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ABSTRACT

The Post-Enlargement Migration Experience in the Baltic Labor Markets*

We use Lithuanian, Latvian and Estonian LFS data (2002-2007) complemented with several other surveys to compare the profile of Baltic temporary workers abroad before and after EU accession with that of stayers and return migrants. Determinants of migration and return, as well as selection issues are discussed. Post-enlargement migrants from all three countries were significantly less educated than stayers. After accession, medium-educated workers were most likely to move, other things equal, and human capital became increasingly less pro-migration over time. Return migrants differ from all movers in many ways and, in particular, are more educated. Although brain drain was not a feature of post-accession Baltic migration, brain waste was: during 2006-2007, the proportion of overqualified among high-educated movers ranged from five out of ten for Latvia to seven out of ten for Lithuania, but it was around one fifth among high-educated stayers in all three countries. We find that the free movement of labor partially introduced in 2004 (and expanded in 2006) for EU citizens, although excluding Baltic non-citizens, brought about significant changes in how ethnicity and citizenship affect workers' mobility. We conclude by discussing migration perspectives in the context of recession.

JEL Classification: J61, J15

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1 Introduction

The four year period after the EU enlargement of 2004 was an unusual time for the three Baltic countries. Economic growth had been fostered by several factors including the benefits of the common market; substantial injections from EU structural funds; and strong domestic demand driven by a credit boom in both the real estate and consumer durables markets. Overall real GDP growth during 2004-2007 was 36%, 38% and 48% in Lithuania, Estonia and Latvia, respectively. Unemployment fell and total employment rose in each of the three countries, although in varying degrees.

One of the defining features of this period was the outflow of a significant part of the labor force: thousands of workers were quick to use the right to work in the United Kingdom, Ireland, Sweden, and later, other countries of the 'old' Europe. This negative demographic shock was very painful for the Baltic countries, which lost significant proportions of their populations (from 6% for Lithuania to 13% -14% for Latvia and Estonia) during the 15 years preceding accession because of negative net migration and, except for Lithuania, negative natural increase (World Bank 2007: p. 115). Large and growing Lithuanian and Latvian diasporas have emerged in Ireland, where they are among the top five groups of foreign nationals, and the UK. Estonian diaspora in Finland is second only to the Russian one and has been first by net migration since 2004. Flows of return migrants attracted by improving possibilities at home, flows of new migrants triggered by the network effect, as well as repeated and seasonal migration has strengthened the informal links between the diasporas and home population.

Migration has contributed to a decline in unemployment and real wage growth in general, as well as improvements in the labor market position of ethnic minorities and the low-skilled. Through these channels and through remittances migration has thus helped to improve living standards. However, migration-induced labor shortages in some sectors have been obstacles to growth. Migration has also changed the distribution of bargaining power in the labor market in favor of employees. While this change was often a necessary correction in countries with weak unions (see Masso and Eamets 2006: Table 5.5), in some cases (notably construction) it went too far and contributed to labor costs rising too fast.

Some of the migration effects, both good and bad, went beyond the labor market. One example is deteriorating (at least temporarily) quality and in some cases falling productivity in sectors affected by labor shortages, e.g. retail, catering, construction and health. On the other hand, labor shortages motivate firms to invest in new capital and improve human resource management, which leads to increases in productivity.

One of the most intriguing questions about the post-enlargement migration wave from the Baltic countries is the behavior of Russian-speaking minorities, many of whom do not have citizenship in Estonia and Latvia; and hence, they are not covered by the free mobility provisions.

The above discussion highlights the prominent role of post-enlargement migration for the Baltic countries (and for the countries which host Baltic migrants) from demographic, economic and

social perspectives. In this chapter, we discuss in detail the dynamics and composition of the Baltic migration and return migration flows before and after EU accession. We also look at the labor market outcomes of migrants and return migrants and at migration impacts on the Baltic economies and societies.

We refer to Kahanec, Zaiceva and Zimmermann (2010) for an overview of the literature on post-enlargement migration within EU. Few papers have looked specifically at the Baltic countries in this context. A study by Hazans (2003a) based on cross-country comparison of inter-regional migration rates concludes that the Baltic populations are more mobile than those of the Czech Republic, the Slovak Republic and Slovenia. Hazans (2003b) employs a survey of internet users to study their migration intentions, as well as the determinants of temporary and permanent migration. Kallaste and Philips (2004), SKDS (2006a) and Järv (2007) study migration intentions in Estonia and Latvia. Kaczmarczyk and Okólsky (2008) discuss the economic impact of migration in Poland and the Baltic countries. The University of Latvia (2007) analyze migration intentions and foreign work experience of Latvian residents and their relatives abroad. Indans et al. (2006) provide an interview-based account of life and thoughts of Latvians working in Ireland. Indans and Kruma (2006), SKDS (2006a), Kadziauskas (2007) and Nurmela (2008) look at migration policies and attitudes. Hazans (2008) studies labor market outcomes of return migrants in Latvia.

The rest of the chapter is organized as follows. Section 2 describes the data sources. The dynamics and intensity of the Baltic migration flows before and after accession are presented in section 3. Sections 4 and 5 are devoted to migrant human capital and their labor market outcomes. Return migration and labor market transitions are analyzed in section 6, followed by a discussion of the migration impact on the Baltic economies in section 7. Section 8 deals with the demographic composition of migrant flows and stocks, as well as with determinants of migration and returning. Section 9 discusses remittances. The main findings are summarized in section 10. The concluding section looks into the future of Baltic migration in the context of economic crisis.

2 Data

In order to describe various aspects of the migration process before and after EU accession, as well as to provide cross-country comparisons, we use several complementary data sources. Administrative data on gross migration flows into the UK (National Insurance numbers and Worker Registration Scheme), Ireland (Personal Public Service Numbers) and other EEA countries (international migration statistics) are used to measure the intensity of the migration and outline a migrant profile along basic demographic and other available dimensions. For Ireland, we also use the 2006 Population Census data.

For a deeper analysis we exploit Lithuanian, Latvian and Estonian LFS data files (2002-2007). LFS data include a sufficient number of observations on migrant workers abroad: 1844 for Lithuania, 577 for Latvia, and 800 for Estonia. These numbers increase further if those with some economic

activity abroad within the last year are considered. The data also has a sufficient number of observations on return migrants with foreign work experience: 313 for Lithuania, 185 for Latvia, and 136 for Estonia. By design, the data do not cover migrants who have already become permanent, i.e. are not considered as household members at home, and those with no family left behind. However, the distribution of movers found in pre-accession and post-accession LFS data by host countries is consistent with the geography of actual migration flows. The UK and Ireland have become major destinations for Lithuanian and Latvian movers, and Finland plays a similar role for Estonia (see Tables 1a, 1b). Table 1b also confirms that labor migration to countries outside the EEA accounted for less than 10% of the total in both 2002-2003 and after accession. This justifies our decision to restrict analysis of administrative data to EEA countries. While formally sending countries' LFS data capture only temporary migrants, one should keep in mind that the post-accession migration from EU-10 countries has been predominantly temporary so far (see Pollard et al., 2008: Figure 20 and pp. 39-40; Barrell et al., 2007: p. 5; European Commission, 2008: pp. 121-122), and that temporary migrants tend to become permanent (see e.g. van Baalen and Müller, 2009, for Germany). This suggests that our LFS data are suitable for cross-country comparisons, for analyzing accession-induced and post-accession changes in migrant characteristics, and for studying migrant labor market transitions. Whenever possible, we also support our findings with the Irish Census data, which include both temporary and permanent migrants.

When relevant, we also employ data from representative surveys conducted in Estonia in 2003 and 2006 (see Kallaste and Philips, 2004; Järv, 2007)) and Latvia in 2005-2008 (see Notes to Tables 2, 4), which include information on migration intentions and foreign work experience. Some of these are based on very large samples and hence allow for a detailed analysis when LFS data are not sufficient. For instance, one of the Latvian surveys includes data on more than a thousand relatives economically active abroad, with more than half having moved after accession. Another sample of over 10 thousand respondents includes data on 467 persons with post-accession foreign work experience. Results presented here are mostly based on our own calculations.

3 Intensity and main destinations of the post-enlargement migration

The removal of restrictions on labor mobility of those from the new member states by the UK and Ireland in 2004 triggered an almost immediate migration response. As is now well documented (see e.g. Baas, Brücker and Hauptmann, 2010; European Commission 2008: chapter 3; UK Home Office 2008), the majority of migrants were temporary, staying in the receiving countries from several months to several years. In most cases, migrants from the Baltic countries did not withdraw from population registers in their home countries. Therefore, standard emigration rates evaluated in the sending countries are not suitable for analysis. Various surveys, including LFS, conducted in sending countries tend to under-sample migrant households. Receiving country statistics is more relevant. One approach (Baas, Brücker and Hauptmann, 2010; see also European Commission, 2008) is to look at

the dynamics of stocks of NMS nationals in the receiving countries using LFS data. According to this methodology, during the four post-enlargement years (2004-2007) migrants to other EU countries accounted for 3.1% of the working-age population in Lithuania, 2% in Poland and the Slovak Republic, 1.3% in Latvia, 1% in Estonia and about 0.5% in the Czech Republic and Hungary (European Commission 2008: Chart 3).

From the sending countries' perspective, however, gross flows of migrants are also of considerable interest as a measure of the proportion of the population involved in the intra-EU mobility of labor. The dynamics of gross migration flows from the three Baltic countries and, for comparison, their Central European 2004 enlargement companions (Poland, the Slovak Republic, the Czech Republic and Hungary) in 2003-2008 is summarized in Figure 1¹. The upper panel features flows to the UK and Ireland. In both cases, flows are measured by the number of social security numbers allocated to adult nationals of the new member states in question. These statistics are perfectly comparable across the two largest destinations of post-enlargement migrants², as well as across sending countries. Moreover, when accumulated over years, it has a straightforward interpretation as the total number of individuals with foreign experience. Bearing in mind the very high activity rates among migrants from A8 countries (see below), we use the sending country's labor force (rather than working-age population) before enlargement as a reference point when measuring these flows³.

Several noteworthy facts are evident from Figure 1 (upper panel). Pre-accession (year 2003) migrant flows from the Baltic countries to the UK and Ireland were nonzero but quite small, accounting in total for a third of one per cent of the labor force in Lithuania, a sixth of one per cent in Latvia, and a ninth of one per cent in Estonia. Flows from Poland, the Slovak and Czech Republics and Hungary were even smaller. In response to opening the British and Irish labor markets in 2004, flows from all of the above mentioned countries increased sharply, reaching 1.5% in Lithuania, 0.9% in Latvia and 0.4% to 0.5% in Estonia, the Slovak Republic and Poland. Flows from Hungary and the Czech Republic increased from almost zero to the levels observed in Estonia and Latvia before enlargement. The network effect seems to work well: the summary flows to UK and Ireland from the Baltic countries and the Czech Republic roughly doubled in 2005, and the flows from Poland, the Slovak Republic and Hungary tripled.

In the following three years, Baltic flows declined steadily, quite likely due to rising earnings and falling unemployment at home. However, these flows remained relatively high in Lithuania

¹ Slovenia, which had much lower emigration rates, is not shown in Figure 1. For the Baltic countries more details, including the absolute sizes of the flows, are reported in Table 1c.

² This is one reason for choosing British national insurance numbers (NINO) over the Worker Registration Scheme (WRS) data. In addition, WRS was launched in 2004, and this year's data include up to 40% of migrants who arrived in previous years, whereas NINO statistics (which is also available for previous years) is less distorted by this effect. Another advantage of NINO from the Baltic perspective is that Latvian and Estonian migrants who do not hold citizenship of these countries (see Zimmerman et al. 2008 for details) are not eligible for WRS but are eligible for NINO if they have a work permit. Finally, NINO also covers the self-employed.

³ Using the working-age population would hardly affect the comparison between the Baltic countries, the Slovak and Czech Republics; however, Polish and Hungarian flows would fall by 7 and 13% relative to Lithuanian ones.

(1.4%) and Latvia (1%) in 2008; the Estonian flow fell to 0.3%. Note, however, that the main destination of Estonian migrant workers, unlike their Latvian and Lithuanian colleagues, was the Nordic countries rather than the UK and Ireland (Figure 1, lower panel). Flows from Poland, the Slovak Republic and Hungary featured quite a different dynamics: they continued to increase until a peak in 2007 and fell only in 2008 to a level below that of Poland and the Slovak Republic in 2005.

A total of 10.1% of economically active Lithuanians moved (at least temporarily) to the UK and Ireland during 2004-2008; for Latvia, Poland and the Slovak Republic, this proportion was 6.7, 6.2 and 5.7%, respectively; for Estonia, Hungary and the Czech Republic, it was 2.3%, 1.6% and 1.3%. In other words, the Baltic nations ranked 1, 2 and 5 among the A8 countries in terms of mobility to the UK and Ireland.

The lower panel of Figure 1 features annual flows of adults (15+) to Germany, Nordic countries (Sweden, Denmark, Finland, and Norway), Spain, Austria, the Netherlands, Cyprus and France⁴. It appears that migration from the Baltic countries, especially Lithuania, to non-English speaking countries has been more geographically diversified than migration from Central Europe, which is heavily concentrated towards Germany. This panel is based on immigration statistics which, unlike British and Irish data, cannot be simply aggregated over time because the same person can be counted more than once. However, the data allow comparison of migration intensity across countries and over time. Moreover, assuming that the proportion of repeated moves within the same year is small, these flows could be roughly compared with the flows to the UK and Ireland.

The data suggest that immediately before enlargement, flows from the Baltic countries to the continental part of the 'old' Europe were larger than flows to the UK and Ireland. This pattern was even more pronounced for Central European countries. Interestingly enough, when the UK, Ireland and Sweden opened their labor markets for the A8 countries in 2004, total flow to other countries of the old Europe increased in size as well, albeit less sharply. A closer look reveals that flow towards the Nordic countries increased steadily for each of the Baltic countries and Poland. Flows to Germany from Lithuania, Latvia and Slovakia increased only temporarily and returned to levels observed in 2003 or lower by 2007. Estonian-German and Czech-German flows declined. By contrast, flows from Poland and Hungary to Germany remained well above the pre-accession level throughout the whole period between 2004 and 2007. In terms of overall intensity of migration towards continental old Europe, Poland is the clear leader, with an average annual gross outflow equivalent to one per cent of the labor force during 2004-2007⁵, followed by Lithuania, the Slovak Republic, Hungary and Estonia, with annual outflow between 0.67 and 0.57 per cent.

The combined evidence from both panels of Figure 1 suggests that Lithuanians have been the

⁴ Available (incomplete) data suggest that including flows from the Baltic and Central European countries to the remaining EU-15 countries (Belgium, Luxembourg, Italy, Greece and Portugal) and flows between new member states would not change the results qualitatively, although flows to Italy from Lithuania and especially Poland are substantial (Kaczmarczyk and Okólsky, 2008 estimate the flow to Italy to be about 8% of the total outflow).

⁵ This rate may well be even higher because the number of Polish seasonal workers in Germany (European Commission, 2008: Table 7) exceeds immigration flow reported by *Eurostat* (used in our analysis) by at least a factor of 2 during 2004-2005 and by at least a factor of 1.6 during 2006-2007.

most mobile nation among those which joined the EU in 2004. Poland ranks second with Latvia and the Slovak Republic slightly behind with very close results. Estonia, Hungary and especially the Czech Republic have seen much smaller outflow rates. These results are broadly consistent with those by Baas, Brücker and Hauptmann (2010) based on stock estimates and with countries' pre-accession income and unemployment levels (see Kahanec, Zaiceva and Zimmermann, 2010); however, flow-based ranking 'favors' Poland and Latvia and suggests that migration from these countries has been of more temporary nature on average than migration from Lithuania, Poland and the Slovak Republic. As far as the three Baltic countries are concerned, higher mobility by Lithuanians might have to do with a very low share of unemployed receiving benefits (Hazans 2007a: Figure 2) – on top of unemployment rate being initially higher by two points than in Estonia and Latvia.

Two more remarks should be made regarding the cross-country comparisons. First, as concerns individual mobility, population covered by the free mobility provisions (rather than the total population) might be a more appropriate base for calculating the migration rates. This amounts to excluding Latvian and Estonian non-citizens, resulting in an increase of emigration rates for these countries by a quarter (Table 1c, col. [6]). Latvia thus outranks Poland and Slovak Republic in terms of individual mobility under this approach. Second, if the interest is in the total number of country's nationals working abroad, then posted workers should be considered as well (although they are not even temporary migrants in the sense that they have moved not on their own initiative). For some sending countries (including Estonia, see col. [3] in Table 1c) posted workers outnumber migrant workers, yet usually they are not covered by migration statistics.⁶ Among the new member states, Estonia and Poland have the highest posting rates: 1.2% of the labor force in 2006 (European Commission 2008: Ch. 3, Chart 4); whereas for other A8 countries these rates ranged between 0.6% (the Slovak Republic) to 0.2% (Lithuania and Latvia). When posted workers are accounted for, it appears that during 2004-2007 Estonia, relative to its labor force, was sending abroad more workers than Latvia (Table 1c, col. [8]).

Distribution of gross migration flows from the Baltic countries by destination is summarized in Table 1a. After enlargement, combined flows to the UK and Ireland accounted for at least 80% of the total outflows from Lithuania and Latvia; for Estonia this proportion reached 60% in 2005 but fell to 34% in 2007. The Germany share was quite stable at 8% to 10% over time and across the three countries. Between 2005 and 2007, the Nordic countries share increased from 3% to 7% for Latvia, from 4% to 10% for Lithuania and from 26% to 53% for Estonia. In the latter case, Finland played a prominent role due to a common border and similar language: about 40% of gross migration flows from Estonia in 2007 ended up in Finland, which lifted restrictions for workers from the EU-10 in 2006. With the exception of Spain, which received 4% to 6% of total outflows from Lithuania, individual shares of other countries after enlargement have been quite small.

⁶ This is clear for Estonia, in which case the number of posted workers is much larger than the number of Estonian migrants to Finland in the same year. Similarly, number of Latvian workers posted in Norway is about ten times larger than the corresponding migrants' flow.

It is instructive to compare the intensity of migration from the Baltic countries and its dynamics with survey evidence on migration intentions presented for Estonia and Latvia in Table 2. At the end of 2006, about 6% of working age residents of Estonia revealed 'having a specific plan' to work abroad in the future, while more than 10% of their Latvian counterparts confirmed 'having made certain preparations' towards working abroad in the next year in a survey conducted between September 2005 and March 2006. One year later, 8% of economically active respondents were 'ready to go abroad [in the near future] in order to get a suitable job.' Taking into account the differences in time horizons, this indicates a somewhat higher potential mobility in Latvia than in Estonia, as was the case in reality. The dynamics of intentions after enlargement, which were available for Latvia, seems to be consistent with reality as well: the proportion of potential migrants peaked at the end of 2005 and fell a year later. Note that when migration potential is measured without reference to specific steps made, the proportions of potential movers in 2005-2006 reached 20% to 26%, which is well above the observed mobility rates.

4 Human capital of the migrants

Proportions of former unemployed and inactive individuals among migrants serve as important indicators of the type of labor market experience they bring to the host country as well as provide lower bounds to the migration effect on unemployment and participation rates in the sending countries. In the first two years after the EU enlargement of 2004, 11% to 13% of migrants from Lithuania and Estonia and 15% of their Latvian counterparts were unemployed in the home country in the previous year and about 7% were either students or pupils. These proportions exceed the ones observed among stayers by a factor of three to four, indicating that work abroad has been an important coping strategy for the Baltic unemployed or potential unemployed (see Figure 2). In the following two years, the proportion of former unemployed stayed roughly unchanged among Lithuanian migrants. It increased to 18% among Latvian migrants, which is almost double the size of the level observed in 2002-2003, but decreased to just 5% among Estonian migrants, which is the same as in 2002-2003. Given that both Latvia and Estonia started with an unemployment rate of about 10% in 2003, one plausible explanation for the different dynamics might be the fact (documented in Table 1a) that between 2005 and 2007, one quarter of Estonian migration flow switched from the UK and Ireland to the Nordic countries.

From the labor market perspective (both in sending and receiving countries), skill level and occupation are the most significant characteristics of the migrants. Figure 3, based on Baltic LFS data for the years 2002-2007, compares the skill composition of migrants from the Baltic countries, stayers and return migrants. The Figure focuses on people aged 18 to 64 who have been economically active for some period of time during the last 12 months. Migrants were not distinguished by destination country, but the vast majority of them had been in Western or Northern Europe (see Table 1b), which is consistent with the results in Table 1a. Three messages are evident from the Figure. First, most of

the migrants (two thirds to three quarters) had secondary education. Second, enlargement changed the skill composition of migrants: before enlargement, Lithuanian migrants had the same skill distribution as stayers, while Latvian and Estonian migrants were more educated on average than stayers. Post-accession migrants from all three countries are significantly less educated than stayers, and the gap tends to increase over time⁷. Third, post-accession return migrants are more educated than migrants, stayers and pre-accession returnees.

Note that sending countries' LFS data include only migrants still considered as household members at home, i.e. mostly temporary migrants. However, the above findings are also supported by other data sources. First, we also include in Figure 3 results from the Irish population Census 2006 based on both temporary and permanent migrants (whose education has ceased) from Lithuania (more than 13 thousands) and Latvia (more than 8 thousands). The low educated accounted for 20% of Lithuanian migrants and 18% of their Latvian counterparts. Among economically active stayers in the same group, these proportions were just 9% and 15%, respectively. On the other hand, the incidence of high education was substantially lower among migrants: 23% vs. 29.5% for Lithuania and 18% vs. 22% for Latvia.

The fact that incidence of tertiary education among Baltic migrants is lower than among stayers contrasts with an opposite finding for migrants from the EU-10 in general (European Commission, 2008: Ch. 3, Chart 22).

Available data on migrants' occupation before moving point in the same direction. Figure 4 (upper panel) compares the last occupation at home of employed migrants from Latvia arriving in EEA countries in 2004-2005 and their counterparts arriving before EU enlargement with the occupations of employed stayers in Latvia in the respective periods (for better comparability the main occupation one year ago is used for stayers). Among post-enlargement migrants, one finds more former manual workers and fewer former highly skilled non-manual workers and students than among migrants arriving in EEA countries during the previous years. When compared to stayers, post-enlargement migrants feature higher proportions of former unskilled manual workers, low skilled non-manual (service and shop) workers and former pupils or students, and a much lower proportion (one eighth as opposed to one third) of former highly skilled non-manual workers. Before enlargement about two fifths of migrants went to countries at that time outside the EEA. This was the former Soviet Union in most, but not all, of the cases. These migrants were significantly more skilled than those heading to Western Europe as well as than those who stayed. The same pattern is found also in 2004-2005, although the number of such migrants has fallen dramatically.

Yet another approach is to look at the composition of flows rather than stocks, and this leads to similar conclusions. For instance, according to a survey on undeclared emigration conducted by

⁷ Fouarge and Ester (2007, Table 2 and 3) find the opposite when analyzing plans to move to another EU country within next five years using the mobility module of the 2005 Eurobarometer. This is not surprising because the wording of their question seems to imply permanent migration and does not refer to working abroad. More than one third of potential movers from the Baltic countries and Poland in their samples are students. According to LFS data, students who have actually worked abroad are a tiny minority among post-accession migrant workers.

Statistics Lithuania, the share of low educated migrants aged 16+ increased from 8% during 2001-2003 to 18% during 2006-2007⁸. Among economically active stayers of the same age, it decreased from 11% to 8% over the same period. For Latvia and Estonia, we rely on the results of surveys of intentions to work abroad conducted in 2005-2007 in Latvia and in 2003 and 2006 in Estonia (Table 2). The majority of post-enlargement potential movers (57% to 70% in Latvia, 64% to 74% in Estonia) have secondary education (Table 2, panel B). In Latvia, the structural break in composition of potential movers (from more to less educated than stayers) seems to have taken place in the second part of 2005 (see col. [5]-[8] in Table 2, panel C). According to a large-scale survey conducted on the eve of 2007, the proportion of low-skilled among potential movers exceeds that among stayers by 5.3 points, whereas it is the opposite for the proportion of highly skilled. This pattern also holds, albeit in a weaker form, when only potential movers who have made some preparations are considered (see col. [9], [10] in Table 2, panel C). A similar pattern was already found in Estonia in 2003, but became much stronger in 2006: among potential movers aged 15-64 with a 'specific plan', just 9% are highly educated. This proportion is twice as big among stayers (col. [1]-[3] in Table 2, panels B, C).

The above results do not imply that the low skill level as such has been a factor promoting migration, other things equal. The skill composition of migrants is certainly affected by age and geographical origin. When these and other relevant factors (including selection into not living in a one-person household) are controlled for, medium-educated workers are most likely to move. During the post-accession period, the effect of low (vs. medium) education on mobility shows positive trends in Latvia and Estonia; Lithuania features a negative trend in the effect of higher education on mobility. In summary, human capital in all three countries has become less pro-migration after accession than it was before, and was becoming even less pro-migration during the post-accession period.

5 Labor market outcomes

Labor market status. According to host country LFS results, migrants from the EU-10 to the EU-15 'show higher labor market participation and employment rates than the overall populations both in the sending and receiving countries; in fact, 78% of those migrants aged 15-64 are employed (European Commission, 2008: Ch. 3, Chart 17; p. 129). In the UK, the major destination country for Baltic migrants, the employment rate of migrants from A8 countries (men aged 16-64 and women aged 16-59) was above 80% in 2005/Q3 and above 84% in 2008/Q3 (ONS, 2008). Specifically for Lithuanian migrants in the UK, Khan (2008) reports an employment rate of 84% for men and 80% for women, an unemployment rate 2% for men and 6% for women, and an inactivity rate of 14% for both genders in 2008/Q2. Employment rates of Lithuanian and Latvian nationals in Ireland were between 82% and 83% according to the 2006 Population Census data. The unemployment rates (9% to 10%) were higher than in the UK; and the inactivity rates at 8% to 9% were lower (see CSO Ireland, 2008). Estonian

⁸ See <http://db1.stat.gov.lt/statbank/SelectVarVal/Define.asp?Maintable=M3020109&PLanguage=1>; simple calculations have been made to arrive at the reported results; non-responses to the education questions (13% in 2001 and 10% in 2006-2007) have been ignored.

migrants in Finland have seen much better labor market outcomes than immigrants from other countries before accession due to a good command of the Finnish language as well as the similarity of the two cultures: Sutela (2005) finds that “the quality of their jobs as well as the risk of unemployment reported are both almost similar to those experienced by Finnish employees.” However, opening the Finnish labor market for EU-10 workers fostered further improvements: the unemployment rate among Estonian immigrants fell from 16% in 2005 to 10% in 2007, and it was as high as 30% among immigrants from Russia (Employment and Economic Development Office of Finland, 2008).

Occupations and industries. Figure 5 is based on the Baltic LFS 2002-2007 and compares occupational distribution of employed Baltic migrants across the three countries and three bi-annual sub-periods. The share of manual workers among migrants had been rising steadily. In 2006-2007 and compared to the pre-accession period, it increased from two thirds to four fifths for Lithuania, from two fifths to two thirds for Latvia, and from less than three fifths to four fifths for Estonia. This is well above the average of about two thirds for all mobile EU-10 nationals in 2007 (reported in European Commission, 2008: Ch. 3, Table 11). Moreover, the share of unskilled manual workers has also increased among Latvian and Estonian migrants. This has not been the case for Lithuanian migrants, where this share was initially much higher. The number of migrants who were employed as an unskilled manual worker in 2006-2007 was one in three Lithuanian migrants, one in four Latvian migrants, and one in seven Estonian migrants. The proportion of low-skilled non-manual workers (mostly waiters, sales and retail assistants, hotel housekeepers and personal care workers) has been declining for all three countries, and it varied from 6% in Estonia to 17% in Latvia in 2006-2007. Finally, the share of highly skilled non-manual workers (managers, professionals and technicians) has dropped sharply compared to the pre-accession period: from 15% to 6% among Lithuanian migrants, from 43% to 17% among Latvian migrants and from 27% to 13% among Estonian migrants. Results from the Irish Population Census 2006 based on almost 16 thousand Lithuanian and over 9 thousand Latvian migrants are presented in the same figure and provide a picture broadly similar to the LFS-based one. The Irish data feature fewer unskilled manual and more low-skilled non-manual workers than the LFS data for Lithuania; and more skilled manual and low skilled non-manual workers at the expense of highly skilled non-manual workers for Latvia. These differences may reflect differences between sectoral distribution of migrants in Ireland and the UK (discussed below), as well as specifics of the sending countries LFS data (which do not cover permanent migrants, as well as those with no family left behind) and sampling errors.

Distributions of Lithuanian and Latvian workers in Ireland by the four broad groups of occupations are statistically indistinguishable. This similarity also holds for economic activities: over half of the males worked in construction and manufacturing industries, while retail work, hotels and restaurants accounted for almost half of the female employment (CSO Ireland, 2008: Table A5). Figure 6 (upper panel) provides details on the distribution of both Baltic migrants and Polish for comparison, according to economic activities in UK and Ireland. The high share of agricultural employment is the most striking feature of Latvian and Lithuanian migrants in the UK. After

excluding workers employed by recruitment agencies and others in unknown sectors, agriculture accounted for one third of Lithuanian employment and two fifths of Latvian employment in the UK, without a significant variation over the period from May 2004 to September 2008. Among Estonian workers it decreased from one fifth in 2004-2005 to one tenth in 2006-2008. By contrast, only 5% of Lithuanians and 10% of Latvians were employed in agriculture in Ireland. This difference might be partly due to the stock nature of the Irish data which refer to April and, therefore, do not capture seasonal farm workers. The share of Polish migrants employed in agriculture was just half of that observed among their Lithuanian counterparts in both the UK and Ireland.

Agriculture, manufacturing and construction accounted for between one half to two thirds of Lithuanian and Latvian workers in the UK and Ireland. This proportion was just short of one half among Polish migrants and fell from one half in 2004-2005 to one third in 2006-2008 among Estonians in the UK. The total share of the hospitality and retail industry varied from one quarter to one third of employment among Latvian and Lithuanian workers in both countries, as well as Estonians in the UK (2004-2005) and Poles in Ireland. It was as high as two fifths among Poles in the UK and reached even higher levels among Estonians in the UK during 2006-2008. Baltic migrants in the UK were more often employed by hotels than shops; the opposite was true for Ireland. One out of nine Estonian migrants in the UK was employed in health and social work in 2006-2008. Individual shares of other sectors were small.

Despite the fact that the UK and Ireland host over three quarters of Lithuanian and Latvian migrants, the sectoral distribution described above might be distorted by a rather big share of 35% to 40% of Baltic workers in the UK in an unknown sector of employment because most of them work for recruitment agencies (see the UK Home Office, 2008: Table 11). Moreover, the British Worker Registration Scheme excludes the self-employed, which is a small group among Baltic migrants (see Figure 8), as well as Baltic nationals who are not citizens of their home country. Up to 15% of Latvian workers abroad and 18% of Estonian workers abroad belong to the latter category (see Figure 11). Finally, only one third of Estonian migrants went to the UK and Ireland during 2006-2007. Therefore, we provide alternative data based on Baltic nationals working abroad and observed in sending countries' LFS in Figure 6 (lower panel). The data do not cover permanent migrants nor those with no family left behind.

As one would expect, the share of agricultural employment (17%, 12% and 8% among Latvian, Lithuanian and Estonian migrants, respectively) according to the annual average stock data is much lower than the British flow data but higher than in the Irish April stock data. However, the total share of agriculture and industry among post-accession migrants (from one half to three fifths) is well in line with the previous data sources and significantly higher than among all migrants from the EU-10 (about two fifths according to European Commission, 2008: Ch. 3, Table 9). A comparison with the pre-accession period reveals that the share of industrial employment among Baltic migrants has significantly increased for all three countries. This has been at the expense of agriculture in the Lithuanian case and at the expense of services for Latvia and Estonia.

Over-qualification and occupational mobility. Immigrant skills might be not immediately utilized to their full extent in the host country labor market, either because of the specifics of the latter or the lack of complementary skills, such as fluency in the local language (Dustmann et al 2008). In such cases, as well as when qualifications obtained abroad are not fully recognized or simply not accepted by employers, migrants work in occupations for which they are (formally) overqualified. This phenomenon, also known as ‘brain waste’, is well documented in the literature. In the EU, over 40% of recent high-educated immigrants from other EU countries and almost 30% of their medium-qualified counterparts were overqualified in 2007. Among the native-born, this rate was below 20% for high-educated and 8% for medium-qualified (European Commission, 2008: Ch. 2, section 8.3; these data, however, exclude the UK, Ireland and Germany – countries which host most of the recent migrants from the EU-10).

Figure 7 sheds light on the extent of over-qualification of Baltic migrants before and after EU accession. The proportion of overqualified among high-educated movers reached extremely high levels in 2006-2007: 47% for Latvia, 60% for Estonia and 70% for Lithuania, while it was around 20% among high-educated stayers in all three countries. A sharp increase in the over-qualification rate of the high-educated migrants after EU accession is evident for Latvia and Estonia, but Lithuanian migrants with tertiary education were overqualified almost to the same extent before accession. The story is different for medium-educated movers: among those of Lithuanian or Latvian origin, the over-qualification rate was about 30% in 2006-2007- three times higher than among stayers. This rate was just above 10% among both stayers and movers for Estonia. Compared to the pre-accession period, the over-qualification rate among medium-educated movers decreased for Lithuania but increased somewhat for Latvia and Estonia. During 2006-2007, the proportion of overqualified people reached almost two fifths of all Lithuanian migrants and almost one third of Latvian migrants, while it was just one fifth among Estonian migrants.

In order to check whether over-qualification of migrants is *caused* by moving, we look at the migrant’s last occupation at home using the 'Relatives Abroad' module of a large survey of 'Geographical Mobility of Population' conducted in Latvia between September 2005 and March 2006 (see Notes to Figure 4 for details). Three out of five post-accession migrants who worked in high-skilled occupations at home switched to low or medium-skilled occupations abroad; while among pre-accession migrants such downward mobility rate was less than two fifths (Figure 4, middle and lower panels). This is very much in line with the over-qualification rates reported above. As far as movers who held medium-skilled jobs at home are concerned, their downward occupational mobility rate is similar to the over-qualification rate among those who moved before accession. It exceeds 50% for those who moved in 2004-2005, which is well above the over-qualification rate documented in Figure 7. This could be because the latter group was to some extent under-qualified at home or because of custom occupation classification used in the survey. In any case, there is no evidence that overqualified movers were already overqualified at home.

Type of work. Work-related characteristics of movers and stayers by country and period are summarized in Figure 8.

The share of wage earners among employed Baltic migrants has been very high both after and (except for Latvian migrants) before accession: 94% to 96% for Lithuanians, 95% to 98% for Estonians, and above 98% for Latvians: The average for mobile EU-10 nationals was 91% in the EU at large in 2006 and 92% in the UK in 2007 (European Commission, 2008: Ch. 3, Charts 18-19). The low share of self-employment is also characteristic of the domestic labor market in Latvia and Estonia. It was 9% in 2006-2007, compared to 16% in Lithuania and in the EU-10 in 2006. Comparisons across host countries suggest a somewhat higher share of those self-employed (between 10% and 20%) among Lithuanian migrants in the US and Canada, as well as in Russia, Ukraine and Belarus; whereas it is just 9% in Germany – a striking difference with the EU-10 average of 38% (European Commission, 2008: Ch. 3, Chart 19).

Such outcomes as fixed-term contracts, work without contract and long hours are found among movers much more often than among stayers. A high incidence of temporary contracts (60% among Lithuanian movers in 2004-2006 and Latvian movers in 2004-2005) and job tenure not exceeding one year (50% to 70% in all cases, except Estonian movers in 2006-2007) also highlights the temporary nature of the recent migration. During 2006-2007, however, the incidence of fixed-term contracts and short tenure among Latvian movers dropped by 14 points for each. This indicates indirectly that many Latvians have earned a good reputation with employers within a year. Why there is no similar evidence for Lithuanians is an open question. One explanation might be related to the fact that Latvian workers were more willing to accept long hours: more than two fifths of Latvian post-accession movers worked 48 hours a week or more. This was the case for only one in five Lithuanians in 2004-2005 and one in nine in 2006.

Estonian movers saw even stronger progress in the quality of jobs in 2006-2007: the incidence of fixed-term contracts dropped from 30% to 10%, while the proportion of workers without a contract fell from 22% to 9%. Lifting restrictions for EU-10 workers by Finland in May 2006 may well have been an important factor in these developments.

The incidence of long hours among Estonian migrants fell steadily: from two fifths in 2002-2003 to one third in 2004-2005 to one quarter in 2006-2007, remaining higher than Lithuanians but lower than Latvians. This is an interesting fact in the context of the transfer of norms: just 3% of Lithuanian stayers work 48+ hours a week. This proportion is 10% in Estonia and 16% in Latvia.

A small, but not negligible, proportion of movers have been assigned supervisory responsibilities: 3% among Lithuanians, up to 5% among Latvians and up to 10% among Estonians. Part-time work and on-the-job search have been virtually absent among the migrant workers.

6 Length of stay abroad, return migration and labor market transitions

It is well documented that the post-accession migration from EU-10 countries has been (up to 2008) predominantly temporary or circulatory. About two thirds of workers registered in the UK WRS intended to stay for no more than one year (Pollard et al., 2008: Figure 20). Barrell et al. (2007: p. 5) compare stock and flow dynamics of EU-10 nationals in the UK and Ireland and conclude that ‘NMS migration to Ireland and the UK has been very much of a temporary nature, with relatively short stays before return’ (see European Commission, 2008: pp. 121-122; Pollard et al., 2008: pp. 39-40 for further evidence). Blanchflower and Shadforth (2009) find that workers from the EU-10 return more rapidly than those who have arrived in the UK from other countries and suggest treating them as temporary workers rather than migrants. Kaczmarczyk and Okólsky (2008: Figure 2.7) provide evidence that after EU accession, the proportion of Polish migrants staying abroad for less than a year increased sharply and stayed above three fifths for two years, then fell somewhat but remained above one half. Hazans (2008) finds that by the beginning of 2007 almost 5% of the economically active Latvian population had worked abroad over the last three years, and 12% had family members with such experience.

We refer to Dustmann (1997, 2003), Dustmann and Weiss (2007), World Bank (2007: pp.179-180), Hazans (2008), van Baalen and Müller (2009) and the literature therein for theoretical models, discussions and empirical results on return migration. Returning might be driven by a higher marginal utility of consumption in the home country than in the host country (put more simply, everything tastes better at home...); by changing prices and exchange rates; by improving employment possibilities, working, living and social conditions in the home country and/or rising expected earnings there; and by expected gains at home from human capital accumulated abroad. On the other hand, migrants might have pre-defined (or endogenously determined) maximal duration or a target savings level frequently related to a planned purchase of a car or an apartment, or repaying a loan. Once this level is reached, they return. More generally, the achievement of any pre-defined objective (e.g. gaining new experience, increased self-confidence and self-respect, working out a business plan) might be a sufficient reason to return. Migrants facing bad labor market outcomes in the first few months abroad tend to return quickly. By contrast, the occurrence of a new family or partnership while abroad leads to permanent emigration in most cases. There is survey and interview based evidence in Latvia which confirms the existence of all these motives (see University of Latvia, 2007: pp. 112-134). It should be noted that non-economic motives play an important role. Return migration is closely related to migrant transitions between employment and other labor market states: the latter often is either a reason for or a result of the former. In this section, we provide survey-based evidence on both issues with regards to recent mobile Baltic nationals.

Figure 9 is based on a survey of relatives abroad which was conducted in Latvia between September 2005 and March 2006 (see Notes to Figure 4 for details). It shows how the intended duration of further stay in the host country increases with the time already spent there. This is in line

with van Baalen and Müller (2009), who find that 70% of temporary migrants in Germany tend to increase their intended duration of stay over time. Almost half of the post-accession migrants, of whom over 90% are in EEA countries, did not plan to stay for more than a year, starting from the survey date. Three quarters of those who arrived before May 2004 planned to stay for more than two years, with almost no difference between EEA and other host countries: pre-accession migrants were almost evenly split between these destinations. According to a population survey conducted within the same study, among those with some, but not necessarily post-accession, foreign work experience, about three fifths had spent no more than a year abroad, and one fifth one to two years (University of Latvia, 2007: Figure 4.3). By contrast, among return migrants found in an Estonian survey carried out at the end of 2006 (see Table 2 for details) only 35% stayed abroad for up to one year and 28% for one to two years.

LFS-based data on return migration and labor market transitions of employed Baltic movers are summarized in Figure 10. While more than half of Latvian movers return to home country within a year, this is the case for less than two fifths of their Lithuanian counterparts and just over one quarter of Estonian migrant workers. The relatively low propensity to return among Estonians is consistent with longer stays reported above, as well as with the findings on the incidence of short tenure in Figure 8.

One out of five Lithuanian and Latvian workers abroad and one out of ten Estonian employed movers become unemployed or inactive a year later, most of them in the home country. Among employed stayers, these proportions are much lower: 5% to 7% in Lithuania and Latvia, 4% in Estonia (Figure 10). Among return migrants with some foreign work experience during the last two years, inactivity rates are even higher: almost 40% in Lithuania, more than 20% in Latvia and almost 20% in Estonia (Figure 11). This should not be interpreted as evidence for a weak labor market position of returnees. One reason for high inactivity and unemployment among return migrants is the fact that due to accumulated savings, they can afford extended periods of inactivity and a longer job search (according to a recent study, 70% of return migrants in Latvia spend part of the earnings from abroad for everyday needs (University of Latvia, 2007, Table 4.15). Another reason is that many return migrants plan to work abroad again and take no job (or only temporary job) while at home. Indeed, according to a survey conducted in Latvia on the eve of 2007 (see Notes to Table 2 for details), 27% of return migrants and just 7% of stayers are ready to go to work abroad.

Characteristics of return migrants differ from those of all migrant workers in many respects. As documented in Figure 3, return migrants are more educated. In terms of occupations, they are clearly more skilled than all movers on average but somewhat less skilled than stayers (Figure 5). Returnees are less often than movers 'too educated' for their jobs (Figure 7), although in Lithuania their over-qualification rate is higher than that of stayers (in Latvia and Estonia the latter effect is within the margin of error). Hazans (2008) shows that after controlling for workers' demographic characteristics and education, as well as for foreign and unemployment experience of their family members, returnees command a substantial earnings' premium: 15% on average, with more than 20%

among men and 6% among women. Accounting for a variety of job characteristics leaves the gap almost unchanged. The earnings gain of the average return migrant is shown to be entirely caused by foreign experience. There is, however, a great deal of individual heterogeneity: in the upper quartile of the earnings distribution, the unexplained gap in favor of return migrants exceeds 40%, while in the bottom quartile it is negative. This is consistent with the coexistence of success, failure and opportunity stories behind return decisions. Preliminary results suggest that Estonian returnees earn about 30% more than otherwise similar stayers despite concentrating in the bottom part of the earnings distribution.

Job-related characteristics of employed return migrants are compared with that of movers and stayers in Figure 8. One in five employed return migrants in Lithuania and one in eight in Latvia are self-employed. These rates are in line with those found among stayers and are much higher than among migrant workers abroad. By contrast, as LFS data suggest, Estonian returnees are not likely to become self-employed. Lithuanian and Estonian returnees are much less likely than stayers to hold supervisory jobs, while it is the other way around in Latvia. The incidence of temporary contracts and short tenure among returnees is much higher than among stayers but not as high as among movers, except for short tenure in Estonia. Returnees have similar working hours to stayers. One in ten employed Lithuanian and Estonian returnees look for another main job, which is a much higher rate than among stayers.

7 Migration impact on the Baltic labor markets and economies

Economic theory suggests several channels through which migration possibilities and actual migration affect the sending country's labor market. New emigration options reduce labor supply and make it more elastic, thus increasing wages and narrowing the gap between the marginal productivity of labor and pay (see Figures 10.1, 10.5 and the discussion in Ehrenberg and Smith, 2006). Unemployment goes down because those unemployed or inactive move abroad (up to 20% of post-accession movers were not employed a year ago according to Figure 2) or fill the vacancies left behind by previously employed migrants⁹. The latter process, of course, results in a rising vacancy rate because it takes time for vacancies to be filled. Labor shortages may develop in some segments of the labor market when the unemployed lack the skills required by employers and cannot replace the movers (see Rutkowski, 2007 for discussion and evidence). Note, however, that such cases were clearly not the dominant ones across the whole of the economy, otherwise unemployment rates would have increased, while employment rates would have fallen – a scenario opposite to the one observed in reality.

⁹ Ignoring the small proportion of migrants who move as 'immediately permanent', the movers in the short run should be still counted in the sending country's population, while those who stay for more than a year should not be counted. Hence in some cases, immediate and medium-term effects of a person moving abroad on the home-country's unemployment rate might differ but they never have opposite signs. Some 'good' flows might become unemployment-neutral but still foster employment and participation rates.

Figure 12 supports the above story for each of the Baltic countries. During 2004-2007, the unemployment rate declined by eight points in Lithuania, by four and a half points in Latvia and by more than five points in Estonia, and the dynamics of this decline was consistent with the one of migration flows. It is important to note, however, that migration was not the only cause for falling unemployment. Total employment, driven by growing domestic demand, intensifying trade, injections from EU structural funds and predatory credit expansion (mainly by Scandinavian-owned banks¹⁰), increased in absolute terms by much more than unemployment decreased. While LFS total employment figures are not reliable due to population estimates which fail to account for the largely unregistered emigration, increase in domestic employment is confirmed by data from various sources independent from the LFS. For instance, the increase in the number of social security contributors in Latvia between 2003 and 2007 amounts to 13.5% of the 2004 labor force; similar estimates for Lithuania and Estonia based on enterprise statistics are 7.5% and 11.1%, respectively.

Figure 12 also documents that all three countries, especially Lithuania, experienced a substantial increase in overall vacancy rates during the period observed. More specifically (not shown in the figure), the vacancy rate in the construction sector tripled in Latvia between 2005 and 2007; while in Lithuania it increased by a factor of more than ten between 2004 and 2007. The vacancy rate for manual jobs more than doubled in Latvia and more than quadrupled in Lithuania between 2005 and 2007. This led to growth in unit labor costs caused by rising wages and hiring expenses. See Karu and Nurmela (2006a-d), Ministry of Social Security and Labour of Lithuania (2007: p. 25; 2008: pp. 26, 218-219), Ministry of Welfare of Latvia (2008: Table 2.3.4) for evidence on labor shortages in construction, manufacturing, land transport, health and police, the resulting wage pressure and increasing numbers of workers from non-EEA countries.¹¹ Based on official estimates presented in Figure 12, real wage growth during the four years (2004-2007) was 56% in Latvia, 47% in Lithuania and 41% in Estonia¹². Real wage growth was largely in line with accumulated migration flows in Lithuania, and it was faster in Estonia and especially Latvia. One likely reason for this difference is an initially higher unemployment rate in Lithuania¹³. Wage growth combined with remittances and credit expansion contributed to inflation. Consumer prices grew in line with migration outflow in Estonia but more slowly in Lithuania. In Latvia, they started to outpace emigration in 2007. Overall inflation in 2004-2007 was 14.1% in Lithuania, 19.6% in Estonia and 33.2% in Latvia.

Tight labor markets forced employers to lower hiring standards as an alternative or complement to further wage increase: media frequently presented anecdotal evidence of falling quality

¹⁰ See Andrusz (2009), Vistesen (2008).

¹¹ Compared to the previous year, the number of work permits issued to such workers in Latvia doubled in 2006 and tripled in 2007, whereas in Lithuania it nearly doubled in 2007. Most of these workers come from Ukraine, Russia, Belarus, Moldova and Uzbekistan.

¹² Official data are distorted by ignoring envelope wages. LFS-based estimate of real wage growth for the same period is just 39% for Latvia, whereas it is 57% for Estonia. Williams and Renooy (2008) indicate that in Latvia and Lithuania envelope wages are more common and paid more for regular hours, while in Estonia they are less common and paid more for overtime or extra work.

¹³ Other reasons might be related to country-specific features such as the real estate bubble being less pronounced in Lithuania.

in services and construction. Higher wages and lower standards led to higher participation¹⁴ and employment rates, both in general and disadvantaged groups, when formerly inactive and unemployed filled vacancies, including those not caused by migration. Hazans (2007b-d; 2011) documents improvements in the labor market position of ethnic minorities, the elderly and the low-skilled in Latvia; similar results for Estonia are found in Ministry of Social Affairs of Estonia (2008: pp. 31, 33).

We refer to Barrel et al. (2007) and Baas, Brücker and Hauptmann (2010) for specific estimates of the migration effects on wages, unemployment, inflation, productivity, GDP and working-age population in sending countries. In particular, Barrel et al. (2007: Tables 3, 4) estimate that migration contributed to a fall in the unemployment rate over the four year period of 2005-2008 of 3.1 points for Lithuania, 2.4 points for Latvia and 1.0 point for Estonia; whereas the estimated impact on inflation is 0.8, 0.8 and 0.2 points, respectively. In our opinion, the true effects on unemployment and wages might be higher than the ones based on macro-models. For instance, evidence from Figure 2 suggests that the direct effects of flows from unemployment and inactivity to foreign countries might alone explain the declines in the unemployment rates of the sizes quoted above, without accounting for replacement flows. 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 its workforce. Scale effect, work organization problems, and the inability to compete for publicly financed projects can all be underlying factors. Underestimated wage effects and ignoring the deterioration of hiring standards lead to an underestimate of the resulting return migration and an increase in labor force participation, especially if assumed labor supply elasticities are derived from data with modest wage changes.

Assuming that emigration from high-unemployment regions (which, according to the wage curve are also low wage regions, see Blanchflower and Oswald, 1994; Brücker and Jahn, 2008) is more intensive, regional disparities in unemployment and wages should be reduced by external mobility. This is found for Latvia in Hazans (2007b) and for Estonia in Republic of Estonia (2007: Table1), Ministry of Social Affairs of Estonia (2008: p. 34). Similarly, given that emigration was predominantly medium and low-skilled, one should expect a reduction of the wage differentials between high-educated and other workers. In fact, according to LFS-based Mincerian earnings function augmented with gender, ethnic and regional controls, between 2003 and 2007 net wage differential between full-time employees with tertiary and secondary general education decreased by 15 points in Latvia and by 11 points in Estonia.

¹⁴ This effect is reduced by the negative impact of remittances and savings from earnings abroad on the labor supply of migrants' household members left in the home country, as well as return migrants. Between 2003 and 2007, participation rates have increased by about four percentage points in Latvia and by about three percentage points in Estonia, but fell by almost two percentage points in Lithuania.

8 Demographics of the Baltic migration

Composition of the flows and stocks in the host countries. Table 3 is based on administrative data and presents demographic profiles of post-enlargement Baltic and Polish migration flows to the UK, Estonian migration flow to Finland, as well as Baltic (excluding Estonia) and Polish nationals living in Ireland in April 2006 (Population Census data).

One can observe significant differences between the Baltic flows on one side and the Polish ones on the other; between Estonian flows to the UK and Finland; and between the UK and Irish profiles. The latter differences might be, at least in part, caused by flow-stock distinction.

Baltic migrants are in general not as young as Polish ones: 22% to 26% of the Baltic movers to the UK and 27% to 29% of their counterparts in Ireland are at least 35 years old, whereas these proportions are 17% and 19% for the Polish migrants. Furthermore, Estonian migrants to Finland are even older: almost half of them are aged 35 and above. The proportion of females among the Baltic migrants is 50% to 58% in the UK and 44% to 46% in Ireland and is about on average 10 points higher than for Poles in the same country. The highest youth dependency ratio, which is migrants under 15 years of age as a proportion of 15-64 year old migrants, is found among Estonian migrants in Finland (likely due to the geographical proximity and the low language barrier), and reaches 19%, not much lower than among stayers in Estonia (23%). For Lithuanian and Latvian migrants in Ireland, this ratio is 13 and 10%, respectively. It is even lower (8%) among their Polish counterparts. The old age dependency ratio is very low in all cases: 0.2% to 0.3% in Ireland and 1.7% in Finland.

The Irish data also provide a description of migrant household types for 2006. One quarter of Lithuanian and one third of Latvian migrants lived in non-family households. This proportion was even higher for Polish migrants at almost two fifths. A further 5% to 7% lived in households with two or more family units. About half of Latvians and Poles and 57% of Lithuanians lived in households based on a couple with or without other members. This couple had children under 15 in about three out of five such cases among Lithuanians, one out of two among Latvians and two out of five among Poles. Single parents with children accounted for 7% to 9% among Latvians and Lithuanians but just 4% among Poles. Only 3% to 4% lived alone. One in eight Baltic migrants lived in households with some Irish members. Furthermore, one in seven Lithuanians and one in four Latvians lived together with people of non-Irish nationalities.

Demographic profiles and determinants of temporary and return migration. This sub-section is based on Figure 11, which compares demographic profiles of Baltic temporary migrants found in the LFS data with that of stayers and return migrants. In addition, we discuss results from Hazans (forthcoming) on the determinants of mobility¹⁵ and data on migration intentions from Table 2.

Females account for one fifth to one third of post-enlargement temporary workers – much less than according to host country statistics. The following offer some explanations: (i) men are more

¹⁵ To correct for the fact that movers with no family left behind are not covered by LFS, we estimate probit models with sample selection into not living in a one-person household using age-squared as an instrument.

likely to stay abroad permanently or for prolonged periods; (ii) male movers are more likely to be considered as gone from their households of origin; (iii) female movers are less likely to leave family behind (i.e. more likely to be tied movers or to live alone before moving). The proportion of females among return migrants in Lithuania is similar to that among migrants, while in Latvia, and especially Estonia, it is higher. This suggests that men are less likely to return on average. After controlling for other factors, a positive female effect on returning is indeed found in Estonia; whereas in Lithuania and Latvia, the effect is negative for childless women. Latvian women with children under 15 are more likely to return than men, other things equal. In line with data on migration intentions reported in Table 2 and results of other studies (see Blanchflower and Shadforth, 2009: Table 10; Fouarge and Ester, 2007: Table 7), we find that Baltic females are significantly less likely to work abroad than otherwise similar males; this effect is less pronounced in Lithuania.

In each of the Baltic countries, about three out of five stayers have a spouse or partner. The same proportion is found among Estonian movers, which confirms once again that they are more likely to stay abroad permanently). However, it is just two fifths among Lithuanian and Latvian movers. One quarter to one third of movers have children under 15, who may, or may not, stay at home. The effect of the migration experience on cohabiting is ambiguous: some partnerships might not survive the time apart, but new ones might be created abroad. In the latter case, however, return is less likely. Hazans (2008: Appendix 3 and Table 6) finds a slightly negative (significant for women) causal effect of foreign experience on having a partner among return migrants in Latvia. As shown in Figure 11, however, they are on average somewhat more likely to have a partner than migrants in general but less likely than stayers. By contrast, post-accession Lithuanian and especially Estonian returnees are less likely to have a partner compared to migrants as a whole. This raises the question of the causal effect of marital (cohabiting) status of migrants on the likelihood of returning. This question awaits a more thorough investigation, but simple models (not accounting for endogeneity of partnership) find a negative effect among all Lithuanians, as well as among childless Latvian men.

An important question from the social perspective concerns negative impacts (including school drop-out) on children left behind by parents working abroad (Soros Foundation Romania, 2008; World Bank, 2007: pp. 177-178). Such children, who are called ‘the Irish kids’ in Latvia, are raised by ‘quasi-single’ parents or even by grandparents if both parents work abroad. The National Strategy Report of Lithuania on social protection and social inclusion acknowledges that ‘in a few recent years, some children, though formally cared by parents, in reality have been left for some time without parental care while they are in emigration abroad. Such children are left alone or placed under guardianship of relatives (sometimes of non-relatives). This creates unfavorable conditions for children’s development and social integration.’ (Republic of Lithuania, 2008: p.23). The Lithuanian government plans to reform the rules on guardianship as part of its response to the situation.

Other things equal, the propensity to move declines with age in all three Baltic countries. However, about one third of Lithuanian and Latvian temporary migrants, as well as return migrants, are older than 35. The Estonian picture is different: about half of the migrants but just a quarter of the

returnees are older than 35, suggesting that younger migrants are more likely to return. Indeed, after controlling for other factors, the likelihood of return reaches its minimum at 50 years of age (note that nine out of ten migrants are younger than 50). The age effect on Latvian migrant propensity to return is also negative, while it has an inverse U shape with maximum at 40 for Lithuanian migrants.

One of the most intriguing questions about the post-enlargement migration wave from the Baltic countries is the behavior of Russian-speaking minorities, many of whom in Estonia and Latvia do not have citizenship; and hence, they are not covered by the free mobility provisions (see Kahanec and Zaiceva (2009) for a study on the citizenship effects on labor market outcomes in Europe). Regarding migration intentions ‘in the near future’ or supported by specific steps, the proportion of potential movers among minority populations in general is somewhat lower than among the titular population in Latvia but higher in Estonia (Table 2, col. [3] and [8-10]). In both countries minority citizens were, however, more inclined to move than the titular population, but it was the other way around for non-citizens. This citizenship effect is much more pronounced in Estonia.

The proportion of minorities among Latvian migrant workers dropped from 56% before accession to 45% after (still being slightly over-represented). The proportion of non-citizens dropped more steeply from 33% before accession to 15% in 2004-2005. In other words, non-citizens were over-represented among pre-accession migrants but under-represented among post-accession ones. The profile of Estonian migrants underwent similar changes after the lifting of restrictions by Finland in 2006. The proportions of minorities, non-citizens and foreign-born among return migrants in both Latvia and Estonia were in line with those among migrants. Due to data limitations, we are not able to track changes with regard to ethnicity of Lithuanian migrants. Lithuanian non-citizens were over-represented among pre-accession migrant workers but became under-represented by 2006; however, their proportion among return migrants is much higher than among stayers.

Given that ethnicity, citizenship and being foreign-born are all inter-related with each other (although not multi-collinear), as well as with regions and degree of urbanization, obtaining a clear picture of the effects of these factors on mobility is only possible in a multivariate framework. The ethnic minority effect on the propensity to work abroad before accession was strongly positive in Latvia and Estonia. Following accession, it has become much smaller in size in both cases but not significant for Estonia (also for Latvia when minorities are not sub-divided by citizenship). Moreover, during the 2006-2007 (i.e. when Finland has opened its labor market) minorities were significantly *less likely* than otherwise similar ethnic Estonians to become economic migrants. The effect of being a non-citizen on the likelihood of working abroad is strongly negative for Latvia and Estonia in the post-accession period, while the effect of being foreign-born has the opposite sign (note that local-born and foreign-born minorities in the Baltic countries differ also in terms of educational attainment, see Hazans et al., 2008: Figure 4). When all effects are combined, foreign-born minority citizens appear the most mobile; local born minority non-citizens appear the least mobile. In Estonia, non-citizens are also more likely to return if having moved, other things equal. In Latvia, minority migrants

are less likely to return, other things equal. Residents of big cities are over-represented among both movers and returnees in Lithuania; in Estonia, the same is true for rural residents.

9 Remittances and use of foreign earnings

Figure 13 illustrates the evolution of officially recorded remittance flows generated by Baltic nationals working abroad (including posted workers). A sharp increase in these flows after the EU accession in 2004 is evident for all three countries, but especially for Estonia. Moreover, starting from 2004, remittances to Estonia exceed those to Latvia and Lithuania in per capita terms; the difference was as large as 40% to 70% in 2006-2007. This might seem surprising given that the largest labor outflow was registered from Lithuania and the smallest from Estonia (Figure 1). One explanation has to do with posted workers: they are mostly not covered by migration statistics, but their earnings are included in the remittances statistics (World Bank, 2008). When posted workers are included, number of Estonians working abroad as a share of country's working-age population is somewhat higher than the Latvian figure but smaller than the Lithuanian one (Table 1c, last column; we assume similar employment rates among adult migrants from all Baltic countries). The question remains, however, why Estonian and Latvian movers remit more than their Lithuanian counterparts. One can offer at least three (not competing) explanations. First, such an outcome is possible if Lithuanians rely on informal channels of sending money home (not captured by the World Bank statistics) to a much larger extent than Estonians and Latvians. Second, as shown in Figure 10 and confirmed by tenure data in Figure 8, the intensity of return migration among Estonian movers is much lower than among Latvians and Lithuanians. In other words, Estonian migrants send money home, whereas other Baltic migrants tend to bring money in person. Finally, it is possible that Estonian migrants in Finland enjoy higher earnings on average than other Baltic migrants located mainly in Ireland and the UK. The reasons might include longer tenures and relatively good Finnish language skills.

In 2007, Estonian migrant workers sent back \$329 per every Estonian resident, while the corresponding figures for Latvia and Lithuania were \$219 and \$192 (World Bank, 2008 warns that 'the true size of remittances... is believed to be larger'). Even these under-estimated amounts, while being a relatively small part of Baltic countries' GDP at 2% to 2.5%, are substantial from the receiving families' perspective. For instance, according to two independent surveys conducted in Latvia, 7.2% of population in 2007 and 6.5% in 2008 had family members working abroad at the time of the survey (Table 4). In 2007, therefore, the \$219 meant \$3000 for each person with a migrant worker in the family. Overall, about two thirds of Latvian migrant workers were sending money home between 2004-2006 and 2006-2008 (Table 4). About two thirds of return migrants from the UK and Ireland used foreign earnings for everyday needs; almost 30% invested in housing; 19% in a car; 22% in other durables; and 11% in education. Figure 14 confirms the role of remittances in improving the standards of living in Estonia: both before and after accession, the proportion of households facing financial difficulties is significantly lower among those with family members working abroad.

10 Conclusions

The onset of the worldwide economic crisis in 2008 raised the question whether shrinking employment opportunities in the host countries combined with the depreciation of the British pound would trigger a sharp increase in return migration (see e.g. Devine, 2009; Tapinsh, 2008). However there is a growing stock of evidence that things are going to develop in the opposite direction. Most Baltic migrants in the UK, Ireland and other host countries see staying as a much safer path than returning, and some are thinking about Canada or Australia (see LETA 2008, Meiden 2009, Sloga 2008 – the titles speak for themselves). The reasons are understandable. First, unemployment rates in the Baltic countries on the eve of 2009 were returning to the pre-accession levels with embarrassing speed. The seasonally adjusted rates in January ranged from 8.6 in Estonia to 12.3% in Latvia, at least twice as high as a year ago. Although the unemployment rates in the host countries were rising as well, they were lower: about 6.5% in the UK and 3% in Norway for example. Combined with more generous social protection systems, risk considerations did not favor returning, let alone still substantial (price-adjusted) wage differentials. Post-accession migrants from the new member states in the UK and Ireland work longer hours and receive about a 10% lower hourly wage than similar native workers in the same region and sector (Blanchflower and Lawton 2008: Table 3; Blanchflower and Shadforth 2009: Table 13; Barrett et al. 2008: Table 7)¹⁶, which certainly adds to their competitiveness, especially amid crises. Recent measures by the British government to restrict access of non-EEA nationals to the UK labor market (see UK Border Agency 2009) will help Baltic workers as well. Baltic migrants interviewed acknowledge that life has become more difficult since the start of recession, but they cope well and look into future with optimism – something most of the stayers lack nowadays. The essence of what they say is: if you are not afraid of hard and in some cases unpleasant work, you will finally find a job - or won't lose one in the first place. They also emphasize the increasing importance of local language skills.

Post-accession migrant flows from the Baltics were predominantly temporary and circulatory. This pattern was most pronounced in the Latvian case, while Estonian migrants showed relatively low propensity to return and longer periods of stay in the host countries. Moreover, the flows to the UK and Ireland declined after 2005, which is unlike similar flows from Poland and the Slovak Republic. However, big and growing Lithuanian and Latvian diasporas have emerged in the UK and Ireland, and a big Estonian diaspora in Finland¹⁷. Media and case studies evidence¹⁸ describe a rich social

¹⁶ This wage gap is much less pronounced in the Nordic countries, see Gerdes and Wadensjö (2010).

¹⁷ The latest official estimates (Office for National Statistics, 2009) put the number of Lithuanian and Latvian nationals in the UK at 58 (s.e. 10) and 23 (s.e. 6) thousand. The true numbers are likely to be higher. Bauere et al. (2007) report about 29 thousand Latvians and about 5.5 thousand for Estonians for the period ending 2006. SKDS (2006b) reports 35 to 40 thousand Latvians in the UK. The unofficial estimates for Ireland are 50 to 100 thousand Lithuanians and 30 to 50 thousand Latvians, well above the 2006 Census estimates of 25 and 13 thousand. According to Statistics Finland, 20 thousand Estonian nationals lived in Finland in 2007.

¹⁸ See e.g. www.labrit.co.uk; <http://www.mfa.gov.lv/lv/ireland/kopiena/>; <http://www.lietuvis.ie/>; <http://www.saloje.lt/>; <http://www.newtotown.ie/forum/living-ireland/ireland-lithuanian-perspective-517.html>; <http://www.mfa.gov.lv/en/ireland/news/embassy-news/template/?pg=7256>; <http://www.sveiks.ie/>;

infrastructure within these diasporas: weekly newspapers published in Lithuanian, Latvian and Russian; Sunday schools in all three Baltic languages and Russian; regular Lithuanian and Latvian schools in Ireland, and Estonian schools in Finland and Sweden; language courses, sport teams, discos, concerts and other activities; numerous NGOs (including religious communities); professional networks with informal meetings at certain bars or Eastern-European and Russian shops etc. In each host country, the Baltic diasporas interact with other East Europeans, using Russian to communicate.

The above considerations suggest, moreover, that a new wave of emigration is likely to emerge. The director of a recruiting company in Latvia says: “We have returned to the situation of 2004, when thousands were leaving Latvia. We are struggling to serve all clients that knock at the doors, calls or send us e-mails. A typical client is a man aged 30 to 40 ready for whatever type of work and nor very demanding in terms of pay” (Mazan 2009). This is echoed by a colleague at a company which offers placements in the UK, the Netherlands and Scandinavia in sectors such as agriculture, shipping and distribution: “Interest in working abroad had skyrocketed in recent months, particularly amongst people aged 20 to 30, both unskilled workers and professionals, many of whom have been laid off or struggling to repay debts” (McIntosh, 2009).

Note that the psychological cost of moving is much lower now than five years ago. According to surveys conducted in Latvia between 2006-2008 (see Table 4), at least 5% of working-age population are post-accession return migrants; 12% have a family member with recent foreign work experience; and more than 70% have a friend or neighbor with such experience. Moreover, adjustment is much easier inside already existing diasporas, which also offer job opportunities for professionals and personal service workers. The chances are high that Baltic migration will become more long-term or permanent in nature, and that the proportion of high-educated migrants will grow. McIntosh (2009) reports a 26-year-old IT worker holding a master degree saying: “I don’t see the way out right now actually. I am at point zero. I am just starting my career, but I don’t see the structure here to develop myself in the labor market”; while a civil servant of the same age says: “Some of my friends who have no work say that they don’t feel that they are needed here in their country...We all thought that we are the next generation that will change the future of the country, but now we have learnt more, we understand that nothing will change”. Of course the actual size of the new emigration wave will depend on how the crisis unfolds in the Baltics and elsewhere. There is a real risk, however, that when entering the recovery, the Baltic economies might experience more severe labor shortages than before – and earlier than it was expected based on previous population projections. This highlights the relevance of recommendations made by Boeri (2008) before the crisis started: “[The] Baltics should plan on attracting migrants from non-EU Eastern countries and invest in return migration”¹⁹.

<http://www.nashagazeta.com/>; <http://www.latviesi.org/ra/?slang=lv>; <http://baltic-ireland.eu/>; <http://www.lbi.ie/>; SKDS(2006b); LETA (2008); Mazan (2009); Meiden (2009).

¹⁹ The first steps to simplify procedures related to the employment of non-EU migrant workers were made by Estonia in 2008 (see Nurmela, 2008) and are under consideration in Latvia and Lithuania. According to the Lithuanian Ministry of Social Security and Labour (2008: pp. 201-203), a comprehensive publication for migrants willing to come back to Lithuania has been disseminated in 2007 and a project „Building-up a Positive Image of Lithuania and Lithuanian Economic Migrants Seeking Their Return” has been launched in 2008.

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Table 1a Gross flows of adult migrants from the Baltic countries to EU-25 and Norway by destination, 2003-2007

	%								
	Lithuania			Latvia			Estonia		
	2003	2005	2007	2003	2005	2007	2003	2005	2007
UK	25.5	50.6	51.3	11.9	51.4	53.7	5.5	37.0	24.6
Ireland	19.3	31.3	22.3	25.2	34.2	24.3	15.7	23.8	8.6
Germany	25.9	8.4	8.7	36.9	8.6	9.3	25.3	7.9	8.1
Sweden	1.7	1.0	1.9	2.9	0.7	1.8	7.4	3.8	5.4
Norway	2.0	1.2	5.0	2.7	0.6	2.5	2.4	2.2	5.3
Finland	0.2	0.1	0.2	0.9	0.3	0.6	29.4	18.3	38.6
Denmark	5.0	1.8	2.5	6.3	1.5	2.7	3.9	1.9	2.6
Spain	13.2	4.2	5.8	4.8	1.1	2.5	2.1	1.4	2.4
Other EU-15	2.8	1.0	1.4	3.1	0.8	1.6	5.5	1.6	2.3
Other EU-10	4.2	0.6	1.0	5.3	1.0	1.0	2.8	2.1	2.0
Total	100	100	100	100	100	100	100	100	100
UK + Ireland	44.8	81.8	73.6	37.1	85.6	78	21.1	60.8	33.2
Nordic countries	9.0	4.0	9.6	12.7	3.0	7.5	43.1	26.2	51.9

Notes: Posted workers (see Notes to Table 1c below) are not included.

Sources: UK – allocation of National insurance numbers, www.dwp.gov.uk/asd/tabtool.asp; Ireland – allocation of Personal Public Service Numbers, <http://www.welfare.ie/EN/Topics/PPSN/Pages/ppstat.aspx>.

Other countries – migration statistics provided by Eurostat or receiving countries.

Table 1b Migrant workers from the Baltic countries by destination (LFS data)

	%				
	Lithuania		Latvia		Estonia
	2002-2003	2004-2007	2002-2003	2004-2007	2005-2006
UK and Ireland	27.8	53.6	31.8	63.3	7.6
Nordic countries	11.8	11.7	12.9	9.5	75.4
Germany	15.7	10.7	9.0	5.4	2.0
Other EEA	24.1	11.8	14.4	11.9	4.5
US and Canada	9.2	5.1	11.9	2.5	1.6
Russia, Ukraine, and Belarus	8.9	4.4	14.4	5.3	5.8
Other	2.5	2.7	5.5	2.1	3.0
Total	100	100	100	100	100
N obs.	703	1477	201	415	290

Notes: Those who are no longer considered as household members in the country of origin (permanent migrants), as well as those with no family left behind are not covered due to LFS design. Posted workers are not included as well. Data on country of work were not available for Estonian LFS 2002-2004 and 2007. EEA: as of 2006, i.e. including EU-10

Sources: Calculations with Lithuanian, Latvian and Estonian LFS data.

Table 1c Gross flows of adult migrants and posted workers from the Baltic countries to EU-25 and Norway, 2003-2008

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
	Adult migrants		Posted workers ^a	Total	Adult migrants as % of			Total as % of
	UK+Ireland	Other EEA		1000	Labor force (2004)			
					All	Excl. non-citizens	Working-age population (2004)	
			Lithuania					
2004	23.4	10.5	0.7	34.6	2.1	2.1	1.4	1.5
2005	47.1	11.0	1.9	60.0	3.6	3.6	2.5	2.6
2006	39.0	11.6	3.4	54.0	3.1	3.1	2.2	2.3
2007	31.9	11.2	4.7	47.8	2.7	2.7	1.8	2.0
2008	22.3	NA	NA	NA				
Total	163.7	b	b	b	b	b	b	b
Average	32.7	11.1	2.7	49.1	2.9	2.9	1.3	2.1
			Latvia					
2004	9.9	3.9	0.3	14.1	1.2	1.5	0.8	0.9
2005	22.5	4.1	3.8	30.3	2.3	2.9	1.6	1.8
2006	18.7	3.9	2.3	24.9	2.0	2.5	1.4	1.5
2007	13.5	3.6	2.3	19.4	1.5	1.9	1.0	1.2
2008	11.3	NA	NA	NA				
Total	75.9	b	b	b	b	b	b	b
Average	15.2	3.9	2.2	22.2	1.8	2.2	1.3	1.4
			Estonia					
2004	2.8	3.5	7.0	13.2	1.0	1.2	0.7	1.5
2005	4.9	3.3	7.0	15.1	1.3	1.6	0.9	1.7
2006	3.5	3.9	8.0	15.2	1.1	1.4	0.8	1.7
2007	2.3	4.5	6.0	12.6	1.0	1.3	0.7	1.4
2008	1.9	NA	NA	NA				
Total	15.4	b	b	b	b	b	b	b
Average	3.1	3.8	7.0	14.0	1.1	1.4	0.8	1.5

Notes: ^a Posted workers are those sent by employers to work in another country for a period of less than 12 months. Majority of Lithuanian and Latvian posted workers are in Norway, followed by Germany, Nordic countries (excl. Norway), Spain, France and Italy. Almost all Estonian posted workers are in Finland. Posted workers usually are not covered by migration statistics.

^b To avoid double counting, aggregation over time is not performed. The nature of the UK and Ireland's data excludes double counting within each country. Aggregation of these flows performed on the assumption (based on evidence from the LFS data) that the number of cases when the same migrant has received social security number in both countries is negligible.

Sources: Migration flows: to UK – allocation of National insurance numbers, www.dwp.gov.uk/asd/tabtool.asp; Ireland – allocation of Personal Public Service Numbers,

<http://www.welfare.ie/EN/Topics/PPSN/Pages/ppsstat.aspx>

Other countries – migration statistics provided by Eurostat or receiving countries .

Posted workers: Administrative data of State Social Insurance Fund Board of Lithuania, State Social Insurance Agency of Latvia and Estonian Ministry of Social Affairs; Estonian data for 2004-2005 are estimates.

Table 2. Intentions to work abroad, Estonia (2003, 2006) and Latvia (2005-2007)

Survey	I	II		III	IV	V			VI		
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	
Country	Estonia			Latvia		Latvia			Latvia		
Period	2003	2006/Q4		July 2005	Dec 2005	2005/Q4-2006/Q1			2006/Q4-2007/Q1		
Horizon	Future	Future		Future	Two years	One year			Near future		
Wording	Plans	Consider	Have a plan	Ready	Big prob.	Would like		Have made steps	Ready (to get a suitable job)		
Age	15-64	15-64		18-65	18-65	18-65	15-65	15-65	15-65	18-65	
Status	All	All		All	All	Econ. active ^b	All	All	Econ. active ^b		
N obs.	1000	1505		884	796	5292	8005			9696	9517
A. Proportion of potential movers by socio-economic characteristics, %											
All	42.2	25.3	5.7	15.4	26.0	19.8	19.7	10.5	8.5	8.2	
Men	52.0	28.2	7.5	15.6	31.2	22.8	22.4	11.8	9.1	8.8	
Women	33.1	22.7	4.0	15.3	21.3	16.4	17.1	9.3	7.9	7.6	
Age											
15(18)-24	70.0	51.3	8.8	29.3	52.3	42.3	36.6	18.1	18.5	18.5	
25-34	46.6	29.2	8.3	17.1	34.1	22.5	21.8	12.5	11.3	11.3	
35-44	47.5	20.9	4.9	13.7	22.9	17.8	17.4	10.9	6.7	6.7	
45-54	25.3	13.0	3.3	12.3	17.7	14.6	14.1	7.3	5.3	5.3	
55-64	11.0	4.6	2.3	5.6	6.3	8.4	5.8	2.5	1.7	1.7	
Ethnicity											
Titular	40.5	26.1	5.1	13.7	24.3	19.2	19.6	10.9	8.6	8.4	
Minority:											
All	45.5	17.3	8.2	17.8	28.3	20.7	19.9	10.0	8.3	7.9	
Citizens	47.0	21.2	13.7	18.7	30.4	20.9	21.6	11.9	9.7	9.2	
Noncitizens	44.0	13.8	3.0	16.4	25.7	20.5	17.6	7.6	6.2	6.0	
Education											
Low	42.9	31.7	5.2	10.6	31.6	25.6	23.9	11.6	10.7	9.3	
Medium	43.3	25.1	6.6	15.6	26.7	19.7	20.3	10.7	8.2	8.2	
High	36.6	17.7	3.1	17.3	21.4	17.6	17.1	9.3	7.2	7.2	
B. Potential movers by education, %											
Low	27.3	23.4	16.8	9.2	11.6	14.3	23.1	21.9	23.0	18.5	
Medium	59.5	64.2	73.8	56.8	69.7	60.7	58.1	58.7	59.8	63.2	
High	13.2	12.4	9.4	34.0	18.7	25.1	18.8	19.4	17.2	18.3	
	100	100	100	100	100	100	100	100	100	100	
C. Difference in composition between potential movers and stayers, % points											
Low educ.	2.0	6.7**	-1.2	-5.0*	2.8	4.0***	3.9**	2.2	5.3**	2.5	
High educ.	-4.3*	-7.1**	-8.8**	4.3	-5.4*	-3.8*	-3.9***	-2.9	-3.5**	-2.7*	

Notes: ^a Potential movers are defined as follows: Surveys I, II – answers ‘Yes, definitely’ or ‘Yes, with high probability’ to the question about plans to work abroad (Col [3] – also a specific plan exists). Surveys III and VI – have ticked option ‘Move abroad’ when answering the question ‘What are you ready to do in order to get a better /desirable job?’; Survey IV – ‘very big’ or ‘big’ probability to go for a work a broad. Survey V – answers “Yes” or “Rather yes” to the question “Would you like to go to work abroad?” (Col. [8] – also have made some preparations).

^b Excluding long-term (one year or more) unemployed.

Sources: Calculations with survey data. Surveys conducted: I and II – by *SaarPoll Ltd.* and *Faktum & Ariko* respectively, both for Estonian Ministry of Social Affairs; III – by *SKDS* for University of Latvia; IV – by *SKDS* for Latvian Ministry of Foreign Affairs; V – by *SIA „Data Serviss”* for University of Latvia; VI – by *GfK Baltic* for Latvian University of Agriculture (V and VI were commissioned by the Ministry of Welfare in the framework of the National Program of Labor Market Studies).

Table 3 Demographics of Baltic and Polish migrants in UK, Ireland and Finland (%)

	Poland	Lithuania	Latvia	Estonia
	UK (flow data)			
	2004-2007			
Age 15-24	42.1	43.8	44.2	48.5
Age 25-34	41.0	32.0	29.4	29.9
Age 35-54	16.1	22.9	24.6	19.4
Age 55-64	0.9	1.4	1.7	2.3
Total	100.0	100.0	100.0	100.0
Female	42.6	50.1	53.4	57.6
	Ireland (stock data)			Finland
	2006			(flow)
				2004-2007
Age 15-24	30.3	30.9	30.6	22.3
Age 25-34	50.8	42.5	40.8	30.4
Age 35-54	18.0	25.3	27.1	42.2
Age 55-64	1.0	1.3	1.5	5.1
Total	100.0	100.0	100.0	100.0
Female	35.4	43.5	45.7	48.3
(Age 0-14)/Age 15-64	8.2	12.8	10.3	19.2
Age 65+/Age 15-64	0.2	0.3	0.3	1.7
Household type				
One person	3.1	2.8	3.8	
Couple without children (with or without other members)	28.7	24.9	23.9	
Couple with children (with or without other members)	21.1	32.4	25.1	
Single parent with children	3.8	7.2	9.1	
Two or more family units	4.8	6.8	5.1	
Non-family household	38.5	25.9	32.9	
Total	100	100	100	
Mixed with Irish	9.1	11.5	11.9	
Mixed with non-Irish	8.1	15.2	27.0	

Sources: UK – Calculation with data on allocation of National insurance numbers (www.dwp.gov.uk/asd/tabtool.asp); Ireland - elaboration on Population Census data published in CSO Ireland (2008: pp. 29, 33, 41; Table A1); Finland - elaboration on immigration data of Statistics Finland.

Table 4 Migration networks, foreign work experience and remittances. Latvia, 2005 - 2008

					%
	Survey: 2005/Q4-2006/Q1 ^a		Survey: 2006/Q4-2007/Q1 ^a		
	N = 8005		N = 10177		
	<i>Networks</i>		<i>Networks</i>		
Another family member or relative works abroad (left less than 2 years ago)	6.8	Another family member has worked abroad during the last three years	10.3	Another family member has worked abroad during the last two years and returned	6.1
Another family member or relative works in some EU country (left in the last 2 years)	6.2	Another family member works abroad at the time of the survey	7.2	Another family member works abroad at the time of the survey	6.5
Another family member or relative works abroad (left more than 2 years ago)	7.2	Any of the above	12.0	Any of the above	12.6
A friend or neighbor works abroad	71.5				
<i>Foreign work experience of the respondent</i>					
Has worked in UK or Ireland	2.6	Has worked abroad during the last three years	5.0	Has worked abroad during the last two years	3.3
<i>Living abroad</i>					
With a family member or partner	21.7				
With another relative/friend	44.4				
Alone	33.9				
<i>Remittances/Earnings</i>			<i>Remittances during the last two years</i>		
				Incidence among respondents with own or family foreign work experience	65.1
More than 50%	16.9				
20 to 50%	15.7				
Up to 20%	29.3				
None	38.1				
<i>Spending abroad / Earnings</i>					
All	6.9				
More than 50%	60.0				
20 to 50%	15.7				
Up to 20%	16.9				
<i>Use of foreign earnings by return migrants:</i>					
<i>Incidence by purpose</i>					
Everyday needs	63.4				
House	28.7				
Car	19.1				
Other durables	22.0				
Education	11.3				
Invest in own business	0.7				

Notes: ^a See Sources of surveys V and VI in Table 2. Respondents aged 18 to 64 are included.

^b Survey on drug use conducted by SPI. Sources: Calculations with survey data.

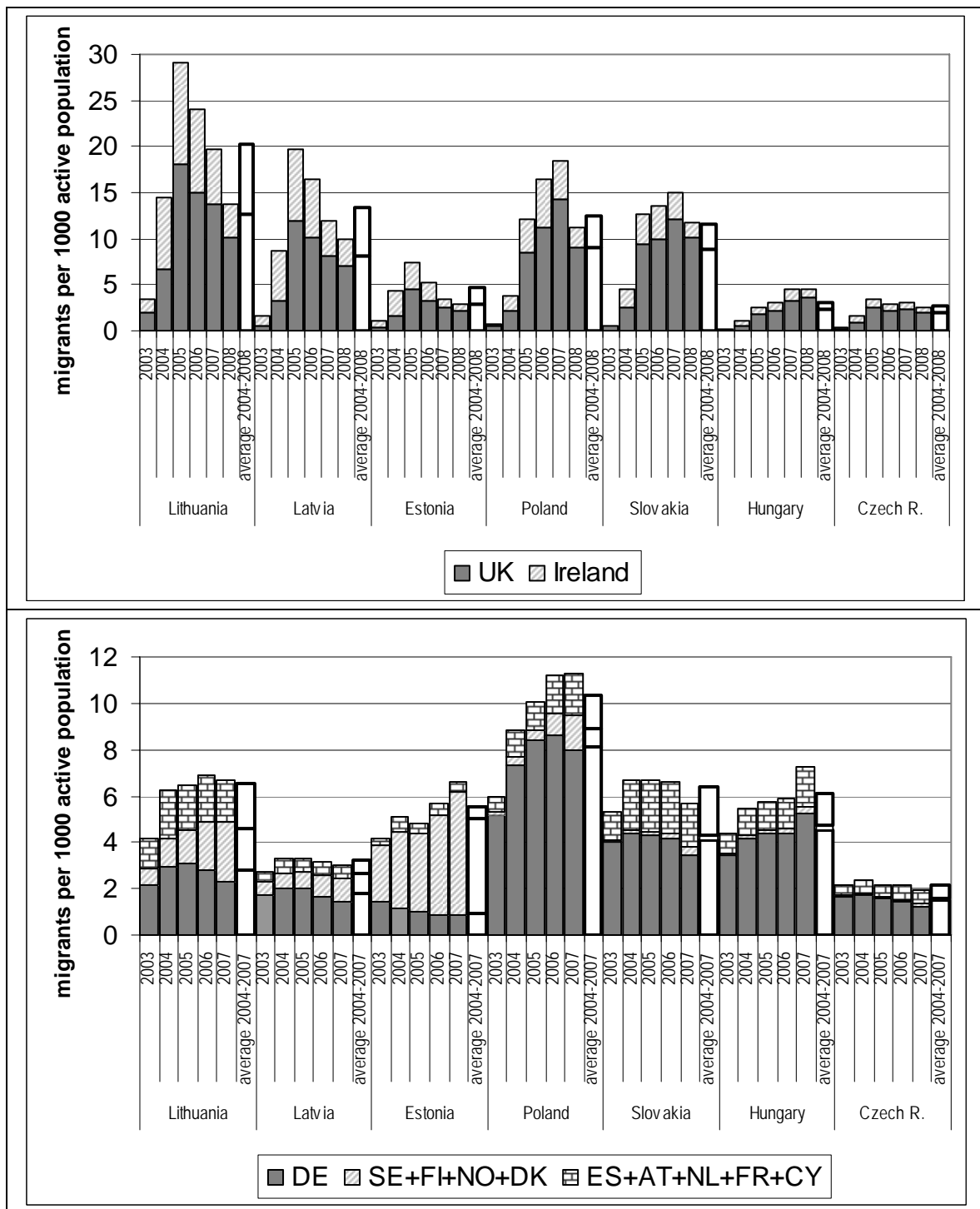


Figure 1 – Gross flows of adult migrants from the Baltic countries and Central Europe to UK and Ireland (2003-2008, top), selected other EU countries and Norway (2003-2007, bottom), per 1000 economically active population of sending country in 2004

Notes: Available (incomplete) data suggest that flows to EU countries not included in the Figure are negligible, except for flow from Poland to Italy. Workers sent by their employers to work in another country for a period of less than 12 months (*posted workers*) in most cases are not covered by migration statistics and not shown in Figure 1. In 2006 number of posted workers from Estonia (mostly to Finland) and Czech R. was twice as big as the gross migration flow to continental Europe; for Poland, Slovak R. and Hungary the two flows were roughly of the same size; number of postings from Lithuania and Latvia (mostly to Norway) was similar to migration flow to Germany. See Table 1c for more details.

Sources: UK – allocation of National insurance numbers, www.dwp.gov.uk/asd/tabtool.asp; Ireland – allocation of Personal Public Service Numbers, <http://www.welfare.ie/EN/Topics/PPSN/Pages/ppsstat.aspx>. Other countries – migration statistics provided by Eurostat or receiving countries.

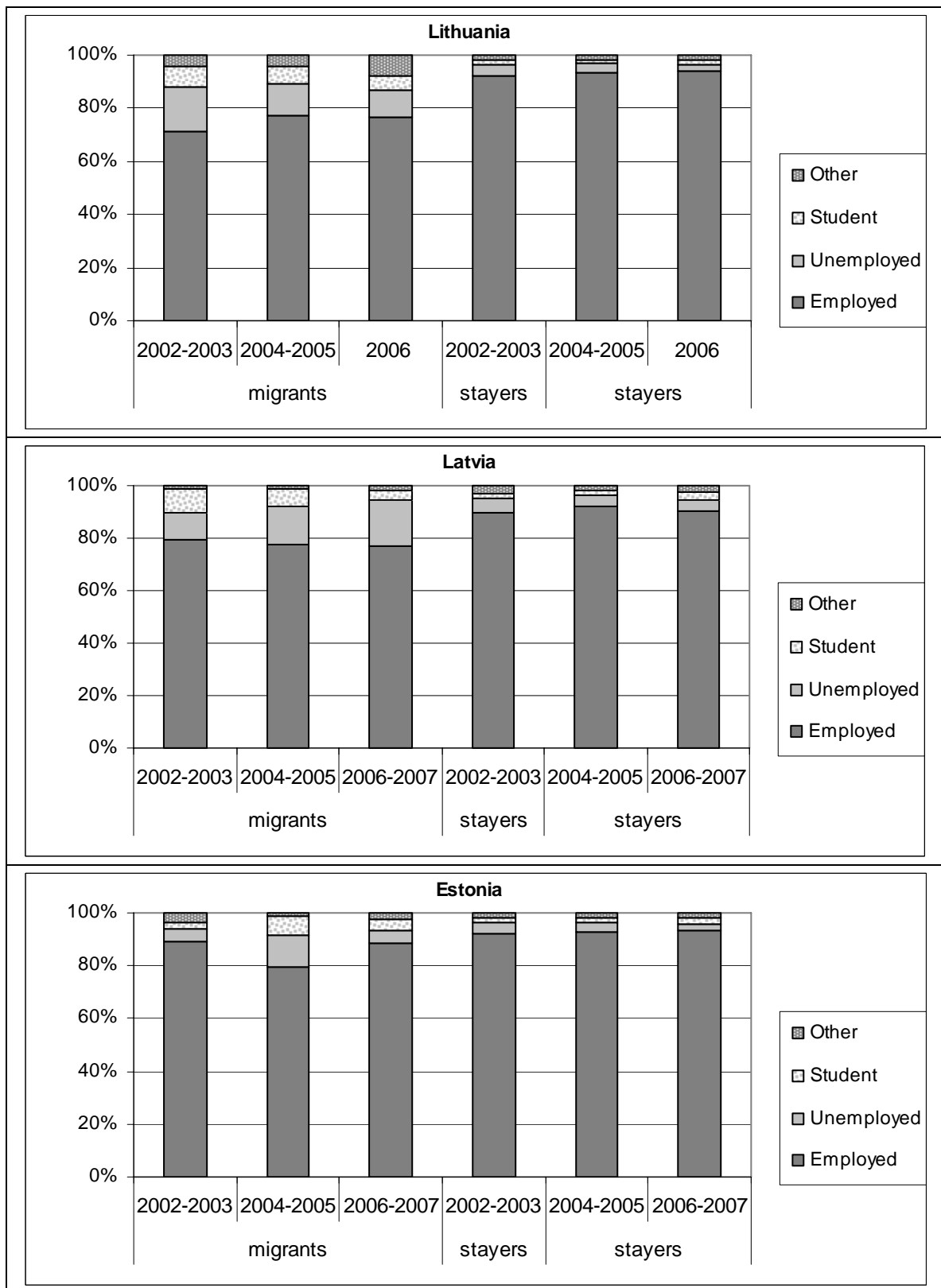


Figure 2 – Employed migrants from the Baltic countries and stayers therein by employment status 1 year ago, 2002-2007

Notes: Number of migrant observations for the three sub-periods are 703, 788 and 350 for Lithuania; 170, 192 and 207 for Latvia; 109, 168 and 523 for Estonia. Virtually all respondents who were unemployed or inactive a year ago have indicated home country as their place of residence at that time. Posted workers, permanent migrants as well as those with no family left behind are not covered due to survey design.

Sources: Calculations with Lithuanian, Latvian and Estonian LFS data.

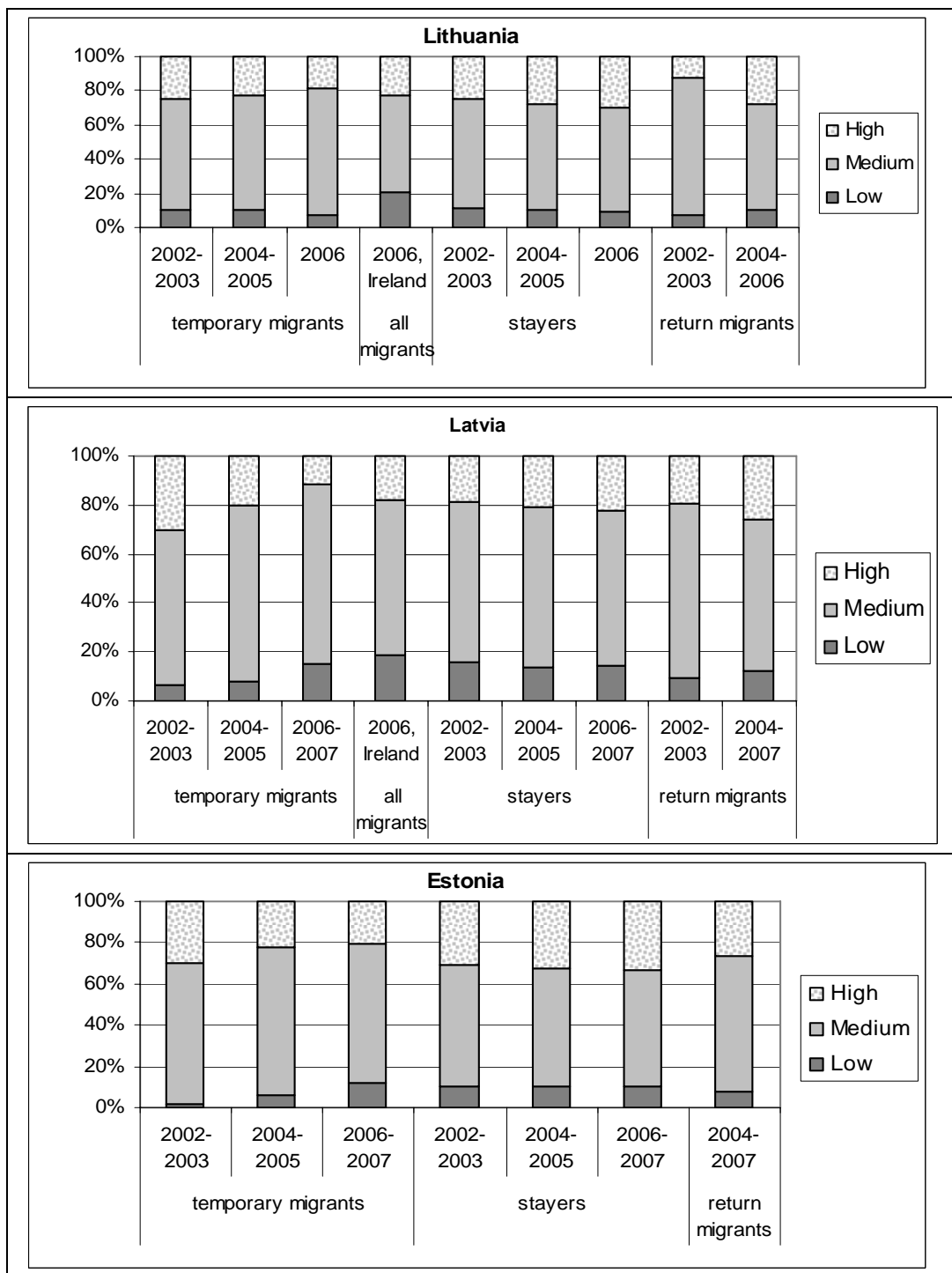


Figure 3 – Economically active migrants from the Baltic countries, stayers therein and return migrants by education level, 2002-2007

Notes: Except for the Irish column, migrants are defined as household members who have been economically active (working or seeking job) abroad for some time during the last year (hence, some overlap across periods is allowed); for return migrants the reference period is two years. All data refer to persons aged 18 to 64. Number of migrant observations for the three sub-periods is 802, 933 and 450 for Lithuania; 240, 258 and 273 for Latvia; 131, 189 and 589 for Estonia. Number of return migrant observations for the two sub-periods is 99 and 214 for Lithuania; 66 and 119 for Latvia; 20 (not shown) and 116 for Estonia. Data on migrants in Ireland (N= 13087 for Lithuania, N = 8333 for Latvia) are based on Irish Population Census and refer to April 23, 2006. Classification of education levels follows the approach of EU LFS: High refers to tertiary education, Medium – to upper secondary education, and everything less is classified as Low. *Sources:* Calculations with Lithuanian, Latvian and Estonian LFS data; for Ireland – census results in CSO Ireland (2008): Table A6.

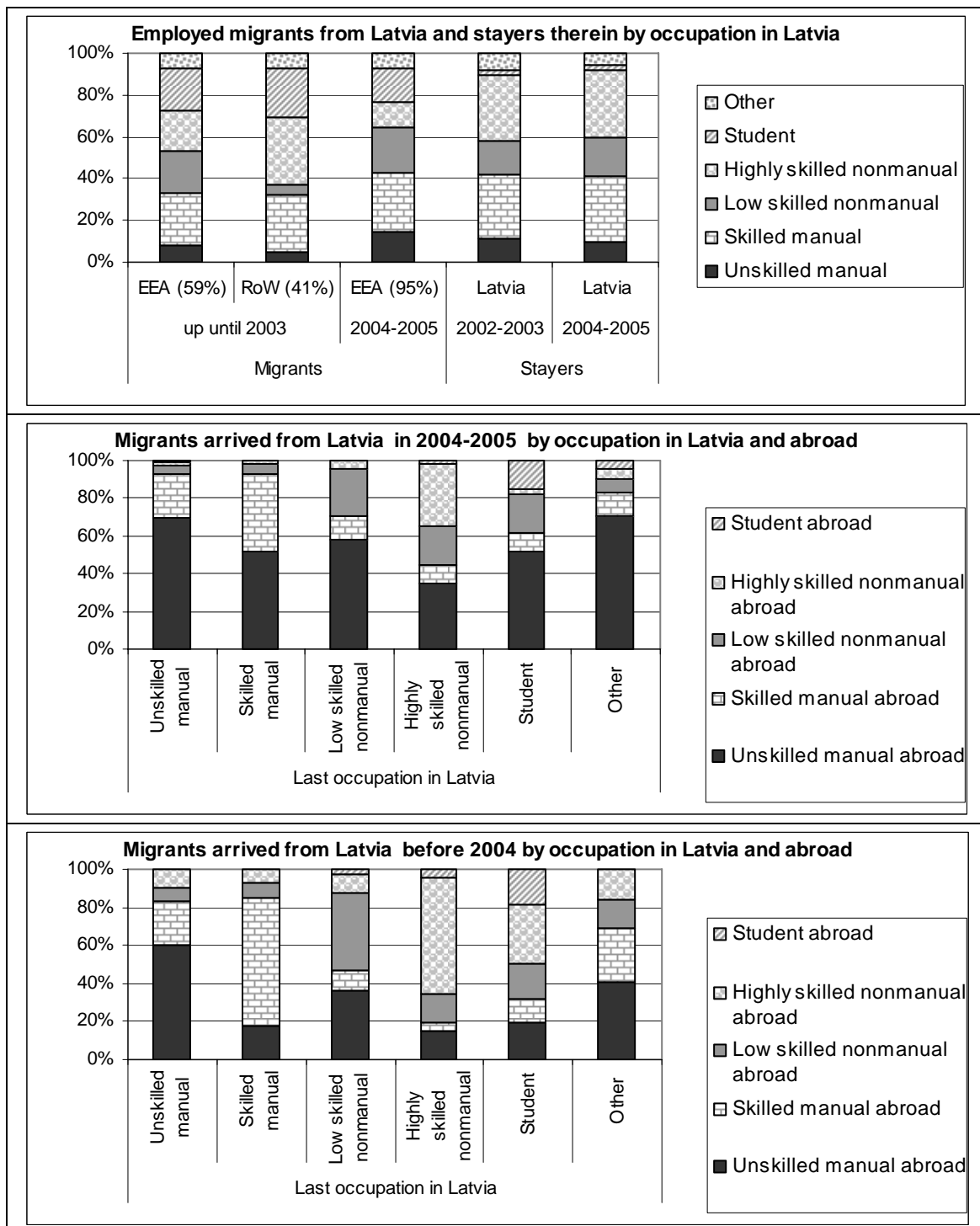


Figure 4 – Migrants from Latvia by occupation in Latvia and abroad

Notes. Upper panel: Last occupation in Latvia is shown for migrants. Main occupation one year ago is shown for stayers. 'Other' include unemployed. EEA: European Economic Area; RoW: Rest of the World. Only employed stayers aged 18 to 64 are included. Middle and lower panel: migrants whose occupation in Latvia or abroad is unknown as well as those not employed abroad are excluded. Number of migrant observations by panel and column:

Panel	Col. 1	Col. 2	Col. 3	Col.4	Col.5	Col.6
Upper	260	203	505	-	-	-
Middle	80	147	113	72	99	41
Lower	30	123	66	120	126	32

Source: Migrants: calculations with (un-weighted) data of 'Relatives abroad' module of the survey on geographical mobility of population conducted by *Data Serviss Ltd* for the University of Latvia in 2005/Q1-2006/Q4 in the framework of the National Program of Labor Market Studies undertaken by the Latvian Ministry of Welfare. Results should be treated as qualitative only due to: (i) unsolved weighting issue; (ii) limited number of observations in columns; (iii) custom (rather than ISCO) classification of occupations used. Stayers: LFS data.

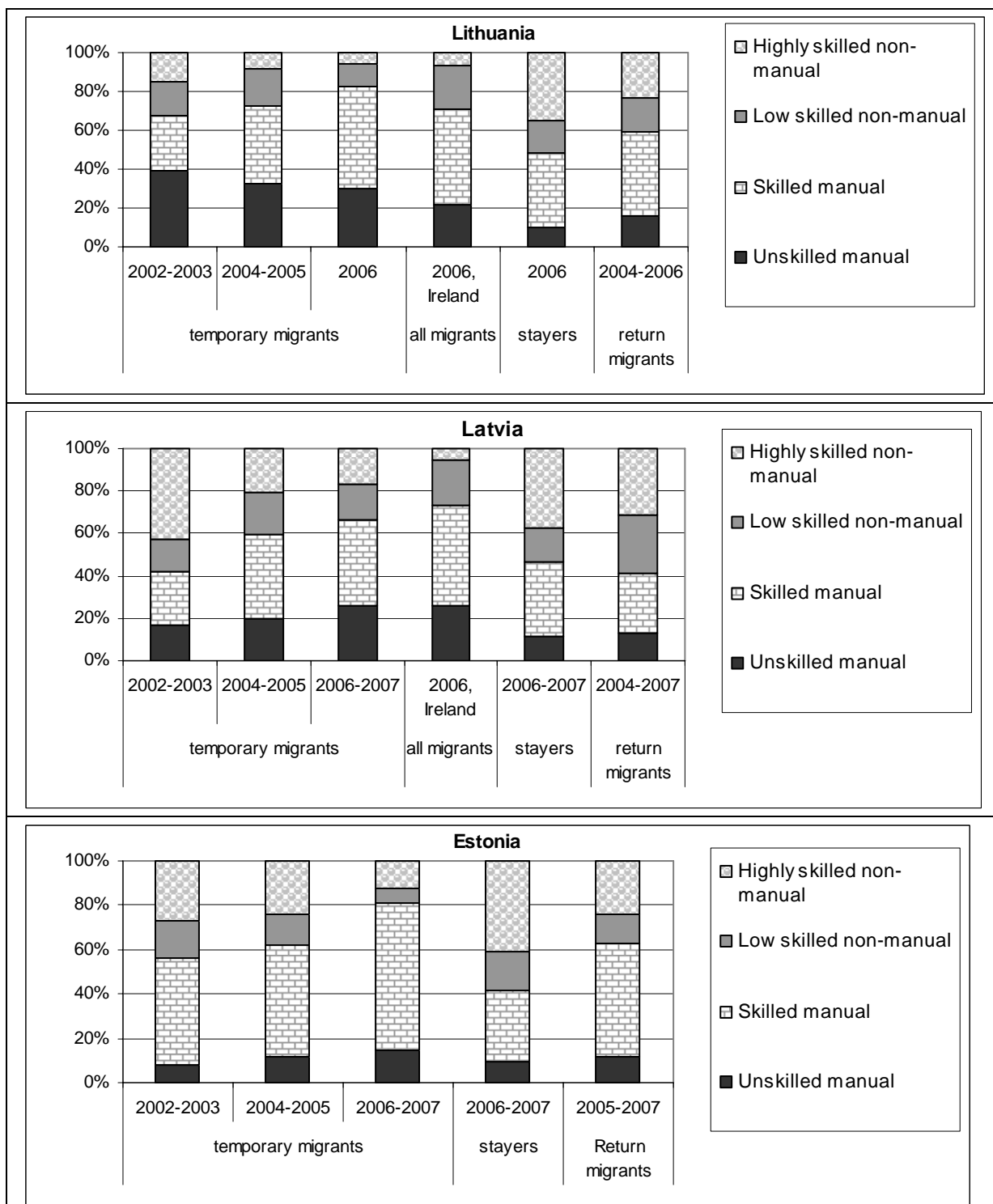


Figure 5 – Employed migrants from the Baltic countries, stayers therein and return migrants by occupation abroad, 2002-2007

Notes. Except for the Irish column, migrants are defined as household members employed abroad during the survey week; hence, permanent migrants as well as those with no family left behind are not covered. Number of migrant observations for the three sub-periods are 703, 788 and 350 for Lithuania; 170, 192 and 207 for Latvia; 109, 168 and 518 for Estonia. Data on migrants in Ireland (N= 15715 for Lithuania, N = 9256 for Latvia) are based on the Irish Population Census and refer to April 23, 2006. When calculating the Irish results, persons with unknown occupations (10% of Lithuanian sample, 8% of Latvian sample) were excluded. Highly skilled non-manual occupations include ISCO groups 1-3; low skilled non-manual – ISCO groups 4-5; skilled manual – ISCO groups 6-8; unskilled manual – ISCO group 9 (elementary occupations). *Sources:* Calculations with Lithuanian, Latvian and Estonian LFS data; for Ireland – census results in CSO Ireland (2008: pp. 36, 42).

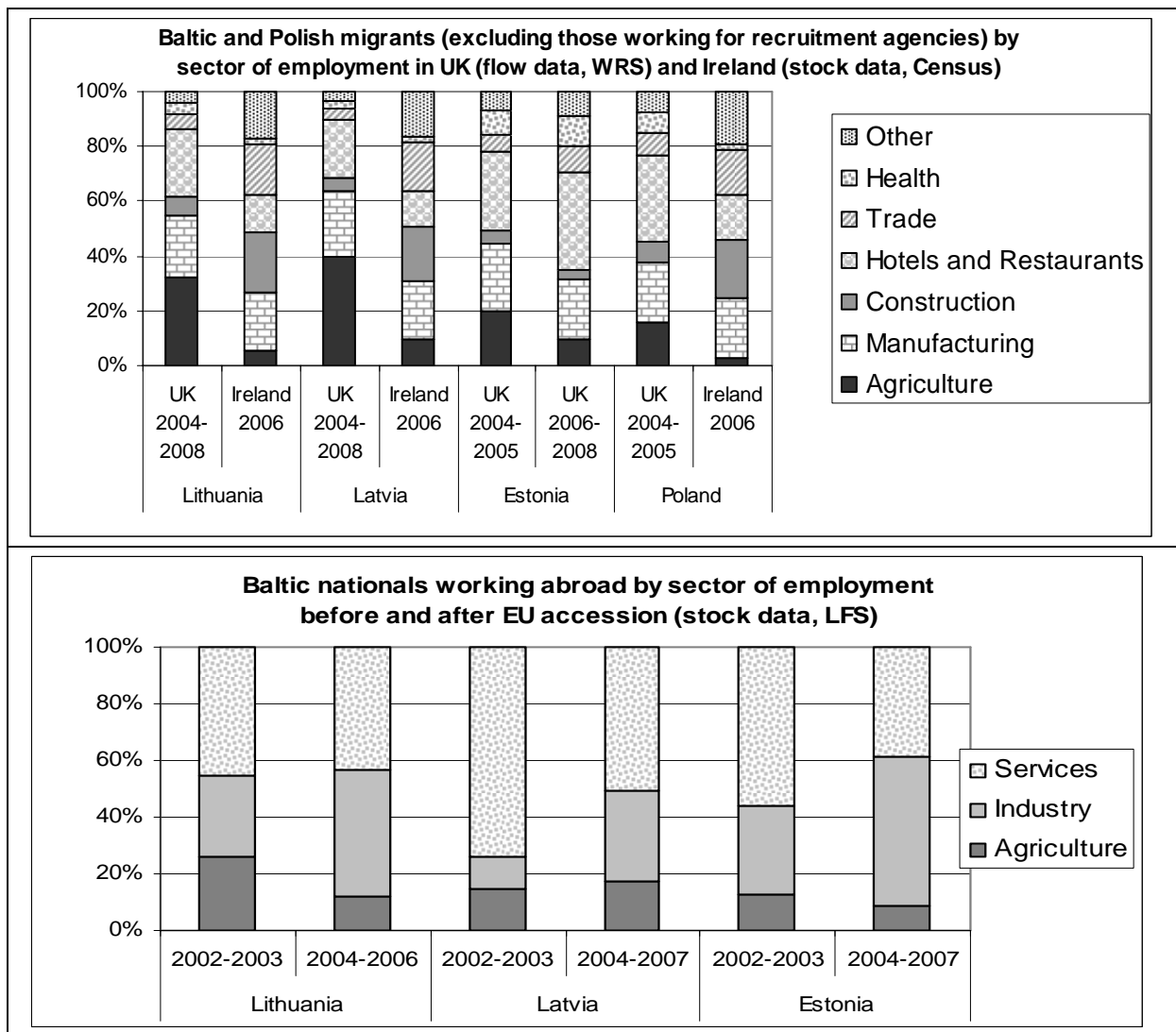


Figure 6 – Baltic nationals working abroad by sector of employment before and after EU accession

Notes. The upper panel is based on the Worker Registration Scheme (WRS) data for the UK and the 2006 Population Census data for Ireland. Workers whose actual sector of employment was unknown are excluded. In the UK, the excluded group accounts for 35 to 40% of Baltic workers and 44% of Polish workers (mostly working for recruitment agencies), hence the results should be used with caution. By design, the WRS excludes also self-employed (a small group among Baltic migrants in the UK, see Figure 8), as well as Baltic nationals who do not have citizenship of their home country (up to 15% of Latvian workers abroad and up to 18% of Estonian workers abroad belong to this category, see Figure 10). In Ireland, the excluded (due to non-response) group is rather small: 10 to 12% for Lithuania and Latvia, 7% for Poland.

The lower panel is based on sending countries' LFS data; see Notes to Figure 5 for the number of migrant observations per country and period.

Sources: Calculations with Lithuanian, Latvian and Estonian LFS data.

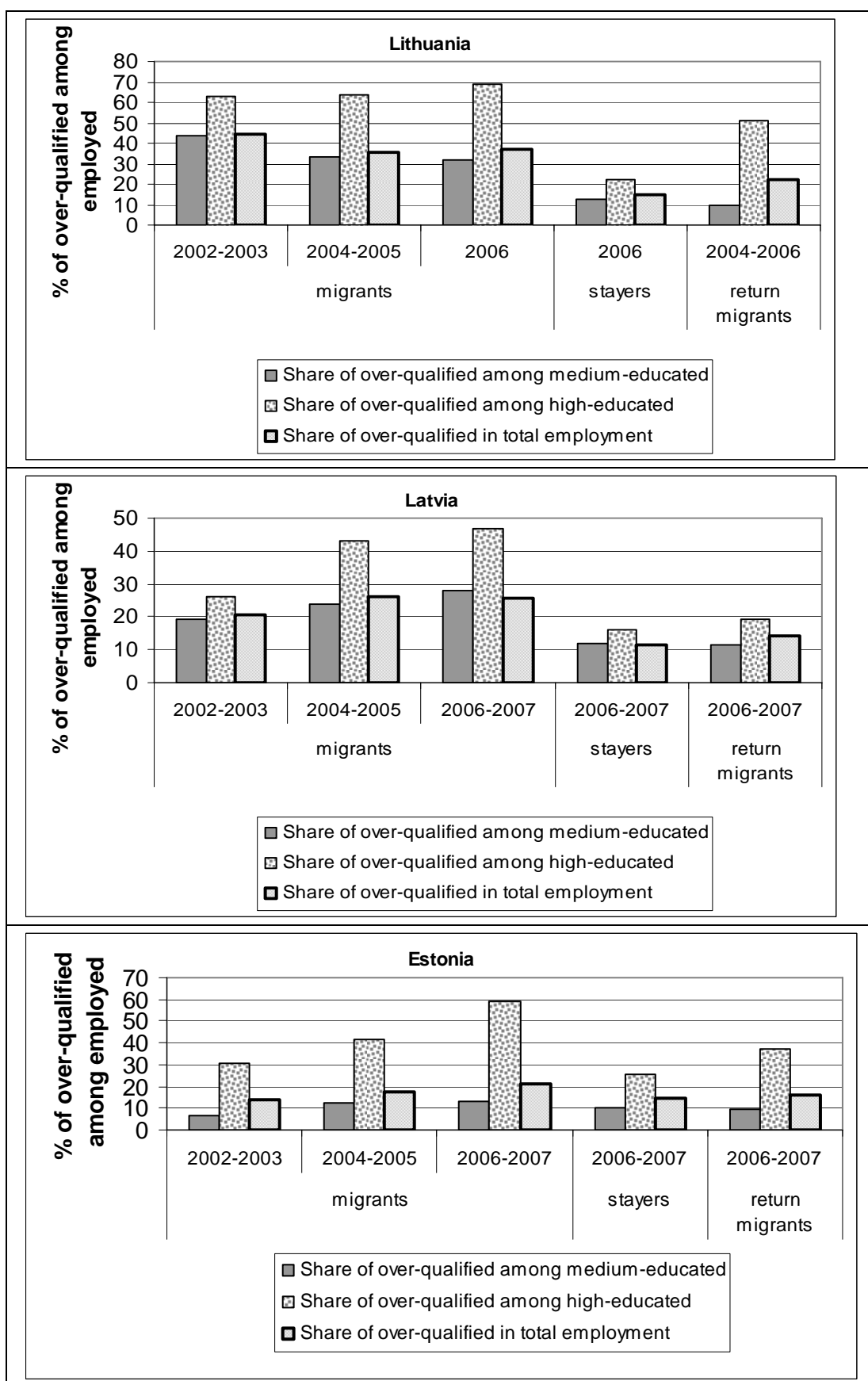


Figure 7 – Over-qualification of employed migrants from the Baltic countries, stayers therein and return migrants, 2002-2007

Notes: See Notes to Figure 5 for definition and other details. Over-qualified workers include: (i) Medium-educated workers (ISCED 3-4) employed in low-skilled (unskilled manual) occupations (ISCO 9); (ii) High-educated workers (ISCED 5-6) employed in medium-skilled (ISCO 4-8) or low-skilled (ISCO 9) occupations.
Sources: Calculations with Lithuanian, Latvian and Estonian LFS data.

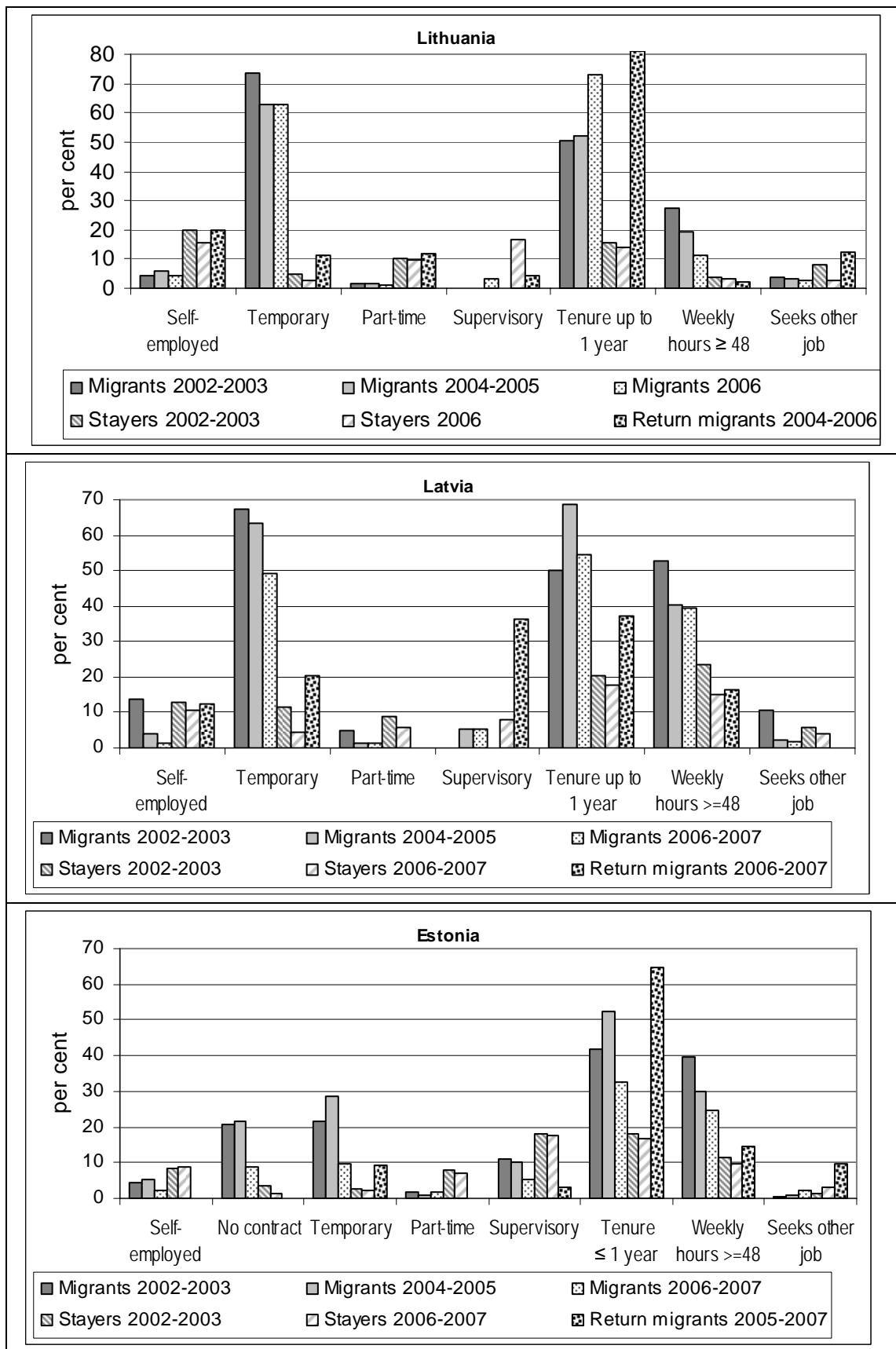


Figure 8 – Incidence of job-related characteristics among employed migrants from the Baltic countries, stayers therein and return migrants, 2002-2007

Notes: Migrants and stayers aged 18 to 64 years are included.

Sources: Calculations with Lithuanian, Latvian and Estonian LFS data

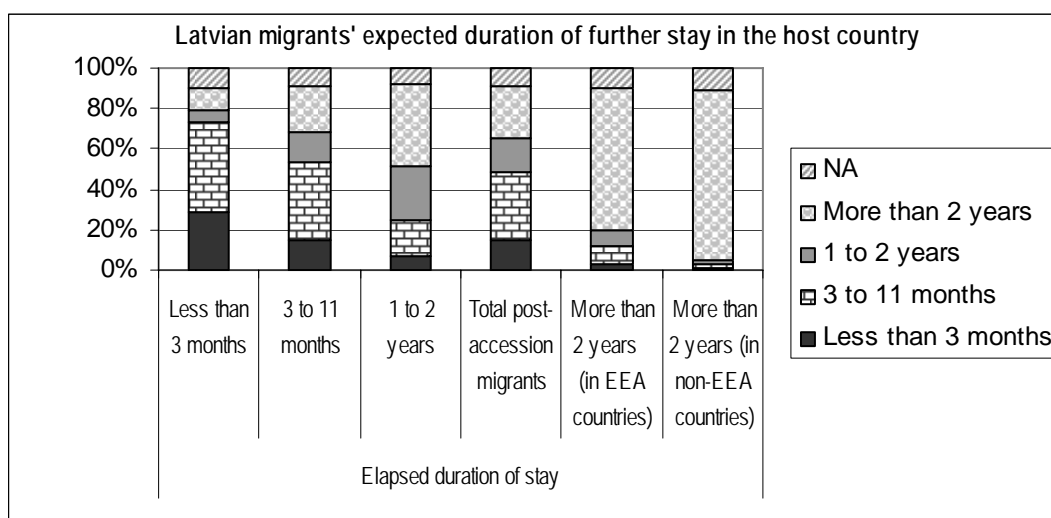


Figure 9 – Latvian migrants' expected duration of further stay in the host country, 2005/Q4-2006/Q1

Source: Calculations with (un-weighted) data of 'Relatives abroad' module of the survey on geographical mobility of population conducted by *Data Serviss Ltd* for the University of Latvia in 2005/Q1-2006/Q4 in the framework of the National Program of Labor Market Studies undertaken by the Latvian Ministry of Welfare.

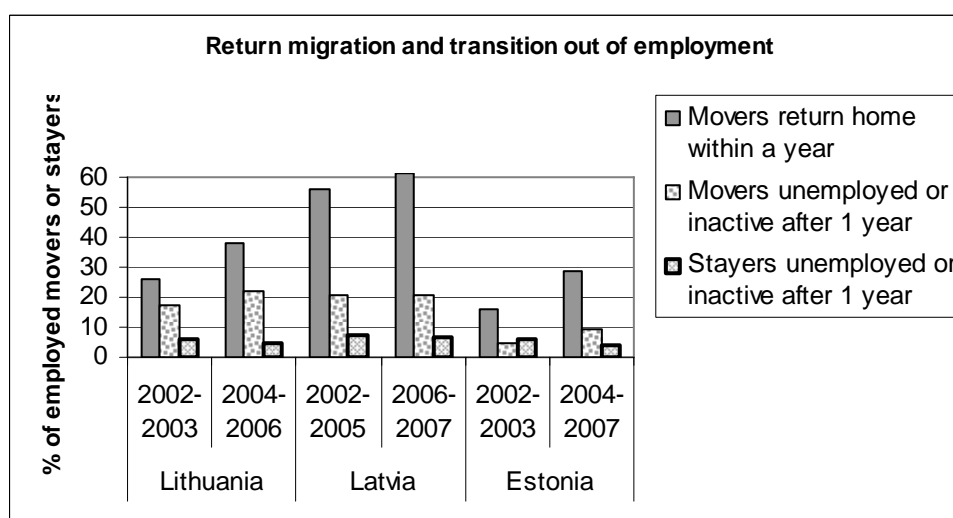


Figure 10 – Return migration and transition out of employment among employed migrants from the Baltic countries and stayers therein, 2002-2007

Notes: Migrants and stayers aged 18 to 64 years are included.

Sources: Calculations with Lithuanian, Latvian and Estonian LFS data.

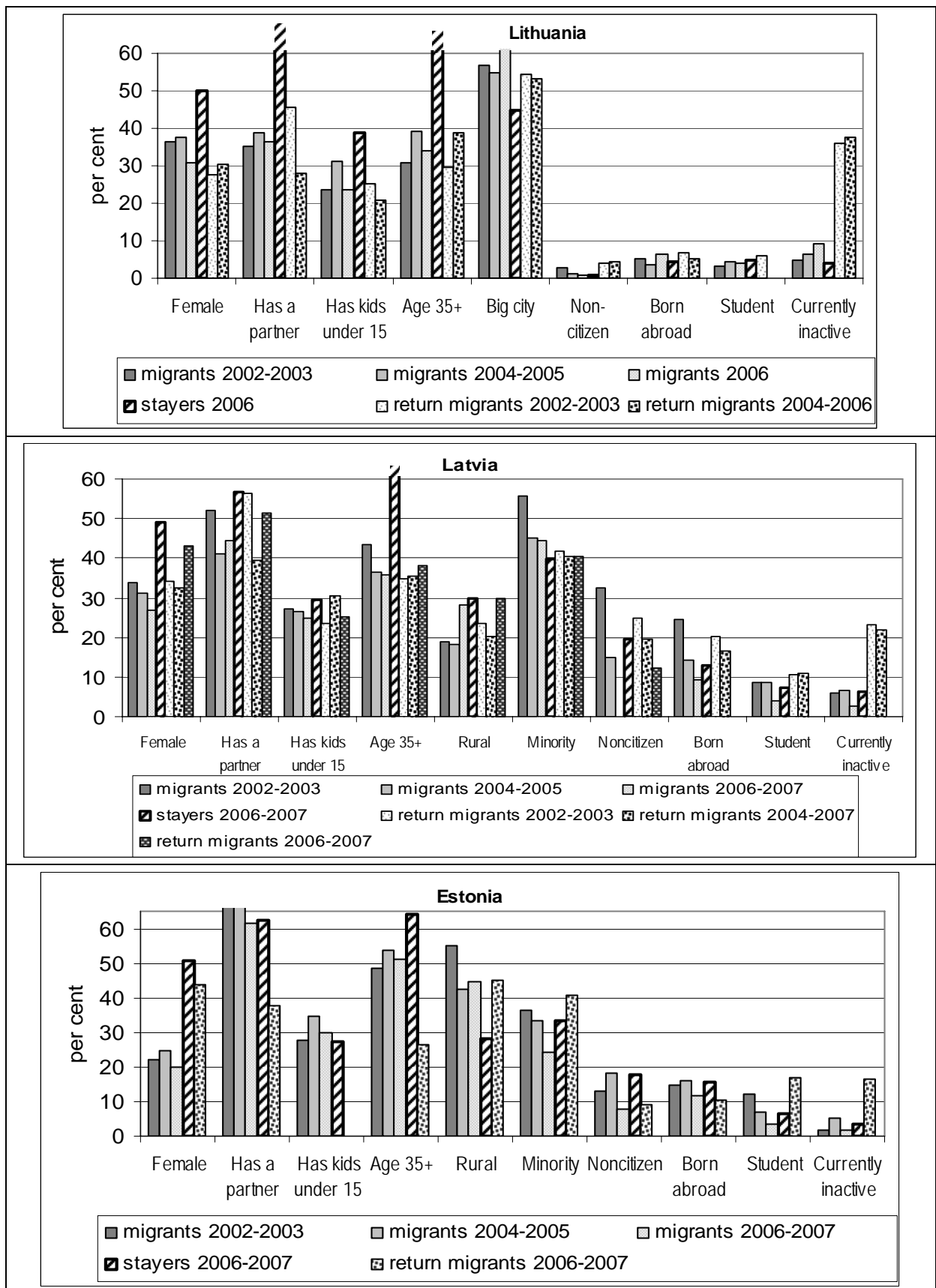


Figure 11 – Demographic characteristics of economically active migrants from the Baltic countries, stayers therein and return migrants, 2002-2007

Notes: Persons aged 18 to 64 years who have been economically active for some time during the last year are included. Return migrants have worked abroad during the last two years (three years for Latvian column '2006-2007'). Sources: Calculations with LFS data and one *ad hoc* Latvian survey (survey VI in Sources of Table 2).

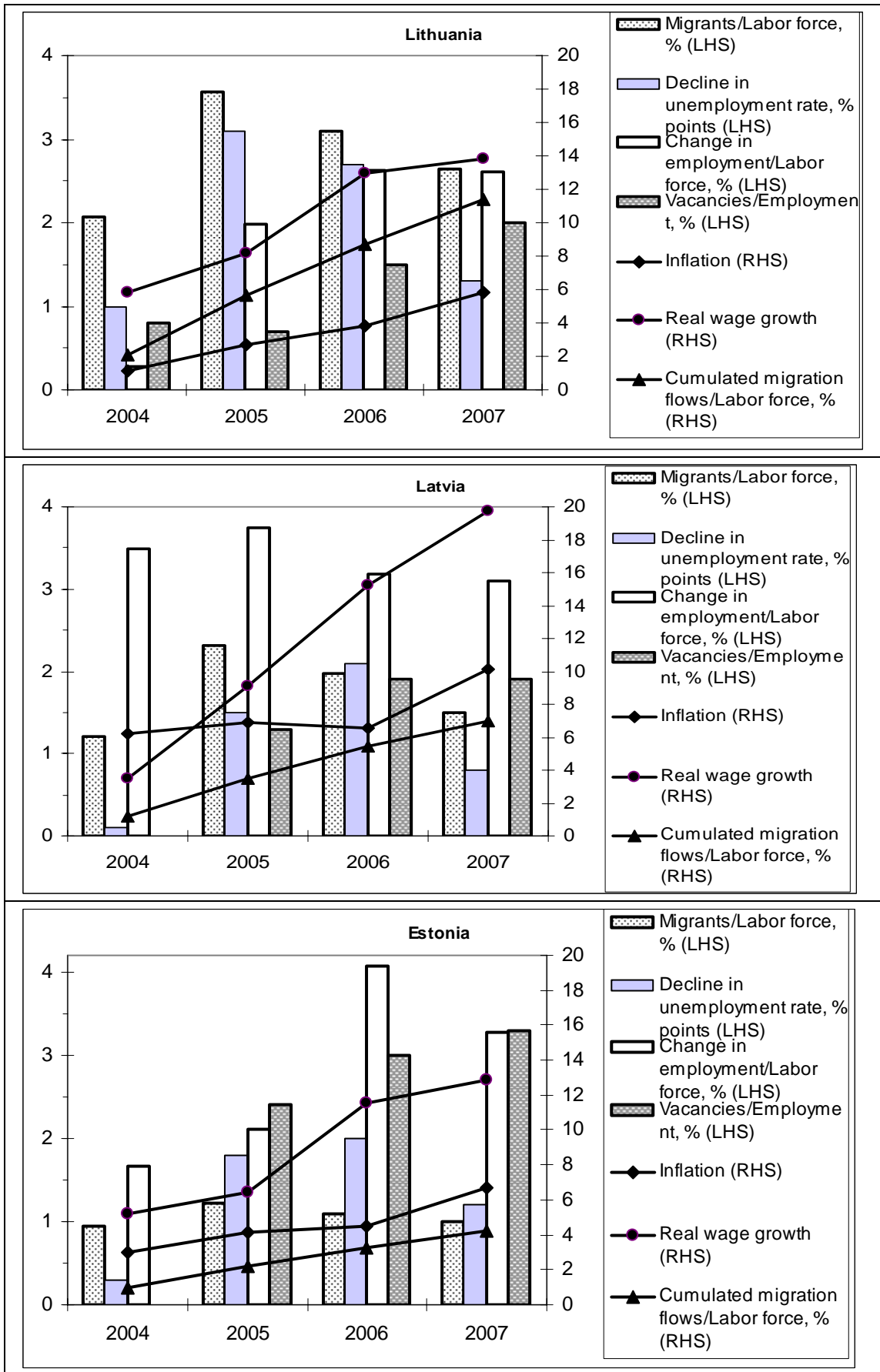


Figure 12 – Migration and labor market developments in the Baltic countries, 2004-2007
Notes: Labor force refers to 2004. Employment – administrative data independent of LFS and population estimates. *Sources:* Migration – see Figure 1. Other data – Eurostat and NSO's.

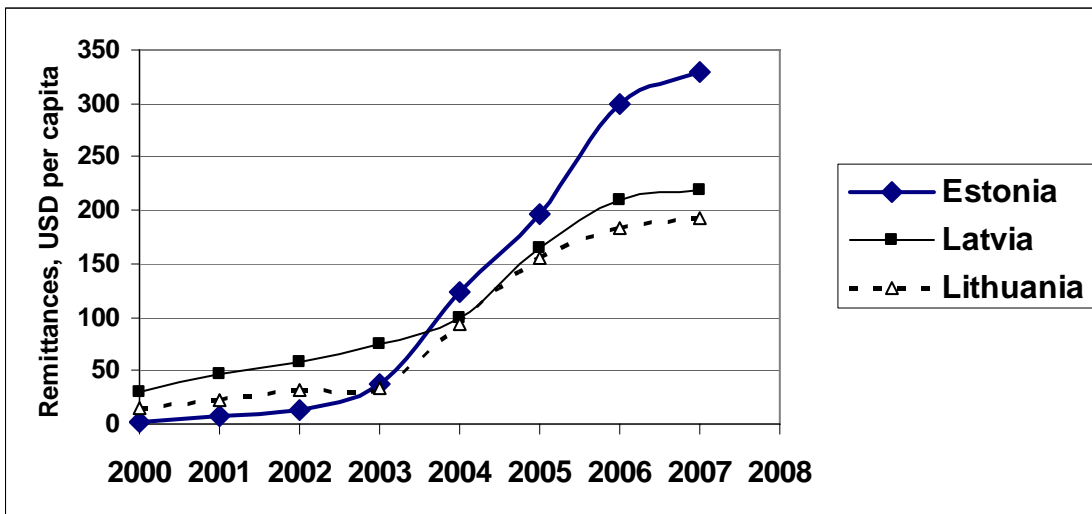


Figure 13 – Remittances to the Baltic countries (USD per capita), 2000-2007

Notes: Remittances include workers' remittances (current transfers by migrants who are considered residents in the host country) and earnings of posted, seasonal and other short-term workers who have centers of economic interest in their own economies.

Sources: World Bank (2008) and own calculations.

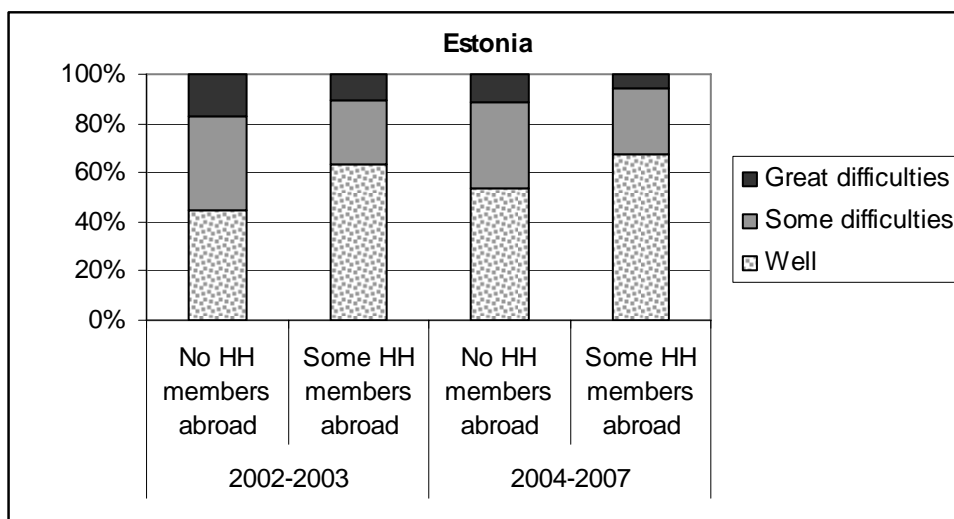


Figure 14 – Estonian households with and without members working abroad by answers to the question 'How did you manage during this period?', 2002-2007

Source: Calculations with Estonian LFS data