



MIGRATION EXPERIENCE OF POLAND AND THE BALTIC COUNTRIES IN THE CONTEXT OF ECONOMIC CRISIS

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IN THE CONTEXT OF ECONOMIC CRISIS**

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1. Introduction

Both Poland and the Baltic countries experienced intensive outflow of labor during the first five years after joining the EU (see Kaczmarczyk, 2010 and Hazans and Philips, 2010)ⁱ. However during the economic crisis of 2008-2010 and its aftermath the behavior of the Baltic migrants was different from that of their Polish counterparts. Mobile citizens of Poland, where economic growth continued in 2008-2010 at almost the same pace as before, responded primarily to worsening economic situation in host countries of the old Europe: emigration slowed down, while return migration intensified; this was also the case for other non-Baltic countries which joined EU in 2004 and were, despite the crisis, unemployment remained below or slightly above 10% (Aujean (2012); European Commission (2012: Chapter 6, Chart 2); Zaiceva and Zimmermann (2012: Figure 1); European Commission (2013a: 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. In other words, while Poland provided a show-case of migration response to external economic shocks, the Baltic countries faced both external and (a lot stronger) domestic shock.

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 1 below. More importantly, by 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. Predictions that net migration in the Baltics will approach zero within few years of economic recovery proved wrong - like did the predictions of a mass return of Polish emigrantsⁱⁱ (see e.g. The Economist 2013). In 2011-2013, Polish emigration stabilized at the level more than by 20% exceeding the low point of 2010 and by less than 20% below the pre-crisis level (Figure 3), while the ratio of the number of returnees to that of emigrants fell below 50% after being substantially higher in 2008-2010 (Figure 8).

Apart from strikingly different emigration dynamics during and after the crisis, there are two important similarities and two no less important differences between Poland and the Baltics which make comparison of Polish and Baltic experience worth effort. First, in all four countries emigration is exacerbating a demographic crisis, much more serious than in the countries which host most of the Polish and Baltic emigrants.

Second, according to different estimates (see European Commission, 2012; Aujean, 2012; Andor, 2014), Latvians, Lithuanians and Poles have been recently among the most mobile CEE citizens. Moreover (see OECD, 2014: Table B.5), in 2012 Poland was the origin of one of the two largest groups of foreign nationals in the UK, Ireland, Germany, Netherlands, Norway, Sweden, Denmark and Iceland (in addition, Polish nationals were among the top ten groups of foreigners in Austria and Italy). 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. Total number of Lithuanian (respectively, Latvian, Estonian and Polish) expatriates in European OECD countries at the end of 2012 amounts to 10.8% (respectively, 9.6%, 6.2% and 6.6%) of their population as of beginning of this century (Figure 10 below).

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.

Many emigrants save part of their earnings abroad for a later use upon return and/or for financial support to family members left behind in the home country. For them, currency exchange rate is an important factor. From this perspective, Polish emigrants were exposed to exchange rate risk to a much larger extent than their Baltic counterparts, as Polish zloty was freely floating, while Estonia, Lithuania and Latvia pegged their currencies to euro (in 1998, 2002 and 2005, respectively).

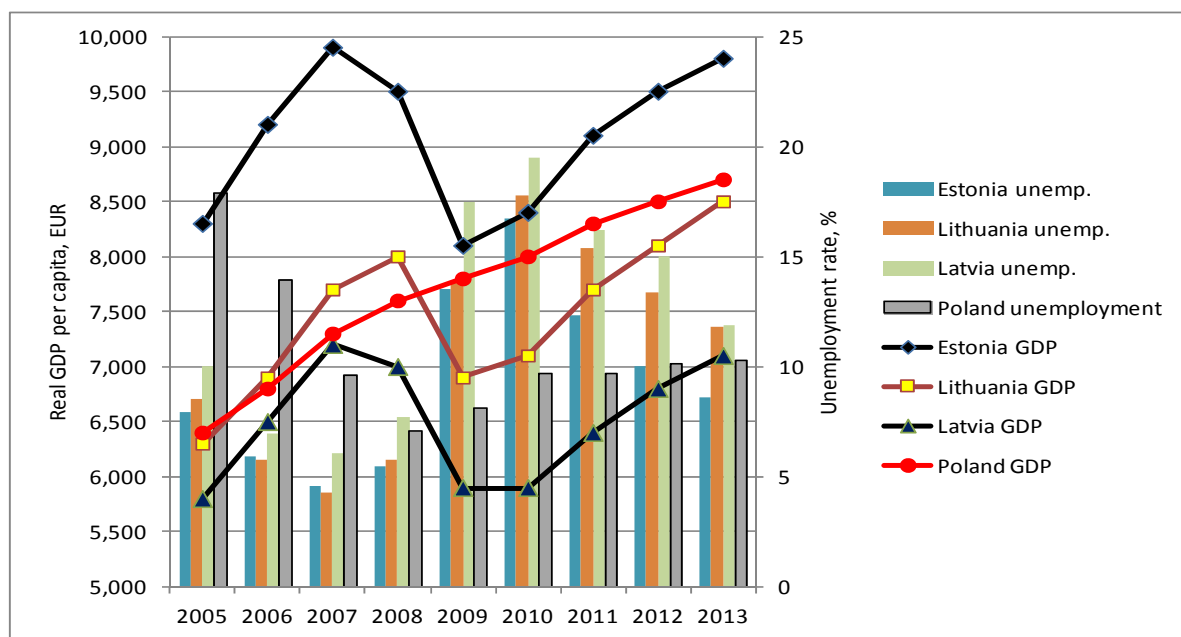
This paper aims at providing a detailed in-depth comparison of emigration patterns experienced by Poland and the Baltic countries since the beginning of the 21st century and especially during the post-enlargement decade 2004-2013. Section 2 compares economic and social context in the four countries. Section 3 discusses demographic challenges to the Baltic countries and Poland caused by emigration. Destination-specific cross-country comparison of scale and trends of emigration is provided in Section 4, which employs various measures of international mobility. 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 2000-2014, along with some supporting empirical material (e.g. on reasons for emigration). Corresponding empirical analysis of the changes in emigrants profile (with a special focus on selectivity of emigrants with respect to human capital), 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. Section 9 looks at migration intentions and emigration potential. XXX

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.

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



Source: Eurostat

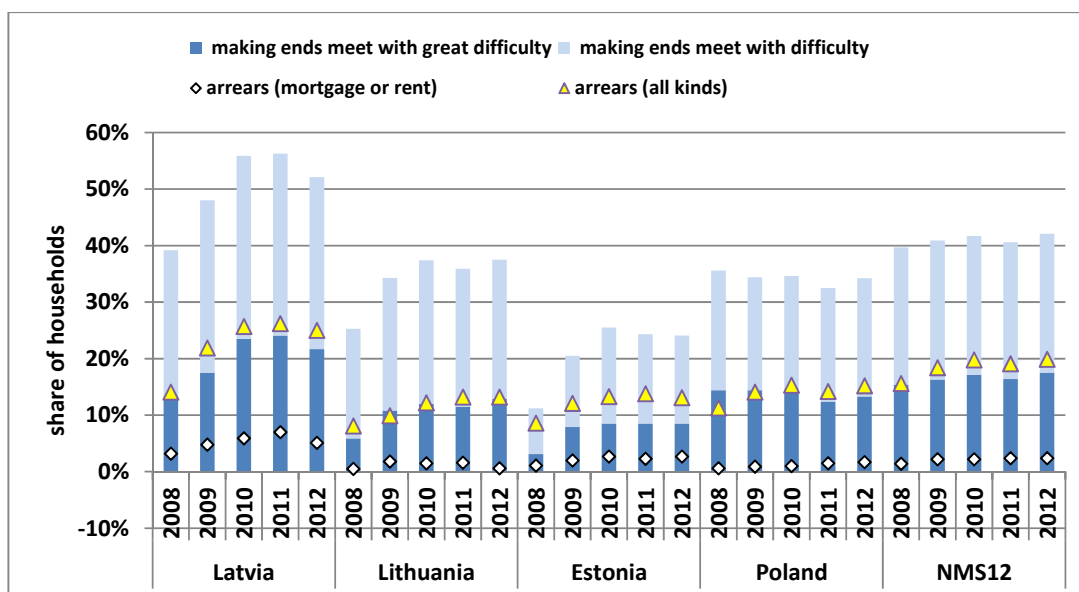
By comparison, in Poland economic growth continued in 2009-2013 (though at a smaller pace than before), while unemployment stayed at about 8% in 2009 and at 10% in 2010-2013; GDP per capita was higher than in Latvia but lower than in Estonia (Figure 1) ⁱⁱⁱ.

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 (Figure 2). 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.

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, the crisis in Latvia 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.

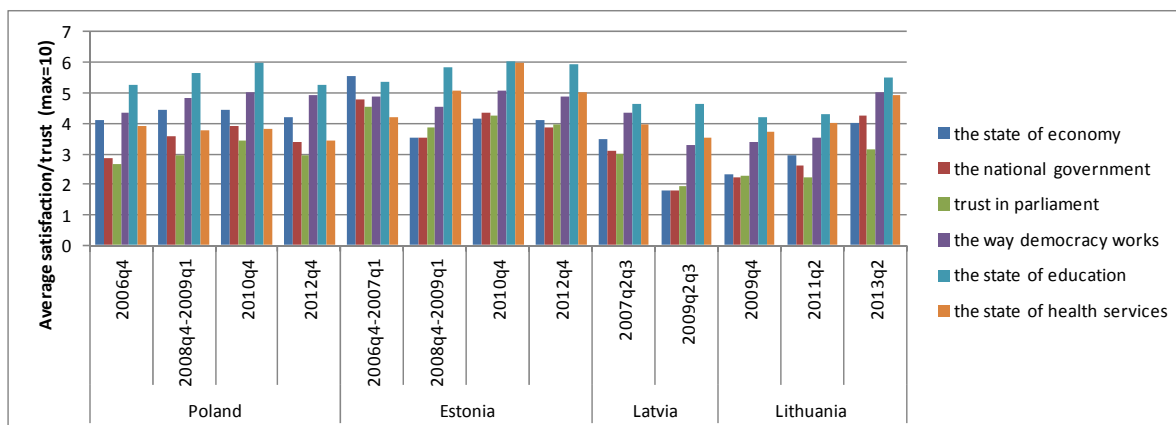
Figure 2. Share of households making ends meet with difficulty or having arrears, 2008-2012



Source: Eurostat (EU SILC data).

Figure 3 (see also underlying data in Table 1) illustrates the differences in popular perceptions between the Baltic countries and Poland.

Figure 3 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). 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 Table 1 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 in 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 of course than in Poland), while more intensive return migration is to be expected in Poland and Estonia^{iv}. 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.

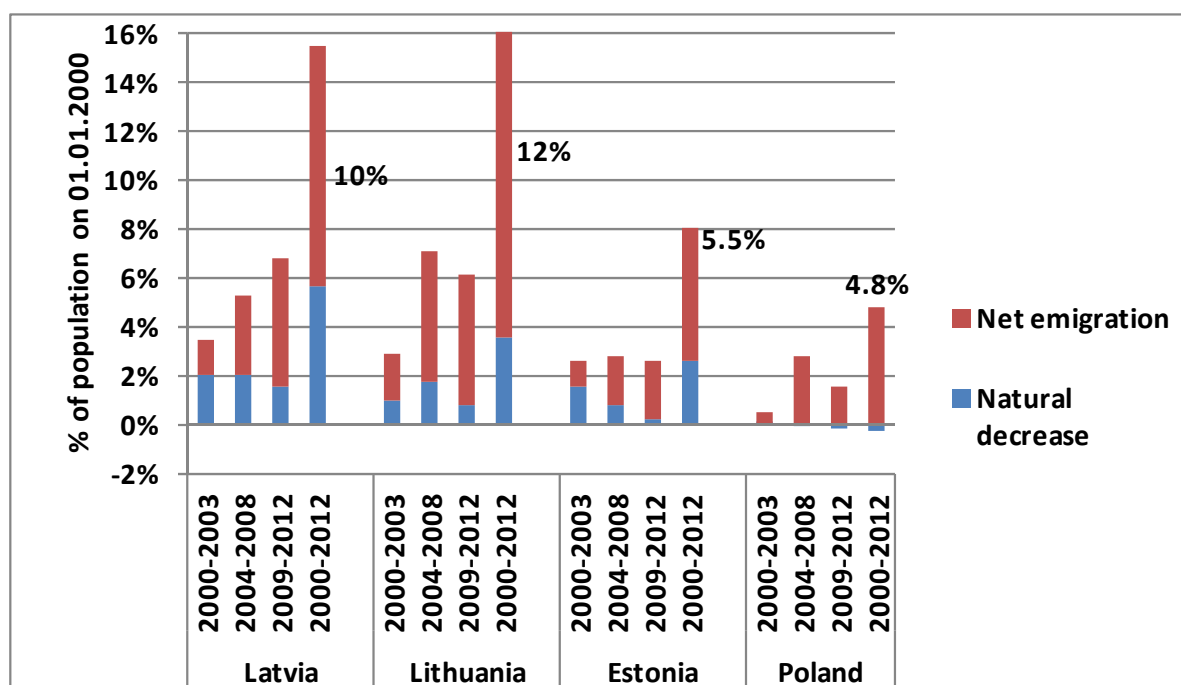
To conclude this section we look at one more economic factor which affects attractiveness of working abroad for emigrants which save part of their earnings for remittances: the exchange rates of the host countries' currencies. As shown in Table 2, after a period of depreciation which started in early 2007 and lasted (with a one or two months break) until July 2008, the British pound lost 29% of its value against Polish zloty, while euro, Swedish krone and Norwegian krone lost 16% to 18% each. The pound exchange rate was also the most volatile during this period. Although all

three currencies later on regained part of these losses and have been more stable, the psychological effect clearly played its role when Polish emigrants (especially those in the UK) considered returning home. By contrast, Baltic emigration during the crisis was driven mainly by push factors, therefore exchange rate risk weakening pull factors was less important (and was absent in Eurozone countries and Denmark).

3. Emigration and demographic challenges

Since the beginning of the 21st century, loss of population due to emigration reinforced negative natural change in all three Baltic countries. In 13 years (2000-2012), Latvian and Lithuanian populations declined by about 16%, Estonian - by 8% (Figure 4). 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 4). Decline of Polish population was very impressive in absolute terms (1.7 million persons^v, despite natural increase by 116 thousand), but in it accounted for less than 5% of Polish population at the beginning of year 2000. To summarize, depopulation in Poland is completely driven by emigration and is less intensive than in the Baltic countries (where it is increasingly driven by emigration).

**Figure 4. Natural decrease of population and net emigration.
The Baltic countries, 2000-2012.**

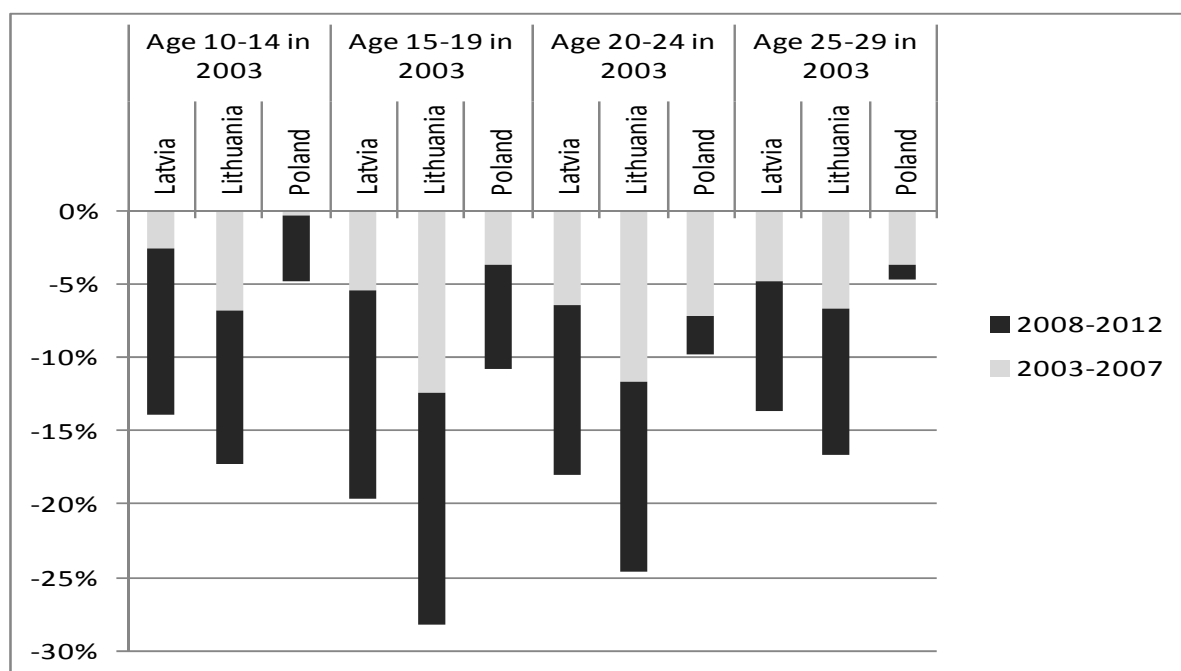


Notes: Net emigration data in the It is worth noting that the 2004-2008 category covers 5 years, while 2000-2003 and 2009-2012 cover 4 years each. In all three Baltic countries (but not in Poland), annual average net emigration rates (as implied by the Figure) in 2009-2012 are much higher than in the previous periods. *Source:* Eurostat, OECD and own calculation.

Most of Baltic and Polish 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 5 (see also Table 3) 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 2003-2012. In ten years, Latvian cohorts aged 15 to 19, 20 to 24 and 25 to 29 years at the beginning of 2003, have sent abroad, respectively, 20%, 18% and 14% of their members, while corresponding Lithuanian cohorts in the same period lost to migration 28%, 25% and 17%. The crisis and post-crisis five years (2008-2012) account to most of these human losses. Note that these data are based on the official population statistics, which, especially in Latvia, underestimates emigration in the post-crisis period (Hazans 2013; see also Figure 7 below), so actual losses are likely even larger.

**Figure 5. Change in the size of selected age cohorts.
Latvia, Lithuania and Poland, 2003-2012 (in % of population on January 1, 2003)**



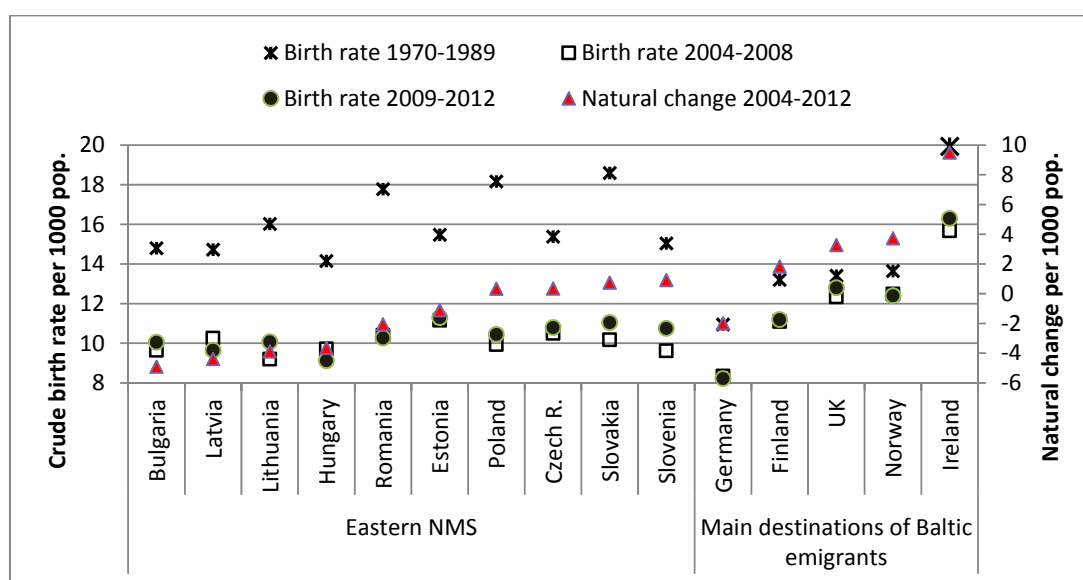
Notes: For Poland, the data presented in Figure 5 diverge substantially from the official Polish population statistics which severely underestimates emigration. *Sources:* Latvia and Lithuania: Population statistics (Eurostat) and own calculation. Poland: Eurostat and OECD statistics on Polish nationals among population of EU and EFTA countries and own calculation (available data from non-European OECD countries were not detailed enough, hence Polish data in Table 3 underestimate (by at least 10%) outflow of population of the age cohorts under inspection.

In Poland, population statistics does not come even close to reflecting the actual scale of emigration, so we have used Eurostat and OECD data to estimate the number of Polish expats aged 20-24, 25-29, 30-34 and 35-39 at the beginning of year 2013, in the EU and EFTA countries^{vi}, as well as the number of Polish expats from the same cohorts 10 years earlier (i.e.

aged 10-14, 15-19, 20-24 and 25-29 at the beginning of year 2003). The [conservative estimate of the] difference accounts, respectively, for 5%, 11%, 10% and 5% of the size of these cohorts of Polish population at the beginning of year 2003. This losses are quite substantial although smaller than those found in Latvia and Lithuania. Moreover, the Polish cohorts aged 20-24 and 25-29 by 2003, experienced largest losses during the post-enlargement period rather than during and after the crisis (Figure 5).

Data presented in Figures 4 and 5 highlight very serious demographic problems faced by the Baltic countries and (to a smaller extent) Poland. To put these in international perspective, Figure 6 compares values of two demographic indicators (crude birth rate and crude rate of natural change of population) in the Baltic countries and other Eastern NMS, as well as in main destination countries of the Baltic emigrants (the UK, Ireland, Germany, Norway and Finland).

**Figure 6 Crude rates of birth and of natural change of population, 2004-2012:
Eastern NMS and main destination countries of Baltic and Polish emigrants**



Source: Eurostat and own calculation.

The Figure conveys three messages. First, it appears that the "natural" aging caused by declining birth rates is much more pronounced in the Eastern EU member states: here, the recent rates are 30 to 40 percent lower than average rates observed in 1970s-1980s, while in most comparison countries this gap ranges between 5 and 20 percent, and only in Germany reaches 25 percent. The steepest fall in birth rates (by more than 40%) is found in Poland, Romania and Slovakia^{vii}.

Second, 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-27, while Estonia performs significantly better. Moreover, Latvia is one of just two of the Eastern NMS, where crude birth rate has declined in 2009-2012 compared to 2004-2008, while Lithuania and Poland have seen improvements in this indicator.

Finally, Poland and 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. The same is true for Poland with the exception of German destination.

To sum up, after EU enlargement in 2004, and especially during the crisis and post-crisis period of 2009-2012, emigration from the 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).

In Poland, net outflow of population was less pronounced (especially during the crisis and post-crisis years) and (due to lower mortality) was not substantially reinforced by natural decrease. However, sizable negative net migration combined with shrinking youth and middle-age cohorts and almost negligible natural increase of population suggests that also in Poland demographic perspectives are far from bright.

Both Baltic and Polish females abroad demonstrate higher fertility than their peers back home. According to the UK Population Census 2011 data, total fertility rates (TFR) of females born in Latvia, Lithuania and Poland were 2.51, 2.29 and 2.13, respectively, while TFR observed at the same time in the sending countries were 1.33, 1.55 and 1.30, respectively. Direct loss of demographic potential due to emigration is quite substantial: in England and Wales alone, the number of births delivered in 2011 by females born in Latvia and Lithuania accounted for about 12% of the number of live births in the sending countries in that year; corresponding indicator for Poland is smaller (5.3%) yet disturbing enough.

4. Polish and Baltic emigration during and after the economic crisis: the scale, the trends and the geography

This section looks at three aspects of emigration: outflows, return and stock of emigrants abroad.

4.1. Outflows. 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 7 presents gross outflows of nationals from Poland and 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^{viii}, 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 (and, although to a smaller extent, from Poland).

For comparison, sending countries' official total gross emigration data are shown in the same Figure. It appears that the Polish official data severely underestimate the scale of emigration: by 84% in 2008 and by about 40% in 2009-2012.^{ix} These data feature an increase of the outflows in 2009 instead of actual decline, but almost correctly reflect the dynamics of between 2009 and 2012. It has to be noted that the Polish Central Statistical Office (CSO) is not completely unaware about the real scale of emigration (see CSO (2012; 2014: Table 59); Kaczmarczyk (2013: Figure 5.1 and Table 5.1), but they classify emigrants which have not sign out from the Population register as "permanent residents staying temporarily abroad".

The Estonian official data are lower than the real outflows by about 50% in 2008-2011, by about 40% in 2012 and by 15% in 2013. These data correctly show Estonian emigration as steadily increasing between 2008 and 2013, but they fail to reflect the sharp increase in 2010, as well as (due to gradual increase in the data quality!) the slowing down in 2012-2013.

Statistics Latvia strongly overestimates the 2008 outflow, correctly reflects the 2009 and underestimates outflows observed in 2010-2013 by one-quarter to one-third. The dynamics between 2010 and 2013 is about right, but the official data wrongly suggest that in 2012-2013 the emigration fell below the pre-crisis level (see Hazans 2013: Annex A4.A1 for details).

Finally, Statistics Lithuania underestimates the 2008 outflow by 46%, the 2009 and 2011 - by 28% and 2012-2013 by 36%; the official figure for 2010 overestimates real outflow by including many of the previous years' emigrants (since 2010, deregistration from the population register became necessary to avoid compulsory health insurance payments, see OECD (2012: p. 248). As the result, the official data suggest that both increase in emigration between 2008 and 2010 and decline between 2010 and 2012 were much faster than in reality.

To sum up, in Poland and in the Baltic countries alike, the official data underestimate the scale of emigration and distorts its dynamics.

As far as total outflows are concerned, a clear distinction in terms of persistency of the effect of the crisis, the scale and trends of emigration, as well as the quality of official emigration statistics, emerges between Poland on one side and Latvia and Lithuania on the other. Estonia in some aspects is similar to Poland, in other - to its Baltic neighbours, but in terms of trends it stands alone (which is not surprising given that Finland, the main destination of Estonian emigrants, is geographically and linguistically very close to Estonia).

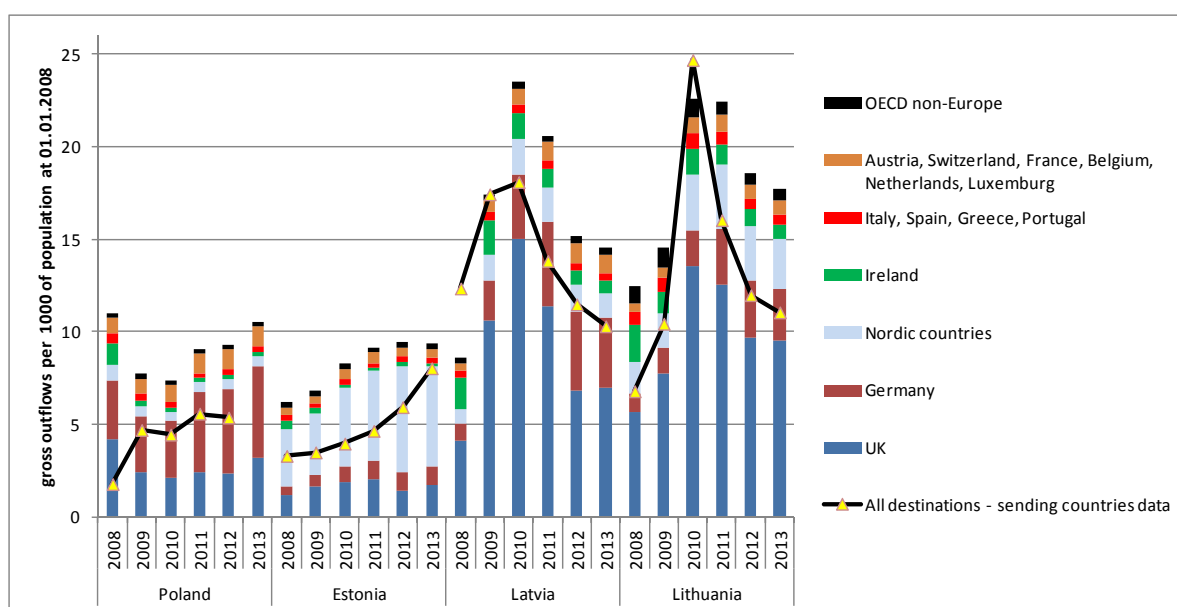
In 2008, total gross outflow of nationals from Poland (respectively, Lithuania, Latvia and Estonia) accounted to 1.1% (respectively, 1.2%, 0.9% and 0.6%) of population on 01.01.2008.

During the five crisis and post-crisis years (2009-2013) gross outflows from Poland and 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 and Poland.

In comparison with the year 2008, average annual emigration rate in 2009-2013 fell by 20% in Poland but increased in the Baltic countries: by 40% in Estonia, by more than a half in Lithuania and more than doubled in Latvia.

Figure 7 Gross emigration of nationals from Poland and 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 strongly across the four sending countries under inspection. The number of emigrants from Poland in 2009-2010 was roughly by one-third smaller than in 2008; the largest relative declines were observed in flows directed towards crisis-hit Ireland, but also to the UK and the Nordic countries; in 2011, the total outflow increased by about a quarter, driven mainly by opening of the German labor market (however, outflows to the UK, the Netherlands and Austria increased as well); in 2013, outflows to the same destinations (especially to the UK) increased again, and the total outflow was just 4% below the pre-crisis level. Thus, Polish emigration during the crisis featured a skewed U-shaped pattern: a steep decline in 2009 followed by a slower increase in 2011-2013. The negative effect of the crisis on the total size of outflows seems to last for no more than two years, but outflows to the UK remain low for four years.

Latvian and Lithuanian emigration, by contrast, 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.

As follows from the above discussion (see also Figure 7), for all four countries under inspection outflows to the UK have been most volatile during the crisis.

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 permanent components. The latter can be explained by combination of several forces, including network effect, non-economic push factors (such as disappointment and loss of perspective) and insufficient labor demand.

In Poland, 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 and 82% in Poland.

Finally, in 2013, emigration from Latvia and Lithuania was just slightly (by less than 5%) below the (post-crisis) 2012 level; emigration from Estonia have hardly changed since 2012, and outflows from Poland increased by 15%.^x

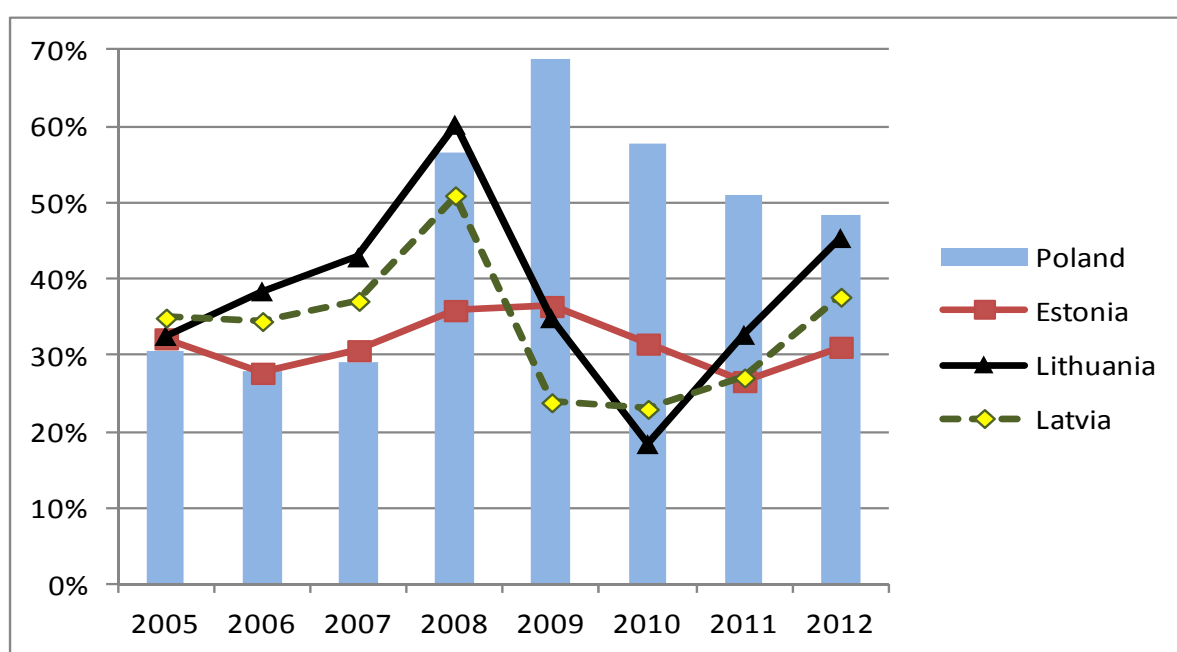
4.2. Return migration. Figure 8 (based on data from **Table XX**) compares flows of return migrants to Poland and the Baltic countries before during and after the crisis. The returning flows are measured as percentage of the outflows of nationals or respective country in the same year.

In 2005-2008, the patterns of return were similar in all four 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 Poland and 60% in Lithuania; a smaller increase (to 36%) is found in aslo 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; note that in Poland unemployment for the first time fell well below

10% level) with the first signs of the crisis in receiving countries and depreciation of the British pound and Nordic currencies (see Table 2).

Since 2009, the Polish "return rate" on one hand and the Baltic ones on the other display opposite trends (as do their economic indicators): during 2009-2010, the Lithuanian and Latvian rates fell, respectively, by two-thirds and by more than a half, reaching 18% for Lithuania and 23% for Latvia, while the Polish rate peaked at almost 70% in 2009 and remained just below 60% in 2010.

Figure 8 Inflow of return migrants to Poland and the Baltic countries from EU and OECD countries, 2005-2013
(% of the outflow of the sending country's nationals in the same year)



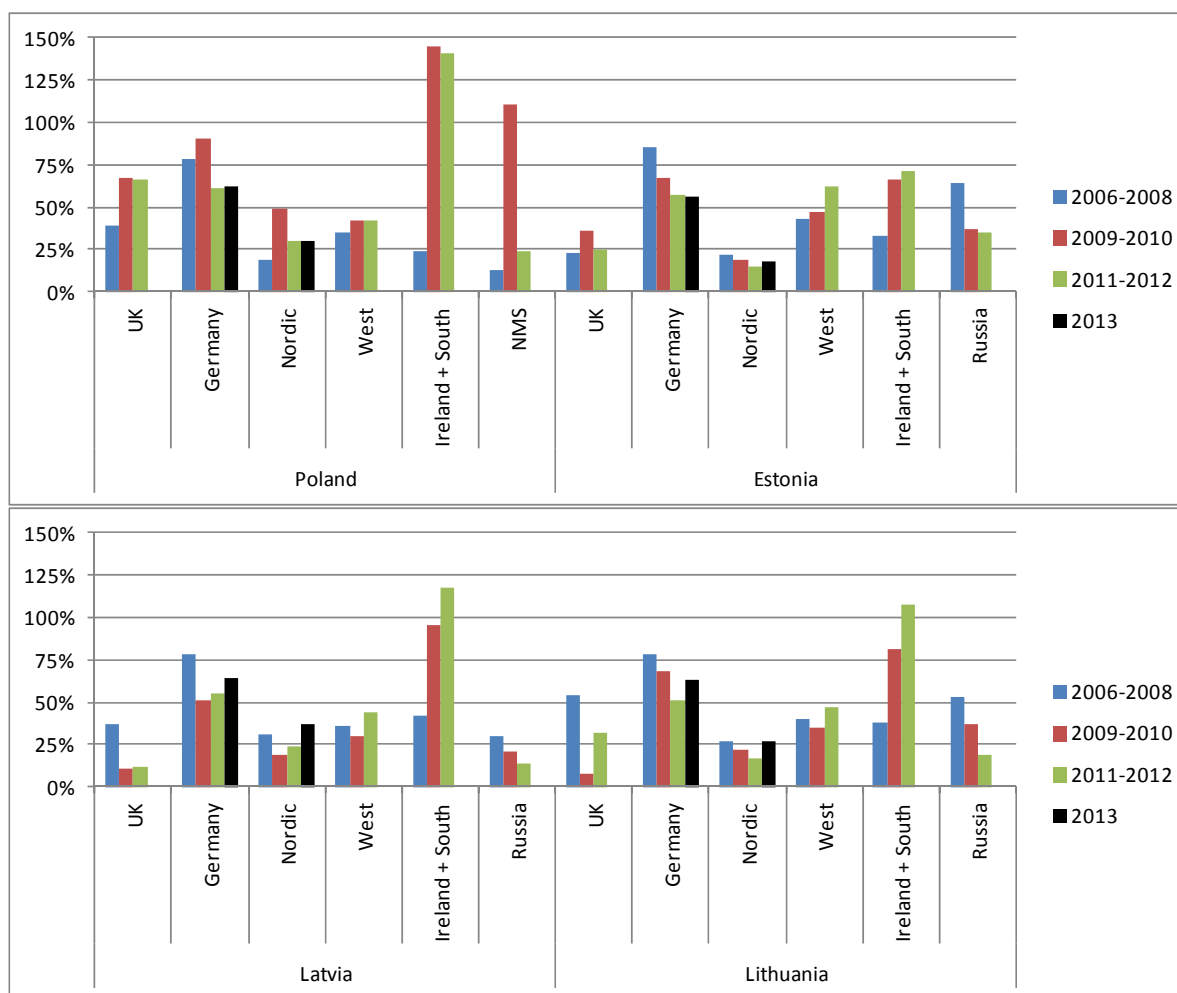
Source: Table XX data.

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, while the Polish return rate slid down (like the popular sentiment indicators, see Section 2) to a level below 50% (similar to the Lithuanian one). Estonia, as already mentioned, is a special case; its return rate behaved similarly to the Latvian one but was less volatile.

Figure 9 reinforces (and details) the message from Figure 8 by comparing the flows of return migrants to Poland and to the Baltic countries from the main European destinations. During the crisis, the intensity of return flows to Poland from the UK, Germany and the Nordic countries increased sharply (in relation to opposite emigration flows), while relative intensity of return flows to Latvia and Lithuania from the same destinations (as well as to Estonia from Germany and the Nordic countries) declined. Relative intensity of return flows from the French-, Dutch- and

German-speaking countries (excl. Germany) was less volatile; it increased slightly for Poland and Estonia but decreased for Latvia and Lithuania. In addition, return to Poland from the new EU member states intensified, while return flows from Russia to the Baltic countries became smaller relative to outflows^{xi}.

**Figure 9 Inflow of return migrants to Poland and the Baltic countries
from main European destinations, 2005-2013
(% of the outflow of the sending country's nationals in the same period)**



Notes: The year 2013 data at the time of writing were available only on return flows from Germany and the Nordic countries (Norway, Sweden, Finland, Denmark and Iceland). "West" refers to France, Belgium, the Netherlands, Luxembourg, Austria and Switzerland. "South" refers to Italy, Greece, Spain and Portugal. NMS stands for the New Member States. The return flows from the NMS to the Baltic countries, as well as from Russia to Poland are small in absolute terms and therefore not shown. *Source:* Table XX data.

The crisis effect on the Polish return migration from the UK appears to be persistent, but with respect to Germany, the Nordic countries and the new member states it lasted for just two years: In 2011-2012, the relative intensity of return flows fell sharply to (or, in the case of "Western"

destinations, stayed at) the levels similar to the ones observed in the Baltic countries, despite very different dynamics which led to those levels.

As far as return migration from countries hardly hit by the crisis (the Southern member states and Ireland) is concerned, the behavior of mobile Polish citizens as a group during and after the crisis was not different from that of their Baltic counterparts: 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 Poland, Latvia and Lithuania exceeds the number of emigrants.

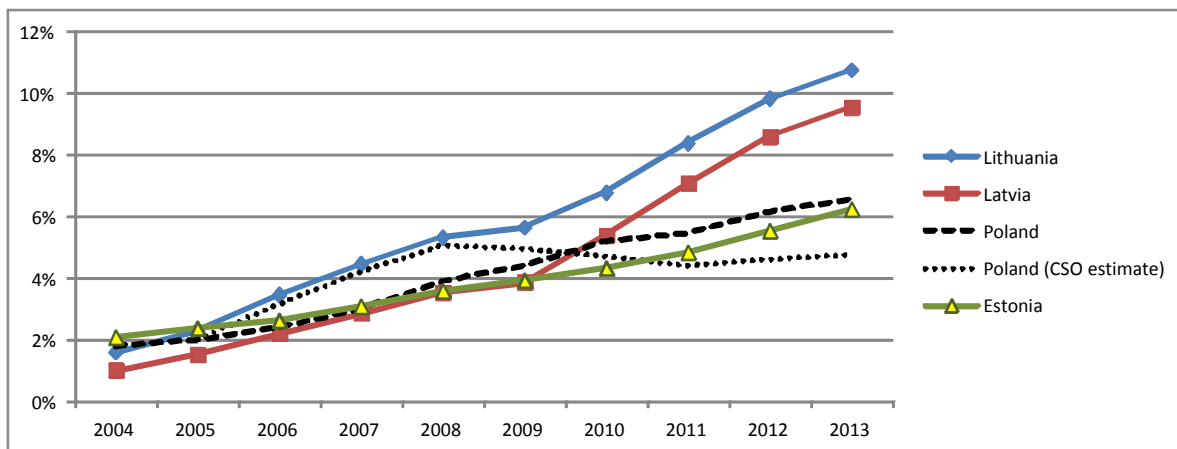
4.3. Stock of Polish and Baltic emigrants in Europe

Figure 10 (based on Table XXX) presents evolution of the number of settled Polish and Baltic expatriates in "Europe" (here understood as EU27 and EFTA countries) after EU enlargement. The underlying data come from Eurostat and OECD data on foreign population with Polish, Latvian, Lithuanian and Estonian nationality/citizenship amended with the number of former Polish (respectively, Baltic) nationals which acquired citizenship of host countries between 1991 and any given year. This definition is thus aimed at the "new" (post-communist) diaspora.^{xii}

For Poland we also present an alternative time series by the Central Statistical Office of Poland (CSO 2014: Table 59 (243)); in the post-crisis period, CSO seems to underestimate the stock of emigrants.

For each of the sending countries the stock of emigrants is expressed as percentage of its population at the beginning of year 2000^{xiii}. This way, dynamics of the stock of emigrants is disentangled from the dynamics of country's population.

**Figure 10 Stock of emigrants (expatriates) from Poland and the Baltic countries
in EU-28 and EFTA countries, 01.01.2004-01.01.2013
(% of sending country's population on 01.01.2000)**



Source: Eurostat, OECD and own calculation.

In 2004, immediately before EU accession, Polish, Lithuanian and Estonian expats in EU and European OECD member states accounted, respectively for 1.8%, 1.6% and 2.1% of sending country's population as of beginning of year 2000, while for Latvia this figure was just 1% ^{xiv}.

In five years, the stock of Latvian (respectively, Lithuanian; Polish; Estonian) emigrants almost quadrupled (respectively, more than tripled; more than doubled; almost doubled), and in the initial stage of the economic crisis (as of 01.01.2009), Latvian and Estonian diasporas in Europe accounted to about 4% of their [year 2000] population, while for Poland and Lithuania these proportions were 4.4% and 5.7%, respectively (Figure 10).

During the four-year period of the economic crisis and its aftermath (2009-2012), the stock of Latvian and Lithuanian emigrants in EU/EFTA countries increased by almost 150% and 90%, respectively, while the Estonian diaspora increased by about 60% and the Polish one - by about 50%. This is consistent with expectations formulated in Section 2. At the beginning of year 2013, total number of Lithuanian (respectively, Latvian, Estonian and Polish) nationals^{xv} in OECD countries amounts to 10.8% (respectively, 9.6%, 6.2% and 6.6%) of their population (Figure 10).

5. Four emigration waves in a dozen years

Recent history (in 2000-2013) of emigration from the Baltic countries and Poland 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; Herzog and Schlottmann, 1983; 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 and Poland featured two-digit unemployment (falling in the Baltics but rising in Poland), 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 or Poland.^{xvi} These strong push and pull factors resulted in a sizeable emigration potential (see Rose, 2000: 34 and Hazans, 2012: Figure 6.2 for details on the Baltic countries). In Poland, as early as in 1995, about 11% of population aged 16 to 55 were very willing to move to another country to improve their working or living conditions (Drinkwater 2003: Table 1); this rate was well above the one found in Latvia (the only Baltic country participating in the same survey).

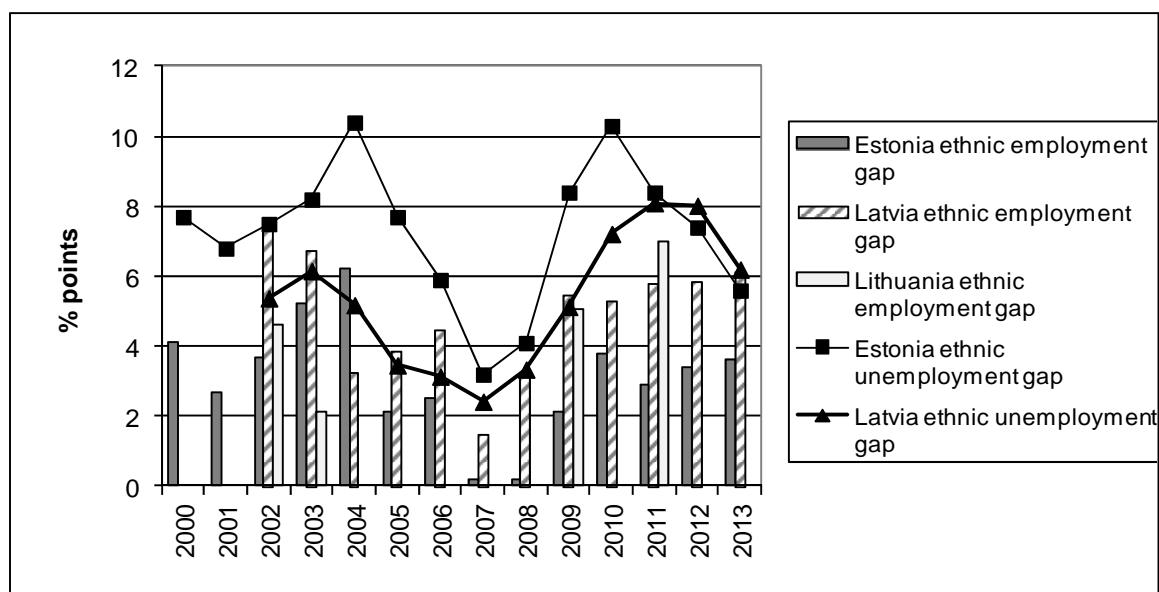
In the Baltics, emigration potential was larger among [Russian-speaking] minority population, which, in comparison to natives, featured less favorable (on average) labor market outcomes (Figure 11; see also Hazans, 2010; 2011a) on one hand, and a weaker attachment to the home country, on the other (see 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, while for Poland this rate was just 0.5%, see Figure 4. Noteworthy, net outflow rates from Poland and Estonia were lower due to more intensive return (see Table XX) rather than because of lower gross outflow rates; in fact, the latter did not differ much across the four countries (1.3% and 1.4% in Poland and Estonia vs. 1.0% and 1.8% in Latvia and Lithuania). Both Estonia and Poland have an important destination country (Finland and Germany, respectively) "next doors", which made seasonal or circular migration an easier option than in Latvian and Lithuanian cases.

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 far as the Baltics are concerned), as well as a high degree of geographical diversification.*

Figure 11. 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 the Great Recession on migration patterns became apparent) migration flows in the Baltics and Poland were shaped mainly by institutional and market factors.

Gradual implementation of free movement of labor within the EU (see Kahanec 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.

Together with high and growing demand for migrants' labor in the EU15, this triggered a sharp and persistent increase in emigration rates (see Figure 7). 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 Europe (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 ^{xvii}.

In addition, sufficiently strong pull factors, such as higher income and better working conditions abroad (mentioned, respectively, by 58% to 70% and 48% to 56% of potential movers from the Baltic countries and Poland 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 four countries ^{xviii}.

On the other hand, due to strong economic growth in the Baltic countries and Poland, 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, while Poland lost 2.8% (see Figure 4).

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 and Poland 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. Importantly, however, outflows from Poland and the Baltics to Germany, despite the

"closed door" policy in absolute terms did not decrease (even increased in the Polish case), acting through a rise in self-employment (Kahanec and Zimmermann 2009:11).

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 ^{xix}.

Hence, one should expect that, *in comparison with the pre-accession period, post-accession emigrants from the Baltic countries and Poland 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 from the Baltic countries 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 2011: Tables 8.8-8.9), labor market position of ethnic minorities in 2004-2007 was steadily improving in Estonia and Latvia (see Figure 11) 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 (see Figure 10 above).

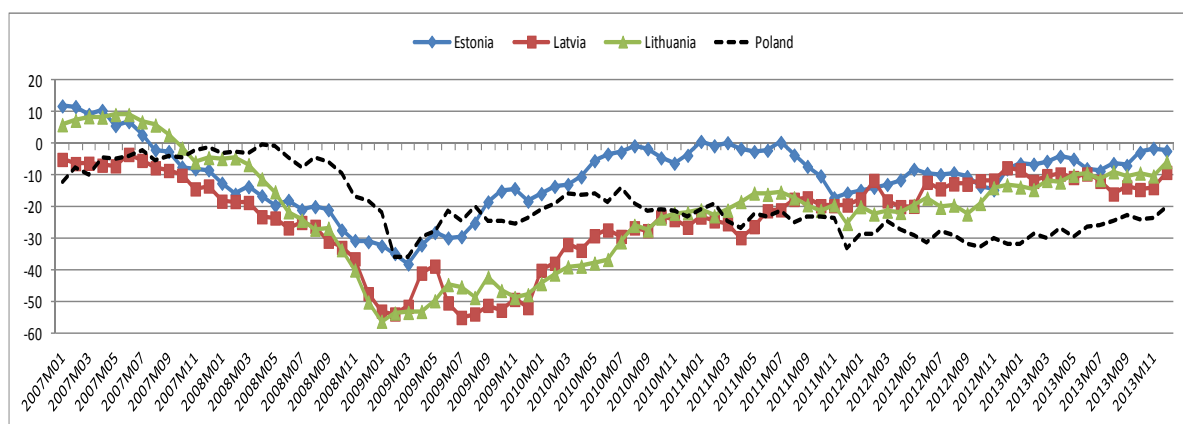
Crisis-driven emigration (2009-2010): Lost jobs, lost perspectives, "new movers" and shift towards permanent emigration

During the years of the Great Depression (2009-2010), push factors (mainly joblessness and wage cuts, but also implied inability to pay back credits^{xx}), were at work again in the Baltic countries and (to a smaller extent) in Poland. In the Baltics, 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 or Poland. 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 Poland 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 Europe, while real earnings did not decline (European Commission, 2011, graphs I.1.8, III.A3.5). Unlike the Baltic countries, Poland did not experienced wage cuts (European Commission, 2011, graph III.A3.6), yet purchasing power of minimum and average wages in Poland still accounted, respectively, for just 34% to 40% of those in the UK and Ireland. However, the PPS gap between average wage in Poland and minimum wage in the British Islands narrowed down from 14% before accession to 7% in early 2009 (Holda et al. 2011: Table 3). Crisis-triggered fall in consumer confidence indicator in Poland was not as deep as in Latvia and Lithuania, but it was not "business as usual" either (Figure 12).

Figure 12. consumer confidence indicator in Poland and the Baltics, 2007-2013



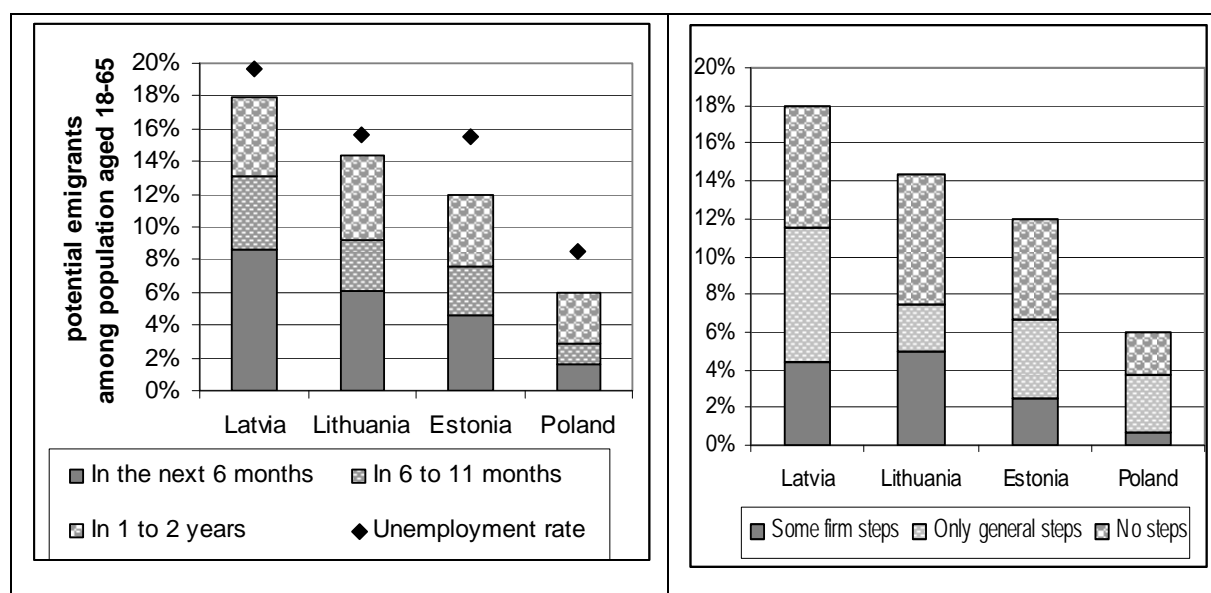
Source: Eurostat.

In summary, expected gains from emigration in terms of employment and earnings increased in comparison to the pre-crisis period for most potential emigrants from the Baltic countries and remained high for some (especially the unemployed and the low-paid) potential emigrants from Poland.

Figure 13 presents, for the three Baltic countries and Poland, the proportion of population (aged 18-65) who at the end of 2009 envisaged working abroad within two years, with a breakdown by planned time of departure, as well as by preparation steps made. One can conclude that during the crisis various measures of emigration potential in the Baltic countries and Poland were well in line with unemployment rates. Among the three Baltic countries, Latvia featured the

largest emigration potential and Estonia - the smallest. In Poland, the proportion of potential movers was just half of that found in Estonia.

**Figure 13. Intentions to work abroad within 2 years,
by planned time of departure and preparation steps.
The Baltic countries and Poland, November-December 2009.**



Source: Calculation with data of Eurobarometer 72.5. Unemployment rate (2009q4): Eurostat (EU LFS).

In addition, as longterm 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 and Poland feature very low income replacement rate by unemployment benefit for long-term unemployed ^{xxi}; for Latvia and Estonia (to some extent also Poland), 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) are 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 longterm or permanent emigration of entire families*, as described in Table N based on the daily records of EURES consultants in Latvia. Figure XYZ in Section 10 below provides evidence that in Estonia and Lithuania the share of population planning to emigrate permanently increased after the economic crisis. Importantly, while the Polish emigration slowed down and return migration intensified during the crisis (see Figures 7 and 8 above), the shift towards longterm emigration was observed also in Poland: according to surveys reported by Holda et al (2011), the share of Polish emigrants staying in the UK (respectively, Ireland) for more than 3 years increased from 14% in 2007 to 39% in 2009 (respectively, from 10% in 2007 to 32% in 2009).

Table N. 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 security

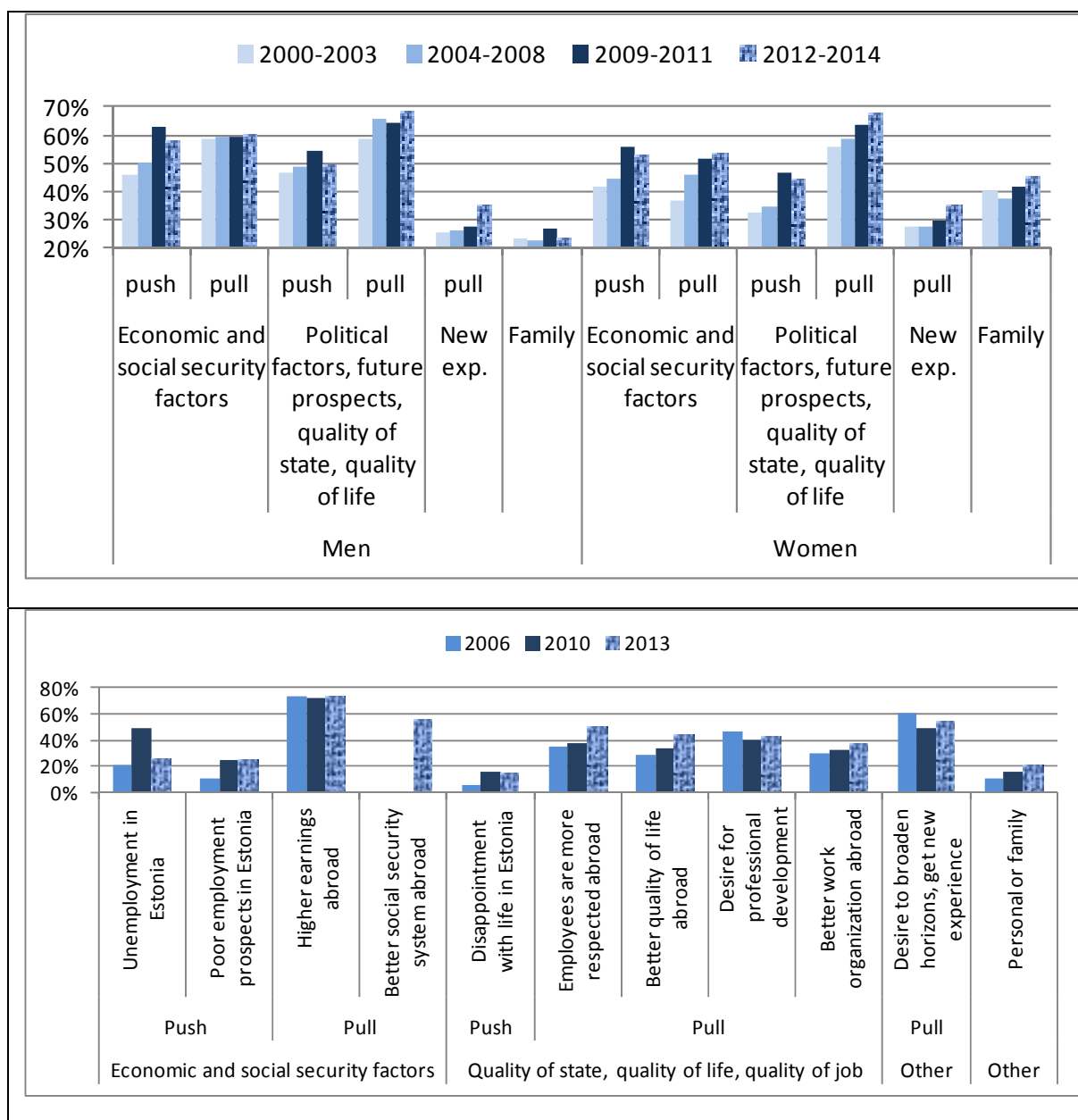
Source: Hazans (2013c: Table 4.6)

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 14 confirms that during the crisis years importance of both economic and non-economic push factors, betters 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)^{xxii}; 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 7 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: p. 151; 2011: p.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, 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 14. Prevalence of various reasons for emigration among emigrants from Latvia (2000-2014, top panel) and potential emigrants from Estonia (2006-2013, bottom panel)



Sources: Latvia (top) - calculations with emigrants' survey data ^{xxiii}. Estonia: 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.

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

In the aftermath of the Great Depression, 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 (see Section 10 below). In Poland, emigration intensified amid deteriorating popular sentiment (Figures 3 and 13). 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 14 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 the Baltic and the Polish emigration flows (see Figure 7); 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 population in the Baltics and Poland 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. Emigration has become “the new normal” (Hazans, 2014b), and the Baltic/Polish diasporas will keep growing in the years to come.

6 The changing face 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 educational attainment of the populations of the Baltic countries and Poland 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, 2011; 2012; 2013^{xxiv}).

We begin by using Population Census (or Population Register) data on educational attainment of Baltic- and Poland-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 more than one-half (respectively, about one-half; one-third; one-sixth) of Latvian (respectively, Lithuanian; Polish; Estonian) expats in EEA/EFTA countries are presented in the upper panel of Figure 15. The lower panel of the same Figure

analyses, for each of the four sending countries, the total stock of emigrants in other European/OECD destinations (excluding German speaking countries). Figure 16 compares emigrants' human capital across the four sending countries, selected destinations and three emigration waves.

More than a half (respectively, almost a half; about 45%) of Estonian (respectively, Latvian; Lithuanian) emigrants who arrived to the UK in the 21st century, as well as almost a half of their Polish counterparts were tertiary-educated by 2011. This is substantially more than among their age peers back home in the same time, as the corresponding values of stock selectivity index (or the "brain drain index") are well above zero (Figure 15, upper panel).

In other European OECD countries (excl. the German-speaking ones), university graduates accounted, on average, for 30% of Latvian and Polish 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, Lithuania and Poland 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 15, lower panel).

Overall, thus, by 2011, university graduates were over-represented among post-2000 Latvian, Lithuanian and Polish emigrants in European OECD countries but under-represented among Estonian emigrants. The extent of brain drain, however, varied strongly depending on destination country. 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 and even somewhat lower than in the sending country (Figure 16, upper panel). For Poland, no or almost no [over-proportional] brain drain is found towards Italy, Germany, Belgium, Austria and the Netherlands, while emigration to the Ireland, Norway, Sweden, France, Spain and Switzerland features strong brain drain (Figure 16, upper panel), as does also emigration to the UK (Figure 15, top panel).

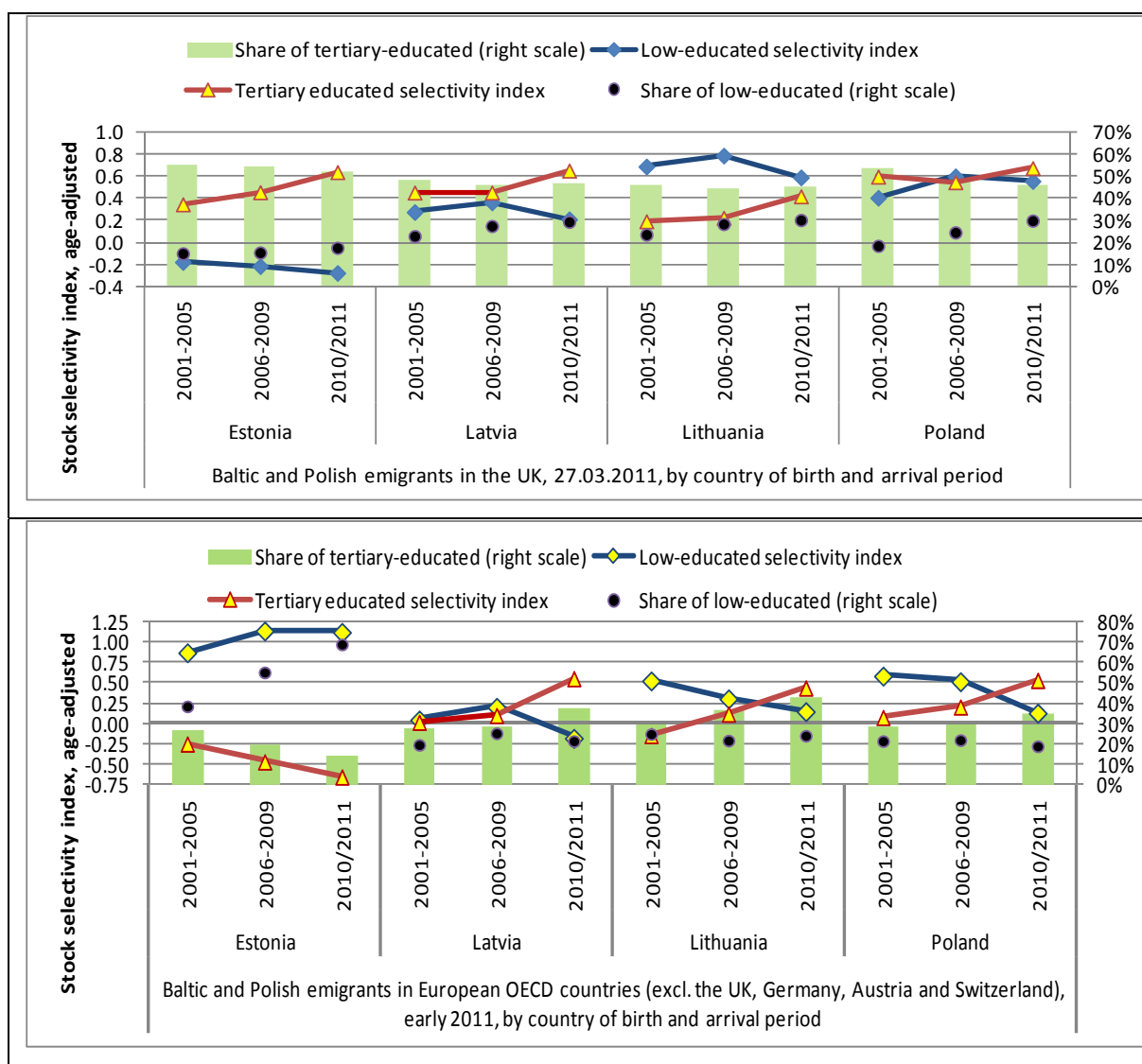
On age-adjusted basis, the low-educated are over-represented among post-2000 Baltic and Polish emigrants in OECD/Europe taken together, but the opposite is found for Estonian emigrants in the UK, Baltic and Polish emigrants in Ireland (except for the Latvian case) and Sweden, as well as Polish emigrants in Austria and Switzerland (Figures 15 and 16).

For emigrants from Poland and each of the three Baltic countries in the UK, the highest value of the stock *SI* for tertiary-educated, as well as (except for the case of Poland) the lowest value of the stock *SI* for the low-educated, is found during the crisis period (Figure 15, upper panel). The same is true for Polish, Latvian and Lithuanian emigrants in other European OECD countries taken together (Figure 15, lower panel), as well as for Estonian emigrants in Ireland, Sweden and (regarding high-educated) Norway (Figure 16, upper 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^{xxv}. This is the case for Polish, Latvian and Lithuanian emigrants in the UK (Figure 15, upper panel), Ireland, Norway

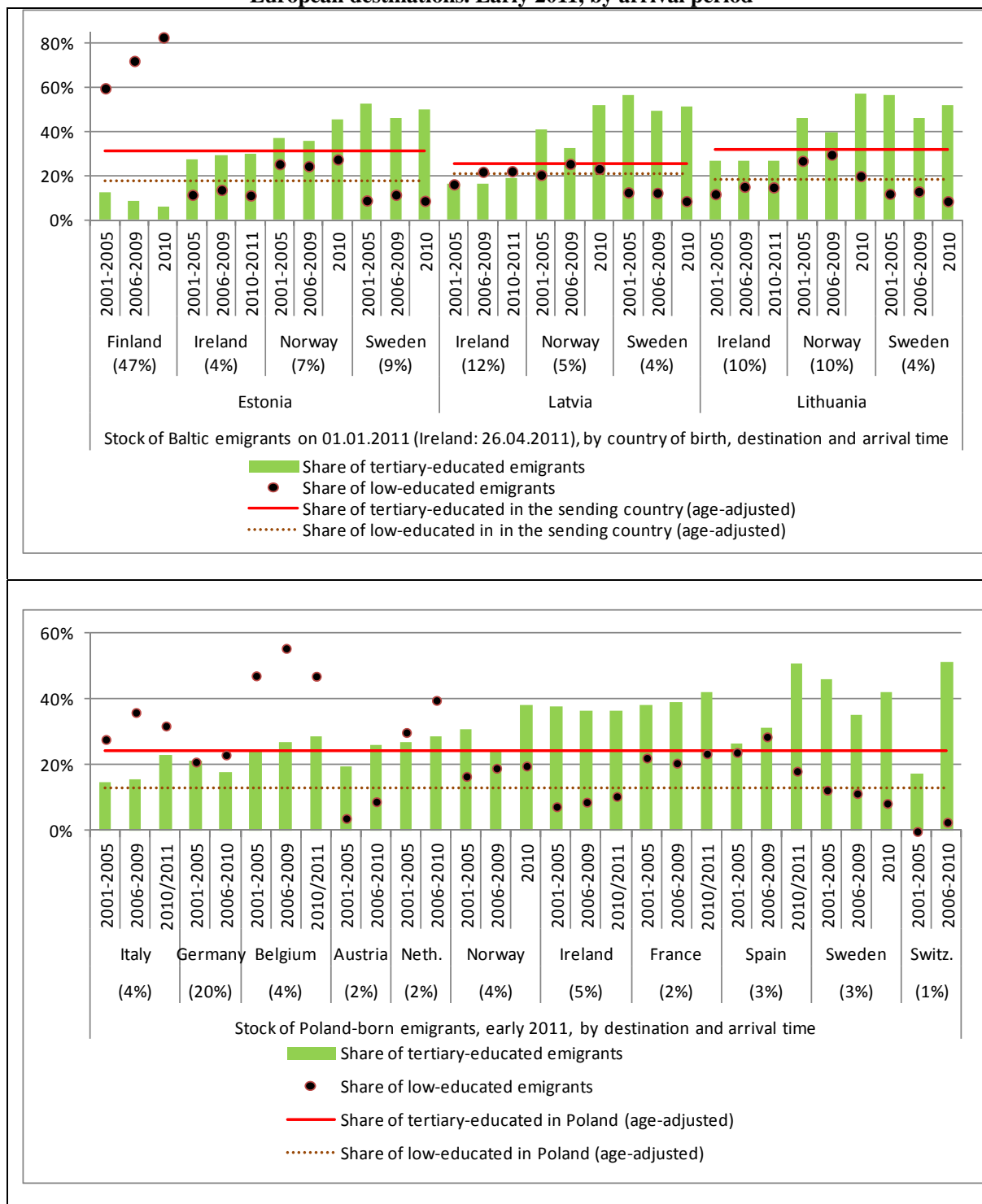
and Sweden (Figure 16), as well as for Estonian emigrants in Finland, Norway and Sweden and Polish emigrants in Germany (Figure 16).

Figure 15. Skill composition and selectivity of Baltic and Polish emigrants (2000-2011)
Top: The UK, stock (27.03.2011), by arrival period.
Bottom: Other European OECD countries (excl. Germany, Austria and Switzerland),
total stock (early 2011), by arrival period.



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 from this country to the given destination/-s. Data were not available for Baltic emigrants in Germany, Austria and Switzerland (for Poland, see the lower panel of Figure 16). *Sources:* The Database on Immigrants in OECD Countries (DIOC 2010/11), Eurostat data on population by educational attainment level, sex and age, and own calculation. For most of the destination countries (incl. the UK and Ireland) the DIOC data on emigrants come from Population Census'es 2011; for the Nordic countries - from Population Registers; for remaining cases (which do not include important destinations) - from the European Labour Force Survey 2010/2011.

Figure 16. Skill composition of post-2000 emigrants from Poland and the Baltics in selected European destinations. Early 2011, by arrival period

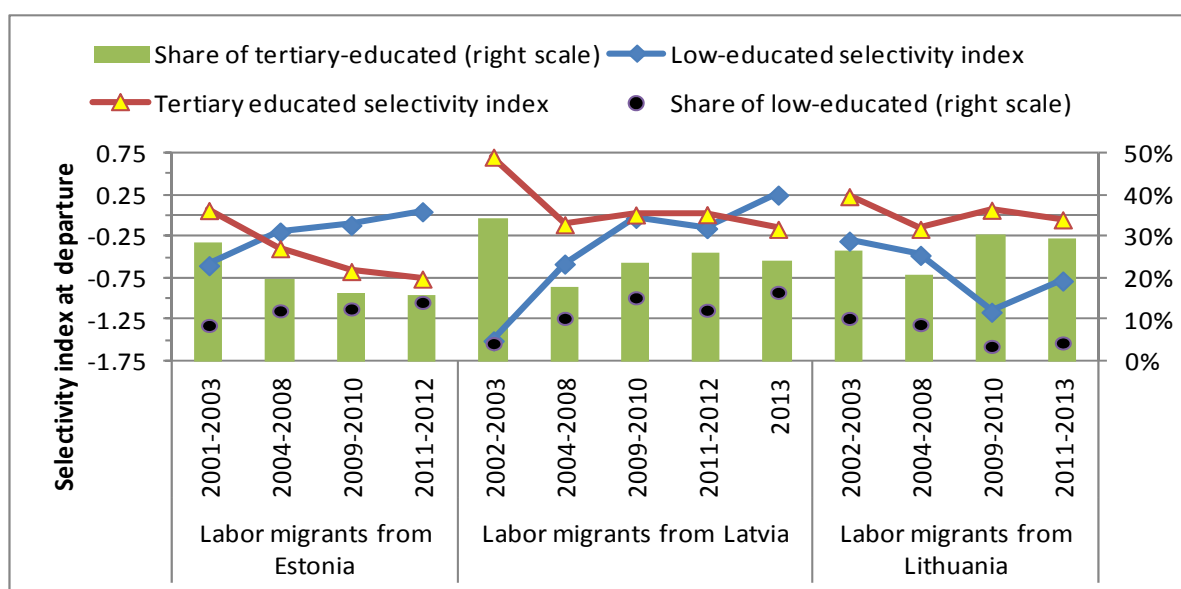


Notes: For emigrants in the UK, see Figure 15 (top panel). For each destination, its share in the stock of post-2000 emigrants from the given sending country to OECD/Europe (as of early 2011) is shown in parentheses.
Sources: The Database on Immigrants in OECD Countries (DIOC 2010/11) and own calculation.

We complement the above analysis by using LFS data on Baltic workers abroad reported as household members in the home country between 2000 and 2013 (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 17 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^{xxvi} (reflecting higher expected gains for the low- and medium-skilled) and, except for the case of Estonia, 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).

Figure 17 Skill composition and selectivity of Baltic migrant workers reported as household members in the home country 2000-2013.



Notes: The [flow] selectivity index compares, for each period, "recent" migrant workers with sending country's population aged 18-64 in the same period. Sources: Calculations with LFS data.

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.

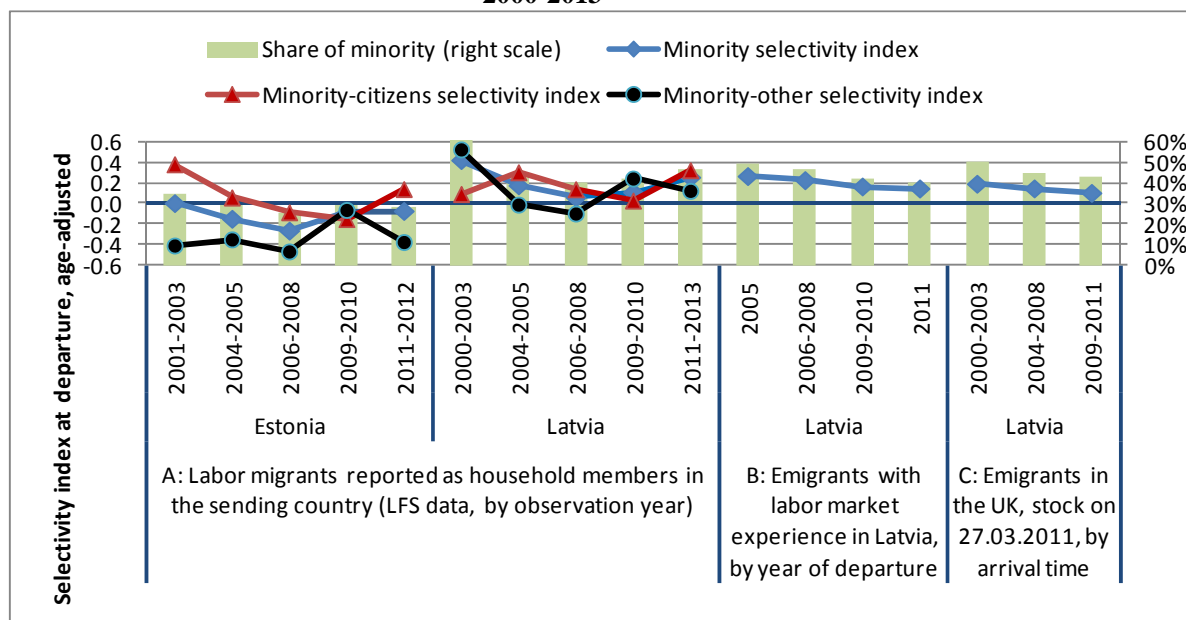
Yet another way of measuring the brain drain is suggested in Hazans (2013: Figure 4.21), where it is shown that during the crisis emigrants from Latvia (especially the top half) were relatively much more productive than before. This supports the hypothesis that the brain drain intensified during the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

Ethnicity and citizenship

Figure 17 (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 11) 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.^{xxvii} 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 17 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 were 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 come 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 migrant 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 12 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 12 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 of course). 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).

7. Labor market status and occupation

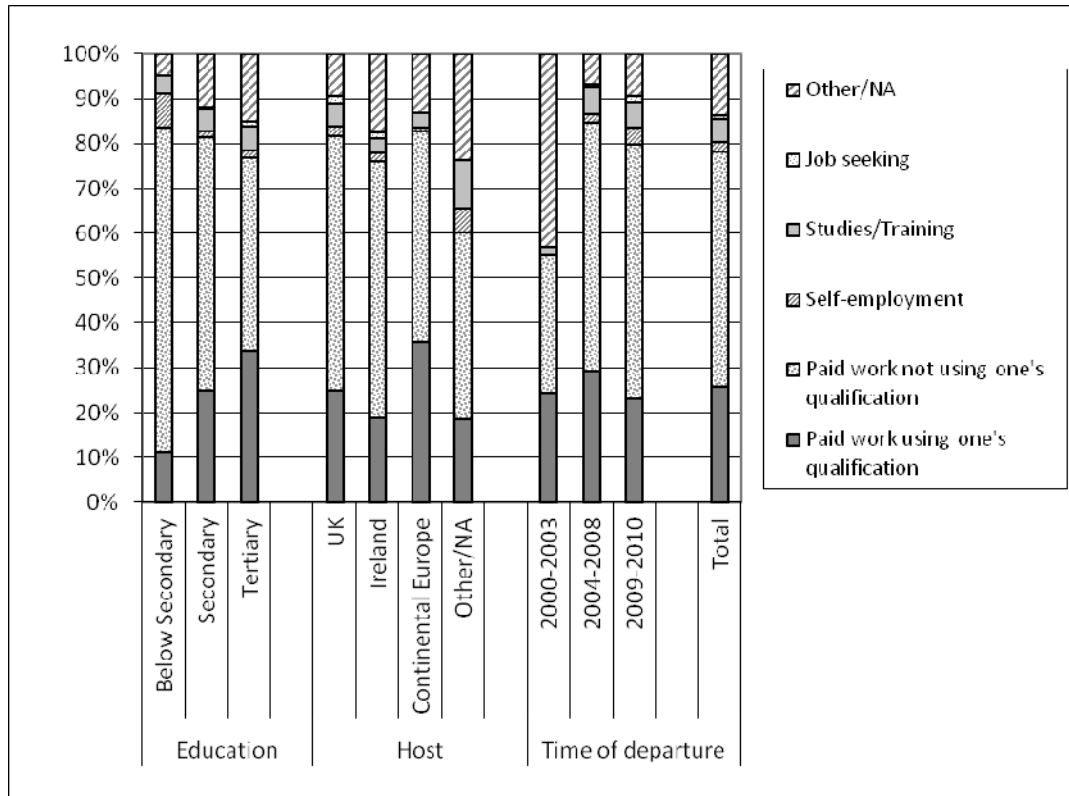
A striking feature of the emigrants' situation in the host countries' labor markets is an extremely high employment rate: at least 87% among those who left Latvia in 2004-2008 and at least 84% among crisis-period emigrants^{xxviii}. For the sake of comparison, only 54% of non-migrants aged 18 to 74 were employed in March of 2011, while the age-adjusted rate of employment for non-migrants was 61%. Unfortunately, the rate of employment among emigrants who left Latvia before 2004 could not be calculated with any degree of certainty due to the high percentage of missing values (43%), but it is surely higher than among non-migrants. Note, that return migrants in Latvia also feature a higher employment rate (about 66%) than stayers (on the other hand, they also feature a higher unemployment rate, but this might be because they can afford to search longer due to savings from earnings abroad - see discussion in Hazans (2008)).

The proportion of self-employed and entrepreneurs among crisis-period emigrants doubled in comparison with the previous period, confirming hypothesis (*H3*)-(f).

Even under the most radical (and unlikely) assumption that all emigrants with an "unknown" employment status were in fact unemployed, during the crisis emigrants of the last two waves feature a much lower unemployment level than the one observed in Latvia. To sum up, emigrants' labor market outcomes are significantly better than those of non-migrants.

Figure 3.9 provides a more detailed breakdown of Latvian emigrants' main activities abroad (by education, destination country and period of departure from Latvia). On average, only 26% of emigrants held a paid job in which they used their qualifications (education). This proportion is higher (and the incidence of brain waste smaller) in continental EU15 countries, where it reaches 36%, than in other countries of destination. The lowest rate (19%) is found among emigrants living in Ireland and in countries outside Old Europe (United States, Canada, Russia, Ukraine, etc.). Tertiary-educated emigrants are more likely to use their qualification than those with a secondary education or less. Those who emigrated during the crisis were less choosy with respect to their job abroad: only 23% of them use their qualification, whereas this is the case for 29% of emigrants who left Latvia during the previous two waves of migration (the difference is statistically significant).

Figure 3.9. Emigrants' main activity abroad at the end of 2010, by educational attainment, destination country and period of departure from Latvia



Note: "Continental Europe" refers to the EU15 (without the United Kingdom and Ireland), Norway and Switzerland.

Source: Calculations based on NIPCMs data.

8. Will the emigrants ever come back?

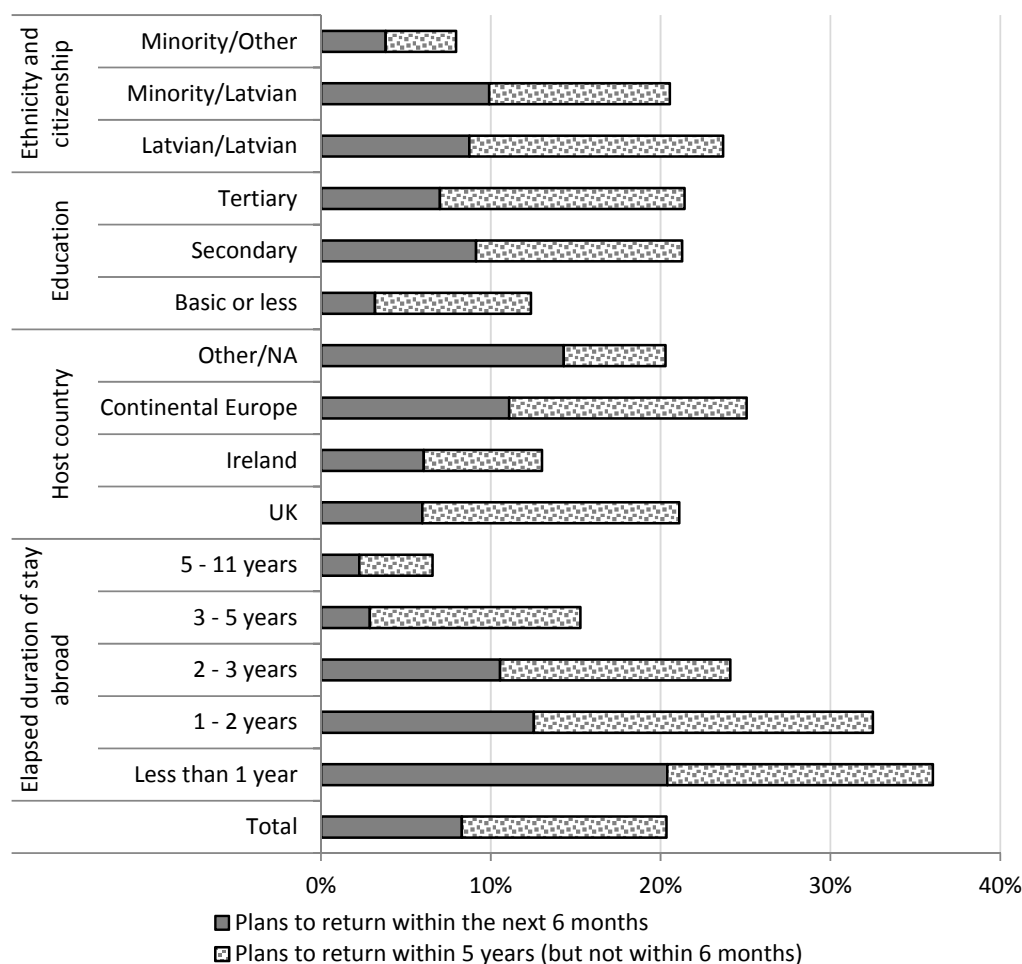
Given Latvia's deteriorating demographic situation, the possible return of emigrants can be extremely important. Figure 3.10 summarises information on Latvian emigrants' intentions to return, as reported in the NIPCM survey. On average, 8% of emigrants intend to (or would like to) return within six months, while about 20% of emigrants entertain the possibility of returning within five years. A more recent survey of users of the Latvian social network Draugiem.lv residing in the United Kingdom, Ireland, Germany, Norway and Sweden produced a similar result: only 23% of respondents plan to return to Latvia within the next five years, 65% plan to stay abroad longer than five years, and 12% plan to move to another country (Krišjāne et al., 2012). These findings are in striking contrast with the situation observed in 2005-06, when two-thirds of emigrants having left Latvia in 2004-05 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). In fact, in 2002-07, more than half of Latvian guest-workers^{xxix} returned home within one year, according to the Latvian LFS (Hazans, 2009, p. 19; Hazans and Philips, 2010, Figure 10). These

data support hypothesis *H3 (d)* namely that Latvian emigrants who left during the crisis are to a much larger extent oriented towards long-term or permanent emigration.

Ethnicity and citizenship are also associated with intentions to return, with non-Latvians having no Latvian citizenship show the lowest propensity to return: only 8% within five years (Figure 3.10). Tertiary- and secondary-educated Latvian emigrants are more likely to return than their counterparts who do not have a secondary education. When different destination countries are compared, it appears that Latvian emigrants in Ireland have the lowest propensity to return within five years (Figure 3.10).

The proportion of emigrants intending to return sharply declines as the duration of stay abroad increases. Thus, among those who left Latvia less than a year ago, one-fifth plan to return within six months, and more than one-third contemplate return within five years. By comparison, these proportions fall to 3% and 15%, respectively, among emigrants who stayed abroad between three and five years.

Figure 3.10. Intentions to return within six months and within five years, among emigrants from Latvia, by ethnicity and citizenship, educational attainment, country of destination and duration of stay abroad, 2010/12 to 2011/01



Source: Calculations based on the NIPCM data.

9. Migration networks and the experience of return migrants

As shown in Hazans (2011b, Box 2.25), among those aged 18-65, the proportion of individuals who had some relative or friend with foreign work experience reached 75% as early as the end of 2005 and increased to 82% by the beginning of 2011. Both at the end of 2006 and in the middle of 2008, 15% of working-age individuals were able to obtain information about work abroad from recent (of the last two years) experience, either their own or that of a close relative. Moreover, at the end of 2010, 28% of respondents indicated that some of their close relatives were working abroad (i.e., during the survey), and 10% had personal foreign work experience (including 9% during the last five years).

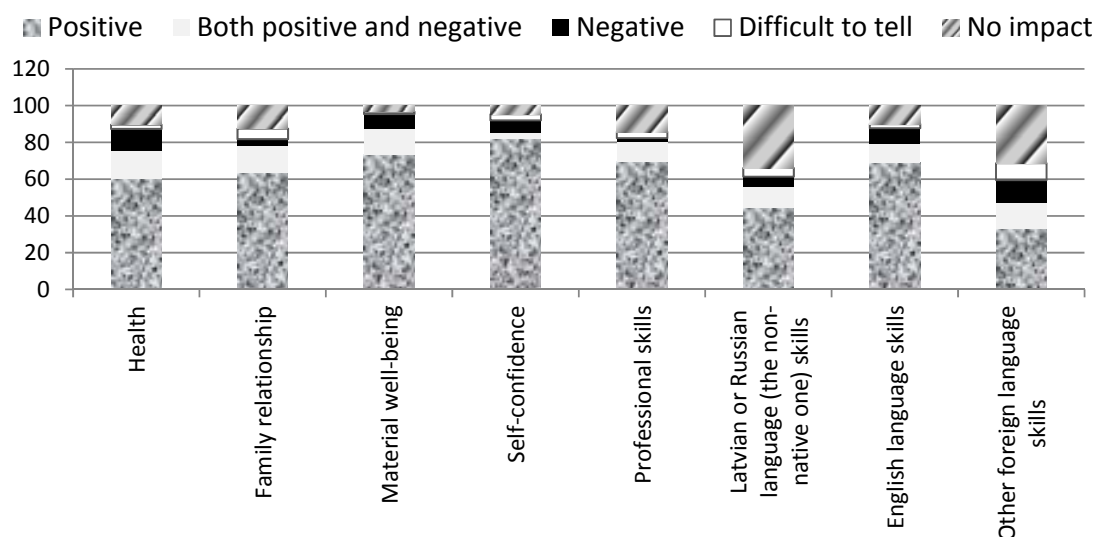
These data confirm the emergence of powerful migration networks. This, as noted above, significantly reduces information and job search costs, as well as psychic and adaptation costs for

potential emigrants. Another (possibly, even more important) conclusion from these data is that in recent years, work abroad has become an integral part of Latvian national identity.

Let us now look at how return migrants assess their experience abroad. The NIPCM survey (December 2010-January 2011) identified 89 respondents who spent at least three months abroad (in a single visit) during the last ten years, but have returned to Latvia. Figure 3.11 presents information on the impact of this experience on various aspects of their lives (health, family, etc.), according to their own assessment. Generally speaking, migrants seem to view their experience abroad as having affected their lives favourably.

A majority of respondents were of the opinion that the time spent outside of Latvia had a positive effect on their lives in terms of health (60%), relationships with family members (82%), material well-being (73%; only 8% reported a negative impact) and self confidence (82%).

Figure 3.11. Return migrants' assessment of the impact of their time spent abroad on various aspects of their lives



Source: Calculations based on NIPCM data.

Respondents were also asked to assess the effect of their stay outside of Latvia on their professional skills. Again, most (69%) considered the experience to have affected their lives positively in this respect (Figure 3.11). The effect of time spent abroad on language skills in Latvian or Russian as second language is less pronounced but very interesting. Forty-four percent of respondents reported a positive effect, one-third noticed no effect, while a negative assessment was very rare (Figure 3.11). As could be expected, most respondents (69%) felt that their English language skills had improved.

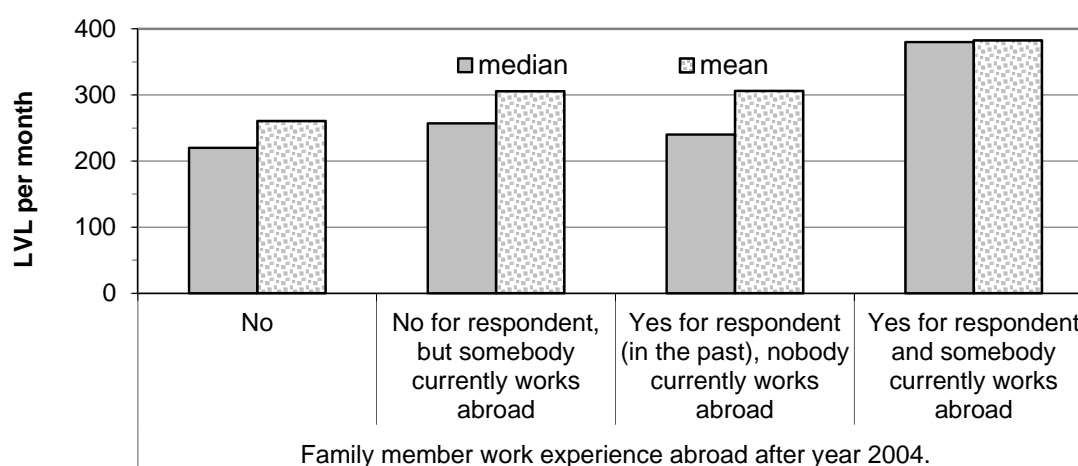
With respect to other foreign languages, a perceived negative effect of time spent abroad is more common (13%) than in the case of English, yet a perceived positive effect prevails (33%).

Return migrants have higher employment levels than people without a migration background. An econometric analysis (omitted here), however, showed that this association can be accounted for by differences in the age and gender distributions of the two groups.

Figure 3.12 sheds some light on the question of whether foreign work experience helps to earn more in Latvia. For this purpose, we look at the personal net income of individuals employed in Latvia in the second half of 2010, depending on their (and their family members') post-accession foreign work experience. Among those respondents who did not have family members working abroad during the survey, those who had personal work experience abroad have, on average, an 18% higher income than those without such experience (306 vs. 261 Lats per month). On the other hand, among respondents who did have a family member working abroad during the survey (and, therefore, were likely to receive remittances), return migrants' average income exceeds the average income of individuals without recent foreign work experience by 25% (383 vs. 306 Lats per month). Comparing median rather than average income of these groups does not change the results qualitatively. Econometric analysis (details omitted) confirms that even after controlling for educational attainment, age, gender, region and family members working abroad, employed return migrants collect a 13% higher income than their employed counterparts without post-accession foreign work experience. Moreover, this difference is due to experience abroad rather than to differences in productivity between return migrants and other workers. A study based on 2007 data yielded similar results (Hazans, 2008).

To sum up, both the respondents' opinions and their labor market outcomes suggest that the effect of foreign work experience on various aspects of the lives of return migrants has been largely positive.

Figure 3.12. Personal net income of individuals employed in Latvia in the second half of 2010, by their own and their family members' foreign work experience



Source: Calculations based on NIPCM data.

10. Intentions to emigrate

Recent data (see Figure XYZ) reveal a high and growing potential for further emigration from the Baltic countries. In 2009, 18% (respectively, 14%, 12%) of Latvian (respectively, Lithuanian, Estonian) working-age (here: 18 to 65 years) population envisaged working abroad within two years, and 12% (respectively, 8%; 7%) have made some preparation steps. By 2010, the share of Estonian population aged 15 to 64 considering work abroad in future was 36% (including 12% with concrete plans and 5% considering permanent emigration); three years later, emigration potential was only slightly smaller - 34% in total, including 8% with concrete plans and 8% thinking of permanent emigration.

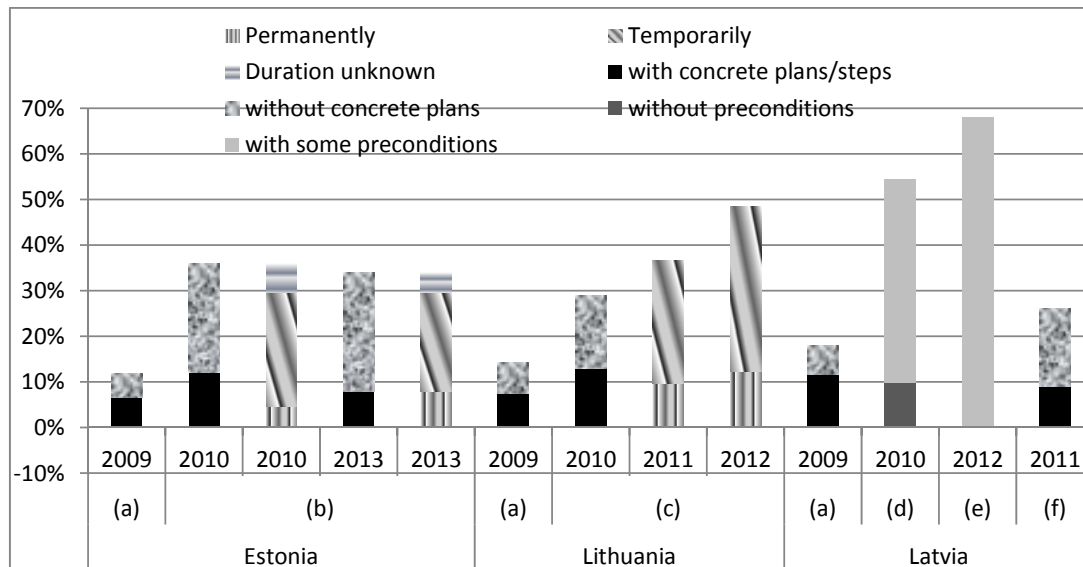
In Lithuania, the share of potential emigrants in population aged 18 to 75 was about 40% in 2011 and about 50% in 2012, including 10% and 12%, respectively, planning permanent emigration. In Latvia, 55% of adult working-age (18-64 years) population in 2010 and 68% in 2012 were prepared to accept an offer implying long-term emigration (in the age group 18 to 74, these shares were, respectively, 47% and 63%, well above the Lithuanian figures for comparable age). On the other hand, proportion of "determined stayers" has declined from 36% in 2010 to 22% in 2012 (Hazans 2013c: Figure 4.16). Potential emigrants "in the near future" accounted for 26% of Latvian population aged 18-65 in 2011, up from 18% in 2009.

Noteworthy, emigration potential has increased despite restored economic growth, declining unemployment and intensive emigration during the previous years. The data discussed above (and even higher ones for the youth and middle-aged population) imply that emigration stands to remain one of the most important challenges for the Baltic nations for the years to come.

In this context, the intentions to LT: Meanwhile, 9.6 percent., Who wish to leave permanently, there is no longer a purely economic migrants. Their primary motivation is not money, because they are in Lithuania, as shown by the survey results, have higher incomes and are well educated. One can guess that it's the people who do not see a viable and have lost faith in

Emigration potential in the Baltics is high also in international perspective. First, Lithuania, Latvia and Estonia were ranked 2, 3 and 5 (respectively) in EU-28 in terms of the share of adult population planning to move abroad within next 12 months, according to Gallup's global survey conducted in 2011-2012. Second, the Baltics (in reversed order) were ranked 1, 3 and 5 among the eleven Central and Eastern European members of the EU in terms of the number of EURES consultants' clients as the share of labor force (data refer to 2013). Note that EURES data suggest that many of potential emigrants are either "new" (return migrants and those with family members or close friends working abroad often rely on social networks rather than EURES consultants) or have a more longterm perspective on staying abroad than typical post-enlargement emigrants (and hence need more comprehensive information).

Figure XYZ Emigration intentions in the Baltic countries, 2009-2013



Notes: (a) Plan to work abroad within two years; age 18-65; (b) Plan or think of work abroad in future; age 15-64; (c) Plan or think of emigration; age 18-75; (d) Would accept a better paid job abroad (age 18-65); (e) Would accept an offer to live and work abroad for a long time (age 18-65); (f) Plan to emigrate in the near future "to improve family material well-being" (age 18-65); in this case "with (respectively, without) concrete plans" refers to answers "Yes" and "Do not exclude", respectively. *Sources:* 2009 - Calculation with data of Eurobarometer 72.5. Estonia, 2010 and 2013 - Emigration intentions surveys' data reported in Tarum (2014) and own compilation. Lithuania 2010 - 2012: Saukienė (2011), Samoškaitė (2012), Sipavičiene and Stankuniene (2013) and own compilation YY; Latvia 2010 - 2012 - own calculation with data of the surveys "National Identity: Place, Capability, Migration" (see Hazans 2011; 2013), as well as DnB Latvian Barometer No. 22 and No. 51.

This section explores emigration intentions of Latvian residents aged 18-65 in the period between December 2010 and February 2011, after more than two years of recession, accompanied by a powerful wave of emigration. The results, based on two surveys, are broken down by respondents' level of education, main occupation (status), ethnicity, citizenship, region, type of settlement and a background of migration.

The NIPCM survey includes a question on whether the respondent plans to move from Latvia in the near future in order to improve his [family's] material well-being. Those who answered "Yes" or "I do not exclude such a possibility" are categorised as potential emigrants; the former group is further referred to as having concrete plans.

To analyse reasons for emigration, we used the question "Do you plan to live and work abroad?" from the DnB NORD Latvian Barometer survey Nr 35 conducted in February 2011 (DnB NORD), followed, in the case of a positive answer, by a multiple choice question in which the respondent was asked to specify one or more reasons from a given list. We divided potential emigrants into two categories. The first one includes those who mention one of the following *economic reasons* (no jobs available in Latvia; no possibility to earn a living in Latvia; elsewhere one can earn much more; better social protection abroad), possibly together with one or more

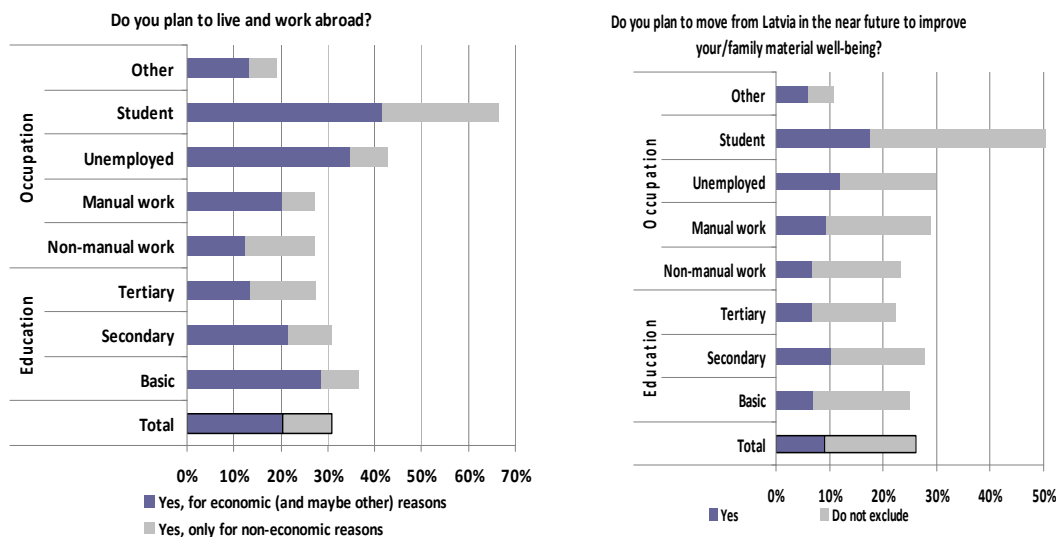
other (non-economic) reasons. The second category includes those who did not mention any of the economic reasons, but plan emigration *only for non-economic reasons* – namely, one or more of the following: an opportunity to see the world, to get new impressions, to meet new friends; education and career possibilities; no future in Latvia; does not like what is going on in Latvia; does not like the political environment; wants to live in a stable country; influence of other people.

Overall, in December 2010-January 2011, 9% of the population aged 18 to 65 planned to leave Latvia in the near future to improve their material well being and another 17% did not exclude such a possibility. Potential emigrants (both groups) thus constituted 26% of the population. In February 2011, in the framework of the DnB NORD survey, 20% of the same population reported plans to emigrate for economic reasons, and another 10% only for non-economic reasons, thus raising the proportion of potential movers to 31% (note however, that in this case, plans do not necessarily refer to the near future and are not restricted to emigration for economic reasons).

According to the NIPCM survey, the highest propensity to emigrate in the near future is found among those with a secondary education: 28% of them are potential movers, including 10% with concrete plans. The other two groups are not far behind, however: 25% of those with less than secondary education and 22% of the tertiary-educated are potential emigrants, in both cases including 7% with concrete plans (Figure 3.13, right).

Larger differences are observed with respect to reasons for emigration (Figure 3.13, left). The proportion of those who plan to move abroad for economic (and possibly other) reasons decreases with educational attainment: from 29% among respondents with a basic education to 13% among university graduates. By contrast, the proportion of those who plan emigration only for non-economic reasons increases from 8% among respondents with less than secondary education to 14% among respondents with tertiary education.

Figure 3.13. Intentions to emigrate among Latvian residents aged 18-65, by educational attainment and main occupation Dec 2010 to Feb 2011



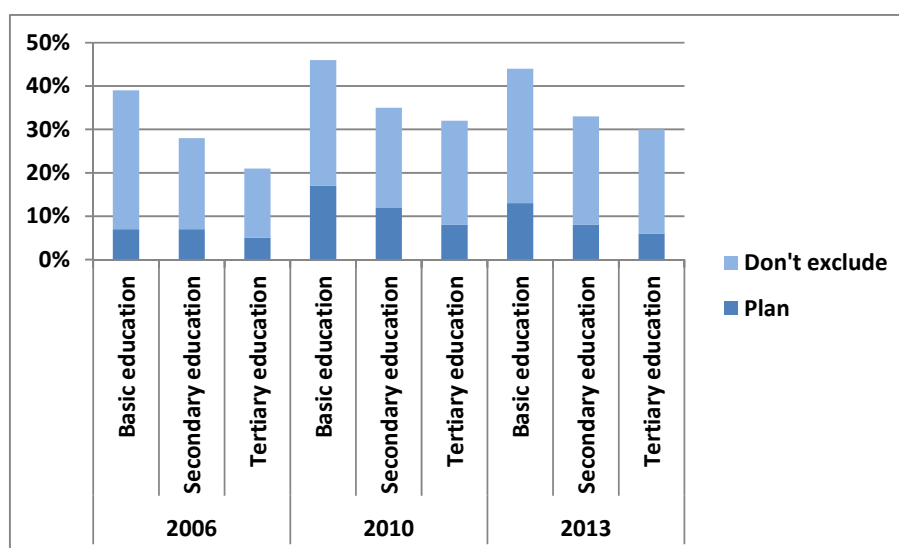
Source: Calculations based on survey data: left – DnB NORD Latvian Barometer Nr. 35; right – NIPCM .

From an occupational perspective, the highest propensity to emigrate in the near future is found among students: more than half of them are potential emigrants, including 18% with concrete plans (Figure 3.13, right). A lower, yet significant propensity to emigrate is found among the unemployed, manual workers and non-manual workers, with between 23% and 30% potential emigrants, including 7% to 12% with concrete plans (Figure 3.13, right). On average, one-third of potential movers mention only non-economic reasons for emigration. The only occupational group in which most potential movers do not mention any economic reasons for their plans, is that of non-manual workers (Figure 3.13, left).

Noteworthy is the very high propensity to emigrate (37% overall, including almost 9% with concrete plans) among persons who did not complete their higher education and who are not students (this result is not shown in Figure 3.13).

The unemployed are more often inclined to leave Latvia due to economic, or a combination of economic and non-economic reasons (this is the case for 35% of all jobseekers), than for non-economic reasons alone (8%). A similar situation is found among manual workers (20% and 7%, respectively). Among non-manual workers, on the other hand, 15% plan to leave Latvia only for non-economic reasons, while 12% mention economic reasons. Interestingly, total emigration potential is equally large (27%) among both manual and non-manual workers (Figure 3.13, left).

Figure XXX. Emigration intentions of Estonia's population, by education level, 2006-2013. (INCLUDE AND DESCRIBE?)



In order to gain a more in-depth understanding of the motivations and concreteness of intentions to emigrate in various population groups, we used an econometric model, which evaluates the impact on the individual's emigration plans, of each of the following variables: gender, age, family status, educational attainment, ethnicity and citizenship, main occupation, region and degree of urbanisation, while holding all other variables constant. The main results of this analysis – presented as the mathematical difference, in percentage points, between the adjusted proportion of potential emigrants in each category and that in the reference category – are summarised in Table 3.8.

Other things being equal, females and males without under-age children do not differ much in terms of propensity to emigrate, although the probability of an emigration plan in the near future is 2.6 percentage points higher for a female than for an otherwise similar male. By contrast, when a woman with children is compared to an otherwise similar man with children, the probability for the woman to plan emigration in the near future or in general is 5.5 to 6 percentage points lower, and her probability to plan emigration for economic reasons 9 percentage points lower, while probability to plan emigration due to non-economic reasons alone is 3 percentage points higher.^{xxx}

The presence of children in the family significantly increases males' propensity to emigrate due to economic reasons, while for females this effect is negative with respect to plans for the near future but is not significant with respect to emigration in general or due only to non-economic reasons (note that for females, the effect of the presence of children in each of the five columns of Table 3.8 can be obtained by summing the rows “Lives with children” and “Female with children”). This supports hypothesis (H3)-(d) namely, that since the onset of the economic crisis, potential emigrants are oriented towards long-term or permanent emigration and tend to move as entire families.

While intentions to emigrate vary significantly by age group, it is worth noting that the 25-34-year-olds have practically as strong a propensity to emigrate as those aged 18 to 24. For both groups, the probability of a plan to emigrate in the near future is 23 percentage points higher than for 55-65 year-olds, the probability of a more general plan to emigrate (without specifying the time) 30 to 35 percentage points higher, and the probability of a plan to emigrate due to economic reasons 26 to 34 percentage points higher. For population aged 35 to 44 years, all the above probabilities are 6 to 11 percentage points lower than for the 25-34-year-olds, but for those aged 45-54 years, another 6 to 10 percentage points lower. When the average probability for each model is taken into account (see row “Proportion of positive answers” in Table 3.8), it appears that the strongest age effects, which exceed the average prevalence of emigration plans by a factor of two-and-a-half, are related to concrete plans to move abroad in the near future.

It is worth noting, that the highest propensity to emigrate due to non-economic reasons alone, is found in 25-44 year-olds.

When other factors are controlled for, the difference between persons with secondary and tertiary education with respect to propensity to emigrate becomes insignificant, with the exception of emigration due only to non-economic reasons. In the latter case, university graduates feature a 4.3 percentage points higher probability of contemplating emigration. These findings once again support our hypothesis (*H3*)-(e) regarding a significant increase in the proportion of individuals with higher education among emigrants during the crisis. On the other hand, for a person whose education is below secondary, the probability of a plan for [economic] emigration in the near future is 6 to 7 percentage points lower than for an otherwise similar person having completed secondary education. This is despite the fact that people of low educational attainment suffered more than others from recession-related lay-offs (see Table 3.5).

Table 3.8. Impact of demographic and occupational factors on emigration plans

Population aged 18-65, December 2010-February 2011

Mathematical difference between proportions of potential emigrants as compared to reference category, in percentage points

	Do you plan to move from Latvia in the near future to improve your/family material well-being?		Do you plan to live and work abroad?		
	Yes	Yes or Do not Exclude	Yes (for any reason)	Yes, for economic (and possibly also other) reasons	Yes, for non-economic reasons alone
<i>Proportion of positive answers</i>	9.1%	26.2%	30.8%	20.4%	10.4%
Factors ^{1,2}					
Gender and family (vs. male without children)					
Female	2.6**	-3.0	-1.2	0.7	-1.5

Married or lives with a partner	1.3	-7.0***	-2.6	-0.7	-2.9
Lives with children	3.6**	8.0***	4.6	7.8***	-3.6
Female with children	-8.1***	-6.4*	-5.1*	-9.6***	4.9**
Age (vs. 55–65)					
18-24	22.9***	33.0***	34.5***	33.4***	2.2
25-34	23.0***	32.4***	30.4***	25.6***	8.0**
35-44	17.0***	20.9***	22.8***	19.2***	6.3**
45-54	11.4***	14.1***	13.2***	13.2***	2.6
Education (vs. secondary)					
Below secondary	-6.0***	-7.1**	-3.4	-1.9	-1.9
Tertiary	-2.7	-2.5	2.3	-3.0	4.3***
Ethnicity & citizenship (vs. Latvian)					
Non-Latvian, LV citizen	-2.0	7.3***	7.4***	8.3***	-0.5
Non-Latvian, non-citizen	2.6*	2.4	0.9	6.7**	-6.4***
Main occupation (vs. wage earners)					
Unemployed	4.8***	6.0**	14.9***	14.3***	-1.1
Student	1.7	6.8	19.4***	6.3	11.1***
Other	1.1	-10.7***	1.4	2.0	-0.8
Monthly household income per capita, LVL (vs. 121–160)					
Up to 80	5.4**	-1.9	-2.3	-5.1*	3.2
81-120	4.3**	1.8	1.5	-4.5	8.0***
161-200	3.3	1.8	-1.1	-8.8***	9.3***
>200	1.3	-3.3	-4.4	-7.8**	5.2**
n/a	4.3*	-0.3	0.5	-9.3***	11.2***
Other controls	5 regions and 3 urbanisation levels (indicator variables)				
Number of observations	869	869	868	868	868

Notes: *, **, *** – estimates significantly different from zero at the 10%, 5%, 1% levels, respectively.

1. Factors and reference categories are given in bold. Cells report the mathematical difference, in percentage points, between the adjusted proportion of potential emigrants in each category and that in the reference category.

2. Additional factors controlled for but not shown in the table were region (5 regions) and an indicator of urbanisation (3 levels).

Sources: Calculations based on survey data: the first two columns are based on DnB NORD Latvian Barometer Nr. 35; the last three columns, on the NIPCM. 2010 survey.

After controlling for the above variables, Non-Latvians with Latvian citizenship are 7 to 8 percentage points more likely than ethnic Latvians, to plan or consider moving abroad (“in the near future”, “in general” and “for economic reasons”). On the other hand, non-Latvians without Latvian citizenship are not significantly different from ethnic Latvians with respect to the first two of the above-mentioned probabilities (i.e., “in the near future” and “overall”). The probability of

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planning emigration due to economic reasons among non-citizens, however, is 7 percentage points higher than among ethnic Latvians. This, in turn, is partly offset by a 6 percentage points lower probability of planning emigration due to non-economic reasons alone. Finally, among non-Latvians with Latvian citizenship the propensity to move abroad due to non-economic reasons alone is the same as among ethnic Latvians.

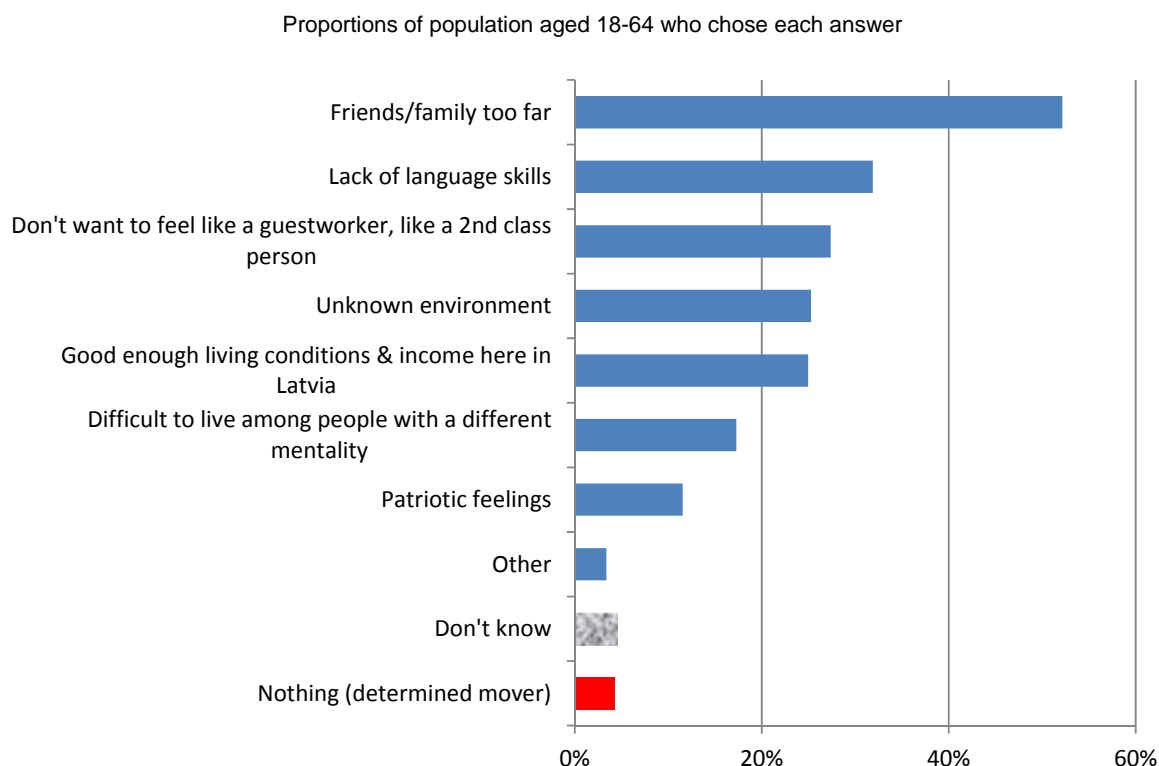
While findings reported in the previous paragraph suggest that non-citizens are less inclined to emigrate than non-Latvians with Latvian citizenship, results from the first column of Table 3.8 are slightly different: holding other variables constant, the probability of planning economic emigration in the near future for non-citizens is, on average, 2.5 percentage points higher than for Latvians and 4.5 percentage points higher than for minority citizens. In all likelihood, this is attributable to the difficult labor market situation of non-citizens (see Table 3.5). Overall, the results of the econometric analysis support hypothesis (*H3*)-(g) above, regarding changes in the role of ethnicity after the onset of the economic crisis: the propensity to emigrate among minority individuals – especially among those holding Latvian citizenship – appears to be higher than among Latvians. Official data on ethnic composition of emigrants in 2011-2012 (Statistics Latvia, 2013a) also support this conclusion: estimated proportion of ethnic Latvians among emigrants is below 50%, while their share in general population is about 61%.

As can be expected, the unemployed are much more likely than the employed, to plan emigration (“in the near future”, “in general”, “for economic reasons”). The impressive size of this effect is demonstrated by the fact that the difference in probabilities between the unemployed and employed (respectively, 5, 15 and 14 percentage points), is very large relative to the average proportion of potential emigrants of the given kind (respectively, 9%, 31% and 20%) in population aged 18-65. If those who do not exclude the possibility of moving abroad in the near future are also considered potential emigrants (along with those having specific plans), then the likelihood to belong to this group for an unemployed person is 6 percentage points higher than for an employed person. By contrast, with respect to plans to move abroad only for non-economic reasons, an unemployed person does not differ significantly from an employed individual.

Finally, students are much more oriented towards emigration for non-economic reasons alone, than those whose main activity is work: the difference in probabilities is 11 percentage points, which is a very large effect given that overall just 10% of population falls into this category.

Results reported so far refer to early 2011. Figure 3.14 provides evidence from a more recent (August 2012) survey, in which respondents were asked to choose from a list (or to suggest) three main reasons that would cause them to reject an offer to live and work outside Latvia for a long time.

Figure 3.14. What would be the main reasons for you to reject an offer to live and work outside of Latvia for a long time?



Source: Calculations based on the DnB NORD Latvian Barometer No. 51 (August 2012).

According to this survey, 4% of respondents aged 18-64 are “determined movers” – people who, while ready to move under certain conditions, could not think of a reason which would stop them.

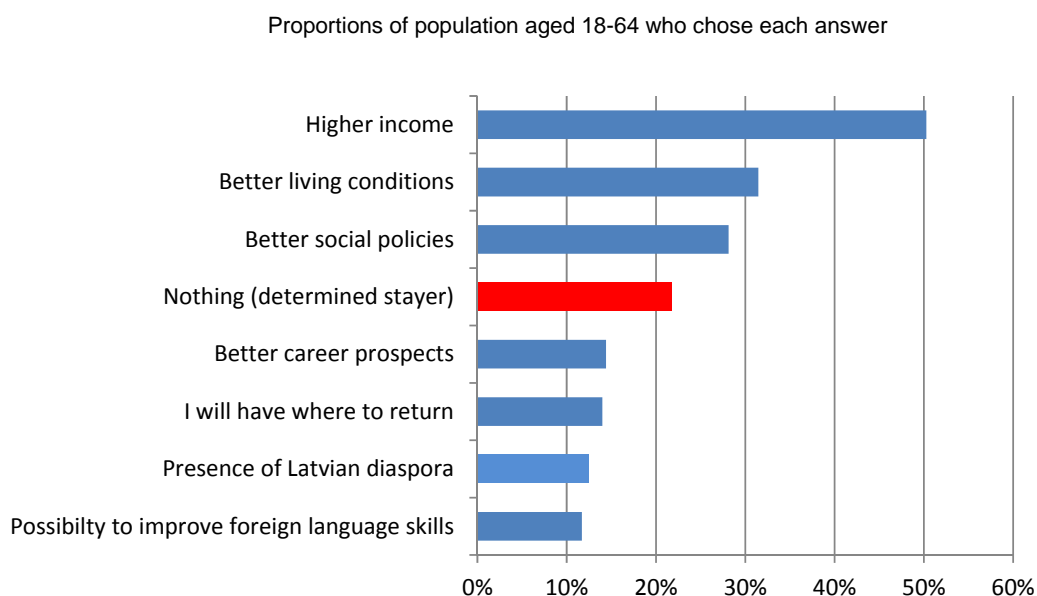
In the same survey, respondents were asked about the main conditions that would need to be met for them to accept an offer to live and work outside Latvia for a long time. Figure 3.15 ranks the most frequent answers. Higher income, better living conditions and (notably) better social policies in the potential country of destination lead the list. Just one out of eight respondents mentioned warranted possibility to return as a precondition.

Only 22% of respondents are “determined stayers” – under no conditions would they move abroad.

Questions similar to those reported in Figures 3.14 and 3.15 were asked in another survey conducted by the same agency early in 2010. Figure 3.16 compares the results regarding determined stayers (as defined above) and potential emigrants – those who would accept an offer to work and live abroad, at least under certain conditions.^{xxxii} The lists of conditions differed somewhat across years, but in both surveys there was an open-ended option to list “Other conditions”. Thus, the results are comparable (although not perfectly). In two and a half years, the share of potential emigrants increased from 54% to 68% at the expense of the proportion of

determined stayers, while the share of the undecided remained at 10%. This suggests that emigration potential has increased – despite the intensive emigration that took place in the period between the two surveys (see Table 3.4), restored economic growth (5.7% in the first three quarters of 2012 vs. – 2.4% in the same period of 2010) and declining (yet high) unemployment (14.2% in the third quarter of 2012 vs. 20.5% in the first quarter of 2010, seasonally adjusted).

Figure 3.15. What would be the three main conditions for you to accept an offer to live and work outside of Latvia for a long time?



8. The economic impact of emigration on Latvia

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 3.9 (based on LFS data) indicates that in 2003-2010 one-fifth to one-third of Latvian guestworkers experienced unemployment or economic inactivity in Latvia during the year prior to their departure.

Table 3.9. Unemployment or spells of economic inactivity in Latvia during the year prior to departure, among Latvian guestworkers¹ (2003-2010)

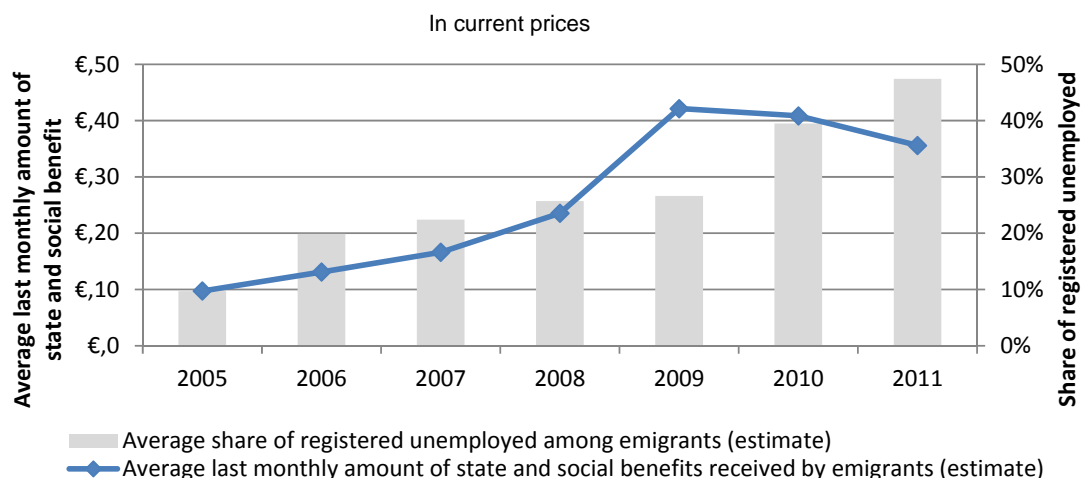
Percentages								
	2003	2004	2005	2006	2007 ²	2008 ²	2009	2010 ³
Unemployed	11.9	16.0	19.9	25.5	10.3	10.0	18.7	19.0
Inactive	9.9	14.3	10.0	12.8	9.2	7.4	6.8	4.0
Total	20.8	30.4	29.0	33.4	19.5	16.5	24.0	23.0

1. Guestworkers here are labor emigrants still considered household members back home.
2. For 2007-2008, the results are not comparable with the other years due to a change in LFS design in 2007.
3. Data for 2010 refer to “one year ago” rather than “during the previous year” and hence should be seen as lower bounds.

Source: Calculations are 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 3.17).

Figure 3.17. 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. Increase in job vacancy rate (especially in manufacturing and construction, as well as for semi-skilled manual workers) outpaced emigration in 2005-07 (even more so in 2005-06), see Figure 3.18. By contrast, during the jobless recovery of 2010-11, 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 (Figure 3.18). 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, Barrell 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). Employers and potential investors complain that despite high unemployment they 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 (Figure 3.19). 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 the near future, seeing 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. Holland et al. (2011) do not provide estimates for emigration impact on real wage growth in Latvia, while 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. Figure 3.20 presents estimates of the effect of emigration on real wages in Latvia for the period 2001-2010, based on a macro-econometric model developed by Zasova (2012). By 2010, the estimated cumulative effect is an increase of real wages by 2.5% (compared to a zero-emigration scenario). 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. Hazans and Philips (2010) discuss other reasons why macro-models might underestimate the effect of emigration on real wages: macro-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, but this is unlikely to last forever, especially when emigration becomes increasingly permanent, as in the case of Latvia. For the period of 2004-2009, Holland et al. (2011), assuming a net outflow of only 2.5% of the population (this study focused on outflows to EU15) 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, p.278). Clearly, the overall long-term effect of losing 9% of a country's population (and 14% of its labor

force) would be much larger, but estimating it using the same model is beyond the scope of this chapter. A simpler model by Zasova (2012) produced a smaller impact of -1.5% (Figure 3.20). On the other hand, introducing the loss of 14% of the labor force into the production function with the share of labor being 0.64 (as in Krasnopjorovs, 2012b; a number of previous studies arrived to similar estimates), one gets a permanent reduction of 9 percentage points in potential output.^{xxxii}

Figure 3.21 suggests that the latter estimate is too high since domestic productivity of at least three quarters of emigrants was below median productivity of all legally employed persons in Latvia. At the same time Figure 3.21 provides strong evidence to support to the hypothesis that during the crisis the emigrants (especially the top half) are relatively much more productive than before, and the brain drain risk is increasing.

As noted in section 6 above, return migrants are on average more productive than non-migrants, but as long as their number is small, this will not be sufficient to compensate for brain drain.

Due to space constraints, we are unable to cover all aspects of the economic impact of migration at length, but let us briefly mention a number of factors not addressed here.

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. Should Latvian diasporas in the United Kingdom, Ireland, Germany, Norway, Sweden, etc. be considered as potential trade partners and foreign direct investment sources?

9. Conclusion

The negative demographic effects of emigration on the Latvian economy (and especially on the sustainability of its social security system) suggest the need for measures which would address both causes and consequences of emigration. Direct job creation measures, as well as tax policies stimulating labor demand would address lack of jobs. Given that most emigrants come from the lower part of the distribution of earnings, raising minimum non-taxable income and allowances for dependants, increasing the role of targeted rather than universal benefits and other ways of promoting progressivity seems to be the right direction in further development of the tax and benefit system. Given a high proportion of former registered unemployed among the emigrants, investments in training programmes for the unemployed are welcome. Latvia should avoid policy changes (and discard existing policies), especially in such fields as education,

employment, health care, taxes and benefits, which increase motivation to emigrate among large groups of population. The state and local governments should become active in fostering diaspora's engagement in economic and social development and expanding Latvia's „virtual borders”. At the EU level, Latvia (together with other new member states) should actively promote creation of a mechanism which should compensate the countries of origin of the migrants for the loss of human capital, labor force and reproductive potential.

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**Table 1. Population sentiment indicators before and during the economic crisis.
The Baltic countries and Poland**

Satisfaction with:	Estonia				Latvia		Lithuania			Poland			
	2006q4- 2007q1	2008q4- 2009q1	2010q4	2012q4	2007q2q3	2009q2q3	2009q4	2011q2	2013q2	2006q4	2008q4- 2009q1	2010q4	2012q4
the state of economy	5.57	3.53	4.17	4.11	3.47	1.81	2.32	2.94	4.03	4.09	4.44	4.45	4.20
the national government	4.77	3.53	4.33	3.87	3.10	1.80	2.25	2.64	4.25	2.88	3.57	3.91	3.39
the way democracy works	4.87	4.52	5.09	4.89	4.37	3.27	3.40	3.53	5.02	4.36	4.83	5.04	4.91
the state of education	5.38	5.86	6.05	5.92	4.64	4.62	4.21	4.30	5.49	5.25	5.63	5.96	5.25
the state of health services	4.20	5.07	5.98	5.03	3.98	3.53	3.73	4.01	4.93	3.90	3.78	3.82	3.45
Trust in parliament	4.55	3.88	4.24	3.94	3.02	1.94	2.26	2.25	3.14	2.68	2.97	3.44	2.95
Sample size	1517	1661	1793	2380	1960	1980	2002	1677	2109	1721	1619	1751	1898

Notes: Satisfaction and trust are measured at the 0-10 scale. The table 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.

**Table 2 Exchange rate depreciation and volatility.
Selected currencies against the Polish zloty, 2007-2008**

	Depreciation period	Duration of <i>steady</i> depreciation of monthly average rates before July 2008	July 2008 vs. max monthly average in 2007	Annualized volatility of the daily exchange rate, Jan 2007- Jul 2008	The 2008 average vs. the 2007 average
GBP/PLN	Jan2007-Jul2008	11 months	-29.2%	8.5%	-20.3%
EUR/PLN	Feb2007-Jul2008	13 months (2 breaks)	-16.3%	5.8%	-7.2%
NOK/PLN	Sep2007-Jul2008	10 months (1 break)	-15.9%	6.9%	-9.5%
SEK/PLN	Jan2007-Jul2008	18 months (2 breaks)	-18.3%	6.5%	-10.8%

Source: National Bank of Poland and own calculation

**Table 3. Change in the size of selected age cohorts.
Latvia, Lithuania and Poland, 2003-2012**

Age on 01.01.2003	Country	2003-2007	2008-2012	2003-2012
10-14 years	Latvia	-2.6%	-11.6%	-13.9%
	Lithuania	-6.9%	-11.2%	-17.3%
	Poland	-0.4%	-4.5%	-4.9%
15-19 years	Latvia	-5.5%	-14.9%	-19.6%
	Lithuania	-12.4%	-18.0%	-28.2%
	Poland	-3.8%	-7.4%	-10.9%
20-24 years	Latvia	-6.4%	-12.4%	-18.0%
	Lithuania	-11.6%	-14.7%	-24.6%
	Poland	-7.2%	-2.9%	-9.8%
25-29 years	Latvia	-4.8%	-9.3%	-13.7%
	Lithuania	-6.7%	-10.7%	-16.6%
	Poland	-3.8%	-1.5%	-4.7%

Notes: For Poland, the data in Table 3 diverge substantially from the official Polish population statistics which severely underestimates emigration. *Sources:* Latvia and Lithuania: Population statistics (Eurostat) and own calculation. Poland: Eurostat and OECD statistics on Polish nationals among population of EU and EFTA countries and own calculation (available data from non-European OECD countries were not detailed enough, hence Polish data in Table 3 underestimate (by at least 10%) outflow of population of the age cohorts under inspection.

NOTES

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- ⁱ Kahanec and Zimmermann (2010) review evidence on the early poste-enlargement mobility in a broader EU context.
 - ⁱⁱ Such predictions mentioned in *The Economist* (2013).
 - ⁱⁱⁱ This was the case both in fixed prices (as shown in Figure 1) and in PPS (not shown).
 - ^{iv} 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.
 - ^v Official Polish population statistics reports net emigration of just 424 thousand; Figure 4 (also for the Baltic countries) is based on receiving countries population and migration statistics.
 - ^{vi} Available data from non-European OECD countries were not detailed enough.
 - ^{vii} The most recent crude birth rates (as of 2013, not shown in the Figure) are between 10.1 and 10.3 in the Baltic countries and 9.6 in Poland; however, when Polish population size is corrected downwards to account for the actual net migration level (see Figure 3), crude birth rate is about 10.0.
 - ^{viii} 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.
 - ^{ix} For 2013, Polish data on emigration of nationals were not available at the time of writing.
 - ^x 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 Poland and each of the Baltic countries to the EU and OECD destinations in 2012.
 - ^{xi} The return flows from the NMS to the Baltic countries, as well as from Russia to Poland are small in absolute terms and therefore not shown in Figure 9.
 - ^{xii} Emigrants of the 1990s (and in the case of Poland, late 1980s) are covered but constitute a small share of the stock as of beginning of 2013 (6% for Latvia, 8% for Lithuania and about 20% for Estonia and Poland).
 - ^{xiii} This point in time is close enough to Population Censuses (2000-2001 in the Baltic countries, 2002 in Poland) implemented before the era of massive unregistered emigration, so we consider corresponding official population estimates much more reliable than those based on the Censuses of 2011.
 - ^{xiv} About 25% of the pre-accession stock of Polish emigrants arrived to receiving countries in 2000-2003; this share was 40% for Latvia and Estonia and 50% for Lithuania.
 - ^{xv} Including those who acquired another nationality after January 1, 1991.
 - ^{xvi} Hazans (2003, Tables A4.1-A4.4) provides a detailed comparison of earnings; for Poland, see Holda et al. (2011: Table 3).
 - ^{xvii} The role of this factors was first noticed in Hazans (2011b), Gugushvili (2011) and Zientara (2011), followed by Bates and Komito (2012) and Anniste et al. (2012).
 - ^{xviii} 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.
 - ^{xix} 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 migrant workers and more than 60% of their Lithuanian counterparts were over-qualified, according to Hazans and Philips (2010, Figure 7).
 - ^{xx} See Figures 1 and 6 above; on wage cuts, see Hazans (2013: Figure 4.7), Masso and Krillo (2011, Table 14).
 - ^{xxi} 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.
 - ^{xxii} Hazans (2012, Figure 6.3; 2013c: Table 4.5) provides evidence for Estonia and Latvia
 - ^{xxiii} 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 consistent with the data from the year 2011 Population Censuses in these countries.

^{xxiv} Kaczmarczyk et al. (2010) and Anacka and Fihel (2011) 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 $G_M/G_S = 1/k$.

^{xxv} Due to data limitations pre- and post-accession are proxied by 2001-2005 and 2006-2009 in Figures 15 and 16.

^{xxvi} For Estonia, this finding is supported also by results in Anniste et al. (2012) who used data on registered emigration.

^{xxvii} 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.

^{xxviii} The actual level could be even higher given that information on labor market status is missing for 7–9% of emigrants in these two waves.

^{xxix} Guestworkers include also short-term and seasonal migrant workers. On the other hand, in the context mentioned here (due to LFS design) guestworkers are still considered as household members back home (those who moved as entire families are therefore not guestworkers).

^{xxx} These results are obtained by summing the effects from the rows “Female” and “Female with children”.

xxx*i*

The concept of potential emigrants here is somewhat broader than the one used earlier in this section. Here, it refers to accepting a hypothetical offer rather than planning emigration.

xxx*ii*

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.