

THE ROLE OF EDUCATION IN PROMOTING POSITIVE ATTITUDES TOWARDS MIGRATION AT TIMES OF STRESS

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Abstract

The paper examines the role of education in shaping individuals' attitudes towards migration in European countries using data from the 2012, 2014 and 2016 editions of the European Social Survey (rounds 6, 7 and 8). Results indicate that, despite the large influx of migrants experienced by many European countries in 2015, attitudes towards migration reported by 25-65 year olds did not vary significantly over the period considered. Education was strongly associated with individuals' attitudes towards migration although the strength of the association and how the association changed over time varied greatly across countries. On average a difference of one standard deviation in educational participation is associated with a difference of 20% of a standard deviation in reported opposition to migration. Around three quarters of the association between education and opposition to migration can be explained by the lower economic threat, cultural threat and prejudice that individuals with higher educational participation experience.

Résumé

Ce document examine l'influence de l'éducation sur le regard que portent les individus sur les migrations dans les pays d'Europe, en s'appuyant sur des données issues des éditions 6, 7 et 8 (2012, 2014 et 2016) de l'Enquête sociale européenne. Il ressort des résultats que, malgré l'afflux de migrants dans de nombreux pays en 2015, la position des 25-65 ans sur les migrations n'a pas varié de manière significative durant la période considérée en Europe. Il existe un lien important entre l'éducation et l'attitude des individus à l'égard des migrations, même si ce lien est plus ou moins fort et a évolué très différemment au fil des ans selon les pays. En moyenne, une différence de scolarisation d'un écart-type est associée à une variation de 20 % d'un écart-type de l'opposition déclarée aux migrations. Le lien entre les deux peut s'expliquer pour trois quarts environ par le fait que les individus ayant un niveau d'instruction élevé se sentent moins menacés économiquement et culturellement et ont moins de préjugés.

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Introduction

An estimated 4.9 million migrants arrived in European countries in 2015 (Eurostat, 2018^[1]) and while this figure was part of a long and steady upward trend in the share of foreign-born populations residing in European countries, 2015 figures represented a sudden and sizable increase over the 4 million of arrivals registered in 2014 (Eurostat, 2018^[1]). While migration flows can create difficulties for host communities, they also represent an opportunity for countries that face ageing native-born populations and the associated threat of labour and skills shortages (OECD, 2018^[2]).

The ability of societies to withstand the pressures on social cohesion posed by migration flows depends on the long-term integration of immigrants, which reflects the host community's capacity to facilitate the settlement of new arrivals as well as immigrants' own capacity to adapt and become part of both labour markets and social networks in countries of destinations (OECD, 2018^[2]). Education is often considered an important element for promoting long-term integration processes because it enables immigrants to acquire skills that will lead them to enter the labour market, and because education systems can help migrants understand the culture and the traditions of their country of destination.

However, education can also play an important role in shaping the attitudes native populations hold towards immigrants. Migration in fact requires both migrants and natives to undergo a process of acculturation, particularly when the size of the migrant group is large (Berry, 1997^[3]). Acculturation has been defined as "culture change that results from continuous, first-hand contact between two distinct cultural groups" (Redfield, Linton and Herskovits, 1936^[4]). The literature has identified three key mechanisms that drive the formation of native populations' attitudes towards migration: competition over social and economic resources, e.g. Blumer (1958^[5]), Bobo (1988^[6]) and Olzak (1992^[7]), threat to the cultural and national homogeneity of society e.g. Castles and Miller (2003^[8]) and Fetzer (2000^[9]), and prejudice (Pettigrew, 1998^[10]; Pettigrew and Meertens, 1995^[11]; Vala, Lopes and Lima, 2008^[12]; Verberk, Scheepers and Felling, 2002^[13]). Education can importantly shape individuals' perceptions of economic threat, cultural threat and prejudice and, through such effects, might shape individuals' attitudes towards migration. However, while the association between education and attitudes towards migration has been studied extensively and studies have indicated that such association varies across countries and contexts (Borgonovi, 2012^[14]; d'Hombres and Nunziata, 2016^[15]), it remains unknown what are the primary mechanisms shaping such association and to what extent such association depends on migration flows, the prevalence of foreign-born individuals in a country and economic factors. The period covered in this paper is characterised by European countries having just experienced a major economic recession (2008) which affected different countries differently, but also and crucially, by a sudden and major inflows of new arrivals (in 2015 such arrivals were mostly refugees and asylum seekers from war-torn nations).

In this paper we use data on countries that participated in the last three rounds of the European Social Survey (rounds 6, 7 and 8), a large and nationally representative survey capturing attitudes towards migration of individuals aged 15 and above residing in Europe. Round 6 was implemented in 2012, well before the large inflows of refugees begun arriving in Europe. Round 7 was implemented in 2014, just before the migration crisis hit European countries. Round 8 was implemented in 2016, right after the peak in arrivals. We include data from 2012 as well as 2014 and 2016 to identify if any changes that can be observed between 2014 and 2016 reflect prior trends. Our analysis focuses on the nineteen countries

that participated in rounds 6, 7 and 8 of the European Social Survey: Belgium, Czech Republic, Estonia, Finland, France, Germany, Great Britain, Hungary, Ireland, Israel, Lithuania, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden and Switzerland.

By comparing estimates on the association between education and attitudes towards migration in Europe in 2012, 2014 and 2016 we aim to provide evidence on the extent to which education can support the ability of European societies to hold positive attitudes towards migration at times of rapid changes in migrant populations.

Our contribution is fourfold: first we examine between-country differences in the evolution of attitudes towards migration between 2012 and 2016 in Europe. Second, we identify the extent to which the overall association between education and native populations' attitudes towards migration changed between 2014 and 2016, using 2012 as a benchmark to evaluate if any changes observed between 2014 and 2016 are in line with existing trends or represent important departures. Third, we examine between-country differences and changes over time in the relative contribution of the direct association between education and attitudes towards migration as well the indirect association through economic threat, cultural threat and prejudice. Understanding the channels that explain individuals' attitudes towards migration, particularly following large increases in migration flows is crucial if education systems are to be able to adequately address concerns native populations may feel because of new arrivals. Finally, we examine to what extent differences across countries in the direct and indirect associations between education and attitudes towards migration depend on the size of the migrant population in a country, recent changes in migrant populations and the unemployment rate, an important macroeconomic indicator.

Theory and hypotheses

At the individual level, empirical research has documented a strong relationship between educational attainment and attitudes towards migration: better educated individuals tend to display more openness towards migrants than those with fewer educational qualifications [see for example, Gesthuizen, van der Meer and Scheepers (2008^[16]), Quillian (1995^[17]), Scheepers, Gijsberts and Coenders (2002^[18]), Kunovich (2004^[19]), and Semyonov, Raijman and Gorodzeisky (2006^[20])]. However, few studies have examined cross-country variations in the relationship between education and attitudes towards migration. Quillian (1995^[17]), Kunovich (2004^[19]), Scheepers, Gijsberts and Coenders, (2002^[18]), Borgonovi, (2012^[14]), and d'Hombres and Nunziata (2016^[15]) represent important exceptions. Even less is known about why and how education matters, in other words what are the underlying social, psychological and cognitive processes that determine an association between education and attitudes towards migration and if the strength of the association between education and attitudes towards migration depends on the conditions and circumstances individuals experience.

Group threat theory provides a useful framework to identify factors that shape the development of attitudes towards migration, how such attitudes may differ depending on individuals' educational attainment, and external conditions such as the size of migrant communities and the economic situation of a country.

Group threat theory predicts that members of a group will exhibit feelings of solidarity towards individuals that they consider to be part of their group and negative attitudes towards those who do not. Negative attitudes arise from a perceived threat from out-of-group members to the interest of the group (Blumer, 1958^[5]). Group identification and perceived threat induced by out-of-group members are conceptually distinct but can be mutually reinforcing: strong feelings of identification with a group depend, to a great extent, to exposure to out-of-group individuals: "*we are what we are because they are not what we are*" (Tajfel, 1979^[21]; Tajfel and Turner, 1979^[22]). Group threat theory essentially maintains that because of the actual or anticipated negative consequences in-group members suffer (or believe they will suffer) because of out-group members, in-group members develop explicit preferences for "denying out-of-group members equality of treatment that out-of-group members may wish to have" (Allport, 1954^[23]).

Group threat theory predicts that, other things being equal, the more threatened natives feel by migrants, the more negative their attitudes towards migrants will be (Blumer, 1958^[5]; Case, Greeley and Fuchs, 1989^[24]; Bobo and Hutchings, 1996^[25]; Scheepers, Gijsberts and Coenders, 2002^[18]; Semyonov, Raijman and Yom-Tov, 2002^[26]; Semyonov et al., 2004^[27]; Sniderman, Hagendoorn and Prior, 2004^[28]; Semyonov, Raijman and Gorodzeisky, 2006^[20]).

Recent empirical findings show how the attitude towards foreigners in host countries depends on both economic and non-economic factors. Some authors highlight that natives feel threatened by the competition in the labour market that arises from immigration (Scheve and Slaughter, 2001^[29]; Mayda, 2006^[30]), while other authors stress the importance of non-economic factors, such as racial intolerance and prejudice (Dustmann and Preston, 2001^[31]), and how both kinds of factors play a significant role (Citrin et al., 1997^[32]; O'Rourke and Sinnott, 2006^[33]; Hainmueller and Hiscox, 2010^[34]). Dustmann and Preston (2007^[35]) suggest that welfare concerns play a more important role than labour market

concerns, and that racial and cultural prejudices relate primarily to immigrants from different ethnic backgrounds.

We consider two types of threat: economic and cultural.

Attitudes towards migration may be driven by the fear (or lack of fear) of labour-market competition from migrants, what is defined in the literature as economic threat. Although the evidence on the net effect of immigration on the wages of native populations is mixed, with some studies estimating a negative effect of immigration on the wages of competing workers (Borjas, 2003^[36]), and other studies failing to find adverse effects (D'Amuri, Ottaviano and Peri, 2010^[37]; Ottaviano, Peri and Wright, 2013^[38]), poorly educated individuals may perceive migrants as potentially substituting them in the labour market (since migrants are, on average, with lower skills than the average native in Europe) while better educated individuals may perceive migrants to bring complementarities to their work (d'Hombres and Nunziata, 2016^[15]). The literature indeed suggests that low-skilled native workers are more likely to support limits to migration flows or to hold negative attitudes towards migration (Scheve and Slaughter, 2001^[29]; Mayda, 2006^[30]; O'Rourke and Sinnott, 2006^[33]), but also that such effect can only be observed among low-skilled natives who are in the labour market.

Education also fosters individuals' information processing abilities and, as a result, better educated individuals may be better placed to interpret and evaluate migration phenomena, enabling them to consider the potential long-term positive economic effects that migration can bring to host countries in terms of taxes and social contributions which tend to match or even surpass, the amount of individual benefits that they receive (OECD, 2013^[39]). Therefore we hypothesise that individuals who feel economic threat will be more opposed to migration but also that better educated individuals will perceive lower economic threat and as a result will report more positive attitudes towards migration than those who attended school for less.

Cultural (symbolic) threat characterises the perceived threat native populations feel when they enter in contact with out-of-group members because out-of-group members hold distinct norms, moral and values from their own (Schnapper, 1994^[40]; Fetzer, 2000^[9]; Stephan, Diaz-Loving and Duran, 2000^[41]; Castles and Miller, 2003^[8]). Differences in values, norms and morals threaten the cultural identity of in-group members because individuals' sense of self and of belonging to a community depends on the articulation of a set of common attitudes and values to which all members of the community subscribe. Group threat theory predicts that when individuals feel that their culture (defined as the organised set of attitudes, values, goals and practices that inform and govern the beliefs and behaviours of a group of people or a society), is threatened by the potential integration of migrants, they will hold more negative attitudes towards migration.

Cultural threat depends both on the level of perceived distinctiveness between in-group and out-groups in attitudes, morals and values (with greater differences being associated with more negative attitudes), individuals' adherence to a specific and well-defined set of values, morals and attitudes (with greater adoption being associated with greater perceived threat) and the consideration of such values and morals as universally valid (with greater perceived universality being associated with greater perceived threat).

While highly educated individuals have benefited greatly from globalisation and the integration of economies and labour markets, individuals with low levels of education have been increasingly left behind (Autor, 2014^[42]). The progressive erosion of social status experienced by poorly educated individuals as a result of globalisation has led to high levels

of anomie among some but also to an increased adherence to the traditional attitudes, values and mores prevalent in their country, and by an increased feeling that such attitudes, values and mores are morally justified and should be followed by all because they are superior to the attitudes, values and mores prevalent in other societies (Sapolsky, 2017^[43]).

Therefore we hypothesise that individuals who feel cultural threat will be more opposed to migration but also that better educated individuals will perceive lower cultural threat and as a result will report more positive attitudes towards migration than those who attended school for less.

Because group threat theory predicts that attitudes towards migration depend on *perceived* threat, it predicts that, *other things being equal*, the greater the size of the foreign-born population in a country is and the greater the growth in such population over time is, the greater the perceived threat will be and, as a result, the more negative attitudes towards migrants among native populations will be (Blalock, 1967^[44]; Blumer, 1958^[5]; Bobo, 1988^[6]). However, this prediction holds under equality of conditions. Therefore observed differences in attitudes towards migration across countries with different levels of migrant populations (or changes in such population over time) may not be in line with group threat theory predictions on a negative association between foreign-born group size and attitudes. A larger group of foreign-born individuals is in fact likely to pose a lower *perceived threat* in countries and periods characterised by a more favourable economic situation and a healthy and dynamic labour market (Semyonov, Raijman and Gorodzeisky, 2008^[45]). Furthermore, intergroup contact theory predicts that as the relative size of the foreign-born population increases, members of the two groups will have more opportunities for direct contact and, with contact, *perceived* threat could be lower. While initially it was considered that intergroup contact would promote positive intergroup attitudes only under optimal conditions (such as the presence of common goals, intergroup co-operation, equal status and authority support) (Allport, 1954^[23]) proponents of intergroup contact theory have recently suggested that intergroup contact can promote positive intergroup attitudes even when the optimality of conditions situation is not satisfied (Pettigrew and Tropp, 2008^[46]; Stein, Post and Rinden, 2000^[47]).

Empirical studies fail to provide conclusive evidence on the association between the size of migrant populations and natives' attitudes towards migration: some studies indicate that larger foreign-born populations are associated with more negative attitudes (Semyonov, Raijman and Gorodzeisky, 2006^[20]; Scheepers, Gijsberts and Coenders, 2002^[18]), some fail to find an association (Coenders, Lubbers and Scheepers, 2005^[48]; Evans and Need, 2002^[49]; Strabac and Listhaug, 2008^[50]) while others find a positive association (Lubbers, 2006^[51]). We examine if individuals' attitudes towards migrants are associated with the percentage of the population who is foreign-born as well as changes in the migrant population. Furthermore, we identify if migrant stocks, migrant flows as well as the economic situation of a country, as indicated by unemployment rates, moderate the indirect association of education on attitudes towards migration through economic threat and cultural threat.

Group threat theory suggests that economic threat and cultural threat may be theoretically relevant mediators of the association between education and attitudes towards migration. We consider an additional mediator – prejudice – as well as the direct association between education and attitudes towards migration in our conceptual framework and subsequent empirical analysis.

Prejudice reflects general negative feelings individuals may hold against people who are out-of-group members. Prejudice constitutes a set of socially learned feelings and is usually

associated with racial or ethnic diversity (Allport, 1954^[23]; Kinder and Sears, 1981^[52]; Sears and Kinder, 1985^[53]; Katz, 1991^[54]). It is defined as a collection of negative attitudes “toward a socially defined group and toward any person perceived to be a member of that group” (Ashmore, 1970, p. 253^[55]) or as “antipathy based on faulty and inflexible generalization” (Allport, 1954, p. 7^[23]). Formal education and schooling, given the strong emphasis that they have on equipping individuals with information processing abilities, should reduce the incidence of prejudice. Contrary to economic or cultural threat, prejudice is not rooted into the economic or cultural institutions of a country but, rather in irrational generalisations. We hypothesise that individuals who have prejudicial feelings against migrants will be more opposed to migration and that better educated individuals will express lower levels of prejudice and therefore will report more positive attitudes towards migration than those who attended school for less.

Although we expect that most of the association between education and attitudes towards migration will be mediated by perceived economic threat, cultural threat and prejudice, education may also be directly associated with attitudes towards migration. The direct association between education and attitudes towards migration may reflect the intergenerational transmission of education and differences in the socialisation processes experienced by individuals with highly educated and poorly educated parents. Children internalise from their parents societal norms, attitudes and values (Johnson and Dawes, 2016^[56]; Putnam, 1993^[57]; Stolle and Hooghe, 2004^[58]; Uslaner, 2002^[59]) and discuss political and social issues with their parents and family members (Dostie-Goulet, 2009^[60]). There is evidence that parents influence young people’s interest in politics, political participation and political efficacy (Andolina et al., 2003^[61]; Dawson and Prewitt, 1969^[62]; Dennis, 1973^[63]; Dostie-Goulet, 2009^[60]; McIntosh, Hart and Youniss, 2007^[64]). Given past evidence on the positive association between education and the likelihood that individuals will hold favourable attitudes towards migration, better educated parents are more likely to socialise their children into also holding similarly favourable attitudes, an effect that could be magnified by the fact that better educated parents tend to be more engaged with their children and to discuss with them social and political issues while they grow and start to form their own attitudes and opinions (Borgonovi and Montt, 2012^[65]).

Data and methods

European Social Survey

The European Social Survey (ESS) is an academically driven cross-national survey that has been mapping attitudes and behavioural changes in Europe's social, political and moral climate since its establishment in 2001. The survey conducts face-to-face interviews every two years with newly selected, cross-sectional samples that are representative of all persons above the age of 14 and who are resident within private households in each country. The sample size requested to participating countries is at least 1 500 respondents, although for countries with small populations the number of respondents can be smaller. The first round was conducted in 2002 in 22 countries. Since then around 350 000 face-to-face interviews have been carried out and over 35 countries have participated in at least one ESS round.

The questionnaire consists of a main core section of questions that have been administered in every ESS round and are thus easily comparable over time. These questions were developed following the recommendations made by academic experts who were consulted by the Core Scientific Team during the early planning stages of the ESS. The core modules contain questions aimed at identifying individuals' attitudes towards the media, health and wellbeing, trust in institutions and governments, education and occupation, social capital and social trust, household circumstances, citizen involvement and democracy, social exclusion, political values and engagement, immigration and crime. In addition to questions on attitudes and dispositions, the ESS contains information on socio-demographic variables such as respondents' ethnic and immigrant background, household income, level of education, employment and occupational status of the respondent, his/ her parents and partner.

In addition to the 'core' modules that are administered in each round, multinational teams of researchers based in ESS countries were selected to contribute to the design of additional 'rotating questionnaires'. 'Rotating questionnaires' that have been administered so far include questions on citizen involvement, health and care, economic morality, family, work and wellbeing, timing of life, personal and social wellbeing, welfare attitudes, ageism, trust in the police and courts, democracy, immigration, social inequalities in health and attitudes to climate change and energy security. Some of these topics have been included in more than one ESS round.

Analyses are based on data from the last three rounds of the European Social Survey (ESS), rounds 6, 7 and 8. Face-to-face interviews were conducted with residents aged 15 or over in 2012 (ESS6), 2014 (ESS7) and 2016 (ESS8) using multistage probability sampling. The following 19 countries are part of our analysis: Belgium (BEL), Switzerland (CHE), Czech Republic (CZE), Germany (DEU), Spain (ESP), Estonia (EST), Finland (FIN), France (FRA), Great Britain (GBR), Hungary (HUN), Ireland (IRL), Israel (ISR), Lithuania (LTU), Netherlands (NLD), Norway (NOR), Poland (POL), Portugal (PRT), Slovenia (SVN) and Sweden (SWE).

Our focus is: 1) to identify between-country differences in the association between education and attitudes towards migration and 2) if the education-attitudes link changed as a result of the large inflow of new arrivals in European countries that occurred in 2015 and 2016. Therefore we include in our analysis only individuals who were born in the country in which they resided at the time of the ESS interview and who were aged 25 or over, and

who reported not being engaged in full time education in the 7 days prior to the interview. These restrictions lead to a final working sample of 85 917 individuals.

Variable description

Individual level variables

Our key outcome indicator, individuals' opposition to migration, is measured by three questions in ESS: 1) 'to what extent do you think [country] should allow people of the same race or ethnic group as most [country] people to come and live here?' 2) 'how about people of a different race or ethnic group from most [country]?' 3) 'how about people from the poorer countries in Europe?' Response options were 1 (many), 2 (some), 3 (a few), and 4 (none).

We report results on the extent to which individuals report being in favour of allowing many, some, a few or no migrants for each of the three categories of migrants identified in the European Social Survey (same race or ethnic group, different race or ethnic group, poorer countries in Europe). We also construct an indicator of overall opposition to migration which represents the sum of individual responses to each of the three questions on attitudes to migration and that is subsequently standardised to have a mean of 0 and a standard deviation of 1 across the pooled dataset (pooling countries and survey waves). Higher values indicate greater opposition to migration.

Our key explanatory factors are individuals' educational attainment, economic threat, cultural threat and general prejudice. Each indicator is represented by a single item measured on a 10-category scale. *Economic threat* is measured through responses to the question "would you say it is generally bad or good for [country]'s economy that people come to live here from other countries?". *Cultural threat* is measured through responses to the question "would you say that [country]'s cultural life is generally undermined or enriched by people coming to live here from other countries?". *General prejudice* is measured through responses to the question "is [country] made a worse or a better place to live by people coming to live here from other countries?". Educational attainment was measured through an indicator of the number of years of schooling that the respondent reported having attended.

All models control for age, gender, if the respondent has children, the respondent's subjective financial situation, the respondent's employment situation and if the respondent lives in a big city, in the suburbs or outskirts of a big city, in a town or a small city, in a country village, farm or in the countryside.

Country-level variables

At the country level we control for the size of the migrant community in each of the three years under analysis (2012, 2014 and 2016). We also control for two-year changes in migrant populations (change between 2012 and 2014 for 2014; and change between 2014 and 2016 for 2016). All data on migrant populations come from OECD migration statistics. Finally, we control for the unemployment rate in the year under consideration. Unemployment rate data come from the OECD employment database.

Estimation strategy

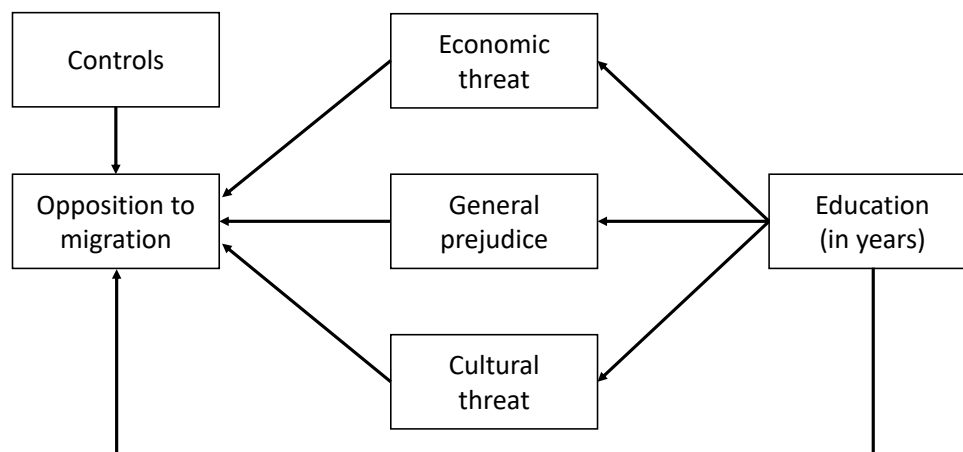
First we develop descriptive statistics on country-level average levels of opposition to migration in 2012, 2014 and 2016 and on the percentage of the population who reported

strong opposition to migration, of being strongly in favour of migration and who reported being neither strongly in favour nor strongly against migration. Secondly, we illustrate how the overall association between education and opposition to migration changed over time both overall and in each of the countries in our sample. Next, we estimate differences across countries and across time periods in the direct association between years of schooling and attitudes towards migration as well as the importance of indirect associations of education through economic threat, cultural threat and prejudice. Finally, we explore the extent to which such differences are systematically related to the size of migrant communities, changes in migrant communities over time and the unemployment rate.

We proceed as follows. In a first step we develop simple descriptive statistics on the mean levels of the opposition to migration composite index by country and year as well as the frequency distribution of the percentage of respondents in each response category for each of the three underlying questions to examine country-level differences and differences over time in opposition to migration.

In the second step of the analysis we use path modelling for each of the countries in our sample and for each time period to explore if relationships differ across different societies and year. Figure 1 illustrates the hypothesised pathways between education and attitudes towards migration, which shows both the direct relation between education and attitudes towards migration as well indirect relations that are mediated by economic threat, cultural threat and prejudice.

Figure 1. Theoretical mediation model of the association between education and opposition to migration

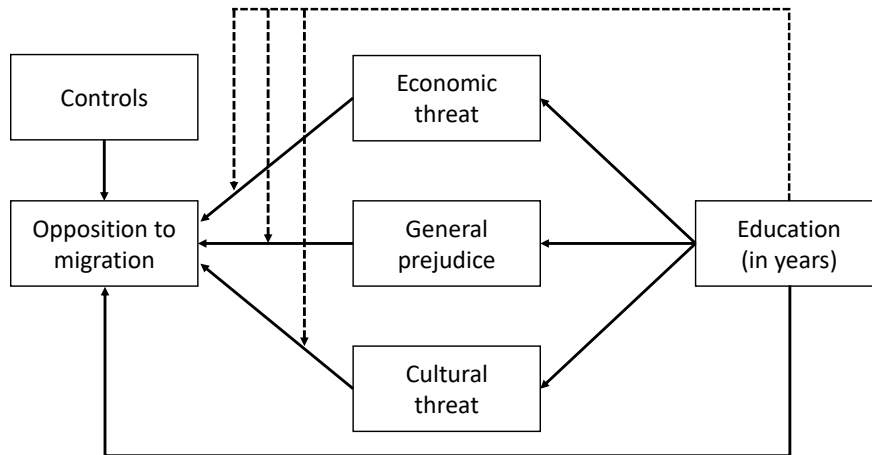


We use the Moderated Mediation Framework for assessing mediation and moderation (Preacher, Rucker and Hayes, 2007^[66]; Hayes, 2013^[67]).

Figure 2 illustrates the mediation-moderation model that we test to identify if education not only has a mediated association with attitudes towards migration through economic threat, cultural threat and prejudice but also moderates the direct association between economic threat and attitudes towards migration, cultural threat and attitudes towards migration, and

prejudice and attitudes towards migration. We performed the analysis country by country and for each time period.

Figure 2. Theoretical mediation-moderation model of the association between education and opposition to migration



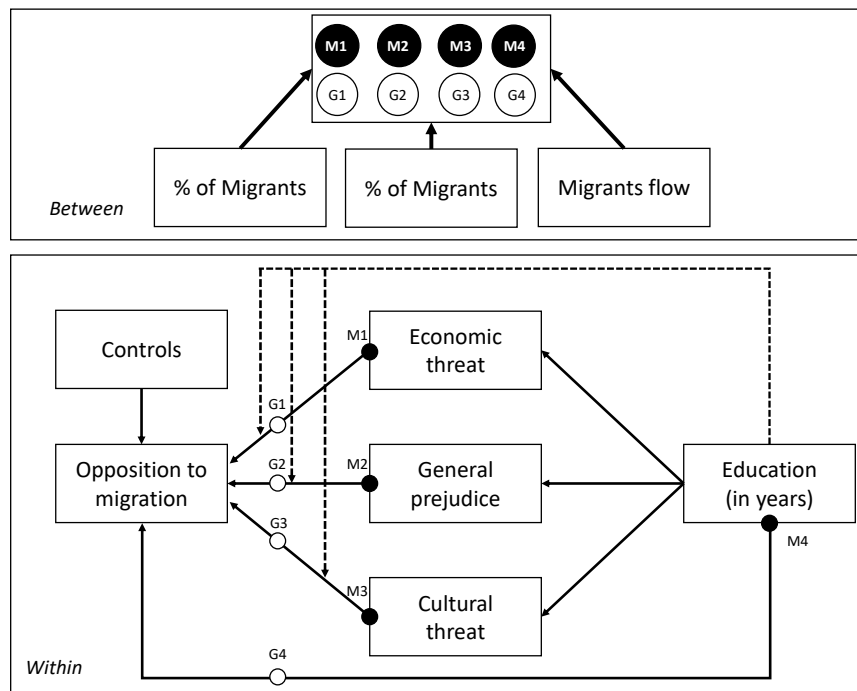
Since considerable differences across countries emerged, in the third and final step we explore cross-country differences as well as differences across the three time periods. Figure 3 illustrates the mediation-moderation model that we develop to identify the country-level moderation effects of size of migrant populations and unemployment rate.

The within part of the analysis described in Figure 3 captures relations at the individual level while the between part details relations at the country level. For example, the direct relation between individuals' education and opposition to migration at the within level shows the relation between respondents' educational attainment and their level of opposition to migration while the between part of the model describes the relation between country mean education and country mean opposition to migration.

In the modelling phase all individual and country-level variables (binary variables excluded) were standardised to have a mean of zero and standard deviation of one in the pooled dataset so that estimated coefficient can be interpreted in units of a standard deviation (SD). Although at a first glance it might appear that the multilevel framework for mediation-moderation analysis would be the most appropriate analytical strategy for our analysis (Preacher, Zyphur and Zhang, 2010^[68]; Preacher, Zhang and Zyphur, 2011^[69]; Preacher, Zhang and Zyphur, 2016^[70]), the limited number of groups in our data, namely 19, combined with the complexity of the underlying model led us to adopt a two-step approach. In a first step we estimated model parameters in each country. In the second step, country-level variables were correlated with estimated parameters. The two-step approach is recommended in all situations (like the one we face), in which there is a large number of observations per unit of analysis and therefore country-level parameters can be estimated with a high degree of precision (in our case this condition is met because we have a large number of respondents per country) (Donald and Lang, 2007^[71]; Bryan and Jenkins, 2015^[72]).

We treated our dependent variable as continuous. Because of the cross-sectional nature of ESS data and the modelling strategy that we use, estimates can be used to identify if patterns

Figure 3. Theoretical mediation-moderation model of the association between education and opposition to migration



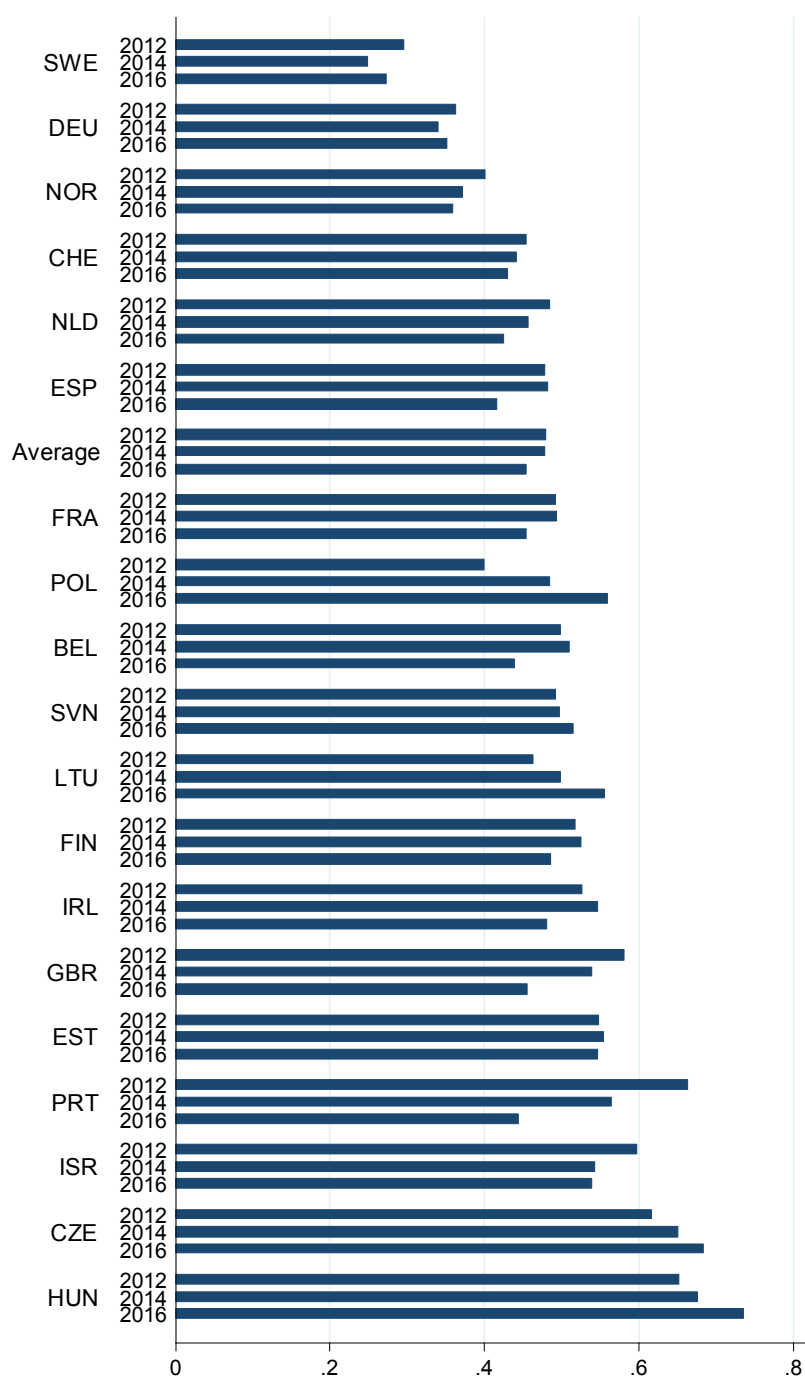
Results

Trends in individuals' opposition to migration in Europe

Figure 4 reports descriptive statistics on country specific average levels of opposition to migration using the composite index in 2012, 2014 and 2016. Higher mean values indicate more negative attitudes (stronger opposition to migration). Figure 4 suggests that, on average, individuals expressed lower opposition to migration in 2016 than in 2014 and 2012. On average in 2012 the average level of opposition to migration was 0.481, in 2014 it was 0.479 and in 2016 it was 0.455. Table 1 indicates that results differ across countries analysed: in 7 out of the 19 countries in our sample there was a decrease in average levels of opposition to migration between 2012 and 2014 and in 5 there was an increase. In 8 out of the 19 countries in our sample there was a decrease in average levels of opposition to migration between 2014 and 2016 and in 5 out of 19 there was an increase.

These results are not in line with our expectation of an increase in opposition to migration in European countries following the large inflow of arrivals that occurred in 2015. However, it is possible that the refugee crisis did not induce a generalised increase in opposition to migration, but, rather, an increased polarisation in attitudes towards migration. Such polarisation may effectively mean that while on average opposition decreased, such decrease corresponded to an increase in the share of individuals with very negative attitudes that was however more than compensated by an increase in the share of individuals with more positive attitudes. An increase in polarisation, if occurring within a context of sizable groups in the population who have negative attitudes towards migration, may result in a consensus opposing migration.

**Figure 4. Levels of opposition to migration in European countries, by country and year
(sorted by pooled country mean)**



Note: Countries are ordered in ascending order of the mean level of opposition to migration in the pooled dataset calculated over rounds 6, 7 and 8 (years 2012, 2014 and 2016).

Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 15 June 2018).

Table 1. Changes across time in levels of opposition to migration, by country

Country	Change between		Country	Change between	
	2012	2014		2012	2014
	2014	2016		2014	2016
BEL	→	↘	IRL	↗	↘
CHE	→	→	ISR	↘	→
CZE	↗	↗	LTU	↗	↗
DEU	↘	→	NLD	↘	↘
ESP	→	↘	NOR	↘	→
EST	→	→	POL	↗	↗
FIN	→	↘	PRT	↘	↘
FRA	→	↘	SVN	→	→
GBR	↘	↘	SWE	↘	↘
HUN	↗	↗	Average	↘	↘

Note: ↗ Statistically significant increase at $p > 0.05$ ↘ Statistically significant decrease at $p > 0.05$ → No statistically significant change at $p > 0.05$

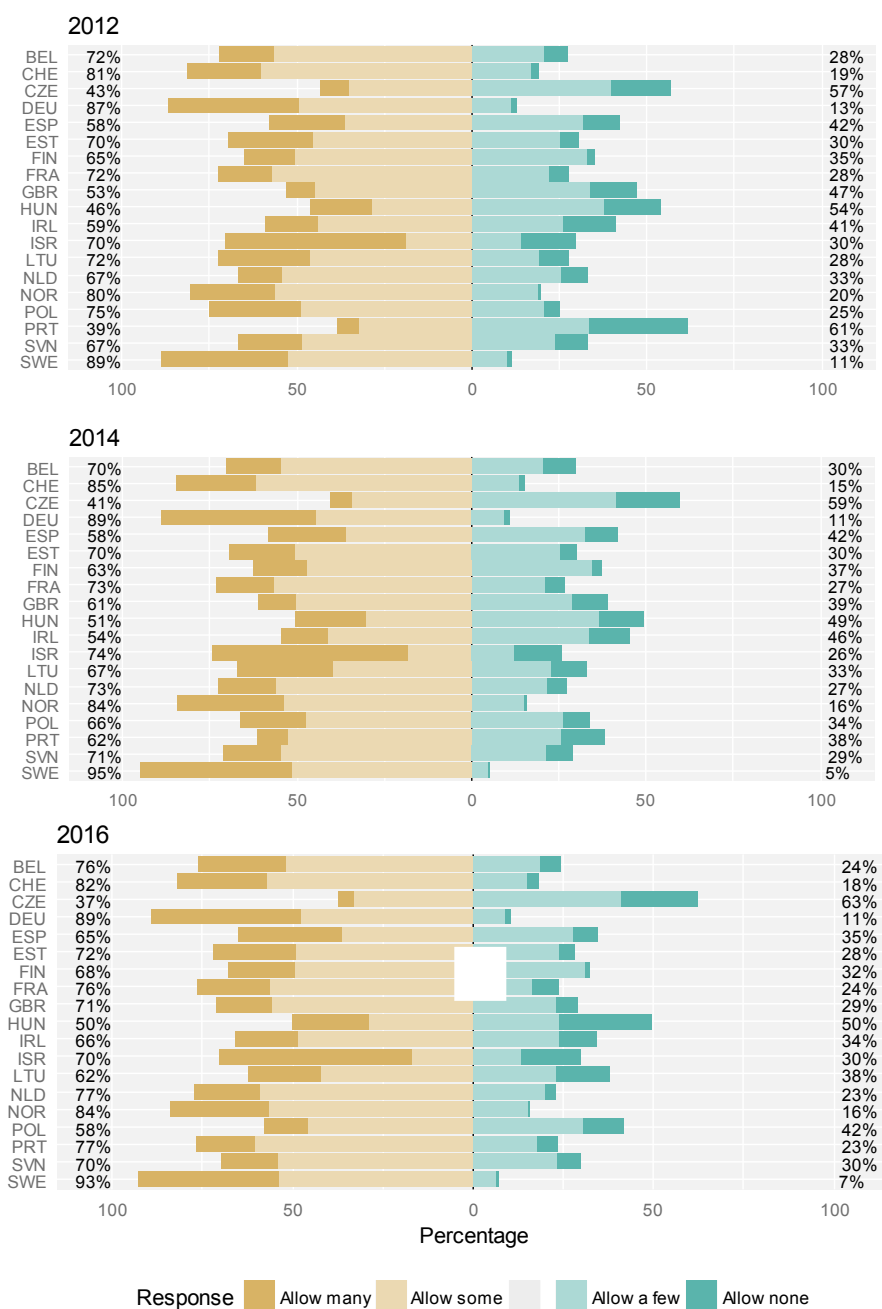
Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

Data presented in Figures 5, 6 and 7 indicate that this is not the case and that average levels of opposition to migration adequately reflect a general decline in opposition. For example, in 2012 on average across the countries in our sample 8% of individuals reported that they did not want any migrant from the same ethnic group as the majority to be allowed in the country. This figure was around 7% in both 2014 and 2016. By contrast 68% of individuals reported that they favoured allowing many or a few in 2012, 71% of them did so in 2014 and 73% did in 2016. Similarly in 2012 14% individuals reported that they favoured that no migrant from a different race or ethnic group as the majority settled in their country, 13% reported the same in 2014 and 14% in 2016. Support for allowing many or some migrants from a different race or ethnic background as the majority remained stable from 55% in 2012 to 56% in 2014 and 55% in 2016.

Unlike the average trend, results show that in certain countries opposition to migration grew. Mirroring results illustrated in Figure 4 based on the composite index, Figures 5, 6 and 7 indicate increasing levels of opposition in the Czech Republic. For example, the percentage of individuals who indicated that they would not allow any migrant as the same group as the majority increased from 17% in 2012 to 18% in 2014 and 21% in 2016. Similarly, the percentage of individuals who indicated that they would not allow any migrant from a different race or ethnic group from the majority increased from 24% in 2012 to 30% in 2014 and 37% in 2016. In Hungary, opposition also grew greatly over the period:

28% indicated that they would not allow any migrant from a different race or ethnic group from the majority in 2012, 33% reported so in 2014 and 47% reported the same in 2016. By contrast, in a country like Finland 7% of the population in 2012 reported that they would not allow any migrant from a different race or ethnic group from the majority, 8% did so in 2014 and 6% reported the same in 2016. In Portugal, 16% opposed allowing any migrant from a different race or ethnic background in 2012, while 9% in 2014 and 10% in 2016 reported the same.

Figure 5. Support for migration of individuals from the same race/ethnic group as the majority, by country and year

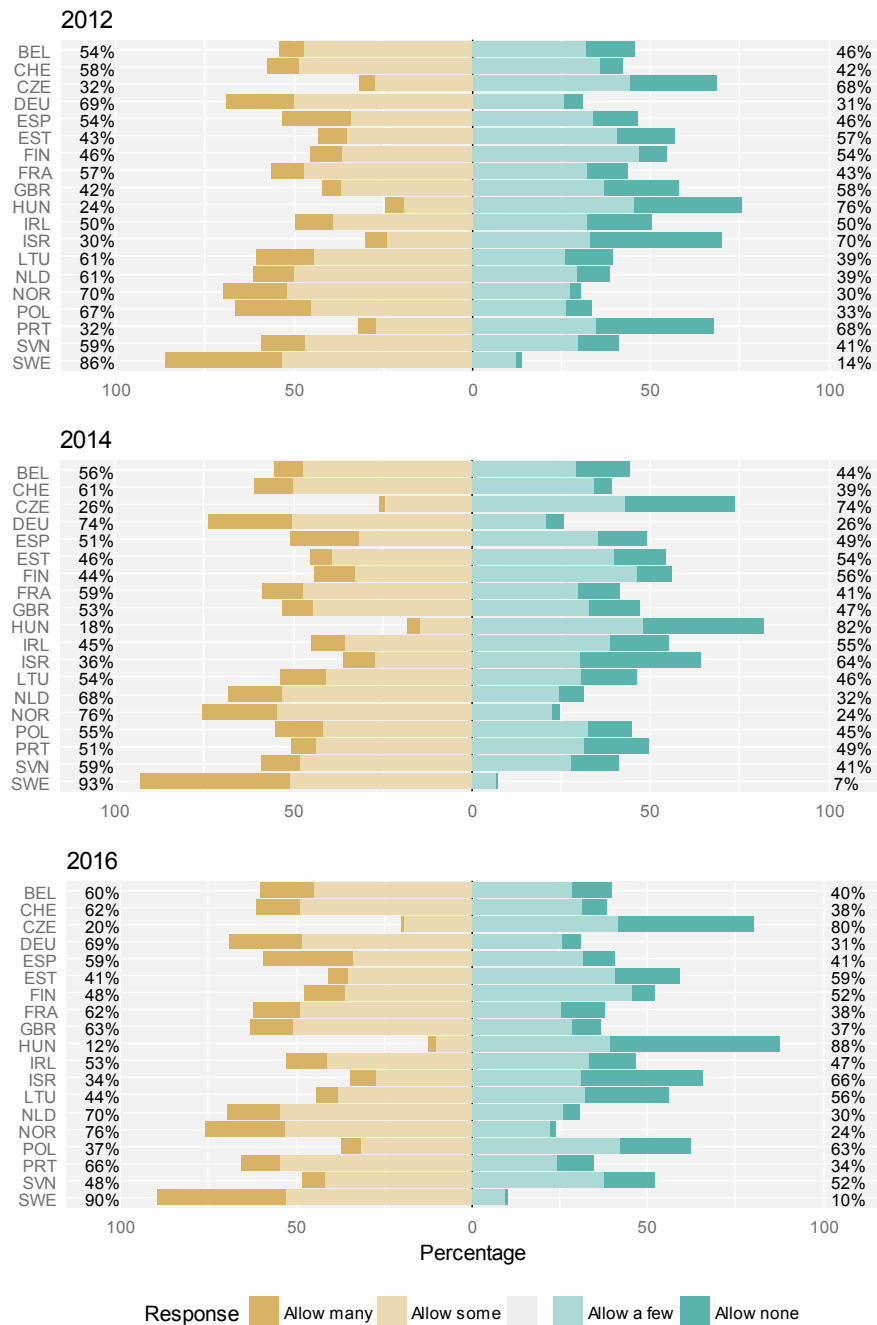


Notes: Countries are reported in alphabetical order.

The percentages reported in the left panel of the figure represent the sum of respondents who report “allow many” and “allow some”. The percentages reported in the right panel of the figure represent the sum of respondents who report “allow a few” and “allow none”.

Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

Figure 6. Support for migration of individuals from a different race/ethnic group as the majority, by country and year

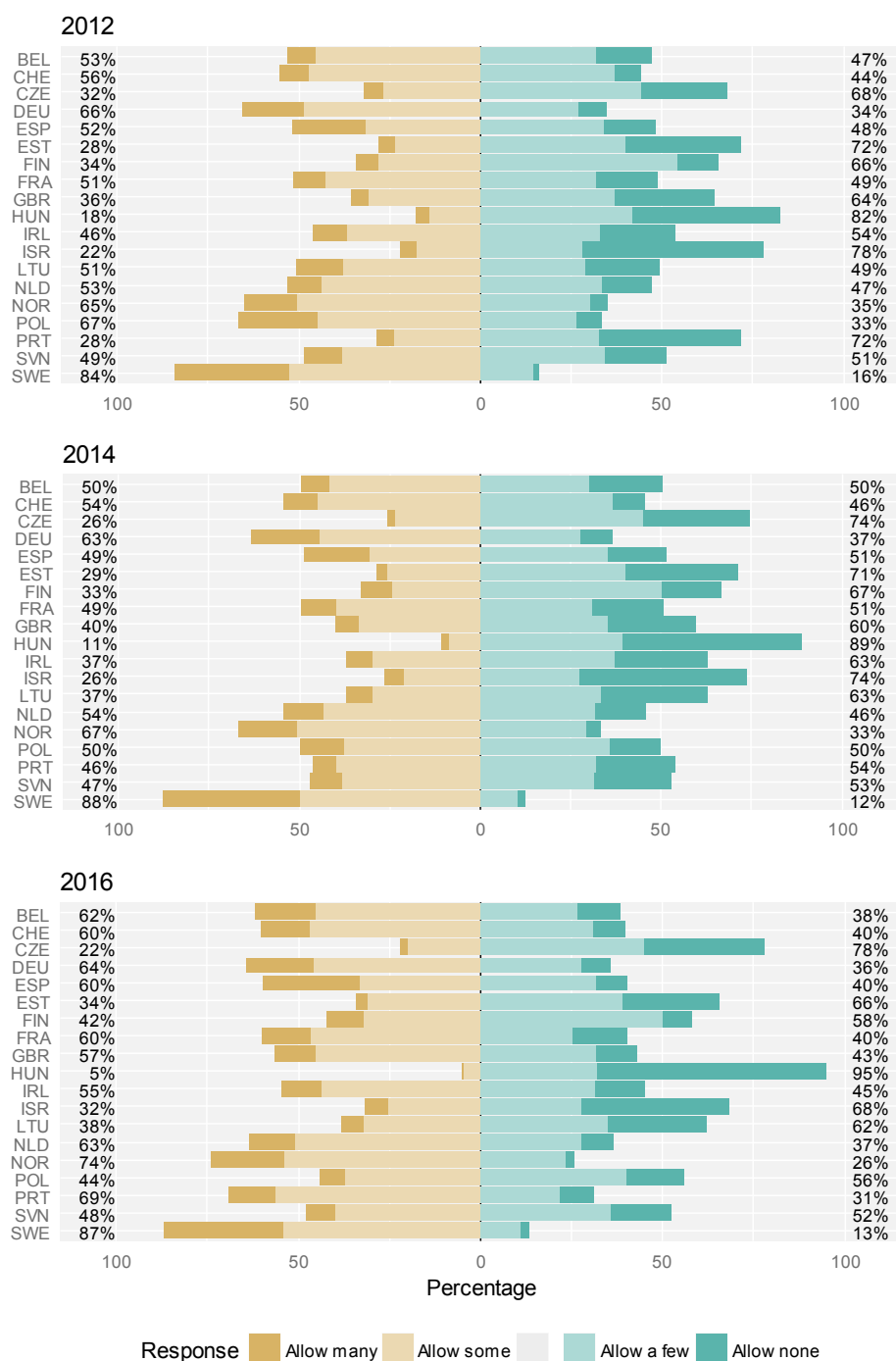


Notes: Countries are reported in alphabetical order.

The percentages reported in the left panel of the figure represent the sum of respondents who report “allow many” and “allow some”. The percentages reported in the right panel of the figure represent the sum of respondents who report “allow a few” and “allow none”.

Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

Figure 7. Support for migration of individuals from poorer countries outside of Europe, by country and year



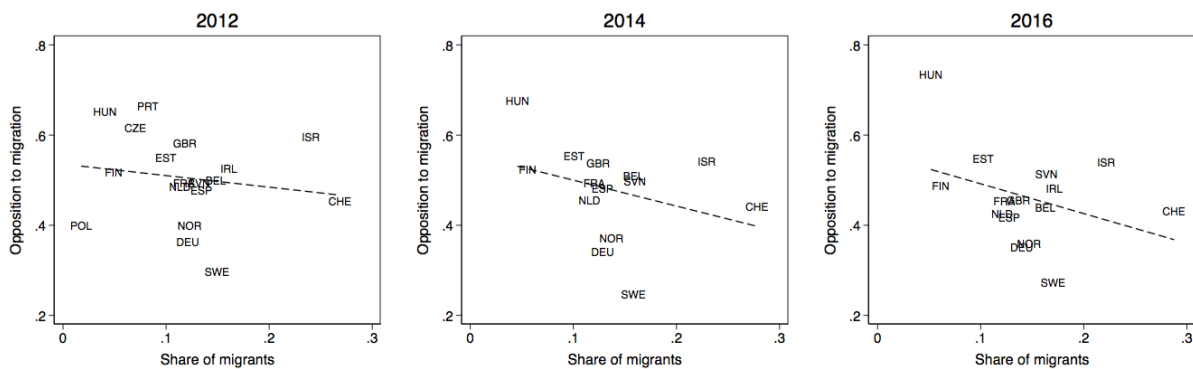
Notes: Countries are reported in alphabetical order.

The percentages reported in the left panel of the figure represent the sum of respondents who report “allow many” and “allow some”. The percentages reported in the right panel of the figure represent the sum of respondents who report “allow a few” and “allow none”.

Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

Figures 8, 9 and 10 illustrate, for each year under analysis, country-level associations between average levels of opposition to migration and three key contextual variables: the size of the migrant population and the unemployment rate (see Table A1 for details on correlations between country level variables depicted in the scatterplots and associated statistical significance). Contrary to group threat theory, results indicate that there is no significant association between overall levels of opposition to migration and the level of threat that individuals may perceive as a result of the size of the migrant community and the precariousness of the labour market. By contrast, results suggest that the increase in countries with the most pronounced increase in the share of foreign-born populations between 2014 and 2016 has the lowest mean levels of opposition to migration in 2016 (see Table A.1 in Annex A). We turn to examining the extent to which such factors contribute to a polarisation across levels of education in attitudes in the next section.

Figure 8. Country-level associations between opposition to migration and share of the population who is foreign-born, by year

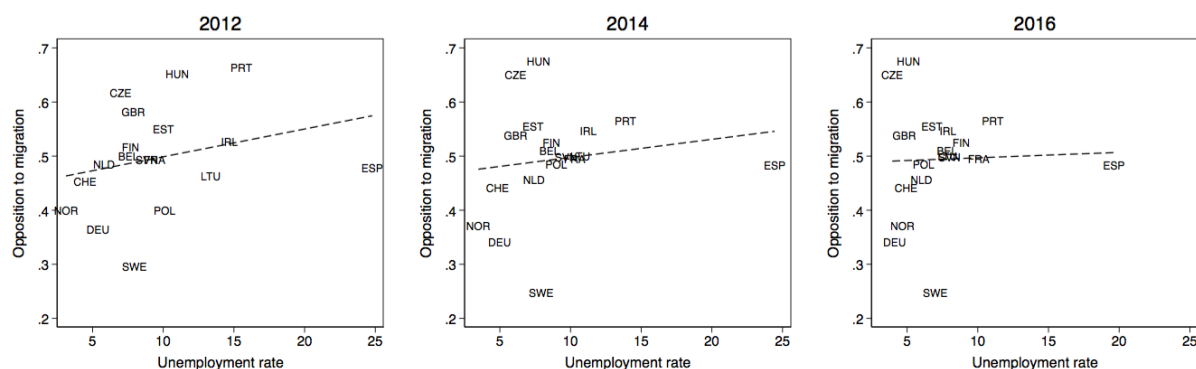


Notes: The x axis represents the proportion of the population who is foreign born. The y axis represents the mean value of the opposition to migration index.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 9. Country-level associations between opposition to migration and unemployment rate, by year

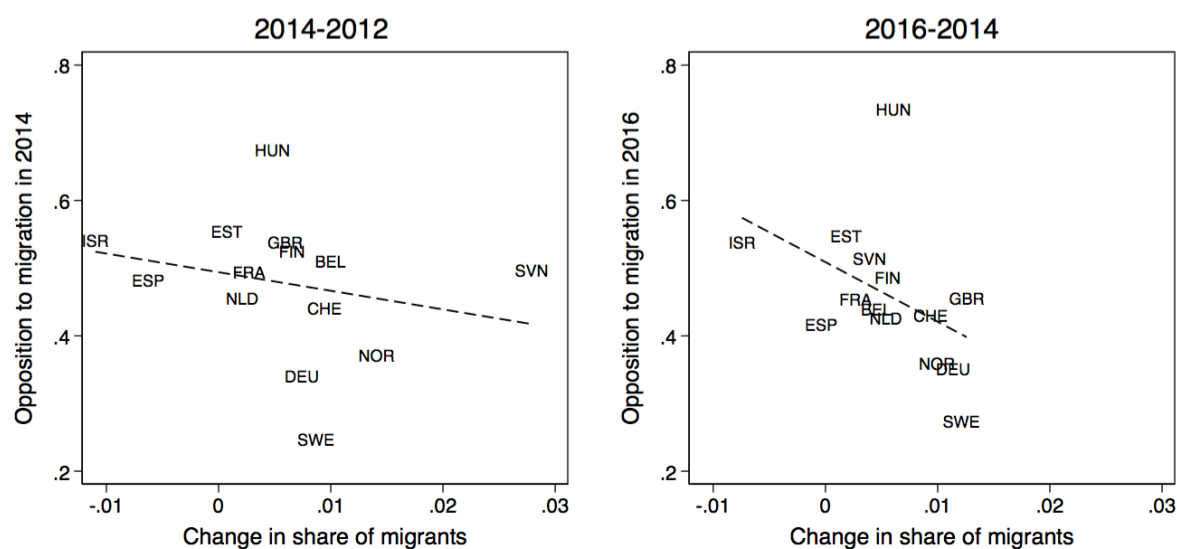


Notes: The x axis represents the unemployment rate. The y axis represents the mean value of the opposition to migration index.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[74]) "Labour: Labour market statistics" (<https://doi.org/10.1787/data-00046-en>) (accessed on 2 July 2018).

Figure 10. Country-level associations between opposition to migration and changes in the share of migrant populations



Notes: The x axis represents the change in the proportion of the population who is foreign born. The y axis represents the mean value of the opposition to migration index.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

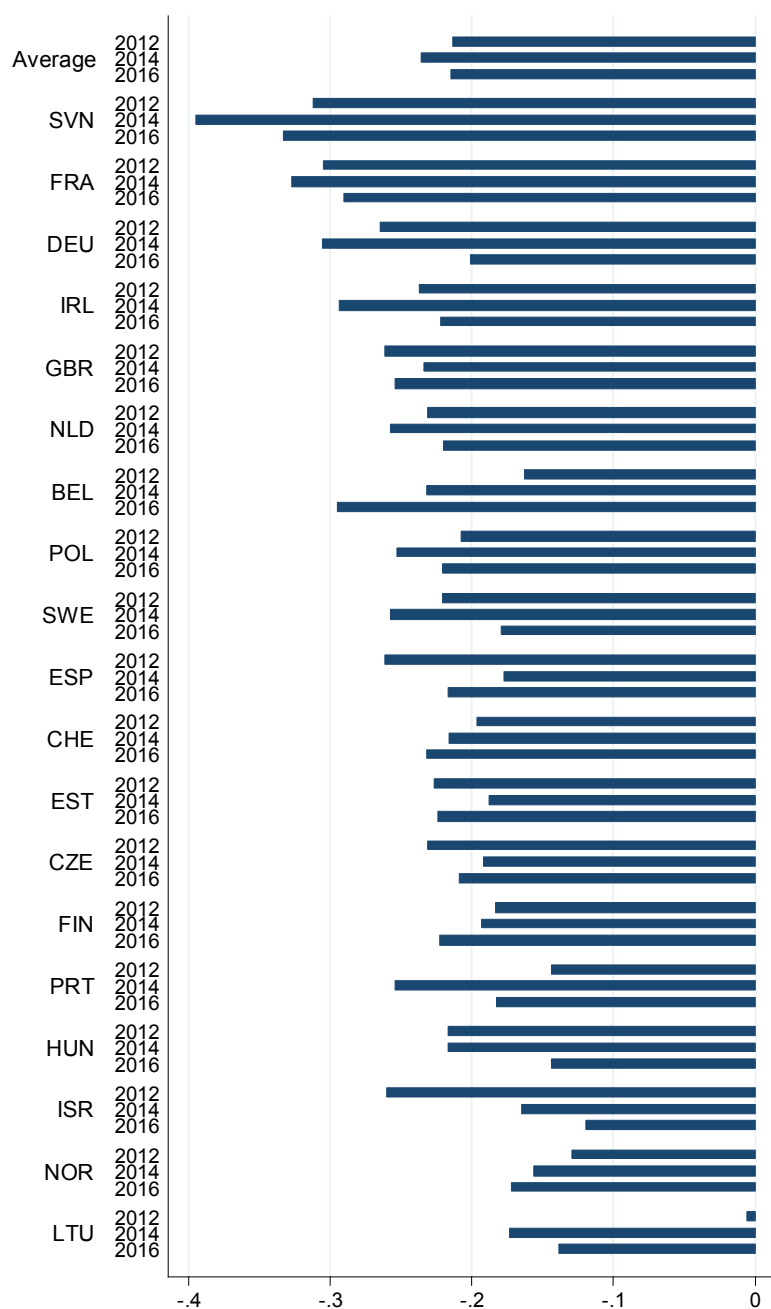
The role of education in shaping attitudes towards migration

Figure 11 illustrates the association between education and opposition to migration for each of the countries in our sample and for each of the three years under consideration: 2012, 2014 and 2016. Results illustrate a high degree of heterogeneity across countries in the association between education and opposition to migration and in how such association changed over the period considered. On average and other things being equal, individuals who attended formal education for longer reported lower levels of opposition to migration with no major differences in estimated associations between 2012, 2014 and 2016. The average education gradient in individuals' opposition to migration was 0.213 in 2012, -0.236 in 2014 and -0.214 in 2016. Since both education and attitudes towards migration were standardised to have a mean of 0 and a standard deviation of 1 over the pooled sample, this means that a difference of 3.9 years of schooling (which correspond to the standard deviation in the education measure), is associated with between 21% and 24% of a standard deviation difference in opposition to migration and that the association is negative: more schooling is associated with lower opposition to migration.

Slovenia is a country where the education gradient is very large in comparative terms: it was -0.312 in 2012, -0.394 in 2014 and -0.333 in 2016. By contrast in Lithuania the education gradient is comparatively small and changed greatly over the period considered. In 2012 the education gradient in Lithuania was very small (-0.006): essentially there was no difference in the attitudes towards migration of individuals with different levels of education. The gradient became negative, indicating that opposition was greater among the less educated in 2014 (education gradient equal to -0.173) and in 2016 (education gradient equal to -0.138). In Germany the education gradient was comparatively large in 2012 and 2014 (-0.265 in 2012 and -0.305 in 2014), while it became smaller in 2016 (-0.200), signalling that in Germany differences in levels of opposition to migration within the population were more tightly associated with educational participation in 2012 and 2014 than in 2016.

Overall, results presented in Figure 11 and Table 2 suggest that between 2014 and 2016, a period with generally stable or decreasing level of self-reported opposition to migration in many countries as established in the previous section, education became a less important demographic factor in predicting opposition to migration in 9 countries, it became more important in 3 countries and it remained stable in the remaining 6 countries.

Figure 11. The overall association between years of schooling and opposition to migration, by country and year (sorted by pooled country mean)



Note: Countries are ranked in descending order of the overall association between years of schooling and opposition to migration calculated on a pooled database over ESS rounds 6, 7 and 8.

Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

Table 2. Changes across time in the association between education and opposition to migration

Country	Change between		Country	Change between	
	2012 2014	2014 2016		2012 2014	2014 2016
BEL	→	→	IRL	→	→
CHE	→	→	ISR	→	→
CZE	→	→	LTU	↗	→
DEU	→	→	NLD	→	→
ESP	→	→	NOR	→	→
EST	→	→	POL	→	→
FIN	→	→	PRT	↗	→
FRA	→	→	SVN	↗	↘
GBR	→	→	SWE	→	→
HUN	→	→	Average	→	→

Note: ↗ Significantly more negative (more polarisation) at $p > 0.05$ ↘ significant less negative (less polarisation) at $p > 0.05$ → no statistically significant change at $p > 0.05$.

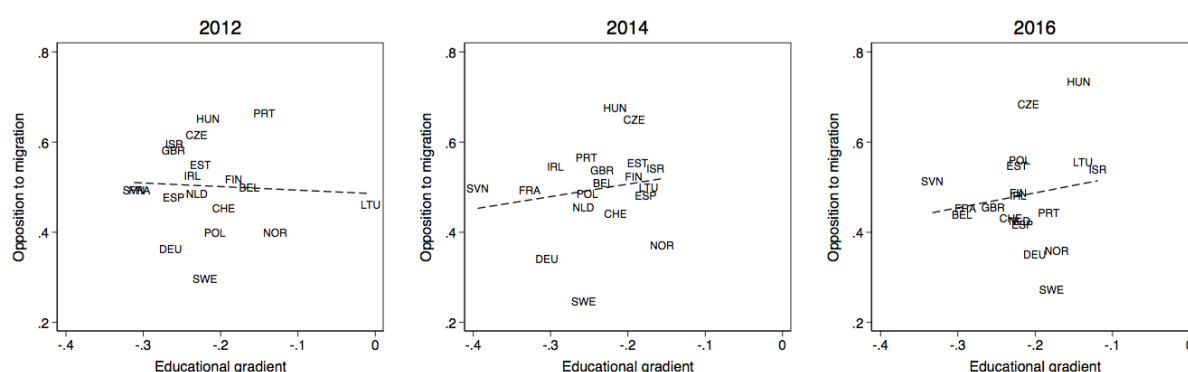
Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

Figure 12 illustrates for each year, the country-level association between average levels of opposition to migration and the education gradient in levels of opposition to migration. The education gradient is defined as the difference in opposition to migration between individuals who differ by one standard deviation in educational attainment (corresponding to 3.9 years of schooling). The more negative the education gradient is, the less opposed to immigration better educated individuals are compared to individuals with lower levels of educational participation. The more positive the opposition to migration index is, the more opposed to migration (on average) individuals in a country are. Table A1 in the Annex report correlations between country level variables and associated levels of significance.

Results suggest that there is no association between how opposed individuals in a country are to migration and the polarisation of such opposition between individuals with different levels of education. Countries like Norway have a small education gradient and comparatively favourable attitudes towards migrants (meaning that both the highly and poorly education have similarly favourable attitudes towards migration), while others like the Czech Republic have a small education gradient and comparatively unfavourable attitudes towards migrants (meaning that both the highly and poorly education similarly oppose migration), Slovenia has a large education gradient and comparatively unfavourable attitudes towards migrants (meaning that average levels of unfavourable attitudes towards

migration are accompanied by a large polarisation of attitudes with highly educated individuals reporting considerably more favourable attitudes than poorly educated individuals), while Germany in 2014 has a large education gradient and comparatively favourable attitudes towards migrants (meaning that average levels of favourable attitudes towards migration are accompanied by a large polarisation of attitudes with highly educated individuals reporting considerably more favourable attitudes than poorly educated individuals).

Figure 12. Country-level associations between opposition to migration and education gradients in attitudes towards migration, by year



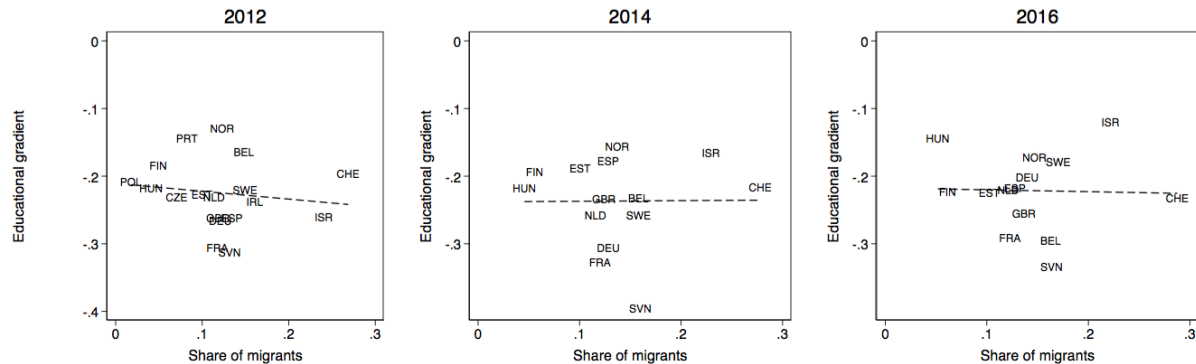
Notes: The x axis represents the overall association between years of schooling and opposition to migration, the y axis represents mean levels of opposition to migration.

Only countries with information on both variables have been included.

Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

Figure 13 illustrates for each year the country-level association between the education gradient in levels of opposition to migration and the share of the population who was foreign-born. Results suggest that there is no association between how different the attitudes towards migration of highly educated and poorly educated individuals are and the overall size of the migrant community. Similarly, Figures 14 and 15 show that there is no association between the education gradient in levels of opposition to migration and the unemployment rate and between the education gradient in levels of opposition to migration and recent changes in migrant populations. This means that there is no evidence, for the years under study, that attitudes towards migration are more polarised along levels of education in countries with larger migrant populations, countries with high levels of unemployment or countries with large inflows of migrants in recent years (rather than in countries with smaller migrant populations, lower unemployment and smaller inflows of new arrivals).

Figure 13. Country-level associations between education gradients in attitudes towards migration and the share of migrant populations, by year

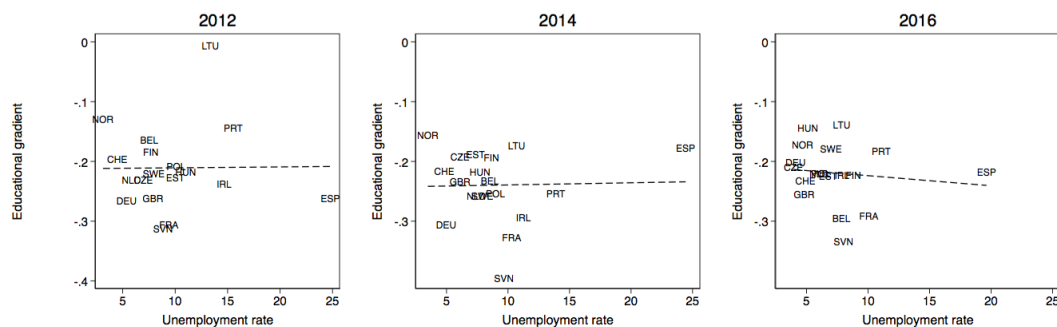


Notes: The x axis represents the proportion of the population who was foreign born, the y axis represents the overall association between years of schooling and opposition to migration.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 14. Country-level associations between education gradients in attitudes towards migration and unemployment rate, by year

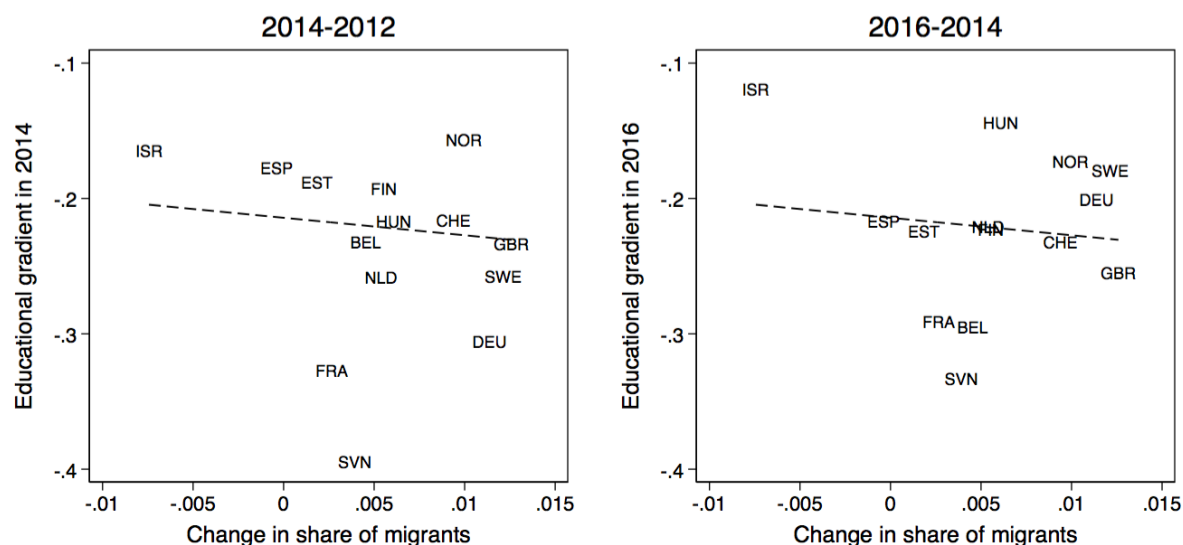


Notes: The x axis represents the unemployment rate, the y axis represents the overall association between years of schooling and opposition to migration.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 15. Country-level associations between education gradients in attitudes towards migration and changes in the share of migrant populations, by year



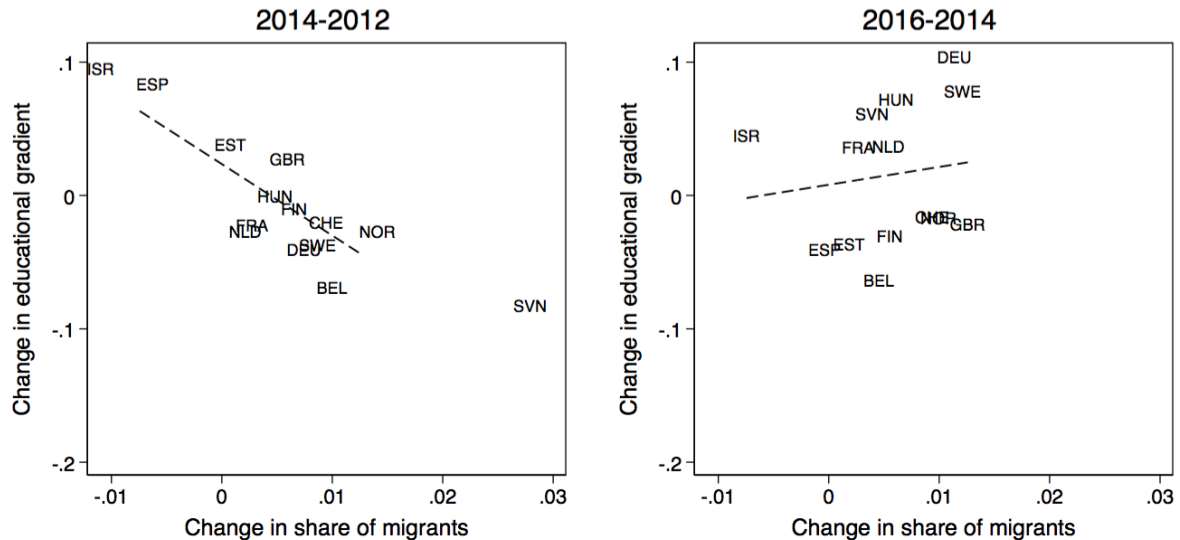
Notes: The x axis represents the change in the proportion of the population who was foreign born, the y axis represents the overall association between years of schooling and opposition to migration.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 16 suggests that in countries where the share of the migrant population grew the most between 2014 and 2016, the education gradient did not change. This stands in marked contrast to the change that occurred between 2012 and 2014 when countries that experienced the largest increases in foreign-born populations were the countries where the education gradient in opposition to migration became more pronounced (see Table A.1).

Figure 16. Changes in education gradients as a function of changes in the share of migrant populations between 2012 and 2014 and between 2014 and 2016



Notes: The x axis represents the change in the proportion of the population who was foreign born, the y axis represents the change in the overall association between years of schooling and opposition to migration. Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

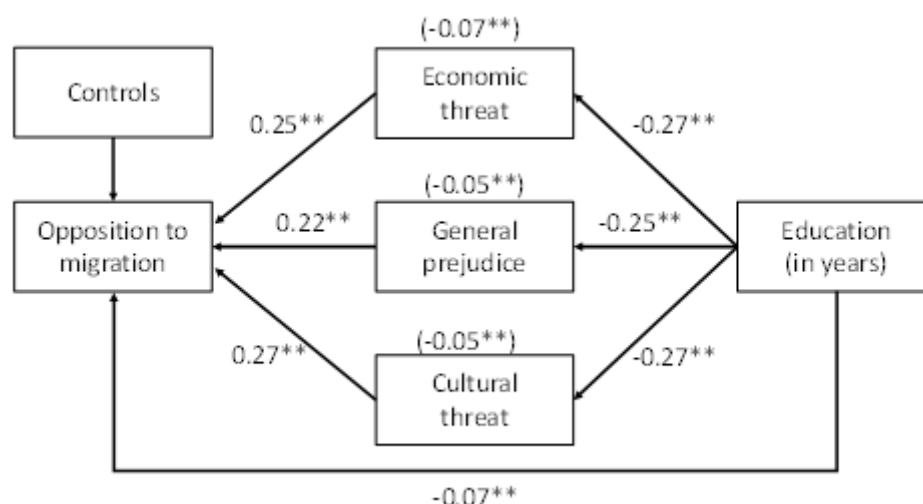
Differences across countries and changes over time in the direct and indirect associations between education and attitudes towards migration

Figure 8 illustrates differences across countries and over time in the overall association between education and opposition to migration but cannot be used to identify the mechanisms underlying such association. Figure 17 displays results based on data from the pooled sample of participants in the last three rounds of the European Social Survey to identify mechanisms underlying the association between education and opposition to migration. By pooling survey waves and countries together we effectively make the strong assumption that associations do not vary across countries and over time. We relax this assumption in Figure 18, where we estimate country specific and time specific models to illustrate differences across countries and over time in the relative importance of the direct association between education and opposition to migration as well as the importance of the indirect channels of economic threat, cultural threat and prejudice.

Results presented in Figure 17 indicate that, as expected, the association between education and individuals' sense of economic threat, cultural threat and prejudice is negative: those who attended school for longer report lower levels of threat and prejudice. Also in line with our hypotheses, the association between opposition to migration and economic threat, cultural threat and prejudice is positive: individuals report greater opposition to migration when they believe that migration is bad for the economy, for the cultural life of the country or that the country is made a worse place because of international migrants. Crucially, our study reveals that more than 75% of the total association between education and opposition

to migration is indirect and can be attributed to the lower perceived economic, cultural threat and the lower prejudice experienced by individuals who attended school for longer. In particular, Figure 17 suggests that, in the pooled sample, the relative contribution of each of the three indirect mechanisms – economic threat, cultural threat and prejudice – and the direct mechanism is very similar. We examine differences across countries and over time next.

Figure 17. Estimated relationships between education and opposition to migration, pooled sample of ESS countries for rounds 6, 7 and 8)



Note: ** indicates a p-value smaller than 0.001. Indirect effects are presented in brackets.

Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

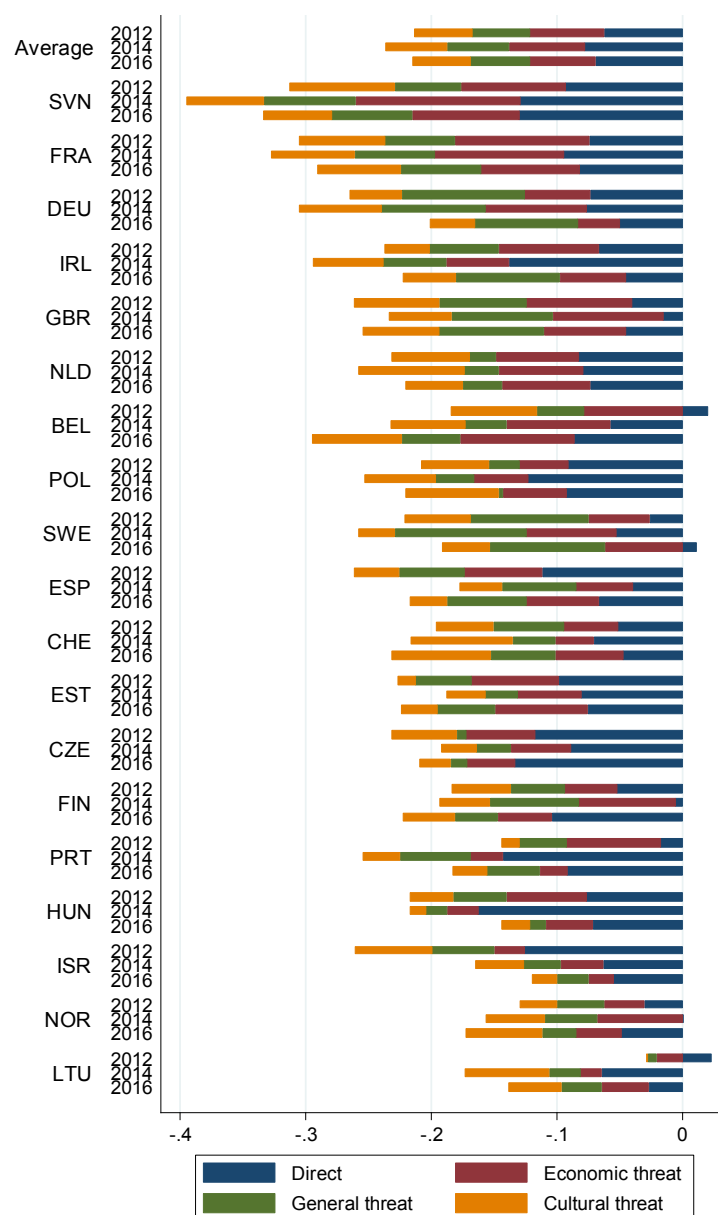
Figure 18 summarises findings from the country specific and year specific path models that are represented in Figure 1. It depicts the variation across countries and over time of the decomposition of the total association between education and opposition to migration into direct and indirect relationships through economic threat, cultural threat and prejudice. Results suggest that on average the proportion of the total association between education and opposition to migration that was mediated through cultural threat and prejudice remained stable between 2012 and 2016. By contrast, the mediated association through economic threat decreased between 2012 and 2014 (from 32% of the overall association in 2012 to 25% in 2014 and 26% in 2016) while the direct association grew over the same period (from 22% in 2012 to 33% in 2014 and 30% in 2016).

The relative importance of the direct association between education and opposition to migration grew between 2014 and 2016 in seven countries (Czech Republic, Finland, Lithuania, Norway, Poland, Portugal and Slovenia) while it decreased in Belgium, Switzerland, Germany, Spain, Estonia, Great Britain, Ireland and Sweden). In most of these countries the relative growth or decline in the relative importance of the direct association was compensated by a similar increase or decrease in the importance of the mediated relationship through economic threat. For example, in Switzerland, the relative importance of the direct association changed from 33% in 2014 to 7% in 2016, while the relative importance of the mediated association through economic threat changed from 21% in 2014 to 31% in 2016.

In most countries, the mediated association through prejudice remained stable over the period. Noteworthy exceptions are:

- a first group of countries where the relative importance of the mediated association through prejudice decreased between 2012 and 2014 and then remained stable (this group includes the Czech Republic, where the indirect association through prejudice was 33% in 2012 but 12% in 2014 and 10% in 2016; Finland, where the indirect association through prejudice was 35% in 2012 but 17% in 2014 and 18% in 2016; Hungary, where the indirect association through prejudice was 20% in 2012 but only 10% in 2014 and 11% in 2016);
- a second group of countries where the indirect association through prejudice decreased between 2012 and 2014 but then increased between 2014 and 2016 (for example Belgium, where the indirect association through prejudice was 38% in 2012, 23% in 2014 and 34% in 2016; Poland, where the indirect association through prejudice was 55% in 2012, 20% in 2014 and 32% in 2016);
- a third group of countries where the indirect association through prejudice increased between 2012 and 2016 (for example Norway, where the indirect association through prejudice was 27% in 2012, 34% in 2014 and 41% in 2016).

Figure 18. Estimated direct and indirect relationships between education and opposition to migration, by country and year (sorted by pooled country mean)



Note: Countries are ranked in descending order of the overall association between education and attitudes towards migration in the pooled dataset over rounds 6, 7 and 8.

Source: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018).

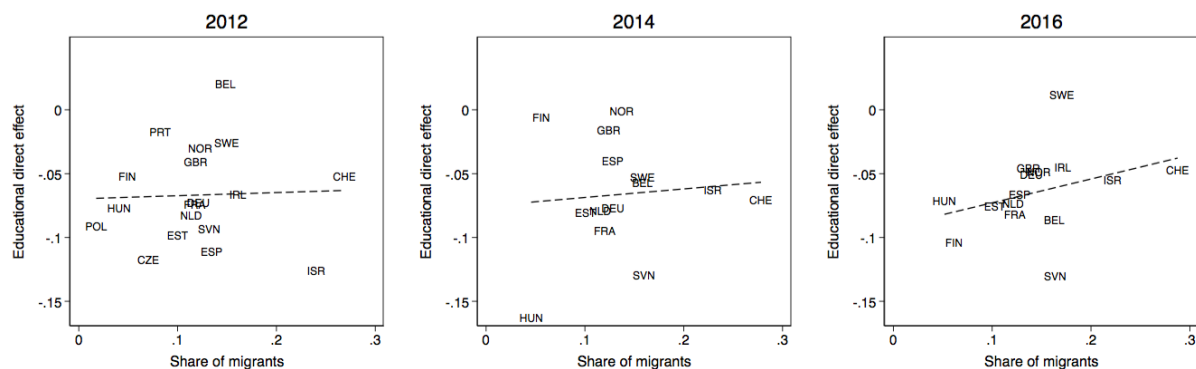
We estimated a mediation-moderation model to test if the associations between economic threat and opposition to migration, cultural threat and opposition to migration, and prejudice and opposition to migration, differ across individuals with different levels of education. Findings suggest that education is not an important moderator of such associations; while individuals who attended formal education for longer tend to report

experiencing lower economic threat, lower cultural threat and lower prejudice than individuals who attended formal education for a shorter period, both groups tend to form similar levels of opposition to migration in response to similar feelings of threat or prejudice (results available from the authors upon request).

The importance of size of migrant populations and unemployment rates as moderators of the direct and indirect association between education and attitudes towards migration

Figures 19 and 20 map the extent to which the direct association between education and attitudes towards migration differ depending on the size of the migrant community in a country or the unemployment rate. Results suggest that there is no association between the strength of the direct association between education and attitudes towards migration in a country, and the share of migrants present in that country (correlations are quantitatively close to 0 and statistically not significant). Similarly, the association between the strength of the direct association between education and attitudes towards migration and the unemployment rate is not statistically significant in any of the years under consideration; and the only year for which the correlation is quantitatively meaningful and in the expected direction is 2014.

Figure 19. Country-level associations between direct education gradients in attitudes towards migration and share of the population who is foreign-born, by year

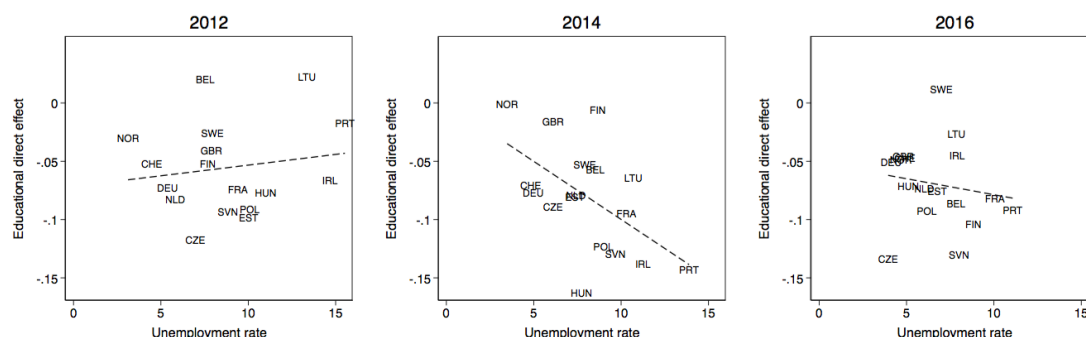


Notes: The x axis represents the proportion of the population who was foreign born, the y axis represents the direct association between years of schooling and opposition to migration.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

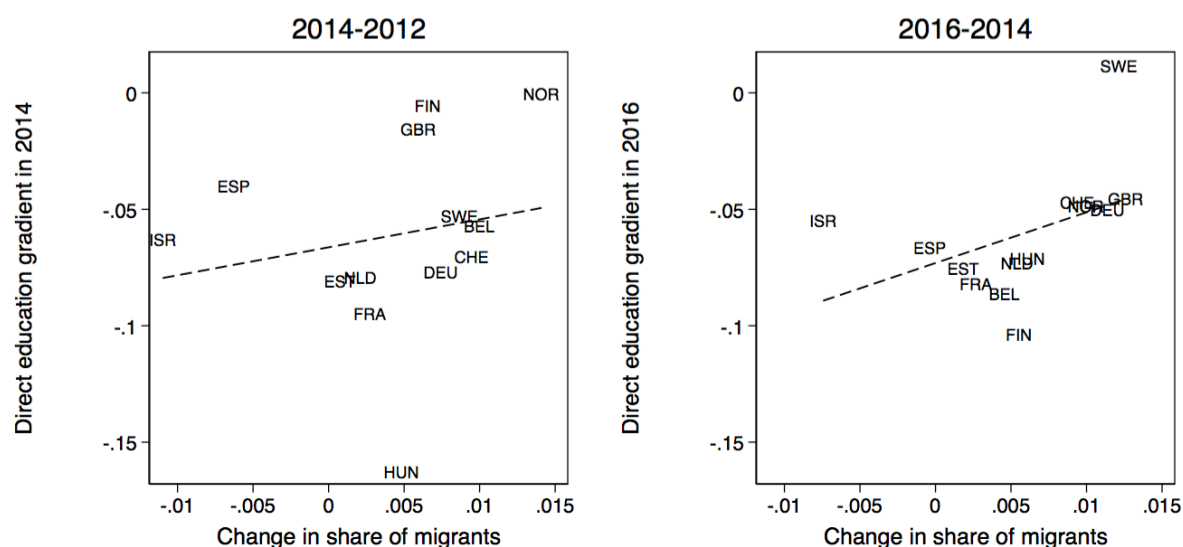
Figure 20. Country-level associations between direct education gradients in attitudes towards migration and unemployment rate, by year



Notes: The x axis represents the change in the proportion of the population who was foreign born, the y axis represents the direct association between years of schooling and opposition to migration. Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[74]) "Labour: Labour market statistics" (<https://doi.org/10.1787/data-00046-en>) (accessed on 2 July 2018).

Figure 21. Country-level associations between direct education gradients in attitudes towards migration and changes in the share of the population who is foreign-born, by year



Notes: The x axis represents the change in the proportion of the population who was foreign born, the y axis represents the direct association between years of schooling and opposition to migration. Only countries with information on both variables have been included

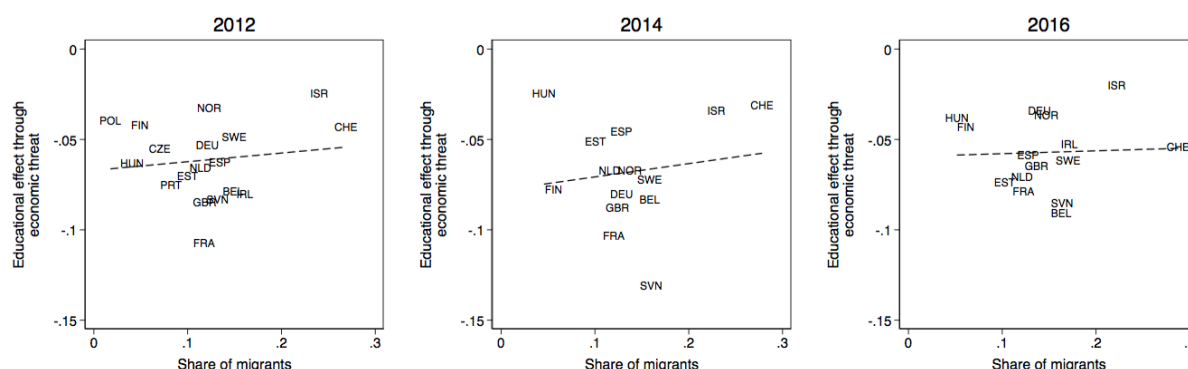
Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

The final step of our analysis examines the extent to which the mediated association between education and opposition to migration through economic threat, cultural threat and prejudice depends on the size of migrant populations, changes in migrant populations and unemployment rates.

Figures 22, 23 and 24 plot each of the three indirect associations and the share of the overall population in a country who is foreign born, Figures 25, 26 and 27 plot each of the three indirect associations and the unemployment rate and Figures 28, 29 and 30 plot each of the three indirect associations and the change in the share of the overall population in a country who is foreign born.

Results reveal that there is no association between the share (and changes in) of the population who is foreign born, unemployment rates in a country and the extent to which individuals with different levels of education in such country oppose migration because of feelings of economic threat. Similarly, there is no association between the share (and changes in) of the population who is foreign born, unemployment rates in a country and the extent to which individuals with different levels of education in such country oppose migration because of prejudice (the only statistically significant association is between the mediated association through prejudice and the share of the population who is foreign-born in 2012, see Table A.1).

Figure 22. Country-level associations between education gradients in attitudes towards migration mediated through economic threat and share of the population who is foreign-born, by year

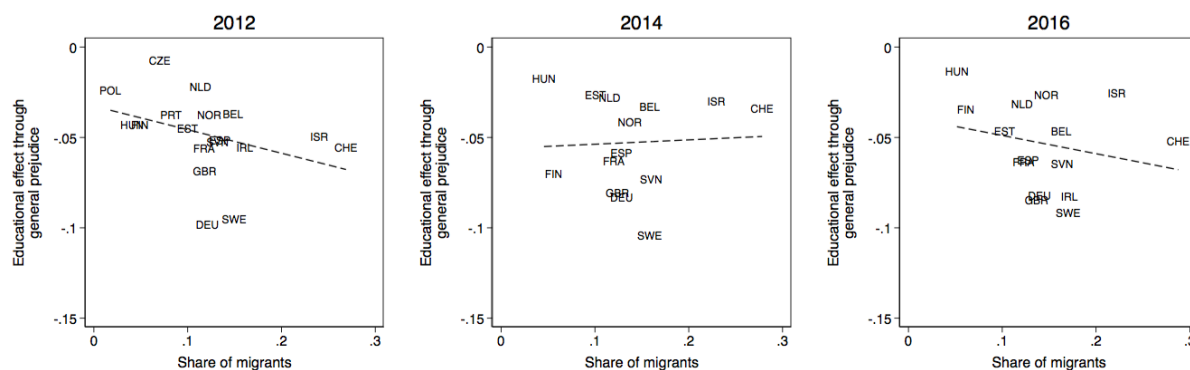


Notes: The x axis represents the proportion of the population who was foreign born, the y axis represents the association between years of schooling and opposition to migration mediated through economic threat.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 23. Country-level associations between education gradients in attitudes towards migration mediated through prejudice and share of the population who is foreign-born, by year

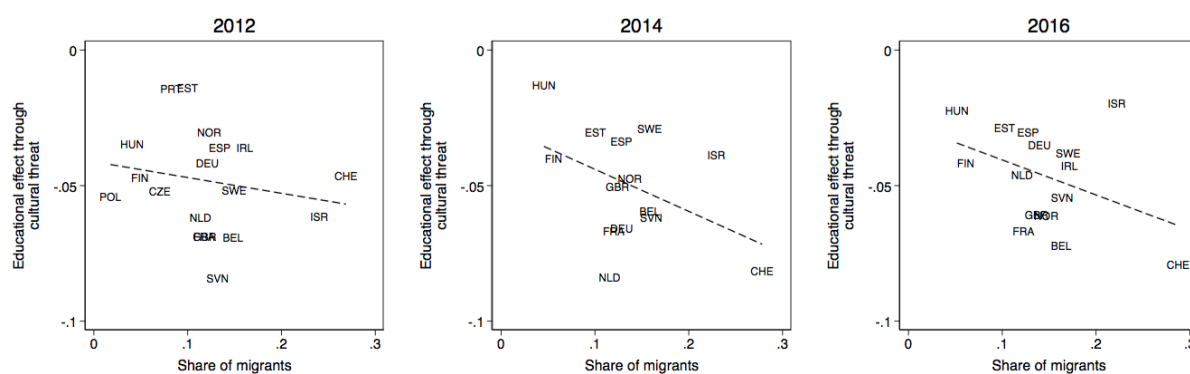


Notes: The x axis represents the proportion of the population who was foreign born, the y axis represents the association between years of schooling and opposition to migration mediated through general prejudice.

Only countries with information on both variables have been included

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 24. Country-level associations between education gradients in attitudes towards migration mediated through cultural threat and share of the population who is foreign-born, by year

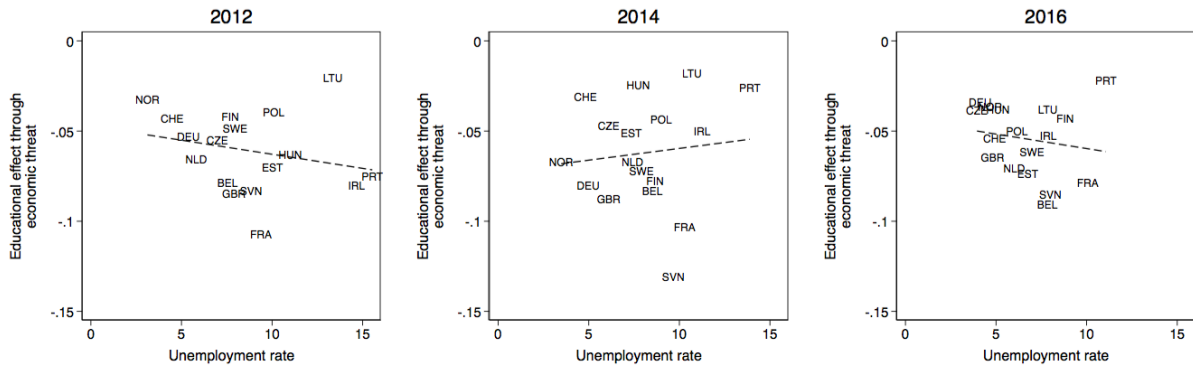


Notes: The x axis represents the proportion of the population who was foreign born, the y axis represents the association between years of schooling and opposition to migration mediated through cultural threat.

Only countries with information on both variables have been included

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 25. Country-level associations between education gradients in attitudes towards migration mediated through economic threat and unemployment rate, by year

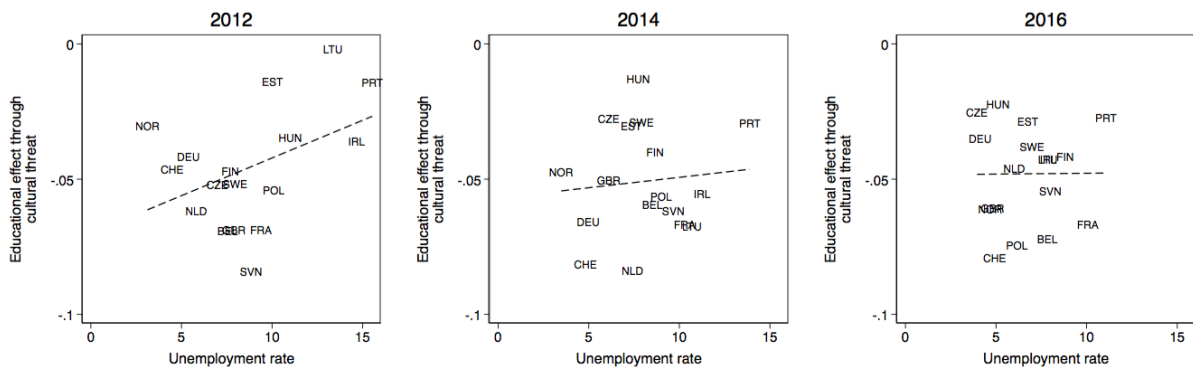


Notes: The x axis represents the unemployment rate, the y axis represents the association between years of schooling mediated through economic threat.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[74]) "Labour: Labour market statistics" (<https://doi.org/10.1787/data-00046-en>) (accessed on 2 July 2018).

Figure 26. Country-level associations between education gradients in attitudes towards migration mediated through prejudice and unemployment rate, by year

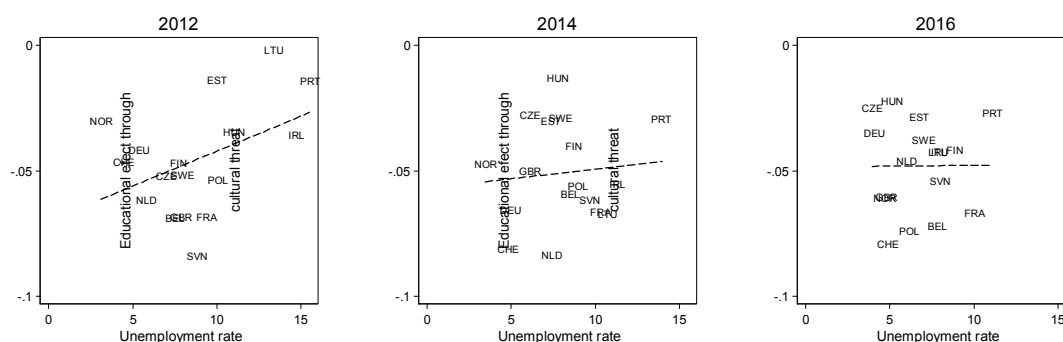


Notes: The x axis represents the unemployment rate, the y axis represents the association between years of schooling mediated through general prejudice.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[74]) "Labour: Labour market statistics" (<https://doi.org/10.1787/data-00046-en>) (accessed on 2 July 2018).

Figure 27. Country-level associations between education gradients in attitudes towards migration mediated through cultural threat and unemployment rate, by year

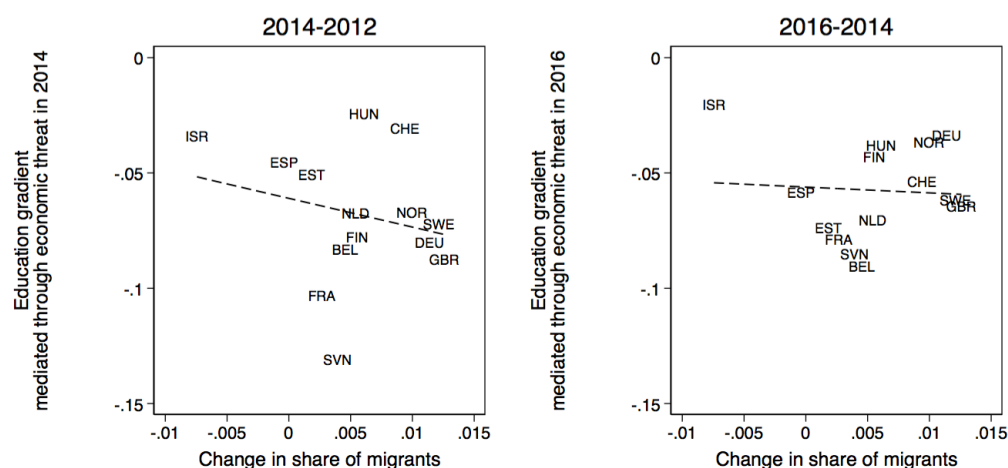


Notes: The x axis represents the unemployment rate, the y axis represents the association between years of schooling mediated through cultural threat.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[74]) "Labour: Labour market statistics" (<https://doi.org/10.1787/data-00046-en>) (accessed on 2 July 2018).

Figure 28. Country level associations between education gradients in attitudes towards migration mediated through economic threat and the share of the population who is foreign born, by year

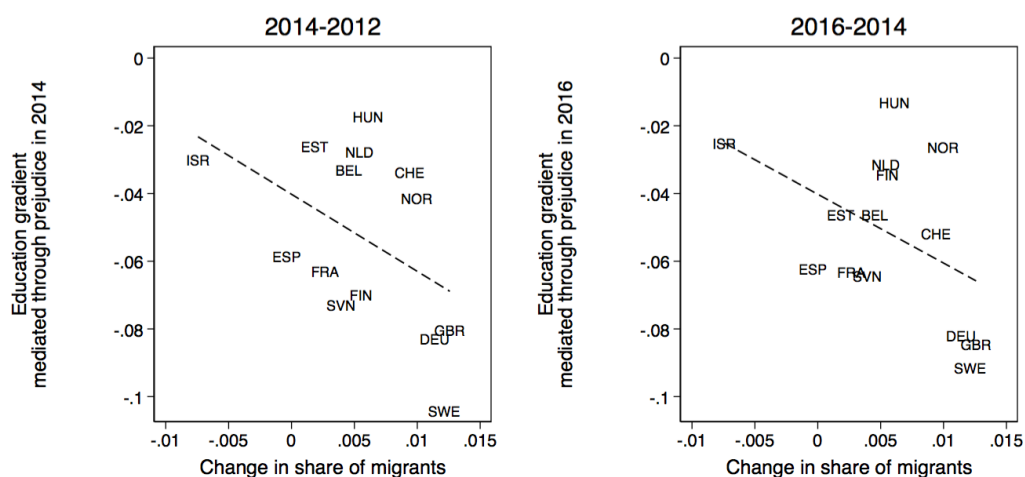


Notes: The x axis represents the change in the proportion of the population who was foreign born, the y axis represents the association between years of schooling and opposition to migration mediated through economic threat.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 29. Country-level associations between education gradients in attitudes towards migration mediated through prejudice and the share of the population who is foreign born, by year

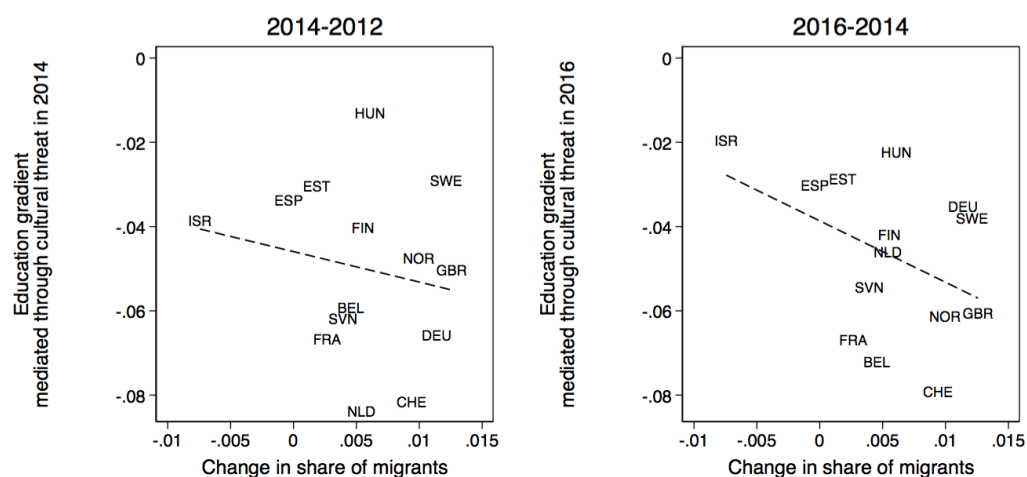


Notes: The x axis represents the change in the proportion of the population who was foreign born, the y axis represents the association between years of schooling and opposition to migration mediated through general prejudice.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Figure 30. Country-level associations between education gradients in attitudes towards migration mediated through cultural threat and the share of the population who is foreign born, by year



Notes: The x axis represents the change in the proportion of the population who was foreign born, the y axis represents the association between years of schooling and opposition to migration mediated through cultural threat.

Only countries with information on both variables have been included.

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[73]) "International migration database" (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).

Discussion

Education is often considered an important element to foster openness to diversity and ensure that individuals do not perceive migration phenomena as a threat but, rather, hold positive attitudes towards migration. However, much less is known about the mechanisms that facilitate education's role in promoting favourable attitudes towards migration and, in particular, how individuals with different levels of education react to changes in their economic and social environment.

We examined data from the last three waves of the European Social Survey to identify the changing association between education and attitudes towards migration in European countries between 2012 and 2016, a period of rapid changes in the economic and social landscape in Europe. In particular, in 2015 a very large number of refugees and asylum seekers fleeing conflict entered Europe at a time when many European societies were just emerging from the protracted economic crisis that followed the collapse of financial institutions in 2008.

Perhaps surprisingly, our results reveal that in many countries opposition to migration decreased over the period, although we observe a large degree of heterogeneity across countries in levels of opposition to migration and how opposition to migration changed over the period. The largest decrease in opposition to migration occurred in Great Britain, Portugal and Israel. By contrast, in Spain, Lithuania, Poland, Hungary and the Czech Republic opposition to migration significantly increased over the period.

The fact that individuals' attitudes towards migration did not change in the majority of countries, and in some became more positive between 2014 and 2016, may be driven by the fact that new arrivals were often humanitarian migrants seeking asylum, and therefore host population may have felt a moral and ethical responsibility to support them, on top of any legal responsibility their country may have had because of international law on humanitarian protection. The literature suggests that individuals distinguish between different migrant groups when modulating feelings of opposition to migration. For example, in the United Kingdom individuals express opposition to migration when asked about migrants overall, but much more positive attitudes when they are asked about specific groups of migrants (Ford, Morrell and Heath, 2012^[75]). In particular, individuals appear to hold more positive attitudes towards refugees than other groups of migrants (Mayda, 2006^[30]; O'Rourke and Sinnott, 2006^[33]; Hatton, 2016^[76]).

Our analyses suggest that in the short term opposition to migration did not increase. However, to the extent that countries struggled with protracted difficulties related to integrating migrants in education and training systems, health systems and labour markets, public attitudes may shift in the medium term. Furthermore, the short-term changes in attitudes observed in our analysis may not be generalisable to other potential future changes in migration stocks and flows since the specific composition of the large influx registered in 2015 may have determined changes in public attitudes towards migrants.

The main aim of the paper was to examine how the association between education and attitudes towards migration changed between 2014 and 2016 and to compare such change to previous trends, using 2012 as a benchmark. In some countries, such as Germany, Ireland, Israel, Portugal Slovenia and Sweden, the association became considerably weaker and led to a lower polarisation of attitudes between highly and poorly educated individuals amidst overall more favourable attitudes towards migration. In others, like Belgium,

Lithuania and Norway, the association between education and opposition to migration became stronger inducing a deepening polarisation in attitudes between highly educated and poorly educated individuals at a time of growing overall opposition to migration. While we find that there is no association at the country level between the level of polarisation in attitudes towards migration across individuals with different levels of education and the size of foreign-born populations or unemployment rates. We find that the increase in migrant populations between 2014 and 2016 corresponded to lower levels of polarisation by level of education and no comparable change in overall levels of opposition to migration.

Our results are consistent with theories that consider education as an important determinant of attitudes towards migration because of the influence it has on feelings of economic threat, cultural threat and prejudice that individuals experience in response to the presence of foreign-born individuals. These three mediators account for around three-quarters, on average, of the overall association between education and opposition to migration.

In general, the share of the population who is foreign born, recent changes in this share and the unemployment rate in the country do not appear to be important moderators of the direct and indirect association between education and attitudes towards migration.

The finding that there is a marked difference in the extent to which highly educated and poorly educated individuals report being opposed to migration phenomena suggests that although what happens in classrooms can play a positive role in strengthening social cohesion in the presence of foreign-born populations by equipping individuals with skills and cultural awareness, disparities in educational opportunities and attainment can create highly polarised public opinions on topics of increasing social and political relevance. While the importance of economic threat in shaping differences in opposition to migration across individuals with different levels of education is well recognised, our analysis shows that cultural threat and prejudice are equally important channels and, taken together, explain almost twice the variation in opposition to migration by education group than economic threat.

The fact that individuals with greater educational attainment experience lower prejudice and lower cultural threat suggests that even if individuals can be open to the social and cultural diversity that results from migration flows, at the moment formal education is the primary channel that helps develop the cognitive capacity, emotional dispositions and psychological states that are necessary to not feel threatened by the presence of foreign-born populations. The political and social significance of this finding cannot be underestimated since, unless remedied, a profound cultural gap between social classes is likely to emerge.

Moving forward, it is of paramount importance that education and schooling will equip all individuals, not only those who obtain higher level qualifications, with the ability to either not feel threatened by the culture of new arrivals or with the ability to respond positively to feelings of threat such that they do not lead individuals to hold discriminatory views and attitudes. Potential actions include on fostering global competencies early on in the school years to ensure that all individuals, irrespective of their eventual highest educational attainment, will develop similar levels of the foundation skills that are necessary to be open and understand different cultures and traditions. Education systems in many countries are increasingly aiming to foster global competence in their students, enabling them to appreciate different perspectives and world views, and interact successfully and respectfully with others (OECD, 2018^[77]). In order to ensure that older cohorts are not left behind, the development of lifelong learning programs could be developed in order to help

older cohorts with the knowledge and skills that are necessary to be able to understand multicultural issues and deal with the tensions they create in everyday life.

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Annex A. Country-level correlations

Table A.1. Full sample correlations and bootstrap correlations of variables depicted in the text with corresponding p-values

		2012		2014		2016	
		sample	bootstrap	sample	bootstrap	sample	bootstrap
Fig8	Corr.	-0.162	-0.162	-0.332	-0.332	-0.365	-0.365
	<i>p-val.</i>	0.520	0.506	0.247	0.171	0.181	0.183
Fig9	Corr.	0.268	0.268	0.152	0.152	0.036	0.036
	<i>p-val.</i>	0.283	0.164	0.548	0.478	0.888	0.869
Fig11	Corr.	-0.058	0.815	0.172	0.172	0.164	0.502
	<i>p-val.</i>	0.815	0.751	0.482	0.345	0.502	0.454
Fig12	Corr.	0.067	0.067	0.008	0.008	-0.028	-0.028
	<i>p-val.</i>	0.821	0.832	0.977	0.221	0.920	0.918
Fig13	Corr.	0.010	0.010	0.027	0.027	0.046	0.046
	<i>p-val.</i>	0.968	0.968	0.914	0.925	0.856	0.869
Fig19	Corr.	0.040	0.040	0.090	0.090	0.340	0.340
	<i>p-val.</i>	0.875	0.868	0.759	0.778	0.215	0.067
Fig20	Corr.	-0.142	-0.142	-0.124	-0.124	-0.066	-0.066
	<i>p-val.</i>	0.574	0.599	0.625	0.682	0.794	0.721
Fig22	Corr.	0.141	0.140	0.150	0.150	0.045	0.045
	<i>p-val.</i>	0.578	0.283	0.609	0.400	0.875	0.868
Fig23	Corr.	-0.361	-0.360	0.055	0.055	-0.238	-0.238
	<i>p-val.</i>	0.142	0.007	0.853	0.853	0.392	0.367
Fig24	Corr.	-0.191	-0.191	-0.450	-0.450	-0.407	-0.407
	<i>p-val.</i>	0.448	0.158	0.106	0.105	0.132	0.194
Fig25	Corr.	-0.171	-0.171	0.174	0.174	-0.130	-0.130
	<i>p-val.</i>	0.499	0.378	0.489	0.357	0.607	0.549
Fg26	Corr.	0.098	0.098	-0.086	-0.086	-0.184	-0.184

	<i>p-val.</i>	<i>0.700</i>	<i>0.610</i>	<i>0.735</i>	<i>0.601</i>	<i>0.466</i>	<i>0.320</i>
Fig27	Corr.	0.361	0.361	0.224	0.224	0.198	0.198
	<i>p-val.</i>	<i>0.141</i>	<i>0.024</i>	<i>0.372</i>	<i>0.244</i>	<i>0.431</i>	<i>0.403</i>
2014-2012				2016-2014			
		sample	bootstrap	sample	bootstrap		
Fig10	Corr.	-0.240	-0.240	-0.444	-0.444		
	<i>p-val.</i>	<i>0.409</i>	<i>0.152</i>	<i>0.112</i>	0.043		
Fig15	Corr.	-0.214	-0.214	-0.121	-0.121		
	<i>p-val.</i>	<i>0.463</i>	<i>0.444</i>	<i>0.681</i>	<i>0.735</i>		
Fig16	Corr.	-0.851	-0.851	0.139	0.139		
	<i>p-val.</i>	0.000	0.000	<i>0.637</i>	<i>0.611</i>		
Fig21	Corr.	0.192	0.192	0.443	0.443		
	<i>p-val.</i>	<i>0.531</i>	<i>0.406</i>	<i>0.130</i>	<i>0.075</i>		
Fig28	Corr.	-0.232	-0.232	-0.065	-0.065		
	<i>p-val.</i>	<i>0.425</i>	<i>0.382</i>	<i>0.825</i>	<i>0.862</i>		
Fig29	Corr.	-0.471	-0.471	-0.462	-0.462		
	<i>p-val.</i>	<i>0.089</i>	0.023	<i>0.096</i>	<i>0.060</i>		
Fig30	Corr.	-0.420	-0.419	-0.191	-0.191		
	<i>p-val.</i>	<i>0.135</i>	<i>0.089</i>	<i>0.513</i>	<i>0.380</i>		

Sources: Adapted from European Social Survey database, rounds 6, 7 and 8 (<https://www.europeansocialsurvey.org>) (accessed 01 June 2018) and (OECD, 2018^[2]) "International migration database", (<https://doi.org/10.1787/data-00342-en>) (accessed on 2 July 2018).