**Survey nonresponse in attitudes towards immigration in Europe**

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**Abstract**: Although immigration is one of key issues facing European societies today, many survey respondents do not reply to questions about immigration and ethnic minorities. Using data from the 2014 European Social Survey, this paper explores the characteristics of nonrespondents and the potential mechanisms which might lie behind their refraining from answering immigration-related questions. Item nonresponse to seven questions on the impact of immigration (impact items) and six questions on allowing ethnic/racial/religious minorities into the respondent’s country (openness items) is analysed. The results indicate that nonresponse to these items is systematically related to respondents’ profiles, their experiences, the characteristics of the interviewer, and the country context. Respondents with a moderate amount of contact with ethnic minorities and who are interested in politics are least uncertain about their attitudes and most likely to report them. Contrary to expectations, nonresponse is not lowest among the more educated – indeed, the nonresponse rate for the openness items is highest for the most highly educated. The results also point to the importance of the interviewer effect, as nonresponse to immigration-related items varies more between interviewers than between countries. The paper concludes by highlighting the implications for the design and analysis of surveys measuring attitudes towards immigration.

**Keywords**: attitudes, immigration, no-opinions, item nonresponse, surveys, European Social Survey.

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**Introduction**

Surveys on attitudes towards key issues facing societies, like immigration, are often used by politicians in justifying policies and by the media in shaping debates. In an era of increasing real and perceived ethnic diversification in Europe (Duffy, Stannard 2017), the question of why some survey respondents decide not to express opinions about international migration and immigrants is timely. Yet, the issue of nonresponse to questions about immigration has been given little attention in the field of ethnic and migration studies (Alexander 2017), and we do not understand what processes lead to nonresponse for immigration-related items. Nonresponse can lead to exclusion bias, when the voice of some people is not heard even though the survey sample is representative (Berinsky 2002). The proportion of ‘don’t knows’, even if low, can still be significant for sample-based estimates, when opinions are evenly split. For example, differences of only a few per cent were decisive in the result of the 2016 British EU Referendum (48.1% voted in favour of the UK remaining in the European Union). While the polls in the weeks just before the vote favoured the remain option, up to 14% of respondents were ‘undecided’[[1]](#footnote-1).

There may be a combination of technical (survey-driven), psychological (respondent-specific) and social context (policy, debates, immigration dynamics) factors all contributing to the likelihood of nonresponse to questions measuring attitudes towards immigration. This paper examines item nonresponse patterns (both ‘don’t knows’ and refusals) in the European Social Survey (ESS), wave 7 (ESS 2014a), for attitudinal questions regarding (i) the impact of immigration on the respondent’s country, and (ii) on permitting immigrant groups of different characteristics into the respondent’s country. This wave was chosen as it has an ‘Immigration Module’ comprising extra questions measuring opinions on immigration, other races or ethnic groups and the frequency of contact with them. ESS is the most important and influential cross-national survey in Europe. Since 2002, this biennial survey has captured an array of social and political opinions in most European countries. It is used to inform national policymaking, agenda setting and policy monitoring (Kolarz et al. 2017)[[2]](#footnote-2). Hence, it is important to better understand why some people do not respond to questions about immigration especially when these are used to justify policies, motivate the agenda, or to drive debates.

A wide range of survey-based studies has examined the role of individual experiences and socio-demographic factors for the formation of anti-immigration attitudes (cf. Hellwig, Sinno 2017; McLaren 2003; Gorodzeisky, Semyonov 2009, 2015; Meuleman et al. 2009; Pardos-Prado 2011). This paper contributes to this research area by combining it with the literature on survey methodology. It improves our understanding on how attitudes towards immigration and immigrants are formed; specifically, the role of education, political engagement, frequency of contact with people of dissimilar ethnicity/race and inter-country differences. The paper concludes with some recommendations about the design and analysis of surveys measuring attitudes towards immigration.

**Why does nonresponse occur and why it is important?**

Why some people respond ‘don’t know’ or ‘refuse to answer’ to certain questions lies at the heart of survey design. Does this item nonresponse occur at random or not? If not at random, does it depend more on respondents’ traits or on the characteristics of interviewers? Some people may genuinely not hold any attitudes as they “have little knowledge of these issues or have not thought enough about it” (Alwin, Krosnick 1991: 144) or they might have difficulty in summarising their personal opinions (Berinsky 2002). However, most survey items measuring attitudes are phrased in a way that presumes respondents do hold an opinion and are able to place them on survey scales (Schuman, Presser 1980; Schaeffer, Presser 2003).

Three questions measuring opposition to immigration (of same race, different race and from poor non-European countries) and three opinions about the impact of immigration (on economy, cultural life and as a place to live) have been asked in every wave of ESS from 2002-2016. On average across the 20 countries analysed, nonresponse to these items has declined from about 4-5% to around 2-3% between wave 1 (2002) and wave 8 (2016). This could perhaps reflect improvements in data collection implemented by the ESS (Beullens et al. 2018), and more respondents feeling comfortable about expressing their attitudes towards immigration (Berinsky 1999). However, as depicted in Figure 1, nonresponse rates vary quite considerably cross-nationally.

[Figure 1 about here]

In most ESS countries, the percentage of people who did not express their opinion on immigration-related questions has decreased since 2002. For example, in Austria in 2002, 9% of respondents replied ‘don’t know’ or refused to answer the question about letting in immigrants from poor countries outside Europe, while in 2016 it was only 2.2%. In Czechia in 2002, 14.4% of respondents could not say whether immigration makes a country a better/worse place to live, but this fell to only 2.4% in 2016. Nonetheless, there are some countries such as Poland, Hungary and Lithuania where nonresponse in 2016 remains as high as 10% for some items. If nonresponse is not random, and the same factors determine both the direction of opinions and the likelihood of nonresponse, survey estimates will be biased (Berinsky 2002).

Below, I discuss some mechanisms, which may explain why some respondents do not answer survey questions designed to measure their attitudes towards immigration.

***High cognitive effort mechanism: the lack of knowledge and familiarity***

According to the cognitive question response model, people formulate their answers to survey questions sequentially: assimilation, comprehension, interpretation, information retrieval, judgement and formatting a response (Groves et al. 2009: 218-223). Even if the question is remembered and understood, it could still be too difficult to answer, if respondents cannot retrieve the required information from their memory set. Alternatively, fixed opinions about immigration might not pre-exist in a respondent’s ‘mental file drawer’. Rather, judgements may be made during the interview (Berinsky 2002). Respondent do some cognitive work and reflect on their past behaviours or how they feel towards a group or an event they associate with immigration. In the final reporting stage, respondents fit their judgement into response categories proposed by the surveyor.

More cognitive effort at any of these stages leads to a higher number of ‘don’t knows’ or refusals (Shoemaker et al. 2002). First, a lack of knowledge about immigration will increase the cognitive effort needed to answer a question and might lead to selection bias during the interview process with more highly educated participants being more likely to respond (Berinsky 1999). Education level positively correlates with the capacity to form an opinion, as less (formally) educated respondents might find some questions to be difficult to comprehend and might not have the ‘resources’ to form an answer which they think is ‘correct’ (Alexander 2017; Converse 1976; Krosnick et al. 2002). Higher political innumeracy and, specifically, overestimating or nonresponding to questions asking about immigrant population size, was found among less formally educated individuals by Herda (2013). Additionally, higher levels of nonresponse to questions on current political issues, such as immigration, might be expected from people with lower political efficacy (those who believe they have no influence on political affairs) due to their lack of interest and engagement in political debates and higher political apathy (Francis, Busch 1975; Zhu 1996). From this we would expect that nonresponse to questions about immigration and immigrants will be greater among people of lower education (**H1a**) and among those less engaged in political debates (**H1b**).

How well the question is related to respondents’ experiences is another decisive factor affecting the level of cognitive effort necessary to formulate an answer. Therefore, nonresponse might be higher for questions which are weakly associated with a respondent’s personal experiences (Shoemaker et al. 2002). Attitudes are formed through exposure to various cues (e.g. policy debates, media), but also through practice, i.e. social interactions, and through reflecting upon one’s past actions (Bem 1972). As such, attitudes towards immigration might not be easily expressed by someone with a limited number of encounters with minority ethnic groups and/or people of immigrant origin, and who therefore has not given much thought to the issue. While the lack of such contact has been associated with less tolerance and lower inter-ethnic trust (Lancee, Dronkers 2011), good quality contact between people of dissimilar ethnic backgrounds leads to a reduction in prejudice (Pettigrew, Tropp 2006). Indirectly then, the share of ‘don’t knows’ in a survey will fall because the chances of being more tolerant increase. More personal contact with immigrants and people of minority ethnicity or race (more likely to have immigrant background in Europe) might be related to more awareness about immigration itself, as through social relations, such as friendships, work colleagues or neighbours, people obtain factual knowledge about other cultures and related impacts of immigration (Lancee, Dronkers 2011).

Returning to the cognitive effort mechanism logic, we would expect that respondents with little or no regular interactions with immigrants would encounter more comprehension and judgement problems. Hence, the second hypothesis is that greater nonresponse in relation to immigration will be expressed by people with less contact with people of different ethnicity or race (**H2**).

***Social desirability bias and interview context***

A counterargument could be that some individuals might abstain from answering some survey items not because of their lack of knowledge about immigration and/or familiarity with immigrant groups, but by a preference to avoid answering the question on their attitudes towards them. Questions on matters more strongly governed by social norms, including less acceptable political and social behaviours or attitudes, such as ethnic and racial prejudice or non-voting, are all more likely to lead to social desirability (SD)-motivated responses (Groves et al. 2009; Kreuter et al. 2008; Preisendörfer, Wolter 2014). Such ‘impression management’ happens during the process of forming an answer, after the interpretation, retrieval and making a judgement stages, when some respondents might decide to edit their response and misreport it (Brenner 2017).

SD bias is higher for face-to-face interviewer-assisted interviews (Krumpal 2013; Preisendörfer, Wolter 2014). This is the mode for the ESS surveys. The interviewer effect – reporting opinions according to the perceived expectations of an interviewer, and/or on the basis of their observable traits – introduces additional SD bias when the topic of the survey is related to the characteristics of the interviewer, e.g. (assumed) class, gender, or ethnic background (Brenner 2017; Krumpal 2013). Hence, the interview context plays an important role in diminishing SD bias. It depends on interviewer experience, the presence of a third party, atmosphere (rapport) and related respondent willingness to truthfully answer questions (Blom, Korbmacher 2013).

Opinion censoring in surveys might be an intended behaviour when respondents want to convey an identity of ‘a good citizen’ and conform to perceived political correctness norms regarding how they should respond (Valentine, Harris 2016). Table 1 presents the percentages of nonresponses for various immigration- and race-related questions in ESS wave 7 (2014a). Items on allowing in immigrants of specific minority groups – Jewish, Muslim and Gypsies – to a respondent’s country and on racism have higher nonresponse rates than questions asking about the opposition to immigration in general. In contrast, nonresponse to questions on factual information about the respondent’s profile and experiences, such as being a member of an ethnic minority group, on local diversity and on contact with other races or ethnic groups, is much lower. The question asking respondents to provide an estimate of the foreign-born population in a country – a high task difficulty knowledge question (Zhu 1996) – is an exception with 9% nonresponse.

[Table 1 about here]

Nonresponses to questions on immigration and racial prejudice might be also interconnected. Studies in 1990s claimed that attitudes towards immigration in Western Europe have shifted from blatant to more subtle forms of prejudice (Pettigrew, Meertens, 1995), in which aversion is not expressed as direct antipathy towards a group of different ‘race’, but rationalised on the basis of other factors, such as a differences in values, labour market or welfare behaviours. More recently, however, De Genova (2016) has argued that ‘EU-ropean’ migration management policies skilfully de-racialise ‘migration’, although it cannot be disconnected from Europe’s colonial past, and anti-Muslim and anti-Black sentiments. Despite the European narrative on immigration seeming to avoid the ‘race question’, cross-national comparative research based on the 2010 ESS survey demonstrates that racial prejudice underpins negative opinions towards immigration of non-Europeans and non-White racial minorities (Gorodzeisky, Semyonov 2015).

The question arising is whether SD bias is sufficient to ‘push’ some respondents who hold anti-immigrant sentiments and racial prejudice to nonresponse. Previous research indicated some nonresponse bias for immigration-related questions in the ESS. In the UK, Switzerland, Germany and the Netherlands (but not in Austria), the perceived threat from immigrants was higher among ‘reluctant’ participants (those who did not agree to be interviewed during the first visit), in comparison to ‘cooperating’ participants (Billiet et al. 2007). Herda’s (2013) analysis of the 2002 ESS survey demonstrated that nonrespondents to the question asking them to assess the size of immigrant population were more likely to express exclusionist views towards immigration than individuals whose perceptions were correct.

We could ask whether “non-responders [might] be concealing their prejudice through nonresponse”, in other words “are those respondents who exhibit more prejudice more or less likely to not respond?” (Alexander 2017: 13). If nonresponse was a *true* no-opinion about immigration, then there should be no correlation with questions measuring direction of attitudes and racial prejudice – rather, they should be randomly distributed across the response categories of these measures. However, if nonresponse was used to cover for negative opinions about immigrants, we would expect that respondents displaying a higher level of anti-immigrant views and racial prejudice would express more nonresponse in questions asking opinions about immigration and immigrants (**H3**).

***Country-level context***

Siciński (1970) drew attention to the fact that, in some cultures, people might be more willing to admit that they ‘truly’ do not hold any opinion or knowledge about particular issues, while in others they are more willing to ‘guess’. He examined questions asking individuals to ‘predict’ future events, such as how likely the next World War is. Respondents in some countries, such as Poland, articulated a higher level of no-opinions, which could be wrongly read as a ‘national trait’ of Polish people. Yet, as Siciński (1970) argued, we should first investigate the cultural, historical and social context of why people might be less likely to respond to certain survey questions in some countries[[3]](#footnote-3). Differences in schooling styles, and in the dominant norms and values, might result in individuals in some countries being more willing to admit their ignorance (Kreuter et al. 2008). A study on nonresponse in China revealed that not all ‘no-opinion’ patterns in survey responses mirrored those in the West, perhaps suggesting, at least in China, not responding in a survey might be a sign of “passive protest to the establishment” (Zhu 1996: 226).

Opinions about immigration are context sensitive too, and various country-level factors have made immigration more salient across Europe. Many previous studies have demonstrated that countries with different migration histories, dynamics and policies will ‘produce’ citizens of dissimilar opinions (Bohman, Hjerm 2016; Gorodzeisky, Semyonov 2009). Attitudes towards immigration will be more favourable in countries with a larger foreign-born population and with more inclusive migration policies (Callens, Meuleman 2016; Kwon, Curran 2016). In contrast, they will be less favourable in countries with recent sudden increases in immigration and a worsening economic situation (Meuleman et al. 2009), and in countries with more negative media reports on immigration (Schlueter, Davidov 2011).

Although the average nonresponse rate across all countries in the 2014 ESS was between 3 to 6% for each question, it was much greater for some questions in some countries. For instance, as displayed in Figures 2 and 3, 17% of respondents in Slovakia and 15% in Lithuania did not (or could not) evaluate what impact immigration had on the tax and benefit system. Similarly, 17% of respondents in Poland and 16% in Lithuania did not answer the question on the impact of immigration on crime. Questions on the impact of immigration on religious practices generated more item nonresponse in Hungary (14%), Lithuania (13%) and Spain (12%). Nonresponse rates to items asking about immigration of Jews and Muslims were particularly high for Lithuania, Spain and Hungary, and about 9% of respondents in Lithuania and Spain did not express their opinion about allowing Gypsy people in. The most ‘decided’ whether various ethnic/religious groups should be allowed into their country were people in Belgium, the Netherlands and Norway, with item nonresponse less than 2%.

[Figures 2 and 3 about here]

Cross-national variation in nonresponse to questions about immigration might be due to immigration being a more familiar experience, or it might be a result of dissimilarities in ESS fieldwork (such as survey agency practices, e.g. using incentives, interviewer training; Beullens et al. 2018), or both. The propensity *not* to express attitudes towards immigration has not previously been examined to our knowledge. I will investigate whether various contextual conditions, such as immigration dynamics, economic conditions, ‘openness’ of migration policy and occurrence of media debates on immigration, are associated with the frequency of nonresponse in questions about immigration.

**Data and methods**

***European Social Survey data***

The ESS is a cross-national survey, conducted biennially since 2002 across selected European countries, and occasionally in non-European countries too (ESS 2016a). In each country, the survey is based on a random probability sample of individuals aged 15 years old and over. I use data from ESS wave 7 (w7) conducted in 2014, when 20 European countries and Israel participated in the survey (ESS 2014a). This wave included an ‘Immigration Module’ with extra questions measuring attitudes towards immigration, racism and the frequency of contact with other races/ethnic groups. The main mode of the survey was face-to-face computer assisted interviews, with the exception of Czechia, where 38.7% of the interviews were conducted as interview-assisted pen and paper interviews. For the descriptive analysis Israel is excluded (N=2,562), which gives a sample of 37,623. The final explanatory analysis uses a sample of 35,639, after deleting observations with missing cases on the independent variables[[4]](#footnote-4).

Studies on attitudes towards immigration often exclude people of minority ethnicity or immigration background from the analysis, arguing that their perceptions are more likely to be biased as they might identify with immigrants themselves (Meuleman et al. 2009). I decided to retain individuals who identify as ethnic minority in the sample, as item nonresponse patterns could depend on minority status (Alexander 2017).

***Dependent variables: nonresponse to immigration-related items***

I explore nonresponse in two sets of immigration-focussed questions. The first set measures opinions about the impact of immigration on the respondent’s country (*the impact items*), while the second set measures the openness to immigration –whether different types of migrants should be allowed to come to live in a respondent’s country (*the openness items*).

The impact items asked respondents to assess the impact of immigration (on a scale from 0 to 10) on:

1. economy (bad → good),
2. cultural life (undermined → enriched),
3. overall country as a place to live (worse → better),
4. jobs (take away → create new),
5. religious beliefs and practices (undermined → enriched)
6. crime (made worse → made better),
7. tax / benefit system (take out → put more).

The openness items asked whether ‘many’, ‘some’, ‘a few’ or ‘no’ immigrants (a scale from 1 to 4) of the following characteristics should be allowed to come to live in the country:

1. same race/ethnic group as majority,
2. different race/ethnic group as majority,
3. from poorer countries outside Europe,
4. from poorer countries in Europe (not asked in Czechia),
5. Jewish people,
6. Muslims,
7. Gypsies.

Question 4, about allowing migrants from poorer countries in Europe, was not fielded in Czechia (see ESS 2016a: 37), so it is excluded from the analysis.

Many previous studies have utilised the ESS impact items to construct an index that captures anti-immigrant attitudes (e.g. Gorodzeisky, Seymonov 2016; Pardos-Prado 2011) and the ESS openness items to construct a measure of general openness/opposition to immigration (e.g. Bohman, Hjerm 2016). Nonresponse to items in both sets will result in poorer reliability of such indices.

Thus, we have two dependent variables which are the counts of nonresponses for each set of items for each respondent: the count of nonresponses to the impact items ranges from 0 to 7, and the count of nonresponses to the openness items, which ranges from 0 to 6[[5]](#footnote-5). As shown in Table 2, 85% of respondents in ESS w7 replied to all seven questions on the impact of immigration while 92% answered all seven questions measuring openness to immigration. In other words, 15% of respondents missed at least one of the impact items and 8% failed to answer at least one of the openness items.

[Table 2 about here]

As depicted in Figures 4 and 5, the degree of nonresponse in ESS 2014 varies cross-nationally. Around 35% of Lithuanian, 32% of Polish, 29% of Slovakian and 28% of Hungarian respondents refused to express their attitudes for at least one impact item. The percentage of respondents in these countries with at least two nonresponses for these items is also high – 20%, 15%, 12% and 15%, respectively. On the other hand, about 95% of respondents in Belgium and Norway answered all seven questions. A similar pattern of variation (albeit at a lower average level of nonresponse) exists for the openness items: nonresponse to at least one question is 23% for Lithuania and 17% for Spain versus 2-3% for Belgium, the Netherlands and Norway.

[Figures 4 and 5 about here]

***Individual-level independent variables***

Following standard practise in studies exploring attitudes towards immigration, I control for the respondent’s age, gender, marital status, whether they have been unemployed in the last five years and how they feel about their household financial income. The question measuring actual income has a high share of refusals and ‘don’t knows’, so I include it as a dummy explanatory variable: answer given (0) or not (1). Education in ESS is measured using the International Standard Classification of Education (ISCED) categories, which I recoded into four levels: lower secondary and less; upper secondary; advanced vocational; and tertiary.

Respondents were asked how interested they were in politics: very; quite; hardly; or not at all. Additionally, I created a measure of political efficacy, as an average of six items asking respondents to agree with the following statements using a scale from 0 to 10 (where 0 meant not at all): (1) Political system allows people to have a say in what government does; (2) Able to take active role in political group; (3) Political system allows people to have influence on politics; (4) Confident in own ability to participate in politics; (5) Politicians care what people think; (6) Easy to take part in politics.

Frequency of contact with immigrants was measured by asking: *How often do you have any contact with people who are of a different race or ethnic group from most [country] people when you are out and about? This could be on public transport, in the street, in shops or in the neighbourhood* – and respondents could say: never; less than once a month; once a month; several times a month (both recoded into ‘Monthly’ due to low counts); once a week; several times a week (both recoded into ‘Weekly’); or every day. Unfortunately, the question does not differentiate between interactions with specific groups of minorities, nor does it account for the nature of the contact (whether it was perceived as a positive or a negative experience).

Finally, in order to test whether nonresponse to both sets of questions masks some prejudice towards immigrants or minorities, I also include a measure of ‘racism’ into the model, and use the question asking respondents to say ‘yes’ or ‘no’ whether *some races or ethnic groups are born harder working* and, in separate models, mean scores for the impact (scale reliability α=0.85) and openness items (α=0.91) in the openness and impact specifications respectively.

***Interview-level independent variables***

At the interview level I control for interviewer gender and age. Unfortunately, no other interviewer characteristics are recorded (e.g. race, ethnicity or nationality). In total, 2,638 interviewers were involved in the ESS w7 sample, with an average number of interviews per interviewer ranging from 7.5 in Czechia to 32 in Switzerland. I use the number of interviews per interviewer (which ranges from 1 to 77) as a proxy for interviewer experience. After each interview was completed, interviewers recorded some (subjective) information about the interview context. I include this as three dummy variables: question understanding; reluctance to answer; and third-party presence.

I decided not to include interview time as a control variable. The completion time for the immigration module of questions was not recorded for four countries, while the overall interview time was not recorded for Portugal, and seems to contain outliers (the total interview time ranges from 8 to 643 minutes). Preliminary analysis conducted with these two variables indicated their marginally positive effect on the nonresponse rate, but their exclusion does not affect the main results.

***Country-level independent variables***

The social, economic and political contexts, how they have been changing, and how they are presented by the mainstream media, translate into citizens’ attitudes and opinions. To capture these factors, I include: the percentage of foreign born in 2014 in a country’s population (i.e. at the time of the survey); the percent point change in the share of foreign born between 2010 and 2014)[[6]](#footnote-6); the Gini coefficient of equivalised disposable income in 2014 (from Eurostat)[[7]](#footnote-7); change in the Gini coefficient between 2010 and 2014; the percent point change in unemployment between 2010 and 2014; Migrant Integration Policy Index (MIPEX)[[8]](#footnote-8) 2014 overall score and change in score between 2010 and 2014 (excluding health, since this was only added in MIPEX in 2014). I excluded the percentage of unemployed in 2014, as there was insufficient country-level variability, and this caused problems with model convergence. Table SM6 summarises the contextual variables by country.

The Media Claims dataset contains the count of the various claims which occurred during the fieldwork in two main newspapers in all ESS countries. Three types of claims were recorded for immigration: a) on immigrants living in a country; b) economic impacts of immigration; and c) cultural diversity of immigration and its impacts. Each claim was coded as either positive, negative or neutral (ESS 2014b). I created a new measure: a count of all claims about immigration issues, which varies from 0 for Slovakia to 164 for Hungary (see Table SM7). Table A1 provides descriptive statistics for all independent variables.

***Analytical approach***

The data has a hierarchical structure: respondents are ‘nested’ in interviewers (N=2,638, ranging from 1 to 77 respondents per interviewer) and then in countries (N=20, with a minimum of 1,172 (in Slovenia) and a maximum of 2,984 (in Germany) respondents per country)[[9]](#footnote-9). I use a multilevel negative binomial specification to model the number of nonresponses[[10]](#footnote-10). The multilevel specification allows the intercept to vary at both interviewer and country levels, so it accounts for the possibility that respondents interviewed by the same interviewer or in the same country might be more (or less) likely not to respond. Additionally, the negative binomial probability distribution accounts for overdispersion in count data when the variance exceeds the mean. In our case, this will be likely given that there are so many zero nonresponse counts[[11]](#footnote-11). I decided not to use a zero-inflated or hurdle model, because they should be theory driven (Zorn 1998), i.e. separate explanatory causal mechanisms should be indicated as reasons for the event to happen (at least one ‘don’t know’/refusal) and for the number of don’t know/refusals to increase. However, these alternative specifications were estimated and results for the three hypotheses are the same (results available upon request).

I add the three levels of variables in a step-wise manner: Model 1 only includes characteristics of the respondents; Model 2 adds the interview and interviewer information; and finally, the country-level variables are added for Model 3. The estimated coefficients are presented as incident-rate ratios (IRRs), which are estimated fixed-effects coefficients after transformation (i.e. exponentiated coefficients, exp(*β*)). The IRR is computed as a ratio of incident rates of two groups of interest and can be interpreted as a relative ‘incident’ rate of nonresponse. Specifically, it indicates how much a one-unit change in an explanatory variable increases the nonresponse rate in percentage terms, while keeping the other variables constant. If IRR equals 1, the estimated impact of the explanatory variable on the expected nonresponse rate is zero; if IRR equals 1.50, the expected count is 50% greater. Additionally, I compute the predicted number of nonresponses for respondents of different characteristics, while keeping all other variables at their means (the ‘marginal effect at the mean’, MEM). The tables of regression results also include the conditional overdispersion statistic[[12]](#footnote-12) and two variance components – one at the interviewer level and one at the country level as appropriate.

**Unpacking mechanisms of nonresponse in the 2014 ESS**

I explore which individual, interview-related and country-level characteristics are most closely associated with a higher number of nonresponses to questions about the impact of immigration and to openness to immigration. What are the correlates of nonresponse for these two multi-item measures? If nonresponse was genuinely random, we should not see any systematic differences by a respondent’s profile, their interview situation or country characteristics.

Table 3 presents the multilevel count models of nonresponse for the questions asking about individuals’ perceptions of the impact of immigration (impact items), while Table 4 presents the equivalent models for the questions about allowing migrants of various ethnicity, race and religion into a country (openness items).

[Tables 3 and 4 about here]

The predicted nonresponse count for all respondents is 0.31 for the impact items, and 0.27 for the openness items, indicating that on average respondents said ‘don’t know’ or refused to answer approximately 0.3 times out of 7 or 6 times, respectively. Self-identifying as person of ethnic minority background increases the expected number of ‘don’t knows’/refusals by 51% for the impact items (IRR=1.51, Table 3, column 1). Holding all else at the mean (i.e. the MEM as described above), the predicted nonresponse count for minorities is 0.45 while for non-ethnic minorities it is 0.30. This is somewhat surprising, as we might expect that ethnic minority respondents would be more familiar with immigration issues, through more often being of non-native background and through their social relations, and, as such, would have more strongly formed opinions about the phenomena. Interestingly, for the openness items, the expected number of nonresponses for ethnic minority respondents does not differ significantly from those who do not consider themselves as ethnic minority. As in Herda (2013), nonresponders are older, more likely to be female and less likely to be coping easily on their current income. The following sub-sections describe the results for our key research questions.

***Knowledge and contact – the cognitive effort mechanism (Model 1)***

I hypothesised that people with less knowledge and understanding of immigration will be less likely to answer all of the questions on immigration. Interestingly, the level of qualifications does not have the same effect on nonresponse in the two sets of questions. For the impact items, all educational categories above than ‘lower secondary education or less’ (the reference category) are associated with a lower number of nonresponses. In contrast, for the openness items, the most highly educated respondents have a higher rate of ‘don’t know’ or ‘refuse to answer’ to these questions, while there is no statistically significant difference between the other education categories.

Hypothesis **H1a** that higher education will be associated with a lower rate of nonresponse is therefore confirmed for the measures asking about the impacts of immigration. However, for the measures on the willingness to welcome various groups of immigrants, we do not find a negative relationship between education and nonresponse, rejecting hypothesis H1a[[13]](#footnote-13). An alternative explanation for the latter finding might be that more highly educated respondents hold more ‘nuanced’ opinions (Converse 1976) or are more prone to differentiate between easy and difficult survey questions which ask about complex social issues (Schuman, Presser 1980). Therefore, when asked about allowing in various immigrant groups, they might be more likely to admit their own ‘ignorance’ and refuse to classify their opinions.

Similar patterns emerge for both sets of measures for political interest and efficacy. As expected (**H1b**), high interest in politics and more belief in the possibility of influencing politics correlate with a lower nonresponse rate for questions on attitudes towards immigration. The predicted number of nonresponses for those ‘not at all interested’ in politics is 0.38 (0.38) for the impact (openness) items, as compared to 0.28 (0.24) for those who are ‘very interested’ in politics. For the political efficacy variable, the impact ranges from 0.35 (0.30) to –0.23 (0.23) the impact (openness) items for a +/– one standard deviation change in the measure.

As hypothesised (**H2**), greater contact with people of different ethnicity or race is related to a lower number of nonresponses, but the relationship is not linear. In comparison to those with no contact, respondents with the most frequent, daily, interactions were not the least likely to express no-opinions, but those who encounter them less regularly, e.g. once-several times a week (predicted count for the impact (openness) items: no contact –0.37 (0.38), weekly –0.28 (0.23)). As such, a moderate amount of contact provides the most ‘favourable’ conditions for lowering item nonresponse for questions measuring attitudes towards immigration. Respondents with very frequent and hence more diverse experience (potentially contradictory, both positive and negative) might perhaps struggle to classify their opinions (Schaeffer, Presser 2003). Still, the highest nonresponse rates are by respondents who have no regular interactions with other ethnicities/races[[14]](#footnote-14).

***Social desirability bias – is prejudice behind nonresponse?***

An elevated level of nonresponse could be driven by the ‘satisficing mechanism’, when some respondents are less likely to engage with more demanding survey questions (Krosnick et. al 2002). Indeed, lack of response to other questions predicts nonresponse to questions on immigration. For example, the household income question generated one of the highest proportions of nonresponse in the entire 2014 ESS sample – almost 17%[[15]](#footnote-15) – and these respondents were also much less willing to express their attitudes on migration[[16]](#footnote-16). Thus, some respondents are simply less likely to answer more sensitive questions.

To investigate whether individuals who did not express opinions about immigration might be masking prejudiced views, I investigated the association between nonresponse on the immigration items and responses to a question capturing a measure of racism – whether some races are born harder working – including nonresponse to this question. For respondents who did not answer the question, the expected number of nonresponses for the impact items is more than doubled, and is more than tripled for the openness items. However, those who agreed that ‘some races are born harder working’ expressed a significantly lower number of nonresponses to both impact and openness items than respondents who disagreed. Therefore, we do not find evidence that racial prejudice might explain item nonresponse for questions measuring attitudes towards immigration (**H3**). It could be either that those without formed attitudes towards immigration also do not hold opinions about other races, or that in both cases, respondents decided not to reveal their ‘true’ (potentially negative or positive), opinions during the interview.

Table 5 presents further analysis based on Model 1, where instead of the race question responses, categories based on the mean scores for the impact and openness items are included in the specification. Higher impact/openness scores indicate more positive attitudes towards immigrants/immigration. Interestingly, after controlling for the respondents’ characteristics and experiences, those with more positive opinions about the impact of immigration and who are more open towards immigrants have higher nonresponse rates for the impact items. This would imply that, contrary to what was anticipated, those who are more welcoming to immigration are more likely to refrain from answering the impact questions. For the openness items, a similar association was found between nonresponse and positive scores on openness item questions.

[Tables 5 about here]

***Interview context (Model 2)***

The interview context adds another layer of factors which might influence the propensity of survey participants to answer survey questions. It is worth highlighting some main patterns. While interviewer age and experience (measured by the number of interviews undertaken) are not significant predictors of nonresponse rates, respondents interviewed by women had significantly higher nonresponse rates – by a factor of 1.11 and 1.30 for impact and openness items, respectively. However, these rates did not significantly differ by gender of respondent (tested with an interaction term between respondent and interviewer gender).

The variance component is higher between interviewers within each country than between countries, meaning that there is more difference in nonresponse rates between interviewers than between countries (Callens, Looseveldt 2018). This could reflect an interviewer effect (i.e. how and by whom the interview is performed). Alternatively, as the samples are typically clustered spatially, it could be a product of other characteristics shared by respondents who were interviewed by the same interviewer (e.g. some community-specific traits). Unfortunately, it is not possible to separate the interviewer effect from any local area effect since ESS respondents cannot be identified at a local level due to data sensitivities.

***Between country differences (Model 3)***

As outlined in the discussion of the theoretical background, country-specific differences might also impact nonresponse patterns to immigration-related items. The importance of these factors is considered in Model 3. The results obtained are slightly different for both sets of items, as the openness questions seem to be more context-dependent.

It might be expected that higher levels of nonresponse will be expressed in countries where the size of the foreign-born population is smaller, as the respondents will, on average, be less exposed to immigrants (Bohman, Hjerm 2016). Interestingly, for the openness measures, the nonresponse rate is higher in countries with larger foreign-born population (predicted nonresponse count for a country with 11% foreign-born is 0.29, with 16% (+1SD) – 0.37), but lower in countries where economic inequality has recently increased (average Gini change – 0.26 nonresponse and +1SD higher – 0.18). The expected number of nonresponses is also lower in countries with a recent increase in foreign-born population in 2010-14 – i.e. 0.7 percentage point increase (+1SD) corresponds to nonresponse count of 0.41 (0.40) for the impact (openness) items. One possible explanation for nonresponse being lower in countries where the immigrant population has been growing is that it might be a period when more people form attitudes, especially more negative (Meuleman et. al 2009).

We would expect more people to express their opinions in countries where the policies for immigration and minority ethnic groups are better established, and the topic of immigration has a higher media presence. However, a recent improvement of the MIPEX index is associated with a higher number of the openness item nonresponses – a one-point increase in the MIPEX index corresponds to an increase in the expected number of nonresponses by a factor of 1.06. There is also a positive effect of the number of media claims on immigration on openness nonresponse rates. For example, predicted nonresponse count is 0.28 in a country with an average number of media claims (24), and 0.37 in a country with +1SD (60). It would appear that recent integration policy improvements and more media debates about immigration issues might contribute to individuals being less sure about letting some immigrants into their country (or at least being less willing to reveal such views).

**Discussion**

The analysis reported above based on ESS wave 7 has confirmed that nonresponse to immigration-related questions is not random, but is systematically related to individual characteristics, interviewer context and country level variables. Some respondents are rather less likely to reveal what they think about immigration or feel unable to express their opinions in the survey format. This is probably partly caused by their lower motivation to provide meaningful survey answers and a desire to finish the survey faster (Krosnick et al. 2002), but even controlling for various interview contexts (e.g. interviewer coded engagement of respondents), some characteristics of respondents are still significant predictors of nonresponse.

The satisficing mechanism might be also prevalent when questions pose a cognitive difficulty for respondents to answer, which in turn increases the uncertainty about how to report their opinions. This might be either because the immigration topic is not particularly related to personal concerns, or because individuals’ experiences with various immigrant groups are not straightforward and therefore cannot be fitted into standardised questionnaire response categories (Converse 1976; Shoemaker et al. 2002; Schaeffer, Presser 2003). The results in this paper provide some support for the cognitive effort mechanism, but also reveal that the picture is rather more complex. While higher education levels correspond to lower nonresponse for questions on the impacts of immigration, highly educated respondents expressed more ‘don’t knows’/refusals in questions asking about allowing immigrants of different ethnicities, race and religions into their countries. Similarly, everyday contact with other ethnicities/races does not necessarily lead to more strongly formed opinions about the impact of immigration – the expected number of nonresponses was lowest for respondents with a moderate amount of interethnic interactions. As such, some attitudinal measures might be less reliable not only for respondents without any regular contact with minorities, but also for those with diverse interactions, who might struggle to summarise their attitudes on the response scales provided.

The findings do not support the argument that nonresponders might be masking their ethnic or racial prejudice by avoiding answering questions about immigration. On the contrary, ‘natural supporters’ of immigration (Berinsky 2002) – like those more tolerant, identifying as members of minority ethnic groups (for the impact items) or those with the highest education level (for the openness items) – are less likely to respond to some of these survey questions. Such associations between opinion direction and the selection into expressing opinions about immigration are further explored in the Supplementary Online Material, Tables SM3 and SM4, for each of the impact and openness items taken separately. They confirm the patterns established above for the items aggregated into the two impact and openness indices.

A natural follow up question would be to examine how significant these nonresponse biases might be for the estimation of attitudes towards immigration, and whether at the subnational level, or after aggregating for subpopulations, the results may be distorted (Berinsky 2002). Survey representativeness for measuring other social and political attitudes is another emerging issue, since some of the nonresponse patterns are not unique to the immigration-related items. For example, people with higher education levels, more contact with minorities, and greater political engagement are also less likely to abstain from answering political trust items. Yet, this pattern is not observed for all types of questions, e.g. mental health items (see Supplementary Online Material, Table SM5). More research is needed to further improve our understanding of the causes of item nonresponse for various types of questions in cross-cultural surveys like ESS. A comprehensive exploration of all its waves could perhaps shed more light on the source of temporal changes in data missingness.

Finally, some evidence was found that the recent improvement in integration policies and more media discussion on immigration-related issues might contribute to greater nonresponse to questions on immigration flows. Future research could usefully explore this, as shifts in country-specific debates on certain immigration groups might be responsible for a rise in uncertainty surrounding immigration issues (Hellwig, Sinno 2017).

**Recommendations**

I would like to conclude with some suggestions and recommendations for survey design and survey-based studies analysing attitudes towards immigration.

**(1)** While the ESS nonresponse rates may have declined over time in several countries, in some countries like Hungary, Lithuania and Poland, the proportion of individuals not responding to questions on the impact of migration on tax/benefits, on religious beliefs and practices, and on the crime level are in excess of 15%. Similarly, 8-10% of respondents in Hungary, Lithuania, Slovenia and Spain did not express their opinions about letting in immigrants of some ethnic or religious groups. Clearly, for some countries at least, these measures are not able to capture what the population thinks about immigration and alternative items could be considered.

**(2)** For capturing the opinions of respondents with more complex opinions, which are hard to be summarised on standardised response scales, other types of measures could be developed. When perceptions of immigrant groups cannot be easily placed on a unidirectional positive-negative scale, survey methodologists could consider using multi-dimensional scales. For example, the warmth-competence stereotype model has been successfully applied in measuring ambivalent and complex perceptions of immigrants and might be helpful in eliciting conflicting attitudes (Reyna et. al 2013).

**(3)** When missingness of the dependent variable – attitudes towards immigration – is not random (missing not at random, or MNAR) and nonresponse depends on the values of the variable or omitted unobserved variables, estimation becomes more challenging. Listwise deletion of cases would result in biased estimates for some subpopulations (Alexander 2017). One solution could be to use a Heckman-type selection model (Heckman 1979). The outcome variable is estimated in two stages: first, selection into answering the question or not, and then the direction of attitudes conditional on answering. This modelling method facilitates detection of the degree of selection bias and computing attitude estimates which are corrected for the self-selection into nonresponse (Berinsky 2002).

**(4)** Finally, much of the (unaccounted for) variance in the ESS nonresponse occurs at the interviewer level, not at the country level. As such, while applying country-level hierarchical modelling has become a standard methodology employed in ESS-based studies (e.g. Gorodzeisky, Semyonov 2009; Pardos-Prado 2011), recognising data clustering at the interviewer-level might be worth considering in all such analyses. The other limitation of the ESS data is that it does not collect any information on interviewer race and ethnicity[[17]](#footnote-17). Although previous research concluded that ‘racially discordant’ interviews (between interviewer and respondent) increase the likelihood of nonresponse (Alexander 2017), we cannot examine this effect in the ESS data. In order to preserve cross-national comparability, it would be worth considering collecting more background information on ESS interviewers using questions which were developed to measure immigrant (country of birth) and minority ethnic status (self-identified) of the ESS respondents.

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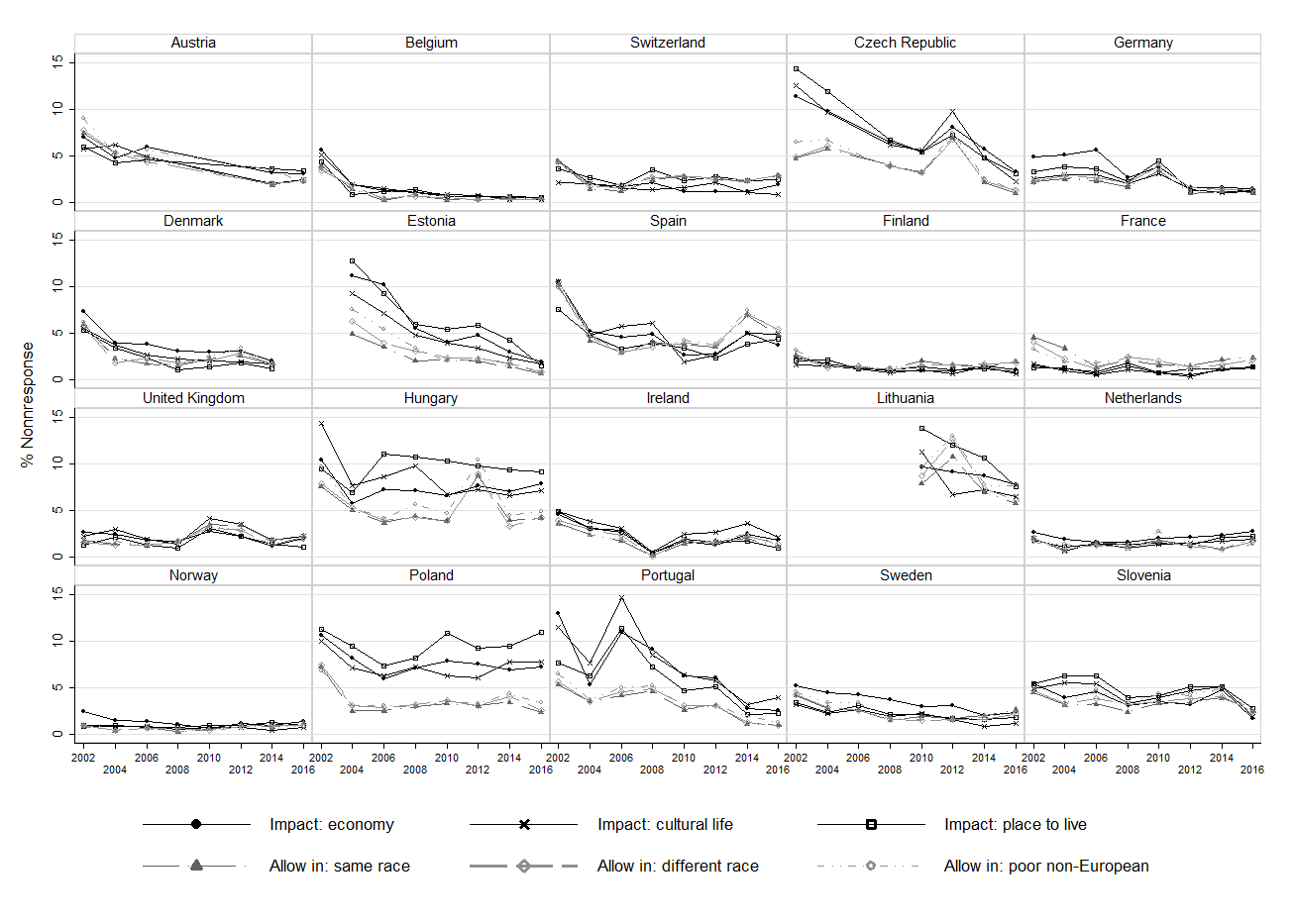
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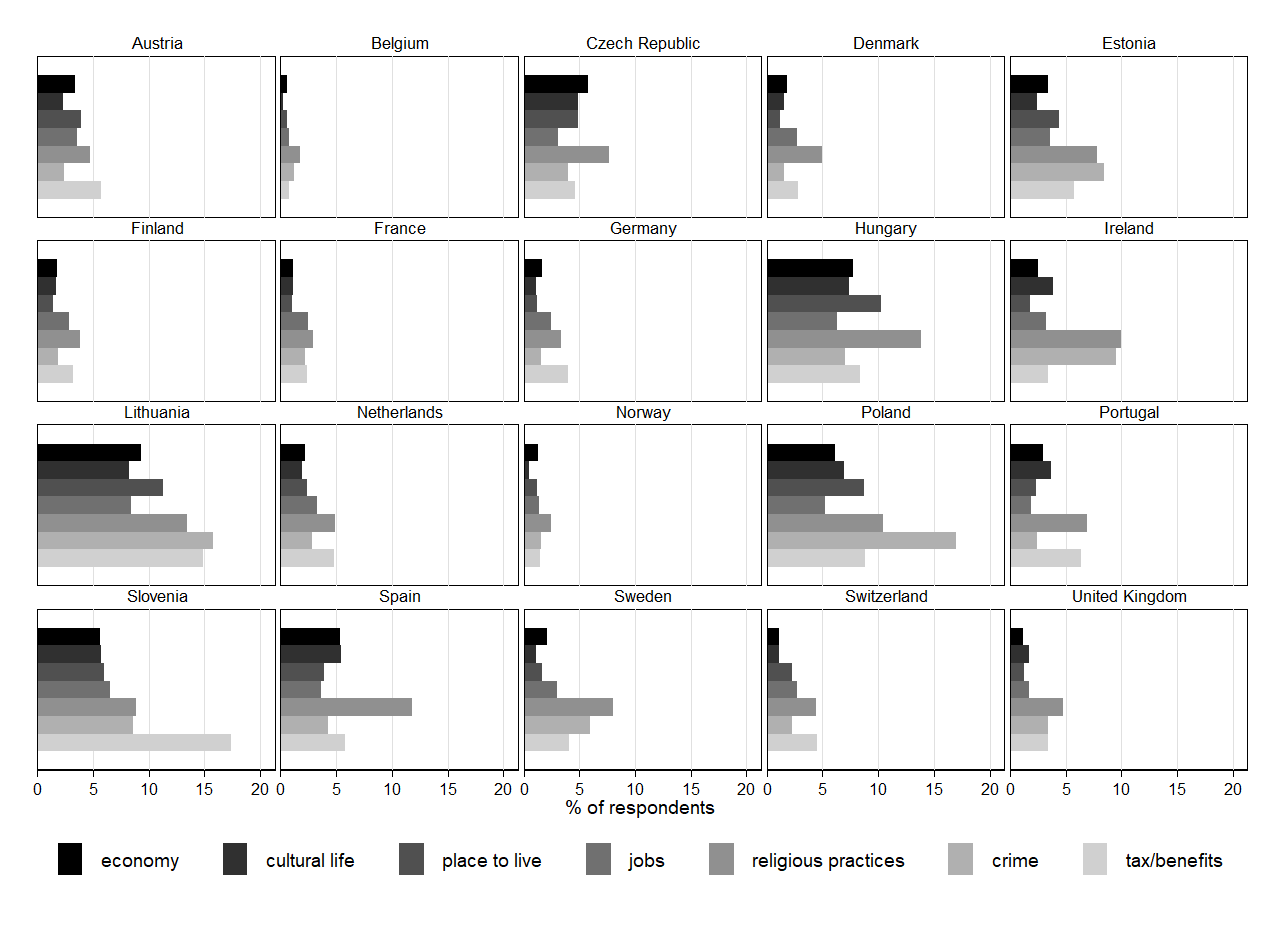
**TABLES AND FIGURES**

**Figure 1. Percentage of item nonresponse across European countries in ESS waves 1-8**

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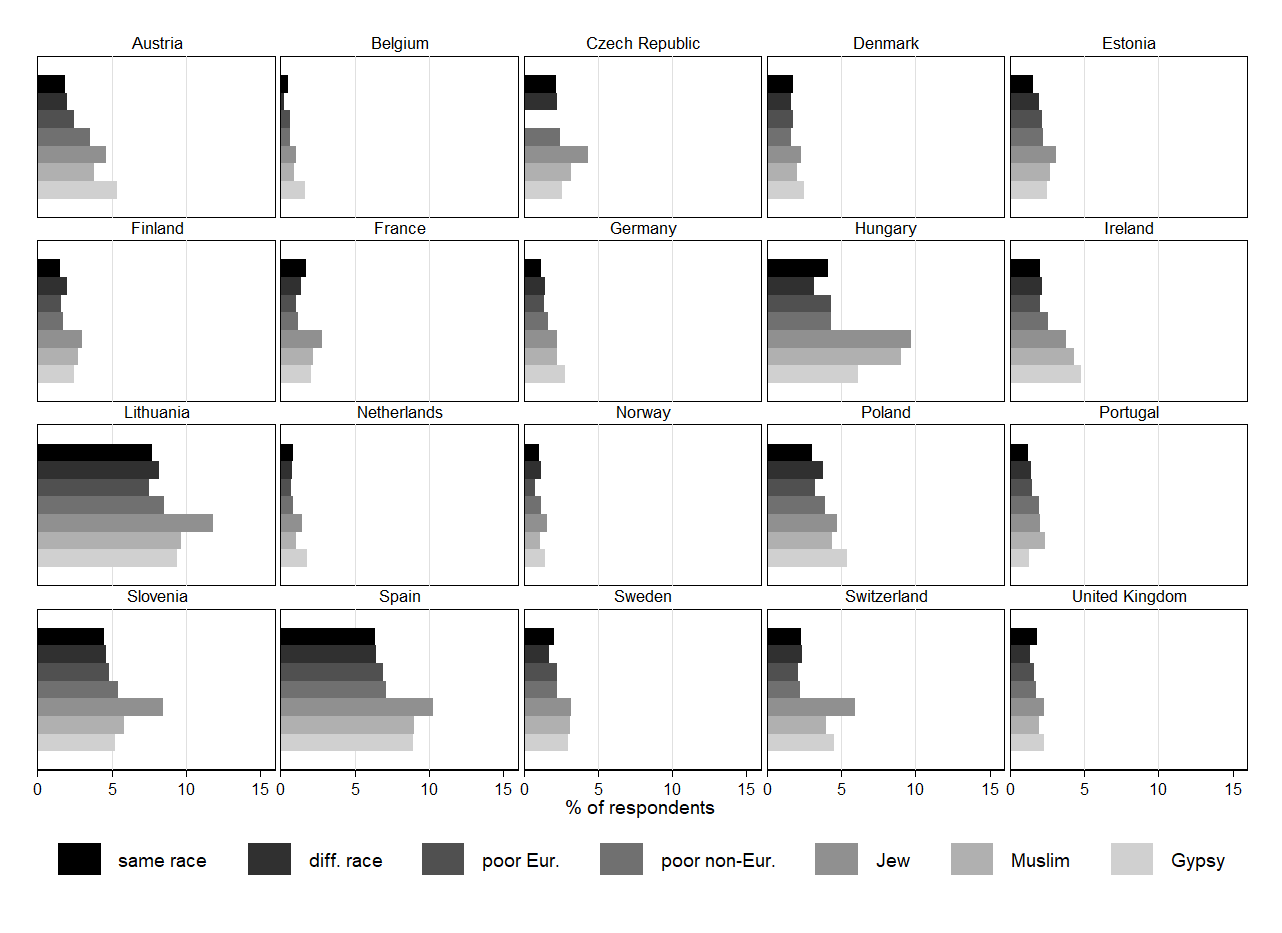
Note: based on ESS 2002-2016, all respondents, weighted samples. Sample sizes are approximately 35,000 per survey year.

**Figure 2. Percentage of nonresponse by question and by country – impact items**



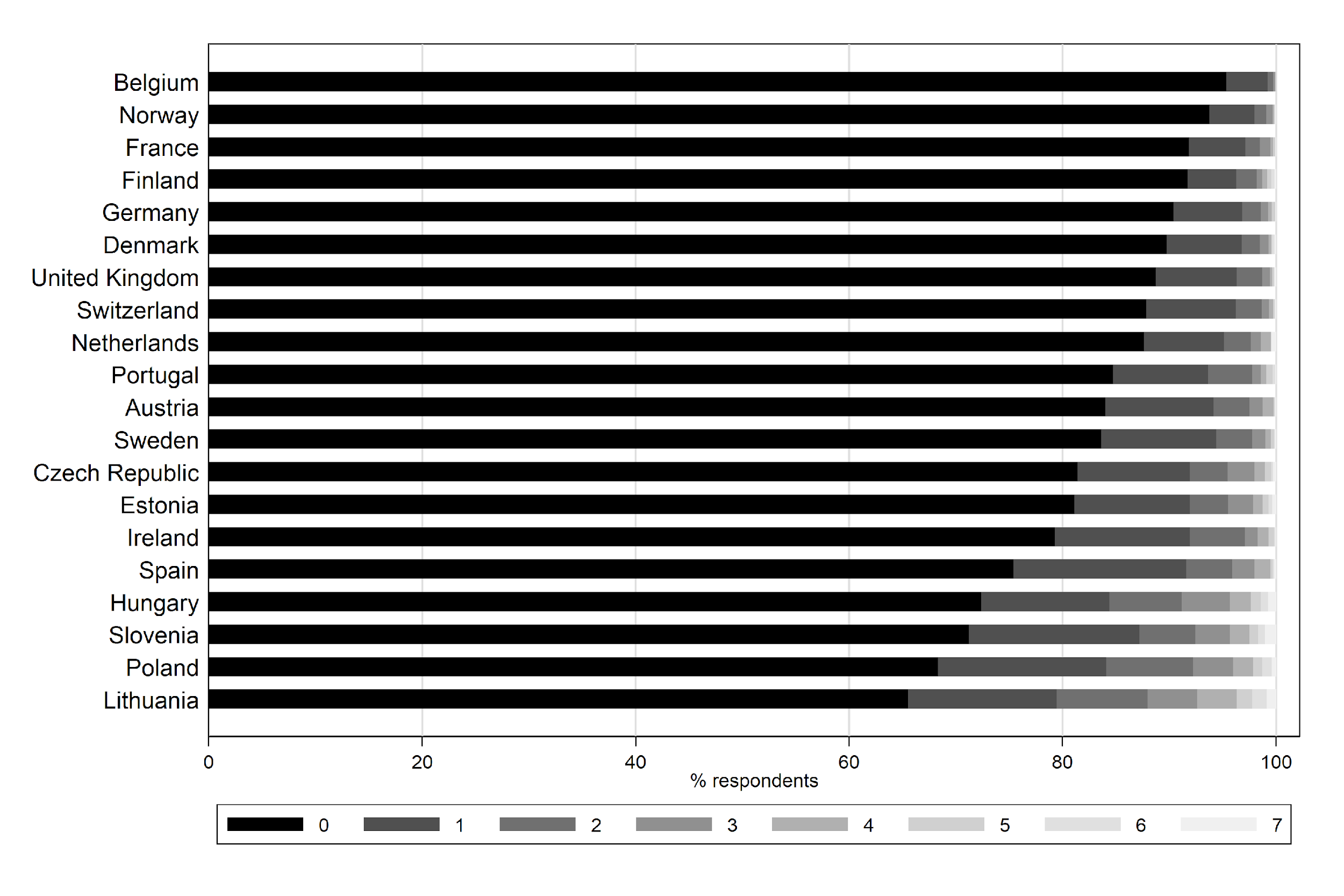
Notes: N=37,623, weighted sample.

**Figure 3. Percentage of nonresponse by question and by country – openness items**



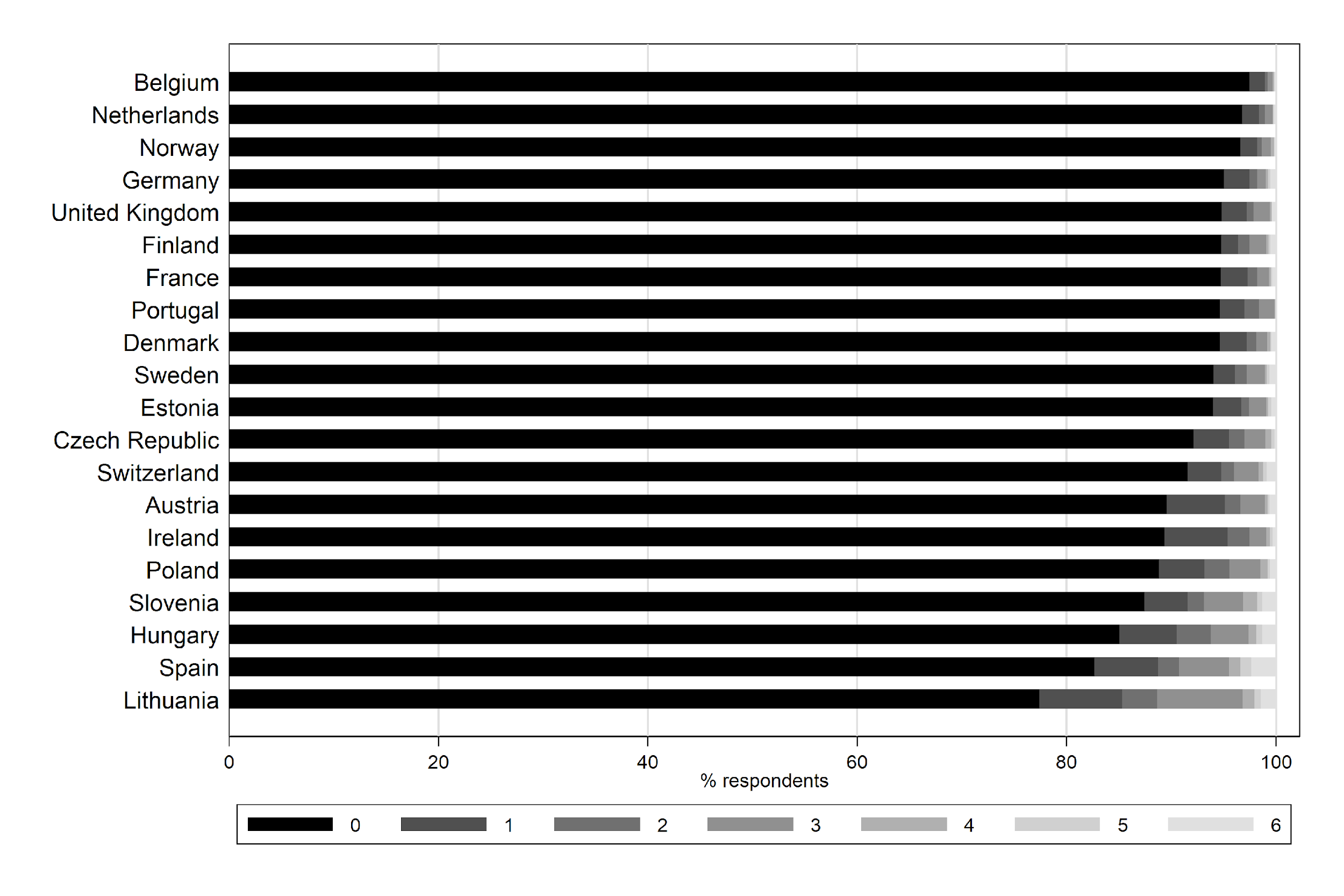
Notes: N=37,623; \* N=35,475 without Czechia; weighted sample.

**Figure 4. Number of nonresponses by country – impact items**



Notes: N=37,623; weighted sample.

**Figure 5. Number of nonresponses by country – openness items**



Notes: N=37,623; weighted sample.

**Table 1. Nonresponse to immigration-related items in the ESS 2014**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Impact items: Impact of immigration on …** | % non-response | | **Openness items: Allow migrants … into [country]** | % non-response | | **Other immigration and race-related questions** | % non-response | |
| not weighted | weighted \* | not weighted | weighted \* | not weighted | weighted \* |
| economy | 3.33 | 2.81 | same race | 2.55 | 2.38 | Some races or ethnic groups: born less intelligent | 5.46 | 4.04 |
| cultural life | 3.03 | 2.77 | different race | 2.59 | 2.36 | Some races or ethnic groups: born harder working | 4.91 | 4.02 |
| place to live | 3.53 | 2.87 | poor non-European | 2.92 | 2.63 | Belong to minority ethnic group in country | 1.30 | 1.40 |
| jobs | 3.39 | 2.98 | poor European^ | 2.66 | 2.38 | Of every 100 people in country how many born outside country | 8.75 | 9.40 |
| religious practices | 6.66 | 6.05 | Jewish | 4.40 | 3.96 | People of minority race/ethnic group in current living area | 0.99 | 0.79 |
| crime level | 5.22 | 4.52 | Muslim | 3.82 | 3.48 | Different race or ethnic group: have any close friends | 0.40 | 0.31 |
| tax / benefits | 5.36 | 4.63 | Gypsies | 3.91 | 3.70 | Different race or ethnic group: contact, how often | 0.96 | 0.55 |

Notes: N=37,623; ^N= 35,475 (without Czechia), \* population size & post-stratification weights applied (pspwght\*pweight).

**Table 2. Percentage of respondents by number of nonresponses for items measuring attitudes towards immigration in the ESS 2014**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Items | Number of nonresponses (% of respondents) | | | | | | | |  | |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Total |
| Impact items | 84.84 | 9.15 | 3.16 | 1.43 | 0.73 | 0.34 | 0.17 | 0.17 | 100 |
| Openness items\* | 92.01 | 3.20 | 1.27 | 1.61 | 0.74 | 0.27 | 0.21 | 0.68 | 100 |
| Openness items | 92.25 | 3.25 | 1.22 | 1.95 | 0.38 | 0.27 | 0.69 | - | 100 |

Note: N=37,623, weighted sample; \* including attitudes towards immigrants from poor European countries, but without Czechia N=35,475.

**Table 3. Multilevel count models predicting number of nonresponses for impact items**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Model 1** | | **Model 2** | | **Model 3** | |
| **Respondent characteristics** | IRR | SE | IRR | SE | IRR | SE |
| Ethnic minority | 1.515\*\*\* | (0.167) | 1.321\*\* | (0.134) | 1.320\*\* | (0.133) |
| Respondent gender: Female | 1.196\*\* | (0.070) | 1.193\*\* | (0.065) | 1.193\*\* | (0.065) |
| Age of respondent | 1.013\*\*\* | (0.002) | 1.010\*\*\* | (0.002) | 1.010\*\*\* | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |
| Separated/Divorced | 0.937 | (0.066) | 0.945 | (0.075) | 0.946 | (0.075) |
| Widowed | 1.325\*\* | (0.126) | 1.264\* | (0.125) | 1.263\* | (0.124) |
| Never married/in union | 1.186\*\* | (0.071) | 1.173\* | (0.073) | 1.174\*\* | (0.072) |
| Any periods of unemployment in last 5 years | 0.972 | (0.045) | 0.954 | (0.039) | 0.954 | (0.039) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |
| Coping on present income | 1.117\* | (0.049) | 1.086^ | (0.052) | 1.083^ | (0.051) |
| Difficult on present income | 1.230\* | (0.100) | 1.137 | (0.112) | 1.134 | (0.111) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |  |  |
| Upper secondary | 0.750\*\*\* | (0.056) | 0.818\*\* | (0.060) | 0.816\*\* | (0.060) |
| Advanced vocational | 0.759\*\* | (0.072) | 0.851^ | (0.076) | 0.850^ | (0.077) |
| Tertiary | 0.876\* | (0.051) | 1.000 | (0.057) | 0.999 | (0.057) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |
| Quite interested | 0.904 | (0.057) | 0.883\* | (0.055) | 0.884\* | (0.055) |
| Hardly interested | 1.059 | (0.094) | 1.012 | (0.082) | 1.012 | (0.082) |
| Not at all interested | 1.332\*\*\* | (0.113) | 1.189\* | (0.105) | 1.191\* | (0.105) |
| Political efficacy index | 0.897\*\*\* | (0.021) | 0.907\*\*\* | (0.020) | 0.908\*\*\* | (0.020) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |  |  |
| Less than once a month | 0.877 | (0.122) | 0.911 | (0.134) | 0.910 | (0.134) |
| Monthly | 0.794\*\*\* | (0.052) | 0.833\*\* | (0.059) | 0.833\* | (0.059) |
| Weekly | 0.770\* | (0.082) | 0.806\* | (0.083) | 0.807\* | (0.083) |
| Every day | 0.787^ | (0.097) | 0.821 | (0.103) | 0.823 | (0.103) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |
| Yes | 0.822\*\* | (0.054) | 0.819\*\* | (0.057) | 0.818\*\* | (0.057) |
| Nonresponse | 2.250\*\*\* | (0.332) | 2.095\*\*\* | (0.270) | 2.093\*\*\* | (0.269) |
| Household income (Ref: Answer) |  |  |  |  |  |  |
| Nonresponse | 1.767\*\*\* | (0.189) | 1.636\*\*\* | (0.139) | 1.635\*\*\* | (0.138) |
| **Interview context** |  |  |  |  |  |  |
| Respondent v. often understood questions |  |  | 0.618\*\*\* | (0.039) | 0.617\*\*\* | (0.039) |
| Respondent often reluctant to answer |  |  | 1.548\*\* | (0.224) | 1.547\*\* | (0.224) |
| Someone present during interview |  |  | 1.091 | (0.082) | 1.091 | (0.082) |
| Age of interviewer |  |  | 1.003 | (0.002) | 1.002 | (0.002) |
| Interviewer gender: Female |  |  | 1.112^ | (0.070) | 1.107 | (0.068) |
| Number of respondents per interviewer |  |  | 1.002 | (0.004) | 1.003 | (0.004) |
| **Country-level variables** |  |  |  |  |  |  |
| % Foreign-born population in 2014 |  |  |  |  | 1.004 | (0.013) |
| Change in foreign-born in 2010-2014 (pp) |  |  |  |  | 0.612\*\* | (0.109) |
| Gini index in 2014 |  |  |  |  | 0.955 | (0.028) |
| Change in Gini index in 2010-2014 |  |  |  |  | 0.905 | (0.063) |
| Change in unemployment rate in 2010-2014 (pp) |  |  |  |  | 0.966 | (0.036) |
| Mipex 2014 (overall score) |  |  |  |  | 1.011 | (0.021) |
| Mipex change 2010-2014 (w/out health) |  |  |  |  | 1.024 | (0.018) |
| Media claims on immigration (number) |  |  |  |  | 1.004 | (0.002) |
| **Constant** | 0.119\*\*\* | (0.025) | 0.141\*\*\* | (0.025) | 0.144\*\*\* | (0.022) |
| Ln Alpha | -0.014 | (0.203) | -0.099 | (0.200) | -0.099 | (0.200) |
| var(Country) | 0.335\*\* | (0.115) | 0.303\*\* | (0.105) | 0.154\* | (0.061) |
| var(Interviewer) | 1.155\*\*\* | (0.261) | 1.151\*\*\* | (0.262) | 1.149\*\*\* | (0.263) |
| **Observations** | 35639 | | 35639 | | 35639 | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted.

Source: European Social Survey (2014a).

**Table 4. Multilevel count models predicting number of nonresponses for the openness items**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Model 1** | | **Model 2** | | **Model 3** | |
| **Respondent characteristics** | *IRR* | *SE* | *IRR* | *SE* | *IRR* | *SE* |
| Ethnic minority | 1.404 | (0.330) | 1.241 | (0.282) | 1.241 | (0.280) |
| Respondent gender: Female | 1.095\* | (0.041) | 1.076^ | (0.042) | 1.076^ | (0.041) |
| Age of respondent | 1.015\*\*\* | (0.002) | 1.012\*\*\* | (0.002) | 1.012\*\*\* | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |
| Separated/Divorced | 1.018 | (0.122) | 1.026 | (0.126) | 1.028 | (0.125) |
| Widowed | 1.174\* | (0.086) | 1.135 | (0.097) | 1.135 | (0.096) |
| Never married/in union | 0.933 | (0.124) | 0.928 | (0.113) | 0.931 | (0.113) |
| Any periods of unemployment in last 5 years | 1.130 | (0.116) | 1.101 | (0.105) | 1.102 | (0.104) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |
| Coping on present income | 1.264^ | (0.155) | 1.246 | (0.182) | 1.243 | (0.181) |
| Difficult on present income | 1.385\*\*\* | (0.098) | 1.239\* | (0.112) | 1.237\* | (0.111) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |  |  |
| Upper secondary | 1.074 | (0.134) | 1.228 | (0.163) | 1.222 | (0.165) |
| Advanced vocational | 1.048 | (0.213) | 1.176 | (0.208) | 1.173 | (0.211) |
| Tertiary | 1.349\* | (0.160) | 1.592\*\*\* | (0.189) | 1.590\*\*\* | (0.190) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |
| Quite interested | 0.978 | (0.107) | 0.925 | (0.096) | 0.929 | (0.096) |
| Hardly interested | 1.111 | (0.163) | 1.061 | (0.162) | 1.065 | (0.162) |
| Not at all interested | 1.594\* | (0.310) | 1.367 | (0.271) | 1.375 | (0.272) |
| Political efficacy index | 0.937\*\* | (0.023) | 0.942\* | (0.025) | 0.943\* | (0.025) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |  |  |
| Less than once a month | 0.639^ | (0.147) | 0.663^ | (0.143) | 0.664^ | (0.143) |
| Monthly | 0.660\* | (0.112) | 0.682\*\* | (0.094) | 0.682\*\* | (0.094) |
| Weekly | 0.614\*\* | (0.107) | 0.635\*\* | (0.094) | 0.635\*\* | (0.094) |
| Every day | 0.691\* | (0.117) | 0.728\* | (0.116) | 0.728\* | (0.116) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |
| Yes | 0.767\*\* | (0.076) | 0.782\* | (0.080) | 0.779\* | (0.079) |
| Nonresponse | 3.681\*\*\* | (1.096) | 3.234\*\*\* | (0.757) | 3.228\*\*\* | (0.752) |
| Household income (Ref: Answer) |  |  |  |  |  |  |
| Nonresponse | 1.930\*\*\* | (0.133) | 1.642\*\*\* | (0.140) | 1.638\*\*\* | (0.138) |
| **Interview context** |  |  |  |  |  |  |
| Respondent v. often understood questions |  |  | 0.618\*\*\* | (0.051) | 0.617\*\*\* | (0.051) |
| Respondent often reluctant to answer |  |  | 3.018\*\*\* | (0.758) | 3.013\*\*\* | (0.758) |
| Someone present during interview |  |  | 1.124 | (0.112) | 1.122 | (0.112) |
| Age of interviewer |  |  | 1.005 | (0.004) | 1.005 | (0.004) |
| Interviewer gender: Female |  |  | 1.298\*\* | (0.126) | 1.309\*\* | (0.125) |
| Number of respondents per interviewer |  |  | 0.995 | (0.004) | 0.996 | (0.004) |
| **Country-level variables** |  |  |  |  |  |  |
| % Foreign-born population in 2014 |  |  |  |  | 1.052\*\*\* | (0.014) |
| Change in foreign-born in 2010-2014 (pp) |  |  |  |  | 0.552\* | (0.134) |
| Gini index in 2014 |  |  |  |  | 0.973 | (0.038) |
| Change in Gini index in 2010-2014 |  |  |  |  | 0.801\* | (0.079) |
| Change in unemployment rate in 2010-2014 (pp) |  |  |  |  | 1.009 | (0.062) |
| Mipex 2014 (overall score) |  |  |  |  | 1.013 | (0.023) |
| Mipex change 2010-2014 (w/out health) |  |  |  |  | 1.061^ | (0.034) |
| Media claims on immigration (number) |  |  |  |  | 1.007\* | (0.003) |
| **Constant** | 0.056\*\*\* | (0.015) | 0.050\*\*\* | (0.014) | 0.050\*\*\* | (0.013) |
| Ln Alpha | 1.789\*\*\* | (0.152) | 1.694\*\*\* | (0.139) | 1.693\*\*\* | (0.139) |
| var(Country) | 0.510\*\* | (0.156) | 0.456\*\*\* | (0.126) | 0.235\*\* | (0.074) |
| var(Interviewer) | 1.941\*\*\* | (0.534) | 1.948\*\*\* | (0.539) | 1.948\*\*\* | (0.539) |
| **Observations** | 35639 | | 35639 | | 35639 | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted.

Source: European Social Survey (2014a).

**Table 5. Multilevel count models predicting number of nonresponses, accounting for the direction of attitudes to immigration**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Nonresponse to the impact items** | | | | **Nonresponse to the openness items** | | | |
|  | **Model 1a** | | **Model 1b** | | **Model 1a** | | **Model 1b** | |
| **Attitudes to immigration** | *IRR* | *SE* | *IRR* | *SE* | *IRR* | *SE* | *IRR* | *SE* |
| Mean impact score (Ref. Neutral) |  |  |  |  |  |  |  |  |
| Negative (-1SD < Mean) | 0.867 | (0.122) |  |  | 0.746 | (0.188) |  |  |
| Positive (Mean > + 1SD) | 1.229\* | (0.120) |  |  | 1.086 | (0.231) |  |  |
| Mean openness score (Ref. Neutral) |  |  |  |  |  |  |  |  |
| Negative (-1SD < Mean) |  |  | 0.822\*\*\* | (0.041) |  |  | 0.974 | (0.066) |
| Positive (Mean > + 1SD) |  |  | 1.187^ | (0.105) |  |  | 1.217\* | (0.110) |
| **Constant** | 0.122\*\*\* | (0.023) | 0.125\*\*\* | (0.026) | 0.063\*\*\* | (0.016) | 0.054\*\*\* | (0.011) |
| Ln Alpha | -0.027 | (0.223) | -0.011 | (0.218) | 1.829\*\*\* | (0.162) | 1.650\*\*\* | (0.162) |
| var(Country) | 0.356\*\* | (0.120) | 0.382\*\* | (0.128) | 0.552\*\*\* | (0.162) | 0.510\*\* | (0.163) |
| var(Interviewer) | 1.190\*\*\* | (0.264) | 1.205\*\*\* | (0.275) | 2.047\*\*\* | (0.562) | 1.981\*\*\* | (0.552) |
| **Observations** | 35586 | | 35434 | | 35586 | | 35434 | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted. Estimations based on Models 1 presented in Tables 3 and 4, without the racism measure. Full models are compared in the Supplementary Online Material, Tables SM1 and SM2.

Source: European Social Survey (2014a).

**APPENDIX**

**Table A1. Descriptive statistics for dependent and independent variables**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Mean / %** | **SD** | **Min** | **Max** |
| **Dependent variables** |  |  |  |  |  |
| Impact items | Number of nonresponse | 0.24 | 0.74 | 0 | 7 |
| Openness items | Number of nonresponse | 0.17 | 0.73 | 0 | 6 |
|  |  |  |  |  |  |
| **Individual characteristics** |  |  |  |  |  |
| Ethnic minority | Yes | 5.5% |  |  |  |
| Gender | Female | 51.9% |  |  |  |
| Age |  | 46.3 | 18.9 | 14 | 114 |
| Marital status | Married/Civil union | 51.4% |  |  |  |
|  | Separated or Divorced | 8.3% |  |  |  |
|  | Widowed | 6.5% |  |  |  |
|  | Never married/in civil union | 33.8% |  |  |  |
| Any periods of unemployment in last five years | No periods | 84.1% |  |  |  |
| Yes, some periods | 15.9% |  |  |  |
| Qualifications | ES-ISCED I & II (lower secondary and less) | 38.5% |  |  |  |
|  | ES-ISCED III (upper secondary) | 34.0% |  |  |  |
|  | ES-ISCED IV (advanced vocational) | 11.5% |  |  |  |
|  | ES-ISCED V & VI (tertiary education) | 16.1% |  |  |  |
| Subjective household income | Living comfortably on present income | 32.1% |  |  |  |
| Coping on present income | 48.3% |  |  |  |
| Difficult on present income | 19.6% |  |  |  |
| Interest in politics | Very interested | 11.9% |  |  |  |
|  | Quite interested | 36.2% |  |  |  |
|  | Hardly interested | 34.7% |  |  |  |
|  | Not at all interested | 17.3% |  |  |  |
| Political efficacy |  | 3.5 | 1.9 | 0 | 10 |
| Contact frequency | Never | 14.3% |  |  |  |
|  | Less than once a month | 10.9% |  |  |  |
|  | Monthly (one-several times a month) | 20.1% |  |  |  |
|  | Once a week (one-several times a week) | 27.5% |  |  |  |
|  | Every day | 27.3% |  |  |  |
| Some races born harder working | No | 57.8% |  |  |  |
| Yes | 38.5% |  |  |  |
| Nonresponse | 3.7% |  |  |  |
| Household income | Answer | 84.7% |  |  |  |
| Nonresponse | 15.3% |  |  |  |
| Attitudes to immigration | Mean impact score | 4.76 | 1.70 | 0 | 10 |
| Mean openness score | 2.60 | 0.76 | 1 | 4 |
| **Interview context\*** |  |  | |  |  |
| Respondent very often understood questions | No  Yes | 30.7% |  |  |  |
| 69.3% |  |  |  |
| Respondent often reluctant to answer | No | 89.6% |  |  |  |
| Yes | 10.4% |  |  |  |
| Someone present during interview | No | 89.3% |  |  |  |
| Yes | 10.7% |  |  |  |
| Interviewer gender | Female | 57.4% |  |  |  |
| Interviewer age |  | 54.7 | 11.7 | 19 | 86 |
| Interviewer experience | No of interviews in ESS wave 7 | 19.4 | 11.6 | 1 | 77 |
| **Country context** |  |  |  |  |  |
| % foreign born in 2014^ | | 11.1% | 4.6 | 1.63 | 26.82 |
| Change in % foreign born 2010-2014 (pp)^ | | 0.4 | 0.7 | -1.40 | 2.99 |
| % unemployed in 2014^ | | 9.4% | 5.8 | 3.50 | 24.50 |
| Change in % unemployed 2010-2014 (pp)^ | | -0.14 | 2.3 | -9.30 | 4.60 |
| Gini coefficient in 2014” | | 29.8 | 3.7 | 23.50 | 35.60 |
| Gini coefficient change 2010-2014” | | 0.7 | 1.6 | -2.00 | 4.50 |
| MIPEX 2014 (overall score)” | | 55.5 | 10.9 | 36.81 | 77.84 |
| MIPEX change 2010-2014 (w/out health)” | | 0.9 | 3.5 | -7.85 | 10.58 |
| Media claims on immigration (number)” | | 24.4 | 35.8 | 0 | 164 |

Notes: Nrespondent=35,639; Ninterviewer=2,638, Ncountry=20; weighted sample; \*percentages represent the share of interviews;   
^ country-size weighted mean, ” arithmetic mean for 20 countries.

**ONLINE SUPPLEMENTARY MATERIAL**

*for*

Piekut A. (2019). Survey nonresponse in attitudes towards immigration in Europe. *Journal of Ethnic and Migration Studies*. Doi: 10.1080/1369183X.2019.1661773.

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Table SM1. Multilevel negative binominal models for the impact items

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Model 1** | | **Model 1x** | | **Model 1a** | | **Model 1b** | |
| **Respondent characteristics** | *Exp(B)* | *SE* | *Exp(B)* | *SE* | *Exp(B)* | *SE* | *Exp(B)* | *SE* |
| Ethnic minority | 1.515\*\*\* | (0.167) | 1.504\*\*\* | (0.173) | 1.439\*\*\* | (0.149) | 1.508\*\*\* | (0.164) |
| Respondent gender: Female | 1.196\*\* | (0.070) | 1.223\*\*\* | (0.068) | 1.196\*\* | (0.068) | 1.210\*\*\* | (0.060) |
| Age of respondent | 1.013\*\*\* | (0.002) | 1.012\*\*\* | (0.002) | 1.013\*\*\* | (0.002) | 1.014\*\*\* | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | 0.937 | (0.066) | 0.935 | (0.072) | 0.902 | (0.065) | 0.940 | (0.077) |
| Widowed | 1.325\*\* | (0.126) | 1.301\*\* | (0.128) | 1.322\*\* | (0.115) | 1.353\*\*\* | (0.122) |
| Never married/in union | 1.186\*\* | (0.071) | 1.189\*\* | (0.074) | 1.164\* | (0.087) | 1.200\*\* | (0.080) |
| Any periods of unemployed in last five years | 0.972 | (0.045) | 0.960 | (0.042) | 0.960 | (0.036) | 0.946 | (0.035) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | 1.117\* | (0.049) | 1.114\* | (0.050) | 1.138\*\* | (0.046) | 1.147\*\* | (0.059) |
| Difficult on present income | 1.230\* | (0.100) | 1.233\* | (0.107) | 1.269\*\* | (0.097) | 1.256\*\* | (0.108) |
| Education level (Ref: Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 0.750\*\*\* | (0.056) | 0.759\*\*\* | (0.054) | 0.731\*\*\* | (0.059) | 0.717\*\*\* | (0.057) |
| Advanced vocational | 0.759\*\* | (0.072) | 0.768\*\* | (0.076) | 0.747\*\* | (0.077) | 0.718\*\* | (0.075) |
| Tertiary | 0.876\* | (0.051) | 0.893^ | (0.061) | 0.838\* | (0.065) | 0.808\*\* | (0.061) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | 0.904 | (0.057) | 0.903\* | (0.045) | 0.921 | (0.056) | 0.903 | (0.059) |
| Hardly interested | 1.059 | (0.094) | 1.053 | (0.091) | 1.087 | (0.097) | 1.044 | (0.113) |
| Not at all interested | 1.332\*\*\* | (0.113) | 1.289\*\*\* | (0.090) | 1.354\*\*\* | (0.116) | 1.348\*\* | (0.123) |
| Political efficacy index | 0.897\*\*\* | (0.021) | 0.897\*\*\* | (0.020) | 0.884\*\*\* | (0.017) | 0.887\*\*\* | (0.019) |
| Contact with diff. ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.877 | (0.122) | 0.890 | (0.121) | 0.822^ | (0.092) | 0.824 | (0.098) |
| Monthly | 0.794\*\*\* | (0.052) | 0.814\*\* | (0.053) | 0.734\*\*\* | (0.034) | 0.727\*\*\* | (0.034) |
| Weekly | 0.770\* | (0.082) | 0.801^ | (0.094) | 0.701\*\*\* | (0.069) | 0.695\*\*\* | (0.071) |
| Every day | 0.787^ | (0.097) | 0.806 | (0.113) | 0.723\*\* | (0.088) | 0.713\*\* | (0.093) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| No answer | 1.767\*\*\* | (0.189) | 1.786\*\*\* | (0.193) | 1.787\*\*\* | (0.201) | 1.792\*\*\* | (0.215) |
| **Racism (1)** Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | 0.822\*\* | (0.054) |  |  |  |  |  |  |
| Nonresponse | 2.250\*\*\* | (0.332) |  |  |  |  |  |  |
| **Racism (2)** Some races born less intelligent (Ref. No) |  |  |  |  |  |  |  |  |
| Yes |  |  | 0.900\* | (0.040) |  |  |  |  |
| Nonresponse |  |  | 2.576\*\*\* | (0.234) |  |  |  |  |
| **Attitudes towards immigration** |  |  |  |  |  |  |  |  |
| **Mean impact score** (Ref. Neutral) |  |  |  |  |  |  |  |  |
| Negative (< -1SD) |  |  |  |  | 0.867 | (0.122) |  |  |
| Positive (> + 1SD) |  |  |  |  | 1.229\* | (0.120) |  |  |
| **Mean openness score** (Ref. Neutral) |  |  |  |  |  |  |  |  |
| Negative (< -1SD) |  |  |  |  |  |  | 0.822\*\*\* | (0.041) |
| Positive (> + 1SD) |  |  |  |  |  |  | 1.187^ | (0.105) |
| **Constant** | 0.119\*\*\* | (0.025) | 0.107\*\*\* | (0.024) | 0.122\*\*\* | (0.023) | 0.125\*\*\* | (0.026) |
| Ln Alpha | -0.014 | (0.203) | -0.041 | (0.210) | -0.027 | (0.223) | -0.011 | (0.218) |
| var(Country) | 0.335\*\* | (0.115) | 0.338\*\* | (0.114) | 0.356\*\* | (0.120) | 0.382\*\* | (0.128) |
| var(Interviewer) | 1.155\*\*\* | (0.261) | 1.146\*\*\* | (0.260) | 1.190\*\*\* | (0.264) | 1.205\*\*\* | (0.275) |
| **Observations** | 35639 | | 35639 | | 35586 | | 35434 | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted.

Table SM2. Multilevel negative binominal models for the openness items

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Model 1** | | **Model 1x** | | **Model 1a** | | **Model 1b** | |
| **Respondent characteristics** | *Exp(B)* | *SE* | *Exp(B)* | *SE* | *Exp(B)* | *SE* | *Exp(B)* | *SE* |
| Ethnic minority | 1.404 | (0.330) | 1.387 | (0.315) | 1.274 | (0.292) | 1.447 | (0.332) |
| Respondent gender: Female | 1.095\* | (0.041) | 1.085\* | (0.044) | 1.087\* | (0.040) | 1.182\*\*\* | (0.036) |
| Age of respondent | 1.015\*\*\* | (0.002) | 1.015\*\*\* | (0.002) | 1.016\*\*\* | (0.002) | 1.016\*\*\* | (0.004) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | 1.018 | (0.122) | 1.037 | (0.128) | 0.996 | (0.113) | 1.057 | (0.078) |
| Widowed | 1.174\* | (0.086) | 1.137 | (0.103) | 1.208\* | (0.091) | 1.205\*\* | (0.083) |
| Never married/in union | 0.933 | (0.124) | 0.947 | (0.121) | 0.928 | (0.127) | 1.141 | (0.167) |
| Any periods of unemployed in last five years | 1.130 | (0.116) | 1.116 | (0.113) | 1.110 | (0.126) | 1.049 | (0.123) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | 1.264^ | (0.155) | 1.244\* | (0.135) | 1.289\* | (0.151) | 1.355\*\* | (0.159) |
| Difficult on present income | 1.385\*\*\* | (0.098) | 1.363\*\*\* | (0.084) | 1.471\*\*\* | (0.093) | 1.488\*\*\* | (0.145) |
| Education level (Ref: Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 1.074 | (0.134) | 1.093 | (0.133) | 1.022 | (0.120) | 0.928 | (0.097) |
| Advanced vocational | 1.048 | (0.213) | 1.088 | (0.210) | 1.037 | (0.216) | 0.869 | (0.149) |
| Tertiary | 1.349\* | (0.160) | 1.370\*\* | (0.154) | 1.339\*\* | (0.139) | 1.074 | (0.099) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | 0.978 | (0.107) | 0.991 | (0.099) | 0.977 | (0.102) | 0.971 | (0.125) |
| Hardly interested | 1.111 | (0.163) | 1.123 | (0.183) | 1.128 | (0.156) | 1.067 | (0.157) |
| Not at all interested | 1.594\* | (0.310) | 1.596\* | (0.310) | 1.650\*\* | (0.295) | 1.537\* | (0.284) |
| Political efficacy index | 0.937\*\* | (0.023) | 0.940\* | (0.023) | 0.918\*\*\* | (0.022) | 0.945\*\* | (0.020) |
| Contact with diff. ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.639^ | (0.147) | 0.653^ | (0.157) | 0.586\* | (0.131) | 0.571\* | (0.127) |
| Monthly | 0.660\* | (0.112) | 0.681\* | (0.115) | 0.587\*\* | (0.098) | 0.509\*\*\* | (0.104) |
| Weekly | 0.614\*\* | (0.107) | 0.628\*\* | (0.111) | 0.516\*\*\* | (0.098) | 0.480\*\*\* | (0.087) |
| Every day | 0.691\* | (0.117) | 0.712\* | (0.113) | 0.593\*\*\* | (0.094) | 0.564\*\*\* | (0.082) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| No answer | 1.930\*\*\* | (0.133) | 2.004\*\*\* | (0.138) | 2.001\*\*\* | (0.175) | 2.022\*\*\* | (0.213) |
| **Racism (1)** Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | 0.767\*\* | (0.076) |  |  |  |  |  |  |
| Nonresponse | 3.681\*\*\* | (1.096) |  |  |  |  |  |  |
| **Racism (2)** Some races born less intelligent (Ref. No) |  |  |  |  |  |  |  |  |
| Yes |  |  | 0.640\*\*\* | (0.085) |  |  |  |  |
| Nonresponse |  |  | 4.035\*\*\* | (1.120) |  |  |  |  |
| **Attitudes towards immigration** |  |  |  |  |  |  |  |  |
| **Mean impact score** (Ref. Neutral) |  |  |  |  |  |  |  |  |
| Negative (< -1SD) |  |  |  |  | 0.746 | (0.188) |  |  |
| Positive (> + 1SD) |  |  |  |  | 1.086 | (0.231) |  |  |
| **Mean openness score** (Ref. Neutral) |  |  |  |  |  |  |  |  |
| Negative (< -1SD) |  |  |  |  |  |  | 0.974 | (0.066) |
| Positive (> + 1SD) |  |  |  |  |  |  | 1.217\* | (0.110) |
| **Constant** | 0.056\*\*\* | (0.015) | 0.051\*\*\* | (0.014) | 0.063\*\*\* | (0.016) | 0.054\*\*\* | (0.011) |
| Ln Alpha | 1.789\*\*\* | (0.152) | 1.778\*\*\* | (0.148) | 1.829\*\*\* | (0.162) | 1.650\*\*\* | (0.162) |
| var(Country) | 0.510\*\* | (0.156) | 0.505\*\* | (0.158) | 0.552\*\*\* | (0.162) | 0.510\*\* | (0.163) |
| var(Interviewer) | 1.941\*\*\* | (0.534) | 1.949\*\*\* | (0.533) | 2.047\*\*\* | (0.562) | 1.981\*\*\* | (0.552) |
| **Observations** | 35639 | | 35639 | | 35586 | | 35434 | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted.

Note on estimates in Tables SM3 and SM4

The following two tables present hurdle models which predict the direction of attitudes to immigration (column 1, Direction) and the likelihood of responding to the question (column 2, Selection) for each of the impact and openness items taken separately.

Each panel of the tables reports the results for separate items as indicated at the head of the column. In Table SM3, higher coefficients for column 1 (Direction) indicate more positive opinions about the impact of immigration, while higher coefficients for column 2 (Selection) indicates that a respondent is more likely to answer the item.

In Table SM4, higher coefficients for column 1 (Direction) indicate less opposition / more openness towards immigration, while higher coefficients for column 2 (Selection) indicates that a respondent is more likely to answer the item.

Table SM3. Hurdle models predicting the selection to answer an impact item and the direction of attitudes

Economy and Cultural life

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Impact on economy** | | | | **Impact on cultural life** | | | |
|  | **Direction** | | **Selection** | | **Direction** | | **Selection** | |
| **Respondent characteristics** | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* |
| Ethnic minority | 0.657\*\*\* | (0.130) | -0.112 | (0.091) | 0.869\*\*\* | (0.114) | -0.084 | (0.142) |
| Respondent gender: Female | -0.205\*\*\* | (0.051) | -0.062 | (0.047) | 0.188\*\*\* | (0.049) | -0.010 | (0.056) |
| Age of respondent | -0.000 | (0.002) | -0.006\*\*\* | (0.002) | -0.003^ | (0.002) | -0.008\*\*\* | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | -0.179^ | (0.092) | 0.015 | (0.082) | -0.221\* | (0.091) | 0.005 | (0.087) |
| Widowed | 0.092 | (0.103) | -0.126 | (0.077) | 0.052 | (0.096) | -0.072 | (0.091) |
| Never married/in union | 0.054 | (0.067) | -0.116^ | (0.060) | -0.045 | (0.066) | -0.106 | (0.072) |
| Any periods of unemployment in last 5 years | -0.159\* | (0.081) | 0.062 | (0.073) | -0.046 | (0.076) | 0.054 | (0.085) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | -0.314\*\*\* | (0.055) | 0.005 | (0.063) | -0.185\*\*\* | (0.054) | -0.008 | (0.077) |
| Difficult on present income | -0.687\*\*\* | (0.087) | 0.037 | (0.073) | -0.477\*\*\* | (0.081) | -0.104 | (0.085) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 0.082 | (0.069) | 0.184\*\* | (0.060) | 0.196\*\* | (0.066) | 0.216\*\* | (0.069) |
| Advanced vocational | 0.351\*\*\* | (0.084) | 0.200\* | (0.083) | 0.533\*\*\* | (0.080) | 0.401\*\*\* | (0.109) |
| Tertiary | 0.896\*\*\* | (0.075) | 0.167\* | (0.074) | 1.008\*\*\* | (0.070) | 0.204\* | (0.100) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | -0.274\*\*\* | (0.078) | 0.005 | (0.091) | -0.108 | (0.077) | -0.023 | (0.113) |
| Hardly interested | -0.553\*\*\* | (0.089) | -0.094 | (0.094) | -0.341\*\*\* | (0.087) | -0.010 | (0.112) |
| Not at all interested | -0.684\*\*\* | (0.115) | -0.132 | (0.100) | -0.434\*\*\* | (0.111) | -0.281\* | (0.115) |
| Political efficacy index | 0.318\*\*\* | (0.016) | 0.048\*\* | (0.015) | 0.301\*\*\* | (0.015) | 0.081\*\*\* | (0.021) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.384\*\*\* | (0.108) | 0.084 | (0.080) | 0.313\*\* | (0.102) | -0.029 | (0.098) |
| Monthly | 0.562\*\*\* | (0.098) | 0.123 | (0.075) | 0.561\*\*\* | (0.095) | 0.070 | (0.083) |
| Weekly | 0.787\*\*\* | (0.099) | 0.108 | (0.070) | 0.775\*\*\* | (0.093) | 0.103 | (0.081) |
| Every day | 0.890\*\*\* | (0.103) | 0.114 | (0.074) | 0.934\*\*\* | (0.098) | 0.010 | (0.089) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | -0.462\*\*\* | (0.054) | 0.139\*\* | (0.052) | -0.499\*\*\* | (0.052) | 0.029 | (0.062) |
| Nonresponse | -0.248^ | (0.138) | -0.370\*\*\* | (0.077) | -0.220^ | (0.117) | -0.514\*\*\* | (0.091) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| Nonresponse | 0.130^ | (0.074) | -0.230\*\*\* | (0.057) | 0.010 | (0.068) | -0.326\*\*\* | (0.070) |
| **Interview context** |  |  |  |  |  |  |  |  |
| Respondent v. often understood questions | 0.046 | (0.063) | 0.132\* | (0.053) | 0.120\* | (0.059) | 0.340\*\*\* | (0.057) |
| Respondent often reluctant to answer | -0.094 | (0.087) | -0.258\*\*\* | (0.063) | -0.135^ | (0.079) | -0.243\*\*\* | (0.068) |
| Someone present during interview | -0.174^ | (0.094) | -0.025 | (0.076) | -0.201\* | (0.091) | -0.063 | (0.073) |
| Age of interviewer | -0.007\*\* | (0.002) | -0.004\* | (0.002) | -0.007\*\*\* | (0.002) | -0.005^ | (0.002) |
| Interviewer gender: Female | -0.116\* | (0.051) | -0.143\*\* | (0.049) | -0.050 | (0.050) | -0.035 | (0.060) |
| Number of respondents per interviewer | -0.001 | (0.002) | 0.004 | (0.002) | -0.004\* | (0.002) | -0.001 | (0.002) |
| **Country (Ref. AU - Austria)** |  |  |  |  |  |  |  |  |
| BE - Belgium | -0.503\*\*\* | (0.104) | 0.666\*\*\* | (0.164) | 0.796\*\*\* | (0.096) | 0.924\*\*\* | (0.201) |
| CH - Switzerland | 0.815\*\*\* | (0.097) | 0.295\* | (0.125) | 0.676\*\*\* | (0.101) | 0.184 | (0.144) |
| CZ - Czech Republic | -0.828\*\*\* | (0.121) | -0.107 | (0.098) | -0.671\*\*\* | (0.113) | -0.225^ | (0.115) |
| DE - Germany | 0.578\*\*\* | (0.090) | 0.217\* | (0.106) | 0.994\*\*\* | (0.090) | 0.185 | (0.134) |
| DK - Denmark | -0.797\*\*\* | (0.110) | 0.167 | (0.118) | 0.146 | (0.110) | 0.017 | (0.143) |
| EE - Estonia | 0.587\*\*\* | (0.101) | 0.084 | (0.100) | 0.938\*\*\* | (0.101) | 0.152 | (0.126) |
| ES - Spain | 0.413\*\*\* | (0.102) | -0.126 | (0.089) | 1.409\*\*\* | (0.101) | -0.188^ | (0.105) |
| FI - Finland | 0.254\*\* | (0.097) | 0.241^ | (0.129) | 1.855\*\*\* | (0.094) | 0.089 | (0.134) |
| FR - France | -0.343\*\* | (0.116) | 0.530\*\*\* | (0.119) | 0.386\*\*\* | (0.112) | 0.315^ | (0.177) |
| GB - United Kingdom | -0.248\* | (0.105) | 0.475\*\*\* | (0.112) | -0.236\* | (0.107) | 0.223^ | (0.120) |
| HU - Hungary | -0.622\*\*\* | (0.126) | -0.151 | (0.098) | 0.720\*\*\* | (0.112) | -0.155 | (0.112) |
| IE - Ireland | 0.319\*\* | (0.103) | 0.136 | (0.102) | 0.625\*\*\* | (0.099) | -0.177 | (0.112) |
| LT - Lithuania | 1.095\*\*\* | (0.116) | -0.238\* | (0.096) | 0.605\*\*\* | (0.115) | -0.325\*\* | (0.108) |
| NL - Netherlands | -0.461\*\*\* | (0.103) | 0.088 | (0.113) | 0.794\*\*\* | (0.098) | 0.051 | (0.130) |
| NO - Norway | 0.028 | (0.102) | 0.233^ | (0.135) | 0.131 | (0.107) | 0.536\*\* | (0.183) |
| PL - Poland | 0.821\*\*\* | (0.113) | -0.159^ | (0.090) | 1.854\*\*\* | (0.107) | -0.401\*\*\* | (0.106) |
| PT - Portugal | 0.760\*\*\* | (0.149) | 0.135 | (0.127) | 1.350\*\*\* | (0.146) | -0.002 | (0.148) |
| SE - Sweden | 0.055 | (0.099) | 0.079 | (0.107) | 1.593\*\*\* | (0.095) | 0.255^ | (0.142) |
| SI - Slovenia | -0.532\*\*\* | (0.130) | -0.096 | (0.107) | 0.606\*\*\* | (0.126) | -0.206 | (0.126) |
| **Constant** | 4.782\*\*\* | (0.161) | 0.868\*\*\* | (0.009) | 4.309\*\*\* | (0.155) | 0.865\*\*\* | (0.008) |
| Ln Sigma Constant |  |  | 1.903\*\*\* | (0.138) |  |  | 2.042\*\*\* | (0.165) |
| Sigma |  |  | 2.3816 | (0.021) |  |  | 2.3759 | (0.018) |
| **Observations** | 35639 | | 35639 | | 35639 | | 35639 | | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted; standard errors clustered at interviewer and country levels. Ln sigma and the sigma are estimated standard deviation of the error term.

**Table SM3. (*continued*)**

Country as a place to live and Jobs

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Impact on place to live** | | | | **Impact on jobs** | | | |
|  | **Direction** | | **Selection** | | **Direction** | | **Selection** | |
| **Respondent characteristics** | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* |
| Ethnic minority | 0.916\*\*\* | (0.109) | -0.296\*\* | (0.098) | 1.020\*\*\* | (0.119) | -0.140 | (0.099) |
| Respondent gender: Female | 0.026 | (0.044) | -0.031 | (0.050) | -0.072 | (0.049) | -0.138\*\* | (0.052) |
| Age of respondent | -0.007\*\*\* | (0.002) | -0.004\* | (0.002) | 0.004\* | (0.002) | -0.005\*\* | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | -0.125 | (0.080) | 0.067 | (0.096) | -0.074 | (0.088) | 0.059 | (0.081) |
| Widowed | 0.067 | (0.089) | -0.283\*\*\* | (0.085) | 0.086 | (0.101) | -0.196\* | (0.080) |
| Never married/in union | 0.005 | (0.059) | 0.016 | (0.064) | 0.002 | (0.066) | -0.088 | (0.064) |
| Any periods of unemployment in last 5 years | -0.126^ | (0.069) | 0.066 | (0.066) | -0.264\*\* | (0.082) | -0.005 | (0.073) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | -0.216\*\*\* | (0.049) | -0.005 | (0.063) | -0.257\*\*\* | (0.052) | 0.031 | (0.058) |
| Difficult on present income | -0.516\*\*\* | (0.075) | -0.048 | (0.070) | -0.680\*\*\* | (0.087) | -0.056 | (0.077) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 0.110^ | (0.058) | 0.058 | (0.059) | 0.115^ | (0.065) | 0.046 | (0.062) |
| Advanced vocational | 0.342\*\*\* | (0.072) | 0.050 | (0.084) | 0.382\*\*\* | (0.079) | 0.072 | (0.081) |
| Tertiary | 0.722\*\*\* | (0.064) | -0.007 | (0.076) | 0.588\*\*\* | (0.070) | -0.171\* | (0.079) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | -0.146\* | (0.069) | -0.058 | (0.089) | -0.106 | (0.072) | 0.129 | (0.086) |
| Hardly interested | -0.302\*\*\* | (0.078) | -0.075 | (0.088) | -0.278\*\*\* | (0.083) | 0.050 | (0.092) |
| Not at all interested | -0.357\*\*\* | (0.102) | -0.133 | (0.098) | -0.440\*\*\* | (0.112) | 0.065 | (0.114) |
| Political efficacy index | 0.305\*\*\* | (0.014) | 0.046\*\* | (0.014) | 0.237\*\*\* | (0.016) | 0.048\* | (0.019) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.273\*\* | (0.095) | 0.121 | (0.083) | 0.388\*\*\* | (0.106) | -0.004 | (0.090) |
| Monthly | 0.457\*\*\* | (0.090) | 0.248\*\* | (0.078) | 0.414\*\*\* | (0.102) | 0.064 | (0.080) |
| Weekly | 0.596\*\*\* | (0.089) | 0.288\*\*\* | (0.071) | 0.643\*\*\* | (0.102) | 0.037 | (0.079) |
| Every day | 0.733\*\*\* | (0.094) | 0.195\*\* | (0.072) | 0.729\*\*\* | (0.107) | -0.058 | (0.081) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | -0.489\*\*\* | (0.047) | 0.026 | (0.056) | -0.284\*\*\* | (0.052) | 0.121\* | (0.054) |
| Nonresponse | -0.173 | (0.111) | -0.504\*\*\* | (0.070) | -0.190 | (0.136) | -0.466\*\*\* | (0.088) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| Nonresponse | -0.008 | (0.063) | -0.167\*\* | (0.059) | 0.062 | (0.074) | -0.378\*\*\* | (0.059) |
| **Interview context** |  |  |  |  |  |  |  |  |
| Respondent v. often understood questions | -0.028 | (0.054) | 0.088^ | (0.053) | 0.149\* | (0.061) | 0.187\*\*\* | (0.056) |
| Respondent often reluctant to answer | -0.137^ | (0.074) | -0.357\*\*\* | (0.059) | -0.122 | (0.090) | -0.261\*\*\* | (0.070) |
| Someone present during interview | -0.188\* | (0.086) | -0.032 | (0.070) | -0.001 | (0.096) | -0.129 | (0.082) |
| Age of interviewer | -0.005\*\* | (0.002) | -0.001 | (0.002) | 0.002 | (0.002) | 0.001 | (0.002) |
| Interviewer gender: Female | -0.060 | (0.045) | -0.036 | (0.049) | -0.049 | (0.049) | -0.028 | (0.052) |
| Number of respondents per interviewer | -0.003^ | (0.002) | -0.002 | (0.002) | -0.002 | (0.002) | 0.003^ | (0.002) |
| **Country (Ref. AU - Austria)** |  |  |  |  |  |  |  |  |
| BE - Belgium | 0.267\*\* | (0.092) | 0.762\*\*\* | (0.146) | -0.142 | (0.098) | 0.576\*\*\* | (0.139) |
| CH - Switzerland | 0.504\*\*\* | (0.090) | 0.100 | (0.110) | 0.269\*\* | (0.093) | -0.104 | (0.110) |
| CZ - Czech Republic | -0.163 | (0.104) | -0.013 | (0.105) | -0.893\*\*\* | (0.114) | 0.207^ | (0.109) |
| DE - Germany | 0.610\*\*\* | (0.082) | 0.423\*\*\* | (0.115) | 0.719\*\*\* | (0.082) | 0.045 | (0.101) |
| DK - Denmark | 0.584\*\*\* | (0.096) | 0.370\*\* | (0.131) | 0.221\* | (0.096) | -0.033 | (0.115) |
| EE - Estonia | 0.802\*\*\* | (0.090) | 0.142 | (0.100) | 0.823\*\*\* | (0.098) | 0.101 | (0.103) |
| ES - Spain | 0.922\*\*\* | (0.092) | 0.053 | (0.095) | 0.298\*\* | (0.103) | 0.089 | (0.101) |
| FI - Finland | 0.942\*\*\* | (0.089) | 0.368\*\* | (0.137) | 0.726\*\*\* | (0.090) | -0.009 | (0.115) |
| FR - France | 0.406\*\*\* | (0.096) | 0.600\*\*\* | (0.135) | 0.418\*\*\* | (0.108) | 0.125 | (0.115) |
| GB - United Kingdom | 0.161^ | (0.098) | 0.509\*\*\* | (0.118) | -0.170^ | (0.099) | 0.311\*\* | (0.110) |
| HU - Hungary | 0.192^ | (0.105) | -0.185^ | (0.094) | -0.952\*\*\* | (0.130) | -0.012 | (0.105) |
| IE - Ireland | 1.107\*\*\* | (0.090) | 0.354\*\* | (0.113) | -0.012 | (0.097) | 0.086 | (0.103) |
| LT - Lithuania | 1.077\*\*\* | (0.104) | -0.175^ | (0.092) | 0.514\*\*\* | (0.115) | -0.150 | (0.101) |
| NL - Netherlands | 0.462\*\*\* | (0.091) | 0.168 | (0.111) | -0.183^ | (0.095) | -0.044 | (0.111) |
| NO - Norway | 0.334\*\*\* | (0.094) | 0.343\*\* | (0.128) | 0.841\*\*\* | (0.093) | 0.202 | (0.132) |
| PL - Poland | 1.725\*\*\* | (0.099) | -0.251\*\* | (0.089) | 0.431\*\*\* | (0.108) | -0.129 | (0.100) |
| PT - Portugal | 0.529\*\*\* | (0.132) | 0.329\* | (0.145) | 0.635\*\*\* | (0.148) | 0.305\* | (0.152) |
| SE - Sweden | 1.476\*\*\* | (0.089) | 0.253\* | (0.114) | 1.213\*\*\* | (0.090) | -0.086 | (0.104) |
| SI - Slovenia | 0.480\*\*\* | (0.110) | -0.059 | (0.107) | 0.123 | (0.123) | -0.174^ | (0.104) |
| **Constant** | 4.253\*\*\* | (0.147) | 0.772\*\*\* | (0.008) | 4.201\*\*\* | (0.154) | 0.827\*\*\* | (0.010) |
| Ln Sigma Constant |  |  | 1.835\*\*\* | (0.143) |  |  | 1.967\*\*\* | (0.147) |
| Sigma |  |  | 2.163 | (0.018) |  |  | 2.287 | (0.022) |
| **Observations** | 35639 | | 35639 | | 35639 | | 35639 | | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted; standard errors clustered at interviewer and country levels. Ln sigma and the sigma are estimated standard deviation of the error term.

**Table SM3. (*continued*)**

Religious beliefs and practices and Crime

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Impact on religious beliefs/practices** | | | | **Impact on crime** | | | |
|  | **Direction** | | **Selection** | | **Direction** | | **Selection** | |
| **Respondent characteristics** | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* |
| Ethnic minority | 0.650\*\*\* | (0.105) | -0.027 | (0.078) | 0.638\*\*\* | (0.100) | -0.315\*\*\* | (0.083) |
| Respondent gender: Female | 0.078^ | (0.044) | -0.014 | (0.040) | 0.091^ | (0.048) | -0.151\*\*\* | (0.043) |
| Age of respondent | -0.007\*\*\* | (0.002) | -0.004\*\* | (0.001) | -0.003^ | (0.002) | -0.002 | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | -0.073 | (0.079) | -0.041 | (0.066) | 0.055 | (0.095) | -0.101 | (0.077) |
| Widowed | 0.290\*\*\* | (0.087) | 0.088 | (0.067) | 0.212^ | (0.115) | -0.226\*\* | (0.076) |
| Never married/in union | 0.055 | (0.059) | -0.094^ | (0.052) | 0.116^ | (0.064) | -0.058 | (0.057) |
| Any periods of unemployment in last 5 years | -0.011 | (0.069) | -0.002 | (0.055) | -0.092 | (0.075) | 0.009 | (0.061) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | -0.060 | (0.050) | -0.015 | (0.050) | -0.013 | (0.054) | -0.046 | (0.053) |
| Difficult on present income | -0.138^ | (0.074) | -0.087 | (0.061) | -0.349\*\*\* | (0.084) | -0.054 | (0.062) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 0.025 | (0.058) | 0.084^ | (0.049) | -0.014 | (0.066) | 0.047 | (0.053) |
| Advanced vocational | 0.168\* | (0.072) | -0.059 | (0.070) | 0.126 | (0.079) | 0.074 | (0.074) |
| Tertiary | 0.483\*\*\* | (0.065) | 0.054 | (0.062) | 0.220\*\*\* | (0.065) | -0.016 | (0.068) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | -0.012 | (0.071) | -0.029 | (0.068) | 0.013 | (0.071) | 0.197\*\* | (0.076) |
| Hardly interested | 0.000 | (0.079) | -0.099 | (0.072) | 0.002 | (0.081) | 0.116 | (0.080) |
| Not at all interested | 0.081 | (0.100) | -0.216\*\* | (0.080) | -0.026 | (0.109) | 0.135 | (0.092) |
| Political efficacy index | 0.220\*\*\* | (0.014) | 0.074\*\*\* | (0.013) | 0.237\*\*\* | (0.017) | 0.032\* | (0.015) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.053 | (0.094) | 0.098 | (0.074) | 0.271\*\* | (0.105) | 0.227\*\* | (0.082) |
| Monthly | 0.215\* | (0.087) | 0.212\*\* | (0.065) | 0.278\*\* | (0.098) | 0.249\*\*\* | (0.070) |
| Weekly | 0.392\*\*\* | (0.085) | 0.129\* | (0.063) | 0.321\*\*\* | (0.097) | 0.201\*\* | (0.069) |
| Every day | 0.468\*\*\* | (0.090) | 0.133\* | (0.067) | 0.304\*\* | (0.101) | 0.163\* | (0.071) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | -0.383\*\*\* | (0.047) | 0.105\* | (0.042) | -0.424\*\*\* | (0.052) | 0.124\*\* | (0.047) |
| Nonresponse | -0.169 | (0.103) | -0.622\*\*\* | (0.072) | -0.214 | (0.136) | -0.498\*\*\* | (0.071) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| Nonresponse | 0.085 | (0.063) | -0.291\*\*\* | (0.048) | 0.130^ | (0.070) | -0.282\*\*\* | (0.053) |
| **Interview context** |  |  |  |  |  |  |  |  |
| Respondent v. often understood questions | -0.044 | (0.053) | 0.222\*\*\* | (0.044) | -0.029 | (0.060) | 0.119\*\* | (0.045) |
| Respondent often reluctant to answer | -0.030 | (0.073) | -0.200\*\*\* | (0.053) | 0.017 | (0.084) | -0.320\*\*\* | (0.059) |
| Someone present during interview | -0.113 | (0.082) | -0.103^ | (0.059) | -0.040 | (0.094) | -0.033 | (0.067) |
| Age of interviewer | -0.006\*\* | (0.002) | -0.003 | (0.002) | -0.005\* | (0.002) | -0.001 | (0.002) |
| Interviewer gender: Female | -0.128\*\* | (0.044) | -0.044 | (0.042) | -0.135\*\* | (0.049) | -0.074 | (0.045) |
| Number of respondents per interviewer | -0.002 | (0.002) | 0.000 | (0.002) | 0.003 | (0.002) | -0.001 | (0.002) |
| **Country (Ref. AU - Austria)** |  |  |  |  |  |  |  |  |
| BE - Belgium | 0.327\*\*\* | (0.091) | 0.477\*\*\* | (0.114) | 0.608\*\*\* | (0.109) | 0.122 | (0.137) |
| CH - Switzerland | 0.576\*\*\* | (0.091) | -0.148 | (0.093) | 0.618\*\*\* | (0.109) | -0.208^ | (0.125) |
| CZ - Czech Republic | -0.217\* | (0.103) | -0.076 | (0.091) | 0.769\*\*\* | (0.115) | -0.317\*\* | (0.121) |
| DE - Germany | 0.673\*\*\* | (0.082) | 0.045 | (0.085) | 0.648\*\*\* | (0.098) | -0.003 | (0.117) |
| DK - Denmark | 0.212\* | (0.100) | -0.236\* | (0.096) | 0.643\*\*\* | (0.115) | -0.044 | (0.137) |
| EE - Estonia | 0.862\*\*\* | (0.091) | -0.153^ | (0.083) | 2.062\*\*\* | (0.098) | -0.614\*\*\* | (0.109) |
| ES - Spain | 0.915\*\*\* | (0.092) | -0.400\*\*\* | (0.079) | 0.924\*\*\* | (0.105) | -0.269\* | (0.113) |
| FI - Finland | 1.459\*\*\* | (0.089) | 0.041 | (0.097) | 0.864\*\*\* | (0.104) | 0.035 | (0.135) |
| FR - France | 0.016 | (0.103) | 0.163 | (0.108) | 1.848\*\*\* | (0.113) | -0.061 | (0.137) |
| GB - United Kingdom | -0.148 | (0.099) | -0.007 | (0.087) | 1.144\*\*\* | (0.102) | -0.285\* | (0.116) |
| HU - Hungary | 0.970\*\*\* | (0.104) | -0.247\*\* | (0.086) | 0.973\*\*\* | (0.119) | -0.288\* | (0.117) |
| IE - Ireland | 0.536\*\*\* | (0.091) | -0.292\*\*\* | (0.080) | 1.626\*\*\* | (0.100) | -0.794\*\*\* | (0.107) |
| LT - Lithuania | 0.592\*\*\* | (0.099) | -0.257\*\* | (0.086) | 1.870\*\*\* | (0.110) | -0.788\*\*\* | (0.110) |
| NL - Netherlands | 0.246\*\* | (0.095) | -0.032 | (0.091) | 0.420\*\*\* | (0.108) | -0.136 | (0.127) |
| NO - Norway | -0.022 | (0.097) | 0.094 | (0.110) | -0.274\* | (0.122) | -0.060 | (0.142) |
| PL - Poland | 1.271\*\*\* | (0.098) | -0.236\*\* | (0.085) | 2.265\*\*\* | (0.106) | -1.026\*\*\* | (0.107) |
| PT - Portugal | 1.006\*\*\* | (0.131) | -0.071 | (0.107) | 1.244\*\*\* | (0.148) | -0.061 | (0.152) |
| SE - Sweden | 0.648\*\*\* | (0.092) | -0.445\*\*\* | (0.084) | 0.800\*\*\* | (0.106) | -0.646\*\*\* | (0.114) |
| SI - Slovenia | 0.857\*\*\* | (0.113) | -0.114 | (0.095) | 1.729\*\*\* | (0.123) | -0.603\*\*\* | (0.119) |
| **Constant** | 4.116\*\*\* | (0.145) | 0.759\*\*\* | (0.009) | 2.243\*\*\* | (0.159) | 0.781\*\*\* | (0.011) |
| Ln Sigma Constant |  |  | 1.745\*\*\* | (0.130) |  |  | 2.074\*\*\* | (0.144) |
| Sigma |  |  | 2.137 | (0.019) |  |  | 2.183 | (0.025) |
| **Observations** | 35639 | | 35639 | | 35639 | | 35639 | | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted; standard errors clustered at interviewer and country levels. Ln sigma and the sigma are estimated standard deviation of the error term.

**Table SM3. (*continued*)**

Taxes and services

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Impact on taxes/services** | | | |
|  | **Direction** | | **Selection** | |
| **Respondent characteristics** | *Coeff.* | *SE* | *Coeff.* | *SE* |
| Ethnic minority | 0.960\*\*\* | (0.105) | -0.241\* | (0.094) |
| Respondent gender: Female | -0.062 | (0.047) | -0.146\*\*\* | (0.043) |
| Age of respondent | 0.001 | (0.002) | -0.005\*\*\* | (0.001) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |
| Separated/Divorced | -0.117 | (0.084) | 0.146\* | (0.067) |
| Widowed | 0.003 | (0.097) | -0.116 | (0.075) |
| Never married/in union | -0.026 | (0.065) | -0.061 | (0.059) |
| Any periods of unemployment in last 5 years | -0.172\* | (0.077) | -0.012 | (0.063) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |
| Coping on present income | -0.110\* | (0.051) | -0.102^ | (0.054) |
| Difficult on present income | -0.381\*\*\* | (0.082) | -0.092 | (0.063) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |
| Upper secondary | 0.025 | (0.063) | 0.147\*\* | (0.054) |
| Advanced vocational | 0.113 | (0.077) | 0.112 | (0.074) |
| Tertiary | 0.484\*\*\* | (0.067) | 0.019 | (0.066) |
| Interest in politics (Ref. Very interested) |  |  |  |  |
| Quite interested | -0.324\*\*\* | (0.069) | 0.065 | (0.081) |
| Hardly interested | -0.543\*\*\* | (0.078) | 0.013 | (0.083) |
| Not at all interested | -0.463\*\*\* | (0.105) | -0.011 | (0.093) |
| Political efficacy index | 0.251\*\*\* | (0.015) | 0.046\*\*\* | (0.013) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |
| Less than once a month | 0.422\*\*\* | (0.100) | -0.008 | (0.073) |
| Monthly | 0.424\*\*\* | (0.093) | -0.037 | (0.068) |
| Weekly | 0.545\*\*\* | (0.093) | 0.021 | (0.065) |
| Every day | 0.614\*\*\* | (0.098) | 0.038 | (0.073) |
| Some races born harder working (Ref. No) |  |  |  |  |
| Yes | -0.494\*\*\* | (0.050) | 0.049 | (0.047) |
| Nonresponse | -0.133 | (0.138) | -0.543\*\*\* | (0.072) |
| Household income (Ref: Answer) |  |  |  |  |
| Nonresponse | 0.111 | (0.072) | -0.348\*\*\* | (0.051) |
| **Interview context** |  |  |  |  |
| Respondent v. often understood questions | -0.026 | (0.059) | 0.214\*\*\* | (0.049) |
| Respondent often reluctant to answer | -0.244\*\* | (0.081) | -0.235\*\*\* | (0.057) |
| Someone present during interview | -0.000 | (0.093) | -0.005 | (0.062) |
| Age of interviewer | -0.005\* | (0.002) | -0.002 | (0.002) |
| Interviewer gender: Female | -0.092^ | (0.048) | -0.080^ | (0.043) |
| Number of respondents per interviewer | -0.002 | (0.002) | 0.001 | (0.002) |
| **Country (Ref. AU - Austria)** |  |  |  |  |
| BE - Belgium | 0.419\*\*\* | (0.104) | 0.782\*\*\* | (0.123) |
| CH - Switzerland | 0.606\*\*\* | (0.103) | -0.096 | (0.090) |
| CZ - Czech Republic | 0.200^ | (0.112) | 0.205\* | (0.097) |
| DE - Germany | 0.902\*\*\* | (0.090) | 0.087 | (0.083) |
| DK - Denmark | 0.369\*\*\* | (0.107) | 0.167 | (0.108) |
| EE - Estonia | 1.577\*\*\* | (0.098) | 0.131 | (0.086) |
| ES - Spain | 0.290\*\* | (0.108) | 0.100 | (0.084) |
| FI - Finland | 0.766\*\*\* | (0.103) | 0.219\* | (0.093) |
| FR - France | 0.653\*\*\* | (0.111) | 0.416\*\*\* | (0.107) |
| GB - United Kingdom | 0.638\*\*\* | (0.104) | 0.220\* | (0.093) |
| HU - Hungary | 0.426\*\*\* | (0.119) | 0.073 | (0.089) |
| IE - Ireland | 0.506\*\*\* | (0.105) | 0.339\*\*\* | (0.094) |
| LT - Lithuania | 1.369\*\*\* | (0.112) | -0.300\*\*\* | (0.084) |
| NL - Netherlands | 0.259\* | (0.103) | 0.050 | (0.091) |
| NO - Norway | 0.723\*\*\* | (0.102) | 0.358\*\* | (0.122) |
| PL - Poland | 1.547\*\*\* | (0.107) | -0.141^ | (0.083) |
| PT - Portugal | 1.321\*\*\* | (0.154) | 0.001 | (0.112) |
| SE - Sweden | 1.208\*\*\* | (0.099) | -0.006 | (0.089) |
| SI - Slovenia | 1.441\*\*\* | (0.121) | -0.611\*\*\* | (0.083) |
| **Constant** | 3.791\*\*\* | (0.149) | 0.801\*\*\* | (0.010) |
| Ln Sigma Constant |  |  | 1.789\*\*\* | (0.130) |
| Sigma |  |  | 2.228 | (0.021) |
| **Observations** | 35639 | | 35639 | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted; standard errors clustered at interviewer and country levels. Ln sigma and the sigma are estimated standard deviation of the error term.

Table SM4. Hurdle models predicting the selection to answer an openness item and the direction of attitudes

Same and Different ethnicity/race from majority

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Don’t allow same ethnicity/race** | | | | **Don’t allow different ethnicity/race** | | | |
|  | **Direction** | | **Selection** | | **Direction** | | **Selection** | |
| **Respondent characteristics** | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* |
| Ethnic minority | 0.110\*\* | (0.035) | 0.066 | (0.102) | 0.168\*\*\* | (0.034) | 0.170 | (0.111) |
| Respondent gender: Female | 0.037\*\* | (0.014) | 0.053 | (0.051) | 0.044\*\* | (0.015) | -0.018 | (0.053) |
| Age of respondent | -0.002\*\* | (0.001) | -0.004\* | (0.002) | -0.004\*\*\* | (0.001) | -0.004\* | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | -0.004 | (0.025) | -0.015 | (0.086) | -0.015 | (0.027) | 0.030 | (0.085) |
| Widowed | 0.020 | (0.032) | -0.035 | (0.085) | 0.061\* | (0.031) | -0.038 | (0.091) |
| Never married/in union | 0.039^ | (0.020) | 0.010 | (0.074) | 0.030 | (0.021) | 0.078 | (0.074) |
| Any periods of unemployment in last 5 years | -0.031 | (0.023) | -0.003 | (0.073) | -0.019 | (0.023) | -0.038 | (0.075) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | -0.091\*\*\* | (0.016) | -0.009 | (0.063) | -0.068\*\*\* | (0.017) | -0.043 | (0.064) |
| Difficult on present income | -0.238\*\*\* | (0.024) | -0.094 | (0.076) | -0.182\*\*\* | (0.025) | -0.150^ | (0.080) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 0.041\* | (0.019) | -0.084 | (0.068) | 0.046\* | (0.020) | 0.002 | (0.071) |
| Advanced vocational | 0.087\*\*\* | (0.023) | -0.166^ | (0.092) | 0.104\*\*\* | (0.025) | -0.100 | (0.092) |
| Tertiary | 0.219\*\*\* | (0.021) | -0.250\*\* | (0.087) | 0.225\*\*\* | (0.022) | -0.183\* | (0.083) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | -0.042^ | (0.022) | 0.115 | (0.088) | -0.026 | (0.023) | 0.083 | (0.083) |
| Hardly interested | -0.123\*\*\* | (0.025) | -0.011 | (0.096) | -0.100\*\*\* | (0.026) | -0.072 | (0.092) |
| Not at all interested | -0.211\*\*\* | (0.032) | -0.025 | (0.105) | -0.158\*\*\* | (0.033) | -0.034 | (0.100) |
| Political efficacy index | 0.047\*\*\* | (0.005) | 0.047\*\* | (0.016) | 0.064\*\*\* | (0.005) | 0.051\*\* | (0.017) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.122\*\*\* | (0.031) | 0.236\*\* | (0.085) | 0.148\*\*\* | (0.031) | 0.121 | (0.094) |
| Monthly | 0.168\*\*\* | (0.028) | 0.219\*\* | (0.080) | 0.230\*\*\* | (0.029) | 0.147^ | (0.082) |
| Weekly | 0.236\*\*\* | (0.028) | 0.147^ | (0.075) | 0.296\*\*\* | (0.029) | 0.194\* | (0.081) |
| Every day | 0.268\*\*\* | (0.029) | 0.102 | (0.083) | 0.343\*\*\* | (0.030) | 0.161^ | (0.092) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | -0.095\*\*\* | (0.015) | 0.194\*\*\* | (0.057) | -0.171\*\*\* | (0.016) | 0.184\*\* | (0.057) |
| Nonresponse | -0.128\*\* | (0.039) | -0.545\*\*\* | (0.098) | -0.115\*\* | (0.043) | -0.602\*\*\* | (0.097) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| Nonresponse | -0.031 | (0.021) | -0.181\*\* | (0.062) | -0.026 | (0.022) | -0.226\*\*\* | (0.061) |
| **Interview context** |  |  |  |  |  |  |  |  |
| Respondent v. often understood questions | 0.052\*\* | (0.018) | 0.074 | (0.058) | 0.047\*\* | (0.018) | 0.123^ | (0.063) |
| Respondent often reluctant to answer | -0.054\* | (0.026) | -0.420\*\*\* | (0.070) | -0.036 | (0.027) | -0.401\*\*\* | (0.070) |
| Someone present during interview | -0.027 | (0.026) | -0.069 | (0.075) | -0.084\*\* | (0.027) | -0.080 | (0.081) |
| Age of interviewer | -0.001 | (0.001) | 0.003 | (0.002) | -0.002\*\* | (0.001) | 0.005^ | (0.003) |
| Interviewer gender: Female | -0.023 | (0.015) | -0.109\* | (0.053) | -0.015 | (0.015) | -0.111\* | (0.056) |
| Number of respondents per interviewer | -0.001 | (0.001) | 0.008\*\*\* | (0.002) | -0.001\* | (0.001) | 0.004^ | (0.002) |
| **Country (Ref. AU - Austria)** |  |  |  |  |  |  |  |  |
| BE - Belgium | 0.004 | (0.030) | 0.729\*\* | (0.222) | 0.060^ | (0.031) | 1.105\*\*\* | (0.244) |
| CH - Switzerland | 0.099\*\*\* | (0.028) | -0.294\* | (0.125) | 0.098\*\* | (0.030) | -0.279\* | (0.128) |
| CZ - Czech Republic | -0.309\*\*\* | (0.034) | 0.274\* | (0.133) | -0.333\*\*\* | (0.034) | 0.327\* | (0.137) |
| DE - Germany | 0.391\*\*\* | (0.026) | 0.194 | (0.124) | 0.362\*\*\* | (0.027) | 0.049 | (0.124) |
| DK - Denmark | 0.062\* | (0.031) | -0.180 | (0.143) | 0.023 | (0.033) | -0.177 | (0.145) |
| EE - Estonia | 0.186\*\*\* | (0.030) | 0.288\* | (0.134) | 0.073\* | (0.031) | 0.221^ | (0.130) |
| ES - Spain | 0.041 | (0.032) | -0.516\*\*\* | (0.107) | 0.242\*\*\* | (0.033) | -0.424\*\*\* | (0.110) |
| FI - Finland | -0.059\* | (0.028) | 0.001 | (0.140) | -0.017 | (0.030) | -0.055 | (0.140) |
| FR - France | 0.007 | (0.032) | 0.053 | (0.124) | 0.109\*\*\* | (0.033) | 0.247^ | (0.133) |
| GB - United Kingdom | -0.204\*\*\* | (0.031) | -0.023 | (0.126) | -0.003 | (0.032) | 0.102 | (0.138) |
| HU - Hungary | 0.002 | (0.038) | 0.054 | (0.124) | -0.407\*\*\* | (0.035) | 0.283\* | (0.128) |
| IE - Ireland | -0.052^ | (0.030) | 0.053 | (0.121) | 0.089\*\* | (0.031) | 0.037 | (0.121) |
| LT - Lithuania | 0.299\*\*\* | (0.037) | -0.138 | (0.114) | 0.261\*\*\* | (0.037) | -0.120 | (0.116) |
| NL - Netherlands | -0.110\*\*\* | (0.031) | 0.254^ | (0.144) | 0.137\*\*\* | (0.032) | 0.320\* | (0.146) |
| NO - Norway | 0.116\*\*\* | (0.030) | -0.006 | (0.156) | 0.259\*\*\* | (0.032) | 0.006 | (0.153) |
| PL - Poland | 0.241\*\*\* | (0.032) | 0.025 | (0.117) | 0.376\*\*\* | (0.034) | 0.018 | (0.118) |
| PT - Portugal | 0.042 | (0.040) | 0.301 | (0.185) | 0.195\*\*\* | (0.042) | 0.315^ | (0.189) |
| SE - Sweden | 0.356\*\*\* | (0.027) | -0.155 | (0.125) | 0.616\*\*\* | (0.028) | -0.052 | (0.133) |
| SI - Slovenia | 0.177\*\*\* | (0.035) | -0.162 | (0.125) | 0.314\*\*\* | (0.037) | -0.094 | (0.130) |
| **Constant** | 2.735\*\*\* | (0.045) | 2.158\*\*\* | (0.159) | 2.318\*\*\* | (0.047) | 2.142\*\*\* | (0.164) |
| Ln Sigma Constant |  |  | -0.286\*\*\* | (0.007) |  |  | -0.250\*\*\* | (0.006) |
| Sigma |  |  | 0.751 | (0.005) |  |  | 0.779 | (0.005) |
| **Observations** | 35639 | | 35639 | | 35639 | | 35639 | | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted; standard errors clustered at interviewer and country levels. Ln sigma and the sigma are estimated standard deviation of the error term.

**Table SM4. (*continued*)**

Immigrants from poorer countries Outside Europe and In Europe

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Don’t allow … outside Europe** | | | | **Don’t allow … in Europe** | | | |
|  | **Direction** | | **Selection** | | **Direction** | | **Selection** | |
| **Respondent characteristics** | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* |
| Ethnic minority | 0.145\*\*\* | (0.039) | 0.140 | (0.110) | 0.116\*\* | (0.039) | 0.246\* | (0.121) |
| Respondent gender: Female | 0.076\*\*\* | (0.016) | -0.021 | (0.053) | 0.049\*\* | (0.016) | -0.005 | (0.054) |
| Age of respondent | -0.005\*\*\* | (0.001) | -0.006\*\*\* | (0.002) | -0.004\*\*\* | (0.001) | -0.004^ | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | 0.003 | (0.030) | 0.088 | (0.083) | 0.021 | (0.030) | 0.103 | (0.091) |
| Widowed | 0.007 | (0.034) | -0.070 | (0.093) | 0.042 | (0.033) | -0.051 | (0.090) |
| Never married/in union | 0.015 | (0.022) | 0.023 | (0.073) | 0.055\* | (0.021) | 0.081 | (0.075) |
| Any periods of unemployment in last 5 years | 0.006 | (0.025) | -0.046 | (0.076) | 0.006 | (0.025) | -0.033 | (0.075) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | -0.076\*\*\* | (0.019) | -0.106^ | (0.064) | -0.073\*\*\* | (0.018) | -0.065 | (0.068) |
| Difficult on present income | -0.174\*\*\* | (0.027) | -0.201\* | (0.079) | -0.203\*\*\* | (0.027) | -0.160^ | (0.084) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 0.033 | (0.022) | 0.018 | (0.070) | 0.029 | (0.021) | 0.055 | (0.073) |
| Advanced vocational | 0.099\*\*\* | (0.027) | -0.008 | (0.095) | 0.075\*\* | (0.026) | -0.058 | (0.095) |
| Tertiary | 0.251\*\*\* | (0.024) | -0.102 | (0.081) | 0.234\*\*\* | (0.023) | -0.063 | (0.085) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | -0.032 | (0.026) | -0.038 | (0.090) | -0.032 | (0.025) | 0.102 | (0.086) |
| Hardly interested | -0.094\*\*\* | (0.028) | -0.160^ | (0.095) | -0.090\*\* | (0.028) | -0.085 | (0.096) |
| Not at all interested | -0.117\*\* | (0.036) | -0.165 | (0.103) | -0.135\*\*\* | (0.036) | -0.145 | (0.105) |
| Political efficacy index | 0.064\*\*\* | (0.005) | 0.039\* | (0.015) | 0.061\*\*\* | (0.005) | 0.024 | (0.017) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.143\*\*\* | (0.032) | 0.056 | (0.094) | 0.142\*\*\* | (0.032) | 0.118 | (0.098) |
| Monthly | 0.215\*\*\* | (0.031) | 0.076 | (0.082) | 0.216\*\*\* | (0.030) | 0.110 | (0.083) |
| Weekly | 0.282\*\*\* | (0.031) | 0.043 | (0.088) | 0.263\*\*\* | (0.030) | 0.109 | (0.085) |
| Every day | 0.301\*\*\* | (0.032) | 0.049 | (0.087) | 0.278\*\*\* | (0.032) | 0.086 | (0.091) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | -0.208\*\*\* | (0.017) | 0.194\*\*\* | (0.055) | -0.175\*\*\* | (0.017) | 0.192\*\*\* | (0.057) |
| Nonresponse | -0.124\*\* | (0.043) | -0.595\*\*\* | (0.097) | -0.078^ | (0.044) | -0.623\*\*\* | (0.099) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| Nonresponse | -0.014 | (0.024) | -0.236\*\*\* | (0.062) | -0.050\* | (0.024) | -0.287\*\*\* | (0.064) |
| **Interview context** |  |  |  |  |  |  |  |  |
| Respondent v. often understood questions | 0.052\*\* | (0.020) | 0.100^ | (0.059) | 0.043\* | (0.019) | 0.050 | (0.065) |
| Respondent often reluctant to answer | -0.068\* | (0.028) | -0.389\*\*\* | (0.070) | -0.068\* | (0.029) | -0.381\*\*\* | (0.073) |
| Someone present during interview | -0.074\* | (0.030) | -0.116 | (0.077) | -0.044 | (0.030) | -0.134^ | (0.080) |
| Age of interviewer | -0.003\*\*\* | (0.001) | 0.003 | (0.002) | -0.002\*\*\* | (0.001) | 0.003 | (0.003) |
| Interviewer gender: Female | 0.001 | (0.016) | -0.129\* | (0.057) | 0.012 | (0.016) | -0.096^ | (0.057) |
| Number of respondents per interviewer | -0.001 | (0.001) | 0.005\* | (0.002) | -0.001\* | (0.001) | 0.005\* | (0.002) |
| **Country (Ref. AU - Austria)** |  |  |  |  |  |  |  |  |
| BE - Belgium | 0.051 | (0.034) | 0.740\*\*\* | (0.161) | 0.144\*\*\* | (0.032) | 0.549\*\*\* | (0.163) |
| CH - Switzerland | 0.125\*\*\* | (0.033) | 0.018 | (0.112) | 0.179\*\*\* | (0.031) | -0.078 | (0.120) |
| CZ - Czech Republic | -0.212\*\*\* | (0.035) | 0.546\*\*\* | (0.124) | - | - | - | - |
| DE - Germany | 0.333\*\*\* | (0.030) | 0.253\* | (0.110) | 0.352\*\*\* | (0.029) | 0.169 | (0.115) |
| DK - Denmark | -0.108\*\* | (0.036) | 0.099 | (0.124) | -0.009 | (0.035) | -0.086 | (0.132) |
| EE - Estonia | -0.151\*\*\* | (0.034) | 0.477\*\*\* | (0.116) | 0.058^ | (0.032) | 0.105 | (0.117) |
| ES - Spain | 0.295\*\*\* | (0.035) | -0.216\* | (0.093) | 0.232\*\*\* | (0.034) | -0.376\*\*\* | (0.098) |
| FI - Finland | -0.100\*\* | (0.032) | 0.314\* | (0.128) | -0.041 | (0.031) | 0.134 | (0.135) |
| FR - France | 0.034 | (0.035) | 0.552\*\*\* | (0.130) | 0.119\*\*\* | (0.034) | 0.366\*\* | (0.127) |
| GB - United Kingdom | -0.140\*\*\* | (0.034) | 0.286\* | (0.114) | -0.068\* | (0.033) | 0.121 | (0.124) |
| HU - Hungary | -0.539\*\*\* | (0.037) | 0.352\*\*\* | (0.107) | -0.450\*\*\* | (0.037) | 0.156 | (0.112) |
| IE - Ireland | -0.016 | (0.033) | 0.195^ | (0.102) | 0.090\*\* | (0.032) | 0.154 | (0.112) |
| LT - Lithuania | -0.040 | (0.041) | 0.061 | (0.100) | 0.067^ | (0.039) | -0.080 | (0.108) |
| NL - Netherlands | 0.003 | (0.035) | 0.602\*\*\* | (0.130) | 0.034 | (0.034) | 0.478\*\*\* | (0.142) |
| NO - Norway | 0.252\*\*\* | (0.034) | 0.259^ | (0.143) | 0.266\*\*\* | (0.033) | 0.229 | (0.150) |
| PL - Poland | 0.390\*\*\* | (0.036) | 0.199^ | (0.102) | 0.500\*\*\* | (0.034) | 0.157 | (0.110) |
| PT - Portugal | 0.207\*\*\* | (0.045) | 0.441\*\* | (0.166) | 0.286\*\*\* | (0.043) | 0.362\* | (0.178) |
| SE - Sweden | 0.644\*\*\* | (0.031) | 0.099 | (0.111) | 0.583\*\*\* | (0.030) | -0.099 | (0.116) |
| SI - Slovenia | 0.166\*\*\* | (0.040) | 0.066 | (0.109) | 0.237\*\*\* | (0.039) | -0.102 | (0.118) |
| **Constant** | 2.197\*\*\* | (0.051) | 2.124\*\*\* | (0.152) | 2.300\*\*\* | (0.050) | 2.129\*\*\* | (0.154) |
| Ln Sigma Constant |  |  | -0.179\*\*\* | (0.006) |  |  | -0.213\*\*\* | (0.006) |
| Sigma |  |  | 0.836 | (0.005) |  |  | (0.808) | (0.005) |
| **Observations** | 35639 | | 35639 | | 33767 | | 33767 | | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted; standard errors clustered at interviewer and country levels. Ln sigma and the sigma are estimated standard deviation of the error term.

**Table SM4. (*continued*)**

Jewish people and Muslims

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Don’t allow Jewish people** | | | | **Don’t allow Muslims** | | | |
|  | **Direction** | | **Selection** | | **Direction** | | **Selection** | |
| **Respondent characteristics** | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* | *Coeff.* | *SE* |
| Ethnic minority | 0.066^ | (0.036) | -0.189^ | (0.105) | 0.086\* | (0.040) | -0.109 | (0.091) |
| Respondent gender: Female | 0.017 | (0.015) | -0.041 | (0.044) | -0.012 | (0.016) | -0.057 | (0.046) |
| Age of respondent | -0.000 | (0.001) | -0.002 | (0.002) | -0.005\*\*\* | (0.001) | -0.005\*\* | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | 0.048^ | (0.027) | -0.051 | (0.076) | 0.013 | (0.028) | -0.076 | (0.079) |
| Widowed | 0.001 | (0.031) | -0.037 | (0.084) | 0.010 | (0.036) | -0.008 | (0.084) |
| Never married/in union | 0.057\*\* | (0.021) | 0.094 | (0.061) | 0.033 | (0.022) | 0.054 | (0.060) |
| Any periods of unemployment in last 5 years | -0.028 | (0.024) | -0.040 | (0.063) | -0.017 | (0.025) | -0.090 | (0.064) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | -0.103\*\*\* | (0.016) | -0.123\* | (0.055) | -0.075\*\*\* | (0.018) | -0.033 | (0.056) |
| Difficult on present income | -0.230\*\*\* | (0.025) | -0.091 | (0.070) | -0.156\*\*\* | (0.027) | -0.038 | (0.070) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 0.062\*\* | (0.019) | -0.058 | (0.060) | 0.035^ | (0.021) | -0.036 | (0.060) |
| Advanced vocational | 0.101\*\*\* | (0.024) | 0.015 | (0.076) | 0.110\*\*\* | (0.026) | -0.001 | (0.081) |
| Tertiary | 0.252\*\*\* | (0.022) | -0.112^ | (0.067) | 0.283\*\*\* | (0.024) | -0.135^ | (0.069) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | -0.052\* | (0.023) | 0.056 | (0.085) | -0.045^ | (0.025) | 0.098 | (0.084) |
| Hardly interested | -0.156\*\*\* | (0.026) | -0.045 | (0.088) | -0.138\*\*\* | (0.028) | 0.040 | (0.087) |
| Not at all interested | -0.223\*\*\* | (0.033) | -0.180^ | (0.098) | -0.182\*\*\* | (0.036) | -0.034 | (0.097) |
| Political efficacy index | 0.053\*\*\* | (0.005) | 0.015 | (0.015) | 0.070\*\*\* | (0.005) | 0.007 | (0.014) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.260\*\*\* | (0.033) | 0.184\* | (0.080) | 0.246\*\*\* | (0.035) | 0.121 | (0.085) |
| Monthly | 0.315\*\*\* | (0.030) | 0.281\*\*\* | (0.079) | 0.352\*\*\* | (0.032) | 0.238\*\* | (0.082) |
| Weekly | 0.393\*\*\* | (0.030) | 0.229\*\* | (0.077) | 0.450\*\*\* | (0.032) | 0.269\*\*\* | (0.075) |
| Every day | 0.387\*\*\* | (0.031) | 0.160\* | (0.076) | 0.471\*\*\* | (0.033) | 0.078 | (0.077) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | -0.102\*\*\* | (0.016) | 0.109\* | (0.050) | -0.220\*\*\* | (0.017) | 0.190\*\*\* | (0.051) |
| Nonresponse | -0.128\*\* | (0.042) | -0.564\*\*\* | (0.078) | -0.132\*\* | (0.044) | -0.571\*\*\* | (0.080) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| Nonresponse | -0.000 | (0.022) | -0.185\*\*\* | (0.053) | 0.009 | (0.024) | -0.236\*\*\* | (0.055) |
| **Interview context** |  |  |  |  |  |  |  |  |
| Respondent v. often understood questions | 0.061\*\*\* | (0.018) | 0.117\* | (0.052) | 0.061\*\* | (0.020) | 0.095^ | (0.054) |
| Respondent often reluctant to answer | -0.055\* | (0.027) | -0.517\*\*\* | (0.060) | -0.053^ | (0.029) | -0.490\*\*\* | (0.061) |
| Someone present during interview | -0.055^ | (0.029) | -0.097 | (0.064) | -0.036 | (0.030) | -0.022 | (0.070) |
| Age of interviewer | -0.000 | (0.001) | -0.006\*\* | (0.002) | -0.003\*\*\* | (0.001) | -0.004\* | (0.002) |
| Interviewer gender: Female | -0.001 | (0.015) | -0.099\* | (0.048) | -0.030^ | (0.017) | -0.091^ | (0.049) |
| Number of respondents per interviewer | -0.002\*\*\* | (0.001) | 0.004^ | (0.002) | -0.002\* | (0.001) | 0.002 | (0.002) |
| **Country (Ref. AU - Austria)** |  |  |  |  |  |  |  |  |
| BE - Belgium | -0.043 | (0.033) | 0.627\*\*\* | (0.134) | 0.030 | (0.034) | 0.534\*\*\* | (0.143) |
| CH - Switzerland | 0.060^ | (0.032) | -0.303\*\*\* | (0.088) | 0.071\* | (0.034) | -0.165^ | (0.097) |
| CZ - Czech Republic | -0.153\*\*\* | (0.036) | 0.368\*\*\* | (0.106) | -0.634\*\*\* | (0.038) | 0.273\* | (0.114) |
| DE - Germany | 0.459\*\*\* | (0.029) | 0.194\* | (0.094) | 0.379\*\*\* | (0.030) | 0.121 | (0.095) |
| DK - Denmark | 0.131\*\*\* | (0.035) | 0.211^ | (0.116) | 0.020 | (0.038) | 0.194 | (0.120) |
| EE - Estonia | 0.127\*\*\* | (0.033) | 0.327\*\* | (0.100) | -0.284\*\*\* | (0.035) | 0.297\*\* | (0.107) |
| ES - Spain | -0.012 | (0.034) | -0.442\*\*\* | (0.080) | 0.050 | (0.035) | -0.462\*\*\* | (0.085) |
| FI - Finland | -0.056^ | (0.032) | 0.162^ | (0.096) | -0.081\* | (0.033) | 0.053 | (0.099) |
| FR - France | 0.165\*\*\* | (0.033) | 0.175^ | (0.094) | 0.278\*\*\* | (0.035) | 0.161 | (0.100) |
| GB - United Kingdom | 0.073\* | (0.033) | 0.283\*\* | (0.099) | 0.072\* | (0.035) | 0.274\*\* | (0.102) |
| HU - Hungary | -0.513\*\*\* | (0.039) | -0.081 | (0.090) | -0.622\*\*\* | (0.039) | -0.204\* | (0.095) |
| IE - Ireland | 0.007 | (0.032) | 0.113 | (0.089) | -0.010 | (0.035) | -0.028 | (0.092) |
| LT - Lithuania | 0.015 | (0.042) | -0.192\* | (0.087) | -0.217\*\*\* | (0.042) | -0.243\*\* | (0.093) |
| NL - Netherlands | 0.029 | (0.034) | 0.414\*\*\* | (0.117) | 0.025 | (0.036) | 0.455\*\*\* | (0.115) |
| NO - Norway | 0.144\*\*\* | (0.033) | 0.252\* | (0.121) | 0.126\*\*\* | (0.036) | 0.349\* | (0.137) |
| PL - Poland | 0.169\*\*\* | (0.035) | 0.178^ | (0.095) | -0.045 | (0.039) | 0.078 | (0.099) |
| PT - Portugal | -0.142\*\* | (0.044) | 0.389\*\* | (0.136) | -0.012 | (0.046) | 0.159 | (0.136) |
| SE - Sweden | 0.445\*\*\* | (0.030) | 0.042 | (0.100) | 0.521\*\*\* | (0.033) | 0.041 | (0.103) |
| SI - Slovenia | -0.012 | (0.040) | -0.296\*\* | (0.093) | 0.171\*\*\* | (0.041) | -0.169^ | (0.100) |
| **Constant** | 2.485\*\*\* | (0.048) | 1.884\*\*\* | (0.158) | 2.127\*\*\* | (0.052) | 1.880\*\*\* | (0.161) |
| Ln Sigma Constant |  |  | -0.242\*\*\* | (0.006) |  |  | -0.180\*\*\* | (0.006) |
| Sigma |  |  | 0.785 | (0.005) |  |  | 0.835 | (0.005) |
| **Observations** | 35639 | | 35639 | | 35639 | | 35639 | | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted; standard errors clustered at interviewer and country levels. Ln sigma and the sigma are estimated standard deviation of the error term.

**Table SM4. (*continued*)**

Gypsies

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Don’t allow Gypsies** | | | |
|  | **Direction** | | **Selection** | |
| **Respondent characteristics** | *Coeff.* | *SE* | *Coeff.* | *SE* |
| Ethnic minority | 0.076^ | (0.044) | -0.126 | (0.088) |
| Respondent gender: Female | 0.011 | (0.018) | 0.016 | (0.043) |
| Age of respondent | -0.005\*\*\* | (0.001) | -0.002 | (0.002) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |
| Separated/Divorced | 0.025 | (0.031) | -0.045 | (0.085) |
| Widowed | 0.013 | (0.037) | -0.057 | (0.086) |
| Never married/in union | 0.080\*\*\* | (0.024) | 0.043 | (0.058) |
| Any periods of unemployment in last 5 years | 0.019 | (0.027) | -0.078 | (0.062) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |
| Coping on present income | -0.044\* | (0.020) | -0.051 | (0.053) |
| Difficult on present income | -0.098\*\*\* | (0.028) | -0.002 | (0.069) |
| Education level (Ref. Lower secondary and less) |  |  |  |  |
| Upper secondary | 0.002 | (0.023) | -0.052 | (0.059) |
| Advanced vocational | 0.091\*\* | (0.029) | -0.033 | (0.080) |
| Tertiary | 0.282\*\*\* | (0.027) | -0.200\*\* | (0.066) |
| Interest in politics (Ref. Very interested) |  |  |  |  |
| Quite interested | -0.031 | (0.028) | 0.041 | (0.078) |
| Hardly interested | -0.097\*\* | (0.031) | -0.016 | (0.078) |
| Not at all interested | -0.142\*\*\* | (0.039) | -0.112 | (0.089) |
| Political efficacy index | 0.076\*\*\* | (0.006) | 0.003 | (0.014) |
| Contact with different ethnicities/races (Ref. Never) |  |  |  |  |
| Less than once a month | 0.208\*\*\* | (0.036) | 0.160^ | (0.084) |
| Monthly | 0.299\*\*\* | (0.033) | 0.235\*\* | (0.079) |
| Weekly | 0.373\*\*\* | (0.033) | 0.160\* | (0.075) |
| Every day | 0.394\*\*\* | (0.034) | 0.158\* | (0.077) |
| Some races born harder working (Ref. No) |  |  |  |  |
| Yes | -0.295\*\*\* | (0.019) | 0.148\*\* | (0.050) |
| Nonresponse | -0.221\*\*\* | (0.045) | -0.595\*\*\* | (0.083) |
| Household income (Ref: Answer) |  |  |  |  |
| Nonresponse | 0.003 | (0.026) | -0.308\*\*\* | (0.055) |
| **Interview context** |  |  |  |  |
| Respondent v. often understood questions | 0.066\*\* | (0.021) | 0.141\*\* | (0.054) |
| Respondent often reluctant to answer | -0.044 | (0.031) | -0.422\*\*\* | (0.059) |
| Someone present during interview | -0.079\* | (0.034) | -0.066 | (0.069) |
| Age of interviewer | -0.003\*\*\* | (0.001) | -0.004\* | (0.002) |
| Interviewer gender: Female | 0.009 | (0.018) | -0.041 | (0.047) |
| Number of respondents per interviewer | -0.002\*\* | (0.001) | 0.002 | (0.002) |
| **Country (Ref. AU - Austria)** |  |  |  |  |
| BE - Belgium | -0.175\*\*\* | (0.038) | 0.507\*\*\* | (0.116) |
| CH - Switzerland | -0.019 | (0.037) | -0.016 | (0.090) |
| CZ - Czech Republic | -0.682\*\*\* | (0.042) | 0.512\*\*\* | (0.108) |
| DE - Germany | 0.270\*\*\* | (0.033) | 0.197\* | (0.089) |
| DK - Denmark | -0.211\*\*\* | (0.041) | 0.296\*\* | (0.113) |
| EE - Estonia | -0.494\*\*\* | (0.038) | 0.455\*\*\* | (0.102) |
| ES - Spain | -0.012 | (0.038) | -0.302\*\*\* | (0.080) |
| FI - Finland | -0.171\*\*\* | (0.036) | 0.281\*\* | (0.097) |
| FR - France | 0.152\*\*\* | (0.038) | 0.380\*\*\* | (0.101) |
| GB - United Kingdom | -0.097\* | (0.039) | 0.362\*\*\* | (0.093) |
| HU - Hungary | -0.689\*\*\* | (0.042) | 0.205\* | (0.095) |
| IE - Ireland | -0.355\*\*\* | (0.038) | 0.119 | (0.083) |
| LT - Lithuania | -0.404\*\*\* | (0.045) | -0.023 | (0.088) |
| NL - Netherlands | 0.004 | (0.039) | 0.450\*\*\* | (0.106) |
| NO - Norway | -0.119\*\* | (0.039) | 0.422\*\*\* | (0.125) |
| PL - Poland | 0.099\* | (0.040) | 0.159^ | (0.090) |
| PT - Portugal | -0.199\*\*\* | (0.050) | 0.601\*\*\* | (0.140) |
| SE - Sweden | 0.568\*\*\* | (0.036) | 0.180^ | (0.098) |
| SI - Slovenia | -0.040 | (0.044) | 0.042 | (0.098) |
| **Constant** | 2.012\*\*\* | (0.056) | 1.705\*\*\* | (0.155) |
| Ln Sigma Constant |  |  | -0.114\*\*\* | (0.006) |
| Sigma |  |  | 0.893 | (0.005) |
| **Observations** | 35639 | | 35639 | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted; standard errors clustered at interviewer and country levels. Ln sigma and the sigma are estimated standard deviation of the error term.

Table SM5. Multilevel negative binominal models for selected multi-item scales

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Impact (0-7)** | | **Openness (0-6)** | | **Trust (0-7)** | | **Mental health (0-8)** | |
| **Respondent characteristics** | *Exp(B)* | *SE* | *Exp(B)* | *SE* | *Exp(B)* | *SE* | *Exp(B)* | *SE* |
| Ethnic minority | 1.320\*\* | (0.133) | 1.241 | (0.280) | 1.534\*\*\* | (0.192) | 1.079 | (0.430) |
| Respondent gender: Female | 1.193\*\* | (0.065) | 1.076^ | (0.041) | 1.441\*\*\* | (0.077) | 0.738 | (0.163) |
| Age of respondent | 1.010\*\*\* | (0.002) | 1.012\*\*\* | (0.002) | 1.002 | (0.004) | 1.023\*\*\* | (0.004) |
| Marital status (Ref: Married/Civil union) |  |  |  |  |  |  |  |  |
| Separated/Divorced | 0.946 | (0.075) | 1.028 | (0.125) | 0.859 | (0.081) | 1.189 | (0.253) |
| Widowed | 1.263\* | (0.124) | 1.135 | (0.096) | 1.529\*\* | (0.251) | 1.277 | (0.383) |
| Never married/in union | 1.174\*\* | (0.072) | 0.931 | (0.113) | 1.123\* | (0.064) | 1.130 | (0.132) |
| Any periods of unemployed in last five years | 0.954 | (0.039) | 1.102 | (0.104) | 0.849 | (0.098) | 1.037 | (0.182) |
| Subjective income (Ref: Living comfortably...) |  |  |  |  |  |  |  |  |
| Coping on present income | 1.083^ | (0.051) | 1.243 | (0.181) | 1.009 | (0.095) | 1.279^ | (0.181) |
| Difficult on present income | 1.134 | (0.111) | 1.237\* | (0.111) | 1.075 | (0.080) | 1.854\*\* | (0.430) |
| Education level (Ref: Lower secondary and less) |  |  |  |  |  |  |  |  |
| Upper secondary | 0.816\*\* | (0.060) | 1.222 | (0.165) | 0.781\* | (0.082) | 1.289\* | (0.145) |
| Advanced vocational | 0.850^ | (0.077) | 1.173 | (0.211) | 0.693\*\* | (0.086) | 1.304 | (0.382) |
| Tertiary | 0.999 | (0.057) | 1.590\*\*\* | (0.190) | 0.695\* | (0.108) | 1.047 | (0.188) |
| Interest in politics (Ref. Very interested) |  |  |  |  |  |  |  |  |
| Quite interested | 0.884\* | (0.055) | 0.929 | (0.096) | 1.188 | (0.161) | 0.727\*\* | (0.087) |
| Hardly interested | 1.012 | (0.082) | 1.065 | (0.162) | 1.647\*\*\* | (0.233) | 0.532\* | (0.141) |
| Not at all interested | 1.191\* | (0.105) | 1.375 | (0.272) | 2.062\*\*\* | (0.339) | 0.780 | (0.188) |
| Political efficacy index | 0.908\*\*\* | (0.020) | 0.943\* | (0.025) | 0.842\*\*\* | (0.014) | 0.963 | (0.065) |
| Contact with diff. ethnicities/races (Ref. Never) |  |  |  |  |  |  |  |  |
| Less than once a month | 0.910 | (0.134) | 0.664^ | (0.143) | 0.875 | (0.095) | 0.920 | (0.197) |
| Monthly | 0.833\* | (0.059) | 0.682\*\* | (0.094) | 0.658\*\*\* | (0.024) | 0.958 | (0.265) |
| Weekly | 0.807\* | (0.083) | 0.635\*\* | (0.094) | 0.649\*\*\* | (0.080) | 0.688 | (0.216) |
| Every day | 0.823 | (0.103) | 0.728\* | (0.116) | 0.751\*\*\* | (0.031) | 1.027 | (0.254) |
| Some races born harder working (Ref. No) |  |  |  |  |  |  |  |  |
| Yes | 0.818\*\* | (0.057) | 0.779\* | (0.079) | 1.007 | (0.040) | 1.443\*\* | (0.170) |
| Non-attitude | 2.093\*\*\* | (0.269) | 3.228\*\*\* | (0.752) | 2.007\*\*\* | (0.187) | 2.312\* | (0.764) |
| Household income (Ref: Answer) |  |  |  |  |  |  |  |  |
| No answer | 1.635\*\*\* | (0.138) | 1.638\*\*\* | (0.138) | 1.288\*\*\* | (0.057) | 2.044\*\* | (0.457) |
| **Interview context** |  |  |  |  |  |  |  |  |
| Respondent v. often understood questions | 0.617\*\*\* | (0.039) | 0.617\*\*\* | (0.051) | 0.482\*\*\* | (0.030) | 0.590\*\*\* | (0.078) |
| Respondent often reluctant to answer | 1.547\*\* | (0.224) | 3.013\*\*\* | (0.758) | 1.347\* | (0.179) | 1.530\*\*\* | (0.186) |
| Someone was present during interview | 1.091 | (0.082) | 1.122 | (0.112) | 1.186^ | (0.122) | 1.435 | (0.333) |
| Age of interviewer | 1.002 | (0.002) | 1.005 | (0.004) | 1.000 | (0.004) | 1.000 | (0.006) |
| Interviewer gender: Female | 1.107 | (0.068) | 1.309\*\* | (0.125) | 1.162\* | (0.072) | 1.166 | (0.213) |
| Number of respondents per interviewer | 1.003 | (0.004) | 0.996 | (0.004) | 1.011\*\* | (0.004) | 0.991 | (0.012) |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Impact (0-7)** | | **Openness (0-6)** | | **Trust (0-7)** | | **Mental health (0-8)** | |
| **Country-level variables** |  |  |  |  |  |  |  |  |
| % Foreign-born population in 2014 | 1.004 | (0.013) | 1.052\*\*\* | (0.014) | 1.061\*\*\* | (0.012) | 0.961^ | (0.023) |
| Change in foreign-born in 2010-2014 (pp) | 0.612\*\* | (0.109) | 0.552\* | (0.134) | 0.714 | (0.177) | 0.753 | (0.187) |
| Gini index in 2014 | 0.955 | (0.028) | 0.973 | (0.038) | 0.949 | (0.031) | 0.917\* | (0.035) |
| Change in Gini index in 2010-2014 | 0.905 | (0.063) | 0.801\* | (0.079) | 0.857^ | (0.070) | 1.020 | (0.095) |
| Change in unemployment rate in 2010-2014 (pp) | 0.966 | (0.036) | 1.009 | (0.062) | 0.968 | (0.036) | 0.902 | (0.065) |
| Mipex 2014 - Overall Score | 1.011 | (0.021) | 1.013 | (0.023) | 1.021 | (0.017) | 0.972 | (0.025) |
| Mipex change 2010-2014 – w/out health | 1.024 | (0.018) | 1.061^ | (0.034) | 1.031^ | (0.019) | 1.054 | (0.056) |
| Media claims on immigration (number) | 1.004 | (0.002) | 1.007\* | (0.003) | 1.003 | (0.003) | 0.990\*\* | (0.004) |
| **Constant** | 0.144\*\*\* | (0.022) | 0.050\*\*\* | (0.013) | 0.082\*\*\* | (0.013) | 0.004\*\*\* | (0.002) |
| Ln Alpha | -0.099 | (0.200) | 1.693\*\*\* | (0.139) | 0.373\* | (0.147) | 1.693\*\*\* | (0.354) |
| var(Country) | 0.154\* | (0.061) | 0.235\*\* | (0.074) | 0.148\*\* | (0.054) | 0.358^ | (0.206) |
| var(Interviewer) | 1.149\*\*\* | (0.263) | 1.948\*\*\* | (0.539) | 1.425\*\*\* | (0.376) | 3.373\*\* | (1.156) |
| **Observations** | 35639 | | 35639 | | 35639 | | 35639 | |

Notes: sig. level: ^ p<0.10, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001; data weighted.

Source: European Social Survey (2014a).

Note on estimates in Table SM5

Table SM5 replicates the results of Model 3 for the impact and openness items as reported in Tables 3 and 4 in the paper, together with estimates for the same specification as applied to political trust items and mental health items.

* Impact items (7 items: scale 0-10): impact of immigration on the respondent’s country: (1) economy; (2) cultural life; (3) overall country as a place to live; (4) jobs; (5) religious beliefs and practices; (6) crime; (7) tax / benefit system.
* Openness items (6 items: scale 1-4): allow many/none immigrants to live in the country: (1) of same race/ethnic group as majority; (2) of different race/ethnic group as majority; (3) from poorer countries outside Europe; (4) Jewish people; (5) Muslims; (6) Gypsies.
* Political trust items (7 items: scale 0-10): (1) trust in country’s parliament; (2) trust in the legal system; (3) trust in the police; (4) trust in politicians; (5) trust in political parties; (6) trust in European Parliament; (7) trust in the United Nations.
* Mental health items (8 items: scale 1-4): how often in past week: (1) felt depressed; (2) felt everything did was an effort; (3) sleep was restless; (4) were happy; (5) felt lonely; (6) enjoyed life; (7) felt sad; (8) could not get going.

Table SM6. Foreign population, economic situation and MIPEX index by country

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Country name** | **Country code** | **Foreign born (%) 2010** | **Foreign born (%) 2014** | **Foreign born change 2010-2014** | **Unemploy-ment rate (%) 2010** | **Unemploy-ment rate (%) 2014** | **Unemploy-ment rate change 2010-2014** | **Gini index 2010** | **Gini index 2014** | **Gini index change 2010-2014** | **MIPEX 2010 (w/out health)** | **MIPEX 2014** | **MIPEX 2014 (w/out health)** | **MIPEX change 2010-2014 (w/out health)** |
| Austria | AT | 15.23 | 16.59 | 1.35 | 4.80 | 5.60 | 0.80 | 28.30 | 27.60 | -0.70 | 45.42 | 50.10 | 48.31 | 2.89 |
| Belgium | BE | 13.87 | 15.83 | 1.95 | 8.30 | 8.50 | 0.20 | 33.20 | 35.40 | 2.20 | 67.75 | 67.45 | 69.51 | 1.76 |
| Czech Republic | CZ | 3.81 | 3.77 | -0.04 | 7.30 | 6.10 | -1.20 | 24.90 | 25.10 | 0.20 | 41.68 | 45.03 | 45.25 | 3.57 |
| Denmark | DK | 9.05 | 10.12 | 1.07 | 7.50 | 6.60 | -0.90 | 26.90 | 27.70 | 0.80 | 48.89 | 58.62 | 59.47 | 10.58 |
| Estonia | EE | 16.34 | 14.94 | -1.40 | 16.70 | 7.40 | -9.30 | 31.30 | 35.60 | 4.30 | 47.79 | 45.84 | 48.50 | 0.71 |
| Finland | FI | 4.27 | 5.46 | 1.19 | 8.40 | 8.70 | 0.30 | 25.40 | 25.60 | 0.20 | 69.32 | 68.83 | 71.08 | 1.77 |
| France | FR | 11.31 | 11.64 | 0.33 | 9.30 | 10.30 | 1.00 | 29.80 | 29.20 | -0.60 | 53.38 | 53.77 | 54.36 | 0.98 |
| Germany | DE | 12.00 | 12.16 | 0.16 | 7.00 | 5.00 | -2.00 | 29.30 | 30.70 | 1.40 | 60.21 | 60.68 | 63.21 | 3.01 |
| Hungary | HU | 4.36 | 4.53 | 0.17 | 11.20 | 7.70 | -3.50 | 24.10 | 28.60 | 4.50 | 45.16 | 45.06 | 45.83 | 0.67 |
| Ireland | IE | 16.06 | 16.10 | 0.04 | 13.90 | 11.30 | -2.60 | 30.70 | 30.80 | 0.10 | 50.31 | 51.78 | 50.86 | 0.55 |
| Lithuania | LT | 5.12 | 4.67 | -0.45 | 17.80 | 10.70 | -7.10 | 37.00 | 35.00 | -2.00 | 37.18 | 36.81 | 38.35 | 1.18 |
| Netherlands | NL | 11.06 | 11.61 | 0.55 | 5.00 | 7.40 | 2.40 | 25.50 | 26.20 | 0.70 | 68.63 | 60.06 | 60.78 | -7.85 |
| Norway | NO | 10.80 | 13.79 | 2.99 | 3.60 | 3.50 | -0.10 | 23.60 | 23.50 | -0.10 | 69.57 | 68.51 | 68.77 | -0.80 |
| Poland | PL | 1.69 | 1.63 | -0.06 | 9.70 | 9.00 | -0.70 | 31.10 | 30.80 | -0.30 | 37.79 | 41.14 | 43.37 | 5.58 |
| Portugal | PT | 7.21 | 8.24 | 1.02 | 12.00 | 14.10 | 2.10 | 33.70 | 34.50 | 0.80 | 79.02 | 74.98 | 79.62 | 0.60 |
| Slovenia | SI | 12.40 | 11.42 | -0.98 | 7.30 | 9.70 | 2.40 | 23.80 | 25.00 | 1.20 | 47.87 | 44.41 | 48.12 | 0.26 |
| Spain | ES | 13.51 | 12.81 | -0.70 | 19.90 | 24.50 | 4.60 | 33.50 | 34.70 | 1.20 | 61.39 | 59.73 | 60.67 | -0.71 |
| Sweden | SE | 14.32 | 15.89 | 1.57 | 8.60 | 7.90 | -0.70 | 24.10 | 25.40 | 1.30 | 79.52 | 77.84 | 80.11 | 0.60 |
| Switzerland | CH | 25.84 | 26.82 | 0.98 | 4.55 | 4.54 | -0.01 | 29.60 | 29.50 | -0.10 | 45.37 | 48.74 | 45.72 | 0.36 |
| United Kingdom | GB | 11.39 | 12.49 | 1.10 | 7.80 | 6.10 | -1.70 | 32.90 | 31.60 | -1.30 | 61.66 | 57.18 | 56.22 | -5.45 |
| **Average (Total/20)** |  | **10.98** | **11.52** | **0.54** | **9.53** | **8.73** | **-0.80** | **28.94** | **29.63** | **0.69** | **55.89** | **55.83** | **56.91** | **1.01** |

Source: Eurostat 2016; OECD 2016; MIPEX 2015.

Table SM7. Media claims on immigration and ethnic and racial issues (number)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Country** | **Negative - Immigration and Ethnic /Racial** | **Negative - Immigration economic impact** | **Negative - Cultural diversity and its impact** | **Negative - Total** | **Neutral - Immigration and Ethnic /Racial** | **Neutral - Immigration economic impact** | **Neutral - Cultural diversity and its impact** | **Neutral - Total** | **Positive - Immigration and Ethnic /Racial** | **Positive - Immigration economic impact** | **Positive - Cultural diversity and its impact** | **Positive -Total** | **All claims** |
| **AT** | 23 | 2 | 5 | 30 | 10 | 0 | 2 | 12 | 18 | 2 | 3 | 23 | 65 |
| **BE** | 0 | 0 | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 2 | 3 | 5 |
| **CH** | 14 | 12 | 1 | 27 | 23 | 10 | 0 | 33 | 12 | 5 | 0 | 17 | 77 |
| **CZ** | 13 | 0 | 1 | 14 | 8 | 0 | 1 | 9 | 13 | 0 | 0 | 13 | 36 |
| **DE** | 9 | 1 | 1 | 11 | 2 | 1 | 1 | 4 | 10 | 2 | 1 | 13 | 28 |
| **DK** | 8 | 1 | 1 | 10 | 0 | 0 | 0 | 0 | 7 | 2 | 1 | 10 | 20 |
| **EE** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **ES** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **FI** | 1 | 3 | 0 | 4 | 8 | 1 | 2 | 11 | 4 | 0 | 0 | 4 | 19 |
| **FR** | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| **GB** | 13 | 3 | 4 | 20 | 13 | 3 | 2 | 18 | 2 | 4 | 1 | 7 | 45 |
| **HU** | 84 | 1 | 1 | 86 | 68 | 0 | 1 | 69 | 8 | 0 | 1 | 9 | 164 |
| **IE** | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 0 | 2 | 3 |
| **LT** | 5 | 0 | 0 | 5 | 9 | 0 | 0 | 9 | 2 | 0 | 0 | 2 | 16 |
| **NL** | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| **NO** | 0 | 1 | 0 | 1 | 2 | 0 | 0 | 2 | 1 | 0 | 2 | 3 | 6 |
| **PL** | 1 | 3 | 0 | 4 | 3 | 2 | 0 | 5 | 9 | 0 | 1 | 10 | 19 |
| **PT** | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 9 | 8 | 2 | 0 | 10 | 19 |
| **SE** | 4 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 5 |
| **SI** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Source: ESS7 Media Claims data, edition 1.0 (ESS, 2016b) published 08.07.2016

1. See the list of polls: <https://ig.ft.com/sites/brexit-polling/> (accessed 17/01/2019). [↑](#footnote-ref-1)
2. See: <https://www.europeansocialsurvey.org/findings/impact> (accessed 17/01/2019). [↑](#footnote-ref-2)
3. More uncertainty (nonresponse) among Polish people could have been related to the country’s history, e.g. the partitions (1772-1918), and/or being attacked by both Nazis and Soviets during the Second World War. [↑](#footnote-ref-3)
4. Number of missing cases (total 1478): 488 ethnic minority status, 22 gender, 75 age, 356 marital status, 338 subjective income, 130 qualification level, 96 interest in politics, 93 political efficacy, 362 contact, 171 interviewer age, 123 interviewer gender. I also excluded 125 respondents with ‘other’ qualification level. [↑](#footnote-ref-4)
5. The analysis below was also undertaken for each item taken separately rather than aggregated as here (see Supplementary Online Material, Tables SM3 and SM4). The tenor of the results is essentially unchanged. [↑](#footnote-ref-5)
6. The share of foreign-born population in 2014 was missing for Switzerland in Eurostat, so instead I used OECD statistics for 2011 and 2014 (as 2010 data was not available), to help ensure data comparability over time. [↑](#footnote-ref-6)
7. See: <https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Equivalised_disposable_income> (last accessed 17/01/2019). [↑](#footnote-ref-7)
8. The Migrant Integration Policy Index (MIPEX) is based on 167 indicators and captures migrants’ opportunities to participate in society in eight areas: labour market; family reunion; education; political participation; permanent residence; citizenship/nationality; anti-discrimination policies; and health services. It varies from 0 to 100, with a higher score indicating more access given to migrants or more equal rights in comparison to native population (MIPEX 2015). [↑](#footnote-ref-8)
9. Level 2 and Level 3 continuous variables were centred around grand means for the analysis. [↑](#footnote-ref-9)
10. -menbreg- function in Stata 14. [↑](#footnote-ref-10)
11. A likelihood-ratio test favoured the multilevel mixed-effect negative binomial model over the multilevel mixed-effects Poisson model (-mepoisson- function in Stata 14). [↑](#footnote-ref-11)
12. In the standard Poisson model the overdispersion parameter (alpha) is constrained to zero. In the negative binomial model, the variance is greater than the mean, and is parameterised on the log scale in the maximum likelihood estimation. [↑](#footnote-ref-12)
13. Predicted nonresponse counts for education levels (from lower secondary to tertiary) for the impact (openness) items are: 0.34 (0.26), 0.26 (0.28), 0.26 (0.27) and 0.30 (0.35). [↑](#footnote-ref-13)
14. The pattern stays the same if models are run without people self-identifying as of minority ethnicity. [↑](#footnote-ref-14)
15. This estimate includes Estonia, which was missing in the integrated ESS file, but provided separately, see: <http://www.europeansocialsurvey.org/data/deviations_country.html?year=2014&land=233>. [↑](#footnote-ref-15)
16. The predicted number of nonresponses on impact (openness) items for nonrespondents to the household income question is 0.48 (0.46) as compared to 0.27 (0.24) for those who replied to the household income question. [↑](#footnote-ref-16)
17. Higher nonresponse in interviews conducted by female interviewers is an issue worth further investigation. This pattern is not unique to immigration-related items either – see Table SM5. [↑](#footnote-ref-17)