How people perceive immigrants' role in their country's life: a comparative study of Estonia and Russia

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Abstract

The paper focuses on a comparative analysis of people's attitudes towards immigrants' role in several aspects of countries' life depending on the individual's socio-demographic and economic characteristics in Estonia and Russia. The empirical part of the paper relies on the European Social Survey (ESS) fifth round database. The results of the study show that the Estonian people's attitudes towards immigrants are, on the average, better in all aspects of the country's life – economy, culture and the country as a living place, compared to the Russian one. Both economic and non-economic factors explain the observed variation of individuals' opinions regarding the role of immigrants in a country's life. Ethnic minorities, religious people and people with higher income are more tolerant to immigrants in both countries. Socio-demographic characteristics such as age, gender and education are valid determinants of people's attitudes towards immigrants only in Estonia. Highly educated people have more positive attitudes towards immigrants compared to less educated people in Estonia but not in Russia. The results of the analysis therefore highlight the necessity to take different factors into account for the design of the migration and integration policies in the countries with ethnically diverse population.

Keywords: attitudes towards immigrants, European Social Survey, comparative analysis, Estonia, Russia

1. Introduction

Due to the increasing international mobility of people as well as to the diverse ethnic composition of population, the majority of countries are facing remarkable challenges for further development of their migration and integration

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policies. An ethnically and culturally diverse population creates a greater variability in the demand for goods and services, and also offers variability in the supply of labour through different skills and business cultures. Consequently, ethnically and culturally diverse countries have favourable preconditions for economic development. At the same time, there are also threats that several social and political tensions can increase between people with different cultural and ethnic backgrounds if integration policies are not sufficiently strong to alleviate or even avoid these tensions. As a consequence, the environment for business activities can worsen and people do not consider these countries sufficiently attractive for living and working. An analysis of people's attitudes towards immigrants is therefore valuable in order to develop proper migration and integration policies and thereby support economic development. This also explains why research interests in this field have grown remarkably during the recent decades at both the micro and macro levels (e.g. Espenshade and Hempstead, 1996; Husfeldt, 2004; O'Rourke and Sinnott, 2006, Facchini and Mayda, 2008; Hainmuller and Hiscox, 2010; Rustenbach, 2010; Andreescu, 2011; Facchini et al., 2013).

Less attention has so far been devoted to the comparative analysis of individuals' attitudes towards the role of immigrants in different fields of countries' life (such as the economy, culture and country as a living place) putting an emphasis on the country's specific conditions such as the size and ethnic composition of the population, immigrant patterns, path dependence, etc. In that sense, interesting cases for analysing people's attitudes towards immigration are provided by Estonia and Russia – two neighbouring countries with remarkably different sizes and ethnically diverse populations and also different political and economic development during the recent decades. The population of Estonia is around 1,3 million and Russia's of around 143 million. The share of minorities in the total population is remarkable in both countries – around 32% in Estonia and 19% in Russia (World Population Statistics, 2013; statistical authorities of Estonia and Russia, 2013). After regaining its independence in 1991, Estonian economic and political developments incrementally moved towards deeper European integration while Russia's development was mainly within the CIS (Commonwealth of Independent States) framework. These changes are also reflected in the composition of recent immigrants' flows.

The paper focuses on the comparative analysis of possible determinants of individuals' attitudes towards immigrants depending on their socio-demographic and economic characteristics (e.g. education, gender, age, income, labour market status, etc.) in Estonia and Russia. The main aim of the study is to find answers to whether both economic (e.g. income, labour market status) and non-economic (socio-demographic) factors can explain the variation of individuals' attitudes

towards immigrants and whether this variation is different in the case of the countries under investigation.

The empirical part of the paper relies on the European Social Survey (ESS) fifth round database. Ordered logit and OLS regressions are estimated in order to explore the main determinants of individuals' attitudes towards immigrants in Russia and Estonia. The attitudes towards immigrants are analysed by focusing on three aspects of a country's life: economy, culture and the country as a living place. To the best of our knowledge, this is so far the first paper where the comparative analysis of people' attitudes towards immigrants in small and large neighbouring countries with ethnically diverse populations, such as Estonia and Russia, is performed by taking into account the above mentioned three aspects.

In the next section of the paper, we provide a short overview of some theoretical considerations and previous empirical results in examining people's attitudes towards immigrants. The third section of the paper presents the data and methodology of the study. The fourth section presents the main results of the comparative analysis of people's attitudes towards immigrants in Estonia and Russia. The last section shortly concludes and discusses the study's main outcomes.

2. Framework for performing a comparative analysis of people's attitudes towards immigrants

The literature that explains the determinants of attitudes towards immigration is diverse and interdisciplinary (see overview of Rustenbach, 2010; Paas and Halapuu, 2012; Facchini et al., 2013, Halapuu et al., 2014). Generally, the theories can be divided into two groups – theories that use an economic perspective to describe the public attitudes towards immigrants and theories that use social and cultural positions to explain public attitudes. Relying on this distinction, the variation of an individual's opinions about the role of immigrants in countries' life is often empirically analysed by focusing on economic and non-economic drivers of individuals' opinion (Citrin et al., 1997; Bilal et al., 2003; Facchini et al., 2013). According to the first approach, public attitudes towards immigration are mostly determined by matters of economic self-interest, particularly by the situation in the labour market and welfare distribution. Dustmann et al. (2008, 2011, 2013) demonstrated that an increase in immigration flows does not always lead to a negative wage effect for native workers. This effect may be different for low and high-skilled groups of natives in the labour market. Facchini and Mayda (2012) found that, in countries where immigrants are more unskilled compared to natives, the individual income is negatively correlated with pro-immigration preferences, whereas the correlation changes sign in destinations characterised by skilled migration. Dustmann and Preston (2005, 2007) also revealed that welfare distribution plays a more

important role in determining attitudes towards immigration than labour market concerns. Facchini and Mayda (2009) combined labour market and welfare channels in one model and argued that educated natives are less likely to favour skilled immigration, whereas richer people are more likely to support immigration in accordance with the welfare state channel. Malchow-Moeller et al. (2006) emphasised the importance of economic self-interest in shaping people's attitudes towards immigration. Therefore, the above mentioned theoretical considerations and empirical proof stress the possible relationship between the individuals' attitudes towards immigrants and the economic environment of countries. The second approach relies on the integrated threat and social identity theories. According to the integrated threat theory (Stephan et al., 1999, 1998, 2000, 2005; Ward, 2006; Leong, 2008), the native population perceives four types of threats by immigrants: a realistic threat, a symbolic threat, intergroup anxiety, and negative stereotypes. A realistic threat focuses on competition for employment opportunities and limited resources, such as social welfare. Symbolic threats refer to differences in social, cultural, moral norms, customs, behaviour, and religious practices. The advantages of this theoretical approach and the special features of the instrumental model of group conflict used in the framework of this theory were highlighted by Ward (2006). The social identity theory (Esses, 2005, 2010; Tajfel, 1982; Tajfel and Turner, 1986) argues that people need to express their identities and that this affects people's participation in their in-group membership. Therefore, these considerations focus on the important role of non-economic factors in evolving individuals' attitudes towards immigrants.

Several scholars have empirically studied the factors of attitudes towards immigrants (e.g. Espenshade and Hempstead, 1996; Husfeldt, 2004; Card et al., 2005; Malchow-Moeller et al., 2006; Brenner and Fertig, 2006; O'Rourke and Sinnott, 2006; Müller and Silvio, 2010; Andreescu, 2011, Facchini et al., 2013). The results of the studies vary depending on several circumstances, including samples of countries and time periods under observation. The majority of studies show that respondents' age, education and economic conditions (income and labour market status) play a significant role in explaining individual attitudes (e.g. Card et al., 2005; Malchow-Moeller et al., 2006; Brenner and Fertig, 2006; Müller and Silvio, 2010; Paas and Halapuu, 2012). Card et al. (2005) revealed that older people perceive immigrants less favourably, finding "a strong correlation between higher education and more favourable views towards immigration". Malchow-Moeller et al. (2006) revealed a positive relationship between a respondent's level of education and his or her general attitude towards immigration. Brenner and Fertig (2006) discovered that not only the respondents' higher education but also the higher education of their parents positively affects respondents' attitudes towards foreigners. However, the influence of education may be more complicated due to several cultural and

other factors (Müller and Tai, 2010). Based on the conclusions of Facchini and Mayda (2009), the individual income is negatively correlated with attitudes toward immigration in countries where immigrants are more unskilled than natives, whereas the opposite is true in countries where immigrants are more skilled.

The results of the Rustenbach (2010) study, in which she tested several theoretical approaches explaining attitudes towards immigrants (e.g. cultural marginality theory, human capital theory, political affiliation, societal integration, neighbourhood safety, contact theory, economic approach), also underline the important role of a country's specific conditions in forming respondents' attitudes towards immigrants. A country's specific conditions that may form the respondents' attitudes towards immigration, beside their individual characteristics, can include the number of migrants in the country, the composition of the migrant group, country size, the historical and political background of the country (e.g. path dependence), the level of economic development (GDP per capita), etc.

Estonia and Russia, as countries with a post-socialist path, have different ethnic population compositions as well as somewhat different migration histories. In Estonia, the share of ethnic majorities is 68%; 26% of the Estonian population are Russians, 2% are Ukrainians, 1% Belarusians, 1% Finns and 2% other ethnic groups (Immigrant Population in Estonia 2009, p.13). The current minority population of Estonia has been formed as a result of compulsory work assignments and voluntary arrivals from the republics of the Soviet Union. The arrival of immigrant population from Soviet republics was developed under the centrally planned economy and was not caused by the natural development of the economy as in the majority of Western countries. The majority of this population has now become a stable population group with strong intentions to remain in Estonia in future. After the restoration of independence in 1991, the structure of the Estonian immigrant population as well as external migration trends have changed remarkably. Immigration has become more varied, with new countries of origin (Finland, Sweden, Latvia, etc.) (see also Krusell, 2009).

In Russia, ethnic Russians, as the majority population, account for 81% of the total population. In total, 160 different ethnic groups and indigenous peoples live within the Russian Federation's borders (World Population Statistics, 2013). Almost six million people (about 4% of the overall population) did not declare any ethnic origin in the Russian Federation's census of 2010. According to some evaluations, Russia is the second largest immigration country after the USA, having 180,000 migrants visit Russia every year. The number of unregistered migrants is estimated to be between three to four million (Banjanovic, 2007). Since 1990, migration contributed an increase of 4% to Russia's population, mainly due to the influx of ethnic Russian immigrants and refugees from other CIS (Commonwealth of Independent States) countries after the collapse of the

Soviet Union. In 2005, 95% of documented migrants came from other CIS countries. They are mainly Russians or Russian speakers repatriating from Kazakhstan (29.3%), Ukraine (17.4%), Uzbekistan (17.2%) and Kyrgyzstan (8.8%). Today, migration into Russia is dominated by migrant workers. As citizens of CIS countries can enter Russia without a visa, the majority of migrants do not have residential status or a working permit (ibid.).

3. Data and model specifications

In the next part of the paper, we perform a comparative analysis of peoples' attitudes towards immigrants in two neighbour countries, Estonia and Russia, which have different immigration patterns. Relying on the interdisciplinary framework of several theories explaining individuals' attitudes towards immigrants and the results of previous empirical studies that vary depending on several circumstances, we compose a set of explanatory variables that characterise respondents' socio-demographic and economic features considering them the possible determinant of people's attitudes towards immigrants. We are looking for answers to the questions whether first, both economic and non-economic factors can explain the variation in individuals' attitudes towards immigrants and second, whether the observed variations in individual's opinions vary depending on which aspects of the countries' life (economy, culture and country as a living place) the role of immigrants is analysed. We also study whether the results differ between the countries under investigation.

The empirical analysis is based on the European Social Survey (ESS) fifth round database. This is an academically driven survey designed to chart and explain the interaction between Europe's changing institutions and the attitudes, beliefs and behaviour patterns of its diverse populations. The ESS contains rich information on individual features such as age, sex, education, income, and other socio-demographic characteristics. The ESS also contains a series of questions regarding the attitude of individuals towards immigrants. We estimate separate regression models for both countries, Estonia and Russia, using ESS fifth round data.

People's attitudes towards immigrants are reflected by three questions about the role of immigrants in the country's economy, culture and country as a living place (Table 1). We used the answers to these questions as dependent variables in our regression models, implementing the corresponding abbreviations "*Economy*", "*Culture*" and "*Living_Place*". The set of explanatory variables includes the individual characteristics of the respondents: age (variable *age*), age squared (*agesq*), gender (*male*), income (*income*), education (variables *Ed_3*, *Ed_4*, *Ed_5*, *Ed_6*), labour market status (unemployment/employment; variable *unemployed)*, religiosity (*religiosity*), citizenship (*citizenship*), ethnic group (*minority*) (see Appendix 1). The variables about income and labour

market status are considered as economic factors and the others as non-economic factors.

The information about the results of the preliminary descriptive analysis of defined dependent variables – peoples' answers to the questions about several aspects of attitudes towards immigration and immigrants – are presented in Table 2. As we see from this table, peoples' attitudes towards immigrants are somewhat better in all aspects (economy, culture and country as a living place) in Estonia compared to Russia. The median of attitudes is 5 in all aspects in Estonia while in Russia the medians are 1–2 points lower. At the same time, the variability of attitudes measured by standard deviations is higher in Russia.

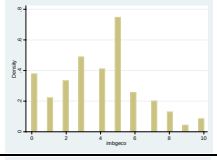
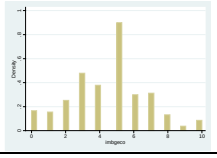
Table 1. Questions regarding respondents' attitudes towards immigrants – dependent variables

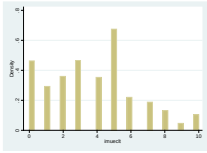
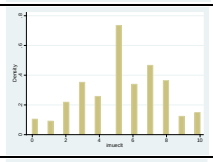
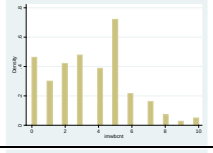
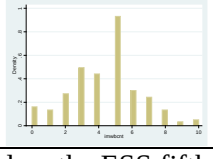
Variable	Corresponding question in the ESS	Values
im_Economy (imbgeco)	Immigration is bad or good for a country's economy	0 – bad for the economy, …, 10 – good for the economy
im_Culture (imueclt)	A country's cultural life is undermined or enriched by immigrants	0 – Cultural life undermined, …, 10 – Cultural life enriched
im_Living_Place (imwbcnt)	Immigrants make a country a worse or better place to live	0 – Worse place to live,…, 10 – Better place to live

Source: the ESS fifth round database

Remark: the abbreviations *imbgeco imueclt* and *imwbcnt* are used in the ESS for these questions.

Table 2. Descriptive statistics for the dependent variables - peoples' answers to the questions about several aspects of attitudes towards immigrants

Variable	Group of countries	Histogram	Mean	Std.Dev.	Median
Immigration is bad or good for a country's economy (0 – bad for the economy, 0…, 10 – good for the economy)	Russia *N* = 2595		3.93	2.44	4
	Estonia *N* = 1793		4.48	2.23	5

A country's cultural life is undermined or enriched by immigrants (0 – Cultural life undermined, …, 10 – Cultural life enriched)	Russia *N* = 2595		3.74	2.58	4
	Estonia *N* = 1793		5.34	2.4	5
Immigrants make a country a worse or better place to live (0 – Worse place to live, …, 10 – Better place to live)	Russia *N* = 2595		3.48	2.34	3
	Estonia *N* = 1793		4.37	2.1	5

Source: authors' calculations based on the ESS fifth round database

We also compared peoples' attitudes towards immigrants in Estonia and Russia with the respective average indicators of other European countries (Appendix 2). For that purpose, we have grouped European countries into three sub-groups: 1) the so-called "old" European countries or representatives of the EU-15 countries (Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Netherlands, Portugal, Spain, Sweden, UK); 2) the so-called "new" European countries or representatives of the EU-12 countries (EU new member states: Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Poland, Slovakia, Slovenia); 3) Russia and Ukraine (CIS countries). On the average, the attitudes towards immigrants in both Estonia and Russia are lower than in the EU-15 countries. In the case of Russia, they are also lower than in the EU-12 countries while in Estonia these attitudes are mainly at the same level in comparison with the EU-12 countries' average.

Taking into account the different post-Soviet development paths for Russia and Estonia, descriptive evidence and the results of previous studies, we formulated two main hypotheses for our empirical analysis:

- Hypothesis 1. The variation of individuals' attitudes towards immigrants can be explained by both economic and non-economic factors.
- Hypothesis 2. The inhabitants of Russia and Estonia have similar and different determinants in their attitudes towards immigrants.

To test these hypotheses, we estimate ordered logit models and for comparison also OLS models considering respondents' assessments (having the

values 0. 1, …, 10) of their attitudes towards immigrants as continuous variables in order to examine the relationship between several aspects of peoples' attitudes towards immigrants in both Estonia and Russia. We estimate both groups of models in order to test the stability of the results.

The ordered logit model is a regression model for an ordinal response variable. The model is based on the cumulative probabilities of the response variable (dependent variable): in particular, the logit of each cumulative probability is assumed to be a linear function of the covariates with regression coefficients constant across response categories. Questions relating to several aspects of attitude to immigrants are ordinal in nature, e.g. the answer to the question "Is *Immigration bad or good for a country's economy*" can range from 1 to 10, with 1 being very dissatisfied and 10 being very satisfied. Similarly, the questions "Is *A country's cultural life undermined or enriched by immigrants*" and "Do *Immigrants make a country a worse or a better place to live in* " can range from 1 to 10 (see Table 1).

The standard ordered logit model is as follows:

Let $-\infty = c_0 < c_1 < ... < c_{m-1} < c_m = \infty$ be a set of cut points on R,

$\{y_i = k\} \Leftrightarrow \{c_{k-1} < y_i^* < c_k\}$,

with y* the latent variable that is linearly dependent on the explanatory factors X.

Then, let

$$\Pr(y_i = k \mid x_i) = F(c_k - x_i\beta) - F(c_{k-1} - x_i\beta), \quad k = 1,..., m \qquad (1)$$

where F is a function of logistic distribution.

Vector β and cut points form a set of parameters to be estimated.

In selecting explanatory variables, we were guided by the existing database and the achievements of previous investigators (see also details in section 2).

More information about the dependent variables (respectively *Economy, Culture* and *Living_Place)* is presented in Table 1, and about the socio-demographic and economic characteristics of the respondents as explanatory variables in Appendix 1.

To test the robustness of our results, we estimated ordered probit models by using two types of coding of respondents' assessments models, having assessments from 0 to 10 as well as coding these assessments in three groups.[1]

[1] On the histogram in Table 2, it is easy to see that the majority of respondents chose answer 5 (neutral attitude towards immigrants), halfway between 0 (bad) and 10 (good). We recoded the original dependent variables in the following way. Let us demonstrate this with the variable Economyshort. This variable does not take eleven values, like the variable Economy, but three values. Economyshort = 1 represents a negative attitude toward immigrants (the corresponding values of the variable Economy are less than 5),

4. Empirical results

We estimated three types of regression models for Estonia and Russia by focusing on several aspects of people's attitudes towards immigrants: how people perceive the role of immigrants regarding the country's economy (dependent variable Economy); how people perceive the role of immigrants regarding the cultural life of a country (Culture); how people perceive the role of immigrants regarding the country as a place for living (Living_Place). The estimators of the linear models and two types of ordered logit models are presented in Appendices 3-5. All estimated models provide to a certain extent similar results. The interpretation of the results relies on both model specifications, linear models (estimated using OLS) and ordered logit models (estimated using Maximum Likelihood (ML) approach). In the case of linear models, we mainly rely on the signs and statistical significance of the regression parameters, in the case of ordered logit models – on the signs and significance of marginal effects of each variable (usually for the mean value of each variable). However, the signs and significance of the coefficients were similar for every variable in all estimated models (linear, ordered logit with 11 categories and ordered logit with 3 categories). Therefore, we can note their robustness, which is an important outcome for interpreting the obtained results.

A summary of similarities and differences in the determinants of the people's attitude towards immigrants in Russia and Estonia is presented in Table 3. Surprisingly, socio-demographic indicators such as age and gender do not play any significant role in peoples' attitudes towards immigrants in Russia. In the case of Estonia, older people found that the presence of immigrants made the country worse to live in. That can be partly explained by the historical path and rapid changes in the ethnic composition of the Estonian population after the Second World War.

People who have higher incomes believe that immigration is good for a country's economy in both Estonia and Russia. Estonian people who have a higher income also believe that immigrants can enrich a country's cultural life. The latter does not apply to Russia. As a rule, the labour market status does not have a statistically significant relationship with the attitudes towards immigrants in Estonia. Only in the case of Russia did unemployed people find that immigrants made the country a worse place to live in. This is consistent with the result of Facchini and Mayda (2009). Both in Estonia and Russia, we have a mix of skilled and unskilled immigrants and the attitude of natives towards those two groups of individuals may be different. Unfortunately, at the time of this study,

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Economyshort = 2 represents a neutral attitude toward immigrants (the corresponding value of the variable Economy is equal to 5), and Economyshort = 3 represents a positive attitude towards immigrants (the corresponding values of the variable Economy are more than 5). The variables Cultureshort and Living_Placeshort were created similarly.

correct data about skilled and unskilled immigrants was unavailable.

Surprisingly, higher education improves attitudes towards immigrants in Estonia but does not have any statistically significant relationship to attitudes towards immigrants in Russia. This may also be partly due to the fact that Estonian students are more mobile, being awarded more scholarships to the universities abroad. Well qualified Estonian people also have plenty of experience working abroad and particularly in Finland, its neighbour country.

Table 3. Similarities and differences in the determinants of peoples' attitudes towards immigrants in Estonia and Russia

Similarities	Differences
- In both Russia and Estonia, the higher income people have, the better the attitudes towards immigrants are in relation to immigrants' role in countries' economies. - In both Russia and Estonia, the more religious an individual is, the better his or her attitude is towards immigrants. - National minorities in Russia and Estonia estimate the cultural and general contribution of migrants higher compared to majorities. In sum, ethnic minorities and religious people are more tolerant to immigrants. People with a higher income believe that immigrants support their countries' economies in both Russia and Estonia.	- In Russia, the unemployed believe that migrants make the country less pleasant to live in. That is not valid in the case of Estonia. - In Estonia, people with higher incomes have better attitudes towards immigrants in relation to immigrants' role in countries' cultural life; in Russia, this does not apply. In Estonia, people with high education levels estimate the role of immigrants to their country's economic, cultural and general life higher. This does not apply in the case of Russia. - In Russia, people having the country's citizenship evaluate the contribution of immigrants to the economy, culture and country as a living place negatively. In Estonia, the same situation is statistically valid only with the general attitude (Living Place) towards immigrants. - With age, the attitude of Estonian people towards immigrants worsens, the attitude of Russian people does not depend on age. In sum, socio-demographic (excluding citizenship) characteristics and education are valid determinants of peoples' attitudes towards immigrants only in the case of Estonia. Unemployed people are less tolerant towards immigrants in Russia by only taking into account the country as a living place.

Source: authors' considerations based on the ESS fifth round database.

In conclusion, the results of the empirical analysis confirm our research hypotheses. Both economic and non-economic factors can explain the variation in individuals' attitudes towards immigrants and the observed variation of

individual's opinions vary depending on which aspects of a country's life (economy, culture and country as a living place) the role of immigrants is analysed. The results also show that there are remarkable differences in the variation of individuals' attitudes towards immigrants and the factors explaining this variation between Estonia and Russia. This can be explained by several reasons, e.g. the different composition of immigrant population in these two countries, the different political and economic development and the European integration of the countries, etc.

The results of the study can provide valuable information to policy makers and civil servants in both countries in order to elaborate and implement measures that can support the integration of people with different ethnical background and cross-border mobility experience. A further package of measures should include the creation of supportive conditions for the improvement of human capital as well as reflecting positive images of multicultural activities in the media by taking into account the socio-demographic composition of the countries' population. The results of the study also indicate that the improvement of economic situation in a country can create supportive conditions for the improvement of attitudes towards immigrants.

5. Conclusion and discussion

Both Estonia and Russia have negative demographic trends and a large share of minority population. However, immigrant patterns and the historical and political background of their formulation are remarkably different in these two countries. These differences can also create a different environment for creating people's attitudes towards immigrants. Relying on the results of the empirical analysis that was based on the European Social Survey fifth round database, we show that the Estonian people's attitudes towards immigrants are, according to the median indicators, better in all aspects of the assessed attitudes (economy, culture and country as a living place) compared to Russia, being at the same level as the EU-12 medians. The results of the study also show that these attitudes are lower in all analysed aspects in Estonia and Russia compared to the "old" European countries (EU-15), indicating that these two countries still have room for further development of their migration and integration policies.

In order to examine possible determinants that can explain the observed variation in peoples' attitudes towards immigrants, we estimated several regression models (ordered logit models with different cutting points, OLS regressions). The estimation results are stable regarding the chosen model and method. We confirmed the research hypotheses that both economic and non-economic factors can explain the variation in individuals' attitudes towards immigrants and the observed variation of individual's opinions vary depending on which aspects of a country's life (economy, culture and country as a living place) the role of immigrants is analysed. There are some similarities and

differences in peoples' attitudes towards immigrants between Russia and Estonia which are summarised in Table 3. Therefore, our second hypothesis was also confirmed.

The results of the study show that ethnic minorities as well as religious people are generally more tolerant towards immigrants in both countries. Socio-demographic characteristics such as age, gender and education are valid determinants of peoples' attitudes towards immigrants only in Estonia. Surprisingly, better education improves attitudes towards immigrants in Estonia but does not have any statistically significant relationship to the attitudes towards immigrants in all monitored aspects – economy, culture and country as a living place – in Russia. At the same time, people who have a higher income believe that immigration is good for the country's economy in both Estonia and Russia. Estonian people who have a higher income also believe that immigrants can enrich the country's cultural life. The latter is not true in the case of Russia. The labour market status does not have a statistically significant relationship with the attitudes towards immigrants in Estonia, in general. Only in the case of Russia, did unemployed people find that immigrants made the country a worse place to live in.

Of course, the study has some limitations that have to be taken into account by further analyses of determinants of peoples' attitudes towards immigrants and of possible consequences of migration processes in several countries. For instance, presumably, not all respondents similarly perceive the concepts related to immigrants and several aspects of immigration. Some respondents may consider all ethnic minorities of a country to be immigrants. This can depend on the share of immigrants and/or ethnic minorities in the total population of a country and also on the society's path dependence. A different understanding of the concept "immigrant" may also somewhat reflect in individuals' attitudes towards immigrants and, as a consequence, in the variability of the attitudes' determinants between the countries.

In sum, the results of our analysis therefore highlight the importance of different factors for the design of migration and integration policies in Russia and Estonia. Taking into account that, in both countries, the attitudes towards immigrants are still below the levels of more advanced European economies, these countries have to constantly put an emphasis on the profound monitoring of the determinants of these attitudes by considering them in elaborating proper policy measures.

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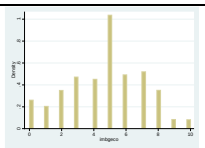
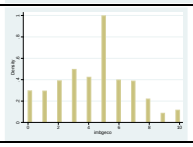
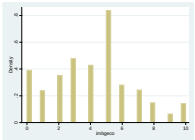
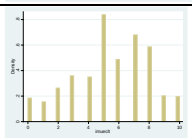
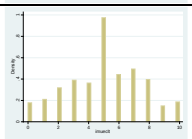
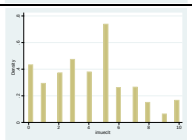
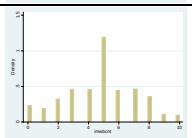
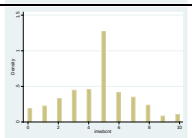
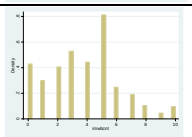
Appendix 1. Characteristics of respondents - explanatory variables of the estimated regression models

Variable	Abbreviation	Description	Values
Age	*Age*	Age of respondent	Continuous variable
Age squared	*agesq*	Non-linear relation	Continuous variable
Male	*Male*	Sex of respondent	1 in case of male, 0 in case of female
Income	*Income*	Income scale	1 - low, …, 10 - high
Labour market status	*Unemployed*	Indicator of unemployment status	1 for unemployed, 0 for other individuals
Education Level 3	*Ed_3*	Lower tier upper secondary, upper tier upper secondary	1 - Yes, 0 – No
Education Level 4	*Ed_4*	Advanced vocational, sub-degree	1 - Yes, 0 – No
Education Level 5	*Ed_5*	Lower tertiary education, BA level	1 - Yes, 0 – No
Education Level 6	*Ed_6*	Higher tertiary education, >= MA level	1 - Yes, 0 – No
Religiousness	*Religiousness*	How religious are you?	0 - not at all, …, 10 – very
Citizenship	*Citizenship*	Citizen of country	1 - Yes, 0 – No
Minority	*Minority*	Belong to the minority ethnic group in the country	1 - Yes, 0 – No

Appendix 2. Descriptive statistics of peoples' attitudes towards immigrants expressed by the respondents' answers to the questions about their opinion about immigration and immigrants in European country groups

Variable	Group of countries	Histogram	Mean	Std.Dev.	Median
Immigration is bad or good for a country's economy (0 - bad for the economy,…, 10 - good for the economy)	"Old" European countries (belonging to the EU-15 group)		4.71	2.36	5
	"New" European countries (belonging to the EU-12 group)		4.39	2.45	5

	Russia and Ukraine		4.12	2.55	4
A country's cultural life is undermined or enriched by immigrants (0 - Cultural life undermined, …, 10 - Cultural life enriched)	"Old" European countries (belonging to the EU-15 group)		5.46	2.5	5
	"New" European countries (belonging to the EU-12 group)		5.07	2.5	5
	Russia and Ukraine		4.04	2.67	4
Immigrants make a country a worse or better place to live (0 - Worse place to live, …, 10 - Better place to live)	"Old" European countries (belonging to the EU-15 group)		4.78	2.32	5
	"New" European countries (belonging to the EU-12 group)		4.63	2.26	5
	Russia and Ukraine		3.76	2.43	4

Source: Authors' calculations based on the ESS fifth round database.

Appendix 3. Results of models estimation with the dependent variable *Economy* (robust standard errors in brackets)

Type of the model	**OLS regression**	**OLS regression**	**Ordered logit with 11 categories**	**Ordered logit with 11 categories**	**Ordered logit with 3 categories**	**Ordered logit with 3 categories**
Country	**Russia**	**Estonia**	**Russia**	**Estonia**	**Russia**	**Estonia**
Age	-0.0264	-0.0143	-0.0190	-0.00958	-0.0169	0.00354
	(0.0191)	(0.0181)	(0.0141)	(0.0158)	(0.0149)	(0.0172)
Agesq	0.000254	-7.55e-05	0.000179	-0.000102	0.000189	-0.000243
	(0.000204)	(0.000181)	(0.000153)	(0.000159)	(0.000157)	(0.000175)
Male	0.0776	0.0831	0.0425	0.0848	0.106	0.132
	(0.119)	(0.117)	(0.0861)	(0.102)	(0.0956)	(0.109)
Income	0.0555**	0.0618***	0.0394**	0.0458**	0.0353**	0.0364*
	(0.0217)	(0.0237)	(0.0155)	(0.0206)	(0.0178)	(0.0219)
Unemployed	-0.152	-0.124	-0.105	-0.170	-0.176	-0.295**
	(0.132)	(0.132)	(0.0942)	(0.116)	(0.108)	(0.122)
Ed3	0.124	0.0781	0.0963	0.0246	0.0305	-0.0210
	(0.214)	(0.165)	(0.166)	(0.144)	(0.160)	(0.150)
Ed4	0.107	0.345*	0.0876	0.265	0.0130	0.157
	(0.229)	(0.194)	(0.177)	(0.170)	(0.172)	(0.181)
Ed5	0.605	0.865***	0.532	0.775***	0.527	0.834***
	(0.600)	(0.221)	(0.460)	(0.196)	(0.555)	(0.213)
Ed6	0.167	0.881***	0.146	0.763***	0.0450	0.691***
	(0.227)	(0.210)	(0.174)	(0.185)	(0.172)	(0.191)
Religiosity	0.0803***	0.0796***	0.0591***	0.0692***	0.0483***	0.0724***
	(0.0222)	(0.0212)	(0.0166)	(0.0183)	(0.0172)	(0.0190)
Citizenship	-3.184***	-0.205	-2.283***	-0.184	-3.034***	-0.193
	(0.586)	(0.232)	(0.462)	(0.196)	(1.016)	(0.168)
Minority	0.115	0.333	0.122	0.297	0.176	0.362**
	(0.160)	(0.218)	(0.118)	(0.187)	(0.128)	(0.170)
Const	6.917***	4.614***				
	(0.730)	(0.457)				
C1			-4.239***	-3.356***	-2.640**	-0.257
			(0.564)	(0.413)	(1.085)	(0.405)
C2			-3.651***	-2.605***	-1.599	1.098***
			(0.561)	(0.398)	(1.085)	(0.406)
C3			-3.064***	-1.870***		
			(0.560)	(0.394)		
C4			-2.401***	-0.973**		
			(0.559)	(0.388)		
C5			-1.880***	-0.412		
			(0.558)	(0.386)		
C6			-0.840	0.937**		
			(0.557)	(0.387)		
C7			-0.303	1.536***		
			(0.559)	(0.389)		

C8			0.364	2.547***		
			(0.557)	(0.400)		
C9			1.115**	3.388***		
			(0.558)	(0.410)		
C10			1.635***	3.787***		
			(0.569)	(0.425)		
Number of						
Observations	1,919	1,431	1,919	1,431	1,919	1,431
R2	0.022	0.096				

Note: *** significant at 1%, ** significant at 5%, * significant at 10%,
Source: authors' calculations based on the ESS fifth round data

Appendix 4. Results of models estimation with the dependent variable *Culture* (robust standard errors in brackets)

Type of model	**OLS regression**	**OLS regression**	**Ordered logit with 11 categories**	**Ordered logit with 11 categories**	**Ordered logit with 3 categories**	**Ordered logit with 3 categories**
Country	**Russia**	**Estonia**	**Russia**	**Estonia**	**Russia**	**Estonia**
Age	-0.0350*	-0.0301	-0.0213	-0.0203	-0.0197	-0.0141
	(0.0202)	(0.0197)	(0.0140)	(0.0151)	(0.0149)	(0.0160)
Agesq	0.000302	8.19e-05	0.000163	3.88e-05	0.000157	-1.65e-05
	(0.000213)	(0.000197)	(0.000149)	(0.000152)	(0.000155)	(0.000161)
Male	-0.00276	-0.319**	-0.00155	-0.237**	-0.0155	-0.225**
	(0.124)	(0.132)	(0.0853)	(0.104)	(0.0959)	(0.108)
Income	-0.00376	0.0473*	-0.00362	0.0379*	-0.0130	0.0366*
	(0.0224)	(0.0266)	(0.0154)	(0.0200)	(0.0177)	(0.0209)
Unemployed	-0.172	0.0186	-0.119	0.0290	-0.137	0.0334
	(0.137)	(0.148)	(0.0945)	(0.114)	(0.108)	(0.118)
Ed3	0.0847	0.174	0.0576	0.123	0.0294	0.108
	(0.211)	(0.185)	(0.150)	(0.140)	(0.155)	(0.146)
Ed4	0.0690	0.330	0.0422	0.237	0.00826	0.216
	(0.226)	(0.220)	(0.161)	(0.167)	(0.170)	(0.174)
Ed5	0.240	0.487*	-0.0301	0.404**	-0.466	0.410**
	(0.767)	(0.249)	(0.460)	(0.195)	(0.732)	(0.203)
Ed6	0.0774	0.686***	0.0583	0.551***	0.0182	0.506***
	(0.228)	(0.236)	(0.162)	(0.179)	(0.171)	(0.191)
Religiosity	0.0796***	0.0666***	0.0634***	0.0525***	0.0635***	0.0574***
	(0.0236)	(0.0228)	(0.0169)	(0.0178)	(0.0180)	(0.0186)
Citizenship	-1.956***	-0.356	-1.164***	-0.262	-1.336***	-0.0735
	(0.628)	(0.239)	(0.389)	(0.186)	(0.454)	(0.177)
Minority	0.451***	0.552**	0.326***	0.440**	0.379***	0.410**
	(0.170)	(0.228)	(0.118)	(0.175)	(0.127)	(0.179)
Const	6.103***	6.184***				
	(0.775)	(0.487)				
C1			-3.284***	-4.142***	-1.230**	-1.015***
			(0.502)	(0.382)	(0.579)	(0.391)

C2			-2.634***	-3.398***	-0.222	-0.0260
			(0.499)	(0.376)	(0.581)	(0.390)
C3			-2.078***	-2.517***		
			(0.499)	(0.367)		
C4			-1.481***	-1.765***		
			(0.497)	(0.364)		
C5			-1.039**	-1.337***		
			(0.497)	(0.365)		
C6			-0.0305	-0.348		
			(0.499)	(0.365)		
C7			0.431	0.117		
			(0.500)	(0.365)		
C8			1.017**	0.919**		
			(0.502)	(0.365)		
C9			1.739***	2.015***		
			(0.513)	(0.375)		
C10			2.216***	2.699***		
			(0.524)	(0.384)		
Number of						
Observations	1,959	1,436	1,959	1,436	1,959	1,436
R2	0.0194	0.0685				

Note: *** significant at 1%, ** significant at 5%, * significant at 10%,
Source: authors' calculations based on the ESS fifth round data

Appendix 5. Results of models estimation with the dependent variable *Living_Place* (standard errors in brackets)

Type of model	**Linear**	**Linear**	**Ordered logit with 11 categories**	**Ordered logit with 11 categories**	**Ordered logit with 3 categories**	**Ordered logit with 3 categories**
Country	**Russia**	**Estonia**	**Russia**	**Estonia**	**Russia**	**Estonia**
Age	-0.0195	-0.0444***	-0.00870	-0.0478***	-0.00803	-0.0480***
	(0.0186)	(0.0164)	(0.0143)	(0.0150)	(0.0154)	(0.0164)
Agesq	0.000150	0.000113	3.53e-05	0.000173	5.68e-05	0.000168
	(0.000199)	(0.000165)	(0.000154)	(0.000150)	(0.000160)	(0.000166)
Male	0.147	-0.180	0.0945	-0.185*	0.159	-0.135
	(0.113)	(0.110)	(0.0857)	(0.102)	(0.0991)	(0.110)
Income	0.0324	0.00802	0.0253	0.00353	0.0237	-0.00343
	(0.0206)	(0.0223)	(0.0154)	(0.0204)	(0.0185)	(0.0215)
Unemployed	-0.366***	-0.0346	-0.277***	0.0314	-0.342***	0.0260
	(0.123)	(0.124)	(0.0921)	(0.114)	(0.115)	(0.119)
Ed3	0.0187	0.118	0.0123	0.113	-0.0264	0.155
	(0.199)	(0.157)	(0.153)	(0.138)	(0.160)	(0.153)
Ed4	0.00815	0.0243	-0.00110	0.0423	-0.131	0.0899
	(0.211)	(0.184)	(0.160)	(0.161)	(0.174)	(0.174)
Ed5	0.632	0.338*	0.482	0.365**	0.381	0.416**

	(0.593)	(0.201)	(0.457)	(0.186)	(0.573)	(0.198)
Ed6	-0.0436	0.369*	-0.0300	0.435**	-0.153	0.533***
	(0.211)	(0.198)	(0.161)	(0.177)	(0.174)	(0.197)
Religiosity	0.101***	0.0881***	0.0807***	0.0825***	0.0831***	0.0851***
	(0.0209)	(0.0199)	(0.0164)	(0.0186)	(0.0181)	(0.0191)
Citizenship	-1.318***	-0.522**	-0.923***	-0.407**	-0.977***	-0.380**
	(0.267)	(0.220)	(0.221)	(0.190)	(0.283)	(0.180)
Minority	0.319**	0.701***	0.260**	0.664***	0.220*	0.643***
	(0.151)	(0.195)	(0.114)	(0.175)	(0.128)	(0.173)
Const	4.641***	6.231***				
	(0.494)	(0.430)				
C1			-2.603***	-4.964***	-0.223	-1.866***
			(0.398)	(0.408)	(0.466)	(0.413)
C2			-1.931***	-4.289***	0.934**	-0.449
			(0.394)	(0.402)	(0.467)	(0.408)
C3			-1.274***	-3.468***		
			(0.392)	(0.395)		
C4			-0.666*	-2.556***		
			(0.391)	(0.387)		
C5			-0.185	-1.896***		
			(0.390)	(0.385)		
C6			0.971**	-0.481		
			(0.392)	(0.380)		
C7			1.582***	0.189		
			(0.396)	(0.383)		
C8			2.338***	1.071***		
			(0.403)	(0.392)		
C9			3.057***	2.003***		
			(0.426)	(0.412)		
C10			3.600***	2.575***		
			(0.445)	(0.428)		
Number of						
Observations	1,951	1,420	1,951	1,420	1,951	1,420
R2	0.027	0.130				

Note: *** significant at 1%, ** significant at 5%, * significant at 10%,
Source: authors' calculations based on the ESS fifth round data