
A dynamic cross-national multilevel study of 28 European countries

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Abstract

The increase in right wing populist parties in Europe combined with the sudden influx of asylum applicants has given rise to the debate regarding immigration both politically and within research. This paper sets out to examine the relation between asylum seeker group size and people’s attitudes towards immigration. Based on group threat theory and ethnic competition theory we hypothesize that countries’ increases in asylum seekers is correlated with decreases in attitudinal support for immigration. We test this hypothesis using cross-national time series survey data from the Eurobarometer from 2014 to 2017 and conducting a multilevel analysis. Despite the extensive theoretical arguments that strengthen the hypothesis, we find no evidence that the group size of asylum seekers is related to attitudes towards immigration from outside EU.

Keywords: Asylum seeker group size, refugee group size, attitudes towards immigration, refugee influx, Europe, multilevel model.
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1. Introduction

During the last decade, there has been a trend of rising support for radical right parties in Europe, parties that oppose immigration and at the same time seem to appeal to people's anti-immigrant sentiments (Gorodzeisky, Rajman & Semyonov, 2006). In combination with this political turmoil, Europe faced a large and rapid influx of refugees during 2014-2017 which further fuelled the immigration debate among politicians and in media (Zeitel- Bank, 2017). One example on what these debates led to is the reinforcement of temporary border controls to keep refugees out of EU membership countries. Taking off in this brief depiction of the European context during 2014-2017, this paper sets out to examine to which extent the increase of asylum seekers affected people's attitudes towards immigration. Studies have investigated the relationship between immigrant group size and anti-immigration attitudes but results have been ambiguous (Pottie-Sherman & Wilkes, 2017). Apart from the varied results provided by previous research, the vast majority of studies has not investigated the relationship in a context with such large refugee group size as the one Europe has faced since 2014. To our knowledge there has been no study that has used recent data covering the time period (2014-2017) when the amount of asylum applicants increased dramatically in many EU membership countries.

Using recent survey data from the Eurobarometer (data collected in November-2014, May-2015, November-2015, May-2016, November-2016 and May-2017) and asylum statistics from Eurostat, we examine the relationship between asylum seeker group size and people's attitudes towards immigration. The Eurobarometer studies include survey data from 28 EU membership countries with a total of 169,870 participants. Asylum flows are not constant nor equally dispersed across the EU member states, hence, immigration differ within and between countries over time. By using a novel multilevel approach (Fairbrother, 2014) it is not only possible to study the relationship between asylum seeker group size and people's attitudes towards immigration in different countries but it also enables us to investigate whether contextual changes within countries over time are correlated with within-county changes in attitudes regarding immigration.

We will describe the recent migration flows to Europe and the context in which it occurred. Subsequently, this paper builds on two sets of theories regarding the formation of attitudes towards
immigrants, namely, group threat theory and ethnic competition theory. The theoretical framework together with previous research on anti-immigration attitudes are outlined in the next section. We use a novel multilevel modeling technique (Fairbrother, 2014) to distinguish between-country variation and variation within countries over time. We then present our results followed by a section of discussion and conclusions where we will discuss our findings in light of previous research.

2. The recent European refugee immigration

Global refugee migration has increased since 2012 and can to a large extent be explained by the conflicts in Syria and Iran. By 2016, there were 22.5 million refugees worldwide, of which the majority was hosted by neighboring countries (UNHCR, 2017). However, most refugees has not applied for asylum in their host countries and the EU member states received a relatively small share of approximately 5.7% (calculation based on data from UNHCR, 2017 and Eurostat 2, 2017) of the overall asylum applicants. The asylum seekers that came to Europe during this time period were overrepresented by people from Syria, Afghanistan and Somalia (UNHCR, 2017). According to the European Commission asylum is:

[…] a form of international protection given by a state on its territory. It is granted to a person who is unable to seek protection in his/her country of citizenship and/or residence, in particular for fear of being persecuted for reasons of race, religion, nationality, membership of a particular social group, or political opinion (Eurostat 1, 2017).

In 2014, Europe was faced with an influx of asylum seekers, mainly from the abovementioned countries. Even though Europe only received a small share of the total number of the world's refugees it still made a large impact on the number of asylum applicants compared to previous years. The rise of asylum applicants started in 2014 peaked in 2015 and 2016 (UNHCR, 2016) and dropped afterwards (UNHCR, 2017). Figure 1 shows that the number of asylum seekers increased notably between 2014 and 2016 in comparison to previous years (data from 2017 were not yet available).
The combination of increasing number of asylum applicants and a rise in radical right parties has brought the topic of immigration to attention, both politically and among researchers (Green-Pedersen & Otjes, 2017). Studies trying to explain the relationship between the presence of radical right parties in a country and people's attitudes towards immigration are few and show inconclusive results (e.g. Bohman & Hjerm, 2016; Dunn & Singh, 2011; Sprague-Jones, 2011), although the majority of the studies show no correlation between the two (Pottie-Sherman & Wilkes, 2017). However, people’s attitudes towards immigration substantially differ between European countries. For example, Nordic countries tend to be more positive towards immigration than eastern European countries (Heath, Richards & Ford, 2016). Understanding people's attitudes towards immigrants is important because attitudes often, but not always, guide social behavior. Attitudes affect how people explicitly or implicitly relate and act towards each other, both in the public and private sphere. A perceived threat can lead to negative feelings and attitudes among the majority group and studies have shown that prejudice is a common manner to legitimize the dominant group's position (Quist & Resendez, 2002). Hence, if a majority of the population holds negative feeling towards immigrants (a minority group), they are more likely to act on their attitudes in order to “protect” the dominant group. With an understanding of existing attitudes towards immigration in a country and how they are formed, politicians, organizations and the public will get a chance to

Source: Data on asylum applicants from Eurostat. Asylum and first time asylum applicants by citizenship, age and sex Annual aggregated data (rounded) (Eurostat 2, 2017).
implement measurements preventing acts of intolerance, discrimination and violence towards minority groups.

2.1 Theory and previous research: Outgroup size and perceived threat

There are both theoretical and empirical reasons to assume that an increase in numbers of asylum seekers negatively influence people's attitudes toward immigration. Group threat theory is one of the most frequently used theories regarding the relationship between (perceived and/or actual) immigrant group size and attitudes toward ethnic minorities (Ceobanu & Escandell, 2008). The theory originates both from Herbert Blumer’s (1958) notion of racial prejudice and Hubert. M. Blalock’s (1967) research on discrimination in the American South. It has also been adopted to understand people's attitudes towards immigrants coming to Europe (see eg. Hjerm, 2007 & Schlueter & Scheepers, 2010).

The group threat theory claims that the development of negative attitudes toward certain outgroups is contextual, that is, caused by conflict between majority and minority groups. It is based on the notion of group positioning, and negative attitudes are usually developed in the majority group towards the minority group. Blumer (1958) identifies four basic types of feelings that are present in a dominant group that inhabits such negative feelings towards a minority group:

 [...] (1) a feeling of superiority, (2) a feeling that the subordinate race is intrinsically different and alien, (3) a feeling of proprietary claim to certain areas of privilege and advantage, and (4) a fear and suspicion that the subordinate race harbors designs on the prerogatives of the dominant race (Blumer, 1958: 4).

These feelings can be broken down into four mechanisms, 1) group identity, 2) out-group stereotyping, 3) preferred group status and 4) perceived threat. All four factors have to be in place in order to develop negative attitudes. The feeling of actual and/or perceived competition over resources is the strongest predictor in the formation of negative feelings towards the minority group (Blumer, 1958). The main argument for why a feeling of threat occurs is that the majority group believe that the minority group is competing for valued resources. The majority group perceive the minority group as a potential risk and in turn they develop negative attitudes towards the minority group (Blalock, 1967). The potential threat can be connected to both material resources such as
welfare benefits or job opportunities on the one hand and to cultural resources such as cultural beliefs and identity (Hjerm & Nagayoshi, 2011) on the other hand.

The development of the majority group's attitudes towards immigrants can be further explained by Susan Olzak's (1992) ethnic competition theory that originates from group threat theory (Blumer, 1958) and group identity theory (Tajfel and Turner, 1979). The theory contributes with comprehensive explanations to the feeling of competition between natives and immigrants. The focus is on contextual explanations but Olzak also identifies that contextual factors influence individuals differently depending on individual factors. Ethnic competition theory emphasize the importance of considering and understanding the complexity in the context of which the development of negative attitudes towards immigrants occur. The contextual explanations interact with individual factors, which in turn can inhibit or fuel the process (Olzak, 1992).

The contextual factors that Olzak describes are relevant to this study since they are similar to the contextual situation Europe faced during the period from 2014 to 2017. Olzak (1992) mentions three influential factors in the development of attitudes between majority and minority groups. The first mechanism behind the development of the majority group's attitudes is the timing and size of the immigration group, as well as the clarity of ethnic distinction that can be made between the majority and minority group. The influx of asylum seekers to Europe happened rather suddenly and the change in pace was noticeable and quick. We chose not go into detail on ethnicity of the asylum applicants except for that the asylum seekers are from outside EU. The second mechanism is similar to the economic threat aspect that was presented in relation to group threat theory. In ethnic competition theory, Olzak (1992) emphasises forces of economic competition between groups as a factor in the emergence of negative attitudes. When immigrants enter an area, the labour market for instance, in which the majority group is overrepresented, the competition for limited resources ought to increase. The third mechanism regards the political/power domain and how a majority group that feels politically threatened by a minority group tends to mobilize themselves collectively in order to prevent a loss in political control (Olzak, 1992). The political/power mechanism is not going to be controlled for in this study because of data limitations.
The potential threat the majority group might feel can be either perceived or actual. This means that it does not have to be an actual threat in order for anti-immigration attitudes to develop. The theories give reasons to believe that a consequence of a rapid influx of a large immigrant population in a country leads to more people sharing the same amount of resources. This, in turn, might lead to that the established population´s attitudes towards immigrants are affected negatively.

The relationship between immigrant group size in a country and the population´s attitudes towards immigrants have become a topic of increased interest for researchers in the last 20 years (Schlueter & Scheepers 2010; Gorodzeisky, Rajman & Semyonov, 2008; Hjerm, 2007; Quillian, 1995). However, the relevant empirical findings are ambivalent (Pottie-Sherman & Wilkes, 2017). The majority of studies concludes that there is no relationship between immigrant group size and attitudes toward immigrants, claiming that neither the objective nor the perceived size of the immigrant group affect native´s attitudes (Pottie-Shearman & Wilkes, 2017). However, some studies conclude that there is a negative relationship between group size and attitudes (Quillian, 1995) where the larger the immigrant group size is, the more threatened the dominant group feels which in turn leads to a development of negative attitudes. The threat is sometimes linked to a perception of an unstable labour market in which people fear the loss of their jobs when the immigrant group size grow. Other studies claim that there is a positive relationship because a larger out-group facilitates intergroup contact and integration which in turn leads to less prejudice from the native group (Schlueter & Scheepers, 2010). These ambiguous results open up for further studies on the topic.

The relationship between immigrant group size and people´s attitudes has been studied from different perspectives depending on which explanatory factor that has been in focus. Research on immigrant-group size and attitudes can be divided up into two strands of explanations for why people hold negative attitudes towards immigrants. The first strand is the fear of conflict over cultural values and identity (Gang et al., 2013; Silke, 2008; Dustmann & Preston, 2007) and is a value-based perspective. Common topics for the value-based perspective is identification with the ingroup and prejudice towards the out-group on racial and ethnic group basis or political affiliation. The second perspective is based on the fear of conflicts over economic resources (Hatton, 2016; Boeri, 2010; Silke, 2008; Quillian, 1995) and is often linked with the group threat theory (Blumer,
1958). This study focuses on the second perspective because of the sudden influx of asylum applicants and the rapid rise in right wing parties.

2.2 Hypotheses
There are, to our knowledge, no studies that examines the relation between changes on a country level over time in relation to changes in attitudes over time. Our study will contribute to the field by examining changes over time in relation to attitudinal changes in a context where immigration flows has altered notably. Taking group threat theory, ethnic competition theory and previous research into consideration, we assume that an increase of asylum seekers will show an increase in anti-immigration attitudes among natives. By applying these theories on the specific European context we formulated the following hypotheses:

H1: An increase (decrease) in asylum applicants in a country is negatively (positively) correlated with attitudinal support for immigration from outside the EU.
H0: An increase (decrease) in asylum applicants in a country is not correlated with attitudinal support toward immigration from outside the EU.

3. Data and variables
Our cross-national time-series survey data come from the six most recent rounds of the Eurobarometer studies, covering a time span from 2014 to 2017. The Eurobarometer is conducted on behalf of the European Commission (European Commission 1, 2017). The surveys were conducted during the following time periods; November 2014 (round 1), May 2015 (round 2), November 2015 (round 3), May 2016 (round 4), November 2016 (round 5) and May 2017 (round 6). The 28 EU member countries that are included are chosen on the basis of their full-participation in all six rounds. The participating countries are presented in Table 1.¹

¹ Some of the countries from the original data material were merged together because contextual material is limited to states. By merging Great Britain and Northern Ireland we created United Kingdom. East- and West Germany was merged into Germany and Cyprus TCC was merged with Cyprus (Republic) to create Cyprus.
The dependent variable in the statistical models is *attitudes towards immigration from outside Europe*. Anti-immigration attitudes is measured by using the following question from the Eurobarometer survey: “Please tell me whether each of the following statements evokes a positive or negative feeling for you?”, with the statement being: “Immigration of people from outside the EU”. (The responses ranged from: 1. Very positive, 2. Fairly positive, 3. Fairly negative, 4. Very negative, 5. Don’t know). This means that a high value represents negative feelings towards immigration and a low value represents positive feelings. We exclude the response *don’t know* (missing values n= 10 914 (6.4 %)) in the analysis which leaves us with an attitudinal scale of 1-4.
This operationalization is suitable since the vast majority of asylum applicants during the time period 2014-2017 came from countries outside EU. Also, migration within EU countries is marginal compared to inflows into the EU (UNHCR, 2016). The question is used in all six rounds of the survey and although it is formulated as attitudes towards immigration and not towards immigrants, we consider it suitable as a proxy of people's attitudes towards immigrants.

The Eurostat database is used to extract data on the amount of asylum seekers for each of the 28 EU member countries from 2014-2017 as well as the percentage of unemployment rate for each country during the same time period. This paper focuses specifically on the number of asylum applicants since previous research has shown that general immigration numbers do not seem to have an impact on attitudes towards immigration (Hjerm, 2007). The number of asylum seekers, *asylum seekers*, in EU member countries from November 2014 to May 2017 are used as an explanatory variable (see Appendix, A for more details) and provides numbers of asylum seekers from outside EU for each country and time period. The data of asylum seekers frequency that is presented on a monthly basis in Eurostat, was bulked into six month periods in order to match the rounds of the Eurobarometer survey. According to research, unskilled migrants from outside EU are not only least welcomed across the EU member states, but are also overrepresented in the asylum applications (Heath, Richards & Ford, 2016). On the basis that this group seems to provoke strong feelings among the natives, asylum seekers is a relevant group to study in relation to the aim.

We further control for within and between country changes in unemployment rates. Both group threat theory and ethnic competition theory are based on the notion that political and economic contexts are important factors in the development of negative attitudes towards immigrants. The economic situation and the level of job scarcity in a country have been shown to be of importance both theoretically and empirically in the development of people's attitudes towards immigration (Rustenbach, 2010; Quillian, 1995). The economical context is taken into account in this paper but due to lack of 2017 Eurostat data on gross domestic product (GDP), only unemployment rates are controlled for (see Appendix A, for more details). Countries’ unemployment rates have in previous research been used as a proxy for the labour market and economic situation in a country (Schlueter & Scheepers, 2010) and group threat theory and ethnic competition theory emphasize the
importance of countries’ economic situation in the formation of negative attitudes towards immigrants. Therefore, we will use unemployment rates as a measurement of the economic context in EU member states. The variable unemployment rate measures the percentage of unemployment among the active population specific for each country and time period. The assumption is that high unemployment rates in a country potentially increases feelings of competition over values and scarce resources among members of a country's majority group, especially when the asylum seeker group size is growing.

A vast amount of research regarding attitudes towards immigration focuses on individual and personal factors. The focus of this paper is not on individual explanations in relation to attitudes towards immigration but since individual-level variables have, in previous research (see, e.g. Gorodzeisky, 2011; Herreros & Criado, 2009; Quillian, 1995), shown to have significant effects on attitudes towards immigration we will use individual factors as control variables (see Appendix B for Eurobarometer survey questions). Left/right political orientation (scale from 1-10 where 1 represents left and 10 represents right) is the first control variable that we will use. It is established that people's perceptions of in- and out- groups affects attitudes on immigration. For example, people who identify themselves as politically right-wing tend to hold more anti-immigration sentiments than those who identifies themselves as politically left (Cohrs & Stelzl, 2010). According to the ethnic competition theory, membership in certain social categories make some people more inclined to perceive a growing minority group as a risk, making left/right wing orientation a suitable control variable in the analysis.

The second individual variable controls for migration background (was created by re-coding the data material coded 0 = no migration background and 1 = migration background). Research show that people who identify themselves as a member of a certain racial or ethnic minority group tend to inhabit less anti-immigration sentiments (see e.g. Barreto et al. 2009; Berg, 2010). This can be drawn back to group threat theory and group positioning (Blumer, 1958) which describes prejudice not so much as a dislike towards the minority group but rather as a strong affection towards the dominant group. Members of minority groups might not inhabit the majority group’s positive feelings towards the dominant group nor feelings of prejudice towards other minority groups. We take this into account by controlling for migration background on an individual level.
The third individual variable is age. Age has in previous research shown to be negatively correlated with support for immigration. In other words: the older people are, the more likely is it that they hold negative attitudes toward immigration (Hempstead & Espenshade, 1996; Pichler, 2010; Gorodzeisky, 2011). The fourth individual variable is education. Previous studies have shown that individuals with higher levels of education tend to hold more pro-immigration attitudes than individuals with lower levels of education (e.g. Herreros & Criado, 2009; Hainmueller & Hiscox, 2007; 2010). We thus control for educational attainment distinguishing four different categories: high, medium, low and missing/still studying (the latter not shown in our regression tables).

The fifth control variable is employment status (housekeeping, in education, unemployed, retired and employed). Immigrants are more likely to compete for the low-skilled jobs rather than the high-skilled ones, hence, a person with a high skilled occupation may not feel as threatened by immigrants as an individual with a low skilled job would. Therefore, individuals working in low-skilled occupations tend to inhabit more anti-immigration attitudes than people with high-skilled occupation (Noel & Pinkney, 1964; Gorodzeisky, 2011). The sixth individual variable is gender (0 = man, 1 = woman), taking into account that the bulk of previous research found that men tend to be less supportive of immigration than women (see e.g. Ceobanu & Escandell, 2008; Gorodzeisky & Semyonov, 2009; Quillian, 1995) However, some studies suggest otherwise and argues that in some situation, women tend to hold more anti-immigrant sentiments than men (Ponce, 2017) which gives us further reasons to control for gender.

Lastly, living area is also going to be controlled for (rural/village, small/middle town and large town). Research has shown that people who live in big cities have less anti-immigration attitudes than people residing in rural areas (Markaki & Longhi, 2013). These findings can be ascribed to the contact theory, which argues that contact between individuals from different backgrounds can under certain circumstances decreases anti-immigration sentiments (Allport, 1954). Since immigrants are more common in larger cities, people living there are assumed to hold more tolerant attitudes towards immigrants. Therefore, living area is going to be used as a control variable on the individual level.
4. Method

The Eurobarometer data is cross-national time series data, but the samples of individuals differ from each measuring occasion to the next. This means that we are studying the development in 28 countries over time, whilst there are new individuals that are randomly selected to answer the survey for each round. The primary focus in this study is on whether the group size of asylum seekers coming to EU countries is correlated with attitudes towards immigration from outside EU. The complexity in the data requires a comprehensive method of analysis. A multilevel approach allows us to assume that the time- and country level contexts are influential factors in the development of people’s attitudes towards immigration. The approach has become typical to use when studying phenomena that are grouped or clustered. Multilevel modelling has been used to study a variety of topics such as health, poverty, political attitudes, voting, education, religiosity and gender gap in household labor (Fairbrother, 2014). The data has been processed in SPSS Statistics version 24.

Our three-level multilevel model takes into consideration that the data is split into different levels. Each level can be considered a potential source of unexplained variance in the dependent variable: attitudes towards immigration. More specifically, our model takes into account that individuals (level 1, n=169 870) are nested in country-time units (level 2, n=168) which are in turn nested in countries (level 3, n=28).

The so called Empty model maps how much variation there is to be explained in attitudes towards immigration on each level of analysis. Model 1 contains our set of individual control variables that are assumed to influence people’s attitudes towards immigrants. Model 2 includes the contextual predictor asylum seekers and controls for whether changes in numbers of asylum applicants within- and between countries over time is correlated with changes in attitudes towards immigration. In line with Fairbrother’s recommendations (2014), we recoded the original ASYLUM SEEKERS variable into two variables, ASYLUM MEAN and ASYLUM LONG. ASYLUM MEAN captures the mean value regarding the absolute number of asylum seekers coming to the respective country across all relevant survey rounds (May 2014 to November 2017). ASYLUM LONG indicates, in turn, each country’s round-specific deviation from the respective overall mean of said country. In order to make the numbers more comprehensible we divided the numbers of asylum seekers by
Table 2 captures how the variables ASYLUM MEAN and ASYLUM LONG are structured. Finland and Sweden are used as examples. The ASYLUM MEAN for Finland is 6.99, which is the calculated mean for all six country-rounds. ASYLUM LONG shows how much the number of asylum applicants deviates from the country mean at each round, with the mean centred at 0. For example, the value on ASYLUM LONG for Finland’s first two rounds (November 2014 and May 2015) are lower than the country mean (-5.07 respectively -4.94) whilst November 2015 (16.48) and May 2016 (3.16) display higher numbers than the country-mean. By November 2016 (-4.62) and May 2017 (-4.82) the values decrease again. Both the Swedish and Finnish example are in accordance with the overall European trend in number of asylum applicants which peaked in 2015.

<table>
<thead>
<tr>
<th>Finland</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country round</td>
<td>ASYLUM MEAN</td>
</tr>
<tr>
<td>November 2014</td>
<td>6.99</td>
</tr>
<tr>
<td>November 2015</td>
<td>6.99</td>
</tr>
<tr>
<td>May 2016</td>
<td>6.99</td>
</tr>
<tr>
<td>May 2017</td>
<td>6.99</td>
</tr>
</tbody>
</table>

Source: Own calculations based on data on asylum applicants from Eurostat. Asylum and first time asylum applicants by citizenship, age and sex Annual aggregated data (rounded) (Eurostat 2, 2017).

Including the two variables ASYLUM LONG and ASYLUM MEAN makes it possible to distinctively analyse within-country changes in the number of asylum seekers and between-country differences in the reception of asylum seekers.

The third model (Model 3), includes the contextual control variable unemployment rate which is treated in the same way as the variable asylum seekers. Unemployment rates change over time and between countries and using the two variables, UNEMPLOYMENT MEAN and UNEMPLOYMENT LONG, enables us to distinguish the changes over time from changes between and within countries.
5. Results
Before moving on to the multivariate analysis, charts depicting the development in anti-immigration attitudes over time for all 28 countries are presented. Figure 2 shows the mean in attitudes towards immigrants from outside EU for each survey round across countries with +/- standard deviation. Across countries and over time, attitudes toward immigration hardly changed, despite the immigrant influx that happened in between. There is, however, a slight increase in anti-immigration sentiments from November 2014 (round 1) to May 2017 (round 6). The trend is curve-linear since it slightly increases from November 2014 (round 1) to November 2015 (round 4) and then slowly drops again until May 2017 (round 6). According to the figure, anti-immigration attitudes seems to peak in November 2015 (round 3), and May 2016 (round 4).

![Figure 2. Mean in attitudes for each survey round.](image)

Source: Eurobarometer. Data on ‘attitudes towards immigration from outside EU’.

The country mean in attitudes over time is presented in Figure 3 which displays the overall trend in attitudes from November 2014 to May 2017 in all countries. Here, the country means in attitudes for each country and survey round are calculated and Figure 3 shows there is a trend difference in attitudes between and within countries over time. High numbers on the y-axis represent higher levels of anti-immigration attitudes whilst the x-axis represents the time span from the first measuring occasion to the last.
In order to facilitate the interpretation of the trends in attitudes for each country over time, we also present three line charts and one scatterplot. Figures 4 display the attitudes of countries with the a) highest, b) medium and c) lowest means of anti-immigration attitudes during the study period. We want to re-emphasize that low values on the attitudinal scale represent support for immigration from outside EU. The three line charts (4a, 4b and 4c) show the changes in attitudes in each country from the first measuring occasion in November 2014 to the last in May 2017.

*Source: Eurobarometer. Data on 'attitudes toward immigration from outside EU'.*
Latvia (Figure 4a) is an example of a country with relatively high anti-immigration attitudes, in comparison to Sweden (Figure 4c) with generally lower levels. There are also differences in attitudes within countries when measured over time. Some countries, such as Denmark (Figure 4b), indicate increased levels of anti-immigration attitudes from the first measuring occasion to the last. Other countries, the United Kingdom for example (Figure 4c), became more positive to immigration during the measuring period. There are also countries, such as Germany (Figure 4b), that have a mixture between increasing and decreasing levels during the time period. This shows that there is a certain change in attitudes to be explained, however, it could be that the differences in attitudes between the measuring occasions are random, that is, statistically not significant which gives further reason to test the relation in a multilevel analysis.

The numbers of asylum seekers in EU have altered during the time period. The levels of asylum seekers differ both between and within countries over time which give rise to the question regarding the relationship between attitudes and number of asylum seekers in a country. In order to get a first indication of the hypothesized relationship between asylum seeker group size and attitudes over time, separate figures for each country is presented in Appendix C. The charts do not display a clear relationship between asylum seeker group size in a country and levels of anti-immigration attitudes. Figure 5, confirms this observation. It exhibits a non-existent relation or a relation that is slightly leaning towards a weak negative correlation between asylum seeker group size (x-axis) and anti-immigration attitudes (y-axis) when examining the relation across all countries. This gives reason for further analysis of the relationship.
Source (Figure 4a-4c): Eurobarometer. Data on ‘attitudes toward immigration from outside EU’. Figure 5: Eurobarometer. Data on ‘attitudes toward immigration from outside EU’ and Eurostat data on asylum applicants in European countries.

The result of the multilevel analysis is displayed in Table 3. The Empty model shows how much of the variance can be ascribed to each level of analysis and can therefore justify the necessity of the use of multilevel modelling. This is followed by Model 1 which includes all individual control variables, whereas Model 2 adds the two key macro-level variables, one variable depicting the mean level of asylum seekers over all six waves and another variable capturing the respective country’s deviation from said mean value at each survey round. Model 3 controls, lastly, for countries’ unemployment rates. By calculating the intraclass correlation (ICC) (Bickel, 2007: 61-62) we conclude that 89% of the variation in attitudes towards immigration can be explained on an individual level, that approximately 1% can be explained by variance within countries over time and 10% of the variance in attitudes to variation between countries. The Empty model shows that the vast majority of variance in attitudes towards immigration can be explained by individual factors whilst the remaining variance from level 2 (within countries over time) and level 3 (between countries), 1 respectively 10% show that their contribution to explaining the variance in attitudes are quite small, but yet of interest.

The multilevel models are summarized in Table 3. In Model 1 we include the individual variables. All the individual variables show to have a significant correlation to attitudes towards immigration from outside EU. We would like to re-emphasize that the dependent variable is coded on a scale of 1-4 where a high value represents strong anti-immigration attitudes. This means that the positive coefficients reflect higher anti-immigration attitudes whereas negative coefficients reflect more tolerant attitudes.
Table 3. Model Summary. Attitudes towards immigration from outside EU.

<table>
<thead>
<tr>
<th>Fixed effects</th>
<th>Empty Model</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>2,855(0.053)***</td>
<td>2,273(0.057)***</td>
<td>2,277(0.062)***</td>
<td>2,330(0.129)***</td>
</tr>
<tr>
<td>Round 1</td>
<td>-0.23(0.026)</td>
<td>-0.23(0.026)</td>
<td>-0.15(0.037)</td>
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<tr>
<td>Round 2</td>
<td>0.02(0.026)</td>
<td>0.23(0.026)</td>
<td>0.02(0.034)</td>
<td></td>
</tr>
<tr>
<td>Round 3</td>
<td>0.106(0.026)***</td>
<td>0.108(0.027)***</td>
<td>0.113(0.032)***</td>
<td></td>
</tr>
<tr>
<td>Round 4</td>
<td>0.069(0.026)**</td>
<td>0.072(0.027)**</td>
<td>0.075(0.029)**</td>
<td></td>
</tr>
<tr>
<td>Round 5</td>
<td>0.033(0.026)</td>
<td>0.036(0.027)</td>
<td>0.038(0.028)</td>
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</tr>
<tr>
<td>Round 6: ref</td>
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<td></td>
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</tr>
<tr>
<td>Housekeeping</td>
<td>0.068(0.012)**</td>
<td>0.068(0.012)**</td>
<td>0.068(0.012)**</td>
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<tr>
<td>In education</td>
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<td>-0.10(0.020)**</td>
<td>-0.10(0.020)**</td>
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<td>0.10(0.009)**</td>
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<td>Retired</td>
<td>0.049(0.007)**</td>
<td>0.049(0.007)**</td>
<td>0.049(0.007)**</td>
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<tr>
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<tr>
<td>Male</td>
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<td>0.039(0.005)**</td>
<td>0.039(0.005)**</td>
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<td>Female: ref</td>
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<td>Rural area/village</td>
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<tr>
<td>Small/middle town</td>
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<tr>
<td>UNEMPLOYMENT LONG</td>
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<tr>
<td>Variance</td>
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<tr>
<td>Level 3 (between countries)</td>
<td>0.076(0.021)**</td>
<td>0.068(0.019)**</td>
<td>0.071(0.020)**</td>
<td>0.073(0.021)**</td>
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<tr>
<td>Level 2 (between country-time units)</td>
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<td>0.009(0.001)**</td>
<td>0.009(0.001)**</td>
<td>0.009(0.001)**</td>
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<td>Level 1 (between individuals)</td>
<td>0.684(0.002)**</td>
<td>0.657(0.003)**</td>
<td>0.657(0.003)**</td>
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</tr>
<tr>
<td>-2 Restricted Log Likelihood</td>
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<tr>
<td>AIC</td>
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</tr>
</tbody>
</table>

Source: Data on ‘attitudes toward immigration from outside EU’ and the individual variables are from Eurobarometer. Number of asylum seekers and unemployment rates are from Eurostat.
Notes: N_i = 169, 870, N_j = 168, N_k = 28. Note: Standard errors in brackets.
Category “Education missing/still studying” is omitted for the sake of clarity.
*p < .05.
**p < .01.
***p < .001.
Model 1 shows that individuals that are employed or studying tend have more positive feelings towards immigration in comparison to individuals that are retired, unemployed or are taking care of the household (housekeeping). Men are, compared to women, generally less positive towards immigration. Individuals living in urban areas are more positive than those living in small towns or rural areas. People with migration background tend to be more positive towards immigration than natives. Left wing orientated are generally more positive towards immigration than individuals that identify themselves as right wing orientated. The variable age is positively correlated to anti-immigration sentiments. Individuals with higher education tend to inhabit more positive feelings towards immigration than people with lower education. These results are consistent with findings from previous research. Round three (November 2015), and four (May 2016) are the ones that were statistically significant among the rounds. Individuals were significantly more negative towards immigration in November 2015 (round 3) and May 2016 (round 4) when compared to May 2017 (round 6) which is reference time point. This give reason to control for the contextual variable, asylum seekers, to test if asylum seeker group size is correlated to the high levels of anti-immigration sentiments those year.

To examine the relationship between asylum seeker group size and attitudes towards immigration we add the variables *ASYLUM MEAN* and *ASYLUM LONG* in Model 2. In accordance with the descriptive statistics, the model shows that asylum seeker group size is statistically not correlated with people's attitudes toward immigration. This means that, according to our findings, the increase in numbers of asylum seekers in EU did not go hand in hand with an increase in anti-immigration sentiment. Neither do between-country differences in asylum seekers statistically correlate with the dependent variable. The result is consistent with other studies (see e.g. Hjerm 2007) that also show no correlation between immigrant group size and anti-immigration sentiments. We also consider the context in a given country over time by including the variables *UNEMPLOYMENT LONG* and *UNEMPLOYMENT MEAN* in Model 3. However, changes in unemployment rates are not statistically significant to changes in attitudes towards immigration, within countries over time nor between countries.

The model fit is measured with -2 log restricted likelihood and with Akaike’s Information Criterion (AIC). The smaller the respective value, the better the overall model fit (Bickel, 2007, 94). While
there is a clear improvement in model fit from the Empty model to Model 1, adding the contextual asylum seeker variables in Model 2 do not contribute to a better model fit. There is neither a notable improvement in model fit when additionally controlling for unemployment in Model 3. To summarize the results from the multilevel models, the hypothesis (H1) that people's attitudes towards immigration are correlated with the absolute numbers of asylum applicants coming to EU member states is, based on our analysis of Eurobarometer data from 2014 to 2017, rejected.

6. Discussion and conclusion
The increase of right wing populist parties and the sudden influx of asylum applicants has surfaced the debate regarding immigration both politically and within research. Against this background, the aim of this study was to investigate whether an increase in numbers of asylum applicants is related to a change in attitudes towards immigration. Based on group threat theory and ethnic competition theory, we hypothesized that an increase in asylum seekers would go along with an increase in anti-immigration sentiment. We tested the hypothesis by conducting a multilevel analysis. Despite the extensive theoretical arguments that strengthens the hypothesis, we found, based on cross-national time series data from the Eurobarometer studies 2014-2017 no support that asylum seeker group size is related to attitudes towards immigration from outside EU. This leaves us with the question of why asylum seeker group size does not affect attitudes towards immigration.

There are several possibilities than can explain this, but we want to point to the fact that attitudes towards immigration in EU has barely changed between 2014-2017 so the variation that could be to be explained is very small. One possibility is that within-country changes in attitudes toward immigration take place over longer time spans. Even though the numbers of asylum seeker peaked in 2015, a change in attitudes might not have had enough time to develop as a result of the increase of asylum applicants. For future research it could be useful to investigate similar relationships during a longer time period in order to capture the delayed effect that some occurrences might have on a change in attitudes.

A second reason for our result could be that the changes are visible in more local contexts rather than on national levels. As we previously described in relation to Olzaks ethnic competition theory
(1992) the context is of huge relevance when it comes to changes in attitudes towards immigration. For example large numbers of asylum seekers can increase the feeling of threat and lead to a development of negative attitudes. It might be that numbers of asylum seekers on a national level are too general to capture changes when asylum seeker group size can differ from municipality to municipality. For example, Weber (2015) finds, in an analysis of cross sectional data from 15 European countries on a national as well as on three differing regional levels ($N = 70, 207, \text{ and } 624$ regions, respectively), that it is rather change at the local context that matters. For future research it might be appropriate to examine numbers of immigrants/asylum seekers and how they are dispersed in spatial units across countries in order to capture differences within countries.

A third reason is our measurements on asylum seeker group size and attitudes. The body of research on attitudes and immigrant group size (Pottie- Sherman & Wilkes, 2017) have measured both attitudes and immigrant group size in different ways. We chose to use asylum applicants as a proxy for immigrant group size because the immigrant influx during 2014-2017 mainly consisted of refugees (UNHCR, 2016). Attitudes was operationalized through one survey question. An index consistent of more questions would might have been able to provide us with a more comprehensive view of the phenomena but due lack of existing data we used what was available. First, the measurement on asylum seeker group size does not take into consideration the refugees that were travelling through Europe to their final destination nor the immigrants that already live in EU member states. Second, we cannot say whether people's attitudes towards immigration are due to the actual numbers of asylum seeker or the majority groups’ perceived threat of the asylum seeker group. People's perceived threat could differ from the actual threat since the number of asylum applicants does not take into consideration the number of refugees that entered EU and immigrants who already live in EU member states. However, people's perceived notion of the asylum seeker group and the threat they might present should not have an impact in our study since the perceived notion rather should have enhanced people's negative attitudes which is contrary to our result.

An advantage of our three-level multilevel is that it explicitly takes into account that immigration flows substantially differ between countries. By concentration on changes within countries over time, those between-country differences in the magnitude of immigration are controlled for.
Factors that are not within the scope of this study, are media coverage on the immigrant influx and policies on immigration. These factors have previously been shown to influence people's attitudes towards immigration (Bloomgaard et al, 2017). Germany was the first country that implemented border controls in May 2015 in order to limit the immigration flow, and was soon followed by several other EU countries; Austria, Slovenia (September 2015), Hungary (October 2015), Malta, Sweden, France (November 2015), Denmark (January 2016), Belgium (February 2016) (European Commission 2, 2017). The resulting in border controls could indicate that the immigration debate hardened from 2014 onwards, eventually leading up to strict political measurements. Media coverage and political framing of the refugee influx could be an explanatory factor of the increase of anti-immigration sentiment in EU from 2014-2016. We recommend future researchers to take this into consideration when studying people's attitudes towards immigration in EU.

According to previous research (Gorodzeisky, 2011) and in line with group threat theory, attitudes towards immigration may differ between different social groups in a society. For example, people working in low-skilled jobs may feel more threatened by immigration for fear of losing their jobs than people working in high skilled jobs would. Due to a lack of good indicators for class and income in the Eurobarometer data we were not able to include these factors in our multilevel model. Also, including interaction variables in a multilevel model is computationally intensive but would be of interest to take into consideration in future studies. This would provide the study with a class perspective that may be a viable piece in explaining people’s attitudes towards immigration. Changes in asylum group size may not provoke changes in attitudes that are visible on a national level, but it may show visible changes within different groups in a society.

One of the limitations of the study is the lack of important factors as proxies for the national context. Previous research have used GDP (Quillian, 1995; Hjerm, 2007) as an indicator of country context. The immigrant group size influence people's attitudes more when it interacts with GDP (Quillian, 1995) and is also a strong explanatory factor in group threat theory. Desirable was to use include GDP together with unemployment rate as characteristics for our countries. Because GDP data for 2017 was not available by the time of writing we were not able to include GDP in our analysis. In addition to unemployment rate, GDP would have enabled us to distinguish between wealthier and
poorer EU countries and could further have explained the assumed feeling of competition over scarce resources between the natives and the asylum seeker group.

Overall, our results are in line with the majority of previous research, further strengthening the argument that it is not the numbers of immigrants that count for shaping people’s attitudes towards immigration (see e.g. Hjerm, 2007). Despite the previously mentioned methodological shortcomings, the novelty of this paper is that it examines the relation between asylum seeker group size and attitudes towards immigration in a context that is historically quite unique due to the sudden influx of asylum applicants. Nevertheless, the results should be read with great caution and further studies on the relationship between migration influx and attitudes toward immigration are encouraged.
7. Reference list


Hainmueller, Jens & Hiscox, Michael J. 2010 Attitudes toward Highly Skilled and Low-Skilled Immigration: Evidence from a Survey Experiment. *American Political Science Review.* 104:1, pp. 61-84.


## Appendix A. Number of asylum seekers and unemployment rate

### Table 1. Number of asylum seekers

<table>
<thead>
<tr>
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<td>54 705</td>
<td>37 760</td>
<td>18 810</td>
<td>13 265</td>
</tr>
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<td>10 820</td>
<td>27 000</td>
<td>17 860</td>
<td>8 285</td>
<td>8 985</td>
</tr>
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<td>7 235</td>
<td>11 910</td>
<td>9 415</td>
<td>11 545</td>
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</tr>
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<td>500</td>
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<td>695</td>
</tr>
<tr>
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<td>925</td>
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<td>1 315</td>
<td>1 425</td>
<td>2 030</td>
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<td>675</td>
<td>845</td>
<td>710</td>
<td>655</td>
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<td>11 135</td>
<td>2 190</td>
<td>1 475</td>
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<td>120</td>
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<td>44 100</td>
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<td>376 985</td>
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<tr>
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<td>6 750</td>
<td>11 780</td>
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<td>95 085</td>
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<td><strong>Total</strong></td>
<td><strong>339 945</strong></td>
<td><strong>408 040</strong></td>
<td><strong>781 385</strong></td>
<td><strong>699 235</strong></td>
<td><strong>691 075</strong></td>
<td><strong>366 605</strong></td>
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</table>

Source: Data from Eurostat. Asylum and first time asylum applicants by citizenship, age and sex. Monthly data (rounded).²

---

These numbers were added to the SPSS data. In order to make the numbers easier to interpret, the numbers of asylum seekers were split by a thousand. This was done by using the following syntax command:

`COMPUTE ASYLUM SEEKERS_1000=ASYLUM SEEKERS/1000.
EXECUTE.`

In order to use the data in the analysis we aggregated the material using the following syntax:

`AGGREGATE
/OUTFILE=* MODE=ADDVARIABLES OVERWRITEVARS=YES
/BREAK=country_new
/ASYLUM_MEAN=MEAN(ASYLUM SEEKERS_1000).
COMPUTE ASYLUM_LONG=ASYLUM SEEKERS_1000-ASYLUM_MEAN.
EXECUTE.`

In the models the variables are named ASYLUM_MEAN and ASYLUM_LONG.
Table 2. Quarterly unemployment rates

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<td>4.9</td>
<td>4.8</td>
<td>4.6</td>
<td>4.3</td>
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</tbody>
</table>

Source: Data from Eurostat. Unemployment by sex and age quarterly average. Unadjusted data (i.e. neither seasonally adjusted nor calendar adjusted data)³

These numbers were added to the SPSS data. The following syntax was used in order to aggregate the data:

AGGREGATE
/OUTFILE=* MODE=ADDVARIABLES OVERWRITEVARS=YES
/BREAK=country_new
/UNEMP_MEAN=MEAN(UNEMPLOYMENT).
COMPUTE UNEMP_LONG=UNEMPLOYMENT-UNEMP_MEAN.
EXECUTE.

In our multilevel analysis we are using the variables UNEMP_MEAN and UNEMP_LONG.
Appendix B. Individual variables

The Eurobarometer surveys that are used include data from six different rounds: November 2014, May 2015, November 2015, May 2016, November 2016 and May 2017. We used seven survey questions to capture individual traits of the participants. Presented below are the variable name, the survey question, the response alternatives and if and how the variable was recoded.

**Variable 1. Gender:** Man, woman.

**Variable 2. Age:** How old are you? (*Number of years*)


The responses of employment status were recoded into five categories: 1. Housekeeping, 2. In education, 3. Unemployed, 4. Retired and 5. Employed. The variable was coded as 1 being housekeeping, 2 being in education, 3 being unemployed and 5-18 being employed.

**Variable 4. Education level:** How old were you when you stopped full-time education? (*Number of years*).

This variable was recoded into a categorical variable with four categories. The variable was coded as 1 being missing/still studying, 2 being 20+, 3 being 16–19 and 4 being 2-15 years of education.

**Variable 5. Political affiliation:** In political matters people talk of "the left" and "the right". How would you place your views on this scale? *Left* 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 *Right*, *Refusal (Sp.)* 11, *DK* 11

**Variable 6. Living area:** Would you say you live in a…? 1. Rural area or village, 2. Small or middle sized town, 3. Large town, 8. *DK*.

**Variable 7. Migration background:** In order to capture if respondents were immigrants or natives in the country they live in, the data material was recoded by using the survey question

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Nationality and related it to a given country. By doing this a new variable was produced called migration background. This variable was coded $0 = \textit{no}$ and $1 = \textit{yes}$. 
Appendix C. Attitudes toward immigration for country over time

The orange bars show the number of asylum seekers for each time period when the survey was conducted. The blue line shows the changes in attitudes towards immigration between each measuring occasion. High values on the attitudinal scale indicate higher levels of anti-immigration attitudes.
Attitudes towards immigration from outside EU

Number of asylum seekers

Survey rounds

Bulgaria

Croatia

Number of asylum seekers

Survey rounds

Attitudes towards immigration from outside EU

Number of asylum seekers

Survey rounds

Attitudes towards immigration from outside EU
Attitudes towards immigration from outside EU

Cyprus

- Number of asylum seekers
- Attitudes towards immigration from outside EU

Czech Republic

- Number of asylum seekers
- Attitudes towards immigration from outside EU
Attitudes towards immigration from outside EU

**Denmark**

- Number of asylum seekers
- Anti-immigration attitudes

**Estonia**

- Number of asylum seekers
- Anti-immigration attitudes
Attitudes towards immigration from outside EU

### Finland

- **Number of asylum seekers**
- **Attitudes towards immigration from outside EU**

### France

- **Number of asylum seekers**
- **Attitudes towards immigration from outside EU**
Attitudes towards immigration from outside EU

Number of asylum seekers

Survey rounds

Germany

Attitudes towards immigration from outside EU

Number of asylum seekers

Survey rounds

Greece

Attitudes towards immigration from outside EU

Number of asylum seekers

Survey rounds
Attitudes towards immigration from outside the EU

**Hungary**

- Number of asylum seekers
- Anti-immigration attitudes

**Ireland**

- Number of asylum seekers
- Anti-immigration attitudes
Attitudes towards immigration from outside Eu

Number of asylum seekers

Survey rounds

Attitudes towards immigration from outside Eu

Number of asylum seekers

Survey rounds

Italy

Latvia
Malin Finell & Elin Åberg

![Graph of attitudes towards immigration from outside EU](image)

**Lithuania**

- Number of asylum seekers
- Anti-immigration attitudes

**Luxemburg**

- Number of asylum seekers
- Anti-immigration attitudes
Attitudes towards immigration from outside EU

Malta

Survey rounds

Number of asylum seekers

2014 nov 2015 may 2015 nov 2016 may 2016 nov 2017 may

Attitudes towards immigration from outside EU

Number of asylum seekers

Poland

Survey rounds

Number of asylum seekers

2014 nov 2015 may 2015 nov 2016 may 2016 nov 2017 may

Attitudes towards immigration from outside EU

Number of asylum seekers
Attitudes towards immigration from outside EU

Portugal

Romania

Number of asylum seekers

Survey rounds

Attitudes towards immigration from outside EU

Number of asylum seekers

Survey rounds

Number of asylum seekers

Survey rounds
Attitudes towards immigration from outside EU

Number of asylum seekers
Survey rounds

Spain

2014 nov 2015 may 2015 nov 2016 may 2016 nov 2017 may

2014 nov 2015 may 2015 nov 2016 may 2016 nov 2017 may

Number of asylum seekers
Survey rounds

Sweden

2014 nov 2015 may 2015 nov 2016 may 2016 nov 2017 may

2014 nov 2015 may 2015 nov 2016 may 2016 nov 2017 may

Number of asylum seekers
Survey rounds
Source: Eurobarometer, data on ‘attitudes towards immigration from outside EU’. Eurostat, asylum and first time asylum applicants by citizenship, age and sex. Monthly data (rounded).

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