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# MIGRATION EXPERIENCE OF THE BALTIC COUNTRIES IN THE CONTEXT OF ECONOMIC CRISIS

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## Abstract

The Baltic countries, which experienced intensive outflow of labor during the first five years after joining the EU provide an interesting case also for a study of migration response to economic shocks. The behavior of the Baltic migrants was different from that of their counterparts from other NMS. During the economic crisis of 2009-2010 and its aftermath, mobile citizens of other countries which joined EU in 2004, responded primarily to worsening economic situation in host old member states: emigration slowed down, while return migration intensified. By contrast, the behavior of the Baltic mobile citizens was, at large, driven rather by dramatic rise of unemployment and fall of household income in their home countries. New emigration wave emerged from each of the three Baltic countries: outflows doubled or almost doubled compared to the pre-crisis levels. More importantly, in 2013 emigration was well above the pre-crisis levels in all three countries despite resumed economic growth and massive outflow of population during the previous years.

This chapter offers a theoretical framework and empirical evidence for understanding the patterns of emigration from the Baltic countries in the 21st century. The focus is on emigrants selectivity with respect to human capital, ethnicity and citizenship, as well as on labor market outcomes. We also assess the demographic and economic implications of recent emigration.

**Keywords:** Emigrant selectivity, human capital, brain drain, downskilling, return migration, migrant network

JEL classification: J61, J24, J62, J15

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## **1. Introduction: The new exodus from the Baltics and its economic background**

The Baltic countries, which experienced intensive outflow of labor during the first five years after joining the EU (Hazans and Philips, 2010) provide an interesting case also for a study of migration response to economic shocks<sup>1</sup>. The behavior of the Baltic migrants was different from that of their counterparts from other NMS. During the economic crisis of 2009-2010 and its aftermath, mobile citizens of other countries which joined EU in 2004, responded primarily to worsening economic situation in host old member states: emigration slowed down, while return migration intensified (Aujean (2012); European Commission (2012: Chapter 6, Chart 2); Zaiceva and Zimmermann (2012: Figure 1); European Commission (2013: p. 43); Kaczmarczyk (2013: Table 5.1)).

By contrast, the behavior of the Baltic mobile citizens was, at large, driven rather by dramatic rise of unemployment and fall of household income in their home countries. To illustrate, Latvian GDP dropped by almost 20% between 2007 and 2009 and the unemployment rate peaked in 2010 at almost 20%, a steep increase from 6% in 2007. Similar developments characterized Estonia and Lithuania, with all three economies gradually recovering during the early 2010s.

As was predicted in Hazans and Philips (2010), new emigration wave emerged from each of the three Baltic countries: outflows doubled or almost doubled compared to the pre-crisis levels in 2009 (Latvia), 2010 (Lithuania) and 2012 (Estonia), see Figure 5 below. More importantly, in 2012 emigration (both gross and net, in absolute numbers as well as in rates) was well above the pre-crisis levels in all three countries despite resumed economic growth and massive outflow of population during the previous years.

Another way to evaluate emigration flows from different countries is to look at the change in stock of nationals of these countries in other EU/OECD member states. By this approach, Latvian emigration stands out in the EU as the most dramatic response to the crisis. According to the 2011 EU Labor Force Survey (LFS), net inflow of Latvian nationals aged 15-64 to the rest of EU between 2008 and 2011 was by half larger than between 2005 and 2008. A parallel increase for Hungarian and Estonian citizens was found to be modest, while a decrease was recorded for citizens of other CEE countries, see Aujean (2012). Moreover, Latvia is the only country among the EU10 for which the estimated impact of recession on net migration to EU15 countries in 2008-2009 was positive (see European Commission, 2012, Chapter 6, Table 9, based on Holland et al., 2011).

Overall mobility rate of nationals of given EU country can also be measured by the total (or accumulated during some recent period) stock of working-age citizens living in another EU member state, expressed as percentage of working age population of the country of origin. According to estimates from EU LFS 2010, 2011 and 2013 (European Commission, 2012; Aujean, 2012; Andor, 2014), among ten CEE member states Lithuania was ranked second in terms of both total and recent mobility; Latvia was ranked fourth (respectively, third) on total (respectively, recent) mobility by 2011 but moved to third (respectively, first) position by 2013. Estonia was ranked sixth to seventh on all accounts. Being survey based, these figures likely underestimate the size of Baltic diasporas (which constitute tiny proportions of population of most of the receiving countries), but they support other evidence suggesting that Lithuanians and Latvians have been recently among the most mobile CEE citizens. According to the most recent

estimates (Andor, 2014), economically active citizens of Lithuania (respectively, Latvia) which have settled in other EU member states during the last 10 years accounted to 8.1% (respectively, 6.9%) of the origin country's labor force, well above corresponding figures for Poland (4.4%) and Estonia (3.3%). Kahanec (2012) finds in Lithuania and Latvia the highest imminent migration potential among EU member states.

The Baltic countries, despite being small in terms of population, also appear in the lists of top origin countries in several European destinations: Lithuania was among top three origin countries of foreigners in Ireland, Norway and Iceland and among top seven in the UK; Latvia was among top five in Ireland and Iceland and among top 15 in the UK and Norway; and Estonia was the number one origin of foreigners in Finland (OECD, 2014a: Table B.5).

From migration perspective, an important distinctive feature of the Baltic countries is a large share of ethnic minorities (mostly Russian-speaking in Estonia and Latvia; Polish and Russian-speaking in Lithuania); immediately before EU enlargement of 2004 they accounted for 41%, 32% and 16% of population in Latvia, Estonia and Lithuania, respectively. Moreover, at that time, about one half of minority population aged 18-64 (note that nine out of ten emigrants depart at this age) in Latvia and Estonia did not hold citizenship of these countries and thus were not covered by the legal provisions for free movement of labor within EU; most of them had so-called non-citizen passports of these countries, while others held Russian, Ukrainian or other citizenship; see e.g. Tammaru and Kulu (2003), Hazans et al. (2008), Leping and Toomet (2008), Hazans (2010, 2011a) for details.

This chapter aims at providing a detailed in-depth comparison of emigration patterns experienced by the Baltic countries since the beginning of the 21st century and especially during the post-enlargement decade (2004-2013). Section 2 compares economic and social context in the Baltic countries and Poland. Section 3 discusses demographic challenges to the Baltic countries caused by emigration. Destination-specific cross-country comparison of scale and trends of emigration is provided in Section 4. This section also assess the deviations from reality found in the emigration statistics of the sending countries. Section 5 offers a conceptual framework and a set of hypotheses about the nature of the four emigration waves observed in 2000-2013. Corresponding empirical analysis of the changes in emigrants profile (with a special focus on selectivity of emigrants with respect to human capital and ethnicity), as well as in reasons for and intended duration of migration, is found in Section 6, which also discusses differences between emigrant composition across destination countries. Labor market outcomes of emigrants are discussed in Section 7. Section 8 focuses on return migrants. The economic impact of emigration is discussed in Section 9. Section 10 concludes.

## **2. The economic and social context in Baltic countries and Poland, 2008-2013**

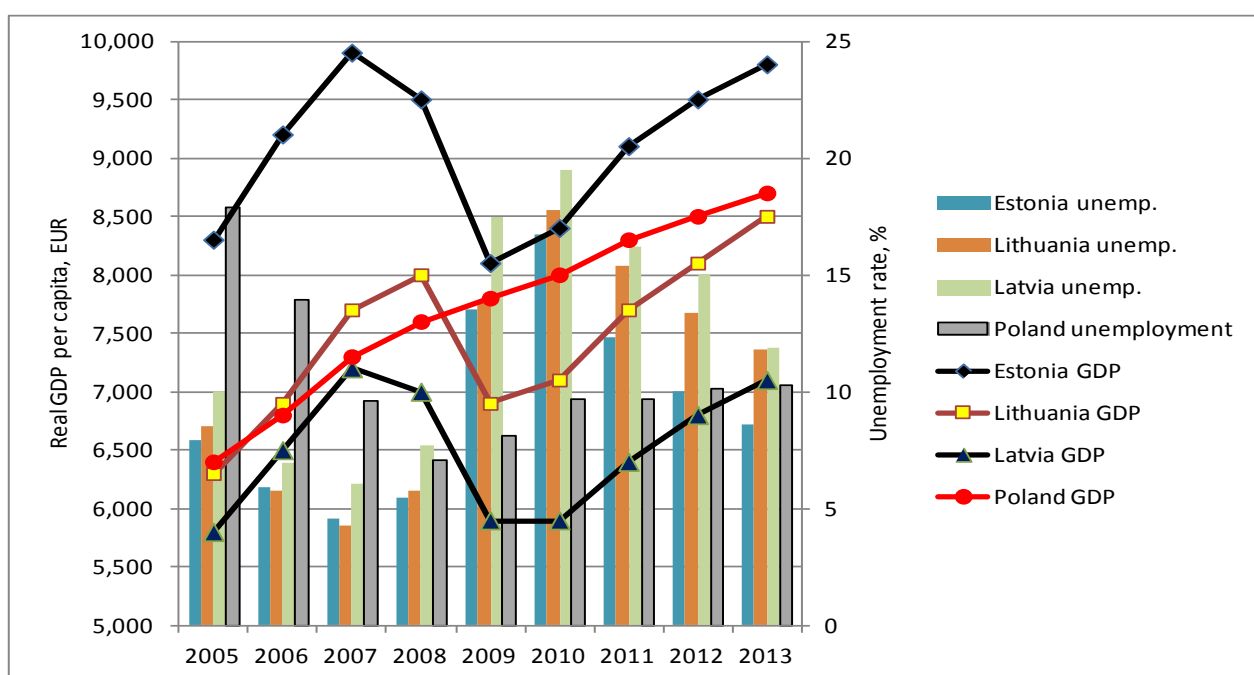
Despite similar historic, economic and social context, there are also significant differences between the three Baltic countries. Estonia, with the highest GDP per capita, the lowest (yet very high) unemployment peak and the fastest decline in unemployment rate thereafter (see Figure 1), entered the crisis and navigated through it in a better shape than its neighbors. Stabilisation fund created in Estonia during the growth period was one of the factors behind this difference but also an evidence for a better governance in general. On the other hand, both before and during the crisis, Latvia featured the lowest GDP per capita and the highest and most persistent

unemployment rate of the three Baltic countries (Figure 1). Since 2011, unemployment was falling in all three Baltic countries, remaining at two-digit levels though in Latvia and Lithuania.

By comparison, in Poland economic growth continued in 2009-2013 (though at a smaller pace than before), while unemployment stayed at about 8% in 2009 and at 10% in 2010-2013; GDP per capita was higher than in Latvia but lower than in Estonia<sup>ii</sup>.

Generally, Latvian population went through more difficult times than their Estonian, Lithuanian or Polish counterparts. According to EU-SILC data, 18% to 22% of Latvian households faced great difficulty making ends meet in 2009-2012, while this share varied in the range of 11% to 13% in Lithuania, 8% to 9% in Estonia and 12% to 14% in Poland. During the same period, 22% to 26% of Latvian households had arrears on mortgage or rent payments, utility bills or hire purchase, compared to 10% to 13% in Lithuania and Estonia and 14% to 15% in Poland. Importantly, incidence of mortgage or rent arrears was below 2% in Lithuania and Poland, below 3% in Estonia, but between 5% and 7% in Latvia.

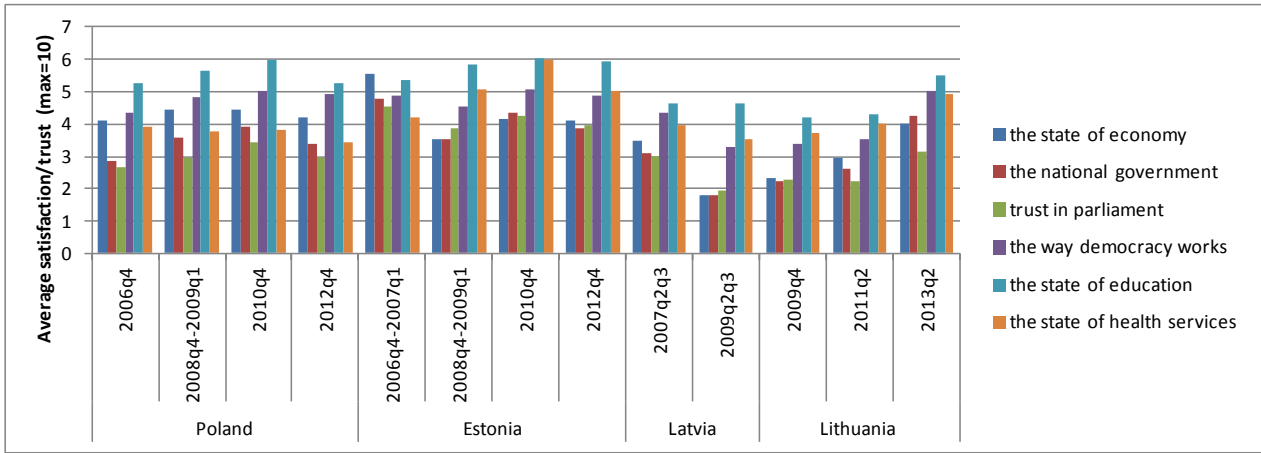
**Figure 1 Real GDP per capita and unemployment rates, the Baltics and Poland, 2005-2013**



Source: Eurostat

To survive the crisis, Latvia was forced to apply for emergency financial assistance from the EU, IMF and the World Bank, while Estonia and Lithuania managed without external help and experienced much more modest wage cuts than Latvia (European Commission 2011, Graph I.3.1). Moreover, in Latvia the Great Recession has been perceived by a majority of population as a systemic (rather than just a financial) crisis, which was less pronounced in Lithuania and was not the case in Estonia. Figure 2 illustrates the differences in popular perceptions between the Baltic countries and provides comparison with Poland.

**Figure 2 Satisfaction and trust indicators in the Baltic countries and Poland, 2008-2013**



*Notes:* Satisfaction and trust are measured at the 0-10 scale. The Figure reports mean values (excluding non-response). Standard errors are between 0.04 and 0.06 in all cases but Lithuania 2011 (0.07 to 0.09). *Source:* Calculation with the data of European Social Survey.

As shown in Blanchflower and Shadforth (2009), life satisfaction seems to be an important determinant of migration; hence, one can infer from Figure 2 something about future migration patterns. Before the crisis, Estonia featured the best satisfaction measures on all accounts; Latvia and Poland shared similar values for all indicators except those related to economy and education, which were higher in Poland.

During the crisis, satisfaction with the state of economy, the national government and the way democracy works, as well as trust in parliament, fell dramatically in Estonia and especially Latvia (the Lithuanian satisfaction levels were similar to the Latvian ones, while pre-crisis data are not available for Lithuania), but increased in Poland. Nevertheless, Estonia remained on top in terms of trust in parliament, as well as satisfaction with education and health systems, and shared with Poland the highest "mark" received by the government (this mark was just 3.5 on the 0-10 scale, though). Poland ranked first on the state of economy and on democracy. Among the four countries, Latvia featured the lowest indicators on all accounts, and Lithuania was slightly above (except for education, where this order was reversed), while Poland and Estonia were doing much better.

Results of two post-crisis surveys (conducted between 2010q4 and 2013q2) are available for all countries but Latvia. By 2010, all indicators for Poland (except the one on health) and Estonia were above the levels observed in the crisis years. However, in Estonia, trust in the parliament and satisfaction with the economy and the government were still below the pre-crisis level - and fell even further by 2012. In turn, all Polish indicators by 2012 fell to the levels similar to those observed in 2008-2009 or slightly lower.

Lithuanian popular sentiment indicators, starting from extremely low levels during the crisis, went up both between 2009 and 2011 and especially between 2011 and 2013.

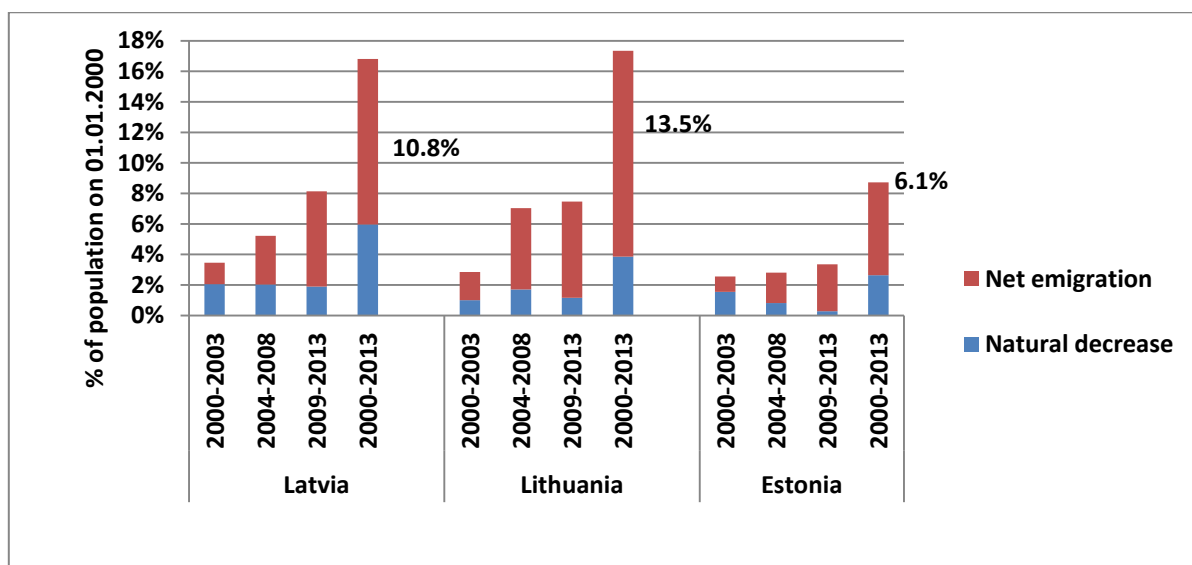
When comparing situation in Poland, Estonia and Lithuania at the end of 2012 or beginning of 2013, one finds that the economies of the three countries received almost identical marks (4 at the 0-10 scale); at about the same level were the best of the three assessments of the government (4.3 for Lithuania, followed by Estonia with 3.9 and Poland with 3.4) and the parliament (3.9 for Estonia, 3.1 for Lithuania and 3.0 for Poland). The remaining indicators were somewhat higher: about 5 for democracy in all three countries, between 5 and 6 for education and between 3.5 and 5 for health services, Estonia being on top in the latter two cases.

To sum up, the above discussion of economic and social context suggests that during (and hence, due to the network effect, after) the crisis, emigration could be a more popular coping strategy in Latvia and Lithuania than in Estonia (and than in Poland, too), while more intensive return migration is to be expected in Poland and Estonia<sup>iii</sup>. Furthermore, the dynamics of push factors suggests that in the post-crisis period emigration could increase in Poland and Estonia but decrease in Lithuania. Moreover, it seems plausible that the satisfaction levels like the ones observed in Latvia and Lithuania in 2009 (as opposed to those found in Estonia and Poland) signal a steep rise in emigration rates which are likely to remain high for quite some time after satisfaction rates rebound.

### **3. Baltic populations: "Natural" shrinking and aging reinforced by emigration**

Since the beginning of the 21st century, loss of population due to emigration reinforced negative natural change in all three Baltic countries. In 14 years (2000-2013), Latvia's and Lithuania's populations declined by about 17% and Estonia's - by 9% (Figure 3). Natural change accounted for more than one-third of this loss in Latvia, about one-third in Estonia and slightly less than one-fourth in Lithuania. During the economic crisis and its aftermath overall depopulation intensified in all three countries, but the share of natural decline in the total change was much smaller than before (Figure 3).

**Figure 3. Natural decrease of population and net emigration.  
The Baltic countries, 2000-2012.**



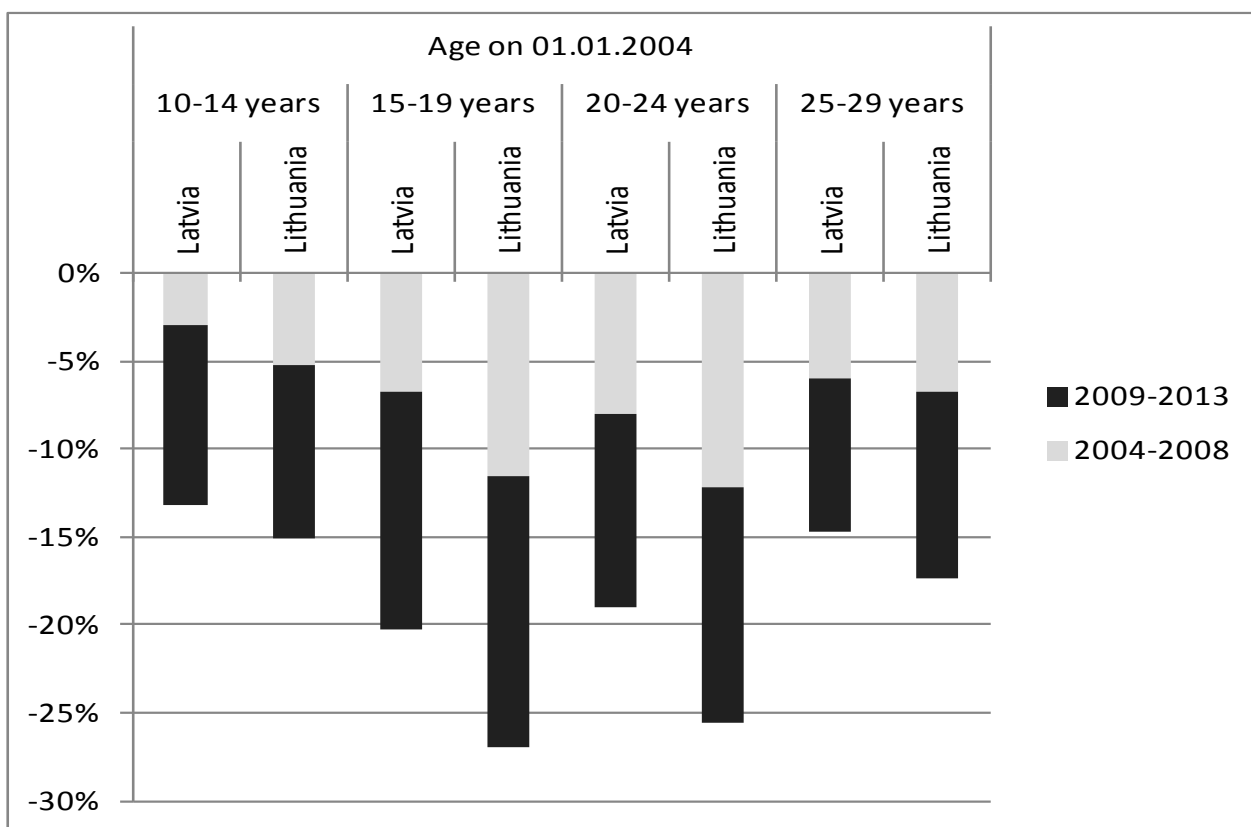
*Notes:* The 2000–2003 category covers 4 years, while 2004–2008 and 2009–2013 cover 5 years each. In all three Baltic countries, annual average net emigration rates (as implied by the Figure) in 2009–2013 are much higher than in the previous periods. *Source:* Eurostat, OECD and own calculation.

Most of Baltic emigrants depart at age between 15 and 34 years, hence this age group shrinks faster than population in general, thus accelerating aging (caused also by declining birth rates) and putting at risk sustainability of social security system.

Figure 4 illustrates the effect of post-enlargement migration on youth cohorts by tracking their size (which is almost unaffected by natural change) over the period of 2004-2013. In ten years, Latvian cohorts aged 15 to 19, 20 to 24 and 25 to 29 years at the beginning of 2004, have sent abroad, respectively, 20%, 19% and 15% of their members, while corresponding Lithuanian cohorts in the same period lost to migration 27%, 26% and 17%. The crisis and post-crisis five years (2009-2013) account to most of these human losses. Note that these data are based on the official population statistics, which, especially in Latvia, underestimate emigration in the post-crisis period (Hazans 2013c), so actual losses are likely even larger.

**Figure 4. Change in the size of selected age cohorts.  
Latvia and Lithuania, 2004-2013 (in % of population on January 1, 2004)**





Source: Statistics Latvia, Statistics Lithuania and own calculation

Data presented in Figures 3-4 highlight serious demographic problems faced by the Baltic countries. To put these in international perspective, let us compare crude birth rate and crude rate of natural change of population observed in the Baltic countries with those found in other Eastern NMS, as well as in main destination countries of the Baltic emigrants (the UK, Ireland, Germany, Norway and Finland). It appears that the "natural" aging caused by declining birth rates is much more pronounced in the Eastern EU member states than in the comparison countries. Furthermore, in terms of either recent birth rates or post-enlargement rates of natural change of population, Latvia and Lithuania are among the three "demographically worst cases" in the Eastern part of EU, while Estonia performs significantly better; average birth rate in 2009-2012 was lower than in 2004-2008 in Latvia, while Estonia and Lithuania have seen an increase. Finally, all three Baltic countries feature substantially lower birth rates and rates of natural change than the UK, Ireland and Norway; moreover, in terms of the rate of natural change Latvia and Lithuania perform worse than Germany, and Estonia performs worse than Finland. In other words, the countries which host most of the Baltic emigrants have better demographic prospects than the Baltic countries.

To sum up, after EU enlargement in 2004, and especially during the crisis and post-crisis years of 2009-2012, emigration from Baltic countries reached levels that threaten reproduction of their populations, sustainability of social security systems and economic development. The demographic risk is most pronounced in Latvia. According to a survey conducted in 2012, three quarters of Latvia's population perceive emigration as the single largest threat to the country and its people (Hazans 2013c, Figure 4.2). Noteworthy, families with the largest demographic potential (the ones with children or planning to have a child within three years) are more likely to

emigrate (Hazans, 2013d; 2014a; 2014b). This finding is supported by the UK Population Census 2011 data, according to which total fertility rate of females born in Latvia and Lithuania was 2.51 and 2.29, respectively, well above corresponding rates observed at the same time in the home countries (1.33 and 1.55, respectively).

#### **4 Baltic emigration during and after the economic crisis: the scale, the trends and the geography**

In this section we use gross outflows from the Baltic countries to analyse the trends in emigration and to assess the deviations from reality found in the emigration statistics of the sending countries.

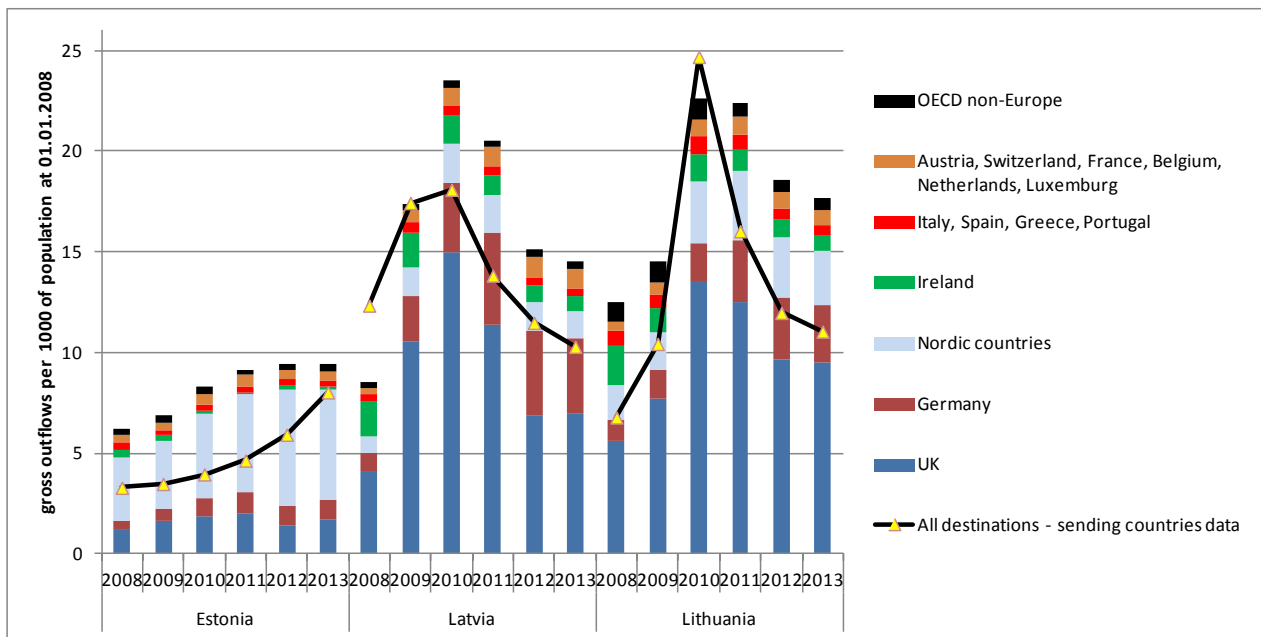
While economic crisis started in the second part of 2008, its full effect on migration can hardly be found in data before 2009. Taking year 2008 data as the "pre-crisis benchmark", Figure 5 presents gross outflows of nationals from the Baltic countries (broken down by main destinations in EU and OECD) in 2008-2013. The outflows are measured per 1000 population of the sending country at the beginning of 2008 (this approach ensures comparability of the outflows across countries in the relative terms, as well as across time in absolute terms). The underlying data are obtained by putting together Eurostat and OECD data on immigration of foreigners by nationality; for Ireland and the UK data on allocation of social security numbers (PPSNs and NINOs<sup>iv</sup>, respectively) are used instead, because British and Irish immigration data are survey-based and severely underestimate inflows from such small countries as the Baltic ones.

In 2008, total gross outflow of nationals from Lithuania (respectively, Latvia and Estonia) accounted to 1.2% (respectively, 0.9% and 0.6%) of population on 01.01.2008.

During the five crisis and post-crisis years (2009-2013) gross outflows from Estonia accounted for about 4.5% of their population, while outflows from Latvia and Lithuania were equivalent to 9.1% and 9.6% of their populations (recall that we stick to population as of 01.01.2008). This is consistent with our expectations (based on the analysis of the economic and social context in Section 2 above) that during and after the crisis emigration could be a more popular coping strategy in Latvia and Lithuania than in Estonia.

In comparison with the year 2008, average annual emigration rate in 2009-2013 more than doubled in Latvia, increased by by more than a half in Lithuania and by 40% in Estonia.

**Figure 5 Gross emigration of nationals from the Baltic countries to main EU and OECD destinations, 2008-2013**



Sources: Eurostat and OECD data on immigration of foreigners by nationality; Ireland and the UK data on allocation of social security numbers. For 2013, data were available on outflows to the UK, Germany, Nordic countries, Ireland, the Netherlands and Austria (these destinations covered more than 90% of outflows in 2012); the remaining flows were (conservatively) predicted.

Emigration dynamics *during* the crisis also varied across the Baltic countries. Latvian and Lithuanian emigration feature a skewed inverse U-shaped pattern: a steep increase in 2009-2010 followed by a less steep and smaller decline (in 2011-2012 for Latvia and in 2012 for Lithuania); this pattern is found also in flows to the UK and to the Nordic countries; flows to Germany (as well as much smaller flows to BENELUX countries, Austria and Switzerland) were steadily growing at least until 2011 but experienced modest declines in 2012 and/or 2013.

Total gross emigration of Estonian nationals was growing in 2009-2012 and stabilized in 2013; the growth was driven mainly by outflows to Finland, the UK and Germany; the latter two, however, reached their peak values in 2011.

In 2012, total outflow of nationals from Latvia (respectively, Lithuania and Estonia) to the EU and OECD destinations exceeded the 2008 level by 77% (respectively, 49% and 52%). While outflows from the Baltic countries to Ireland declined by more than a half each, a substantial increase is found in the outflows to all other main destinations: outflows from Latvia and Lithuania to the UK increased by more than two-thirds; total outflow of Estonian (respectively, Latvian and Lithuanian) nationals to the Nordic countries increased by more than 80% (respectively, almost 80%; 60%), while outflow to Germany from Estonia (respectively, Latvia; Lithuania) more than doubled (respectively, more than quadrupled; almost tripled).

Plausibly, the emigration-boosting effect of the crisis in the Baltic countries included both transitory and persistent components. The latter can be explained by combination of several forces, including the network effect, non-economic push factors (such as disappointment and loss of perspective) and insufficient labor demand in the home countries.

In Latvia and Lithuania, outflows to the UK and Germany accounted for about three quarters of the total gross outflow to the EU and OECD countries in 2012; when Nordic countries and Ireland are added, this share reaches nearly 90% in each of the three Baltic countries.

Finally, in 2013, emigration from each of the Baltic countries was just slightly below the (post-crisis) 2012 level.<sup>v</sup>

Comparison of receiving and sending countries' data (also available from Figure 5) suggests that in all three Baltic countries alike, the official data underestimate the scale of emigration<sup>vi</sup> and distorts its dynamics; see Hazans (2013c: Annex A4.A1) for a more detailed discussion.

## **5 Four emigration waves in a dozen years: the changing characteristics of Baltic EU mobility**

Recent history (in 2000-2013) of emigration from the Baltic countries can be loosely divided into four episodes: (i) Pre-accession period (which we denote as 2000-2003); (ii) Post-accession period of economic growth, to which we refer as 2004-2008 (although the crisis hit Latvia and Estonia already at the end of 2008 its effect on emigration first appears only in 2009); (iii) The crisis period: 2009-2010; (iv) the post-crisis period: 2011-2013. During this relatively short time, the main reasons for emigration, emigration rates, the most popular destinations, as well as the profile of the emigrant population and emigrants' plans, have changed substantially several times.

According to the human capital model of migration decisions (Sjaastad, 1962; Borjas, 1987, 1999) an individual (or a family) decides to move if expected (over the planning period) utility in the host country (net of total cost of migration) exceeds utility in the home country. The “calculation” should account for all factors which can affect the quality of life, including job finding and job losing probabilities, expected earnings, legal status, career perspectives, working and living conditions, generosity of social security system, social and cultural norms, perceived life perspective for children, etc. The costs of migration, in turn, include monetary and effort costs related to acquiring necessary information, job search, transportation, and maintaining the connections with the country of origin, as well as psychological costs related to missing people and environment left behind, uncertainty associated with the life in the new country, and adaptation to the new reality. This framework helps to understand the patterns of selectivity of emigrants and the way these patterns change over time in response to economic, political and social developments in the source countries and in the potential host countries.

### ***The pre-accession wave: personal characteristics***

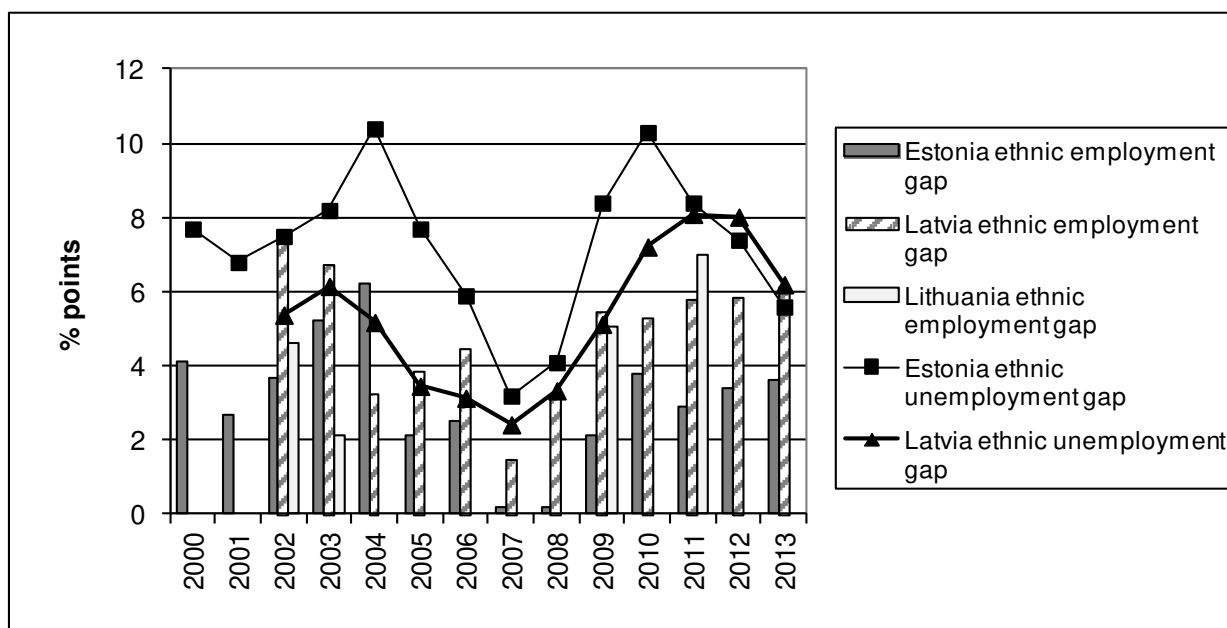
Before joining the EU (in 2000-2003), the Baltic countries featured two-digit unemployment, while GDP per capita (at PPP) was well below 50% of the EU-15 average. Earnings of an unskilled worker in the United Kingdom, Germany or the Nordic countries looked very attractive in comparison with average earnings in the Baltics.<sup>vii</sup> These strong push and pull factors resulted in a sizeable emigration potential (see Rose, 2000: 34 and Hazans, 2012: Figure 6.2 for details). This potential was larger among ((Russian-speaking)) minority population, which, in comparison to natives, featured less favorable (on average) labor market outcomes (Figure 6 below; see also Hazans, 2010; 2011a) on one hand, and a weaker attachment to the home country, on the other

(see e.g. Rose, 2000: 64-66; Aptekar, 2009; Zepa and Kļave, 2011: Boxes 1.3, 1.9, 1.16, 1.20, 1.21; Anniste and Tammaru, 2014).

However, actual emigration rates in early 2000s weren't high, not least because of an institutional environment which was not favorable to economic migration (need for work and residence permits), but also due to very high migration costs (high transportation and communication costs, limited availability of good quality internet, absence of convenient extensive sources of information on vacancies and living and working conditions abroad). During a four year period before accession (2000-2003), net outflow from Estonia (respectively, Latvia and Lithuania) was about 1% (respectively, 1.5%; 2%) of population, see Figure 3.

To understand who were the likely movers in the pre-accession period, one should notice that migration costs would have been relatively lower for persons with professional or at least private contacts in potential destinations, good foreign language and IT skills, and opportunities to use the internet for private purposes at the workplace. Clearly, all these attributes are more often found among university graduates. On the other hand, absence of a favorable legal framework, restricted access to reliable information, difficulties in job search "from overseas", as well as a high risk of fraud by domestic firms recruiting workers for jobs abroad in early 2000s, implied that emigration required a high degree of initiative and willingness to accept risk; these qualities could be substituted by access to migration networks related to previous waves of migration to/from the United States, Canada, Australia, Sweden and Germany, as well as Russia, Ukraine and Belarus. Most emigrants driven by own initiative (rather than networks) were oriented towards relatively new directions, mainly the United Kingdom and Ireland, where language barrier for them was lower than in the rest of the EU, while migration costs were lower than to other English-speaking countries. *The pre-accession wave of emigration thus featured a substantial positive selectivity on human capital and other personal characteristics, over-representation of Russian-speakers, as well as a high degree of geographical diversification.*

**Figure 6. Ethnic gaps in employment and unemployment in the Baltic countries, 2000-2013**



Notes: The gaps are defined as the differences between employment (respectively, unemployment) rates of native and minority (respectively, minority and native) population aged 15-64. Sources: Statistics Estonia online database; calculation with Latvian LFS data (2002-2013), Lithuanian LFS data (2002-2003) and ESS data (2009, 2011).

### ***Post-accession emigration: Institutional and market factors***

During the first five years within the EU (before the effect of the Great Recession on migration patterns became apparent) migration flows in the Baltics were shaped mainly by institutional and market factors.

Gradual implementation of free movement of labor within the EU (see Kahaanec et al (2014: Table 1) substantially lowered both monetary and non-monetary costs of job search abroad and migration, as well as the human capital threshold (in terms of skills, initiativeness and risk taking) for labor migration. Kahanec et al (2014) use panel of intra-EU migration flows to show that enlargement as well as removal of transititional arrangements lead to more migration.

Together with high and growing demand for migrants' labor in the EU15, this triggered a sharp and persistent increase in emigration rates (see Figure 5; see also Kahaanec et al, 2014). This, in turn, further lowered migration costs via migrant networks, rich social and media infrastructure within rapidly growing Baltic diasporas in Ireland, the United Kingdom, Sweden, Germany and elsewhere in old member states (see Hazans and Philips, 2010; OECD, 2012) and the scale effect, which caused air and land transportation costs, as well as international phone calls tariffs to fall; communication costs have been also pulled down by increased coverage and speed of internet connections.

In addition, sufficiently strong pull factors, such as higher income and better working conditions abroad (mentioned, respectively, by 60% to 70% and about 50% of potential movers from the Baltic countries in 2005), as well as family- or friends-related factors (mentioned by 13%

to 22%) were at work; together, these factors covered about 80% to 90% of potential emigrants from each of the three countries<sup>viii</sup>.

On the other hand, due to strong economic growth in the Baltic countries, the unemployment rates there were falling while real income was rising (see Figure 1 above; see also Hazans and Philips 2010: Section 7 and Figure 12), gradually reducing expected gains from emigration. Thus, during the second part of the post-accession period, motivation to move abroad driven by push factors was falling, whilst motivation to return among recent emigrants was on the rise.

As the net result of the developments briefly described above, in the five post-accession years Estonia, Latvia and Lithuania lost to emigration, respectively, 2.0%, 3.2% and 5.3% of their population (see Figure 3).

The choice of destination countries during the post-accession period was of course strongly affected by institutional factors: since May 1, 2004, emigration flows from the Baltic countries became heavily oriented towards the UK, Ireland and (to a smaller extent) Sweden, following decisions of these countries to open their labor markets for workers from the NMS. Likewise, a sharp and persistent increase of the Finland's share in Estonian emigration is observed since 2006.

In what respects were the post-accession emigrants different from the pre-accession ones? First, in 2004–2008 emigrants' self-selection in terms of human capital was driven not so much by individual's comparative advantage in lowering migration costs, but mainly by expected gains in terms of income and working conditions. These gains were, on average, larger for persons with secondary or lower education. For instance, in 2005, tertiary educated employees in Latvia earned by 54% (respectively, 76%) more than otherwise similar workers with secondary (respectively, less than secondary) education (Hazans, 2007: p.18 and Figure 2.1). By contrast, in the EU-15 countries returns to schooling for post-accession immigrants from the Baltic countries and other NMS were quite low, not least because majority of tertiary-educated members of this group held jobs which did not require higher education<sup>ix</sup>.

Hence, one should expect that, *in comparison with the pre-accession period, post-accession emigrants from the Baltic countries are, as a group, less educated* - either in absolute (composition) or in relative (selection) sense, or both.

The effect of ethnicity and citizenship on propensity to emigrate has also changed. Due to strong economic growth and labor shortage caused by emigration (see e.g. Hazans and Philips 2010: Section 7 and Figure 12), as well as gradual improvement in state language skills among young and middle-age minorities (Hazans 2010: Figure 3; Hazans 2011a: Tables 8.8-8.9), labor market position of ethnic minorities in 2004-2007 was steadily improving in Estonia and Latvia (see Figure 6) and, plausibly, also in Lithuania. On the other hand, a substantial part of minority population – those without Estonian or Latvian citizenship – was not covered by the legal provisions for free movement of labor within EU. Indirectly – via spouses who held Estonian or Latvian citizenship, as well as via migrant networks – new migration possibilities emerged also for non-citizens; yet their mobility opportunities in comparison to citizens worsened.

The above considerations suggest that, *in comparison with the pre-accession period, post-accession emigrants from the Baltic countries feature a significantly lower proportion of ethnic minorities, especially non-citizens.*

Another important feature of this emigration wave (which could not be predicted based on theoretical considerations alone) is its mixed nature: while migration was to a large extent short-term and/or cyclical ( see e.g. Hazans and Philips, 2010, Section 6, Figures 9 and 10), the Baltic diasporas abroad were steadily growing.

***Crisis-driven emigration (2009-2010): Lost jobs, lost perspectives, "new movers" and shift towards permanent emigration***

During the years of the Great Recession (2009-2010), push factors (mainly joblessness and wage cuts, but also implied inability to pay back credits<sup>x</sup>), were at work again. The psychological shock was no less painful: a large proportion of people of working age (including those who managed to keep their jobs) lost confidence in the future (see Hazans 2011b, 2013c; Saukienė 2011); as discussed in Section 2 this was most pronounced in Latvia, and least pronounced in Estonia.

Finding a job in Western Europe was not as easy as before the crisis (hence, the role of diasporas and informal networks increased). Yet it was much easier than in the Baltics. The rate of unemployment was very low (3% to 4%) in Norway, the Netherlands and Austria, and remained modest (about 8%) in the United Kingdom, Germany, Sweden, Denmark and Finland (European Commission, 2010, Table 24). During 2009-2010, the job vacancy rate (i.e. the number of vacancies relative to the sum of vacancies and occupied posts) in these countries (excl. Sweden) was five to ten times higher than in Latvia, three to more than four times higher than in Lithuania and about twice as high as in Estonia (European Commission, 2010, Chart 6). Lifting restrictions on free movement of workers from EU8 countries by Belgium, Denmark and especially Norway since May 2009 further facilitated labor migration to these destinations.

Moreover, nominal earnings continued to rise across old member states, while real earnings did not decline (European Commission, 2011, graphs I.1.8, III.A3.5). Thus, expected gains from emigration in terms of employment and earnings increased in comparison to the pre-crisis period.

In addition, as long-term joblessness was becoming more widespread in the Baltic countries, the issue of social protection, previously neglected by the middle class, has gained importance as a factor driving the migration decisions. Note that the Baltic countries feature very low income replacement rate by unemployment benefit for long-term unemployed<sup>xi</sup>; for Latvia and Estonia, this is the case also when social assistance and housing benefits are accounted for (European Commission, 2011, graphs II.2.3- II.2.4); moreover, child benefits in the Baltic countries (especially Latvia and Lithuania) were extremely low in comparison with those paid in the main destination countries for the Baltic emigrants.

High and persistent unemployment, weak social security system, lost perspectives – these were the factors that converged to make emigration a real option in the minds of Baltic residents, even those who had not considered such a possibility before. There were two kinds of these "new movers" : i) individuals who are inherently not very mobile but did not see another way out of trouble; and ii) persons who were not satisfied with the developments in the home country and with their own prospects there (even if they did not experience immediate economic hardship).



Unlike the pre-accession emigrants, *most of those who left during (and after) the crisis were not risk-takers: on the contrary, they perceived staying as too risky, and destination countries as safe heaven.*

Naturally, this implied a strong *shift from temporary emigration of breadwinners towards long-term or permanent emigration of entire families* (see Table 1 for evidence based on the daily records of EURES consultants in Latvia).

**Table 1. Changes in the profile of EURES clients in Latvia, 2004-2010**

2004-2007	2008-2010
Planning to move alone	Planning to move with family
Looking for temporary, low-skilled job	Looking for permanent, skilled job
Minimal knowledge of foreign languages	Better knowledge of foreign languages, higher qualifications
Planning to return	Interested in legal employment and social protection

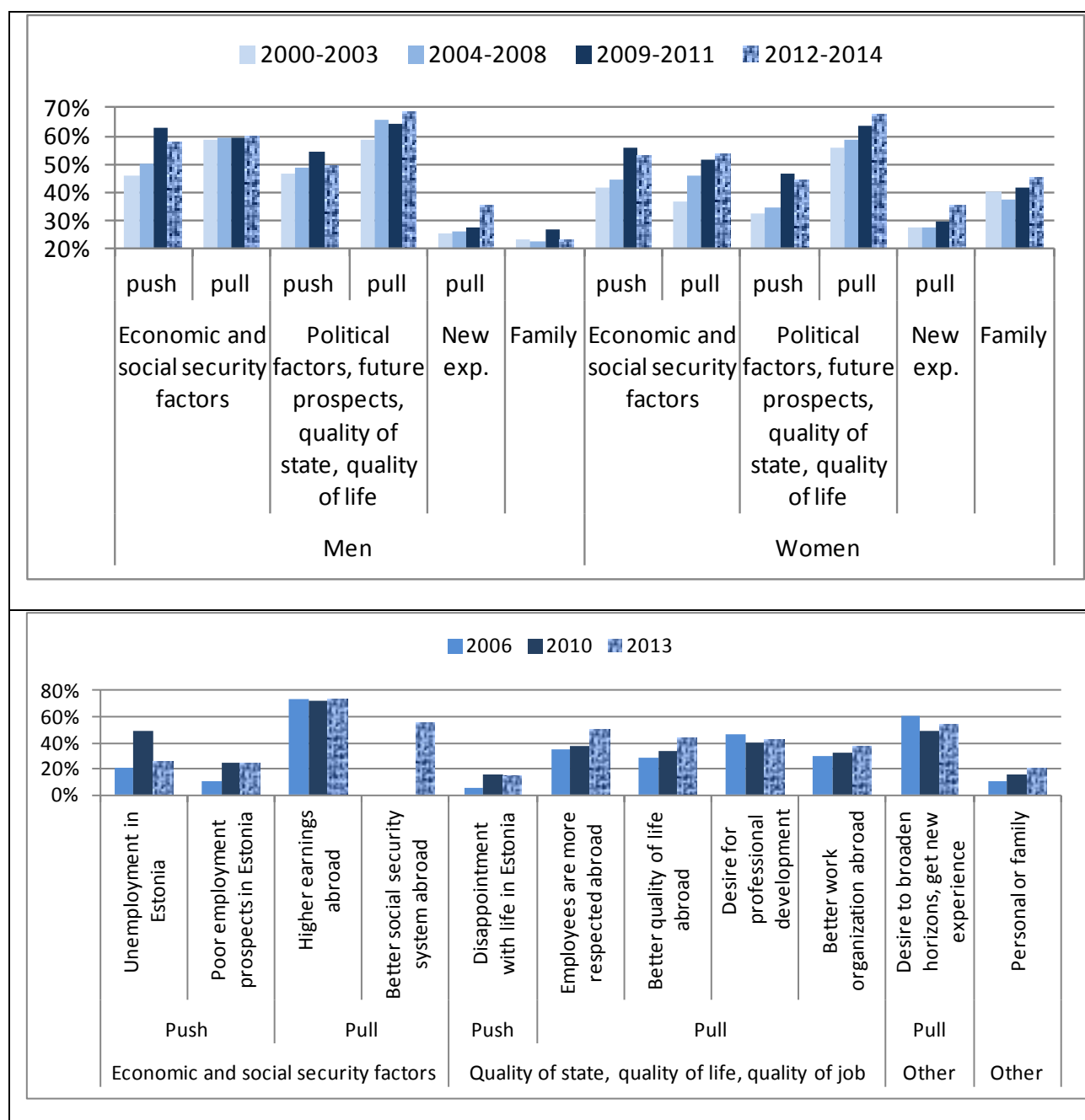
*Source:* Hazans (2013c: Table 4.6)

Evidence from survey of Latvian emigrants conducted in 2014 and surveys on emigration intentions in Estonia conducted in 2006, 2010 and 2013 presented in Figure 7 confirms that during the crisis years importance of both economic and non-economic push factors, better social security abroad, as well as family-related factors sharply increased in both countries.

How and why did the crisis change the emigrants' profile? In all three Baltic countries, joblessness increased particularly among individuals without higher education (and even more so among those who have completed only basic school or less)<sup>xii</sup>; On the other hand, in Latvia and Estonia, relative labor market position of ethnic minorities (especially Latvian and Estonian non-citizens) deteriorated during the crisis (see Figure 6 above and Hazans (2010: Figure 9; 2013c: Table 4.5); in Latvia, it was accompanied by strengthening of the state language proficiency requirements in the private sector (Hazans 2010:151; 2011:187).

Hence, based on (domestic) economic factors alone, one should expect a significant increase in the proportions of the low-skilled and (in case of Estonia and Latvia) of the Russian-speakers among emigrants (see Hughes (2005) and Ivlevs (2013) for some theoretical considerations, and Hazans (2013c) for intentions-based empirical evidence), whilst there is no reason to believe that brain drain will intensify. On the other hand, in times of crisis, the low-skilled might find it difficult to compete with secondary school graduates for jobs abroad (one of the reasons being poor language skills). Moreover, given that in Latvia and (to some extent) Lithuania the crisis was perceived as systemic, the proportion of high-skilled among Latvian and Lithuanian emigrants could also rise, because people who have opted to invest in higher education are usually future-oriented.

**Figure 7. Prevalence of various reasons for emigration among emigrants from Latvia (2000-2014, upper panel) and potential emigrants from Estonia (2006-2013, lower panel)**



Sources: Latvia (upper panel) - calculations with emigrants' survey data. Estonia (lower panel): Emigration intentions surveys' data reported in Tarum (2014) and own compilation.

The ethnic story is also not straightforward, as a number of factors work against expected shift towards higher proportion of minorities among emigrants. First, Estonian and Latvian non-citizens (as well as residents holding citizenship of Russia and other CIS countries) are not covered by the free mobility provisions. Second, there is anecdotal and media evidence that emigration of young ethnic Latvians, especially those coming from small towns and countryside,

is growing because the share of those able to communicate in Russian is falling, and without Russian language skills it is difficult to find a job in big cities. Finally, for ethnic Estonians, emigration to Finland (which hosts most of Estonian emigrants) is easier than for non-Estonians because Estonian language is similar to Finnish (Praagli, 2011).

### ***The post-crisis wave (2011-2014): Emigration as "the new normal".***

In the aftermath of the Great Recession, despite economic recovery, there have been no clear signs of a considerable slowdown in emigration from the Baltics; moreover, potential for further emigration is high and growing. Pull factors gained importance among the drivers of emigration; furthermore, while economic reasons for emigration remain widespread, non-economic ones become increasingly important, especially among university-educated population (see Figure 7 above; see also Hazans, 2011b; 2013c; Saukienė, 2011; Samoškaitė, 2012). In terms of destinations, Germany, which opened its labor market for EU-10 workers in 2011, increased its share in Baltic emigration flows (see Figure 5); plausibly, this had an impact also on composition of these flows, as Germany is more attractive than, say, the UK, for middle-aged skilled manual workers.

Vast majority of Baltic populations now have close relatives or friends who have moved abroad. Migration flows are shaped by these migrant networks, along with already formed but not yet implemented emigration intentions (Hazans, 2013c; Veidemann 2010; Tarum 2014); in 2012-2013, 8% of adult population in Estonia and 12% in Lithuania planned to move abroad permanently (Hazans 2015b:16). Emigration has become “the new normal” (Hazans, 2014b), and the Baltic diasporas will keep growing in the years to come.

## **6 The changing selectivity of emigrants: 2000-2014**

### ***Human capital***

Analysis of trends in the "brain drain", i.e. the patterns of emigrants' selectivity on human capital is complicated by a rather strong positive trend in skill composition of the Baltic populations during the whole period of 2000-2013. To facilitate comparison across time, we use selectivity index  $SI = \ln(G_M/G_S)$ , where  $G_M$  and  $G_S$  are shares of university graduates (or any other group of interest) among movers (i.e., emigrants) and stayers, respectively; thus,  $SI$  is positive (negative) if tertiary educated persons are over-represented (under-represented) among movers (Hazans, 2011b; 2012; 2013c<sup>xiii</sup>).

We start by using national LFS data on Baltic workers abroad reported as household members in the home country (the analysis here extends that in Hazans 2012: 183-187). According to LFS rules, these are "recent" emigrants, away from home for less than a year, which allows treating data as "flow". Data presented in Figure 8 (top panel) support, for each of the three countries, the hypotheses put forward in the previous section: university graduates were over-represented among pre-accession emigrants (this was least pronounced in Estonia); both the share of tertiary-educated among emigrants and the corresponding selectivity index "at departure" (which compares, for each period, emigrants with sending country's population aged 18-64 in the same period) drop in the post-accession period<sup>xiv</sup> (reflecting higher expected gains for the low- and medium-skilled) and, except for the case of Estonia<sup>xv</sup>, take higher values during and after the

crisis (reflecting rise of general disappointment and non-economic reasons for emigration in Latvia and Lithuania).

On the other hand, for Estonia and Latvia, both the share of low-skilled among emigrants and corresponding selectivity index is higher in the post-accession period than before (supporting the idea that free movement of labor lowered human capital threshold for migration) and further increases during and after the crisis (reflecting the fact that the low-skilled suffered stronger and longer from the recession-related joblessness). For Lithuania, the share and selectivity index of low-skilled slightly decreased after EU enlargement, but less so than respective indicators on the tertiary-educated, so the Lithuanian data are also consistent with the notion of post-accession emigrants being less educated. During the crisis, Lithuanian low-skilled (in contrast with their Estonian and Latvian counterparts) were even stronger under-represented among (recent and having family left behind) emigrants (probably they, due to poor language skills, were less inclined to emigrate when job finding in the destination countries became more difficult).

We proceed by using Population Census (or Population Register) data on educational attainment of **adult (aged 15+)** Baltic-born residents of European OECD countries early in 2011, depending on the arrival period. These are stock data, and emigrants' education could be completed also after leaving the home country. Therefore we use "age-adjusted stock selectivity index" to compare educational attainment of emigrants with that of sending country's population in 2011q1, assuming the same (country and arrival period-specific) age distribution as for the stock of emigrants from this country to the given destination. This way, we are indeed measuring "brain drain" rather than "diploma drain".

Data from the UK, the destination of about two-thirds (respectively, about three-fifths; one-fifth) of Latvian (respectively, Lithuanian; Estonian) post-2000 expats in EEA/EFTA countries are presented in Figure 8 (lower panel); other destinations are featured in Figure 9.

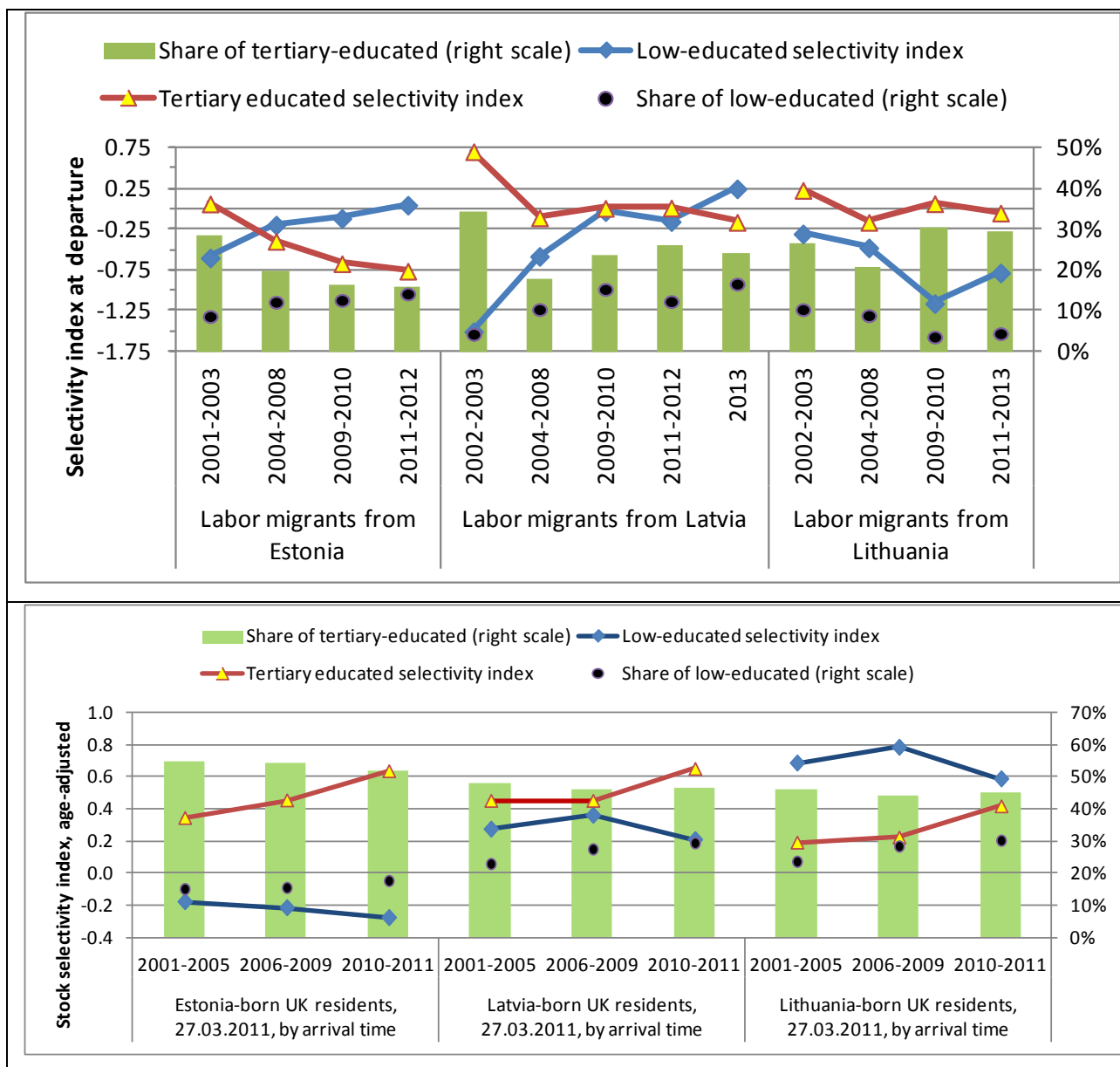
More than a half (respectively, almost a half; about 45%) of Estonian (respectively, Latvian; Lithuanian) emigrants who arrived to the UK in the 21<sup>st</sup> century were tertiary-educated by 2011. This is substantially more than among their age peers back home at the same time, as the corresponding values of stock selectivity index (or the "brain drain index") are well above zero (Figure 8, lower panel)<sup>xvi</sup>.

In other European OECD countries (excl. the German-speaking ones), university graduates accounted, on average, for 30% of Latvian and 35% of Lithuanian emigrants (as of 2011), but just for 20% of their Estonian colleagues. The "brain drain index" is negative (and falling) for Estonia, while for Latvia and Lithuania it displays a positive trend being, on average, close to zero for pre-accession and post-accession waves, but strongly positive during the crisis (Figure 9, top panel).

Overall, thus, by 2011, university graduates were over-represented among post-2000 Latvian and Lithuanian emigrants in European OECD countries but under-represented among Estonian emigrants. The extent of brain drain from the Baltics, however, varied strongly depending on destination country (Figure 9, lower panel): the proportion of tertiary-educated among Estonian emigrants is extremely low in Finland, moderate in Ireland and rather high elsewhere, while the share of university graduates among Latvian and Lithuanian emigrants in Ireland is much lower than in other European destinations.

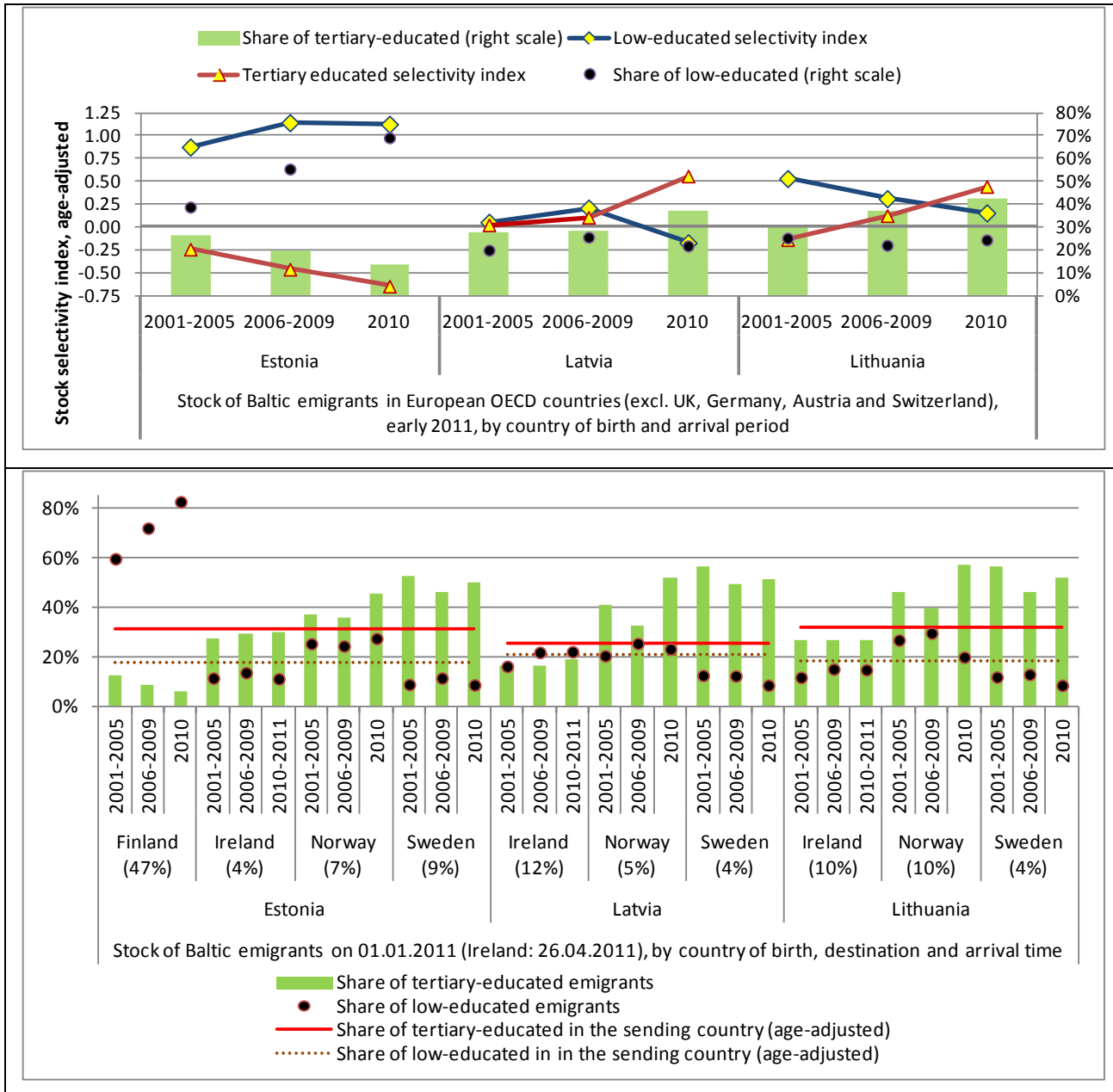
On age-adjusted basis, the low-educated are over-represented among post-2000 Baltic emigrants in OECD/Europe taken together, but the opposite is found for Estonian emigrants in the UK, Estonian and Lithuanian emigrants in Ireland and Sweden and Latvian emigrants in Sweden, see Figure 8 (lower panel) and Figure 9.

**Figure 8. Skill composition and selectivity of emigrants from the Baltic countries, 2000-2013.**  
**Top: Baltic mobile workers reported as household members in the home country (LFS data).**  
**Bottom: Baltic-born residents of the UK aged 15+ (stock, 27.03.2011, by arrival time)**



*Notes:* In the top panel, the (flow) selectivity index compares, for each period, "recent" mobile workers with sending country's population aged 18-64 in the same period. In the bottom panel, the (stock) selectivity index is age-adjusted, i.e. calculated vs. sending country's population in 2011q1, assuming the same age distribution as for the stock of emigrants from this country to the UK (according to the UK Census data). *Sources:* Top - calculations with LFS data. Bottom - calculation with the Population Census data (UK, and the Baltic countries) and Eurostat data.

**Figure 9. Skill composition and selectivity of the 21<sup>st</sup> century emigrants from the Baltics.**  
**Top: Total stock in OECD/Europe (excl. the UK and German-speaking countries), early 2011.**  
**Bottom: Ireland, Sweden, Finland and Norway, early 2011.**



Notes: The (stock) selectivity index is age-adjusted, i.e. calculated vs. sending country's population in 2011q1, assuming the same (period-specific) age distribution as for the stock of emigrants (aged 15+) from this country to the countries considered. Data were not available for Baltic emigrants in Germany, Austria and Switzerland. For each destination country, its share in the stock of post-2000 emigrants from given Baltic country to OECD/Europe (as of early 2011) is shown in parentheses. Sources: OECD (2014b), Eurostat data on population by educational attainment level, sex and age, and own calculation.

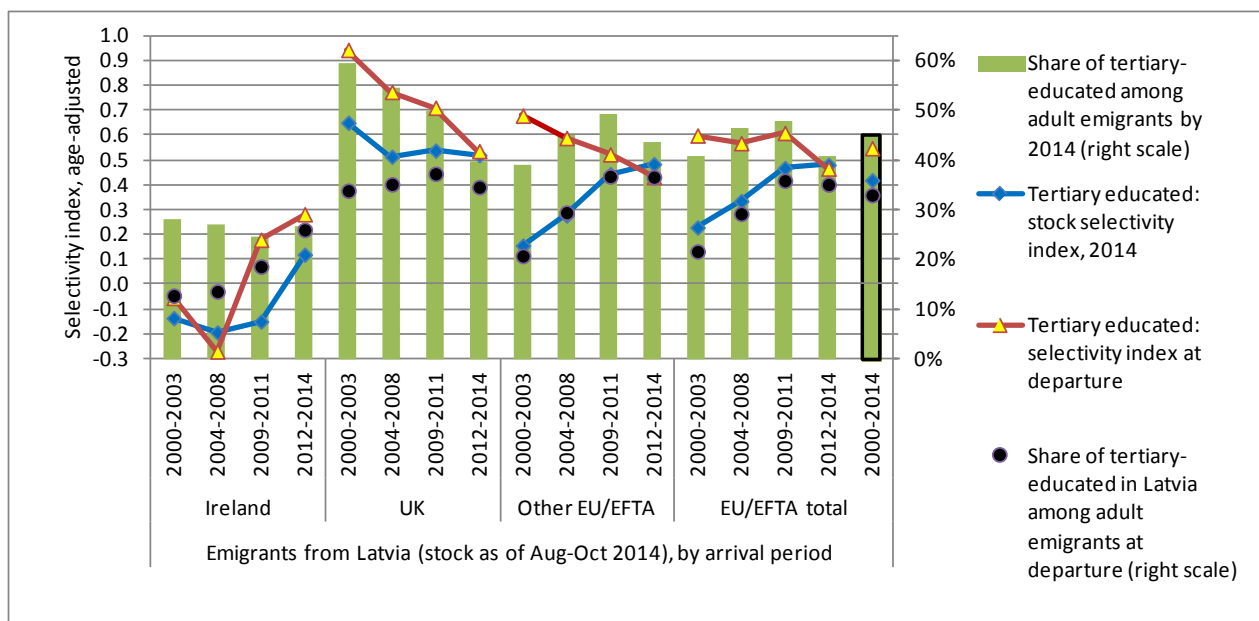
For emigrants from each of the three Baltic countries in the UK, the highest value of the stock *SI* for tertiary-educated, as well as the lowest value of the stock *SI* for the low-educated, is found during the crisis period (Figure 8, lower panel). The same is true for Latvian and Lithuanian

emigrants in other European OECD countries, as well as for Estonian emigrants in Ireland, Sweden and (regarding high-educated) Norway (Figure 9, lower panel). This, once again, provides strong empirical support to the idea that brain drain has intensified during the crisis (emigration from Estonia to Finland being an exception).

The hypothesis that post-accession emigrants are less educated than the pre-accession ones also seems to be consistent with the data from the main destination countries<sup>xvii</sup>. This is the case for Latvian and Lithuanian emigrants in the UK and Ireland, as well as for Estonian emigrants in Finland and for emigrants from each of the Baltic countries in Sweden and Norway (see lower panels of Figures 8-9).

We conclude the analysis of emigrants' selectivity on human capital using data from online survey of the Latvian emigrants which attracted about 14 thousand respondents across the world<sup>xviii</sup>. To save space, we focus on tertiary-educated. This time, we are able to compare selectivity at departure and the stock selectivity (using age-adjusted indexes in both cases). The data, covering emigrants which left Latvia in 2000-2014 are presented in Figure 10, separately for Ireland, the UK and other EU/EFTA countries, as well as for all EU/EFTA destinations.

**Figure 10 Shares, flow selectivity and stock selectivity of tertiary educated emigrants from Latvia, 2000-2014, by destination and arrival period**



*Notes:* The (stock) selectivity index compares, for each destination and arrival period, human capital of the stock of adult Latvian emigrants in August - October 2014 with human capital of Latvia's population as of 2014, assuming the same (destination-and-arrival-period-specific) age distribution as for the stock of emigrants. The (flow) selectivity index compares, for each destination and arrival period, the share of emigrants who left Latvia aged 15+ with completed tertiary education with the share of tertiary educated stayers in that period, assuming the same age distribution as for those who moved from Latvia during that period. *Sources:* Calculation with emigrant survey data and Eurostat data.

Noteworthy, choice of destination was not neutral with respect to human capital: Between 2000 and 2014, the proportion of university graduates among adult Latvian emigrants arriving to Ireland (respectively, the UK and the rest of EU/EFTA) varied from 13% to 26% (respectively, from 34% to 37% and from 21% to 37%). Except for Ireland in 2000-2008, these shares were well above those found in respective periods among stayers of the same age as emigrants, as indicated by positive values of selectivity index at departure (ranging between 0.23 and 0.48 for the total outflow to EU/EFTA). Thus, these data confirm substantial (and increasing over time) diploma drain from Latvia to various EU/EFTA destinations during the whole period between 2000 and 2014. The share of tertiary educated among emigrants further increased during their stay in the host countries, reaching, by mid-2014, 45% on average across destinations and arrival periods (Figure 10; note that the shares shown for 2014 in the Figure refer to those aged 15+ in 2014, but they would change by less than 1 percentage point if those who were aged 15+ when arrived would be considered). *Ireland aside*, the brain drain selectivity index (stock *SI*) takes positive values<sup>xix</sup>, indicating that *by 2014, the share of university graduates among Latvian emigrants in each of the destinations under inspection was higher than among their age peers in Latvia.*

Do data presented in Figure 10 support our expectations regarding selectivity patterns? Our first hypothesis stated that the post-accession emigrants are, as a group, less educated than the pre-accession ones. This is strongly supported by selectivity index at departure for all destinations considered, as well as by stock selectivity index in Ireland and the UK. Moreover, for the UK this is also true in terms of the shares of university graduates among emigrants found in 2014.

Regarding the crisis period we had ambiguous expectations: Baltic residents with higher education were, on average, less hardly than others hit by unemployment but, plausibly more likely to emigrate for non-economic reasons. Evidence from Figure 10 (the share of university graduates at departure) suggests that *during the crisis, diploma drain from Latvia was more intensive than before*, although for destinations other than Ireland this reflected fast growth of high-educated segment of the young and middle-aged population in Latvia, while the selectivity index was falling. On the other hand, the stock selectivity index suggests that *by 2014, the crisis wave (and, except for the UK, also the post-crisis wave) of emigrants from Latvia featured more intensive brain drain than the post-accession wave.*

Hazans (2012: 193-194) provides econometric analysis of determinants of work abroad using data from Estonian and Latvian LFS 2001-2009. He finds that propensity to work abroad among the university graduates (respectively, among the low-skilled) has decreased (respectively, increased) after EU accession both in Estonia and Latvia. During the first year of the crisis, the differences between the skill groups in terms of propensity to work abroad have disappeared in Latvia (supporting the idea of systemic nature of the crisis there), while in Estonia these differences hardly changed since the pre-crisis period.

Yet another way of measuring the brain drain is suggested in Hazans (2013c: Figure 4.21), where it is shown that during the crisis emigrants from Latvia (especially the top half) were relatively much more productive than before. This supports the hypothesis that the brain drain intensified during the crisis. This effect, however, did not last for more than two years.

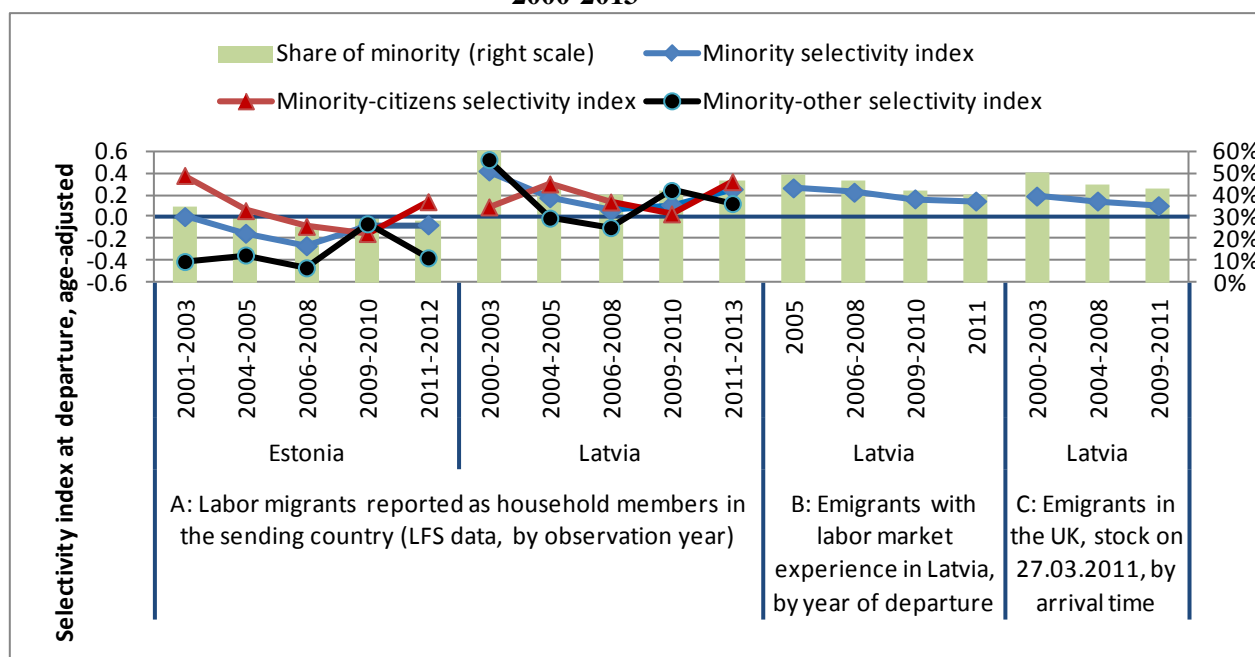


### *Ethnicity and citizenship*

Figure 11 (panels A-C) presents empirical evidence from Latvia and Estonia on ethnic composition of the four recent waves of emigrants. As seen in panel A (which extends results of Hazans 2012: Section 5), the share of minorities among the individuals working abroad but still considered household members at home is U-shaped, reaching its minimum in 2006-2008 (when the ethnic gaps in employment and unemployment in both countries were at their lowest values, see Figure 7) and increasing during the crisis, when relative labor market position of ethnic minorities deteriorated. Corresponding selectivity index (which accounts for the fact that minority share in the population of the sending countries was declining over time and is smaller among the youth and the middle-agers than among the elderly) follows the same pattern, consistent with expectations stated in Section 5.<sup>xx</sup> Moreover, as expected, selectivity indexes of minority individuals with and without Estonian/Latvian citizenship move in opposite directions (except for the second part of the post-accession period).

The Latvian results are fully consistent with the expectations: after accession, propensity to work abroad increased among minority population with Latvian citizenship but decreased among non-citizens and those holding CIS countries' passports. During the crisis it was the other way around (both in Latvia and Estonia); in other words, the crisis-triggered joblessness was strong enough push factor to overcome the institutional barrier - lack of free mobility provisions for residents of Latvia and Estonia without citizenship of these countries. In the post-crisis period, however, propensity to work abroad is again higher among minority citizens than among noncitizens.

**Figure 11 Ethnic composition and selectivity of emigrants from Estonia and Latvia, 2000-2013**



*Notes:* In the Latvian part of panel A, citizenship-specific selectivity indexes for 2000-2003 due to data limitations refer to 2002-2003. In panel B, the data refer to persons which where either officially employed or registered unemployed in Latvia for some time in 2005-2011, have neither died nor retired in Latvia but have disappeared (at age below 60) at least for a year from both State Social Insurance Agency (SSIA) and State Employment Agency (SEA) records. In panel C, the data com from the UK Population Census 2011 but cover only England and Wales. *Sources:* Panel A: National LFS data and own calculation. Panel B: Merged records of SSIA, SEA and Population Register and own calculation. Panel C: ONS (2014a) and own calculation.

Noteworthy, Latvian minorities were over-represented among mobile workers still attached to their Latvian households in the whole period between 2000 and 2013 (selectivity index falls from 0.42 before accession to 0.06 in 2006-2008 and rises again to 0.25 in 2011-2013), while their Estonian counterparts were under-represented in 2004-2012, as seen by negative values of selectivity index. Plausibly, the Estonian case can be explained by the comparative advantage ethnic Estonians have over Russians in Finland's labor market due to similarity between Estonian and Finnish languages. However, the share of Russian-speakers among Estonia-born in Finland seems to be on rise since 2008 (Hazans 2014b:12).

Panels B of Figure 11 is based on Latvian administrative data and refers to emigrants which left Latvia in 2005-2011 and have been officially employed and/or registered as unemployed in Latvia during this period. Panel C of Figure 11 is based on the data of the UK Population Census 2011 and refers to Latvia-born residents of England and Wales which arrived to the UK in 2000-2011 (before the Census). For 2005-2011, these two independent data sources (both free from the restriction that the emigrants are still considered household members in Latvia) give consistent estimates of the proportion of non-Latvians among emigrants: between 49% and 40% in general and between 44% and 43% in England and Wales; both sources suggest that this proportion was falling over time, yet minorities remained over-represented among emigrants. Panel C supports our expectation (see Section 5) that the proportion of ethnic minorities among post-accession emigrants (and respective selectivity index) was smaller than before. Unlike the Latvian part of

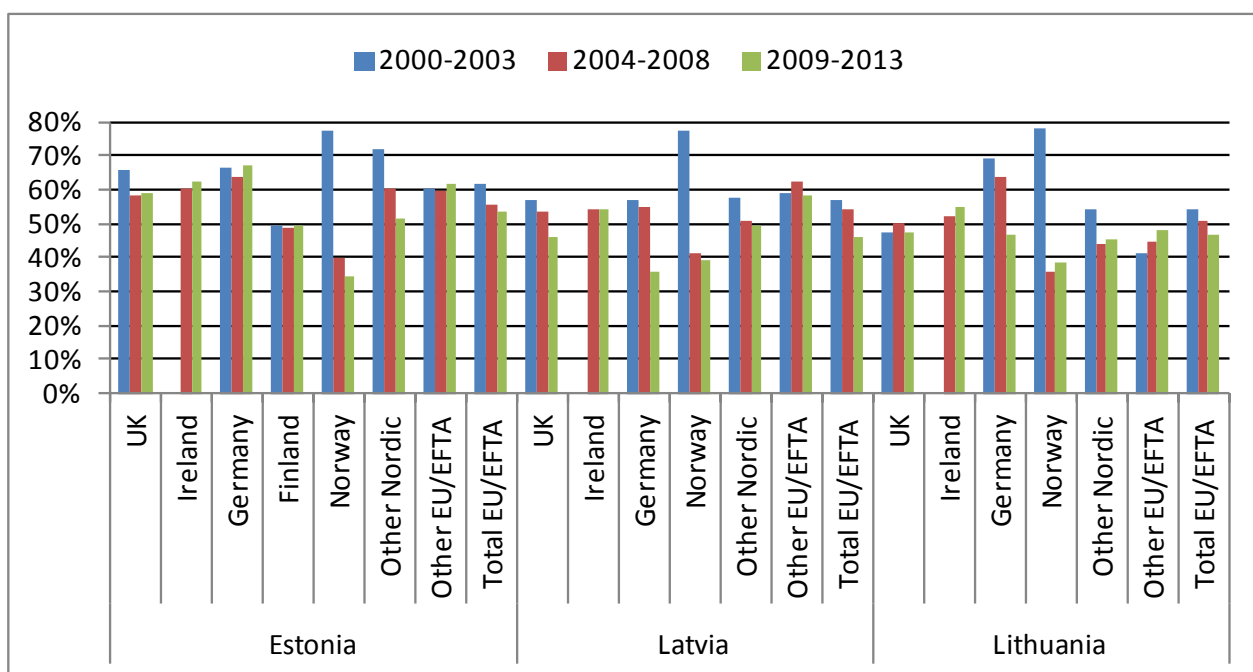
panel A, panels B and C do not feature an increase in the minority selectivity index after the crisis; this might have to do with the data coverage (only (part of) 2011 in panel C as opposed to 2011-2013 in panel A) but also with different definitions of "emigrants".

Note that even when ethnicity and citizenship are controlled for, country of birth is an important driver of emigration: other things equal, foreign-born minority individuals are much more likely to work abroad (Hazans, 2012: 193-194).

### *Gender and family<sup>xxi</sup>*

We start this subsection by looking at gender balance of emigration flows across time periods and European destinations (Figure 12). The share of females in total gross outflow from Estonia (respectively, Latvia, Lithuania) to EU/EFTA countries was declining over time: from 62% (respectively, 57%, 54%) in the pre-accession period to 54% (respectively, 46%, 47%) in 2009-2013. What are likely explanations for higher female share in pre-accession emigration? First, in the absence of free movement of labor, non-labor migration accounted for a larger share of outflows: according to the survey of Latvian emigrants (see endnote <sup>xviii</sup>), 25% of females which moved from Latvia in 2000-2003 indicate finding a foreign spouse/partner as one of the reasons for emigration, while this proportion falls to 14% in 2004-2008 and 11% in 2009-2013. Second, while at that time there was no easy ways to find jobs in formal sector abroad, working *au pair* (often informally) was a popular first step available almost exclusively to females.

**Figure 12 Female share in gross outflows from the Baltic countries by destination, 2000-2013**



Source: Calculation with data of Eurostat and UK Department of Work and Pensions.

Another noteworthy message from Figure 12 is that the main destinations of labor migrants (Finland for Estonia, the UK and Ireland for Latvia and Lithuania) feature roughly equal

proportions of males and females. By contrast, flows to some of the other important destinations remained female-dominated also in the post-accession period; this was the case for the flows to Germany before it opened its labor market in 2011 (and also after that for Estonia), as well as for Estonian, Latvian and (during and after the crisis) Lithuanian flows to destinations other than the UK, Ireland and the Nordic countries. On the other hand, post-accession flows to Norway from all Baltic countries were male-dominated (likely due to high demand for physically demanding occupations).

Table 2 illustrates that shift towards family migration during and after the Great Recession (see Table 1) increased the share of children in Latvian and Lithuanian (respectively, Estonian) outflows to the Nordic countries from about 10% (respectively, 14%) in 2004-2008 to 14% (respectively, 18%) in 2009-2013, while in outflows from Latvia and Lithuania to Ireland this share increased from 11% in 2007-2008 to about 20% in 2009-2013. In the same time, number of Baltic children left in foster care by emigrated parents also increased substantially: in Latvia, the such children accounted for 5% to 6% of all students of general schools in 2010-2013<sup>xxii</sup>; in Lithuania, the annual number of new requests for foster care for to parents' emigration in 2008 - 2011 has more than doubled compared to the pre-crisis level (Sipavičiene and Stankuniene, 2013: Table 3.4). This problem attracted a lot of public attention; special government regulations have been adopted in Latvia and Lithuania (Broka, 2011; Sipavičiene and Stankuniene, 2013).

**Table 2 Share of children below 15 years of age in emigration flows from the Baltic countries to selected destinations, by period**

	Outflows to the Nordic countries			Outflows to Ireland	
	Estonia	Latvia	Lithuania	Latvia	Lithuania
2000-2003	13.9%	10.3%	6.0%		
2004-2008	13.6%	9.9%	9.5%	2007-2008	10.9% 11.4%
2009-2013	18.3%	14.0%	13.6%	2009-2013	21.0% 18.2%

Source: Calculation with Eurostat data

According to the survey of Latvian emigrants (see Hazans (2015a) and endnote <sup>xviii</sup>), 10% of adult Latvian emigrants have children of pre-school or school age left in Latvia, while 25% live with such children abroad.

## 7 Emigrants' labor market status, occupation and downskilling

Figure 13 (top panel) compares employment, unemployment and inactivity rates of Baltic emigrants and natives in the UK, Ireland (for Estonia - Finland) and other European OECD countries<sup>xxiii</sup> in 2011, separately for the youth and the 25-64 years olds (we refer to the latter group as "adults" hereafter); the corresponding rates for stayers in the Baltic countries are shown alongside.

In the UK labor market, Baltic emigrants fare much better than natives (and of course than stayers in their home countries). Among the youth, emigrants enjoy much higher employment and substantially lower unemployment rates. Baltic-born adults in the UK feature unemployment rates similar to those of natives (but lower than those found in the Baltics). Employment rates of Latvia- and Lithuania-born exceed those of natives (respectively, stayers) by 10 (respectively, 15)

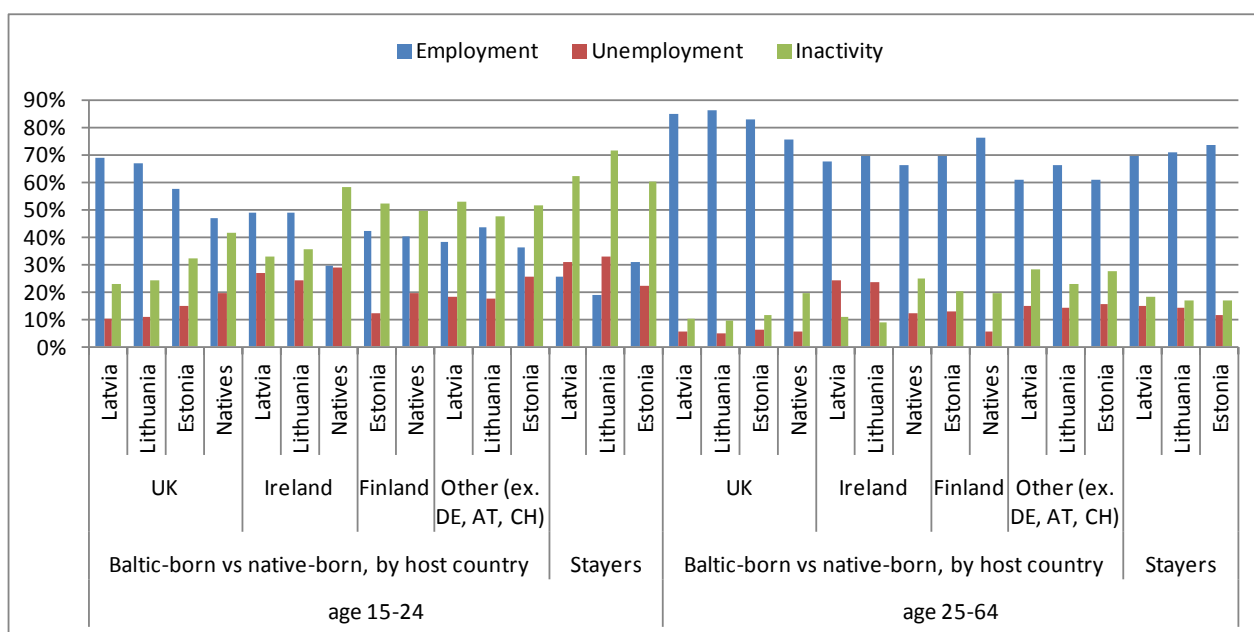
points, while inactivity rates are by 8 to 10 points lower than among natives and stayers. For Estonians, the gaps are somewhat smaller but still substantial.

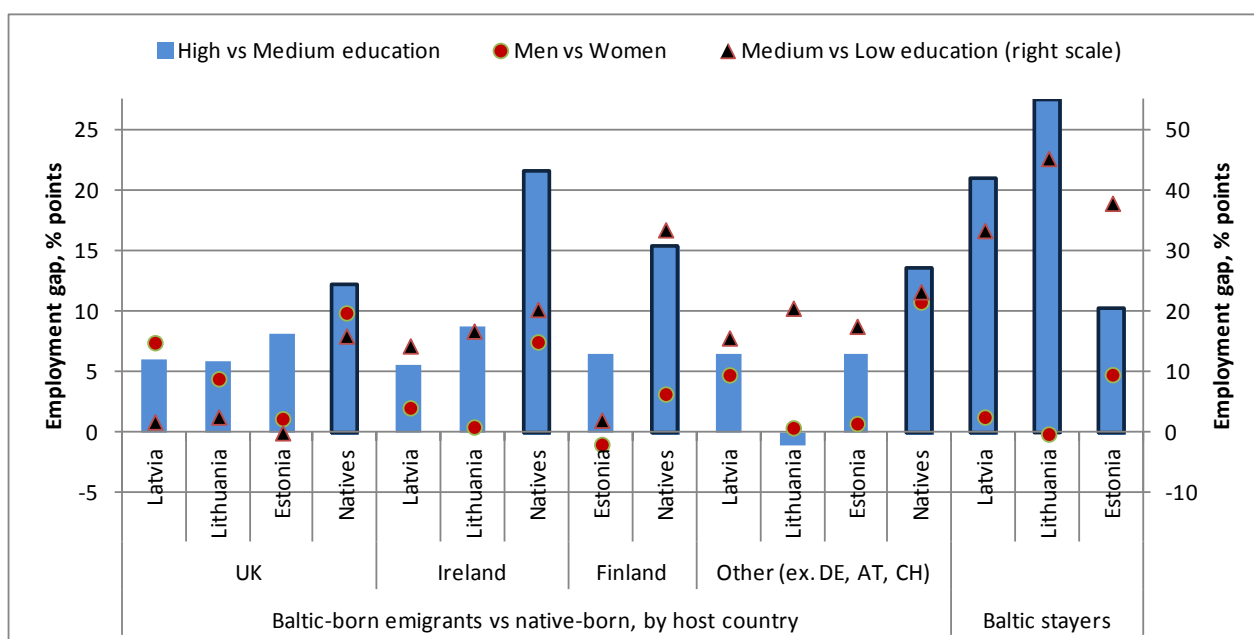
In Ireland, employment rates of Baltic-born youth (about 50%) are lower than in the UK, yet well above those of Irish-born youth (30%), let aside Baltic stayers; youth unemployment rates are high (around 25%) yet lower than 30% found among both Irish-born youth in Ireland and Baltic youth at home. Situation among adults differs: employment rates of Latvians and Lithuanians in Ireland (almost 70%) are similar to those of native-born and also to those found in the home countries, but unemployment rates among the Baltic-born, at 24%, are twice as high as among natives and by about 10 points higher than among stayers. Inactivity rates among the Baltic emigrants in Ireland, at about 10%, are much lower than among natives (25%) and Baltic stayers (17%).

The main destination of Estonian emigrants is Finland; here, Estonia-born youth feature similar employment rate but lower unemployment rate than their native-born counterparts; on both accounts young emigrants outperform young stayers. By contrast, among Estonia-born adults in Finland employment rate is somewhat lower, but unemployment - twice as high as among natives; moreover, among adult stayers both indicators are better than among emigrants in Finland. Like in case of Latvians and Lithuanians in Ireland, this disadvantage is outweighed by higher earnings and benefits in Finland.

Finally, in other European OECD countries young Baltic emigrants have, on average, higher employment rates than their counterparts in home countries. On the other hand, employment rates of Baltic emigrants aged 25-64 are, on average, 5 to 10 points below those of stayers in the same age.

**Figure 13 Labor market status of Baltic emigrants and natives in selected European OECD countries in comparison with Baltic stayers, 2011**  
**Top: Youth and adult employment, unemployment and inactivity rates**  
**Bottom: Employment gaps by gender and educational attainment (age 15-64)**





Notes: "High" refers to tertiary education (ISCED11 levels 5-8); "Medium" - to upper secondary and post-secondary non-tertiary education (ISCED11 levels 3-4); "Low" - to ISCED11 levels 0-2 (lower secondary, primary and below). Sources: Emigrants - calculations with data from OECD (2014b). Natives and Baltic stayers - calculation with EU LFS data (Eurostat).

As shown in the bottom panel of Figure 13, tertiary-educated Baltic emigrants enjoy employment rates by 6 to 9 points higher than their medium-educated counterparts in all main European destinations; these skill-driven employment gaps among emigrants are, however, substantially smaller than among natives in the same countries and among Baltic stayers. Employment gaps between medium- and low-educated Baltic emigrants are absent in the UK and Finland (where such gaps for natives are very large); by contrast, in Ireland and other European destinations employment rates of medium-educated emigrants exceed those of low-educated emigrants by 14 to 20 points, yet these gaps are slightly (respectively, much) smaller than those found among natives (respectively, Baltic stayers). We conclude that employment gain from emigration is inversely related to education level among Baltic emigrants.

While gender gaps in employment are close to zero among stayers in Latvia and Lithuania, among emigrants from these countries in their main destination, the UK, male employment rates exceed female ones by 7.5 and 4.5 points in Latvian and Lithuanian case, respectively; these gaps are smaller than 10 points found among UK natives. In other destinations, gender gaps in employment are close to zero among Lithuanian emigrants and vary between 2 and 5 points among their Latvian counterparts, well below the gender gaps among natives. Estonian male and female emigrants feature almost equal employment rates in all destination countries, while among stayers in Estonia male employment rate is by 5 points higher (Figure 13, bottom).

More detailed information available from UK Population Census 2011 (ONS 2013, 2014a) indicates that 20% of employed Lithuanian emigrants in England and Wales were self-employed; this proportion is similar to that found among emigrants from non-Baltic NMS but higher than among natives (15%) and Latvia-born emigrants (9%); note that in the same year there were about 11% self-employed among employed stayers in both Lithuania and Latvia.

Figure 14, based on a survey conducted in 2014<sup>xxiv</sup>, provides a more detailed breakdown of post-2000 Latvian emigrants' main activities abroad (by gender, education, destination country and period of arrival). Overall, two-thirds are employees, about 7% - self-employed, 9% - students, 3% - jobseekers, 10% care for children or other family members, and just 5% are other inactive (note that 99.5% of respondents are aged 15-64). Employment rate is much higher among men (83% vs 64% among women), but this is largely balanced by child (and other family members) care duties (16% among women vs. 3% among men). While recent emigrants feature somewhat lower employment rates (72% and 68% among those who arrived in 2009-2011 and 2012-2014, respectively, vs. 80% among those who arrived in 2004-2008), the proportion of emigrants who are either employed or students is more stable: 82%, 85% and 81% for pre-enlargement, post-enlargement and post-crisis waves, respectively. Proportion of self-employed increases with education level; it is lowest in Ireland and highest in non-English speaking EU/EFTA destinations, as well as in destinations outside EU/EFTA.

Regarding emigrants' occupation, we use two complementary data sources (see Figure 15). Data of UK Population Census 2011 (ONS 2014b) cover all emigrants considered as usual residents as of March 27, 2011; for comparison, data on UK natives and Baltic stayers are presented alongside. In addition, for Latvian emigrants we provide data by period of arrival to the UK. On the other hand, Latvian and Lithuanian LFS data (2000-2013; split into three periods) provide information on residents of these countries working abroad but still considered household members at home.

According to both data sources, Baltic emigrants and mobile workers, in comparison with stayers (and in the UK, also with natives) feature much smaller proportions of high-skilled nonmanual workers and much larger proportions of elementary occupations (Figure 15). When split by gender (these results are not shown in the Figure), it appears that female emigrants and mobile workers, in comparison with their male compatriots, feature by 3 to 5 points higher proportions of high-skilled nonmanual occupations, much higher proportions of low-skilled nonmanual (clerical, sales and service) occupations and much lower proportions of skilled manual occupations; the share of elementary occupations among Estonian and Latvian emigrants (as well as among post-crisis Latvian mobile workers) does not vary by gender, but is much higher among Lithuanian female emigrants and mobile workers than among their male counterparts.

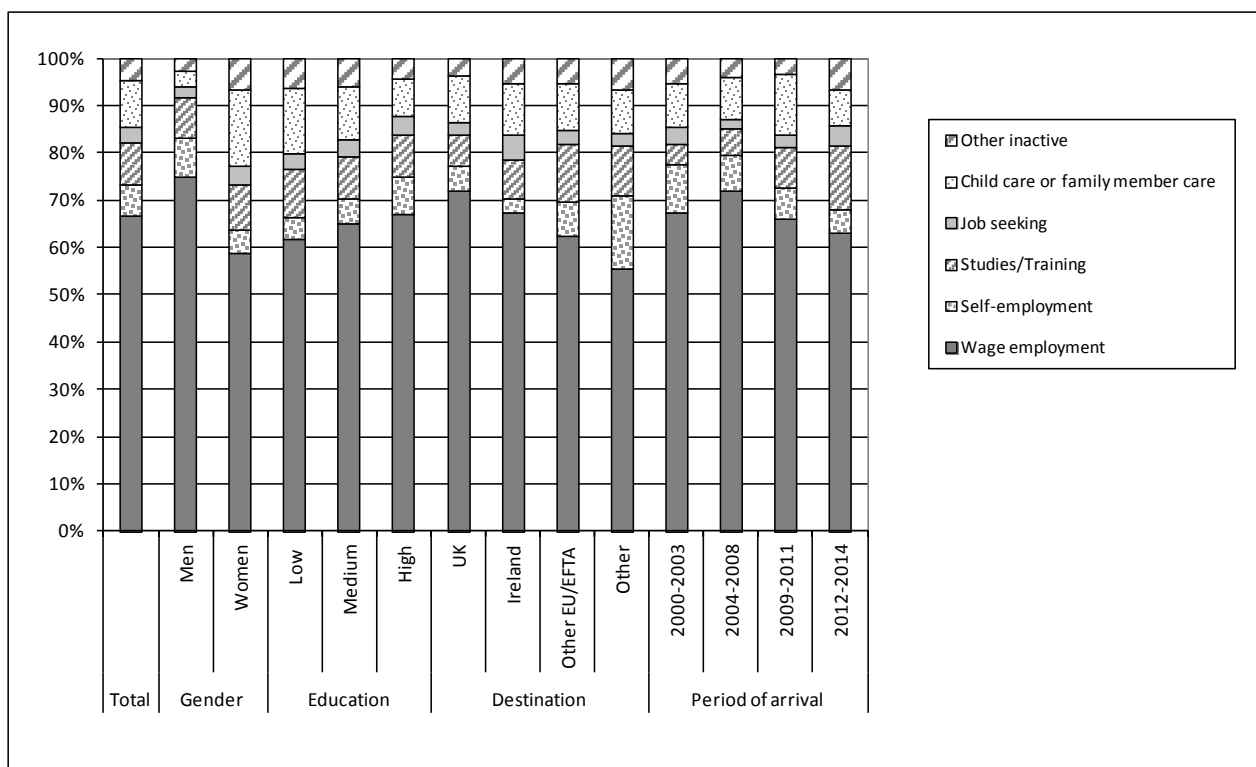
Next we discuss how does emigrants' occupational profile change over time and with duration of stay in the host country. First, we might observe wave-composition effects related to fall in emigrants' human capital after EU enlargement of 2004, and country-specific changes in emigrants' human capital after the start of the Great Recession at the end of 2008 and with the beginning of recovery in 2011 (see sections 5 and 6). Second, one might expect wave-specific behavioral effects, especially among post-2008 emigrants (see section 5 for discussion of the context): those who left home countries during the crisis were likely to be less choosy with respect to their job abroad; on contrary, the post-crisis emigrants (and even part of the crisis-time ones), being interested in long-term or permanent emigration could postpone moving until finding a job where they can to some extent use their skills and/or hope for promoting in future. Third, skill-composition of host countries' labor demand might also change over time (recently, such a change was "pro-skill" in most cases). Fourth, steady growth of the Baltic diasporas (especially since 2004, see Figure 3), suggests that migrant network effect resulted in better employment opportunities for more recent emigrants. Finally, longer time spent by emigrants in the host

country is often associated with better local language skills, increased social capital, larger general and/or specific experience and, hence, with better chances to be promoted or to find a job which better matches their qualifications (if downskilling was accepted in the first place).

In the case of UK Census data, different waves of emigrants are observed at the same time, so both time and duration of stay effects are at work. According to the data presented in Figure 15, post-accession Latvian emigrants feature "less skilled" occupational profile than pre-accession ones, and this profile further deteriorates after the onset of the crisis, suggesting that negative effects (duration of stay, as well as some wave-composition and behavioral ones) were stronger than the network effects and and pro-skill changes in the UK labor demand.

Internationally-mobile workers found in national LFS data are assumed to be absent from home country for less than a year<sup>xxv</sup>, hence occupational profiles based on these data are subject to time effects but not to duration effect. Indeed, both Latvian and Lithuanian post-accession mobile workers abroad feature lower proportions of all nonmanual and high-skilled nonmanual occupations than pre-accession ones (Figure 15). On the other hand, Latvian (respectively, Lithuanian) mobile workers observed during and after the crisis (in 2009-2013) have the same (respectively, higher) occupational profile than their pre-crisis counterparts, which is consistent with increase in shares of both high- and low-skilled among emigrants (see section 6) and presence of behavioral, network and demand effects working in opposite directions.

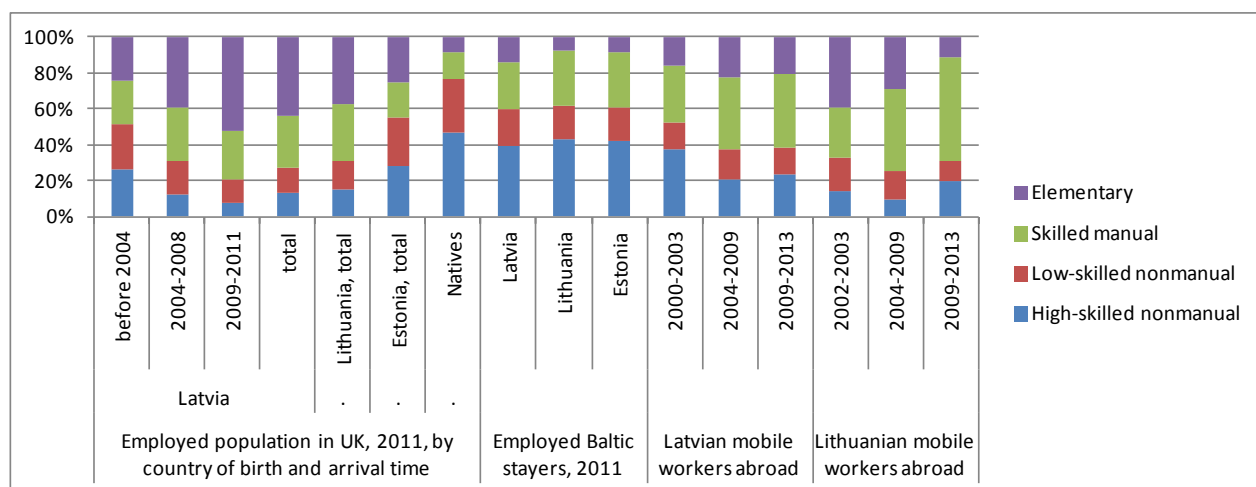
**Figure 14. Post-2000 emigrants from Latvia: main activity abroad in 2014, by educational attainment, destination and period of arrival**



Source: Calculation with emigrant survey data (see endnote<sup>xviii</sup>), N=11058 (after excluding non-response of 11.9%).



**Figure 15. Employed emigrants from the Baltic countries and stayers therein by occupation**



Source: Calculation with the data of the UK Population Census 2011 (ONS 2014 a, b, c) and LFS data.

An important question is how many of emigrants experience downskilling, i.e. are overqualified for the jobs they hold abroad. We look at this question from three perspectives. First, we use the standard OECD definition of overeducation: an employed person with tertiary (respectively, upper secondary) education is overeducated if he/she works in manual or low-skilled nonmanual (respectively, elementary) occupation. Second, we compare emigrant's occupation with his/her last occupation in the home country. Following the spirit of the OECD definition, those who moved from high-skilled nonmanual to other occupations have experienced downskilling, as well as those who moved from low-skilled nonmanual or skilled manual to elementary occupations (reversed moves will be referred to as upskilling). Third, we use answers to the question "Do you to a large extent use your education/qualification in your job?" from survey of Latvian emigrants (negative answers are interpreted as self-assessed downskilling). The results are summarised in Figure 16 for the stock of Latvian emigrants as of 2014, as well as for Latvian and Lithuanian<sup>xxvi</sup> mobile workers abroad and stayers observed in 2000-2013.

In the period under inspection overeducation rates among employed stayers varied in a narrow range: 13% to 16% in Latvia 11% to 13% in Lithuania, with a slight increase during and after the crisis; among university graduates about 20% were overeducation in both countries (Figure 16, top). By contrast, mobile workers abroad feature higher overeducation rates, and in 2009-2013 this rates declined compared to the pre-crisis period: from 25% to 21% (respectively, from 35% to 25%) among all mobile workers from Latvia (respectively, Lithuania) and from 41% to 39% (respectively, from 66% to 54%) among those with higher education. Furthermore, downskilling vs. the last job at home among Latvian mobile workers also declined from 12% in 2004-2008 to 6% in 2009-2013. Migrant network effect, increased preference for long-term emigration and changes in demand structure (discussed earlier in this section) are likely reasons why, despite the crisis, recent Latvian and Lithuanian mobile workers were able to find jobs matching their qualifications more often.

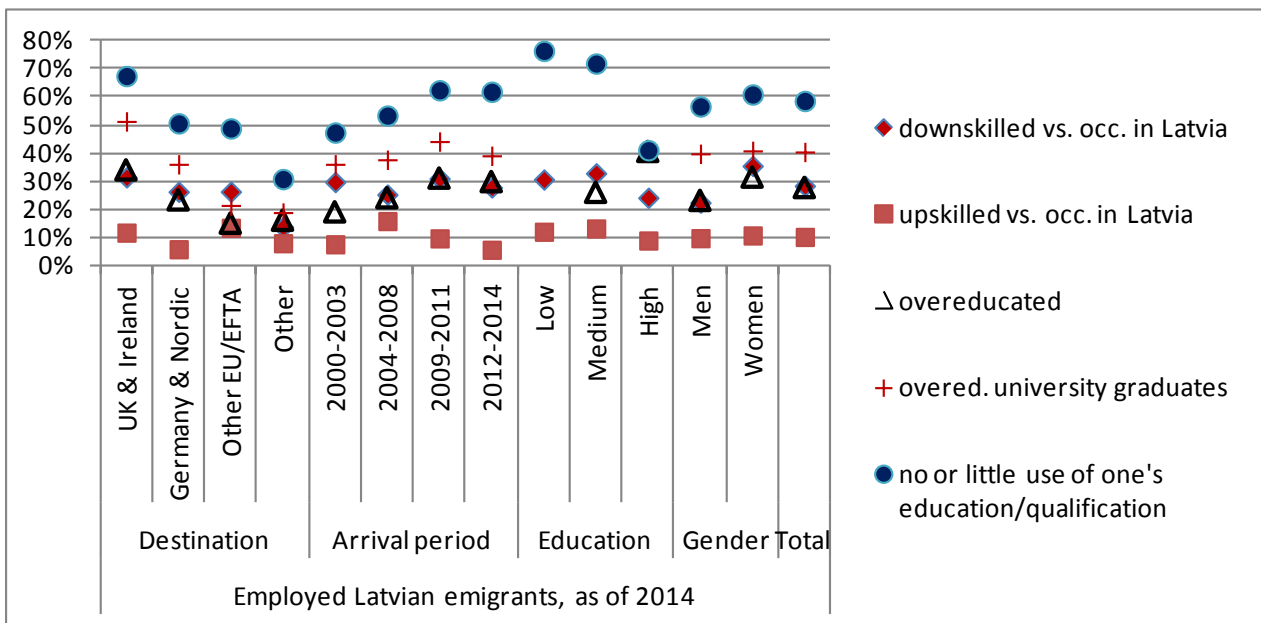
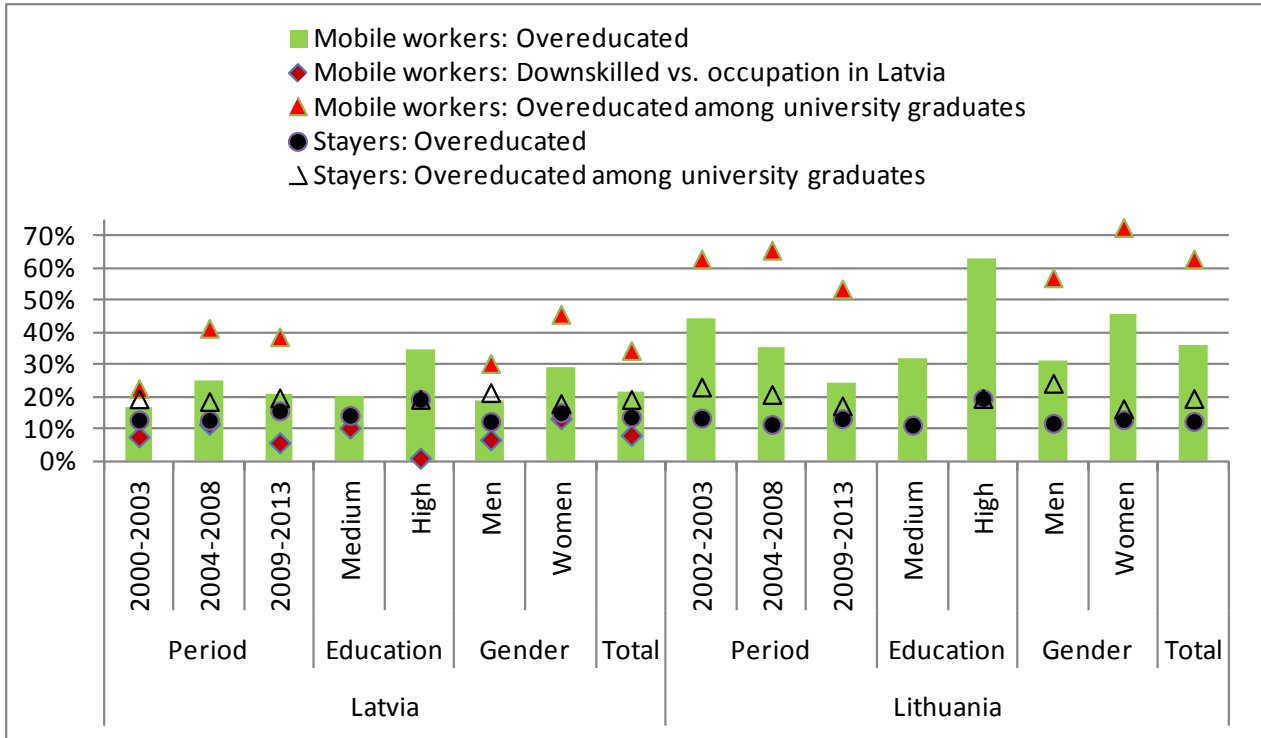
About one-third of employed Latvian emigrants in 2014 were formally overeducated, and the same proportion experienced downskilling vs. their last occupation in Latvia, while almost 60%

reported little or no use of their education or qualification (Figure 16, bottom). Among all emigrants and mobile workers alike, all measures of brain waste are substantially higher among women (Figure 16, top and bottom).

In the context of brain waste, the largest concerns are usually associated with college graduates. Noteworthy, while this category of emigrants (and mobile workers) feature higher overeducation rates than their medium-educated counterparts, it is the other way around for both downskilling (vs. last job at home) and self-reported skill underutilization (Figure 16, top and bottom). Furthermore, while about 40% of employed high-educated Latvian emigrants are overeducated and the same proportion report skill underutilization, only 24% are downskilled vs. their last occupation in Latvia (Figure 16, bottom); this difference is even more pronounced (35% vs. 1%) among high-educated mobile workers (Figure 16, top). In other words, a large part of overeducated tertiary-educated emigrants and mobile workers were overeducated already in Latvia.

The extent to which emigrants are subject to downskilling strongly varies across destination countries: All measures of brain waste among Latvian emigrants take their highest values in the UK and Ireland, followed by Germany and the Nordic countries, followed by other EU/EFTA countries, while the lowest values are found in destinations outside EU/EFTA (Figure 16, bottom).

**Figure 16. Various measures of brain waste among Baltic emigrants and stayers.**  
**Top: Latvian and Lithuanian mobile workers and stayers, 2000-2013, by observation period**  
**Bottom: Employed Latvian emigrants as of 2014, by arrival period**



*Notes:* For Latvia, data on downskilling refer to 2002-2013. For Lithuania, results on downskilling are absent due to data limitations. *Sources:* Top - calculation with Latvian and Lithuanian LFS data. Bottom - calculation with emigrant survey data (see endnote <sup>xviii</sup>).

## 8. Return migration, migration networks and intentions to return

Figure 17 compares flows of return migrants to the Baltic countries before, during and after the crisis. The returning flows are measured as percentage of the outflows of nationals or respective country in the same year.

In 2005-2008, the patterns of return were similar in all three countries (reflecting similar positive developments in their economies in up until the first half of 2008): returning flows initially accounted to about 30% of the outflows; until 2007 this "return rate" remains almost stable (except for Lithuania where it exceeds 40%), but in 2008 exceeds 50% in Latvia and 60% in Lithuania; a smaller increase (to 36%) is found in also in Estonia (recall that the main destination country, of Estonian emigrants, Finland, is geographically and linguistically very close, which makes pressure to return smaller). The sharp increase in return in 2008 was likely caused by combination of previous increase in earnings and fall of unemployment in the home countries (see Figure 1) with the first signs of the crisis in receiving countries and depreciation of the British pound and the Nordic currencies.

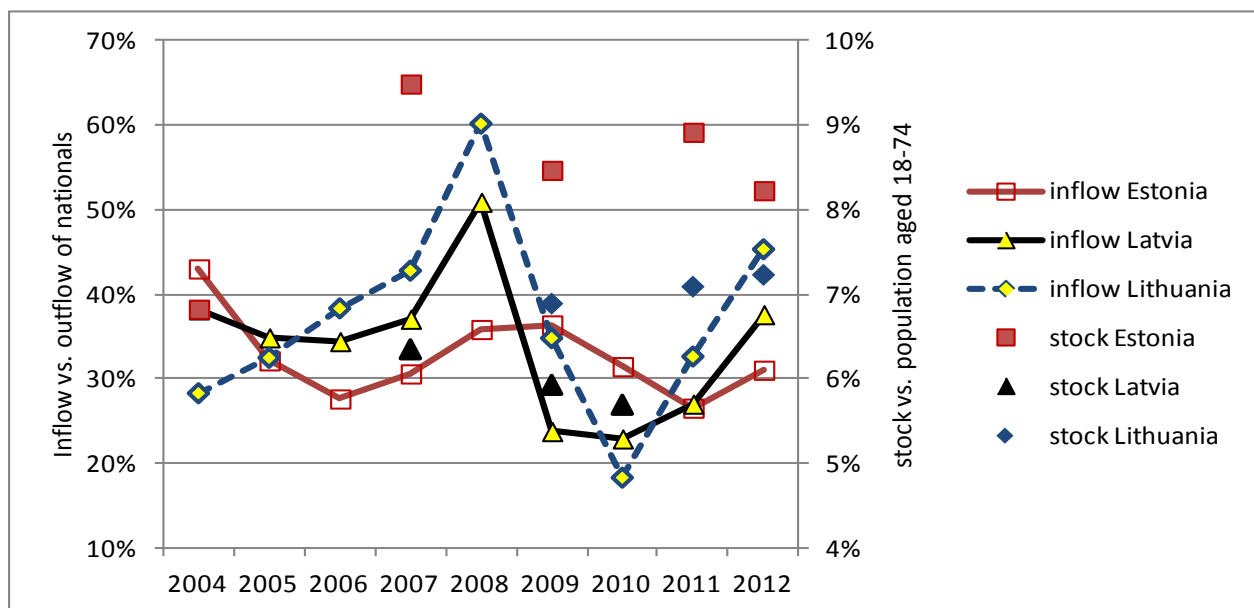
During 2009-2010, the Lithuanian and Latvian return rates fell, respectively, by two-thirds and by more than a half, reaching 18% for Lithuania and 23% for Latvia. In 2011-2012, as the Baltic economies resumed growth, the number of Lithuanian and Latvian returnees increased faster than the number of emigrants, reaching, respectively, 45% and 38% of the outflows. Estonia, as already mentioned, is a special case; its return rate behaved similarly to the Latvian one but was less volatile.

When the flows of return migrants to the Baltic countries from the main European destinations are compared, it appears that during the crisis, the intensity of return flows from the UK, Germany and the Nordic countries to Latvia and Lithuania (as well as to Estonia from Germany and the Nordic countries) declined in relation to opposite emigration flows, while relative intensity of return flows from the French-, Dutch- and German-speaking countries (excl. Germany) was less volatile; it decreased for Latvia and Lithuania but increased slightly for Estonia. Return flows from Russia to the Baltic countries became smaller relative to outflows.

As far as return migration from countries hardly hit by the crisis (the Southern member states and Ireland) is concerned, relative intensity of return flows increased explosively and stayed very high for at least four years; in 2011- 2012, the number of returnees from these destinations to Latvia and Lithuania exceeds the number of emigrants.

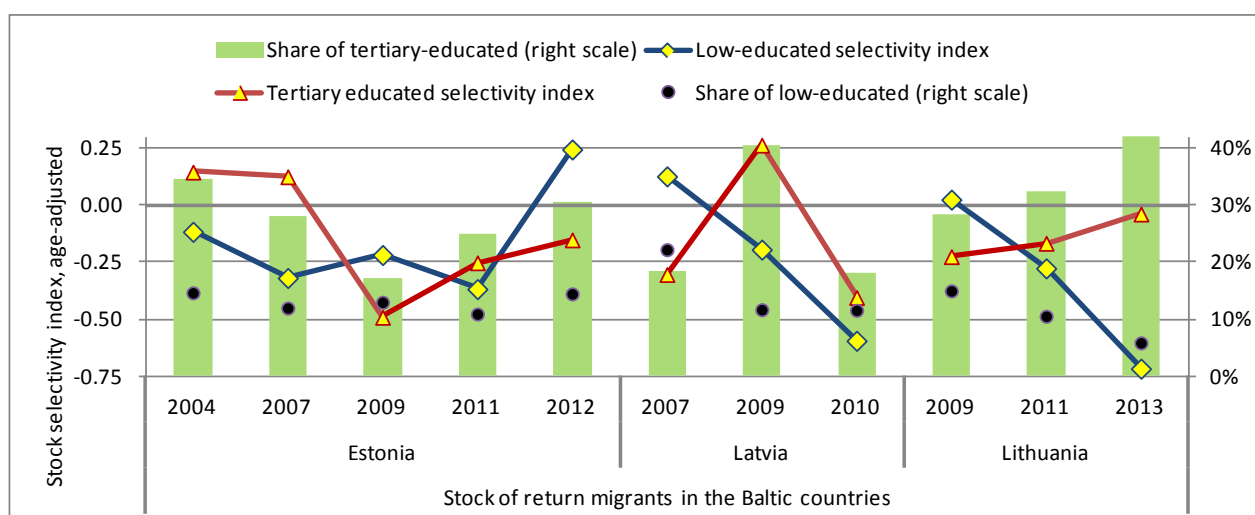
Figure 17 presents also the share of returnees (defined as those who spent at least 6 months working abroad over the last 10 years, lived in the country before that and returned) in population aged 18-74 for each of the Baltic countries. This share was pretty stable both in Latvia (about 6% in 2007-2010) and Lithuania (about 7% in 2009-2012). In Estonia, returnees accounted for 7% of population already in 2004 (Finland nearby, with a similar language, played its role here); this share varied around 9% in 2007-2011 and fell to 8% in 2012. Given the declining populations (see Figure 3), it appears that in 2007 - 2012 the *absolute* stock of returnees was declining in Estonia and Latvia and roughly stable in Lithuania, despite steady positive inflows<sup>xxvii</sup>. This means that substantial part of returnees repeatedly moved abroad. Indeed, according to a survey conducted in Latvia in late 2010, 43% of the return migrants plan to move abroad again in the near future and

**Figure 17 Inflow and stock of return migrants in the Baltic countries, 2004-2012**



*Notes:* Inflow of return migrants from EU and OECD countries is expressed as % of the outflow of the sending country's nationals in the same year. Stock of return migrants in population aged 18-74 is measured as % of persons who spent at least 6 months working abroad over the last 10 years, lived in the country before that and returned. Lithuanian stock data shown in 2012 refer to 2013. *Sources:* Inflow - Hazans (2015b), based on receiving countries data (sending countries' data result in similar dynamics). Stock - calculation with data of European Social Survey (rounds 2-6) and (Latvia, 2010) survey "National Identity: Place, Capability, Migration" (see Hazans 2011b).

**Figure 18. Stock of returnees in the Baltic countries, 2004 -2013:  
Skill composition and selectivity with respect to stayers**



*Notes:* See Notes to Figure 17 for the definition of the stock of return migrants. Selectivity index is age-adjusted, i.e. calculated vs. country's population in the same year, assuming the same age distribution as for the stock of return migrants. *Sources:* calculation with data of European Social Survey (rounds 2-6) and (Latvia, 2010) survey "National Identity: Place, Capability, Migration" (see Hazans 2011b).

another 23% admit such a possibility (Hazans 2011b, p.98 and Box 2.33); furthermore, 48% of post-2000 emigrants from Latvia moved from their home country more than once, according to the survey of Latvian emigrants conducted in 2014 (see Hazans 2015a , 2015c).

Figure 18 compares education of return migrants with that of stayers using age-adjusted stock selectivity index (see section 6 for details). In all three countries, the proportion of tertiary educated among the returnees is either lower or (in Estonia, 2004-2007 and Latvia, 2009) just slightly higher than among similarly aged stayers, suggesting that in terms of formal education brain gain due to return migration is, at best, modest; however, the proportion of low-educated is in most cases also lower than among stayers. See Hazans (2012: Table 6.6) for similar analysis of the flows of returnees to Latvia and Estonia.

Apart from obvious positive demographic impact of return migration and (admittedly, modest) gain it might bring in terms of educational attainment, there are other potential benefits the Baltic countries can enjoy if more emigrants come back. The returnees bring useful foreign work experience which manifests itself in higher earnings, other things equal (Hazans, 2008; Hazans, 2013c: 89)<sup>xxviii</sup>. According to the results of the survey conducted for the Latvian Human Development Report 2011, 70% of returnees report that foreign experience had a positive effect on their professional skills and 82% notice a positive effect on self-confidence (Hazans, 2013c: 88). Pungas et al. (2012) for Estonia provide evidence that education obtained abroad improves the socialisation prospects later on.

To conclude this section, we briefly summarise findings from (Hazans, 2015a) on post-crisis return intentions of Latvian emigrants, based on a survey conducted in 2014. Within 5 years 16% of emigrants will (definitely or probably) return (this includes less than 4% planning to return within 6 months). Another 16% plan or consider returning upon retirement. These findings are in striking contrast with the situation observed in 2005-2006, when two-thirds of emigrants having left Latvia in 2004-2005 were planning to return within two years, most of them (almost half of all emigrants) even within one year (Hazans and Philips, 2010, Figure 9). Similarly to Pungas et al. (2012), Anniste and Tammaru (2014) for Estonia, we find that other things equal, Russian-speakers are less likely to return than ethnic Latvians, while those not using their education/qualification at work are more likely to return. The effect of higher education on propensity to return is negative for men but positive for women.

## **9. The economic impact of emigration**

Emigration may affect the sending country's labor market in a number of ways. First, it tends to reduce unemployment below the levels expected under a zero-emigration scenario, because actual or potential unemployed, and economically inactive individuals move abroad or fill the vacancies left behind by previously employed emigrants. Table 3 (based on LFS data) indicates that in 2003-2013 one-fifth to one-third of Latvian guestworkers experienced unemployment or economic inactivity in Latvia during the year prior to their departure; the share of those coming from unemployment was especially high during the crisis.

**Table 3 Unemployment or spells of economic inactivity in Latvia during the year prior to departure, among Latvian guestworkers (2002-2013)**

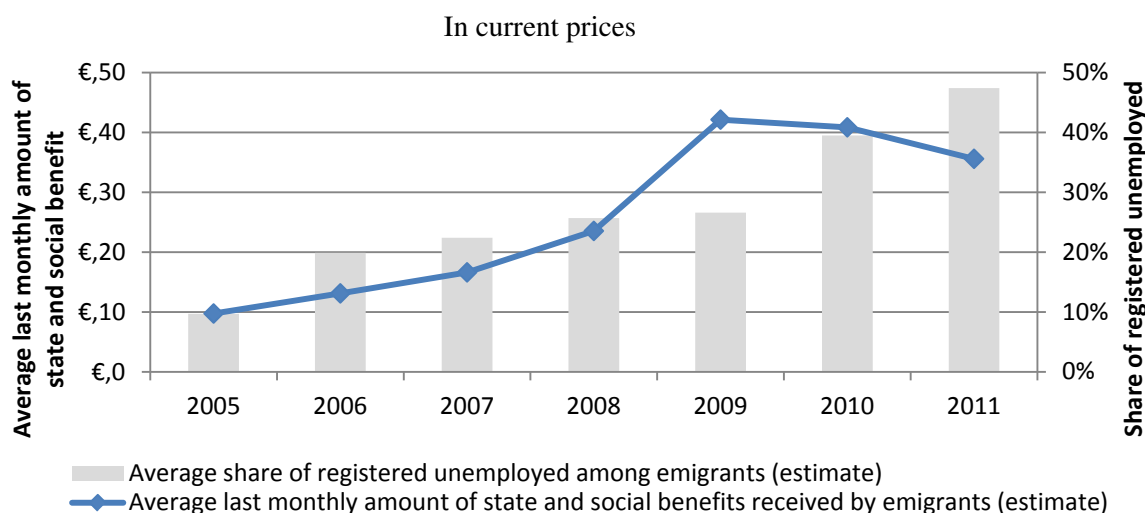
	Percentages			
	2002-2003	2004-2008	2009-2011	2012-2013
Unemployed	12.2	21.7	27.8	17.5
Inactive	17.3	13.8	8.0	5.6
Total	27.5	32.4	32.4	20.8

Notes: Guestworkers here are labor emigrants still considered household members back home.

Source: Calculations based on Latvian LFS data.

Moreover, among all emigrants with legal work or registered unemployment experience in Latvia, the share of those whose last registered activity before leaving was unemployment, rose from 10% in 2005 to 48% in 2011 (Figure 19).

**Figure 19. Estimated share of registered unemployed among emigrants with registered labor market experience, and average last monthly amount received in benefits by emigrants before departure, 2005-2011**



Source: Calculation with State Social Insurance Agency (SSIA) and State Employment Agency (SEA) data. Emigrants' age structure is used for assigning weights to individuals (excluding retirees) permanently leaving both SSIA and SEA datasets in between January 2005 and August 2011 (to allow one year abroad for those who left most recently).

As discussed in detail in Hazans and Philips (2010), during the growth period, emigration was not the only cause for the decline of unemployment. Hazans (2013c: Figure 4.18) demonstrates that increase in job vacancy rate (especially in manufacturing and construction, as well as for semi-skilled manual workers) outpaced emigration in 2005-2007 (even more so in 2005-2006). By contrast, during the jobless recovery of 2010-2011, job vacancy rate was either roughly constant at a very low level or growing at a much slower pace than emigration. Moreover, the fastest growth in job vacancy rate refers to high-skilled non-manual jobs. This is consistent with an increasing share of university graduates among the emigrants.

Several studies have used large macro-econometric models to estimate the effect of emigration on the rate of unemployment in sending countries, including Latvia; see Holland et al. (2011) and European Commission (2012, pp. 275-276) for a summary. In particular, Barrel et al. (2007, Tables 3 and 4) estimate that migration contributed to reduce the rate of unemployment in Latvia by 2.4 percentage points over the four year period of 2005-2008. Holland et al. (2011), however, find a much smaller effect. Zasova (2012) developed a model which sets the estimated contribution of emigration to the decline in the non-accelerating inflation rate of unemployment (NAIRU) after EU enlargement, at 0.4 points (applying our emigration estimates).

A major focus of public debate in Latvia is the question whether emigration has already led to labor shortages, as it had in 2005-2007 (see Hazans and Philips, 2010; and Rutkowski, 2007 for discussion and evidence). While shortages indeed develop in particular occupations (e.g. health professional, especially in public hospitals outside the capital city, and top-qualified IT professionals with specific experience in particular sectors), employers and potential investors complain that despite high unemployment they generally cannot find qualified workers, suggesting that unemployment in Latvia is largely structural. Survey data, however, provide only limited support for these claims. The highest proportion of enterprises reporting labor shortages is found in the construction sector and among large manufacturing firms, but even there it peaks at about 20% in late 2012, and at any rate remains below 10% in trade and services (Hazans (2013c: Figure 4.19). A more detailed analysis by Anosova et al. (2012) and Hazans (2013a, 2013b) also seems to refute the hypothesis that Latvian unemployment is structural (i.e. that available unemployed are not suited for most of the vacancies offered). Difficulties in finding relevant employees concern only a small share of businesses and a small proportion of available vacancies. Nevertheless, labor shortages will inevitably become a serious challenge in future, as that the cohorts of labor market entrants are expected to be smaller than those of leavers (a situation exacerbated by emigration, but that would have occurred in any case). Increased propensity to emigrate tends to reduce labor supply and make it more elastic, thus increasing real wages and narrowing the gap between the marginal productivity of labor and pay, but also forcing employers to lower hiring standards (for a discussion of the latter point, see Hazans and Philips, 2010). Through real wages, emigration also contributes to increases in consumer prices. At the same time, however, through falling domestic demand, it also exerts influence in the opposite direction.

Barrel et al. (2007, Tables 3, 4) estimate that over the four year period of 2005-2008 emigration contributed 0.8 percentage points of inflation in Latvia and Lithuania, and 0.2 points in Estonia. Hazans (2013c: Figure 4.20) applies a macro-econometric model developed by Zasova (2012) and finds an increase of real wages by 2.5% during the period 2001-2010 compared to a zero-emigration scenario. Elsner (2013a, 2013b) shows that in Lithuania, a one-percentage-point increase in emigration rate increases the real wage of men on average by 1%, and that over the period of five years emigration increased the wages of young workers by 6%, while it had no effect on the wages of old workers. All these estimates seem quite low. The European Commission (2012, p. 276) notes that this might be due to aggregation bias and that the effects for specific skill groups, occupations or sectors might be significantly larger. Furthermore, as noted by Hazans and Philips (2010), macro-models might underestimate the effect of emigration on real wages because these models do not account for the monopsonistic structure of the labor market, in particular the threat of a substantial fall in labor productivity when a firm loses not just a marginal worker but, say, half of its workforce. Scale effect, work organisation problems, and the inability to compete for publicly financed projects can all be underlying factors.



The overall economic impact of emigration results mainly from a reduction of the labor force. This effect might be reinforced if emigrants are on average more skilled than non-migrants or mitigated if they are less skilled. Emigrants' remittances, on the other hand, can partly or fully compensate the loss of output (in 2013, remittances amounted to 4.5% (respectively, 2.5%; 1.8%) of Lithuanian (respectively, Latvian, Estonian) GDP<sup>xxx</sup> but this is unlikely to last forever, especially when emigration becomes increasingly permanent, as in the case of the Baltic countries<sup>xxx</sup>. For the period of 2004-2009, Holland et al. (2011), assuming a net outflow of just 2.5% of the population estimated the long-term effect on Latvian real GDP to be -3.3%, only half of which has been compensated by remittances during the same period (European Commission, 2012: 278). Clearly, the overall long-term effect of losing 10% of a country's population, as was the case for Latvia (see Figure 3) would be much larger. Assuming a production function with the share of labor about 0.6, the loss of 15% of the labor force implies a permanent reduction of about 9 percentage points in potential output.<sup>xxx</sup> The latter estimate is, however, likely too high since domestic productivity of at least three quarters of emigrants was below median productivity of all legally employed persons in Latvia (Hazans 2013c: Figure 4.21).

As shown in Hazans (2008; 2013c), return migrants in Latvia are on average more productive than otherwise similar non-migrants, but as long as their number is small, this will not be sufficient to compensate for brain drain.

By reducing population and hence domestic market size, emigration discourages investment – both foreign and domestic. This is reinforced by the threat of labor shortages (Kugler and Rapoport, 2005; Javorcik et al., 2011; Gormsen and Pytlikova, 2012). While theoretical considerations suggest that investment from and trade with countries hosting large numbers of recent emigrants from Latvia should substantially increase, this is yet to happen, if at all. However, according to a survey of emigrants from Latvia, 25% of the post-2000 emigrants plan to start a business in Latvia or to help their employers to establish business relations with Latvia (Hazans 2015c). Fostering the diaspora's engagement in economic and social development of the Baltic countries seems to be the most perspective way to realize gains from emigration. One of the noteworthy initiatives in this regard is World Latvian Economics and Innovation Forum. About 340 entrepreneurs, engineers, lawyers, scientists and other professionals of Latvian origin from 21 countries took part in the first event of the series in July 2014, and the second one is scheduled for July 2015.<sup>xxxii</sup>

## 10. Conclusion

This chapter offers a theoretical framework and empirical evidence for understanding the patterns of emigration from the Baltic countries in the 21st century. The focus is on emigrants selectivity with respect to human capital, ethnicity and citizenship, as well as on labor market outcomes. We also assess the demographic and economic implications of recent emigration.

During the Great Recession, new emigration wave emerged from each of the three Baltic countries as a reaction to dramatic rise of unemployment and fall of household income. By 2013, despite resumed economic growth and massive outflow of population during the previous years, the Baltic countries featured outflows of nationals well above the pre-crisis levels and high

potential for further emigration. The main reasons for it include wide income gap with the old Europe, the network effect, non-economic push factors (such as disappointment and loss of perspective - especially in Latvia and Lithuania), weak social protection and insufficient labor demand in the home countries. Emigration has become “the new normal”, and the Baltic diasporas will keep growing in the years to come.

While emigration from the Baltics helped to alleviate the economic and social implications of the crisis by absorbing slack labor and bringing in substantial amount of remittances, in the longer term it puts at risk reproduction of the populations, sustainability of social security systems and economic development of these countries. The demographic risk is most pronounced in Latvia. The countries which host most of the Baltic emigrants (the UK, Ireland, Germany and the Nordic countries) have better demographic prospects than the Baltics.

Except for the pre-accession period, university graduates were not over-represented among the Baltic residents working abroad while still attached to their households at home (most of these mobile workers were medium-educated). However, by 2011, in European OECD countries the shares of tertiary-educated individuals were substantially higher among (the total stock of) post-2000 immigrants from Latvia and Lithuania than among similarly aged stayers in these countries. Brain drain was taking place both as "diploma drain" and via emigration of secondary-educated youth who received their university degrees in the destination countries and settled there (or elsewhere abroad). Evidence from the main destination countries suggests that post-accession Baltic emigrants were less educated than the pre-accession ones - plausibly, because expected gains were higher for the low- and medium-skilled than for high-skilled, while introduction of the free movement of labor has diminished the comparative advantage in mobility previously enjoyed by the better-educated.

Except for emigration from Estonia to Finland, brain drain from the Baltics has intensified during the crisis (plausibly, reflecting rise of general disappointment and non-economic reasons for emigration in Latvia and Lithuania). Return migration is unlikely to compensate for the brain drain, because the share of university graduates among the returnees is either lower or (in some periods) just slightly higher than among similarly aged stayers.

Ethnic minorities (mostly Russian-speaking) were slightly over-represented among emigrants from Latvia but under-represented among their Estonian counterparts (likely because similarity between Estonian and Finnish languages gives ethnic Estonians an advantage over Russians in Finland's labor market). Both for Estonia and Latvia, the share of ethnic minorities among mobile workers abroad moved together with the ethnic gaps in employment, declining in the post-accession period and increasing during the crisis. Moreover, selectivity indexes of minority individuals with and without Estonian/Latvian citizenship most of the time moved in opposite directions, reflecting the dual disadvantage faced by residents of Latvia and Estonia holding either "noncitizen" or Russian (or other non-EU) passports: they have worse labor market outcomes at home (especially in the bad times) and are not covered by free mobility provisions within EU. Once emigrated, Russian-speakers are less likely to return than ethnic Latvians or Estonians.

Labor market outcomes of the Baltic emigrants vary across European destinations. In the UK, which hosts most of Latvian and Lithuanian expats, they fare much better than natives and than stayers in their home countries; the same is true for Baltic-born youth (but not adults) in Ireland and Finland. Baltic emigrants with college diplomas enjoy the highest employment rates, but skill-driven employment gaps are substantially smaller among emigrants than among both natives in the same countries and stayers.

We find evidence that high-educated emigrants experience downskilling vs. last occupation in the home country less often than skill underutilization or formal overeducation; in other words, overeducation is not always caused by emigration. All measures of brain waste are substantially higher among women. Emigrants in the UK and Ireland are more often subject to brain waste than elsewhere in EU/EFTA.

Findings from the literature suggest that post-enlargement emigration from the Baltic helped to contain unemployment but had a negative effect on GDP (and permanent negative effect on potential output), while wages of the stayers increased compared to zero-emigration scenario. By reducing population and hence labor force and domestic market size, emigration discourages investment; however, there is evidence that Fostering the diaspora's engagement in economic development of the Baltic countries can partly compensate the negative effects.

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## NOTES

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- <sup>i</sup> Kahanec and Zimmermann (2010) review evidence on the early post-enlargement mobility in a broader EU context. Kahanec (2012) extends analysis to cover also the 2007 enlargement and the beginning of the economic crisis. Kahanec et al (2014) provide econometric analysis of migration flows in EU15+ EFTA +EU12 over the period of 1995-2010.
- <sup>ii</sup> This was the case both in fixed prices (as shown in Figure 1) and in PPS (not shown).
- <sup>iii</sup> In the case of Estonia, however, the situation might be affected by the fact the main destination country, Finland is geographically and linguistically very close, which makes psychic cost of staying abroad lower and pressure to return smaller.
- <sup>iv</sup> NINO statistics reflects only immigrants aged 16 and more; it has been adjusted upwards assuming, for each year and sending country, the same proportion of children among immigrants to the UK as among immigrants to other EU/EFTA countries.
- <sup>v</sup> These results are based on data covering outflows to the UK, Germany, the Nordic countries, Ireland, Austria and the Netherlands, which accounted for more than 90% of the total emigration from each of the Baltic countries to the EU and OECD destinations in 2012.
- <sup>vi</sup> The official Lithuanian figure for 2010 is an exception: many of the previous years' emigrants signed out from the population register in 2010 to avoid compulsory health insurance payments, see OECD (2012: p. 248).
- <sup>vii</sup> Hazans (2003, Tables A4.1-A4.4) provides a detailed comparison of earnings.
- <sup>viii</sup> These results based on Eurobarometer 64.1 data refer to population aged 18 to 65 years; see Hazans (2012: Table 3) for Estonia and Latvia.
- <sup>ix</sup> Brucker et al. (2009, Tables 6.7- 6.8) in the case of UK in 2004-2007 report returns of just 2% per year of schooling and finds that 82% of tertiary-educated immigrants from the NMS were over-qualified for their jobs. In the same period, 40% to 60% of tertiary-educated Estonian and Latvian mobile workers and more than 60% of their Lithuanian counterparts were over-qualified, according to Hazans and Philips (2010, Figure 7).
- <sup>x</sup> See Figures 1 and 6 above; on wage cuts, see Hazans (2013c: Figure 4.7), Masso and Krillo (2011, Table 14).
- <sup>xi</sup> During the crisis years in Latvia, for workers with less than 20 years of contribution this was the case already after 6 months of registered unemployment.
- <sup>xii</sup> Hazans (2012, Figure 6.3; 2013c: Table 4.5) provides evidence for Estonia and Latvia
- <sup>xiii</sup> Kaczmarczyk et al. (2010) use  $SI = G_M / G_S - 1$  with similar properties; the advantage of our measure is in having symmetric (opposite) values for  $G_M / G_S = k$  and  $G_M / G_S = 1/k$ .
- <sup>xiv</sup> For Estonia, this finding is supported also by results in Anniste et al. (2012) who used data on registered emigration.
- <sup>xv</sup> Estonian case is not perfectly comparable to the other two because some of the Estonians working in Finland commute to/from Estonia (mostly on weekly basis but in some cases more often); yet substantial part of these commuters are registered as residents of Finland. This makes exact identification of Estonian emigrants in Finland difficult. Commuters are, on average, less educated than settled emigrants.
- <sup>xvi</sup> The UK Population Census data are likely to overestimate the share of tertiary-educated immigrants and underestimate the share of low-educated. First, the low-educated immigrants are more likely to avoid participation due to language problems. Second, due to complicated design of the question on educational attainment and specific terminology used in it, many of the immigrants (especially the low-educated) choose only the answer "Foreign qualification". The imputation algorithm used by ONS when producing publicly available tables on educational attainment by country of birth is not sending-country-specific and classifies 69% of these immigrants as highly-educated. We assume that the bias is not big enough to change the conclusions by Figure 8 (lower panel) qualitatively. This assumption is supported from data from online survey of Latvian emigrants conducted in 2014 (see Note <sup>xviii</sup> below), with non-weighted share of tertiary-educated among 3091 post-2000 emigrants living in the UK being 40%. However, this issue calls for further investigation.



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<sup>xvii</sup> Note that due to data limitations pre- and post-accession are proxied by 2001-2005 and 2006-2009 in Figure 8 (lower panel) and Figure 9.

<sup>xviii</sup> The survey has been designed and conducted in the framework of interdisciplinary research project “The emigrant communities of Latvia: National identity, transnational relations, and diaspora politics” implemented by Institute of Philosophy and Sociology, University of Latvia in cooperation with Faculty of Economics and Management, University of Latvia and supported by European Social Fund Project 2013/0055/1DP/1.1.1.2.0/13/APIA/VIAA/040.

Comparison of the respondents' distribution by host country, age, gender and period of leaving with data from other sources does not show any significant selection bias. Moreover, distribution of respondents from the UK and Ireland by educational attainment is largely consistent with the data from the year 2011 Population Censuses in these countries.

<sup>xix</sup> Except for the most recent emigrants, the stock *SI* are smaller than the flow ones because during the period between arriving to the host country and 2014, the share of university graduates among emigrants was growing slower than among young stayers.

<sup>xx</sup> Anniste et al. (2012: Table 1), using data on registered emigrants from Estonia, find that the proportion of minorities among emigrants declined from 48% in 2000-2003 to 28% in the post-accession period (2004-2008).

This also supports our expectations on the pattern of ethnic selectivity.

<sup>xxi</sup> See Kahanec and Fabo (2013) for a recent analysis of gender and family effects on emigration intentions in the EU.

<sup>xxii</sup> Ministry of Education and Science, unpublished data

<sup>xxiii</sup> Due to data limitations, Germany, Austria and Switzerland are excluded.

<sup>xxiv</sup> See endnote <sup>xviii</sup> for details.

<sup>xxv</sup> Note that median, across all years, tenure of Latvian mobile workers in the LFS data is less than 1 year.

<sup>xxvi</sup> Eamets et al (2013) provide evidence for substantial downskilling among Estonians working abroad.

<sup>xxvii</sup> Note that in the post-accession period, the total inflow or returnees during the moving 10-year window was growing over time.

<sup>xxviii</sup> By contrast, Eamets et al (2013) do not find an earnings premium for return migrants in Estonia.

<sup>xxix</sup> World Bank online database, assessed on June 30, 2015.

<sup>xxx</sup> In 2014, only 35% of Latvian emigrants sent home remittances on a regular basis, according to the survey described in endnote <sup>xviii</sup> and Hazans (2015a, 2015c).

<sup>xxxi</sup> The effect of emigration on total labor force participation is theoretically ambiguous. Changes in the age structure caused by emigration suggest a negative effect, while higher real wages and lower hiring standards tend to increase the participation rate, especially among disadvantaged groups (Hazans and Philips, 2010; Hazans, 2011a). In fact, the activity rate of the Latvian working age population was much higher in 2011-2012 than in the pre-accession period, but it could have been even higher in absence of emigration.

<sup>xxxii</sup> For details, see <http://www.ieguldilatvija.lv/>