

**ARE BETTER EDUCATED MIGRANTS RETURNING? EVIDENCE FROM
MULTIDIMENSIONAL EDUCATION DATA**

Enel Pungas* (enel.pungas@ut.ee)

Ott Toomet^{#,*},[§] (otoomet@gmail.com)

Tiit Tammaru* (tiit.tammaru@ut.ee)

* Department of Geography, University of Tartu

Vanemuise 46, Tartu 51014, Estonia

Faculty of Economics, University of Tartu

Narva mnt 4, Tartu 51009, Estonia

[§]Corresponding author.

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Abstract

This study examines the relationship between migrants' education and their intentions to return. Previous research has presented mixed evidence on the association between the level of education and return migration. This study takes a multidimensional approach by analyzing, aside from the level of education, the type and country of education and over-education as predictors of intentions to return based on a unique survey of Estonian migrants in Finland. The results indicate that the level of education is not related to the tendency to return. The most important education variable that shapes return migration is over-education – migrants who work below their training express higher intentions to return back home. We also find some evidence that education obtained in the host country improves the socialization prospects later on.

Keywords: Education, return migration, East-West migration, Estonia, Finland

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Introduction

Highly skilled workers are key drivers in the contemporary knowledge-based economy with destination countries making increasing efforts to attract immigrants from this group, while emigration countries are equally attempting to encourage them to move back home. Perhaps the most easily accessible variable, describing “skills”, is education¹. Previous research on the relationship between the level of education and return migration has presented mixed evidence. Based on Swedish data, Nekby (2006) found that returning emigrants have higher levels of education compared to those who stay, i.e. the initial “brain drain” could become a “brain gain” for the source country. Jensen and Pedersen (2007) obtained a similar result for all immigrants leaving Denmark, but their findings were less straightforward by source country groups. In contrast, Dustmann (1996; 2003) found that there was a negative effect of years of schooling on the intention of immigrants living in Germany to return to their home countries. These ambiguous results call for a more comprehensive treatment of education together with an analysis on the association between skills and return migration behavior.

Several existing studies indicate that other dimensions of education are also helping to shape return migration. First, studying in a foreign country is a quickly growing phenomenon around the world (Appave, 2010; Boyle *et al.*, 1998; Globerman and Shapiro, 2008). The education obtained abroad helps migrants to establish themselves in the labor market of the host country, but it may be highly valued in the origin country as well, facilitating return migration. For example, the study by Bijwaard (2010) shows that most foreign students return to their homeland upon graduating from host country universities. Second, previous research has established that many immigrants do not find a job to match their level of education (Hardy, 2010), which potentially increases their willingness to return. Analogous behavior may be observed when many immigrants focus on earning the

¹In the literature, high skills levels are usually treated synonymously with high levels of education. Below, we follow this tradition.

best possible income instead of finding a job that corresponds to their qualification (Drinkwater *et al.*, 2009; Trevena, 2011).

This study complements previous research by examining the relationship between education and return migration in more than one dimension. In addition to education level, we include the type of education, education obtained in the destination country (skill improvement) and the mismatch between level of education and job (over-education or deskilling) in the analysis.

We also contribute to the literature on East-West migration where the issues of “brain drain”, “brain waste” and “brain gain” are widely discussed, since the proportion of highly educated emigrants from the new member states is clearly above that of those who remain (Kahanec *et al.*, 2009; Olofsson and Malmberg, 2010). Compared to global South-North migration, another important feature of East-West migration in Europe relates to its temporary character (Castles and Miller 2009; Dustmann, 2000; Dustmann and Weiss, 2007). For example, data for the UK and Ireland suggest that around half of the Eastern European labor migrants in the UK have left the country within five years (European Commission, 2008). Mayr and Peri (2010) have recently suggested that Eastern European countries could gain from current emigration in the long run through return migration. But there are no studies that explicitly focus on the relationship between education and return migration in an East-West context.

We use a unique dataset on the intentions for return migration among Estonian immigrants living in Finland. The case of Estonian migrants in Finland is illuminating for two reasons. First, it presents evidence from a high emigration country: Estonia belongs to a group of high mobility new EU member states (Karppinen *et al.*, 2006; Katseli *et al.*, 2006; Vandenbrande *et al.*, 2008). The main destination country for Estonian emigration is Finland (Tammaru *et al.*, 2010). Second, return migration back to Estonia is widespread. According to the latest European Social Survey (2008), eight percent of the adult population of Estonia has worked for at least six months abroad, which is one of the highest rates in Europe.

Education and Return Migration: Literature Review

There is a broad consensus that human capital, including a highly skilled workforce, is a crucial factor behind economic development. This leads countries to compete more and more for highly skilled migrants (Beine *et al.*, 1999; Appave, 2010; De Haas, 2010; Jakoby, 2011). However, previous research does not indicate a straightforward relationship between economic development and the migration of highly skilled workforce in either destination or origin countries. The potential positive and negative effects for destination countries have been summarized by Regets (2007). On the positive side, high-skilled immigration brings more human resources for research and development, enhances the knowledge base and ties with foreign research institutions, develops export technology, and increases enrollment in graduate programs due to the spread of knowledge intensive industries. The negative effects include increased competition in the best universities for nationals, which may decrease rather than increase the incentives to improve their skills. Language and culture-related barriers may render knowledge spillovers inefficient between highly skilled nationals and the immigrant workforce.

The emigration of highly skilled individuals may also help or hamper development in the source countries. The negative effects are obvious; for example, the loss of highly skilled labor reduces economic competitiveness and productivity falls among those left behind. The economy also loses the investments made for the schooling of those who leave (Ozden and Schiff, 2006; Thaut, 2009). However, recent studies increasingly highlight the positive aspects of emigration for sending countries (Bauer *et al.*, 2001; 2005; Dustmann and Kirchkamp, 2002; Lowell and Findlay, 2002; Stark 2004; Stark and Fan, 2007; Mayr and Peri, 2010). Emigration relieves pressure on the labor market at a time of economic recession, and it improves the career prospects for those left behind (Pocius, 2002). Emigration may also increase employers' incentives to invest into new technology, and it may foster domestic enrollment in higher education (Mountford, 1997; Stark *et al.*, 1997; Vidal, 1998; Beine *et al.*, 2001). Potentially, the most important positive effects of emigration are through the return of highly skilled migrants; those people bring back additional knowledge, skills

and contacts that have been acquired abroad (Dustmann and Kirchkamp, 2002; Stark and Fan, 2007). In a theoretical framework, Mayr and Peri (2010) demonstrate the positive effect of emigration and return migration on the human capital formation in Eastern European countries in the long run, allowing those countries to turn the initial “brain drain” into a significant “brain gain”.

For these gains to materialize, the high-skilled emigrants have to return. An extensive literature analyses the relationship between the level of education and return migration with mixed results. Studies by DaVanzo and Morrison (1981; 1982) on long-distance migrants within the US observed that those who return (in particular early returners) have somewhat lower education levels compared to those who stayed. In a similar way, Mexican migrants, returning from the US, are less educated than those who remain in the US (Reyes, 1997; Massey and Espinoza, 1997; Curran and Rivero-Fuentes 2003). Such results are often interpreted as return migration being a corrective move resulting from the initial “failed migration”, where lower educated migrants are less successful and therefore more likely to return (DaVanzo and Morrison, 1981; 1982; Massey and Espinoza, 1997).

Other studies have presented different results: either no significant association between the level of education and return migration (Miller, 1977; Long, 1988; Adams, 1993; Newbold and Liaw, 1995) or reporting a positive relationship (Reicher, 2001; Constant and Massey, 2003; Nekby, 2006; Dustmann and Weiss, 2007; King and Newbold, 2008; Bijwaard, 2010). For example, the analysis by King and Newbold (2008) shows that a bachelor’s degree increasingly predicts return migration in Canada. According to Borjas and Bratsberg (1996) model, such results indicate that better educated and more highly skilled migrants are attracted by better labor market opportunities in their homeland after acquiring work experience abroad.

Not only the level of education *per se* but also other aspects of education are important from the perspective of return migration. In particular, studying abroad is viewed as an important human capital investment among migrants, as it could potentially bring higher returns in the origin rather than the destination country (Dustmann, 1996; Dustmann and Glitz, 2011). Most students return to

their homeland after obtaining their degree. For example, research by Bijwaard (2010: 1231) showed that only 20% of foreign students remained in the Netherlands upon completing their studies. Nekby (2006: 207–208), based on detailed Swedish registry data, adds that the higher the degree obtained in the destination country, the higher the probability to return. The higher rates of return migration among better educated migrants have been explained by several factors (OECD, 1997; Mahroum, 1999; King and Newbold, 2008). Most importantly, countries and companies constantly compete with each other in order to attract highly skilled workers, and people with better skills are therefore also in high demand in origin countries. Following the Borjas and Bratsberg (1996) model, moving back to one's homeland after studies indicates that improvement of education abroad could be highly valued in countries of origin. Likewise, better educated people often do not restrict their careers to a particular country, and frequently move house internationally in order to take an advantage of the best job offers available.

While studying abroad improves skills, which is potentially beneficial in both the origin and destination countries, the opposite phenomenon of “brain waste” is also observed (Hardy, 2010; Kahanec *et al.*, 2009). For example, many better educated workers moving from East to West Europe accept jobs that are below their level of qualification (Dustmann *et al.*, 2007; Drinkwater *et al.*, 2009; Trevena, 2011). Better educated migrants downgrade into less skilled occupations for two reasons – first, incomplete transferability of skills between countries (Kahanec *et al.*, 2009), and second, migrants often move to a foreign country temporarily in order to increase their lifetime wealth (by working temporarily in a higher wage labor market) and consumption (by taking advantage of low costs in their homeland). The second strategy implies that part of the migrant population does not prioritize a good match between their qualification and actual job while working abroad (Djajic, 1989; Dustmann and Weiss, 2007; King *et al.*, 2008; Dustmann and Glitz, 2011). The downside of such a myopic focus on earnings gains is the resultant deskilling of immigrants (Anderson *et al.*, 2006; Hardy, 2010). In conclusion, previous research suggests that the decisions to stay or to return to one's homeland are not only closely related to the level and type of

education but also to the valuation of different type of skills in different countries and the mismatch between education and job (over-education). To our knowledge, no previous studies have explicitly addressed all these dimensions in association with return migration.

Estonian Migrants in Finland: Background

Estonia and Finland are neighboring countries on the east coast of the Baltic Sea, separated only by the Gulf of Finland. Before World War II, both countries generally shared an equal standard of living and despite language similarities (Estonian and Finnish belong to the same language group) there was not much migration between the two, at that time largely agricultural countries. After the war, Estonia became part of the Soviet Union. Its sealed borders made emigration all but impossible, despite an increasingly widening gap between its standards of living and civil liberties and those of West European countries, including Finland. At the same time, Estonia experienced substantial immigration from other parts of the Soviet Union, mainly from Russia.

In early 1990s, after the collapse of Soviet Union, Estonia became a country of emigration as relocation to the West European countries eased. At the same time, a substantial number of recent immigrants returned back to Russia and other locations in the former Soviet Union, while Finland became the main destination of choice for westward migrants (Tammaru *et al.*, 2010). Due to the extremely restrictive emigration policy of Soviet Union, there was almost no previous Estonian diaspora in Finland. At the beginning of 2011, however, its total size amounted to 29,080 (Taskutiето, 2011), making it the second largest Estonian diaspora after Russia (Tammaru *et al.*, 2010). Emigrants from Estonia to Finland are ethnically and linguistically diverse, including ethnic Estonians, Russians and Ingrian Finns (people with Finnish ancestry living in the former Soviet Union, see Kyntäjä, 1997; Liebkind *et al.*, 2004).

The formation of the Estonian diaspora in Finland took place in two waves in the 1990s and 2000s. As with East-West migration elsewhere in Europe, the first peak of emigration occurred at the beginning of the 1990s (Figure 1). This migration was directly influenced by the changing polit-

ical order in Europe (Castles and Miller, 2009) and contained many migrants of Finnish origin (Ingrian Finns). The other peak is related to EU enlargement in 2004 and the migration flow has been increasing ever since, possibly due to the global economic recession, which hit Estonia especially hard. According to Statistics Finland, the total number of migrants from Estonia to Finland was 34,100 between 1991 and 2009,² while 8,200 individuals, about 1 in 4, returned during the same period. The Estonians in Finland are rather well integrated in general; however, several studies suggest a certain tension between the new country environment and transnational lifestyles maintained by (at least some) migrants (Kyntäjä, 1997; Liebkind *et al.*, 2004; Kyntäjä, 2005; Jasinskaja-Lahti and Liebkind, 2005; Jasinskaja-Lahti, 2008).

FIGURE 1 ABOUT HERE

Data and Method

The data originates from a representative survey conducted in spring 2009 of Estonian immigrants living permanently in Finland. A random sample of 1,000 individuals was drawn from the Finnish Population Register. The sample is based on immigrants whose last country of residence was Estonia and who were at least 18 years old at the time of the survey. Aside from ethnic Estonians, it also includes individuals whose mother tongue is Russian³, Ukrainian, and Belorussian. The number of individuals that match the sampling conditions was 14,992, which indicates that almost every fifteenth migrant from Estonia was included in the sample. The survey includes information about their intentions to return to Estonia, current education, and education before relocation to Finland. We also observe common socioeconomic characteristics, such as age, gender and family status.

²These include legal residents. Finland, like other Nordic countries, is known for its excellent population statistics. These statistics do not include unauthorized workers and “rental” workers, formally employed by Estonian firms. We expect the number of unauthorized workers to be small as there are little barriers for EU citizens while the rental workers do not qualify to the standard definition of a migration (at least one year of actual or expected duration of residence) in most cases.

³Most ethnic Russians and Ingrian Finns use Russian as their first language.

Table 1 gives an overview of the most important variables in the data. Twenty four per cent of the Estonian migrants that participated in the survey intend to return to Estonia, which is quite similar to the actual share of return migrants in the 1990s and 2000s (see above). We distinguish between three *levels of education* categories: primary, secondary and third level. We also include *type (track) of education*: general or vocational. *Finnish education* (categories: yes, no) describes whether individuals have studied in Finland, either at higher or a similar level in Estonia. We include a (self-reported) measure for working below one's qualification – *over-education* (categories: yes, no). Self-reported match quality may be criticized because it indicates how people think about their job, not the actual correspondence between their skills and the demands of the job. However, an immigrant doctor, although still working as doctor in Finland, may actually perform simpler tasks than earlier, a fact that is not easily observed in a different type of data. We analyze how the reported over-education is related to education and occupation (Table A2 in the Appendix). It appears that education level is a strong predictor of the perceived match in the upper and lower end of the educational ladder, while the results are mixed for people with a vocational education.

TABLE 1 ABOUT HERE

The descriptive table indicates that people with third level education are somewhat overrepresented among those Estonian migrants living in Finland who intend to stay, while over-educated are somewhat overrepresented among those who intend to return (Table 1). We can also observe that Estonian migrants who have obtained an education in Finland are clearly overrepresented among the potential stayers. Regarding the country of education, it is interesting to note that while only five per cent of the respondents initially left Estonia because of educational reasons, 38% of them eventually studied (received a diploma/degree) in Finland. This is partly because our sample also includes those who moved to Finland in childhood and who continued to attend school. However, this cannot be the only explanation, as those who have studied in Finland

form a large percentage (more than 20%) of those who were aged 50 or less at the time of migration (Figure 2). This suggests that many people find it necessary to improve their level of education while already in the new country. Furthermore, by splitting the sample according to level and country of education, we find that return migration intentions vary across both of these dimensions (Figure 3). Those who have obtained a secondary or vocation education in Finland have greater intentions to stay while those who have obtained a third level education wish to return. In this way, our preliminary analysis suggests that the relationship between return migration and education is not fully explained by either level or country of education alone.

FIGURE 2 ABOUT HERE

FIGURE 3 ABOUT HERE

We base our inference on binary choice (logit) models, estimating the intentions to return to country of origin using educational variables and relevant socioeconomic controls. As we have cross-sectional data, one must keep dynamic selection issues in mind while interpreting the results – more return-inclined individuals will disproportionately leave Finland as time passes. Note that we include controls for duration of residence, migration motive and a number of other background characteristics that potentially impact selectivity in our sample. Our focus is on association between education and return migration. We estimate a number of models that differ from each other by the explanatory variables included. Model 1 only includes the educational variables; successive models add additional background variables in order to analyze whether the relationship between education and intentions to return remains robust with respect to other controls.

Model 2 includes the main individual background characteristics, namely *age at migration*, *duration of residence* in destination country, *gender*, *ethnicity*, *origin of the partner*, *children in household*, and *labor market status*. The first two of these are considered the key variables for un-

derstanding return migration according to Dustmann (1996). Previous research shows that emigration at a younger age significantly increases the likelihood of the individual to remain in the destination country (Olsen, 2000; Vadean and Piracha, 2009), and early socialization in the host society thoroughly influences migration and integration behavior in adulthood (Kulu, 2002; Van Ham and Tammaru, 2011). Except for the youngest groups, we use 10-year age brackets: <20, 20–24, 25–34, 35–44, 45–54, and 55+. The origin of the partner indicates whether one lives together with a partner from the origin country (Estonia) or destination country (Finland); the omitted category is single. We split years since migration into 5-year intervals (0–4, 5–9, 10–14 and 15+). Also, bear in mind that there were very few Estonian immigrants in Finland prior to 1991, more than 18 years before the survey was conducted. According to Bratsberg *et al.* (2007), the probability of return migration is especially high during the first five years after arrival, and it decreases steadily thereafter. We use a dummy variable (working or not working) to indicate labor market status.⁴ Many studies have shown that return migrants are largely selected from the economically less successful (Bellemare, 2003; Constant and Massey, 2003; Nekby, 2006; Jensen and Petersen, 2007; Haug, 2008), i.e. return migration corrects the failure of initial migration (DaVanzo and Morrison, 1981; 1982; Massey and Espinoza, 1997). Constant and Massey (2003) found that working at more prestigious occupations significantly decreased the odds of returning. Their analysis shows that guest workers are more likely to return home when they lose access to German jobs. Studies in other contexts have also found that being unemployed significantly increases the probability to return to one’s homeland (Steiner and Velling, 1994; Schmidt, 1994).

Model 3 adds *emigration motive*. The dataset provides us with the following categories for the main motive: “better income”, “family”, “studies”, “work” (other than income), and “other”. We expect those who arrived for better earnings to represent individuals who see migration as a way to achieve lifetime wealth optimization. They may be willing to leave as soon as a certain wealth level is achieved. The main table (Table 2) only reports the results for *better income*, and the other cate-

⁴We have also analyzed models with controls for occupation and income. These results are not reported here but are available on request. See below.

gories are reported in Table A1 in the Appendix. The last model further adds the cross-effects of Finnish education and years since migration (Model 4), in order to capture possible differences in the duration trend of the return intention for those who have Finnish education and for those who have not.

Results

The most important findings are given in Table 2, and more detailed information on variable categories can be found in Table A1 in Appendix. All the models indicate that education level is not associated with the intention to return to Estonia. By contrast, over-education shows a significant and stable association with the intentions to return. There is also some evidence ($p < 0.10$) that migrants who are educated in the vocational track are more willing to leave than people with general education. The variable that measures country of education presents mixed results across models – without further controls (Model 1), the coefficient is negative and highly significant, signaling more interest to stay among those immigrants who have obtained their education in Finland. This effect disappears once we introduce age controls in Models 2 and 3 (the positive effect in Model 4 is related to cross-effects and must be interpreted in a different way). The negative correlation in the data between return migration intentions and host country education seems to be an artifact of age, as most of those who attend school in Finland arrive in their teens or early 20s. Estimates for these age groups are negative. Age controls also indicate that those who arrive when more than 55 years old are more inclined to return.

TABLE 2 ABOUT HERE

The duration of stay controls indicate that individuals who have lived in Finland longer are less inclined to return (although the estimates are not significant). A number of results related to individual characteristics shown in Models 2 and 3 are worth discussion. We can see that those who

do not identify themselves as ethnic Estonians (these are mainly ethnic Russians) are considerably less inclined to return. This may be explained by either less attachment to Estonia or perceived discrimination in that country. Being married to a non-Estonian partner has a strong and robust negative impact on return, while the effect of marriage with an Estonian partner is similar to that of singles. Children in the family do not show any statistically significant effects. Interestingly enough, there are no differences in intentions to return between people belonging to different occupational categories or between people earning different income (results available on request). However, a clear difference is related to labor market status. Those who are not working are significantly less prone to leave Finland compared to those in employment, possibly because of better access to welfare in Finland compared to Estonia (welfare migrants). From all categories of migration motive, as introduced in Model 3, only those who primarily moved to Finland to earn a better salary are substantially more inclined to return compared to other migrant groups. Note that “better salary” does not include those who relocated in order to get a job.

We introduce an interaction term in Model 4 by allowing for different time trends in intentions to return for Estonian migrants with Finnish education and those with only Estonian education. The results reveal a different picture for these subgroups. For immigrants with only Estonian education, we have not detected any duration dependency. In contrast, Estonian migrants with Finnish education show a declining willingness to move back to Estonia (small and significant effect for *Finnish education * duration > 15*). This may be either because local education provides resources for deeper socialization into the host society over time or because Finnish education slowly paves the way towards better career prospects. Note also that this group tends to be more inclined to move back to Estonia during the first years after arrival, in line with research showing that students prefer to leave shortly after graduating (Bijwaard, 2010). We also included several other interaction terms between different education variables, and between education variables and other variables, but this did not affect the results above.

Discussion of the Results

We were not able to find a systematic association between the level of education and the intentions of return migration. According to the Borjas and Bratsberg (1996) selective return migration model, this outcome suggests that ability-based selectivity does not play an important role. This is a somewhat surprising result, as Finland belongs to the most egalitarian economies and Estonia to the group of unequal countries in the EU. As our data only includes information on returning to Estonia, we cannot, unfortunately, analyze the plans for moving to another country with higher income disparities, such as the UK. Several other education-related variables were important. First, without further controls, plans for return migration are strongly related to country of education. This relationship disappears when adding controls for age at arrival. Allowing for different duration dependency for those with Finnish education and for those without, it further appears that people who are educated in the host country become less prone to leave after a long stay. Note that local education does not make immigrants willing to stay right after their studies but after about 10 years. This refers to mechanisms, such as social integration, that do not work very fast. Host country education is potentially a major factor behind social integration, and those who cannot access that melting pot are left only marginally attached to their new society, despite the length of stay in the country. But we cannot completely separate school and age effects at younger ages, since all of those who move in childhood will also continue their studies in the Finnish educational system.

It is also interesting to note that adults are also motivated to improve their education once in the destination country, even if study was not the primary motive for their arrival. This is in line with a recent claim by Gibson and McKenzie (2011, p. 23) that the standard analysis of returns to skill and educational selectivity is misleading, since education is itself a result of migration, rather than a determinant. This calls for further analyses of the role of host country education in return migration.

Perhaps the most important educational variable across all model specifications is over-education. People working below what they consider their level of qualification to be have elevated return migration intentions. According to the previous literature, this can either be due to a result of failed migration or as an outcome of a lifetime strategy that prioritizes the labor market of temporarily working on higher wages over the route of matching the job to education (DaVanzo and Morrison, 1981; 1982; Djajic, 1989; Dustmann and Weiss, 2007; Dustmann and Glitz, 2011). A piece of evidence that points toward the second explanation is the fact that over-education is more widespread among migrants whose initial immigration motive was related to better income (though the related coefficient is not statistically significant, see Table A2 in the Appendix)⁵.

Further evidence for lifetime strategy explanation stems from the fact that income-migrants have substantially stronger plans to return. We may refer to this group as “guest workers” in the true sense of the word, since they are mostly attracted by the prospects of better earnings and they express elevated intentions to return. Their low attachment to Finland may be enhanced by the possibility of easy commuting between the two countries, as frequent visits help to maintain contacts with relatives and friends living in Estonia (cf. Hedberg, 2008; Bijwaard, 2010). Indeed, this group of migrants are visiting home on a much more frequent basis compared to other migrant groups (see Table A3 in the Appendix).

We found an expected negative, although not statistically significant duration dependency in our data; intentions of return migration decrease as the length of stay in the host country increases. Our analysis further reveals a significant interaction effect; part of the negative duration dependency, which is observable in the raw data, is related to those who have obtained their education in the host country. This seems to be due to two factors: first, a large number of individuals want to leave the country soon after completing their education (e.g., Bijwaard, 2010). Second, those who stay seem to develop an attachment to the host society, even after we have controlled for nationality of the partner (origin or destination country). This is not the case for the others (see above). Host country education is also a strong predictor of not being over-educated, but

⁵Note that other work-related migrants are also visiting their home country frequently.

as the negative duration effect persists even after controlling for over-education, our results suggest that labor market integration is not the main explanation either.

Our analysis did also detect a group of “welfare migrants”. Namely, the odds for leaving Finland for those individuals who are not working are only about 50–60% of the odds of those who work. This group contains of various types of individuals, including those who are unemployed, retired and on parental leave. As we were not able to find significant differences in return plans between immigrants belonging to different occupational or income categories, the main factor elevating the intentions to stay seems to be whether the person is employed or not. Our sample is not large enough for a more detailed analysis of subgroups within this category. However, the fact that migrants who have a job also have higher intentions to return implies that sending countries could also gain (and receiving countries lose) from intra-European migration as predicted by Mayr and Peri (2010). These people have accumulated foreign work experience that could also be an important factor in stimulating economic growth and a new working culture in the origin countries. This calls for empirical studies that will focus on the labor market careers of return migrants in their origin countries in order to determine how they fare upon arrival, and what the possible knowledge spillovers are that they generate once back at home.

Conclusions

This paper analyses the association between education and intentions of return migration, by examining many dimensions of education. We use a unique representative dataset of Estonian immigrants in Finland, providing information on plans for return migration, various dimensions of education, reason of migration, and common socioeconomic characteristics. We use logit models for estimating intentions to return as a function of education and other characteristics. The results indicate that education level in itself is not closely related to returning plans. However, over-education in the host country labor market is clearly associated with an elevated willingness to return. A similar, though somewhat weaker result is obtained for vocational education. Individuals

who obtained (at least part) of their education in Finland are more willing to return in the first years following the migration, while their returning tendency shows a more negative duration dependency. This suggests that host country education leads to better prospects for social integration. We also find evidence that local schooling improves labor market prospects in terms of less over-education. Furthermore, even if only a small number of people migrate for mainly educational reasons, a significant proportion undertakes studies while already in the host country.

The analysis identifies two types of immigrants that we may refer to as “guest workers” and “welfare migrants”. The first group contains individuals who moved primarily for better earnings, and who possess a substantially elevated willingness to leave. The other group contains those who are not working. They are less willing to leave, possibly because the Finnish welfare state offers substantially better social protection. We also find that individuals who do not identify themselves as ethnic Estonians are far less willing to move back. Further, the data shows that those who are living with a host country partner are less interested in returning. Finally, return intentions increase monotonically in the age of migration.

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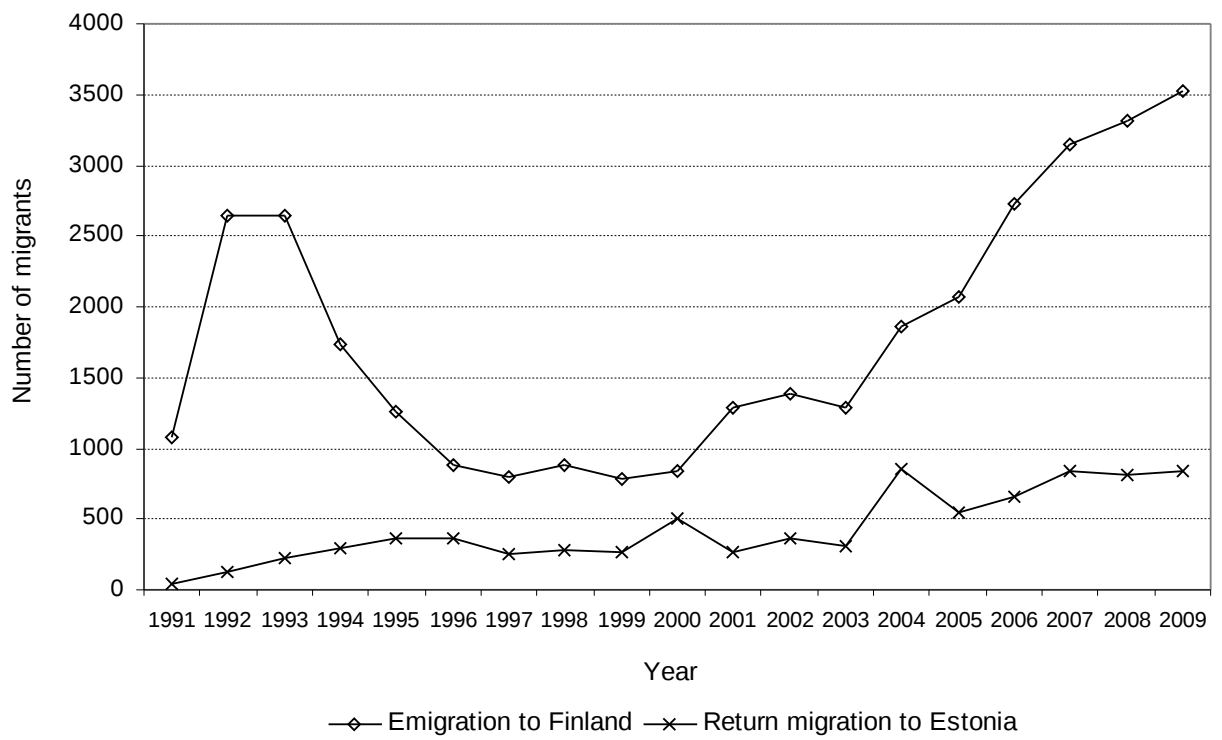


Figure 1. Migration between Estonia and Finland, 1991–2009.

Source: Statistics Finland.

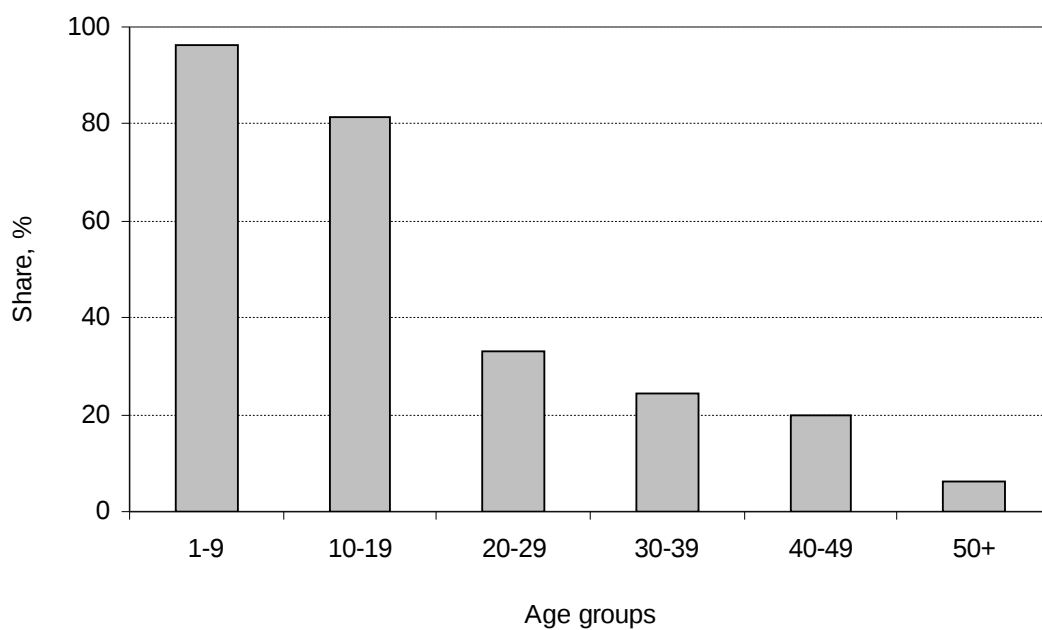


Figure 2. Share of Estonian migrants who improved their education while living in Finland by age of migration.

Source: Sample survey.

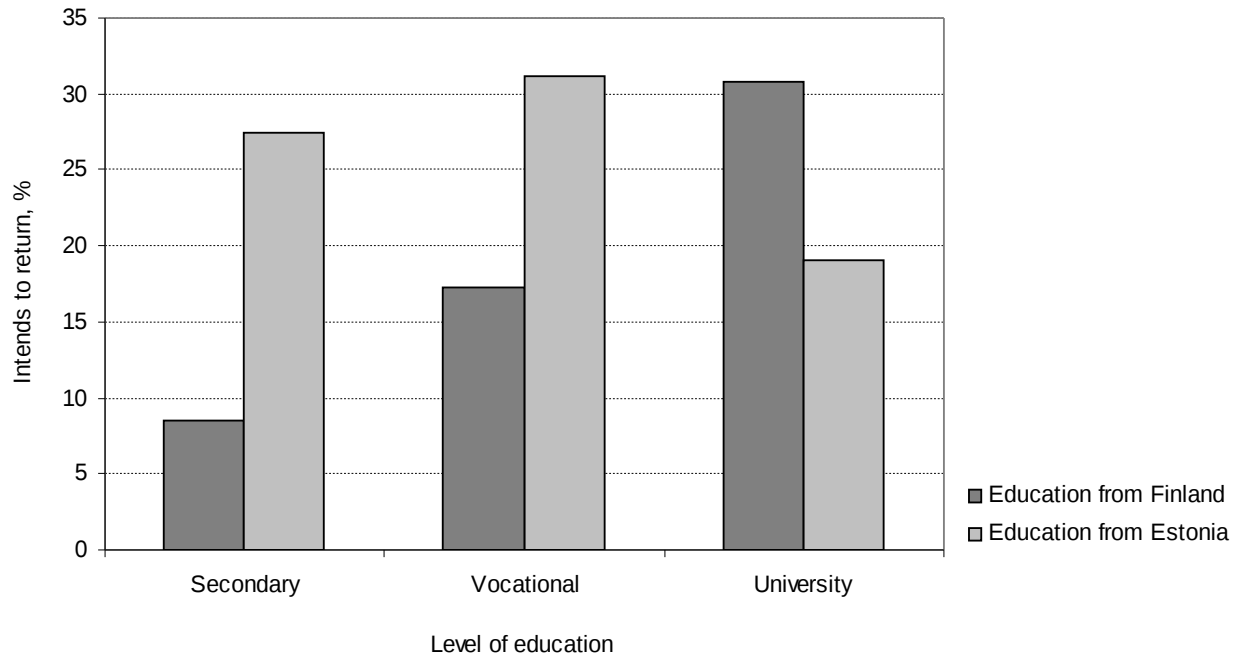


Figure 3. Share of Estonian migrants who intend to return to Estonia by level of education.

Source: *Sample survey.*

Table 1. Characteristics of research population (%).

		Intends to return	Does not intend to return	Total
Intends to return to Estonia	Yes			24
	No			76
				100
Level of education	Primary	6	7	7
	Secondary	70	63	64
	Third level	24	30	29
		100	100	100
Type of education	General	42	47	46
	Vocational	58	53	54
		100	100	100
Country of education	Estonia	73	58	62
	Finland	27	42	38
		100	100	100
Over-education*	No	75	83	81
	Yes	25	17	19
		100	100	100
Gender	Male	46	45	46
	Female	54	55	54
Age at migration	1–9	1	7	6
	10–19	7	18	16
	20–29	32	33	33
	30–39	23	24	24
	40–49	25	13	16
	50+	12	5	7
		100	100	100
Duration of residence in Finland	0–4	35	24	27
	5–9	33	25	27
	10–14	14	19	18
	15+	18	31	28
		100	100	100
Partner origin	Finland	12	22	20
	Estonia	52	44	46
	Single	36	34	35
		100	100	100
Labour market status	Works	88	73	77
	Does not work	12	27	23
		100	100	100

Migration motive	Better income	19	8	11
	Other work	31	21	23
	Study	6	4	5
	Other	44	67	61
		100	100	100
N		237	763	1000

* Among working population. *Source: Sample survey.*

Table 2. Intentions of return migration, odds ratios.

Model:	1	2	3	4
Education variables (ref: secondary, general, education obtained in Estonia)				
Primary	1.151	1.492	1.513	1.64
Third level	0.964	1.008	1.037	1.069
Vocational	1.371 *	1.413 *	1.433 *	1.487 **
Finland	0.575 ***	1.108	1.117	1.996 *
Over-education	1.802 ***	1.657 **	1.627 **	1.47 *
Age at arrival (ref: 35–45)				
< 20		0.340 ***	0.356 ***	0.386 ***
> 55		2.807 **	2.850 **	3.019 **
Duration of stay (ref: 0–5 years)				
5–10		0.880	0.897	0.956
10–15		0.661	0.727	0.570
> 15		0.730	0.812	1.446
Individual characteristics (ref: Female, ethnic Estonian, Partner from Finland, Working)				
Male		1.187	1.152	1.172
Not ethnic Estonian		0.298 ***	0.314 ***	0.302 ***
Partner not from Estonia		0.425 ***	0.430 ***	0.410 ***
Children in household		0.775	0.764	0.754
Not working		0.537 **	0.556 **	0.542 **
Migration motive (ref: other)				
Better income			1.998 **	2.048 **
Cross-effects with Finnish education				
Duration 5–10				0.576
Duration 10–15				1.011
Duration > 15				0.163 ***

Note: significance levels: * - 10%, ** - 5%, *** - 1%.

Source: Sample survey.

APPENDIX

Table A1: Complete result for all models. Odds ratios with corresponding standard errors. Dependent variable: intention to return to Estonia.

Model:	1	2	3	4
Level of education (ref: secondary, not vocational, obtained in Estonia)				
primary	1.151	1.492	1.513	1.64
	0.372	0.53	0.544	0.596
third level	0.964	1.008	1.037	1.069
	0.198	0.228	0.239	0.251
vocational (ref: general)	1.371 *	1.413 *	1.433 *	1.487 **
	0.233	0.259	0.265	0.278
Finland (ref: Estonia)	0.575 ***	1.108	1.117	1.996 *
	0.115	0.27	0.276	0.816
Over-education	1.802 ***	1.657 **	1.627 **	1.47 *
	0.365	0.368	0.364	0.333
studying	1.336	1.654	1.692	1.404
	0.488	0.668	0.692	0.604
Age at arrival (ref: 35–45)				
< 20		0.34 ***	0.356 ***	0.386 ***
		0.12	0.128	0.142
20–25		0.705	0.692	0.676
		0.198	0.198	0.194
25–35		0.791	0.805	0.839
		0.181	0.187	0.197
45–55		0.922	0.934	0.983
		0.258	0.264	0.28
> 55		2.807 **	2.85 **	3.019 **
		1.425	1.455	1.54
Duration of stay (ref: 0–5 years)				
5–10		0.878	0.897	0.956
		0.183	0.189	0.229
10–15		0.661	0.727	0.57
		0.176	0.2	0.21
> 15		0.73	0.812	1.446
		0.19	0.218	0.447
Individual characteristics				
male		1.187	1.152	1.172
		0.204	0.206	0.212
not ethnic Estonian		0.298 ***	0.314 ***	0.302 ***
		0.091	0.097	0.094
Estonian citizen		1.436	1.349	1.309
		0.559	0.527	0.522
partner from Estonia		1.152	1.186	1.213
		0.333	0.346	0.356
partner not from Estonia		0.425 ***	0.43 ***	0.41 ***
		0.097	0.099	0.095
children in household		0.775	0.764	0.754
		0.152	0.15	0.151

Table A1: Continued

living in Helsinki	0.865	0.871	0.861
	0.164	0.166	0.166

not working		0.537 **	0.556 **	0.542 **	
		0.144	0.151	0.149	
	Migration motive (ref: other)				
better income			1.998 **	2.048 **	
			0.607	0.625	
family			1.303	1.307	
			0.341	0.346	
studying			1.427	1.241	
			0.689	0.613	
work			1.376	1.336	
			0.368	0.36	
	Cross-effects with Finnish education				
Duration 5–10				0.576	
				0.3	
Duration 10–15				1.011	
				0.599	
Duration > 15				0.163 ***	
				0.096	
	Cross-effects with over-education				
Studying	0.53	0.608	0.619	0.817	0.842
	0.487	0.582	0.593	0.802	0.839
constant	0.293 ***	0.412 *	0.304 **	0.287 **	0.238 **
	0.044	0.2	0.159	0.153	0.134

Note: significance levels: * - 10%, ** - 5%, *** - 1%.

Source: Sample survey.

Table A2: Complete results for over-education models. Odds ratios. Dependent variable: over-education

Model:	1	2	3
Level of education (ref: secondary, not vocational, obtained in Estonia)			
primary	0.229 **	0.275 *	0.258 *
	0.171	0.209	0.198
third level	2.175 ***	2.332 ***	4.100 ***
	0.581	0.659	1.310
vocational (ref: general)	1.216	1.286	1.151
	0.259	0.285	0.264
Finland (ref: Estonia)	0.208 ***	0.244 ***	0.220 ***
	0.062	0.083	0.082
studying	1.579	1.703	2.022
	0.688	0.785	0.975
Age at arrival (ref: 35–45)			
< 20		0.613	0.679
		0.287	0.326
20–25		0.626	0.744
		0.235	0.289
25–35		0.947	1.115
		0.262	0.322
45–55		0.997	0.973
		0.333	0.338
> 55		1.455	1.443
		0.962	0.986
Duration of stay (ref: 0–5 years)			
5–10		0.743	0.795
		0.195	0.217
10–15		0.541 *	0.622
		0.196	0.230
> 15		0.938	0.948
		0.291	0.304
Individual characteristics			
male		1.023	0.904
		0.221	0.204

Table A2: Continued.

not ethnic Estonian	1.479	1.567
	0.434	0.480
Estonian citizen	1.359	1.517
	0.561	0.646
partner from Estonia	0.783	0.777
	0.345	0.349
partner not from Estonia	1.039	1.070
	0.260	0.277
children in household	0.871	0.873
	0.206	0.216
living in Helsinki	1.294	1.353
	0.286	0.311
	Migration motive (ref: other)	
better income	1.215	1.223
	0.427	0.448
family	0.908	0.984
	0.278	0.312
studying	0.890	0.997
	0.581	0.672
work	0.737	0.834
	0.233	0.273
	occupation (ref: blue collar)	
occupation manager		0.186 ***
		0.104
occupation service		0.380 ***
		0.089
occupation specialist		0.032 ***
		0.034
(Intercept)	0.239 ***	0.217 ***
	0.042	0.122

Note: significance levels: * - 10%, ** - 5%, *** - 1%.

Table A3: Frequency of visits, ordered logit model. Odds ratios. Dependent variable: frequency of visits (from more to less frequent).

Model:	1	2	3
Level of education (ref: secondary, not vocational, obtained in Estonia)			
primary	1.695 **	1.614 *	1.572 *
	0.430	0.426	0.417
third level	0.926	0.813	0.743 *
	0.143	0.131	0.122
vocational (ref: general)	1.135	1.139	1.153
	0.149	0.154	0.158
Finland (ref: Estonia)	1.764 ***	1.065	1.042
	0.262	0.193	0.190
Over-education	0.766	0.910	0.932
	0.134	0.165	0.170
studying	0.822	0.777	0.772
	0.236	0.229	0.230
Age at arrival (ref: 35–45)			
< 20		2.166 ***	1.897 ***
		0.514	0.455
20–25		1.817 ***	1.847 ***
		0.396	0.409
25–35		1.461 **	1.399 *
		0.268	0.261
45–55		1.125	1.098
		0.260	0.256
> 55		0.569	0.574
		0.242	0.247
Duration of stay (ref: 0–5 years)			
5–10		1.554 ***	1.431 **
		0.258	0.240
10–15		1.886 ***	1.465 *
		0.369	0.297
> 15		1.922 ***	1.543 **
		0.372	0.307

Table A3: Continued

	Migration motive (ref: other)		
male		0.742 **	0.826
		0.097	0.111
not ethnic Estonian		2.173 ***	1.937 ***
		0.412	0.375
Estonian citizen		0.525 ***	0.575 **
		0.123	0.135
partner from Estonia		0.676 *	0.664 *
		0.158	0.155
partner not from Estonia		1.166	1.105
		0.174	0.167
children in household		1.204	1.230
		0.175	0.179
living in Helsinki		0.521 ***	0.508 ***
		0.073	0.072
not working		1.916 ***	1.762 ***
		0.335	0.312
	Migration motive (ref: other)		
better income			0.298 ***
			0.075
family			0.764
			0.137
studying			0.574 *
			0.190
work			0.459 ***
			0.094
	Cross-effects with over-education		
Studying	2.301	2.906	2.729
	1.607	2.100	1.994