

Working paper

The Impact of Education and Age Cohort on Attitudes toward Immigration in Europe

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Abstract

In the context of current discussions about increasing cultural diversity of European societies and a radicalization of the political sphere this paper studies the role that better education could play in increasing tolerance towards immigrants. We complement the existing literature on determinants of attitudes to foreign populations by explicitly addressing the role of educational attainment using individual-level panel data combined with aggregate information on recent migration to the EU countries. Using data from the European Social Survey, we examine the role of educational attainment on general, cultural and economic attitudes toward immigration over 12 years by pooling 16 EU countries. We also study and compare the two individual countries Norway and Finland with many institutional similarities but different migration histories. Our findings indicate a significant positive effect of higher education on a more favourable attitude toward immigration in all three aspects. However, on top of this very strong education effect we also found that the youngest cohorts (born between 1980 and 1999) were less tolerant toward immigration than older cohorts (born between 1940 and 1980). Furthermore, with respect to recent levels of immigration to the EU countries, we found that stronger migrant inflows have a significant positive effect on the economic aspect of attitudes toward immigration but significant negative effects on attitudes in general and cultural aspects, indicating that Europeans do generally welcome the work of migrants but are more negative about the cultural change they bring. Viewed together, these findings clearly indicate that higher education can be an effective way of increasing the tolerance to migrants and help reduce the tendency towards radicalization.

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Introduction

"The highest result of education is tolerance."

Helen Keller

Migration is an inherent part of contemporary Western countries; however, it poses challenges not only to migrating populations, but also to receiving societies and societies of origin. In Europe, numerous claims suggesting a link between immigration, cultural changes and economic situation are brought up by the re-emerging radical right. Their unprecedented electoral success is correlated with changes in attitude to newcomers, when liberal values of inclusion are being replaced by an ethno-centrist stance of exclusion and marginalization of cultural diversity.

Attitudes toward foreign population have for long been a subject of interest in the scholarly debate. A vast block of literature focuses on the ethno-racial component of immigration; however, comprehensive studies on attitudes toward immigration as a phenomenon are quite scarce (Meuleman et al. 2009). Moreover, the research could be enriched by investigating the formation of attitudes toward immigration utilizing panel data (Ceobanu and Escandell 2010), especially in the face of changing rates of immigration to EU countries during the past decades.

In this paper, we combine the individual and contextual approaches in studying the trends in general, cultural, and economic aspects of attitudes toward immigration in 16 European countries between 2002 and 2014 as well as at the individual level of a pair of North European countries – Norway and Finland. Further, we aim to shed light on the effect of educational attainment under the changing set of political, economic and demographic circumstances in contemporary European societies analyzing European cross-sectional panel data. We hypothesize that i) respondents with a higher level of educational attainment will display a more favorable attitude toward immigration despite the radicalization of political discourse and the increase in immigration rates; ii) younger cohorts will be more tolerant toward immigration than older ones; iii) following the theory of cohort change, we posit that respondents, who achieved a high level of educational attainment will exhibit a more favorable attitude toward immigration even at an older age.

This paper is structured in the following way. First, we discuss individual and contextual theories that lie in the base of the scholarly understanding of what influences attitudes toward immigration. It is followed by the outline of the methodological backbone of this research. Finally, we present the results at the aggregated and individual country level, draw conclusions and discuss implications of the findings.

Background

The concept of an "immigrant" has no universal definition and is subject to different interpretations across countries and over time (Pettigrew 1998). Attitudes toward immigration have been a topic of interest for many scholars, thus creating different explanations according to various schools of thought. Idiosyncratic differences between countries' positions on the issue and the distinction between attitude toward immigration as a phenomenon and immigrants as people have contributed to an uncertainty in understanding the topic. The existing literature may be categorized into two main levels: individual and contextual level theories.

Individual level theories

Socio-economic status has been pointed out as one of the main determinants of immigration attitudes. Strong labor market position and higher occupational classification were found in a direct association with favorable attitudes toward immigration (Gorodzeisky and Semyonov 2009). The fear of competition with foreigners for lower-status jobs and allocation of welfare resources was proved to result in a less favorable attitude toward immigration among the native lower socio-economic strata, exacerbated at times of economic hardships (Burns and Gimpel 2000; Semyonov et al. 2008) due to a low skill level of immigrants in developed European countries (Scheve and Slaughter 2001). In a similar vein, some studies emphasized the impact of income as a predictor of the type of attitude toward both immigrants and immigration (Coenders et al. 2008; Kehrberg 2007); however, others found it insignificant and inconsistent (Semyonov et al. 2006).

Education was shown to have a consistent effect on developing attitudes to immigration. While both number of years of schooling and the level of educational attainment were mentioned as predictors of individual preferences, it is the latter that had a clearer and a more consistent impact on positive attitudes toward immigration (Hainmüller and Hiscox 2007). Higher level of educational attainment was associated with a more liberal and sympathetic attitude toward outgroups and immigration in general, whereas lower educated people displayed sentiments of ethnic exclusionism and national chauvinism (Coenders and Scheepers 2003). Although the level of educational attainment is often included among other factors that influence attitudes toward immigration, a detailed analysis of the categories within the variable across countries and over time is relatively scarce (Coenders and Scheepers 2003; Hainmüller and Hiscox 2007; Ceobanu and Escandell 2008). In this study, we follow the assumption that the impact of the level of educational attainment depends on country-specific characteristics (Hjern 2007; Weil 1985) and examine the effect of three educational attainment categories (lower than secondary and lower secondary, upper secondary and post-secondary non-tertiary, and tertiary) in the national setting of 16 EU countries over the period of 12 years.

In terms of the causal mechanisms by which the level of educational attainment influences attitudes to migration, it can be assumed to be a mix of enhanced cognitive abilities that come along with better abstraction skills and a broader intellectual horizon, as well as better socio-economic status which makes immigration look less dangerous in terms of economic competition. The cultural and economic aspects of attitudes toward migration which are studied separately in this paper will allow us to distinguish among these two different effects.

Among the *other demographic factors* age, gender, and place of residence (urban or rural) were mentioned as the most prominent predictors of attitudes toward immigration. Older male respondents residing in rural areas were found to have a less favorable attitude toward immigration than younger female respondents residing in urban settings (Gorodzeisky and Semyonov 2009). However, the inconsistency of these findings was shown by other studies, in which, for example, age had no linear negative effect on attitudes toward immigration (Coenders & Scheepers 2003).

In contrast to studies which use the age variable to measure cohort effects (e.g., Dustmann and Preston 2007, 13), we posit that viewing age and cohort separately might provide a finely nuanced picture. While the age variable depicts mostly individual characteristics that change with age, the cohort effect provides an understanding of the *Zeitgeist* of each generation on a broader social level. Indeed, the so-called *Silent Generation* cohorts born in times of the post-war austerity may be expected to have a less favorable attitude toward immigration due to the feeling of competition over resource allocation than *Generations X* and *Y*, that were born in a considerably less harsh social, political and economic setting.

This assumption is based on the theory of social change and the notion of demographic metabolism coined by Ryder (1965), according to which societies evolve through cohort replacement rather than changes within generations. An individual's ability to change attitudes once they are established is very limited, therefore, a certain set of values that shapes one's worldview in the adolescent years is prone to affect the types of attitudes throughout lifetime. Conversely, Lutz (2013) suggests that lifelong learning can foster changes *within* birth cohorts and thus become a driving force of socio-economic changes. Following Lutz's approach, we claim that education may be considered as a locomotive of such change and that attitudes developed during earlier stages of life might be transformed over time depending on the level of educational attainment. The importance of *values and identities* in forming attitudes toward others was explored by social identity theory. It emphasizes the individuals' need to belong to a certain group, which therefore is perceived more favorably than other groups (Tajfel and Turner 1986; Mummendey et al. 2001). The celebration of the feeling of belonging to what is sometimes referred to as imagined communities (Anderson 1991) may manifest itself in ethnocentrism and national pride on the one hand, and development of ethnic exclusionism and hostile attitudes to the outsiders, or the other. Conversely, contact theory postulates that interaction with out-groups has a positive effect on development of sympathetic attitudes toward the other (Pettigrew 1998).

Contextual level theories and the politics of it all

Contextual level theories emphasize the impact of exogenous factors on individual attitudes toward immigration. Open borders that fostered economic migration along with technological advances of the digital era introduced new rules for market competition. The new, postindustrial individualized capitalism setting pushed many citizens to the margins of society creating so-called "losers of modernization", who are unable to adjust to the changing technological and cultural environment thus reducing their ability to compete in the labor market. The less educated and low-skilled segment of the population, also referred to as blue-collar workers, constitutes a significant part of the right-wing populist parties' electorate (Betz 1993).

The transformation of social values since the end of WW2 has introduced a new post-material mindset, which evolves around issues such as individual freedom, quality of life, freedom of expression and inclusion (Inglehart 1997). The "silent revolution", advocating the "new politics" of equality of rights, individualism and ecology, prompted the emergence of the Green parties in the 1970's; whereas the "silent counter-revolution", seen as a reaction to the "new politics" and resulting in a growing insecurity, called for a return to traditional values and gave rise to the populist right-wing parties in the late 1980's in some European countries (Müller-Rommel 1998).

The ethno-cultural diversity, propelled by recent inflows of immigrants, is a relatively new socio-demographic phenomenon in most European countries (Castles and Miller 2003) and as such not only directly affects types of attitude toward outgroups but also calls for a re-evaluation of the established predictors. Cross-sectional studies showed an inconsistent evidence regarding the impact of size of immigrant community on natives' attitudes toward immigration (e.g. Scheepers et al. 2002, Semyonov et al. 2008 and Sides and Citrin 2007). Therefore, some scholars suggested to examine changes in the rate of immigration, rather than in immigration stocks (Hopkins 2010). As an exogenous factor, the impact of the rapid increase in *immigration rate* on the economic, demographic and political landscapes of hosting countries may blur the consistency of previous findings at the individual level, such as the effect of different levels of educational attainment, for instance, due to the growing perception of competition with the incoming population over economic and social resources.

The importance of a national community's collective identity, referred to by Taggart (2000) as *heartland*, is argued to intensify the community's feeling that its national values are threatened by the newcomers (McLaren 2012). The group threat theory suggests that a hostile attitude toward outgroups will be formed, if members of the group feel that their national or economic interests are threatened (Jackson et al. 2001, Scheepers et al. 2002). Perception of a group threat can be real but also imagined, if it is utilized by political actors or the media to define a certain social group by juxtaposing it to other groups and thus shaping a group identity.

A parallel may be drawn here to Schmitt's friend-foe distinction, which stresses the importance of self-identification in terms of "friends" and "foes" in contemporary international and domestic politics (Schmitt 2007). Schmitt's approach is valuable in explaining the formulation of public opinion and the need in point of reference in identity shaping of those who belong to imagined communities. Contemporary populist radical right parties provide this point of reference to their electorate by presenting immigrants as a cultural and economic threat to the native community. Expressions such as "the hated multicultural experience has given us nothing but disadvantages", "save billions on immigration from Muslim countries", "Islam brings us no cultural enrichment but Sharia fatalism, Jihad terrorism, and disseminates hatred" and "immigration influx needs to be stopped" are voiced by the populist radical UKIP in the UK (2010 election manifesto), the PVV in the Netherlands (2010 election manifesto), and the FPÖ in Austria (2006 election manifesto) among many other populist radical parties which found a fertile ground in contemporary European societies' insecurity.

Data, variables, and method

Data

In this study we analyze data from the European Social Survey (ESS), which were conducted in 30 countries over seven biennial rounds from 2002 to 2014. The ESS offers a variety of questions on attitudes toward immigration in rounds two and seven, and three questions on attitudes toward immigration, with the same wording, in all seven rounds. Further, we use data from Eurostat, Faostat and the OECD to account for macro-level parameters such as immigration rate and number of asylum applications.

Variables

Our three outcome variables general, cultural, and economic attitudes toward immigration were elicited by asking the following questions, subsequently:

- *Immigrants make a country a worse or a better place to live*
Is [respondent's country] made a worse or a better place to live by people coming to live here from other countries? (0=worse place to live; 10=better place to live).
- *A country's cultural life is undermined or enriched by immigrants*
Would you say that [respondent's country]'s cultural life is generally undermined or enriched by people coming to live here from other countries? (0=cultural life undermined; 10=cultural life enriched).

- *Immigration is bad or good for country's economy?*

Would you say it is generally bad or good for [respondent's country]'s economy that people come to live here from other countries? (0=bad for the economy; 10=good for the economy).

To juxtapose the difference in attitudes, we created a dichotomous variable for each of the questions, in which 0 indicates a negative attitude to immigration that combines answers from 0 to 5 inclusive, while 1 stands for a positive attitude to immigration combining answers from 6 to 10.¹ Collapsing responses on an 11-point Likert-scale into dichotomous categories inevitably leads to information loss; however, this approach has distinct advantages in terms of drawing a more vivid distinction between positive and negative attitudes, which is the focal point of this research.

The highest level of educational attainment² was recoded into three categories: (1) lower secondary and less (reference category); (2) upper secondary and post-secondary non-tertiary; (3) tertiary.

The variable *age* is categorized into six groups; (1) 25 = younger than 25 (reference category); (2) 35 = between 25 and 34; (3) 45 = between 35 and 44; (4) 55 = between 45 and 54; (5) 65 = between 55 and 64; (6) 75 = 65 and above.

Further, we divided the respondents into four birth cohorts using the *year of birth*; (1) born before 1940, also referred to as the Silent Generation (reference category); (2) 1940-1959, the so-called Baby Boomers; (3) 1960-1979, i.e. Generation X; (4) 1980-1999, a.k.a. Generation Y.

We also include the variable *satisfaction with the economy*³ as natives were reported to have unfavorable attitudes toward immigration during economically difficult times (Burns and Gimpel 2000).

Income was proxied by the subjective variable *feeling about household's income*⁴.

Following the social identity theory (Tajfel and Turner 1986), we also include the variable attitude to equality⁵ recoded into a dichotomous variable (0 = respondent agrees that people should be treated equally and have equal opportunities; 1 = respondent disagrees with this statement).

A dichotomous variable on the residency (0 = residency in big cities; 1= in rural areas) follows the contact theory with higher percentages of immigrants found in big cities than in rural areas (Bell et al. 2010).

In addition, the variable *migrant inflows* was calculated as the percentage of immigrants entering a specific country in each survey year as part of the country's total population. This variable measuring the size of the contemporary flow of immigrants allows us to control for a possible group threat presented by immigrants, which posits that unfavorable attitudes toward newcomers might be developed if members of the group feel that their own economic and social interests are threatened (Jackson et al., 2001; Scheepers et al., 2002).

¹ We exclude the "don't know", "refusal" and missing answers from the analysis, since they comprise less than 4% of the answers.

² The ESS Question: "What is the highest level of education you have achieved?" The answers are coded: 0 = Not possible to harmonize into 5-level ISCED; 1 = Less than lower secondary education (ISCED 0-1); 2 = Lower secondary education completed (ISCED 2); 3 = Upper secondary education completed (ISCED 3); 4 = Post-secondary non-tertiary education completed (ISCED 4); 5 = Tertiary education completed (ISCED 5-6).

³ The ESS Question: "On the whole how satisfied are you with the present state of the economy in [country]? (0=extremely dissatisfied; 10=extremely satisfied).

⁴ The ESS Question wording is: "Which of the descriptions on this card comes closest to how you feel about your household's income nowadays?" The answers are coded as follows: 1=Living comfortably on present income; 2=Coping on present income; 3=Difficult on present income; 4=Very difficult on present income.

⁵ The ESS Question: "Please listen to each description and tell me how much each person is or is not like you. Use this card for your answer. She/he thinks it is important that every person in the world should be treated equally. She/he believes everyone should have equal opportunities in life." The coding of the answers: 1=Very much like me; 2=Like me; 3=Somewhat like me; 4=A little like me; 5=Not like me; 6=Not like me at all.

Finally, we include *gender* (1 = male; 2 = female), *left-right partisan placement* (0 = the left; 10 = the right), whether a respondent is a *native* of the country living (1 = born in that country; 2 = not born in that country), and time dummies.

Method

After a descriptive overview, we investigate the impact of education and age on the three different aspects of the respondent's attitude toward immigration not only on a cross-country level, but also over the span of 12 years. In a first step we explore the full sample, which pools the 16 countries (i.e. Belgium, Denmark, Finland, France, Germany, Hungary, Ireland, The Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland and the United Kingdom) covered in all seven waves. This sample consists of 213,514 observations with an average sample of about 30,000 per wave and an average country sample of around 13,000 respondents. The three aspects of attitude toward immigration (cultural, general, and economic) are analyzed with two binomial regression models performed on the pooled data of all 16 European countries. Model [1] explores the effect of educational attainment and age on cultural, general and economic aspects of attitude toward immigration, while controlling for migrant inflows, country fixed effects, and time effects. In Model [2] the *age* variable was substituted by *cohort* to distinguish between an individual age and generation effect. Next, we rerun our analysis adding an interaction between age-group/cohort and education to investigate whether the effect of education is retained at different age groups.

To validate our research results at the country level, we focus on a pair of two Nordic countries (i.e. Finland and Norway). We selected this pair of countries according to the Most Similar Systems Research Design – a design used frequently in comparative politics (Lijphart 1971). Norway and Finland are two Scandinavian countries, which share many similarities in terms of geographical position, population size and homogeneity, free-market economy and unicameral parliamentary type of government (Finland is a republic, Norway is a constitutional monarchy).⁶ However, one major difference between the countries in the context of this research lies in the history of foreign population inflows. While inflow of foreign population as a percent of total population in Finland was lower than 0.5 percent and exhibited no significant change over the period of 12 years, the percent of foreigners coming to Norway doubled between 2002 and 2012 (see Appendix 5). This strategy not only allows one to investigate attitudes toward immigration on an individual country level; it also allows us to control for immigration rates as a possible alternative explanation for shifts in attitudes toward immigration. Following the approach for the full sample, we investigate the effect of our variables of interest on cultural, general and economic aspects of attitude toward immigration while differentiating between cohort and age effects separately for Norway and Finland.

⁶ <https://www.indexmundi.com/factbook/compare/finland.norway>

Results

Descriptive results

Percentages of respondents with a positive attitude to immigration in general, cultural and economic aspects in the selected 16 countries are reported in Table 1. The results at the individual country level coincide with the general trend of the full sample presented in Appendix 1 and show that respondents tend to have a more positive attitude toward immigration in its cultural aspect than in general and economic aspects in all the countries which figure in this study. While six countries (Belgium, France, UK, Hungary, Portugal and Slovenia) displayed a less favorable attitude toward immigration in general and economic aspects, with less than 50 percent of the population reporting a positive attitude, only less than 50 percent within the UK sample reported a positive attitude toward immigration from a cultural point of view. Looking at Appendix 1 we can draw another interesting conclusion: at the aggregate level, there has been very little variation in attitudes toward immigration in any of the three aspects over the span of twelve years in the 16 investigated European countries.

Table 1: Share of respondents reporting positive attitudes toward immigration, by country

Country	General attitude	Cultural attitude	Economic attitude
Belgium	46.4 %	57.4 %	45.7 %
Switzerland	53.2 %	61.0 %	59.5 %
Germany	50.5 %	60.3 %	52.5 %
Denmark	57.2 %	59.9 %	50.8 %
Spain	50.4 %	59.1 %	52.7 %
Finland	54.6 %	70.9 %	53.2 %
France	46.2 %	52.8 %	47.7%
United Kingdom	46.2 %	49.8 %	45.9 %
Hungary	40.7 %	51.5 %	38.1 %
Ireland	54.2 %	55.8 %	51.2 %
Netherlands	50.7 %	60.8 %	50.2 %
Norway	52.0 %	58.7 %	55.7 %
Poland	56.8 %	63.6 %	51.1 %
Portugal	40.7 %	52.5 %	47.1 %
Sweden	62.7 %	70.5 %	55.1 %
Slovenia	45.4 %	51.3 %	42.6 %

Source: European Social Survey 2002-2014, 16 EU countries, cases weighted by DWEIGHT.

Effects of level of education, age group and cohort, full sample

We applied a binomial logistic regression analysis to estimate the probability of a respondent having a favorable attitude toward immigration. The regression results presented in Table 2 consistently indicate that respondents with a higher level of educational attainment were more sympathetic toward immigration in all three aspects in both models. Individuals with tertiary education were almost three times more likely to hold the opinion that immigrants make their country a better place to live from a cultural point of view than those with lower secondary or less education, holding all other explanatory variables constant and controlling for time- and country-specific factors (time-effects presented in Appendix 3.A). The effect was half as big (about

1.4 times), but still statistically significant in the case of respondents with an upper secondary and post-secondary non-tertiary level of educational attainment.

In general aspects, respondents with tertiary education were twice more tolerant toward immigration and 2.5 times more tolerant in economic aspects than those with a lower secondary and less education. Respondents with an upper-secondary and post-secondary non-tertiary level of education displayed a lower probability to have a favourable attitude toward immigration in general and economic aspects (about 1.2 and 1.3 times accordingly).

The effect of *age* is negative and significant, but not linear. In all three aspects (cultural, general and economic) all age categories were less in favour of immigration than those younger than 25; however, the coefficients remain relatively similar except for the group of at least 65 years old. This finding is most vivid in the cultural aspect of attitude toward immigration, meaning that 65-year-olds were roughly half as tolerant as those younger than 25.

The coefficients for different *cohorts* are in accordance with the age effect – older cohorts were found less tolerant toward immigration in all three aspects; however, the difference between generations in the economic aspect was the smallest, while in the cultural aspect – the largest, *ceteris paribus*. Generation Y (born between 1980 and 1999) was found to be slightly over 1.6 times more tolerant toward immigration in cultural and general aspects than the Silent Generation born before 1940, while only 1.2 times in economic aspect. It may be concluded that while younger generations feel more inclusive toward outgroups than older cohorts that have been less exposed to the phenomenon of immigration throughout their lives and therefore may struggle more to accept cultural diversity, the attitude to economic aspect of immigration displays little change over generations.

Next, we consider the effects of the control variables in the pool of 16 EU countries. *Satisfaction with economy* and *feeling about income* are in line with some previous studies (Coenders et al. 2008; Kehrberg 2007), while contradict other findings (Semyonov et al. 2006), and display a consistent and significant trend in all the aspects of attitude toward immigration, meaning that the more respondents are satisfied with economy in general and their income, the more sympathetic their attitude toward immigration will be, holding other variables constant. Moreover, *gender* displays an interesting variation as a predictor of attitude toward immigration. While differences between the sexes are small and insignificant in the cultural aspect, women were found to be less tolerant toward immigration in the general aspect, and even less sympathetic in the economic aspect. This finding may be presumably explained by a fear of competition in the labor-market and unequal working conditions (such as wages inequality) that are still present in some countries nowadays, rather than a personal feeling of dislike toward outgroups.

Coefficients of the dichotomous variable *attitude to equality* are in accordance with the social identity theory (Tajfel and Turner 1986) and show that respondents who do not agree that people should be treated equally and have equal opportunities were found to be almost half as tolerant to immigration in all three aspects than those who agree with this statement. Right-wing *political affiliation* was found associated with a less tolerant attitude toward immigration in all aspects, *ceteris paribus*, a finding which does not come as surprise in times when immigrants are used as scape-goats by the new radical right. The effect of *type of residency* is relatively small but significant and indicates that residents of big cities are more tolerant toward immigration in all aspects than residents of small towns and rural areas. This might be a result of people having more opportunities to be in contact with immigrants in big cities and thus correlate with the premise of the contact theory (Pettigrew 1998); however, it may also be due to the open-mindedness of those who live in big cities and initially display a higher acceptance of diversity.

Table 2: Odds ratios and robust standard errors (in parentheses) from binomial regression estimating the association between attitudes (cultural, general, and economic) toward immigration and education as well as age category (model [1]) or cohort (model [2]).

	Cultural attitude		General attitude		Economic attitude	
	[1]	[2]	[1]	[2]	[1]	[2]
Education (Ref: lower secondary and less)						
upper secondary and post-secondary	1.436*** (.027)	1.422*** (.027)	1.238*** (.025)	1.228*** (.024)	1.318*** (.026)	1.309*** (.026)
tertiary	2.891*** (.063)	2.835*** (.061)	2.142*** (.046)	2.104*** (.044)	2.617*** (.056)	2.578*** (.054)
Age (Ref: <25)						
25-34	.831*** (.024)		.837*** (.024)		.864*** (.025)	
35-44	.925*** (.026)		.925*** (.026)		.945** (.026)	
45-54	.872*** (.024)		.867*** (.024)		.951* (.026)	
55-64	.758*** (.021)		.767*** (.022)		.941** (.026)	
65+	.572*** (.015)		.619*** (.017)		.8*** (.022)	
Cohort (Ref: <1940)						
1940-1959		1.416*** (.034)		1.377*** (.035)		1.201*** (.029)
1960-1979		1.639*** (.040)		1.546*** (.040)		1.187*** (.029)
1980-1999		1.682*** (.045)		1.709*** (.049)		1.248*** (.034)
Migrant inflows (% of total pop.)	.803*** (.024)	.791*** (.022)	.871*** (.026)	.913*** (.026)	1.188*** (.004)	1.235*** (.035)
Satisfaction with economy	1.128*** (.004)	1.122*** (.004)	1.169*** (.004)	1.163*** (.004)	.84*** (.009)	1.185*** (.004)
Negative feeling about income	.847*** (.009)	.843*** (.009)	.875*** (.009)	.876*** (.009)	.692*** (.020)	.84*** (.009)
Unequal treatment	.571*** (.016)	.574*** (.016)	.609*** (.018)	.604*** (.018)	.91** (.003)	.688*** (.020)
Partisan placement	.876*** (.003)	.876*** (.003)	.89*** (.003)	.892*** (.003)	1.188*** (.004)	.911*** (.003)
Non-native	1.608*** (.049)	1.602*** (.049)	2*** (.058)	2.016*** (.058)	1.801*** (.053)	1.804*** (.053)
Rural residence	.817*** (.013)	.817*** (.013)	.829*** (.014)	.835*** (.014)	.816*** (.013)	.821*** (.013)
Women	1.02 (.015)	1.019 (.015)	.938*** (.014)	.939*** (.014)	.716*** (.010)	.717*** (.010)
N	173,241	173,278	172,840	172,876	172,660	172,697

Notes: *p<0.1; **p<0.05; ***p<0.01. Sample includes 16 EU countries; each model controls for country fixed effects and model [1] additionally controls for survey year; sampling weights are considered.

In addition, inhabitants of small towns and rural areas might read negative headers about migration in the news rather than having personal experience with migration.

Foreign-born respondents exhibit a significantly more favorable attitude toward immigration in all three aspects than *natives*, particularly in general (twice more likely to favor immigration) and in economic (over than 1.8 times) aspects, holding other variables constant. *Migrant inflows* as measured in the current year of the survey have a significant negative impact on attitudes toward immigration in general and cultural aspects, while the effect of the variable on the economic aspect is positive and significant, controlling for other variables. This raises interesting questions to be discussed further down.

We also investigated whether the significant and positive effect of a higher level of educational attainment is retained even at an older age. We added interaction variables between age group and level of educational attainment to the existing statistical models. Table 3 summarizes the findings, presenting only coefficients of the interactions, controlled for all other independent variables such as in the main models.

According to the coefficients, respondents up to the middle age with a tertiary level of educational attainment were roughly twice more sympathetic toward immigration in the cultural aspect than younger individuals with a lower than secondary and lower-secondary level of education (see Table 3). However, the power of tertiary education decreases among at least 65-year-old respondents, but it remains positive and statistically significant. A similar finding presents itself in two additional aspects of attitude toward immigration – general and economic – albeit to a slightly smaller degree. This supports the hypothesis that individuals with a higher level of educational attainment, specifically tertiary education, will have a more favorable attitude toward immigration even in an older age.

Table 3: Odds ratios and robust standard errors (in parentheses) from binomial regression estimating the interaction between education and age as well as education and cohort effect on attitudes (cultural, general, and economic) toward immigration.

	Cultural attitude		General attitude		Economic attitude	
	upper secondary and post-secondary	tertiary	upper secondary and post-secondary	tertiary	upper secondary and post-secondary	tertiary
Age (Ref: <25)						
25-34	1.197*** (.082)	1.887*** (.169)	1.175** (.085)	1.605*** (.140)	1.112 (.079)	1.463** * (.126)
35-44	1.362*** (.085)	2.059*** (.176)	1.163** (.076)	1.684*** (.139)	1.196*** (.078)	1.679** * (.138)
45-54	1.156** (.069)	1.744*** (.147)	1.079 (.068)	1.593*** (.130)	1.128* (.071)	1.555** * (.126)
55-64	1.393*** (.084)	1.646*** (.139)	1.212*** (.077)	1.574*** (.128)	1.357*** (.085)	1.636** * (.133)
65+	1.15** (.067)	1.404*** (.116)	1.028 (.063)	1.34*** (.108)	1.132** (.068)	1.311** * (.105)
Cohort (Ref: <1940)						
1940-1959	1.195*** (.064)	1.278*** (.079)	1.114* (.066)	1.163** (.075)	1.042 (.059)	1.199** * (.075)
1960-1979	1.123** (.062)	1.451*** (.091)	1.093 (.067)	1.201*** (.079)	.933 (.054)	1.166** (.074)
1980-1999	.845*** (.050)	.888 (.064)	.965 (.062)	.881* (.064)	.829*** (.051)	.904 (.065)

Notes: *p<0.1; **p<0.05; ***p<0.01. Sampling weights are considered.

Interactions between different cohorts and levels of educational attainment exhibit a U-shape trend. Although the so-called Baby Boomers (born between 1940 and 1959) and Generation X (born between 1960 and 1979) with a tertiary level of educational attainment are more tolerant toward immigration than the Silent Generation (born before 1940) with a lower secondary and less education, the differences in coefficients are small. Moreover, despite the expectation that younger educated cohorts will display a more favorable attitude toward immigration, the results for the Generation Y (born between 1980 and 1999) deviate from this assumption; in all aspects of attitude toward immigration they were found less sympathetic than the Silent Generation born before 1940.

Effects of level of education, age group and cohort: Comparison of Norway and Finland

Comparing the two rather similar Nordic countries of Norway and Finland which share many features but differ by their histories of migration – with Finland having experienced much lower levels –, we generally find the same pattern as described above for all countries. The picture is dominated by a considerable difference between respondents with tertiary and respondents with lower levels of *educational attainment* (Tables 4,5). In Norway, respondents with tertiary education were found roughly three times more prone to develop favorable attitude toward immigration in cultural (3.24) and economic (more than 2.97 times) aspects and almost twice more (1.8) in general aspect, compared to those with lower secondary and less education. The effect was almost half as big among respondents with upper secondary and post-secondary levels of education, which coincides with the findings in the full sample. The case of Finland displays similar results, although the effect of tertiary education in cultural and economic aspects is slightly smaller than in Norway, albeit still significant.

The impact of *age* on attitudes toward immigration, however, exhibits a very different trend, compared to the full sample (see Table 2 for the full sample and Tables 4,5). Both in Norway and Finland, when using the group of 25-year-olds and younger as a reference category, overall the effect was found positive. While the significance of this finding varies a bit, the results mirror the results when investigating the *cohort* effect. Our results indicate that Baby Boomers and Generation X (born between 1940-1959 and between 1960-1979, accordingly) were more tolerant toward immigration in all three aspects in both countries, whereas Generation Y was found less sympathetic toward immigration than their predecessors, *ceteris paribus*. Overall, the difference was found larger in Norway than in Finland and may indicate a growing decrease in favorable attitudes toward immigration among the young in the future.

Further, *satisfaction with economy* was found significant positive and in line with the findings of the full sample analysis and previous studies (Coenders et al. 2008; Kehrberg 2007); however, *feeling about income* displayed that a more negative feeling about income is assigned with less favourable attitude. *Women* were found significantly more in favour of immigration in its cultural aspect, whereas significantly less in favour of immigration in the economic aspect in both countries, *ceteris paribus*. This coincides with the finding of the full sample and presumably indicates that women are more intimidated by the repercussions of immigration than men due to the competition over the allocation of social benefits and in the labor market, while men show less acceptance of cultural diversity.

In both countries, *residents* of rural areas displayed less sympathetic attitudes toward immigration than those residing in big cities, having other variables in the models controlled for. Moreover, *natives* showed less

support for immigration in general and economic aspects. Finland having smaller inflows of foreigners, showed more tolerance in cultural aspect of immigration than Norway with a higher rate of immigration. The effects of *current inflows of migrant population* are significantly positive in both countries with respect to general and economic aspects. In Finland, they are even more positive than in Norway. However, both countries showed less tolerance toward immigration in the cultural aspect, meaning that despite the economic advantages seen by immigration, cultural differences make the phenomenon less desirable. Interestingly, despite a lower percent of migrant population inflows, Finland showed less cultural inclusiveness in its attitude toward immigration than Norway.

Table 4: Odds ratios and robust standard errors (in parentheses) from binomial regression estimating the association between attitudes (cultural, general, and economic) toward immigration and education as well as age category within Norway (NO) and Finland (FI).

	Cultural attitude		General attitude		Economic attitude	
	[1]	[2]	[1]	[2]	[1]	[2]
Education (Ref: lower secondary and less)						
upper secondary and post-secondary	1.428*** (.084)	1.526*** (.090)	1.065 (.068)	1.234*** (.061)	1.385*** (.084)	1.179*** (.059)
tertiary	3.245*** (.213)	2.863*** (.211)	1.894*** (.127)	1.838*** (.100)	2.978*** (.195)	2.342*** (.129)
Age (Ref: <25)						
25-34	1.149* (.090)	1.021 (.101)	1.022 (.082)	.995 (.073)	1.168** (.092)	1.063 (.079)
35-44	1.477*** (.111)	1.073 (.103)	1.155* (.089)	.914 (.066)	1.441*** (.108)	1.075 (.078)
45-54	1.572*** (.118)	1.19* (.109)	1.181** (.091)	1.16** (.080)	1.48*** (.111)	1.298*** (.091)
55-64	1.364*** (.105)	1.017 (.088)	.947 (.075)	1.247*** (.084)	1.334*** (.103)	1.372*** (.094)
65+	.951 (.072)	.667*** (.054)	.852** (.068)	1.005 (.068)	1.033 (.079)	1.149** (.078)
Migrant inflows (% of total pop.)	.88* (.064)	.603* (.181)	1.998*** (.148)	3.206*** (.740)	1.645*** (.119)	3.526*** (.824)
Satisfaction with economy	1.137*** (.012)	1.167*** (.015)	1.138*** (.013)	1.162*** (.012)	1.136*** (.012)	1.185*** (.013)
Negative feeling about income	.941* (.030)	.915** (.035)	.871*** (.029)	.981 (.029)	.875*** (.028)	.868*** (.026)
Unequal treatment	.644*** (.039)	.447*** (.033)	.628*** (.042)	.509*** (.037)	.638*** (.039)	.551*** (.039)
Partisan placement	.842*** (.008)	.961*** (.012)	.857*** (.009)	.983* (.009)	.891*** (.009)	1.007 (.009)
Non-native						
Rural residence	1.269*** (.103)	.744** (.109)	1.895*** (.145)	1.526*** (.173)	1.428*** (.113)	1.303** (.150)
Women	.744*** (.034)	.74*** (.042)	.741*** (.033)	.754*** (.031)	.754*** (.034)	.657*** (.027)
N	10,515	12,199	10,492	12,164	10,454	12,171

Notes: *p<0.1; **p<0.05; ***p<0.01; sampling weights are considered.

In both countries *political affiliation* had a significant effect, showing that right-wing partisan placement was associated with a lower tolerance toward immigration in general and cultural aspects; however, in economic aspect, the effect was insignificant for Finland. Further, we hypothesized in this paper that respondents with a higher level of education would display a tolerant attitude toward immigration even in an older age. The results for Finland and Norway summarized in Table 6 show that neither age nor cohort have significant effects once considering the interaction with education and controlling for all the other variables in contrast to results gained with the full sample. This seems to indicate that at least in the two Nordic countries Finland and Norway the education effect of viewing migration more positively clearly dominates the cohort effect which across all countries implies less tolerance for the youngest cohorts after controlling for education.

Table 5: Odds ratios and robust standard errors (in parentheses) from binomial regression estimating the association between attitudes (cultural, general, and economic) toward immigration and education as well as cohort within Norway (NO) and Finland (FI).

	Cultural attitude		General attitude		Economic attitude	
	[1]	[2]	[1]	[2]	[1]	[2]
Education (Ref: lower secondary and less)						
upper secondary and post-secondary	1.435*** (.084)	1.505*** (.089)	1.059 (.067)	1.199*** (.059)	1.397*** (.084)	1.145*** (.057)
tertiary	3.24*** (.208)	2.771*** (.201)	1.87*** (.123)	1.768*** (.094)	2.995*** (.193)	2.259*** (.122)
Cohort (Ref: <1940)	1.676*** (.119)	1.745*** (.122)	1.33*** (.101)	1.406*** (.085)	1.337*** (.096)	1.336*** (.081)
1940-1959	1.581*** (.114)	1.856*** (.149)	1.449*** (.112)	1.113 (.073)	1.351*** (.099)	1.096 (.072)
1960-1979	1.094 (.086)	1.484*** (.119)	1.228** (.103)	1.089 (.075)	.958 (.076)	.943 (.065)
1980-1999	.882* (.065)	.444*** (.133)	1.949*** (.146)	3.356*** (.776)	1.669*** (.123)	3.982*** (.932)
Migrant inflows (% of total pop.)	1.135*** (.012)	1.171*** (.015)	1.136*** (.013)	1.164*** (.012)	1.135*** (.012)	1.186*** (.013)
Satisfaction with economy	.942* (.030)	.917** (.035)	.87*** (.029)	.982 (.029)	.875*** (.028)	.868*** (.026)
Negative feeling about income	.642*** (.039)	.445*** (.032)	.627*** (.042)	.509*** (.037)	.638*** (.039)	.552*** (.039)
Unequal treatment	.841*** (.008)	.96*** (.012)	.857*** (.009)	.985 (.009)	.89*** (.009)	1.009 (.009)
Partisan placement						
Non-native	1.287*** (.104)	.763* (.112)	1.902*** (.146)	1.525*** (.173)	1.447*** (.114)	1.306** (.150)
Rural residence	.743*** (.034)	.732*** (.042)	.741*** (.033)	.749*** (.031)	.756*** (.034)	.653*** (.027)
Women	1.258*** (.054)	1.339*** (.066)	.996 (.043)	1.272*** (.048)	.647*** (.027)	.873*** (.033)
N	10,515	12,199	10,492	12,164	10,454	12,171

Notes: *p<0.1; **p<0.05; ***p<0.01; sampling weights are considered.

Table 6: Odds ratios and robust standard errors (in parentheses) from binomial regression estimating the interaction between education and age as well as education and cohort effect on attitudes (cultural, general, and economic) toward immigration within Norway (NO) and Finland (FI).

	Cultural attitude				General attitude				Economic attitude			
	upper secondary and post-secondary		tertiary		upper secondary and post-secondary		tertiary		upper secondary and post-secondary		tertiary	
Age (Ref: <25)	NO	FI	NO	FI	NO	FI	NO	FI	NO	FI	NO	FI
25-34	.901 (.252)	1.105 (.322)	1.257 (.395)	1.143 (.470)	.924 (.272)	1.09 (.280)	1.535 (.494)	1.183 (.360)	.753 (.213)	1.105 (.284)	1.142 (.358)	1.16 (.354)
35-44	1.348 (.292)	1.224 (.289)	1.777** (.469)	1.312 (.489)	1.294 (.305)	1.073 (.221)	2.116** * (.577)	1.326 (.348)	.873 (.193)	.875 (.178)	1.553* (.406)	1.34 (.351)
45-54	.899 (.177)	1.302 (.263)	1.156 (.288)	1.372 (.489)	1.288 (.275)	1.159 (.192)	1.834** (.467)	1.471 (.346)	.864 (.174)	1.143 (.190)	1.144 (.281)	1.588* (.377)
55-64	1.408* (.259)	.841 (.153)	1.578* (.381)	1.028 (.356)	1.165 (.230)	1.12 (.167)	1.489 (.362)	1.375 (.308)	1.208 (.230)	1.248 (.187)	1.693* * (.407)	1.71** (.388)
65+	1.276 (.217)	1.258 (.223)	1.67** (.390)	1.067 (.365)	1.499** (.272)	1.469* (.219)	1.555* (.366)	1.427 (.324)	.948 (.165)	1.517*** (.227)	1.252 (.288)	1.464* (.335)
Cohort (Ref: <1940)	1.121 (.188)	.945 (.160)	.829 (.157)	1.196 (.243)	.925 (.171)	.853 (.127)	1.213 (.240)	.997 (.155)	1.16 (.199)	.857 (.127)	1.159 (.219)	1.038 (.165)
1940-1959	.879 (.174)	1.357 (.277)	.784 (.169)	1.711** (.394)	.831 (.180)	.92 (.172)	1.291 (.293)	1.013 (.193)	.846 (.170)	.764 (.141)	1.017 (.218)	.905 (.173)
1960-1979	.865 (.155)	.819 (.153)	.586** (.124)	.803 (.194)	.725* (.140)	.704** (.114)	.796 (.173)	.883 (.164)	1.06 (.194)	.653*** (.106)	.879 (.186)	.822 (.155)
1980-1999	1.121 (.188)	.945 (.160)	.829 (.157)	1.196 (.243)	.925 (.171)	.853 (.127)	1.213 (.240)	.997 (.155)	1.16 (.199)	.857 (.127)	1.159 (.219)	1.038 (.165)

Notes: *p<0.1; **p<0.05; ***p<0.01. Sampling weights are considered.

Discussion and conclusion

This article aimed to assess the effects of education and age-cohorts on three aspects of attitude toward immigration – general, cultural and economic. By dividing the impact of age-cohort into two separate models, we aimed to distinguish between an individual-level age effect and an aggregate-level effect of generations or cohorts. We started with the hypothesis that higher level of educational attainment and younger age/cohort will result in a more favorable attitude toward immigration in all three aspects.

What we found was an unexpected race between the strongly positive education effect and a tendency towards declining tolerance for more recent cohorts. Since these more recent birth cohorts are generally better educated than older ones, in the aggregate picture this decline over time does not surface and the evidently dominating education effect even results in a slow increase of positive assessments of migration over time (see Appendix 1).

The strong positive education effect is visible at both aggregate and individual-country level and indicates that higher educated (i.e. tertiary educated) show roughly a three times more favorable attitude toward immigration in all three aspects as compared to the lower educated, *ceteris paribus*. This result goes in line with that of Coenders and Scheepers (2003), which indicated that higher educated people were more liberal toward outgroups and immigration in general, while people with lower level of education displayed sentiments of ethnic exclusionism and national chauvinism. The fact that these strong education differentials hold for all three aspects of migration attitudes also indicates that it is not merely the higher socio-economic status of better educated groups that makes them less vulnerable in terms of economic competition with immigrants. The fact that the differences are also pronounced in the cultural dimension shows that it also is the cognitive enhancement and the broader thinking horizon that comes with higher education that influences the attitudes towards migration.

More specifically, the difference in attitudes between tertiary educated respondents and those who do not hold a university degree might also stem from the nature of a university education, which promotes not only the importance of knowledge but also values of inclusion and acceptance of diversity and was found to have a mind-opening effect on students' beliefs and attitudes (Ceobanu & Escandell 2008). However, this effect is expected to depend on the idiosyncrasies of national settings, which we examined more thoroughly in our analysis on Norway and Finland.

With respect to our second hypothesis about younger age and membership in more recent cohorts leading to more tolerance we only got mixed results. At the aggregate level and without considering the interactions with education (see Table 2) we did indeed find the expected pattern of a mild increase in tolerance in the more recent cohorts. But already the focus on education-specific cohort trends (Table 3) shows sort of a U-shaped pattern with the oldest cohorts (born before 1940) and the youngest (born after 1980) being the least tolerant with the middle cohorts being more tolerant. For the two Nordic countries Finland and Norway this U-shaped pattern is even more pronounced although many of the estimated coefficients are statistically not significant due to smaller sample sizes.

In general, we found that Generation Y (born between 1980 and 1999) was less tolerant toward immigration at both aggregate and individual country level regardless of the differences between upper secondary and tertiary levels of educational attainment. This finding contradicts our hypotheses and indicates a growing sentiment of hostility toward out-groups among the young after controlling for the improving level of education. Based on the assumption of cohort determinism (Ryder 1965), according to which an individual has a limited ability to change his attitudes once they are established, this finding may have profound implications in terms of anti-immigration policies, radicalization of politics, antagonism to multiculturalism and globalization, the

recent revival of the populist radical right being only a small step to cultural exclusion and dominance of national values.

But at the same time the picture is dominated by another even more powerful inter-cohort change, namely the fact that younger cohorts are better educated, and that higher education is a highly significant factor leading to more tolerance. Hence, the main political message to be derived from this analysis is that continued strong investments in education of the young cohorts is the best remedy against the otherwise prevalent tendency of increasing intolerance among young cohorts. Or viewed the other way around, should education levels stagnate or even deteriorate for the younger cohorts that may imply a future decline in tolerance towards immigration.

Furthermore, we tested our hypotheses with respect to the impact of changing contemporary immigration rates in the European countries. In the pool of the 16 EU countries, we found that migrant inflows have a significant positive effect on the economic aspect of attitude toward immigration; however, their impact on attitudes in general and cultural aspects was negative and significant. This finding indicates that respondents acknowledge economic benefits of immigration in ageing societies, even though they are less content with the phenomenon culturally. Interestingly, at the individual country level, Finland showed less cultural inclusiveness in its attitude toward immigration than Norway, despite a lower percent of migrant population inflows than in Norway. But this could also have to do with the specific situation of Finland being a small population with a very different non-Indo-Germanic language that is very concerned about the survival of this specific culture in a globalizing world. Our results for Finland thus contradict previous findings in the literature (see Semyonov, Rajzman, Gorodzeisky 2006) that anti-foreigner sentiments develop in places with a large proportion of non-native populations.

Public discontent with immigration is often channeled by populist radical parties into defining the outsider as a *foe*, who presents a cultural threat to the imagined native community.⁷ By calling for a clear and mutually-exclusive Schmittian distinction between “us” and “the other” not only as part of media spins but also while outlying their agendas in election manifestos, populist radical parties legitimize anti-immigration discourse in Europe (Umansky and Spektorowski 2017). The post-industrial mindset (Inglehart 1997) that advocated values of liberalism and inclusion is giving way to the revival of nationalism and new definitions of “friends” and “foes”.

One of the biggest challenges today is not only finding a quick and efficient way to integrate newcomers into hosting societies, but also finding a way to combat the misperceptions disseminated by the populist radical right. Since many populist radical right supporters are found among so-called “losers of modernization”, i.e. the less educated and less skilled lower strata (Betz 1993), and tertiary education was found in this research to have a strong positive effect on positive attitudes to immigration in all aspects at the aggregate and individual country level, higher education may present a valuable tool in tackling the recent radicalization of the political sphere. If we follow the assumption that education can foster change within birth cohorts (Lutz 2013), the implications may differ greatly. A well-educated Generation Y, equipped with the necessary skills to compete in the labor market, may become “winners of modernization” and reverse the deterioration of liberal values of inclusion and acceptance of the other. Higher education not only equips people with skills, but also

⁷ Despite the difference in the rate of migrant inflows in Finland and Norway, ideological positions on the issue of multiculturalism were found equally negative among the populist radical right parties, the Finns in Finland and the Progress Party in Norway, while other political parties in both countries referred to multiculturalism in a positive way (see Appendix 6 for more information).

allows for having a more critical point of view, which can be useful in tackling the radical populist propaganda and the parties' attempt to scapegoat "the other", especially in the aftermath of the 2015 "refugee crisis".

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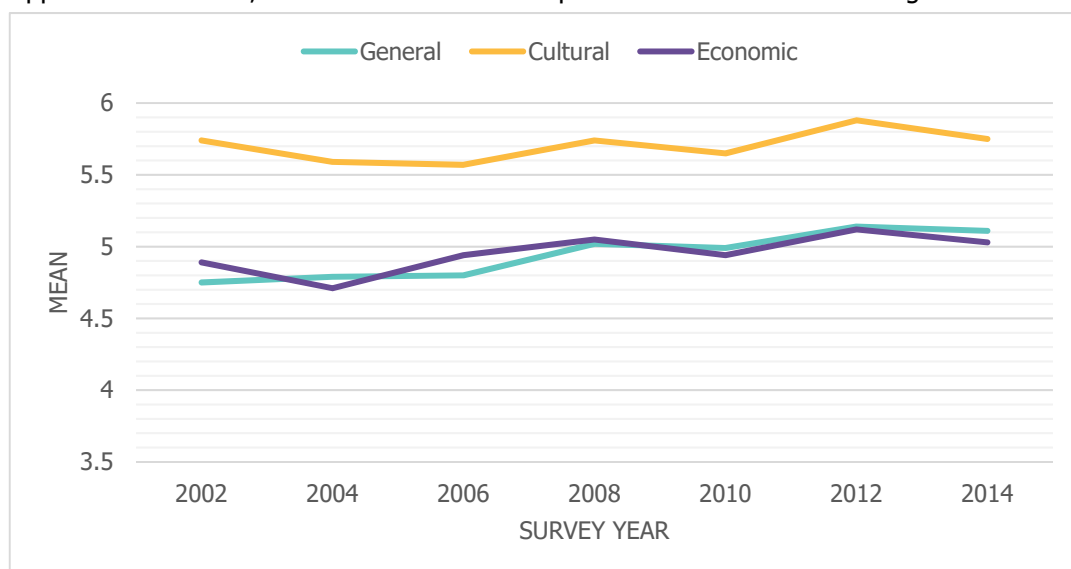
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Appendices

Appendix 1: General, cultural and economic aspects of attitude toward immigration



Source: European Social Survey 2002-2014, 16 EU countries.

Appendix 2: Bivariate correlation between independent variables

	Level of education	Age category	Type of residency	Equality attitude	Partisan placement	Native	Gender	Satisfaction with economy	% of migrant inflows	Feeling about income
Level of education	1									
Age category	-0.1353	1								
Type of residency	-0.1115	0.0341	1							
Equality attitude	-0.0265	0.013	0.0076	1						
Partisan placement	-0.0163	0.0614	0.0383	0.083	1					
Native	0.0486	-0.0527	-0.0704	-0.0187	-0.0412	1				
Gender	-0.0207	0.0172	-0.0097	-0.0434	-0.0352	0.0054	1			
Satisfaction with economy	0.1314	-0.0234	-0.0044	0.0152	0.1138	0.058	-0.0685	1		
% of migrant inflows	0.0752	-0.0007	0.0523	-0.0185	-0.0568	0.1151	-0.0157	0.2167	1	
Feeling about income	-0.2391	0.0067	0.0062	-0.0017	-0.0588	0.0392	0.0556	-0.3318	-0.1805	1

Note: N=176,56

Appendix 3: Cultural, general and economic attitudes toward immigration; time effects

Appendix 3.A: Odds ratios and robust standard errors (in parentheses) of survey year from binomial regression estimating the association between attitudes (cultural, general, and economic) toward immigration and education as well as age category.

Survey year (Ref: 2002)	Cultural attitude	General attitude	Economic attitude
	2004	.885*** (.026)	1.152*** (.036)
2006	.788*** (.023)	1.046 (.032)	1.046 (.031)
2008	1.018 (.030)	1.447*** (.044)	1.269*** (.037)
2010	.866*** (.025)	1.307*** (.039)	1.106*** (.032)
2012	1.023 (.029)	1.511*** (.045)	1.224*** (.036)
2014	.937** (.028)	1.389*** (.043)	1.082*** (.033)

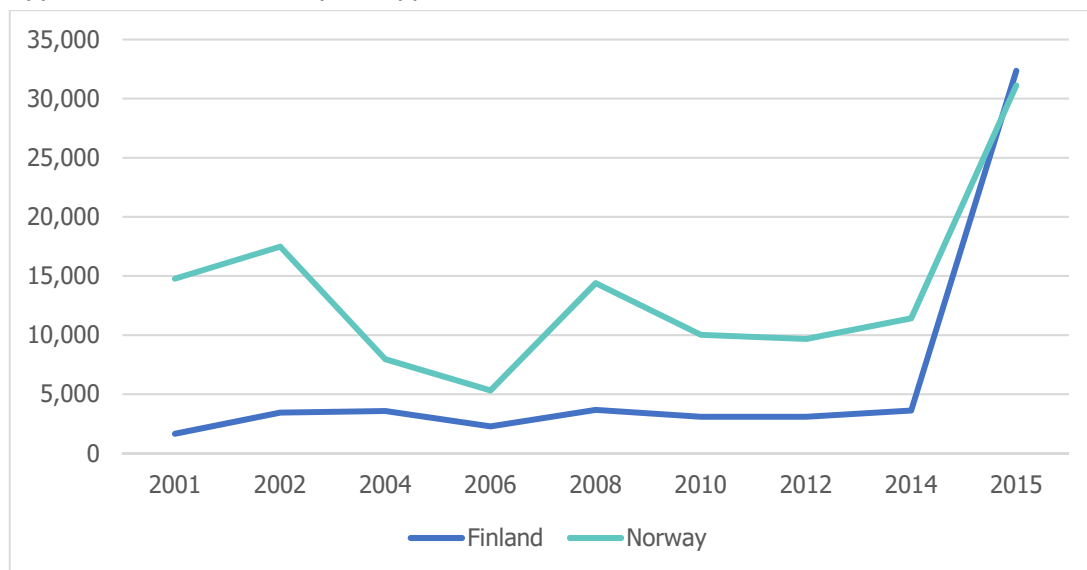
Notes: *p<0.1; **p<0.05; ***p<0.01; sampling weights are considered.

Appendix 3.B: Odds ratios and robust standard errors (in parentheses) of survey year from binomial regression estimating the association between attitudes (cultural, general, and economic) toward immigration and education as well as age category within Norway (NO) and Finland (FI).

Survey year (Ref: 2002)	Cultural attitude		General attitude		Economic attitude	
	NO	FI	NO	FI	NO	FI
2004	.855** (.065)	.801** (.078)	1.04 (.084)	1.193** (.087)	.743*** (.056)	.833** (.061)
2006	.871* (.067)	.876 (.087)	1.292*** (.104)	1.282*** (.094)	1.046 (.080)	1.039 (.077)
2008	.943 (.074)	.972 (.094)	1.685*** (.136)	1.355*** (.096)	1.343*** (.104)	1.295*** (.092)
2010	.768*** (.060)	.7*** (.067)	1.396*** (.113)	1.222*** (.090)	1.07 (.083)	.984 (.073)
2012	.866* (.068)	.817** (.075)	1.929*** (.155)	1.341*** (.093)	1.335*** (.104)	1.087 (.076)
2014	.75*** (.060)	.643*** (.059)	1.566*** (.129)	1.462*** (.105)	1.017 (.081)	1.148* (.083)

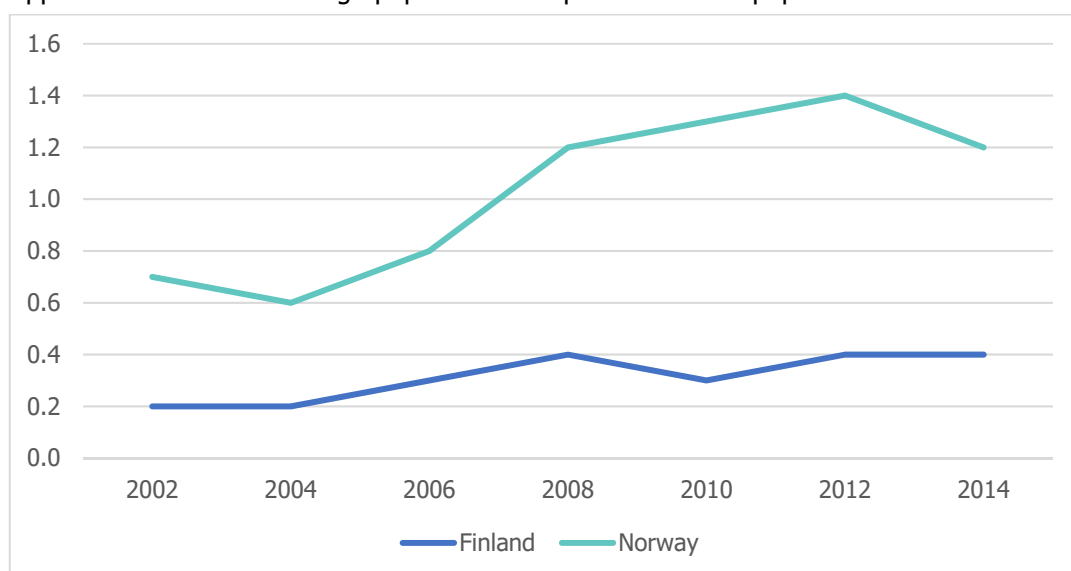
Notes: *p<0.1; **p<0.05; ***p<0.01; sampling weights are considered.

Appendix 4: Number of asylum application in the selected countries



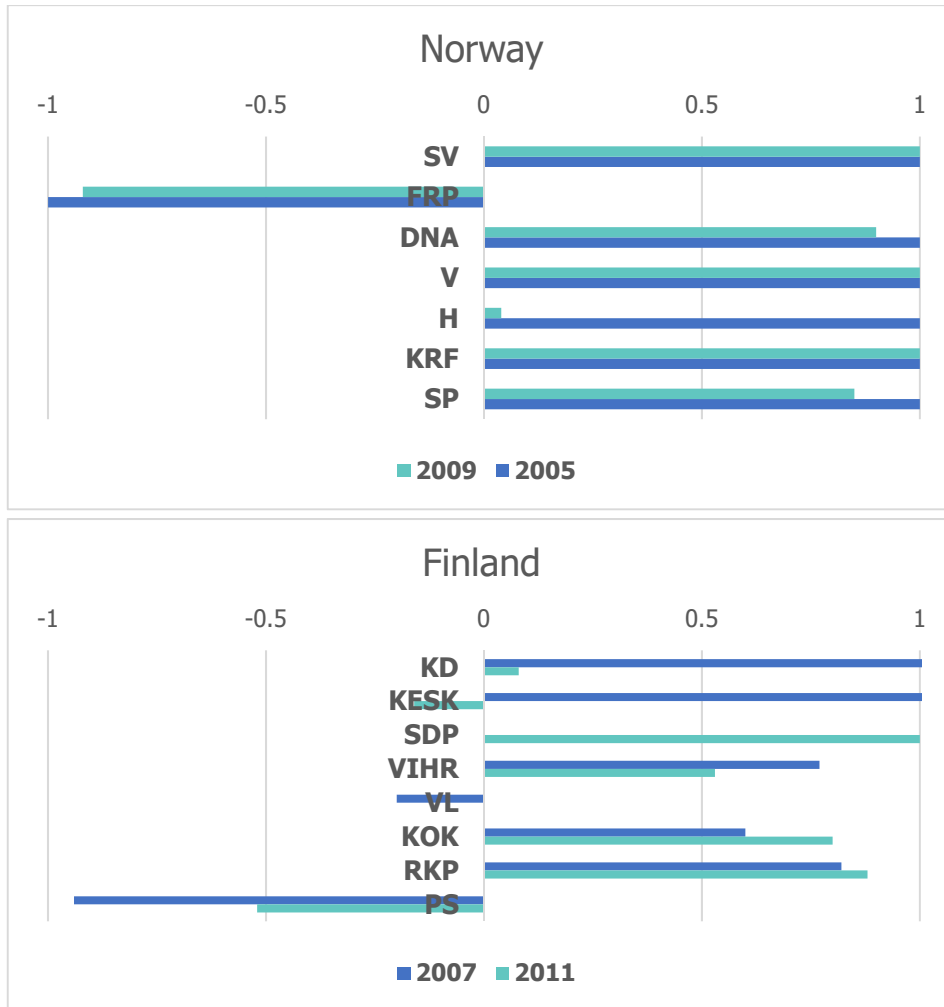
Source: Eurostat

Appendix 5: Inflows of foreign population as a percent of total population



Source: OECD & Faostat

Appendix 6: Party positions on the issue of multiculturalism in Norway and Finland⁸



Note: Calculated by the authors. Range is from -1 to +1. Position is estimated by dividing the delta between the following variables – 607 (multiculturalism positive) and 608 (multiculturalism negative) - by the total number of references to multiculturalism in a party manifesto.

Source: Comparative Manifesto Project.

⁸ DNA – Norwegian Labor Party; FRP – Progress Party; H – Conservative Party; SV – Socialist Left Party; KRF – Christian Democratic Party; SP – Centre Party; V – Liberal Party.
 Keskk – Center Party of Finland; SDP – Social Democratic Party; KOK – National Coalition Party; VL – Left Alliance; Vihr – Green League; RKP – Swedish People’s Party in Finland; KD – Christian Democrats in Finland; PS – True Finns.