replaced Tolerance with two indicators of discrimination: the Gay Travel Index and the Global Index on Legal Recognition of Homosexual Orientation (as described in the data section above). This exercise reveals (see Tables A14a,b in the Online Appendix) that these measures attain statistical significance for Civic integration, indicating that laws that do not discriminate against the gay minority in the background country is related to more civic-political engagement in the country of residence. Otherwise, these indicators are non-significant, and throughout, Tolerance retains its clear statistical significance and a substantive size effect.

We also offer an empirical test of whether tolerance in the country of origin of the second-generation immigrants is related to being a member of a group that has been discriminated against in the country of residence. The latter are individual-level data from the ESS. Our hypothesis is that a second-generation immigrant from a more tolerant background is less likely to have experienced discrimination. Admittedly, this exercise is not perfect, both because the discrimination measure refers to some group the respondent belongs to rather than personal experience and because the link between discrimination and integration need not be very strong. Yet, as reported in Table A15 in the Online Appendix, we find that there

is, as hypothesized, a negative relationship between tolerance in the country of origin and the outcome variable being a member of a group that has been discriminated against in the country of residence, and it is statistically significant at 5%.

Tenth, there is a potential issue of selection, such that the country-of-origin tolerance levels are quite different from the tolerance levels of the parents of our second-generation immigrants who migrated from those countries. What we can do empirically is to use the ESS tolerance indicator of the degree to which one wants gays and lesbians to be free to live life as they wish and compare the average tolerance of today's natives (who have not emigrated) in each country of origin with the average tolerance of the first-generation emigrants from the same country living in our sample of European countries of residence. This is not a perfect test, since it does not involve the parents of our sample of second-generation immigrants, but it is still indicative of whether people who migrate differ from those who remain in the dimension of interest. The relationship is depicted in Fig. A2 in the Online Appendix, with the ratio between the average tolerance among emigrants from various countries and the average tolerance among the natives (who have not emigrated) from the same countries on the Y axis and the average tolerance among the natives (who have not emigrated) from the same countries of origin on the X axis. A ratio of 1 means that the tolerance levels are the same, a ratio >1 that the tolerance of emigrants is higher and a ratio <1 that the tolerance of natives is higher. In the countries of origin where the tolerance of natives is relatively high (above 3.5 or so), the ratio is close to 1, indicating that emigrants are quite representative of the people who have remained in the home country. For lower tolerance levels among natives, the ratio >1, which suggests that emigrants are more tolerant. Notably, this kind of unrepresentativeness speaks in our favor, since it shows that when emigrants and natives differ, it takes the form of emigrants being more tolerant than natives. This means that we may underestimate the effects of tolerance on integration by using the tolerance of the natives who stayed behind in our regressions. Based on this test, the issue of selection does not seem to be of grave concern as the bias is arguably towards zero.

Eleventh, we have separated male and female second-generation immigrants (the individuals whose integration we study). The results, which can be found in Table A16 (for females) and Table A17 (for males) in the Online Appendix, mainly remain the same, but we find no indication of clear gender differences. For both female and male second-generation immigrants, background-country tolerance is positively related to all types of integration.

5. Concluding remarks

The challenge of integration is real in countries with many and increasing numbers of immigrants – certainly in the economic realm, where earning an income is a key feature of a good life, but also, in times of polarization, in the political and cultural realm. For society to develop harmoniously, its various groups of inhabitants arguably need to participate in markets, democratic life and be connected to the cultural fabric.

In this study, we have investigated a hitherto overlooked cultural predictor of integration: tolerance. Unlike previous work, that looks at the "demand" side, i.e., the attitudes and related behavior of natives towards immigrants, we look at the attitudes of the immigrants themselves. We investigate how tolerance in their ancestral culture affects economic, civic-political and cultural integration and find ample indications of a positive influence in all three dimensions. By using the epidemiological method, measuring tolerance in the countries from which parents of second-generation immigrants in Europe migrated and assuming transmission via the family, the results do not suffer from reverse causality.

We find that tolerance in the background culture is clearly associated with economic, civic-political and cultural integration. The findings withstand a number of sensitivity tests and extensions, making us confident that we identify a robust effect.

Our results may be taken to suggest that strengthening tolerance is a virtuous matter, not only for those who value it for its own sake but also from the point of view of those who strive for integration. How, then, can tolerance be strengthened? As a cultural characteristic, it is embedded in traditions, making it hard to consciously change it, but there are certain findings that offer some hope for change. One thing that seems promising is contact-based interventions that make people more familiar with and knowledgeable about others after personal contacts (Lemmer and Wagner, 2015). There are also signs of education playing a positive role, both through increasing knowledge and through socialization involving people who are different (Vural-Batik, 2020). Moreover, certain institutional reforms appear able to generate tolerance, such as a stronger rule of law (Berggren and Nilsson, 2013; Berggren et al., 2019) and social and economic globalization between countries (Berggren and Nilsson, 2015).

Even though our findings are novel and policy-relevant, they do not, of course, exclude other measures or insights, shown by previous research to foster integration. Still, we consider it valuable to have identified a new factor that seems to affect the important process of making everyone partake in economic, political and cultural life.

References

Ahmed, A., Hammarstedt, M., 2020. Ethnic discrimination in contacts with public authorities: a correspondence test among Swedish municipalities. Applied Economics Letters 27 (17), 1391–1394.

Akaliyski, P., 2019. United in diversity? The convergence of cultural values among EU member states and candidates. European Journal of Political Research 58 (2), 388–411.

Aksoy, C.G., Poutvaara, P., Shikora, F., 2020. First time around: local conditions and multi-dimensional integration of refugees. Working paper available at https://www.iza.org/publications/dp/13914/first-time-around-local-conditions-and-multi-dimensional-integration-of-refugees.

Aldén, L., Bastani, S., Hammarstedt, M., 2021. Ethnic background and the value of self-employment experience: evidence from a randomized field experiment. Oxford Bulletin of Economics and Statistics 83 (6), 1287–1310.

Aldén, L., Bastani, S., Hammarstedt, M., Miao, C., 2022. Immigrant-native differences in long-term self-employment. Small Business Economics 58 (3), 1661–1697.

Aldén, L., Hammarstedt, M., 2016. Discrimination in the credit market? Access to financial capital among self-employed immigrants. Kyklos 69 (1), 3–31.

Alesina, A., Giuliano, P., 2015. Culture and institutions. Journal of Economic Literature 53 (4), 898–944.

Algan, Y., Bisin, A., Manning, A., Verdier, T., 2013. Cultural Integration of Immigrants in Europe. Oxford University Press, Oxford.

Andersson, L., Hammarstedt, M., 2015. Ethnic enclaves, networks and self-employment among Middle Eastern immigrants in Sweden. International Migration 53 (6), 27–40.

Arai, M., Bursell, M., Nekby, L., 2016. The reverse gap in ethnic discrimination: employer stereotypes of men and women with Arabic names. International Migration Review 50 (2), 385–412.

Badgett, M.V.L., Waaldijk, K., van der Meulen Rodgers, Y., 2019. The relationship between LGBT inclusion and economic development: macro-level evidence. World Development 120 (August), 1–14.

Bansak, K., Heinmueller, J., Hangartner, D., 2016. How economic, humanitarian, and religious concerns shape European attitudes toward asylum seekers. Science 354 (6309), 217–222.

Barro, R., McCleary, R.M., 2006. Religion and economy. Journal of Economic Perspectives 20 (2), 49–72.

Baycan-Levent, T., Nijkamp, P., 2009. Characteristics of migrant entrepreneurship in Europe. Entrepreneurship & Regional Development 21 (4), 375–397.

Berggren, N., Bergh, A., Bjørnskov, C., Tanaka, S., 2020. Migrants and life satisfaction: the role of the country of origin and the country of residence. Kyklos 73 (3), 436–463.

Berggren, N., Jordahl, H., 2006. Free to trust: economic freedom and social capital. Kyklos 59 (2), 141–169.

Berggren, N., Elinder, M., 2012a. Is tolerance good or bad for growth? Public Choice 150 (1), 283–308.

Berggren, N., Elinder, M., 2012b. Tolerance and growth: modeling the empirical relationship. Public Choice 153 (3–4), 495–502.

Berggren, N., Ljunge, M., Nilsson, T., 2019. Roots of tolerance among second-generation immigrants. Journal of Institutional Economics 15 (6), 999–1016.

Berggren, N., Nilsson, T., 2013. Does economic freedom foster tolerance? Kyklos 66 (2), 177–207.

Berggren, N., Nilsson, T., 2014. Market institutions bring tolerance, especially where there is social trust. Applied Economics Letters 21(17), 1234–1237.

Berggren, N., Nilsson, T., 2015. Globalization and the transmission of social values: the case of tolerance. Journal of Comparative Economics 43 (2), 371–389.

Berggren, N., Nilsson, T., 2021. Economic freedom and antisemitism. Journal of Institutional Economics 17 (2), 289–304.

Bergh, A., Öhrvall, R., 2018. A sticky trait: social trust among Swedish expatriates in countries with varying institutional quality. Journal of Comparative Economics 46 (4), 1146–1157.

Berry, J.W., 1997. Immigration, acculturation and adaptation. Applied Psychology International Review 46 (1), 5–34

Bethoui, A., 2007. The distribution and return of social capital: evidence from Sweden. European Societies 9 (3), 393–407.

Bisin, A., Patacchini, E., Verdier, T., Zenou, Y., 2011. Ethnic identity and labor market outcomes of immigrants in Europe. Economic Policy 26 (65), 57–92.

Bisin, A., Verdier, T., 2001. The economics of cultural transmission and the dynamics of preferences. Journal of Economic Theory 97 (2), 298–319.

Bisin, A., Verdier, T., 2011. The economics of cultural transmission and socialization. In: Benhabib, J., Bisin, A., Jackson, M.O. (Eds.), Handbook of Social Economics. Elsevier, Amsterdam, pp. 339–416.

Blau, F.D., 2015. Immigrants and gender roles: assimilation vs. culture. IZA Journal of Migration 4 (1), 1–21.

Blume, K., Ejrnæs, M., Nielsen, H.S., Würtz, A., 2009. Labor market transitions of immigrants with emphasis on marginalization and self-employment. Journal of Population Economics 22 (4), 881–908.

Bogt, T.t., Raaijmakers, Q., van Wel, F., 2005. Socialization and development of the work ethic among adolescents and young adults. Journal of Vocational Behavior 66 (3), 420–437.

Boschma, R.A., Fritsch, M., 2009. Creative class and regional growth: empirical evidence from seven European countries. Economic Geography 85 (4), 391–423.

Calmfors, L., Sánchez Gassen, N. (Eds.), 2019. Integrating Immigrants into the Nordic Labor Markets. Nordic Council of Ministers, Copenhagen.

Cameron, L., Erkal, N., Gangadharan, L., Zhang, M., 2015. Cultural integration: experimental evidence of convergence in immigrants' preferences. Journal of Economic Behavior & Organization 111 (March), 38–58.

Carillo, M.R., Lombardo, V., Venittelli, T., 2021. Identity and labor market outcomes of immigrants. GLO discussion paper 749, Global Labor Organization, Essen.

Carlsson, M., Eriksson, S. and Rooth, D.-O., 2017. Job search methods and wages: Are immigrants and natives different? Manchester School 86 (2), 219–247.

Center for Systemic Peace (2022). The Polity project. Database. https://www.systemicpeace.org/polityproject.html.

Corneo, G., Jeanne, O., 2009. A theory of tolerance. Journal of Public Economics 93 (5–6), 691–702.

Das, J., DiRienzo, C., Tiemann, T., 2008. A global tolerance index. Competitiveness Review 18 (3), 192–205.

Delander, L., Hammarstedt, M., Månsson, J., Nyberg, E., 2005. Integration of immigrants: the role of language proficiency and experience. Evaluation Review 29 (1). 24–41.

De Paola, M., Brunello, G, 2016. Education as a tool for the economic integration of migrants. Working paper available at https://www.iza.org/publications/dp/9836/education-as-a-tool-for-the-economic-integration-of-migrants.

Dinesen, P.T., Sønderskov, K.M., 2018. Cultural persistence or experiential adaptation? A review of studies using immigrants to examine the roots of social trust. In: Uslaner, E.M. (Ed.), The Oxford Handbook of Social and Political Trust. Oxford University Press, Oxford, pp. 205–230.

Dohmen, T., Falk, A., Huffman, D., Sunde, U., 2012. The intergenerational transmission of risk and trust attitudes. Review of Economic Studies 79 (2), 645–677.

de Jong, E., 2021. Economic Ideas, Policy, and National Culture: A Comparison of Three Market Economies. Palgrave, London.

Dunn, K.M., 2005. A paradigm of transnationalism for migration studies. New Zealand Population Review 31 (2), 15–31.

Eriksson, K., Simpson, B., Vartanova, I., 2021. The power of tolerance vs. unselfishness as a cultural determinant of cooperation. Frontiers in Psychology 12, 678237.

Ericsson, S., 2020. Cultural norms and neighborhood exposure: impacts on the gender gap in math. Working paper available at https://swopec.hhs.se/lunewp/abs/lunewp2020_006.htm.

Esses, V.M., 2021. Prejudice and discrimination toward immigrants. Annual Review of Psychology 72 (1), 503–531.

Eurostat, 2016. First and second-generation immigrants – statistics on main characteristics. Online data available at https://ec.europa.eu/eurostat/statistics-explained/index.php?title=First_and_second-generation_immigrants_-_statistics_on_main_characteristics#General_overview.

Eurostat, 2021. Migrant integration statistics – labor market indicators. Online data available at https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Migrant_integration_statistics_%E2%80%93_labour_market_indicators.

Fasani, F., Frattini, T., Minale, L., 2022. (The struggle for) refugee integration into the labor market: evidence from Europe. Journal of Economic Geography 22 (2), 351–393.

Fernández, R., 2011. Does culture matter? In: Benhabib, J., Bisin, A., Jackson, M.O. (Eds.), Handbook of Social Economics. Elsevier, Amsterdam, pp. 481–510.

Fernández, R., Fogli, A., 2006. Fertility: the role of culture and family experience. Journal of the European Economic Association 4 (2–3), 552–561.

Fernández, R., Fogli, A., 2009. Culture: an empirical investigation of beliefs, work, and fertility. American Economic Journal: Macroeconomics 1 (1), 146–177.

Fernández, R., Fogli, A., Olivetti, C., 2004. Mothers and sons: Preference formation and female labor force dynamics. Quarterly Journal of Economics 119 (4), 1249–1299.

Ferwerda, J., Finseraas, H., Bergh, J., 2020. Voting rights and immigrant incorporation: evidence from Norway. British Journal of Political Science 50 (2), 713–730.

Florida, R., Mellander, C., Stolarick, K., 2008. Inside the black box of regional development – human capital, the creative class and tolerance. Journal of Economic Geography 8 (5), 615–649.

Forst, R., 2012. Toleration in Conflict: Past and Present. Cambridge University Press, Cambridge, UK.

Gathmann, C., Keller, N., 2018. Access to citizenship and the economic assimilation of immigrants. Economic Journal 128 (616), 3141–3181.

Grajzl, P., Eastwood, J., Dimitrova-Grajzl, V., 2018. Should immigrants culturally assimilate or preserve their own culture? Host-society natives' beliefs and the longevity of national identity. Social Science Research, 75 (November), 96–116.

Grønhøj, A., Thøgersen, J., 2009. Like father, like son? Intergenerational transmission of values, attitudes, and behaviours in the environmental domain. Journal of Environmental Psychology 29 (4), 414–421.

Guiso, L., Sapienza, P., Zingales, L., 2006. Does culture affect economic outcomes? Journal of Economic Perspectives 20 (2), 23–48.

Hainmueller, J., Hangartner, D., Pietrantuono, G., 2015. Naturalization fosters the long-term political integration of immigrants. Proceedings of the National Academy of Sciences of the United States of America 112 (41), 12651–12656.

Hainmueller, J., Hangartner, D., Ward, D., 2019. The effect of citizenship on the long-term earnings of marginalized immigrants: quasi-experimental evidence from Switzerland. Science Advances 5 (12), eaay1610.

Hammarstedt, M., 2006. The predicted earnings differential and immigrant self-employment in Sweden. Applied Economics 38 (6), 619–630.

Hammarstedt, M., Miao, C., 2020. Self-employed immigrants and their employees: evidence from Swedish employer-employee data. Review of Economics of the Household 18 (1), 35–68.

Hartog, J., Zorlu, A., 2009. How important is homeland education for refugees' economic position in the Netherlands? Journal of Population Economics 22 (1), 219–246.

Helliwell, J.F., Wang, S., Xu, J., 2016. How durable are social norms? Immigrant trust and generosity in 132 countries. Social Indicators Research 128 (1), 201–219.

Hjerm, M., 2004. Immigrant entrepreneurship in the Swedish welfare state. Sociology 38 (4), 739–756.

Johansson, A., Berggren, N., Nilsson, T., 2022. Intolerance predicts climate skepticism. Energy Economics 105 (January), 105719.

Kahn, L.M., 2007. The impact of employment protection mandates on demographic temporary employment patterns: international microeconomic evidence. Economic Journal 117 (521), F333–F356.

Kling, J.R., Liebman, J.B., Katz, L.F., 2007. Experimental analysis of neighborhood effects. Econometrica 75 (1), 83–119.

Koopmans, R., 2016. Does assimilation work? Sociocultural determinants of labor market participation of European Muslims. Journal of Ethnic and Migration Studies 42 (2), 197–216.

Lemmer, G., Wagner, U., 2015. Can we really reduce ethnic prejudice outside the lab? A meta-analysis of direct and indirect contact interventions. European Journal of Social Psychology 45 (2), 152–168.

Lens, D., 2022. Does self-employment contribute to immigrants' economic integration? Examining patterns of self-employment exit in Belgium. International Migration Review forthcoming.

Ljunge, M., 2014. Trust issues: evidence on the intergenerational trust transmission among children of immigrants. Journal of Economic Behavior and Organization 106 (October), 175–196.

Lochmann, A., Rapoport, H., Speciale, B., 2019. The effect of language training on immigrants' economic integration: empirical evidence from France. European Economic Review 113 (April), 265–296.

Lundborg, P., 2013. Refugees' employment integration in Sweden: cultural distance and labor market performance. Review of International Economics 21 (2), 219–232.

Lundborg, P., Skedinger, P., 2016. Employer attitudes towards refugee immigrants: findings from a Swedish survey. International Labor Review 155 (2), 315–337.

McGranahan, D.A., Wojan, T.R., 2007. Recasting the creative class to examine growth processes in rural and urban counties. Regional Studies 41 (2), 197–216.

Nannestad, P., Svendsen, G.T., Dinesen, P.T., Sønderskov, K.M., 2014. Do institutions or culture determine the level of social trust? The natural experiment of migration from non-western to western countries. Journal of Ethnic and Migration Studies 40 (4), 544–565.

Nesseler, C., Gomez-Gonzalez, C., Dietl, H., 2019. What's in a name? Measuring access to social activities with a field experiment. Palgrave Communications 5, 160.

Neuman, E., 2018. Source country culture and labor market assimilation of immigrant women in Sweden: evidence from longitudinal data. Review of Economics of the Household 16 (3), 585–627.

Neumark, D., 2018. Experimental research on labor market discrimination. Journal of Economic Literature 56 (3), 799–866.

Ottaviano, G.I.P., Peri, G., 2006. The economic value of cultural diversity: evidence from U.S. cities. Journal of Economic Geography 6, 9–44.

Penninx R., Garcés-Mascareñas, B., 2016. The concept of integration as an analytical tool and as a policy concept. In: Garcés-Mascareñas B., Penninx R. (Eds.), Integration Processes and Policies in Europe. Springer, Cham, pp. 11–30.

Schilling, P., Stillman, S., 2021. The impact of natives' attitudes towards immigrants on their integration in the host country. Working paper available at https://www.iza.org/publications/dp/14728/the-impact-of-natives-attitudes-towards-immigrants-on-their-integration-in-the-host-country.

Settle, J.E., Dawes, C.T., Fowler, J.H., 2009. The heritability of partisan attachment. Political Research Quarterly 62 (3), 601–613.

Skedinger, P., 2010. Employment Protection Legislation: Evolution, Effects, Winners and Losers. Edward Elgar, Cheltenham.

Slotwinski, M., Stutzer, A., Gorinas, C., 2017. Democratic involvement and immigrants' compliance with the law. Working paper available at http://ftp.iza.org/dp10550.pdf.

Slotwinski, M., Stutzer, A., Uhlig, R., 2019. Are asylum seekers more likely to work with more inclusive labor market access regulations? Swiss Journal of Economics and Statistics 155 (1), 1–15.

Spartacus, 2021. The gay travel index. Report. https://spartacus.gayguide.travel/gaytravelindex.pdf

Storr, V.H., Choi, G.S., 2020. Growing up in the market: the character traits that markets reward and punish. In: von Hagen, J., Welker, M., Witte, J., Pickard, S. (Eds.), The Impact of Markets on Character Formation, Ethical Education, and the Communication of Values in Late Modern Pluralistic Societies. Evangelische Verlagsanstalt GmbH, Leipzig, pp. 51–72.

UNHCR, 2016. Refugees/migrants emergency response – Mediterranean. Online statistics. Available at http://data.unhcr.org/mediterranean/regional.php.

Von Bergen, C.W., Bandow, D., 2009. Supporting genuine tolerance in organizations. In: Oglesby, R.A., Adams, M.G. (Eds.), Business Research Yearbook: Global Business Perspectives. International Graphics, Beltsville, MD, pp. 586–593.

Vural-Batik, M., 2020. The effectiveness of the dealing with homophobia psycho-education program on psychological counselor candidates. Higher Education Studies 10 (3), 1–15.

World Bank (2022). Worldwide governance indicators. Database. http://info.worldbank.org/governance/wgi/.

Tables and figures

Table 1

Descriptive statistics

	Obs.	Mean	Std. dev.	Min	Max
Individual variables					
Integration	8,502	0.04	1.23	-3.04	3.77
Economic integration	9,405	0.04	1.13	-1.36	3.81
Civic integration	12,819	0	1.07	-1.71	1.42
Cultural integration	13,696	0.75	0.24	0	1
Income (decile)	10,319	5.28	2.83	1	10
Self-employed	12,719	0.11	0.31	0	1
University degree	14,338	0.10	0.30	0	1
Voted (in the last national election)	12,819	0.74	0.44	0	1
Civic participation	14,338	0.33	0.47	0	1.00
Language	14,338	0.82	0.39	0	1.00
Tolerance (towards gays and lesbians)	13,696	3.76	1.24	1	5.00
Age	14,286	44.73	18.15	14	102.00
Age squared (/100)	14,286	23.30	17.37	1.96	104.04
Female	14,331	0.54	0.50	0	1
Married	13,908	0.47	0.50	0	1
Never married	13,908	0.33	0.47	0	1
Religious	14,194	4.49	3.09	0	10
Muslim	14,338	0.03	0.18	0	1
Social trust	14,271	4.96	2.45	0	10
Important to be free	13,963	4.86	1.10	1	6
Important with traditions	13,958	4.18	1.43	1	6
Male preference for jobs	8,636	3.57	1.25	1	5
Member of a group discriminated against	14,132	0.10	0.30	0	1
University degree, father	14,338	0.19	0.39	0	1
University degree, mother	14,338	0.16	0.36	0	1
Father working when respondent was 14	14,338	0.84	0.37	0	1
Mother working when respondent was 14	14,338	0.61	0.49	0	1
Country-of-origin variables					
Tolerance	14,338	0.49	0.13	0.27	0.85
Share finding homosexuality justified (rated 6–10)	14,338	0.26	0.20	0	0.78
Share wanting to teach children tolerance	14,338	0.71	0.09	0.48	0.92
Log real GDP per capita	14,337	9.57	0.77	6.71	11.06
Democracy (Polity2)	14,018	7.72	3.77	-10	10
Rule of law	14,338	0.43	1.05	-1.45	1.99
Share religious	14,323	0.68	0.15	0.16	0.96
Individualism	12,536	0.57	0.19	0.12	0.91
Social trust	14,338	0.29	0.13	0.08	0.74
Share of Muslims	14,338	0.12	0.27	0.00	0.99

Female labor participation rate	14,337	0.42	0.09	0.11	0.81
Tolerance different religion	10,190	0.87	0.10	0.48	0.99
Tolerance unmarried couples	10,190	0.88	0.19	0.14	1
Non-discrimination GILRHO	13,964	1.24	1.07	0	5
Non-discrimination Gay Travel Index	14,092	-0.81	5.87	-13	9
Country-of-residence variable					
Tolerance	14,338	2.44	0.28	1.81	3.14
Tolerance (country of origin) x Tolerance (country of residence)	14,338	1.20	0.39	0.48	2.66

Table 2

Baseline results

Dependent variable →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	1.222***	0.641***	1.148***	0.268**
	(0.215)	(0.173)	(0.317)	(0.102)
Log real GDP per capita (country of origin)	-0.0210	-0.0766**	0.000585	-0.00329
	(0.0453)	(0.0306)	(0.0424)	(0.0141)
Age	0.0651***	0.0577***	0.0497***	0.00808***
	(0.00552)	(0.00381)	(0.00292)	(0.00166)
Age squared	-0.0714***	-0.0630***	-0.0434***	-0.00822***
	(0.00531)	(0.00383)	(0.00317)	(0.00154)
Female	-0.0292	-0.129***	-0.0134	0.0276***
	(0.0262)	(0.0240)	(0.0258)	(0.00356)
Constant	-1.657***	-0.618***	-1.811***	0.469***
	(0.374)	(0.221)	(0.319)	(0.0881)
Observations	8,482	9,385	12,770	13,641
R-squared	0.211	0.176	0.150	0.179

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.
*** p<0.01, ** p<0.05, * p<0.1
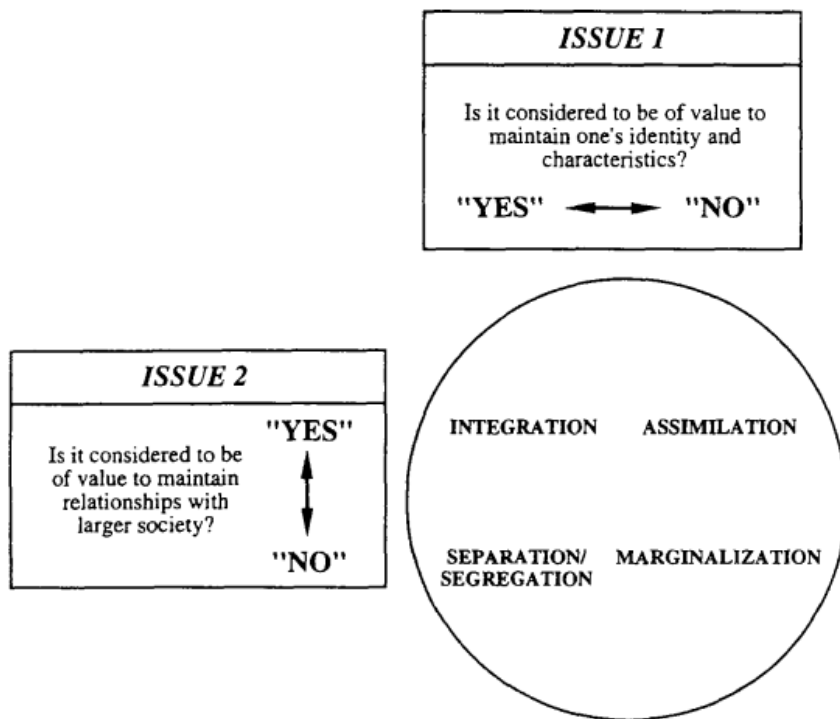
Fig. 1. *Four Acculturation Outcomes*

Source: Berry (1997, p. 10).
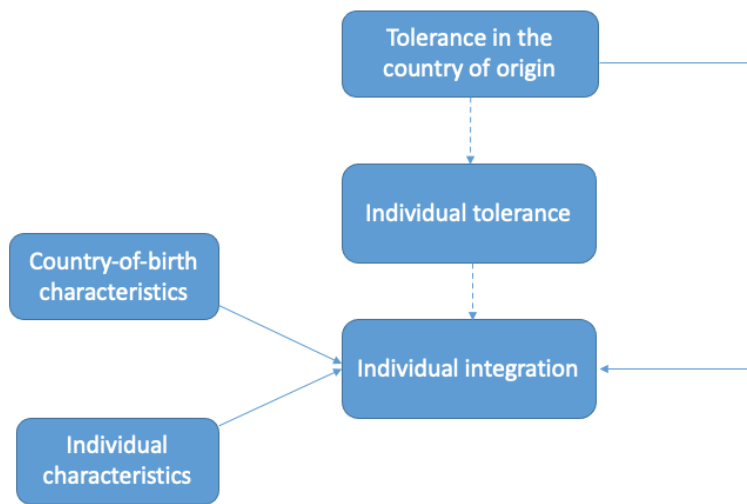
Fig. 2. *The Epidemiological Method*

Tables and figures for Online Appendix

Table A1
Sample per country of origin with country tolerance levels

Ancestral country	Tolerance	Count mothers	Count fathers
Albania	0.417	16	16
Algeria	0.284	143	187
Argentina	0.505	31	43
Armenia	0.281	14	30
Australia	0.564	18	17
Austria	0.575	213	203
Azerbaijan	0.311	24	25
Bangladesh	0.352	10	13
Belarus	0.391	207	221
Belgium	0.643	100	77
Bosnia and Herzegovina	0.363	195	207
Brazil	0.402	49	32
Bulgaria	0.366	67	82
Canada	0.657	32	26
Chile	0.457	18	22
China	0.295	19	26
Colombia	0.411	3	7
Croatia	0.433	122	141
Czechia	0.594	201	222
Denmark	0.728	68	89
Dominican Republic	0.450	6	1
Egypt	0.332	59	69
Estonia	0.415	20	21
Finland	0.607	253	155
France	0.620	317	284
Georgia	0.291	45	47
Germany	0.653	806	645
Greece	0.469	94	128
Hungary	0.395	203	235
Iceland	0.763	9	4
India	0.356	113	133
Indonesia	0.318	102	108
Iran	0.307	107	125
Ireland	0.521	142	165
Israel	0.571	3	6
Italy	0.574	576	760
Japan	0.465	10	3
Jordan	0.341	5	3
Korea	0.333	4	2
Kyrgyzstan	0.361	7	5

Latvia	0.410	41	53
Lithuania	0.335	37	42
Luxembourg	0.623	15	7
Macedonia	0.397	35	42
Malta	0.360	5	8
Mexico	0.427	4	4
Moldova	0.391	32	39
Netherlands	0.831	120	102
New Zealand	0.584	5	
Nigeria	0.337	11	16
Norway	0.570	83	53
Pakistan	0.269	71	74
Peru	0.417	5	6
Philippines	0.383	23	6
Poland	0.481	586	625
Portugal	0.428	148	159
Russian Federation	0.380	1,578	1,667
Saudi Arabia	0.288		1
Singapore	0.389	4	3
Slovakia	0.500	224	212
Slovenia	0.548	29	16
South Africa	0.430	14	18
Spain	0.620	164	188
Sweden	0.826	80	74
Switzerland	0.672	40	31
Taiwan	0.487	1	
Tanzania	0.422	1	
Turkey	0.326	503	571
Uganda	0.293	2	1
Ukraine	0.368	353	429
United Kingdom	0.620	274	274
United States	0.544	180	193
Uruguay	0.493	11	4
Venezuela	0.426	8	7
Vietnam	0.357	16	22

Notes: Tolerance is the main tolerance measure used in the empirical analysis: the average of Share finding homosexuality justifiable (country of origin) and Share wanting to teach children tolerance (country of origin).

Table A2
Baseline results with the seven individual indicators of integration

Dependent variable →	Income decile	University degree	Self-employment	Voted	Civic participation	Language	Tolerance
Tolerance (country of origin)	1.343***	0.163***	-0.0726	0.276***	0.471***	0.200	1.313***
	(0.408)	(0.0506)	(0.0530)	(0.0899)	(0.158)	(0.213)	(0.367)
Log real GDP per capita (country of origin)	-0.0592	-0.0229**	0.0145**	-0.0112	0.0133	-0.0275	0.0794
	(0.0721)	(0.00938)	(0.00697)	(0.0144)	(0.0187)	(0.0268)	(0.0550)
Age	0.141***	0.00811***	0.00722***	0.0229***	0.00642***	0.0120***	0.0161**
	(0.00985)	(0.000819)	(0.000906)	(0.00133)	(0.00164)	(0.00211)	(0.00641)
Age squared	-0.169***	-0.00791***	-0.00576***	-0.0170***	-0.00875***	-0.00917***	-0.0287***
	(0.00905)	(0.000937)	(0.00105)	(0.00130)	(0.00186)	(0.00187)	(0.00661)
Female	-0.466***	0.000141	-0.0602***	0.00824	-0.0146**	0.00325	0.213***
	(0.0566)	(0.00617)	(0.00607)	(0.0124)	(0.00608)	(0.00553)	(0.0205)
Constant	3.017***	0.0597	-0.159***	0.0612	-0.0992	0.657***	2.191***
	(0.572)	(0.0678)	(0.0464)	(0.113)	(0.135)	(0.174)	(0.413)
Observations	10,298	14,281	12,671	12,770	14,281	14,281	13,641
R-squared	0.200	0.133	0.101	0.169	0.133	0.204	0.244

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.
*** p<0.01, ** p<0.05, * p<0.1

Table A3

Results for individual tolerance for three indicators of country-of-origin tolerance

Dependent variable →	Individual tolerance	Individual tolerance	Individual tolerance
Tolerance (country of origin)	1.313***		
	(0.367)		
Tolerance different		-0.155	
religion (country of origin)		(0.483)	
Tolerance unmarried couples			-0.0720
(country of origin)			(0.255)
Log real GDP per capita	0.0794	0.275***	0.119***
(country of origin)	(0.055)	(0.0875)	(0.0344)
Age	0.0161**	0.0172**	0.0156**
	(0.00641)	(0.00803)	(0.00621)
Age squared	-0.0287***	-0.0282***	-0.0277***
	(0.00661)	(0.00827)	(0.00637)
Female	0.213***	0.201***	0.203***
	(0.0205)	(0.0219)	(0.0179)
Constant	2.191***	0.992*	2.320***
	(0.413)	(0.585)	(0.324)
Observations	13,641	10,420	15,111
R-squared	0.244	0.243	0.226

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Table A4a
Results for overall and economic integration with two new indicators of tolerance

Dependent variable →	Integration	Integration	Integration	Economic integration	Economic integration	Economic integration
Tolerance (country of origin)			1.368***			0.399*
			(0.275)			(0.200)
Tolerance different religion (country of origin)	0.240		-0.249	0.722*		0.222
	(0.492)		(0.418)	(0.363)		(0.400)
Tolerance unmarried couples (country of origin)		0.251	0.0383		0.437***	0.187
		(0.174)	(0.259)		(0.0709)	(0.175)
Log real GDP per capita (country of origin)	0.114	0.0912	-0.0515	-0.0648	-0.0746***	-0.131***
	(0.0683)	(0.0628)	(0.0716)	(0.0494)	(0.0237)	(0.0419)
Age	0.0651***	0.0646***	0.0648***	0.0564***	0.0556***	0.0567***
	(0.0077)	(0.00745)	(0.0082)	(0.00511)	(0.00512)	(0.00552)
Age squared	-0.0710***	-0.071***	-0.0711***	-0.0614***	-0.0608***	-0.0620***
	(0.00763)	(0.00739)	(0.00821)	(0.00519)	(0.00521)	(0.00558)
Female	-0.0588*	-0.0585*	-0.0661*	-0.156***	-0.156***	-0.162***
	(0.0309)	(0.0308)	(0.0330)	(0.0264)	(0.0264)	(0.0276)
Constant	-2.503***	-2.273***	-1.199**	-0.982***	-0.615***	-0.270
	(0.411)	(0.464)	(0.534)	(0.303)	(0.210)	(0.316)
Observations	6,392	6,392	5,972	7,102	7,102	6,648
R-squared	0.215	0.216	0.230	0.193	0.194	0.201

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects. *** p<0.01, ** p<0.05, * p<0.1

Table A4b
Results for civic and cultural integration with two new indicators of tolerance

Dependent variable →	Civic integration	Civic integration	Civic integration	Cultural integration	Cultural integration	Cultural integration
Tolerance (country of origin)			1.584***			0.290***
			(0.410)			(0.0799)
Tolerance different religion (country of origin)	-0.519		-0.232	0.188		-0.0499
	(0.338)		(0.332)	(0.162)		(0.117)
Tolerance unmarried couples (country of origin)		-0.287	-0.388**		0.107*	0.115
		(0.193)	(0.179)		(0.0599)	(0.0798)
Log real GDP per capita (country of origin)	0.192***	0.0191***	0.00465	0.0105	0.0102	-0.0234
	(0.0580)	(0.0625)	(0.0544)	(0.0161)	(0.0104)	(0.0174)
Age	0.0489***	0.0491***	0.0509***	0.0077***	0.00752***	0.00719***
	(0.00368)	(0.00373)	(0.00344)	(0.00205)	(0.00194)	(0.00199)
Age squared	-0.0429***	-0.043***	-0.0445***	-0.0075***	-0.0074***	-0.007***
	(0.00400)	(0.00414)	(0.00401)	(0.00184)	(0.00176)	(0.00178)
Female	-0.0379	-0.0378	-0.0390	0.0258***	0.0259***	0.0247***
	(0.0355)	(0.0356)	(0.0382)	(0.00359)	(0.00367)	(0.00418)
Constant	-2.562***	-2.760***	-1.526***	0.311***	0.388***	0.604***
	(0.440)	(0.494)	(0.381)	(0.0920)	(0.0599)	(0.102)
Observations	9,695	9,695	9,051	10,420	10,420	9,695
R-squared	0.164	0.164	0.180	0.169	0.171	0.184

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects. *** p<0.01, ** p<0.05, * p<0.1

Table A5

Results for integration when adding two institutional and five cultural variables from the country of origin

Dependent variables →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	0.722***	0.502**	0.438*	0.178**
	(0.256)	(0.203)	(0.249)	(0.0711)
Log real GDP per capita (country of origin)	-0.168***	-0.0826**	-0.172***	-0.0169
	(0.0499)	(0.0359)	(0.0439)	(0.0124)
Democracy (country of origin)	-0.0102	-0.0139**	0.00254	-0.00144
	(0.00786)	(0.00594)	(0.00651)	(0.00239)
Rule of law (country of origin)	0.104***	-0.0147	0.160***	0.0140
	(0.0385)	(0.0260)	(0.0300)	(0.00888)
Share of religious persons (country of origin)	-0.0722	-0.0167	-0.0651	0.0179
	(0.113)	(0.0723)	(0.130)	(0.0299)
Individualism (country of origin)	0.204	0.0936	0.267**	-0.0317
	(0.143)	(0.120)	(0.130)	(0.0286)
Social trust (country of origin)	0.395	0.103	0.490**	0.0275
	(0.245)	(0.154)	(0.215)	(0.0475)
Share of Muslims (country of origin)	-0.115	-0.125	0.0445	-0.0840**
	(0.117)	(0.0841)	(0.0653)	(0.0329)
Female labor participation rate (country of origin)	0.00229	0.00509**	-0.00287	0.00196**
	(0.00270)	(0.00200)	(0.00212)	(0.000748)
Age	0.0685***	0.0588***	0.0499***	0.00776***
	(0.00612)	(0.00401)	(0.00332)	(0.00163)
Age squared	-0.0743***	-0.0633***	-0.0440***	-0.00783***
	(0.00600)	(0.00380)	(0.00365)	(0.00151)
Female	-0.0410	-0.130***	-0.0249	0.0266***
	(0.0288)	(0.0281)	(0.0270)	(0.00402)
Constant	-0.278	-0.684**	-0.00308	0.581***
	(0.478)	(0.310)	(0.390)	(0.102)
Observations	7,476	8,212	11,133	11,930
R-squared	0.221	0.191	0.160	0.196

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. The regression includes region-of-residence by ESS-wave fixed effects.
*** p<0.01, ** p<0.05, * p<0.1

Table A6
Results for integration when adding two institutional and five cultural variables from the country of origin one by one

Dependent variable →	Integration	Integration	Integration	Integration	Integration	Integration	Integration
Tolerance (country of origin)	1.272***	0.820***	1.161***	1.361***	0.937***	1.284***	1.154***
	(0.218)	(0.240)	(0.233)	(0.214)	(0.305)	(0.207)	(0.213)
Log real GDP per capita	-0.0420	-0.123***	-0.0187	0.116***	-0.00428	-0.0201	-0.0206
(country of origin)	(0.0497)	(0.0409)	(0.0459)	(0.0401)	(0.0418)	(0.0461)	(0.0452)
Democracy (country of origin)	0.00117						
	(0.00992)						
Rule of law (country of origin)		0.149***					
		(0.0362)					
Share of religious persons			-0.110				
(country of origin)			(0.129)				
Individualism (country of				0.196			
origin)				(0.127)			
Social trust (country of origin)					0.423*		
					(0.253)		
Share of Muslims (country of						0.0576	
origin)						(0.107)	
Female labor participation rate							0.00250
(country of origin)							(0.00275)
Age	0.0654***	0.0654***	0.0652***	0.0676***	0.0651***	0.0653***	0.0651***
	(0.00576)	(0.00560)	(0.00554)	(0.00602)	(0.00544)	(0.00551)	(0.00555)
Age squared	-0.0716***	-0.0716***	-0.0715***	-0.0735***	-0.0713***	-0.0715***	-0.0714***
	(0.00553)	(0.00542)	(0.00532)	(0.00585)	(0.00525)	(0.00531)	(0.00535)
Female	-0.0329	-0.0293	-0.0290	-0.0386	-0.0300	-0.0293	-0.0289
	(0.0264)	(0.0262)	(0.0261)	(0.0285)	(0.0263)	(0.0262)	(0.0262)
Constant	-1.492***	-0.571	-1.578***	-0.941***	-1.802***	-1.710***	-1.732***
	(0.406)	(0.348)	(0.372)	(0.344)	(0.337)	(0.402)	(0.391)
Observations	8,294	8,482	8,473	7,519	8,482	8,482	8,482
R-squared	0.211	0.213	0.212	0.216	0.212	0.211	0.211

Tolerance signif. for:	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu
Added variable signif. for:	–	Ci	–	Ci	Ci	E, Ci	E, Cu

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. The regression includes region-of-residence by ESS-wave fixed effects. E = economic integration; Ci= civic integration; Cu = cultural integration. *** p<0.01, ** p<0.05, * p<0.1

Table A7
Results for integration when adding eight additional individual variables

Dependent variables →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	0.742***	0.340*	0.904***	0.0941
	(0.228)	(0.191)	(0.243)	(0.0640)
Log real GDP per capita (country of origin)	-0.0136	-0.0548	-0.0123	0.00342
	(0.0326)	(0.0362)	(0.0349)	(0.0111)
Married	0.0430***	0.0339***	0.0406***	0.00840***
	(0.00471)	(0.00515)	(0.00440)	(0.00122)
Never married	-0.0453***	-0.0369***	-0.0324***	-0.00809***
	(0.00426)	(0.00485)	(0.00423)	(0.00115)
Religious	0.000686	-0.102***	-0.00216	0.0248***
	(0.0274)	(0.0303)	(0.0291)	(0.00457)
Muslim	0.477***	0.585***	0.160***	-0.00732
	(0.0528)	(0.0404)	(0.0411)	(0.00795)
Social trust	0.213***	0.216***	0.127**	-0.00798
	(0.0567)	(0.0413)	(0.0485)	(0.00896)
Important to be free	-0.0200**	-0.00883	0.00200	-0.00870***
	(0.00818)	(0.00614)	(0.00490)	(0.000999)
Important with traditions	0.00567	0.0605	0.0815	-0.141**
	(0.124)	(0.110)	(0.0818)	(0.0649)
Male preference for jobs (disagree)	0.0896***	0.0523***	0.0553***	0.00434***
	(0.00780)	(0.00584)	(0.00669)	(0.00128)
Age	0.0797***	0.0510***	0.0379***	0.00157
	(0.0176)	(0.0144)	(0.0140)	(0.00236)
Age squared	-0.0388**	-0.0332***	0.00384	-0.00756***
	(0.0164)	(0.0109)	(0.0127)	(0.00259)
Female	0.213***	0.0990***	0.110***	0.0244***
	(0.0157)	(0.0158)	(0.0126)	(0.00335)
Constant	-2.814***	-1.331***	-2.392***	0.448***
	(0.314)	(0.345)	(0.288)	(0.0807)
Observations	4,645	5,075	7,091	7,568
R-squared	0.315	0.240	0.174	0.198

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. The regression includes region-of-residence by ESS-wave fixed effects.
*** p<0.01, ** p<0.05, * p<0.1

Table A8

Results for integration when adding eight additional individual variables one by one

Dependent variable →	Integration	Integration	Integration	Integration	Integration	Integration	Integration	
Tolerance (country of origin)	1.097***	1.093***	1.087***	1.128***	0.983***	1.247***	1.165***	1.286***
	(0.240)	(0.225)	(0.215)	(0.225)	(0.209)	(0.225)	(0.212)	(0.255)
Log real GDP per capita	-0.0202	-0.0191	-0.0094	-0.0215	-0.0157	-0.0163	-0.0132	-0.0389
(country of origin)	(0.0451)	(0.0452)	(0.0456)	(0.0451)	(0.0383)	(0.0458)	(0.0445)	(0.0405)
Married	0.344***							
	(0.0307)							
Never married		-0.104***						
		(0.0356)						
Religious			-0.0346***					
			(0.00589)					
Muslim				-0.284***				
				(0.0801)				
Social trust					0.0991***			
					(0.00728)			
Important to be free						0.0808***		
						(0.0139)		
Important with traditions							-0.0700***	
							(0.0108)	
Male preference for jobs								0.255***
(disagree)								(0.0162)
Age	0.0486***	0.0601***	0.0647***	0.0641***	0.0650***	0.0653***	0.0650***	0.0547***
	(0.00542)	(0.00526)	(0.00553)	(0.00539)	(0.00510)	(0.00543)	(0.00513)	(0.00395)
Age squared	-0.0566***	-0.0677***	-0.0705***	-0.0706***	-0.0713***	-0.0716***	-0.0702***	-0.0572***
	(0.00516)	(0.00495)	(0.00519)	(0.00520)	(0.00482)	(0.00528)	(0.00484)	(0.00387)
Female	-0.009	-0.0392	-0.00216	-0.0287	-0.0345	-0.0292	-0.0164	-0.0566*
	(0.0249)	(0.0248)	(0.0262)	(0.0263)	(0.0254)	(0.0260)	(0.0262)	(0.0285)
Constant	-1.368***	-1.420***	-1.566***	-1.572***	-2.091***	-2.108***	-1.437***	-2.347***
	(0.358)	(0.376)	(0.386)	(0.381)	(0.318)	(0.391)	(0.376)	(0.336)

Observations	8,232	8,232	8,431	8,482	8,457	8,292	8,286	5,048
R-squared	0.229	0.214	0.217	0.212	0.245	0.219	0.220	0.253
Tolerance signif. for:	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu	E, Ci, Cu
Added variable signif. for:	E, Ci, Cu	E, Cu	E, Cu	E, Cu	E, Ci, Cu	E, Ci, Cu	E, Cu	E, Ci, Cu

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. The regression includes region-of-residence by ESS-wave fixed effects. E = economic integration; Ci= civic integration; Cu = cultural integration. *** p<0.01, ** p<0.05, * p<0.1

Table A9
Results for integration when adding individual parental control variables

Dependent variables →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	0.722***	0.502**	0.438*	0.178**
	(0.256)	(0.203)	(0.249)	(0.0711)
Log real GDP per capita (country of origin)	-0.168***	-0.0826**	-0.172***	-0.0169
	(0.0499)	(0.0359)	(0.0439)	(0.0124)
Age	0.0685***	0.0588***	0.0499***	0.00776***
	(0.00612)	(0.00401)	(0.00332)	(0.00163)
Age squared	-0.0743***	-0.0633***	-0.0440***	-0.00783***
	(0.00600)	(0.00380)	(0.00365)	(0.00151)
Female	-0.0410	-0.130***	-0.0249	0.0266***
	(0.0288)	(0.0281)	(0.0270)	(0.00402)
University degree, father	0.204	0.0936	0.267**	-0.0317
	(0.143)	(0.120)	(0.130)	(0.0286)
University degree, mother	0.395	0.103	0.490**	0.0275
	(0.245)	(0.154)	(0.215)	(0.0475)
Father working when respondent was 14	-0.115	-0.125	0.0445	-0.0840**
	(0.117)	(0.0841)	(0.0653)	(0.0329)
Mother working when respondent was 14	0.00229	0.00509**	-0.00287	0.00196**
	(0.00270)	(0.00200)	(0.00212)	(0.000748)
Occupation 1	-0.341***	-0.182**	-0.214***	0.0183
	(0.107)	(0.0818)	(0.0540)	(0.0142)
Occupation 2	-0.105	-0.0784	-0.0513	-0.00958
	(0.124)	(0.121)	(0.0991)	(0.0178)
Occupation 3	-0.0994	-0.148	0.0176	0.0473***
	(0.101)	(0.102)	(0.0674)	(0.0151)
Occupation 4	-0.0102	0.0526	0.0897	0.00168
	(0.114)	(0.121)	(0.0824)	(0.0185)
Occupation 5	0.120	0.140	0.0825	-0.00610
	(0.105)	(0.0949)	(0.0864)	(0.0203)
Occupation 6	-0.256**	-0.168**	-0.135**	0.00786
	(0.109)	(0.0690)	(0.0670)	(0.0149)
Occupation 7	-0.225**	-0.193**	-0.176***	-0.0189
	(0.103)	(0.0736)	(0.0625)	(0.0211)
Occupation 8	-0.437***	-0.324***	-0.240***	-0.0265**
	(0.139)	(0.0903)	(0.0756)	(0.0128)
Occupation 9	0.0655	0.119	0.111	0.0243
	(0.157)	(0.136)	(0.127)	(0.0218)
Occupation 10	0.480**	0.223	0.143	0.0243
	(0.189)	(0.211)	(0.124)	(0.0249)
Occupation 11	0.422***	0.176	0.166	0.0406*
	(0.114)	(0.143)	(0.156)	(0.0219)
Occupation 12	0.342***	0.0626	0.250*	0.0478**
	(0.119)	(0.125)	(0.133)	(0.0216)
Occupation 13	0.808***	0.469**	0.271	0.0120
	(0.247)	(0.184)	(0.200)	(0.0274)
Occupation 14	0.160	-0.0346	0.108	0.0111

	(0.175)	(0.109)	(0.111)	(0.0249)
Occupation 15	0.313**	0.0232	0.119	0.0173
	(0.135)	(0.111)	(0.156)	(0.0178)
Occupation 16	0.106	-0.0607	0.0251	0.00851
	(0.121)	(0.109)	(0.118)	(0.0152)
Occupation 17	0.164*	0.120	0.0360	0.00191
	(0.0842)	(0.0822)	(0.0470)	(0.0130)
Occupation 18	0.385***	0.278***	0.155***	0.00781
	(0.0600)	(0.0636)	(0.0544)	(0.0134)
Occupation 19	0.408***	0.317***	0.162***	0.0134
	(0.0886)	(0.0676)	(0.0603)	(0.0168)
Occupation 20	0.407***	0.306***	0.158**	0.0111
	(0.0928)	(0.0933)	(0.0668)	(0.0151)
Occupation 21	0.208***	0.219***	0.00628	-0.00791
	(0.0777)	(0.0725)	(0.0616)	(0.0178)
Occupation 22	0.187**	0.111	0.0895	0.00652
	(0.0831)	(0.0771)	(0.0641)	(0.0171)
Occupation 23	0.209***	0.126**	0.106***	0.0114
	(0.0561)	(0.0565)	(0.0386)	(0.0149)
Occupation 24	-0.00221	0.0333	-0.0228	-0.00562
	(0.0538)	(0.0738)	(0.0479)	(0.0139)
Occupation 25	-0.135**	-0.134**	-0.0475	-0.0362**
	(0.0614)	(0.0671)	(0.0476)	(0.0166)
Occupation 26	0.0381	0.148	-0.0692	0.0246
	(0.0977)	(0.135)	(0.0754)	(0.0197)
Occupation 27	0.320***	0.288***	0.0871	0.0336**
	(0.115)	(0.101)	(0.0916)	(0.0168)
Occupation 28	0.268	0.229	-0.00428	0.0490**
	(0.236)	(0.164)	(0.140)	(0.0239)
Occupation 29	0.347***	0.266***	0.0973	0.0377*
	(0.0989)	(0.0902)	(0.0799)	(0.0223)
Occupation 30	0.299***	0.273***	0.0134	0.0379*
	(0.110)	(0.0910)	(0.0902)	(0.0216)
Occupation 31	0.258**	0.175	0.0376	0.0283
	(0.112)	(0.109)	(0.0850)	(0.0209)
Occupation 32	0.154	0.154	-0.0582	0.0397**
	(0.114)	(0.0991)	(0.0887)	(0.0179)
Occupation 33	-0.0251	-0.0479	-0.0875	0.00469
	(0.108)	(0.118)	(0.0721)	(0.0187)
Occupation 34	0.0247	0.0359	-0.139**	0.00343
	(0.0859)	(0.0917)	(0.0672)	(0.0247)
Constant	-2.221***	-1.413***	-2.027***	0.355***
	(0.481)	(0.308)	(0.346)	(0.0832)
Observations	8,482	9,385	12,770	13,641
R-squared	0.286	0.247	0.174	0.190

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. The regression includes region-of-residence by ESS-wave fixed effects.
*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table A10
Results when the sample is restricted to respondents with parents from European countries of origin

Dependent variable →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	1.001***	0.704***	0.945***	0.294**
	(0.230)	(0.177)	(0.331)	(0.124)
Log real GDP per capita (country of origin)	0.140***	-0.0856**	0.140***	0.00660
	(0.0517)	(0.0418)	(0.0490)	(0.0199)
Age	0.0640***	0.0562***	0.0481***	0.00687***
	(0.00581)	(0.00400)	(0.00341)	(0.00190)
Age squared	-0.0718***	-0.0631***	-0.0417***	-0.00731***
	(0.00561)	(0.00399)	(0.00352)	(0.00170)
Female	-0.0285	-0.108***	-0.0237	0.0265***
	(0.0288)	(0.0287)	(0.0295)	(0.00353)
Constant	-3.126***	-0.535	-3.064***	0.383**
	(0.445)	(0.339)	(0.396)	(0.152)
Observations	6,981	7,766	10,536	11,205
R-squared	0.233	0.189	0.170	0.200

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.
*** p<0.01, ** p<0.05, * p<0.1

Table A11

Results for integration when restricting the sample to those having two immigrant parents

Dependent variable →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	2.037***	1.534***	1.349**	0.302*
	(0.469)	(0.264)	(0.519)	(0.181)
Log real GDP per capita (country of origin)	-0.0446	-0.121***	-0.0417	-0.00620
	(0.0651)	(0.0414)	(0.0642)	(0.0257)
Age	0.0369***	0.0397***	0.0460***	0.0116***
	(0.0108)	(0.00712)	(0.00708)	(0.00266)
Age squared	-0.0418***	-0.0437***	-0.0377***	-0.00965***
	(0.0102)	(0.00695)	(0.00712)	(0.00232)
Female	0.00996	-0.0950**	0.0441	0.0188**
	(0.0494)	(0.0449)	(0.0369)	(0.00780)
Constant	-1.288***	-0.299	-1.582***	0.327**
	(0.439)	(0.344)	(0.469)	(0.163)
Observations	2,259	2,681	3,614	4,059
R-squared	0.319	0.280	0.220	0.257

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Table A12
Baseline results excluding Russia

Dependent variable →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	1.207***	0.765***	0.787***	0.292**
	(0.217)	(0.165)	(0.199)	(0.112)
Log real GDP per capita (country of origin)	-0.0283	-0.0954***	0.0179	-0.00597
	(0.0449)	(0.0311)	(0.0405)	(0.0149)
Age	0.0700***	0.0602***	0.0512***	0.00949***
	(0.00394)	(0.00346)	(0.00334)	(0.00148)
Age squared	-0.0764***	-0.0655***	-0.0458***	-0.00960***
	(0.00357)	(0.00361)	(0.00311)	(0.00135)
Female	-0.0346	-0.134***	-0.0385*	0.0287***
	(0.0287)	(0.0275)	(0.0207)	(0.00443)
Constant	-1.656***	-0.590**	-1.743***	0.452***
	(0.367)	(0.241)	(0.328)	(0.0921)
Observations	7,459	8,156	10,532	11,351
R-squared	0.218	0.185	0.146	0.195

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects. The baseline results including Russia are in Table 2.
*** p<0.01, ** p<0.05, * p<0.1.

Table A13

Results when interacting tolerance of immigrants with tolerance of natives

Dependent variable →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	2.899**	1.933**	0.434	-0.205
	(1.402)	(0.911)	(1.263)	(0.280)
Tolerance (country of origin) x Tolerance (country of residence)	-0.748	-0.513	0.184	0.189
	(0.553)	(0.368)	(0.455)	(0.144)
Tolerance (country of residence)	1.008***	0.234	0.630**	-0.0799
	(0.349)	(0.218)	(0.298)	(0.0894)
Log real GDP per capita (country of origin)	-0.0494	-0.0787**	-0.0178	-0.00290
	(0.0406)	(0.0302)	(0.0375)	(0.0135)
Age	0.0660***	0.0577***	0.0497***	0.00807***
	(0.00562)	(0.00375)	(0.00301)	(0.00163)
Age squared	-0.0712***	-0.0630***	-0.0426***	-0.00821***
	(0.00533)	(0.00383)	(0.00323)	(0.00153)
Female	-0.0261	-0.129***	-0.0119	0.0276***
	(0.0267)	(0.0239)	(0.0254)	(0.00355)
Constant	-3.825***	-1.181**	-3.062***	0.664***
	(0.745)	(0.585)	(0.703)	(0.235)
Observations	8,482	9,385	12,770	13,641
R-squared	0.220	0.176	0.165	0.180

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Table A14a
Results for overall and economic integration with two indicators of legal non-discrimination

Dependent variable →	Integration	Integration	Integration	Economic integration	Economic integration	Economic integration
Tolerance (country of origin)			1.035***			0.897***
			(0.281)			(0.205)
Non-discrimination Gay Travel	0.0187***		0.00185	0.00495		-0.00859
Index (country of origin)	(0.00544)		(0.00525)	(0.00636)		(0.00534)
Non-discrimination GILRHO		0.0881***	0.0358		0.0298	-0.00933
(country of origin)		(0.0205)	(0.0232)		(0.0227)	(0.0253)
Log real GDP per capita	0.0847*	0.0879**	-0.0224	-0.0648	-0.0746***	-0.0807**
(country of origin)	(0.0433)	(0.0346)	(0.0441)	(0.0494)	(0.0237)	(0.0309)
Age	0.0655***	0.0629***	0.0657***	0.0564***	0.0556***	0.0580***
	(0.00547)	(0.00563)	(0.00570)	(0.00511)	(0.00512)	(0.00409)
Age squared	-0.0713***	-0.069***	-0.0720***	-0.0614***	-0.0608***	-0.0636***
	(0.00528)	(0.00549)	(0.00552)	(0.00519)	(0.00521)	(0.00405)
Female	-0.0347	-0.0310	-0.0369	-0.156***	-0.156***	-0.135***
	(0.0243)	(0.0236)	(0.0258)	(0.0264)	(0.0264)	(0.0240)
Constant	-2.078***	-2.160***	-1.612***	-0.982***	-0.615***	-0.692***
	(0.389)	(0.321)	(0.391)	(0.303)	(0.210)	(0.247)
Observations	9,064	9,297	8,252	7,102	7,102	9,129
R-squared	0.199	0.195	0.218	0.193	0.194	0.181

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects. *** p<0.01, ** p<0.05, * p<0.1

Table A14b
Results for civic and cultural integration with two indicators of legal non-discrimination

Dependent variable →	Civic integration	Civic integration	Civic integration	Cultural integration	Cultural integration	Cultural integration
Tolerance (country of origin)			0.462*			0.364***
			(0.276)			(0.132)
Non-discrimination Gay Travel	0.0216***		0.0146***	0.0029*		-0.000555
Index (country of residence)	(0.00460)		(0.00446)	(0.0016)		(0.00143)
Non-discrimination GILRHO		0.0951***	0.0560**		0.00481	-0.00940
(country of residence)		(0.0277)	(0.0220)		(0.00807)	(0.0100)
Log real GDP per capita	0.0624*	0.0068**	-0.0019	0.0199**	0.0202**	-0.0006
(country of origin)	(0.0294)	(0.0625)	(0.041)	(0.0087)	(0.0093)	(0.0014)
Age	0.0491***	0.0478***	0.0498***	0.0082***	0.00778***	0.00760***
	(0.00323)	(0.00325)	(0.00306)	(0.00162)	(0.00152)	(0.00163)
Age squared	-0.0430***	-0.042***	-0.0433***	-0.0083***	-0.0079***	-0.0077***
	(0.00337)	(0.0034)	(0.00331)	(0.00149)	(0.00140)	(0.00149)
Female	-0.0125	-0.0106	-0.0133	0.0275***	0.0273***	0.0261***
	(0.0252)	(0.0241)	(0.0269)	(0.00337)	(0.00321)	(0.00351)
Constant	-1.800***	-1.947***	-1.518***	0.376***	0.379***	0.461***
	(0.328)	(0.270)	(0.325)	(0.0777)	(0.0989)	(0.0873)
Observations	13,736	14,098	12,448	14,704	15,111	13,263
R-squared	0.147	0.144	0.158	0.168	0.161	0.183

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.
*** p<0.01, ** p<0.05, * p<0.1

Table A15

Discrimination as outcome variable

Dependent variable →	Being a member of a group that has been discriminated against
Tolerance (country of origin)	-0.224**
	(0.0922)
Log real GDP per capita (country of origin)	-0.0101
	(0.0148)
Age	0.000
	(0.000853)
Age squared	-0.00103
	(0.000810)
Female	-0.00406
	(0.00637)
Constant	0.327***
	(0.108)
Observations	14,078
R-squared	0.087

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. The regression includes region-of-residence by ESS-wave fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Table A16

Results with only female second-generation immigrants

Dependent variable →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	1.102***	0.660**	0.838**	0.277**
	(0.332)	(0.260)	(0.356)	(0.105)
Log real GDP per capita (country of origin)	-0.0127	-0.0769	0.0119	-0.00658
	(0.0542)	(0.0475)	(0.0516)	(0.0152)
Age	0.0627***	0.0537***	0.0542***	0.00848***
	(0.00728)	(0.00553)	(0.00383)	(0.00167)
Age squared	-0.0731***	-0.0629***	-0.0495***	-0.00876***
	(0.00687)	(0.00543)	(0.00399)	(0.00152)
Female	-	-	-	-
Constant	-1.552***	-0.563	-1.844***	0.519***
	(0.433)	(0.371)	(0.391)	(0.0986)
Observations	4,449	4,907	6,942	7,312
R-squared	0.266	0.234	0.166	0.205

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.

*** p<0.01, ** p<0.05, * p<0.1

Table A17

Results with only male second-generation immigrants

Dependent variable →	Integration	Economic integration	Civic integration	Cultural integration
Tolerance (country of origin)	1.574***	0.863***	1.549***	0.258**
	(0.271)	(0.273)	(0.335)	(0.101)
Log real GDP per capita (country of origin)	-0.0512	-0.120**	-0.00911	0.000350
	(0.0683)	(0.0509)	(0.0471)	(0.0143)
Age	0.0664***	0.0606***	0.0439***	0.00791***
	(0.00651)	(0.00427)	(0.00480)	(0.00190)
Age squared	-0.0685***	-0.0613***	-0.0355***	-0.00789***
	(0.00633)	(0.00445)	(0.00507)	(0.00186)
Female	-	-	-	-
Constant	-1.670***	-0.487	-1.836***	0.438***
	(0.563)	(0.371)	(0.353)	(0.0951)
Observations	4,033	4,478	5,828	6,329
R-squared	0.254	0.227	0.215	0.213

Notes: Robust standard errors in parentheses, which are clustered on the parent's birth country. All regressions include region-of-residence x ESS-wave fixed effects.
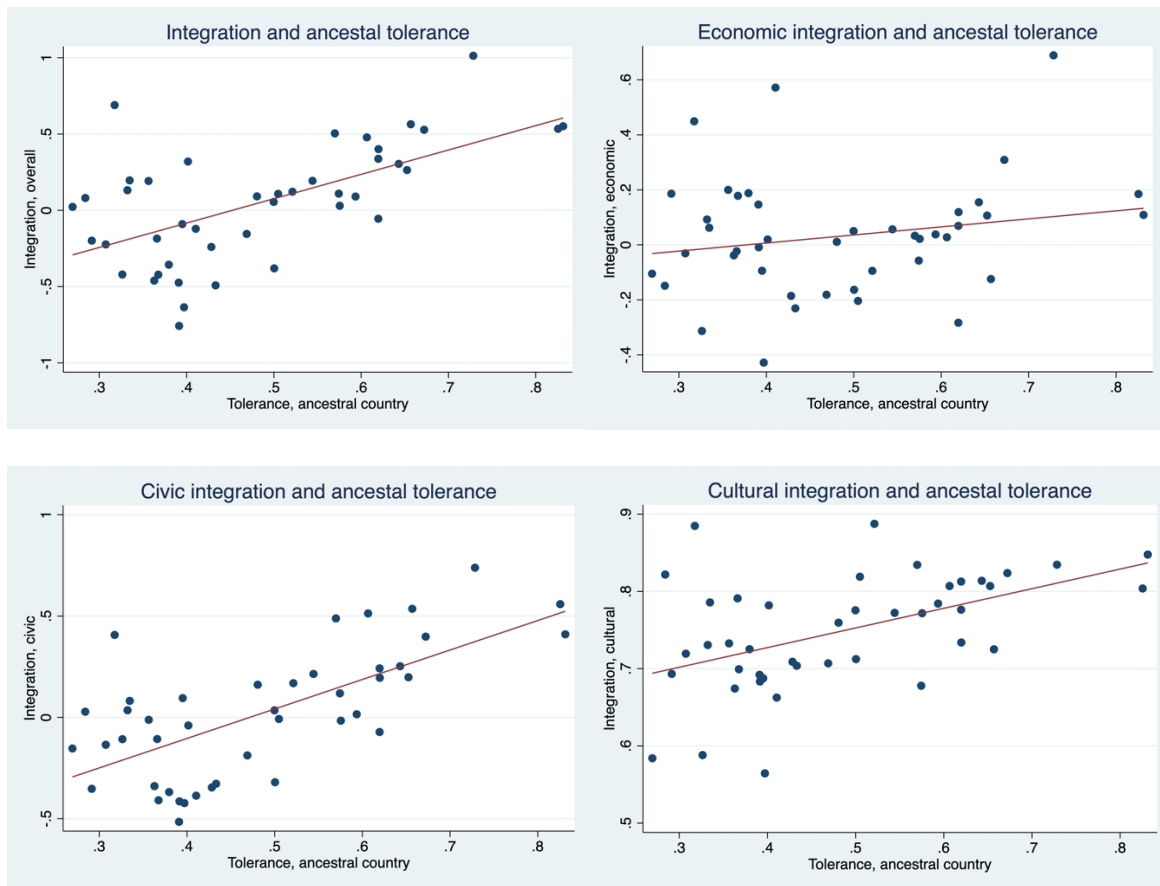*** p<0.01, ** p<0.05, * p<0.1

Fig. A1. *The Unconditional Relationships between Tolerance in the Country from which the Parents Emigrated and (Overall, Economic, Civic-Political and Cultural) Integration of Second-Generation Immigrants-*
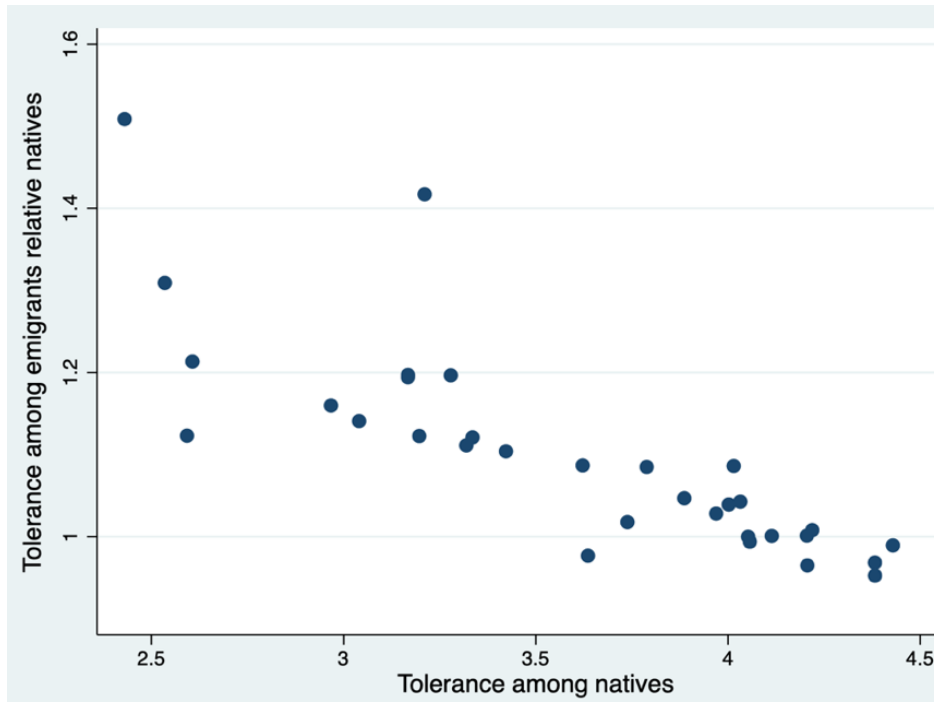
Fig. A2. *Ratio of the Average Tolerance towards Gays and Lesbians Among Emigrants from Various Countries and the Average Tolerance towards Gays and Lesbians Among Natives (Non-Emigrants) from the Same Countries*