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DYNAMICS OF EDUCATIONAL DIFFERENCES IN EMIGRATION FROM ESTONIA TO THE OLD EU MEMBER STATES

Kristi Anniste, Tiit Tammaru, Enel Pungas, and Tiiu Paas

University of Tartu

Abstract. This study examines the changes in emigration from Estonia, focusing on differences in the level of education of migrants, shedding more light on East-West migration, in particular the migration of skilled labour. We used anonymous individual-level data for all emigrants from the register-based Estonian Emigration Database compiled by Statistics Estonia for the period 2000–2008. The analysis shows that Estonia suffered no significant loss of skilled labour from Estonia during this period. There is also evidence that emigration has spread into a wider range of population groups, including the less educated, since Estonia joined the European Union in 2004.

Keywords: education, emigration, East-West migration. Estonia

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1. Introduction

East-West migration became a mass phenomenon in Europe in the period from around the fall of the Berlin Wall in 1989 to the collapse of the Soviet Union in 1991 (Mansoor and Quillin 2007, Massey and Taylor 2004, Okólski 2004). Emigration from Central and Eastern European countries accelerated after the enlargement of the European Union (EU) in 2004 and 2007 (Kahanec et al. 2010). Wealth differentials between Eastern and Western Europe, and improved access to the labour markets of the old member states (EU-15[1]) for citizens of Central and Eastern European (CEE) countries are considered to be the most important catalysts for migration within Europe, bringing about losses of skilled workers in

[1] European Union member states before the accession of ten candidate countries on 1 May 2004: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

countries of origin, and gains in skilled workers in destination countries (Castles and Miller 2009, Bonifazi et al. 2008, Favell 2008). There are different conceptualizations of what constitutes the group of skilled migrants, but the most common and accessible approach to studying this is to focus on the university-educated people (Gibson and McKenzie 2011a, 2011b).

Most of the research on the East-West migration in Europe has focused on the effects of emigration *per se* on the origin and destination countries and their labour markets. Comparatively little is known about the composition of migrant populations, especially how it has changed over the time. The aim of the study reported herein was to investigate differences in the composition of Estonian emigrants, with respect to their level of education, before and after EU enlargement. Barriers to emigration are usually greater for the less educated; EU enlargement reduced such barriers significantly. This makes the topic of differences in the composition of migrants with respect to their level of education in the context of East-West migration in Europe especially relevant. The Estonian case is interesting for studying the relationship between emigration and education for two reasons. First, Estonia has experienced significant emigration since 1991, as have most other countries of Eastern Europe (Tammaru et al. 2010). Second, Estonia has performed better in economic terms than many other new member states.[2] This may offer more career opportunities for the highly educated (Hazans and Philips 2010). In order to shed new light on differences with respect to education in East-West migration, our study on Estonian emigration sought to answer two main research questions:

- Are people with a university degree over-represented among emigrants from Estonia?
- Are people with lower levels of education increasing their share among emigrants from Estonia after it joined the EU in 2004?

Data for the study was drawn from the Estonian Emigration Database compiled by Statistics Estonia. One of the problems in studies of East-West migration in Europe relates to the poor quality of the available data, especially the fact that people who migrate abroad do not register their departure in the country of origin (de Beer et al. 2010). Such under-registration of emigration is also a problem in Estonia (Anniste 2009). However, Estonian data has some characteristics that increase its reliability, despite the fact that not all migrants register their departure in Estonia when leaving the country. Most important in this regard is the fact that Estonia and Finland exchange information stored in their population registers on a regular basis, because Finland is the main destination country of Estonian migrants. Data exchange with Finland has thus significantly improved the quality of emigration statistics in Estonia; people who settle for longer than one year in Finland are accorded emigrant status in the Population Register of Estonia

[2] *Eurostat*. Available online at <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsieb020>. Accessed on 30.09.2011.

(Anniste 2009). The Estonian data thus allows us to shed new light on the nature of the changes that have occurred in East-West migration in Europe since 2000.

2. Review of the literature on education and East-West migration in Europe

Wealth differences, the removal of restrictions on free movement of labour, reduced costs for transport and communications (including the expansion of budget airlines), the expansion of formal and informal labour recruitment networks, and initiatives by governments and employers to recruit labour into specific economic sectors have resulted in an increase and diversification of international migrant flows in Europe (Krings 2009, Salt 2008, Massey and Taylor 2004, Okólski 2004). Large-scale emigration has become a major concern, both in Estonia and in CEE countries in general (Estonian Human Development Report 2011, Kahanec et al. 2010). Yet there is a lack of knowledge about the exact composition of migrants, and how it has changed over time. For example, it is not well documented which population groups benefit the most from policies that encourage a free labour market within Europe. Less than adequate knowledge about the extent and dynamics of emigration has led to migration-related concerns in both European origin and destination countries. In origin countries, the major concern relates to losing the highly educated (Guth and Gill 2009, Favell 2008). In destination countries, the major concern relates to the downward pressure on wages as a result of an inflow of cheap labour from Eastern Europe (Krings 2009, Borjas 2003, Boeri and Brücker 2001). In order to study the effects of migration in the countries involved, we need to know more about the educational composition of migrants.

Previous research has shown that migrants from CEE countries are generally well-educated (Olofsson and Malmberg 2011, Krišjāne et al. 2009, Kępińska 2007). For example, in both Latvia and Poland, the proportion of emigrants who attended university is higher than in the overall population of those countries (Krišjāne et al. 2009, Kępińska 2007). The study by Olofsson and Malmberg (2011) also shows that 43 percent of immigrants from the former Soviet republics (except for the three Baltic countries of Estonia, Latvia and Lithuania) to Sweden have at least a Bachelor's degree. The emigration of the better educated has been related to the need for highly educated professionals in Western Europe, for instance, in sectors such as medicine and information and communication technology. Borjas (1999) and Dumont et al. (2005) suggest that the increasing demand for highly educated workers is worldwide. Wealthier countries are often being more successful in attracting them, resulting in an inflow of highly educated migrants also from Eastern to Western Europe. This category of people has more social capital, better language skills, and access to information, and are better able to finance a move, which makes them more mobile (Poot et al. 2008). It should be noted, however, that the majority of East-West migrants do low-paid jobs in the

service and manufacturing sectors in Western Europe (Ciupijus 2011, Cook et al. 2011, Pollard et al. 2008).

There are no studies based on large-scale national micro data that focus explicitly on changes in the educational composition of emigrants among new member states before and after their accession to the EU. However, the barriers for migration from Eastern to Western Europe have changed significantly over the past 20 years, especially for countries that have become EU members states, so changes in emigration by education can be expected as well. The mechanism could be as follows. Although restrictions on emigration from Eastern Europe were eased significantly after the fall of the Berlin Wall and dissolution of the Soviet Union, in the 1990s, the right to move within Europe was separated from the right to work (Ciupijus 2011). The gradual opening of the labour market of the old EU member states to the people living in the new EU member states has thus been a very important step in removing restrictions on the free movement of labour within EU. For example, the number of migrants in Ireland from the new member states who moved to Ireland (which did not impose restrictions and opened its labour market to citizens of the accession countries in May 2004) grew from around 10,000 in 2002 to 120,000 in 2006 (Barrett 2009). Higher barriers to migration generally work against more disadvantaged population groups, including people with lower levels of education (Wickramasekara 2008), so the lowering of such barriers could facilitate their mobility relative to people with higher levels of education.

3. Main features of Estonian emigration since 1991

Estonia was a country of immigration during the Soviet period (1944-1991), but similarly to many other CEE countries it became a country of emigration after regaining its independence in 1991 (Statistics Estonia 2011, Tammaru and Kulu 2003, Katus and Sakkeus 1993) (Figure 1). Emigration principally took the form of return migration of Russians and other nations of the Soviet Union back to their homelands in the 1990s; emigration to Western Europe was modest at that time. From the very beginning of the 1990s, the neighbouring country Finland became the main destination country for westward migration from Estonia. Emigration from Estonia to the old EU member states increased in the 2000s compared to the 1990s. Yet emigration to the main destination country, Finland, has remained the same. Being both geographically and linguistically close to Estonia, it is the most attractive choice for Estonian emigrants. As very few immigrants from other CEE countries move to this country, Estonians have become the largest new immigrant group in Finland (Statistics Finland 2011).

However, some important changes in emigration took place during the 2000s as well. Statistics Estonia (2011) reveals that there was a continued increase in the number of emigrants in 2000–2004, followed by a rapid growth in emigration in 2005 or immediately after Estonia joined the EU (Figure 2). After EU enlargement in 2004, the EU-15 countries became increasingly attractive destinations for

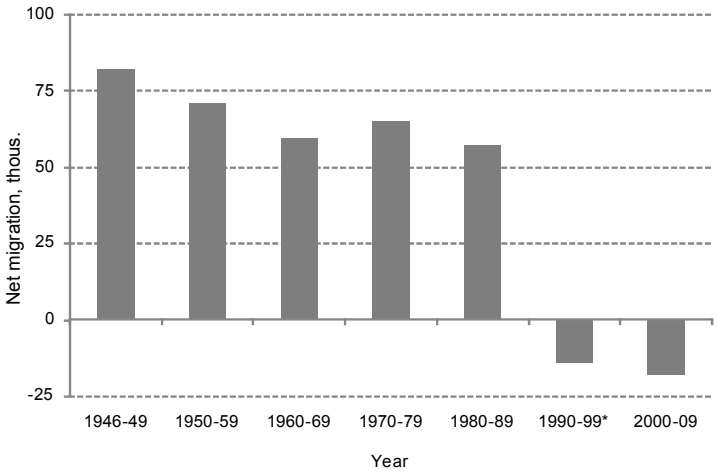

Figure 1. Net migration in Estonia, 1946–2009.

* Without the return migration of the Russian-speaking minority population from Estonia to their homelands that took place during the very beginning of the 1990s, after Estonia regained her independence.

Sources: Katus and Sakkeus; Tammaru and Kulu; Statistics Estonia 2011.

emigrants from all new member states (Krišjāne et al. 2009, Thaut 2009, Kępińska 2007, Fihel et al. 2006). Estonia was no exception in this regard. For example, emigration from Estonia to Ireland and the UK (countries that, along with Sweden, opened their labour markets to the nationals of ten new member states in 2004) increased more than eightfold and emigration to Finland increased more than fivefold from 2000 to 2008, whereas emigration to the US and Canada decreased by 1.8 and 2.5 times, respectively (Figure 3).

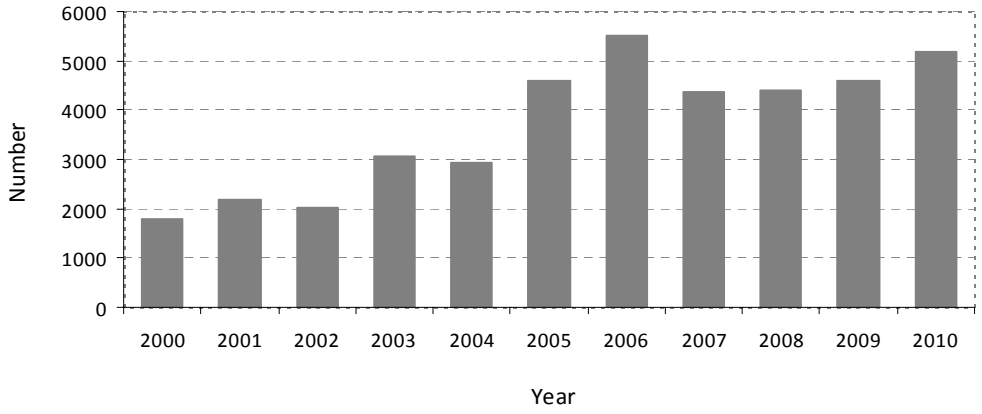

Figure 2. Emigration from Estonia, 2000–2010.
Source: Statistics Estonia 2011.

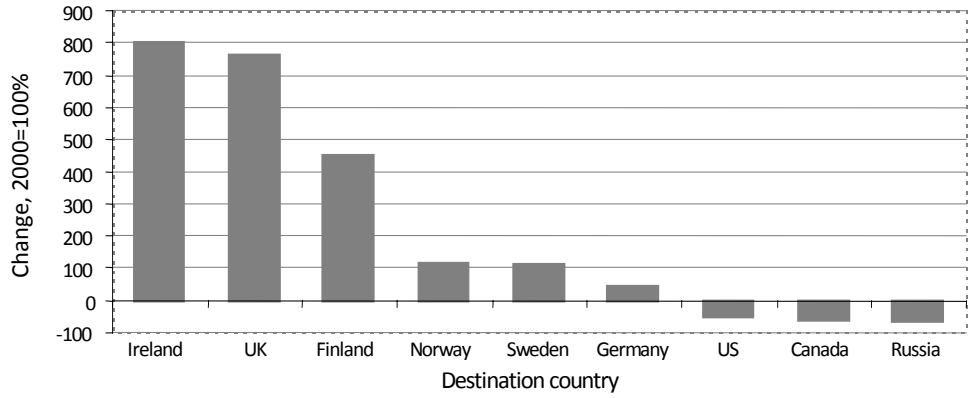

Figure 3. Change in number of emigrants by destinations between 2000 and 2008.
Source: EED.

4. Research data

Data for the current study comes from Statistics Estonia. The raw data is stored in the Estonian Population Register, but Statistics Estonia cleans the data and completes the database with information from other sources, such as the Citizenship and Migration Board. We use anonymous individual-level extraction of all emigrants from Estonia between 2000 and 2008, and refer to this data as the Estonian Emigration Database (EED). The database contains only the migrants who did not return to Estonia within one year after emigration, providing information on 29,377 individuals. We restrict our research population to emigrants who 1) were aged 20 or over at the time of emigration, and 2) left Estonia to EU-15 countries in 2000–2008, i.e. to 19,018 individuals. This data allows us to compare changes in the origins, destinations, and composition of the migrant population over time. The EED contains the date of migration, last place of residence in Estonia at municipal level, country of destination, gender, age, ethnicity, and level of education. Knowing the last municipality of residence allows us to construct several place-specific variables, such as the local level of unemployment. Municipalities are quite small in Estonia, with an average population of 5,905 inhabitants. In consequence, municipality-level variables depict the immediate living environment fairly accurately.

Yet data in the EED are not without limitations. First, EED does not allow us to analyse Estonian emigration before 2000. Second, data in the EED is incomplete because migrants, especially older people, do not always register their departure in Estonia when moving to another country (Herm et al. 2005, Sjöberg and Tammaru 1999), a problem that is common in most emigration countries (de Beer et al. 2010). However, a regular data exchange takes place between Estonia and her main destination country, Finland. Finland has a reliable Population Register and such data exchange thus significantly improves the emigration data quality of Estonia as well.

The third limitation of the data relates to the time of emigration. The time when data is entered into the Population Register does not necessarily reflect the time of emigration (Herm et al. 2005). An individual can report departure to a foreign country while still in Estonia or when already in the destination country. As a result, determining the exact moment of the move is often difficult. For example, some intervening moves could precede final settlement in a new country. Alternatively, people might intend to move to another country temporarily, but could later decide to migrate permanently, for instance, if they found a partner or suitable job that tied them to that country. The higher share of circular migration in East-West migration in Europe compared to global South-North migration (Castles and Miller 2009) makes it even more complicated to determine the exact timing of the migration events. Typically, the date of actual migration takes place before the date of registration of the move. For example, many people register their move only when they renew or change documents, legalize their work or when their children start school. This need to contact the authorities in their new homeland helps to mitigate against the problem of under-registration of moves.

The fourth limitation relates to the fact that data on the level of education is incomplete in the Estonian Population Register (and other Estonian registers). This carries on to the EED, where the level of education is missing for 20 percent of emigrants. Unfortunately, there is no analysis of the reasons for these missing values. However, at the broadest level, we suggest two likely explanations for why some people do not have a specified level of education in Estonian registers. These explanations are not mutually exclusive. First, the level of education is unknown for many people who completed their education during the Soviet period since the variable for education has been specified retrospectively and it makes sense to suppose that values are missing because the people who specified them retrospectively did not have access to the appropriate information. Second, even in the period covered by the EED, the level of education of younger people who have not completed their studies is not recorded; only the level of those who have completed their studies is recorded, whether at school or university level. People dropping out of school has been an important problem in Estonia during the last two decades (for example, 1 percent of pupil dropouts annually between grades 7–9 (Mündi 2006)), and the level of education of school dropouts is not recorded. The exact distribution of people who fall under these two explanations is not known. However, there is certainly no reason to expect that the university-educated are overrepresented in this category of people. In fact, given that the level of education of the Estonian population has increased considerably since the Soviet period (Paulus 2004) there is a strong reason to expect that the less educated rather than better educated are over-represented. Despite such quality-related concerns, the individual-level EED database still enables us to shed new light on East-West migration in Europe, especially since Estonia enjoys data exchange with its main destination country, Finland.

5. Descriptive analysis: emigration from Estonia since 2000

We start our empirical analysis by comparing the characteristics of emigrants, in particular their level of education, with those of the total population living in Estonia at the time of the 2000 census date. The 2000 census still provides the most comprehensive picture of the composition of the Estonian population. Since data in the EED start from the 2000 census, the year 2000 is also an appropriate reference for studying the selectivity of emigration in the 2000s. It appears that emigrants are significantly younger and somewhat less educated than the population as a whole (Table 1). The proportion of emigrants with a lower level of education is bigger for 2004–2008 than for 2000–2003 (Table 1). The EED also clearly shows that the proportion of university-educated people in the emigrant population is much less than in the total Estonian population and that the propor-

Table 1. Characteristics of Estonian emigrants and total population (%)

Variables	Label	Emigrants 2000–2003	Emigrants 2004–2008	Emigrants 2000–2008	Total population 2000
Dependent	Period of emigration	21	79	100	
Personal attributes	Education				
	Primary	15	26	24	27
	Secondary	51	50	50	55
	Tertiary	10	5	6	15
	Unknown	24	18	20	0
	Gender				
	Male	40	45	44	44
	Female	60	55	56	56
	Age				
	20-29	27	34	32	19
	30-39	29	29	29	18
	40-49	22	22	22	19
	50-59	11	10	10	16
	60+	12	4	6	28
	Ethnicity				
	Estonian	52	72	67	66
	Russian	18	13	14	27
	Other	20	9	12	6
	Unknown	10	6	7	1
Attributes of origin	Origin				
	City	67	56	58	61
	Hinterland	15	17	17	14
	Periphery	18	28	26	25
	Unemployment				
	Low	68	68	68	65
	High	32	32	32	35
Attributes of destination country	Destination country				
	Finland	75	82	81	
	Other	25	18	19	

Sources: EED, Census 2000.

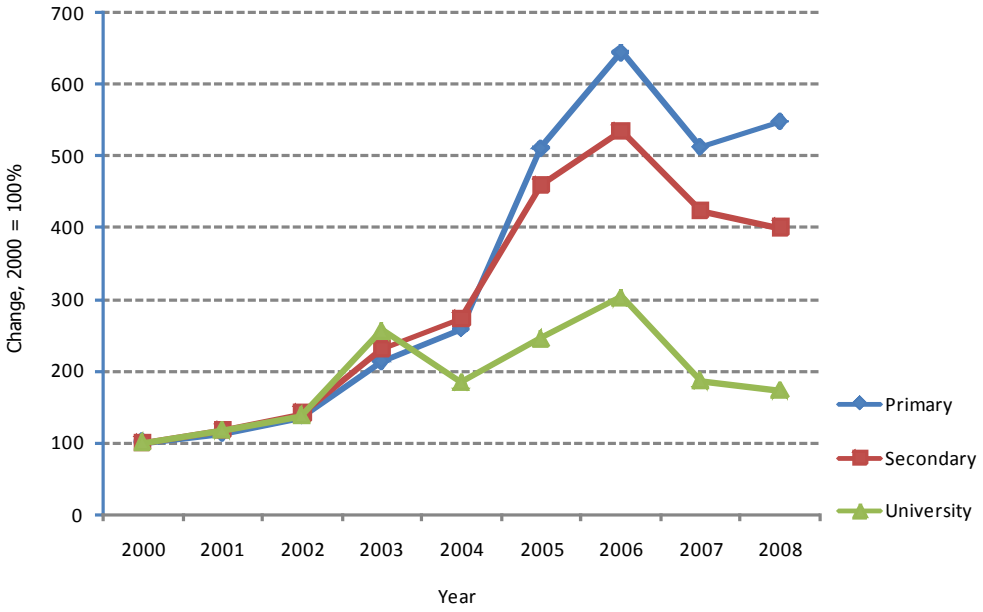

Figure 4. Changes in the number of emigrants by level of education between 2000 and 2008, 2000 = 100%.
Source: EED.

tion of emigrants who are highly educated has further decreased since Estonia joined the EU.[3] A closer look at the emigration dynamics by education in the 2000s reveals that the percentage of emigrants with no university degree increased significantly just after Estonia joined the EU in 2004

6. Specification of logistic regression models

We proceed by applying a series of logistic regression models to the EED data in order to clarify the changes in the composition of emigrants from Estonia to the old EU member states before and after joining the EU in 2004. We use logistic regression because it is well suited for modelling dichotomous outcomes, thereby allowing us to analyse and control for the effect of several categorical and linear variables to the target variable. The main focus of the data analysis is on changes in the educational composition of emigrants since EU enlargement and we are interested whether the results obtained in the preceding section persist in a multivariate research setting. The full regression model can be written as follows:

[3] As noted in the "Research Data" section, there are no reasons to believe that the university-educated are over-represented in the category of people whose level of education is not specified.

$$\log \frac{p(Y_i = 1)}{1-p(Y_i = 1)} = \alpha + \sum_{k=1}^{K} \beta_k X_{ik}$$

where $p(Y_i = 1)$ is an individual's $i = 1, \ldots I$ probability of migrating from Estonia to the EU-15 member states between 2004 and 2008; $1-p(Y_i = 1)$ is an individual's $i = 1, \ldots I$ probability of migrating from Estonia to the EU-15 member states between 2000 and 2003; α is a constant; X_{ik} is the value of the variable for an individual; and β_k is the parameter that describes the effect of this variable, with K variables. We estimate three regression equations, adding new variables step-wise into the models.

Model 1 includes only the level of education, because this is the variable of the main interest for the study. In Model 2, we add other personal variables, municipality of origin, and characteristics of the destination country, to control for whether the initial relationship between education and migration following enlargement of the EU that was found in the baseline model is affected by other differences in the composition of the group of emigrants before and after Estonia joined the EU. First, we control for the standard personal variables of gender and age. Next, we control for ethnicity, because Estonia has a high ethnic minority population (one third of the total population) and Table 1 and previous studies showed that the ethnic composition of emigrants varies over time (Hughes 2005). We also control for variables of place of origin in our regression model. In the 2000s, international mobility became an important alternative to emigration to rural areas. The labour market opportunities are worse and the share of better educated people is smaller in rural areas than in urban areas (Statistics Estonia 2011), so we control for rural/urban residence in our regression models. Then we introduce the destination country (Finland/Other) into Model 2, to control for possible effects introduced by the data exchange between Estonian and Finnish population registers. In Model 3, we test for interaction effects.

7. Results of logistic regression

Next, we report the results of the logistic regression that compares the composition of emigrants before (2000–2003) and after (2004–2008) Estonia joined the EU. Model 1 includes education only, and shows that the odds for lower-educated migrants are greater in the post-accession emigration group. After joining the EU, people with primary education have 1.8 times higher odds to be an emigrant than people with secondary education, while people with university education have half the odds to be an emigrant as people with secondary education (Table 2, Model 1). The results for education are robust and remain unchanged after adding individual-level control variables, variables characterizing places of origin, and destination country variables (Table 2, Model 2). In short, the frequency of less-educated migrants has increased since EU enlargement.

Table 2. Changes in the propensity of emigrating from Estonia since joining the EU (odds ratios, 0 = emigrant 2000–2003, 1 = emigrant 2004–2008)

Independent variables		Model 1	Model 2	Model 3
		Exp(B)	Exp(B)	Exp(B)
Personal attributes	Education			
	Primary	1,734 ***	1,709 ***	1,714 ***
	Secondary	1	1	1
	Tertiary	0,497 ***	0,598 ***	0,526 ***
	Unknown	0,805 ***	0,876 **	0,867 **
	Gender			
	Male		1	1
	Female		0,946	0,951
	Age			
	20-29		1	1
	30-39		0,961	0,975
	40-49		0,987	0,998
	50-59		1,021	1,032
	60+		0,467 ***	0,493 ***
	Ethnicity			
	Estonian		1	1
	Russian		0,629 ***	0,585 ***
	Other		0,427 ***	0,436 ***
	Unknown		0,648 ***	0,693 ***
Attributes of origin	Origin			
	City		1	1
	Hinterland		1,114 **	1,115 **
	Periphery		1,381 ***	1,381 ***
Attributes of destination country	Destination country			
	Finland		1,270 ***	1,283 ***
	Other		1	1
Interaction	Education by Ethnicity[1]			
	Primary by Russian			1,412 **
	Tertiary by Russian			1,326 *
	Unknown by Russian			0,924
	-2 Log likelihood	19439,694	18727,867	18704,678

* Significant at 10% level; ** Significant at 5% level; *** Significant at 1% level.

[1] Interactions 'Education by Other (ethnicity)' and 'Education by Unknown (ethnicity)' have also been controlled.

Source: EED.

We discuss briefly the results for other variables (Table 2, Model 2). Differences in emigration with respect to sex and age before and after EU accession are mainly insignificant, but the chances of being an emigrant are smaller among the oldest (60+) age group since 2004. Emigration has spread down the urban hierarchy, as the probability of living in the geographically peripheral rural areas of the country has increased during the post-EU accession period. We did not detect any interaction effect between level of education and place of residence in urban or rural areas before emigration.

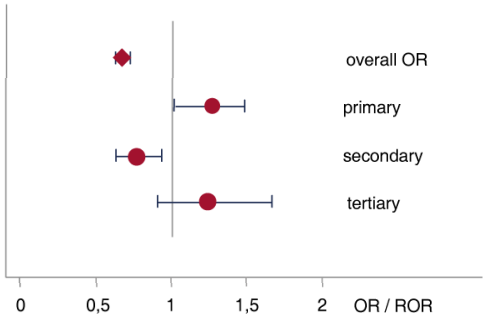

Figure 5. Forest plot for interaction of education with Russian ethnicity.
Source: EED.

The results for other variables are the most interesting with respect to ethnicity. The odds of an emigrant being an ethnic Estonian have increased since 2004, i.e. post-accession. One reason for this change in the ethnic composition of the emigrant population could be related to the high share of Russian minorities who do not have Estonian citizenship. There are around 100,000 residents with undefined citizenship who can travel within the Schengen zone without a visa, but who need to apply for a work or residence permit if they wish to stay for more than 90 days, or to work or to study in any other EU member state.[4] Therefore, the policies of free movement of labour do not pertain to all the workers of Estonia: ethnic minorities have restricted access to labour markets in the EU-15 countries. We also find significant interaction effects between the level of education and ethnicity (Table 2, Model 3). Figure 5 shows that since 2004, both lower educated and highly educated Russians have higher odds to emigrate than Russians with secondary education. This phenomenon seems to suggest that well-educated ethnic minorities do not enjoy equal opportunities for good careers in Estonia with Estonians, which is in line with the results of research that shows that a 'glass ceiling' effect has emerged for ethnic minorities, in the Estonian labour market (Lindemann and Saar 2008). This glass ceiling could motivate some members of ethnic minority groups to pursue their careers abroad. The less-educated ethnic minorities who receive the lowest salaries in the Estonian labour market (Toomet 2011) could, similarly to less-educated Estonians, also find better-paying labour markets in Western Europe much more attractive than Estonia.

[4] *Estonian Ministry of the Interior*. Available online at <http://www.siseministeerium.ee/ siseministeerium-kutsub-maaratlemata-kodakondsusega-inimesi-eesti-kodakondsust-taotlema/?highlight=kodakondsuseta>. Accessed on 30.09.2011.

8. Conclusion and discussion

We analyzed changes in the level of education of Estonian emigrants in the 2000s, focusing on changes before and after accession to the EU in 2004. We gained new insight into the migration of skilled labour between East and West. Firstly, emigration has increased overall since Estonia joined the EU. This is similar to East-West migration in general (Kahanec et al. 2010, Castles and Miller 2009, Favell 2008). Secondly, the proportion of university-educated people in the emigrant population is much less than in the total Estonian population before and after Estonia joined the EU. This is different from many other countries involved in the East-West migration in Europe, including the territories of the former Soviet Union (Olofsson and Malmberg 2011, Krišjāne et al. 2009, Kępińska 2007). Thirdly, and most importantly, the share of the university-educated has decreased over time among Estonian emigrants. We further find that the increase of emigration in the 2000s was also due to the growing number of rural inhabitants among emigrants.

Accession to the EU and the parallel global economic boom of the middle of the 2000s are probably the most important factors that shaped changes in Estonian emigration during our study period, 2000–2008. First, emigration increased significantly after Estonia joined the EU. While emigration to Finland has been an important feature of Estonian emigration throughout the 2000s, departure for more distant countries, especially to the UK and Ireland, has increased significantly since accession to the EU. Similar increases in emigration and the increased attraction of the UK and Ireland has been observed in other countries that joined the EU in 2004 (Castles and Miller 2009, Drinkwater et al. 2009). People face several obstacles when they wish to migrate to another country and the barriers are higher for lower-educated and other disadvantaged people (Wickramasekara 2008). Although barriers to migration from Eastern to Western Europe were eased significantly after the fall of the Berlin Wall and the dissolution of the Soviet Union, obtaining a job in Western Europe was more difficult (Ciupijus 2011). Accession to the EU and the opening of the labour markets have thus been the final steps in removing restrictions from the free movement of labour within the EU. The results of our research suggest that these events were more important for more disadvantaged workers in the labour market, such as the lower-educated and rural inhabitants, and that in consequence, emigration has increased in those population groups as well. The parallel development of budget airlines in Europe further lowered the barriers to emigration for those with lower financial resources (Batnitzky et al. 2012). To limit the outflow of the valuable workforce, the policies of the origin countries also need to target the more disadvantaged workers in the labour market, for example, by offering them retraining prospects, second-chance education etc.

To sum up, Estonia is suffering no considerable loss of skilled labour. This finding coincides with the research results of Hazans and Philips (2010), who found that brain drain was not a feature of post-accession Baltic migration. Yet our study also provides evidence that the share of the university-educated among emigrants decreased during the 2000s.

These findings call for further cross-national studies that focus more explicitly on the effect of the origin country on the level of education of emigrants, and to present more evidence on emigration trends by education over time. Future research should therefore attempt to clarify (1) whether a similar spread of emigration to the lower educated is common in Eastern Europe, (2) whether the Eastern European countries with worse macroeconomic environment than Estonia's experience a greater proportion of emigration among highly educated people, and (3) whether the Eastern European countries with better macroeconomic environments provided better career opportunities for their highly qualified residents, thereby reducing their motivation to emigrate and work in jobs that are often below their qualification level. If the latter is true, it would have an important implication for policy, in that supporting reform in origin countries would be an important means of reducing emigration of the highly skilled from CEE countries. Another hypothesis that warrants investigation is that the size of the economy affects the level of migration of highly educated people. Countries with small populations, such as Estonia and the other Baltic countries of Latvia and Lithuania, need proportionally more highly educated civil servants and other professionals and working in such an environment may provide such individuals with more challenges and opportunities. It is therefore likely that well-qualified people in such countries might decide to stay and work in their own country, despite the availability of higher salaries abroad.

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Addresses:
Kristi Anniste
Department of Geography
University of Tartu
Vanemuise 46
51014 Tartu, Estonia
Tel.: +372 555 46846
E-mail: kristi.anniste@ut.ee

Tiit Tammaru
Department of Geography
University of Tartu
Vanemuise 46
51014 Tartu, Estonia

Enel Pungas
Department of Geography
University of Tartu
Vanemuise 46
51014 Tartu, Estonia

Tiiu Paas
Faculty of Economics and Business Administration
University of Tartu
Narva mnt 4
51009 Tartu, Estonia

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