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ABSTRACT

Labor Mobility in an Enlarged European Union*

The 2004 and 2007 enlargements of the EU extended the freedom of movement to workers from the twelve new member states mainly from Central Eastern Europe. This study summarizes and comparatively evaluates what we know about mobility in an enlarged Europe to date. The pre-enlargement fears of free labor mobility proved to be unjustified. No significant detrimental effects on the receiving countries' labor markets have been documented, nor has there been any discernible welfare shopping. Rather, there appear to have been positive effects on EU's productivity. The sending countries face some risks of losing their young and skilled labor force, but free labor mobility has relieved them of some redundant labor and the associated fiscal burden. They have also profited from remittances. Of key importance for the sending countries is to reap the benefits from brain gain and brain circulation in an enlarged EU. For the migrants the benefits in terms of better career prospects have with little doubt exceeded any pecuniary and non-pecuniary costs of migration. In conclusion, the freedom of movement in the EU provides for a triple-win situation for the receiving and sending countries as well as for migrants themselves, provided the risks are contained and efficient brain circulation is achieved.

Keywords: EU labor markets, migration, EU enlargement, labor mobility, free movement of workers, transitional arrangements, new member states, European Union

JEL Classification: F22, J61

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Daughter: "*What's over there, Mom?"*

Mother: "*There is nothing there – there is the East Bloc*."

Conversation between a mother and her daughter pointing in the direction of Slovakia on a hilltop in Austria near the Czechoslovak border sometime in 1987.

1. Introduction

The freedom of movement of workers is one of the four fundamental pillars of economic integration in the European Union (EU), which also includes the free mobility of capital, goods, and services. A central objective of free mobility is to enable EU citizens to seek employment, and any social benefits attached with it, in any of the EU member states. From the economic perspective free labor mobility improves the allocative efficiency of EU labor markets, thus buttressing the EU's economy and alleviating some of its demographic challenges (Zimmermann, 2005; Kahanec and Zimmermann, 2010). Yet, with the process of EU enlargement expanding this freedom to new member states, free labor mobility constitutes one of the most sensitive, and often challenged, freedoms in the EU.

The controversies surrounding the freedom of movement of labor culminated when Cyprus, the Czech Republic, Estonia, Latvia, Lithuania, Malta, Hungary, Poland, Slovakia, and Slovenia, referred to as the EU10, joined the EU in 2004 and carried on in 2007 when Bulgaria and Romania, the EU2, followed suit.[1] These controversies were probably rooted in the history of deep political, economic and social separation

[1] The respective abbreviations used in the text below are: CY, CZ, EE, LV, LT, MT, HU, PL, SK, SI, BG, and RO. EU8 denotes EU10 minus Cyprus and Malta; EU8+2 includes EU8 and EU2. EU15 includes Austria (abbreviated AT), Belgium (BE), Denmark (DK), Finland (FI), France (FR), Germany (DE), Greece (EL), Ireland (IE), Italy (IT), Luxembourg (LU), the Netherlands (NL), Portugal (PT), Spain (ES), Sweden (SE) and the United Kingdom (UK).

during the Cold War. This separation had severely limited mobility and contact across the East-West limits and resulted in a fissure in the European identity along the Iron Curtain. Presumably the economic disparities between the new and old member states, combined with the large scale of these enlargements, created grounds for a widespread perception in the EU15 of EU8+2 migrants as a threat to their labor markets and welfare systems, and explain the magnitude of such controversies at least partly.[2] As a consequence, a policy instrument – transitional arrangements – was adopted allowing member states to keep their labor markets closed for citizens from new member states for up to 7 years, with revisions required after 2 and 5 years, following their accession.[3]

In the EU8+2 free mobility was seen as a way out of the difficulties stemming from labor market mismatches and excess labor inherited from the process of their difficult post-socialist transformation. In spite of some fears of brain drain, overall, the expectations of faster convergence to the living standards of the old member states following their accession framed the expectations in the acceding countries quite favorably towards this process.

[2] Some of the early forecasts added to the fears in the EU15 by predicting rather high east-west migration flows (Sinn et al., 2000), possibly even undermining the welfare state in the receiving countries (Sinn and Ochel, 2003). More moderate migration rates in the vicinity of actual post-enlargement migration flows were predicted by e.g. Layard et al. (1992), Bauer and Zimmermann (1999), Dustmann et al. (2003), IOM (1998); see also Zaiceva and Zimmermann, (2008) and Brücker et al. (2009). See Canoy et al. (2010) for a thorough account of the links between public perception, migrants' labor market outcomes, and migration policies.

[3] Cyprus and Malta were exempt from such restrictions. Ireland, the UK, and Sweden opened up their labor markets immediately following the 2004 accession, while Germany and Austria imposed restrictions up until the end of the seven-year period, albeit simplifying some of the procedures. The other old member states had gradually opened up by May 1, 2009. As for the 2007 enlargement, ten member states opened up their labor markets during the first 2-year phase: the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Poland, Slovenia, Slovakia, Finland and Sweden. By the end of the second phase on January 1, 2012, Denmark, Greece, Hungary, Portugal, Slovenia and Spain opened up as well, with Austria, Germany, Belgium, France, Ireland, Luxembourg, Malta, the Netherlands, and the UK still applying transitional arrangements as of January 2012. In July 2011 the EC authorized Spain to reinstate restrictions for Romanian workers until the end of 2012.

This chapter reviews what we know about labor mobility in the EU following the two recent waves of enlargement in 2004 and 2007. We in particular evaluate the experience with post-enlargement migration in an enlarged EU in view of the fears and hopes attached to it in the sending and receiving countries, and by the migrants themselves. The next section provides a theoretical account of possible effects of free mobility in sending and receiving labor markets. We then describe how enlargement affected labor mobility in the EU, and what measurable effects can be documented empirically. In the subsequent section we shed some light on what migration flows can be expected in the near future. Finally, we discuss a number of lessons that can be learned, and conclude.

2. A theoretical account

To pinpoint the diverse social, political, or economic factors behind the reserved attitudes towards free labor mobility in the old member states and the more relaxed perceptions in the new member states would take a major study on its own. We undertake a narrower question here: does economic theory predict any worrisome effects of increased mobility for the receiving and sending countries? And does it in fact predict any significant migration flows in an enlarged EU?

The answer to the latter question is in all likelihood "yes". Harris and Todaro (1970) point to the significance of (expected) regional disparities in the standard of living for the migration decision. More generally, international disparities in the levels (and distribution) of earnings and income, net of migration costs, chances to pursue a rewarding career and avoid unemployment, the cost of living, or the availability and

quality of public goods and amenities are proposed in the literature as key drivers of migration (Massey, 1990; Borjas, 1999; Bonin et al., 2008).[4] Others, such as the generosity of the welfare system are more controversial (De Giorgi and Pellizzari, 2006; Giulietti et al., 2012). Stark (1991) advanced the view that for the household as a decision-making unit it may be worthwhile to have one or more of its members abroad as a strategy of risk sharing.

Factors such as those listed above may affect various subpopulations differently. The costs of migration and adjustment in the host economy, pecuniary and non-pecuniary, depend on the geographical, linguistic, and cultural distances between (subpopulations in) the sending and receiving countries (Chiswick and Miller, 2011). The human capital theory predicts that the migration decision also depends on age and skills of potential migrants, as these determine their capacity to adjust in the host country and thus benefit from migration (Becker, 1957; Sjaastad, 1962). As a result, people who decide to migrate and stay in the receiving country may be positively or negatively self-selected based on their observable or unobservable characteristics (Borjas, 1987; Chiswick, 1999).

Based on these arguments and given the initial disparities in many socio-economic variables, it is probably just to say that the expectations of non-negligible migration rates between new and old member states following the liberalization of the new EU citizens' access to old member states' labor markets were justified. Given the linguistic, cultural, institutional, and socio-economic diversity in Europe one could also well expect uneven migration rates across source and host populations. But are

[4] Besides these economic factors, family, ethnic, or social ties; natural catastrophes; social and political crises; as well as discrimination or persecution may result in significant movement of people (Mincer, 1978; Massey, 1990).

there any theoretical reasons to justify the pre-enlargement fears of various negative economic effects caused by such migration flows?

The impact of migration on sending and receiving labor markets can be pinned down in a simple economic model drawing on the idea that the effects of immigration depend on the degree of substitutability or complementarity of migrant and non-migrant (native or staying) labor (Chiswick, Chiswick, and Karras, 1992; Chiswick, 1980, 1998). It is useful to consider the effects of inflow and outflow of skilled and unskilled workers in the respective labor markets. In Figure 1 we look at the effects in a receiving country. Immigration increases the supply of high-skilled workers from $\overline{H}^0$ to $\overline{H}^1$ in panel a. This drives the equilibrium and the corresponding wage level from A^0 to A^1, along the original demand curve D_h^0. The increased employment of high-skilled workers, through complementarity between high- and low-skilled labor, increases the demand for low-skilled workers from D_l^0 to D_l^1 in panel b. Assuming a competitive low-skilled market, given the supply of low-skilled workers at $\overline{L}^0$, high-skilled immigration leads to as shift of the equilibrium from B^0 to B^1 and the corresponding wage increase. If, however, a (binding) minimum wage is set at $\overline{w}_l^U$, high skilled immigration reduces low-skilled unemployment from $\overline{L}^0 - L_U^0$ to $\overline{L}^0 - L_U^1$. Through complementarity of low- and high-skilled workers the corresponding increase in low-skilled employment feeds back into the high-skilled market and so mitigates the initial decrease of equilibrium wage, increasing it from w_h^1 to w_h^2.

Low-skilled immigration, on the other hand, decreases the wage of low skilled workers from w_l^0 to w_l^2 along the initial demand curve under a competitive market, or it increases unemployment from $\overline{L}^0 - L_U^0$ to $\overline{L}^1 - L_U^0$ under a wage floor. In the former case the increase in low-skilled employment increases the demand for high-skilled workers lifting the high-skilled wage from w_h^0 to w_h^3.

[Figure 1 about here]

In a sending country, correspondingly, high-skilled out-migration increases high-skilled workers' wages by moving the equilibrium from M^0 to M^1. Lower high-skilled employment leads to a lower demand for low-skilled workers, either reducing their wage from w_l^0 to w_l^1 or increasing low skilled unemployment from $\overline{L}^0 - L_U^0$ to $\overline{L}^0 - L_U^1$ under a binding minimum wage. In the latter case this feeds back into the high-skilled market through complementarity of high- and low-skilled labor, thus shifting the demand for high skilled labor down, decreasing their wage from w_h^1 to w_h^2. Low-skilled out-migration, on the other hand, increases low-skilled competitive market wage from w_l^0 to w_l^2, or decreases unemployment from $\overline{L}^0 - L_U^0$ to $\overline{L}^1 - L_U^0$, under the minimum wage regime. By the complementarity argument, in the former case the lower low-skilled employment decreases demand for high-skilled labor and thus high-skilled wage from w_h^0 to w_h^3.

[Figure 2 about here]

This straightforward analysis elucidates the redistributive consequences of immigration and out-migration. Clearly these depend on whether migration concerns low-skilled or high-skilled workers. Consider, for example, the case of high-skilled post-enlargement migration. The winners of enlargement would then be low-skilled workers in the receiving countries benefiting from higher wages or lower unemployment. In the sending countries, the staying high-skilled workers could also benefit unless the weakened demand for low-skilled workers resulted in lower low-skilled employment and, as a consequence, lower productivity of high-skilled workers in spite of their increased scarcity. High-skilled workers in the receiving countries could be among the losers of enlargement, but not if the increased demand for low-skilled labor resulted in their higher employment and thus an increased productivity of high-skilled workers in spite of their increased relative abundance. Low-skilled workers in the sending countries would clearly lose either in terms of higher unemployment or lower wages. One can similarly track the redistributive effects of low-skilled migration in this model.[5]

While this textbook model elucidates some potential redistributive effects of post-enlargement migration, many other important factors may considerably change or even reverse some of its predictions. For example, economic migration can be expected to improve the allocation of labor and human capital. Moreover, migration proliferates cross-regional and cross-border social ties, thus acting as a vehicle for international flows of goods and services, capital, as well as ideas and knowledge (Bonin et al., 2008). The resulting improved productivity may benefit all types of

[5] See Kahanec and Zimmermann (2009) for more on redistributive effects of migration.

labor in sending as well as receiving countries. Further economic benefits may result from increased ethnic diversity in receiving countries (Ottaviano and Peri, 2006)

However, a range of psychological, linguistic, institutional, or legislative barriers, as well as discrimination, may impede immigrant adjustment in the host society, thus hindering some of the positive effects migration may entail (Constant, Kahanec and Zimmermann, 2009; Kahanec, Kim and Zimmermann, 2011). Such barriers may for example result in weaker labor market outcomes and, as a consequence, an increase in migrants' demand for welfare (Borjas, 1999; Brücker et al., 2002; Kahanec, Kim and Zimmermann, 2011; Zimmermann et al., 2012). Ethnic identity is another factor that may positively or negatively affect adjustment in host labor markets (Constant and Zimmermann, forthcoming).

Whether given migration flows should be considered as high- or low-skilled depends on the migrant's skill level relative to the skill level in sending and receiving countries. The same migrant can thus be seen as skilled from the perspective of the sending country but unskilled in the receiving country. A similar discrepancy may also arise if skills are not perfectly transferable from sending to receiving countries; the speed of adjustment then determines the effective skill level of migrants in host countries.[6] Downskilling, whereby immigrant workers' potential is underutilized in jobs below their skill level, has been documented also in the context of post-enlargement migration (Kahanec and Zimmermann, 2010; Kureková, 2011; Hazans

[6] See Kahanec and Zimmermann (2009).

2012).[7] Such considerations point out the importance of skill measurement when evaluating the effects of migration flows.

This theoretical account of migration illustrates that the scale and skill composition of post-enlargement migration is particularly important for the evaluation of its effects in sending and receiving economies. For the receiving countries the degree and speed of adjustment of immigrants is another important variable. It also shows that without strong assumptions the effects of enlargement are hard to evaluate unequivocally based on theoretical grounds. Similarly, any a priori fears of enlargement are hard to justify theoretically. To evaluate the scale, composition, and effects of post-enlargement migration one needs to look at hard data.

3. The scale and composition of post-enlargement migration

The gradual opening-up of western European labor markets instigated by the 2004 and 2007 EU enlargements enabled many workers from the new member states to seek employment and pursue careers in the more prosperous part of an enlarged EU. This has dramatically changed the migration landscape in Europe and led to substantial east-west migration flows.

Given the scarcity of migration data, to evaluate the scale and composition of post-enlargement migration is a formidable task. We therefore look at various data sources and the available literature to triangulate some of the most important trends. According to the data provided in Holland et al. (2011), in 2004 there were about a

[7] Whereas the formal recognition of qualification obtained within the EU in another EU member state has been significantly simplified by EU legislation, informational asymmetries, linguistic and other barriers still obstruct the adjustment of within-EU migrants.

million citizens from the EU8, and almost another million EU2 nationals, residing in the EU15.[8] By 2009, just five years later, the total number of EU8 and EU2 citizens residing in the EU15 increased by about 150% and reached almost five million (Table 1). In effect, the combined populations of citizens from EU8 and EU2 countries residing in the EU15 constituted 1.22% of the total EU15 population and 4.75% of combined populations of EU8 and EU2 countries.[9]

[Table 1 about here]

Whereas over the five-year period preceding 2004 the average annual inflow to the EU15 from the EU8 was about 58,000, in the five years after 2004 this has risen to 256,000 annually. The corresponding figures for the EU2 were 129,000 and 330,000, respectively (Table 1). The dynamics of these flows are visualized in Figure 3. We observe an increasing dynamic of inflows from new to old member states until 2007, followed by a significant slow down during the financial crisis in 2008 and 2009. EU8 citizens reacted to enlargement with some delay, with peak migration attained only in 2006 and 2007, two years after their accession. The response of EU2 citizens was considerably swifter and more pronounced, reaching peak migration flows already in

[8] While this dataset provides probably the most comprehensive account of migration flows between the new and old member states known to us, it has to be acknowledged that a number of issues arise with it. These mainly arise because of the lack of adequate infrastructure to collect data enabling us to measure migration flows in the EU. For example, data is often based on population statistics by citizenship, and changes in respective stocks are interpreted as migration flows. Deaths and births, legalizations, as well as citizenship acquisition, are included in these flows, although they should not be interpreted as migration. Latvia and Estonia are especially problematic in this respect, as these countries host large populations of non-citizens, who are treated in various destination countries in different ways. Data from Ireland and the UK are similarly problematic, as they are based on interpolations from the respective labor force surveys rather than large-scale administrative or census data, which may have large error especially for evaluating the sizes of populations originating from smaller source countries. Looking at foreign-born populations does not help to solve all these issues; for example, many migrants from the Baltic states were born in other republics of the Soviet Union. Various registers have their own problems, as migrants often fail to deregister. The statistics that we discuss below may therefore over- or under-represent true migration flows and need to be interpreted with these caveats in mind.

[9] For 2007 these figures are slightly higher than those reported by Brücker and Damelang (2009) or Brücker et al. (2009), and in the range of those provided by European Commission (2008a, b).

the year of enlargement.[10] The slow down of 2008 and 2009 indicates that the worsened economic prospects in some of the receiving countries may have discouraged potential migrants.

[Figure 3 about here]

From where and where to did migrants from the new member states go? The most important sending countries are Romania and Poland, which in 2009 together accounted for three quarters of all migrants from the EU8 and EU2 in the EU15. Figure 4 shows that the numbers of citizens from new member states in the EU15 as percentages of respective source populations. A clear picture that emerges is that the most significant sending countries, relative to their populations, are Romania, Lithuania, and Bulgaria. The Czech Republic, Slovenia, and Hungary exhibit the lowest shares of their population residing in the EU15.

[Figure 4 about here]

As for the receiving countries, in 2009 the most significant of the EU15 host countries for EU8 citizens were Germany and the UK, jointly hosting 62% of them. For EU2 citizens the two most significant destinations were Italy and Spain, in 2009 each hosting more than 40% of all EU2 citizens residing in the EU15.[11] In Figure 5 we distinguish countries by the period in which they opened up their labor markets to citizens from new member states.

[10] That the 2004 accession took place on May 1, whereas in 2007 it was January 1, can at best only partly explain this difference in response.

[11] The size of these populations needs also to be interpreted in the context of total immigrant populations, as people originating from EU10 or EU2 constitute only a smaller fraction of all immigrants in EU15 (Kahanec, Zaiceva and Zimmermann, 2010).

[Figure 5 about here]

Panel a of Figure 5 shows that the growth in population of EU8 citizens increased significantly, although to a different degree, in each of the countries that liberalized access to their labor market as of May 1, 2004. Remarkably, many of the countries that opened up their labor markets later – including Denmark, the Netherlands, Luxembourg, Finland, and Austria – have similarly experienced an increase in the rate of growth of their EU8 populations following the 2004 enlargement. A possible explanation is that EU accession removed some bureaucratic and psychological barriers to moving to old member states or that EU8 citizens circumvented labor market barriers mainly by coming as self-employers.[12] In general, Figure 5 documents that populations of EU8 citizens continued to increase across old member states throughout the studied period, the rate of growth of these populations increased in the post-enlargement period as compared to the pre-2004 period, and a delayed liberalization of labor market access in some EU15 countries may have diverted some migrants but did not prevent their EU8 populations from growing.

Concerning citizens of EU2 countries, their access to most EU15 labor markets continued to be restricted throughout the studied period. Nevertheless, EU2 populations increased significantly in southern Europe, most notably in Spain, Italy, but also in Greece (Figure 6). In Scandinavia, Bulgarian and Romanian populations continued to be rather small, although since 2007 there appear to be significant

[12] Even in countries applying transitional arrangements restrictions for EU8+2 migrants were relaxed upon their countries' EU accession. This includes preferential treatment in access to work permits vis-à-vis third country nationals, the freedom of establishment of a business for self-employed, and the freedom to provide services and thus post workers in the EU15 (excepting Austria and Germany).

growth rates in Denmark and Sweden. Among the other EU15 countries Austria, Ireland, Luxembourg, and Belgium hosted the most dynamic EU2 populations.

[Figure 6 about here]

The trends discussed above point at an important phenomenon that characterizes post-enlargement migration, namely the geographic diversion of migration flows. Figure 7 demonstrates that for EU8 citizens the relative importance of the UK, Ireland but also Spain as host countries increased substantially, while the traditional host countries, Germany and Austria, lost their share quite dramatically. For EU2 citizens the shares of Spain and Italy increased steeply, at the expense of mainly Germany, but also Austria and France. The effects of this diversion may be long lasting due to the power of immigrant networks for the migration decision (Delbecq and Waldorf, 2010).

[Figure 7 about here]

As concerns the skill composition of citizens from new member states residing in the EU15 in the early post-enlargement period, a number of early studies indicate that the majority of EU8 immigrants had medium educational attainment, and almost a quarter of them attained high education (European Commission 2008b; Brücker and Damelang 2009; Bruecker et al. 2009). Brücker and Damelang report that in 2006 among EU8 migrants in the EU15 17% had low and 22% had high educational attainment. The corresponding figures for EU2 migrants were 29% and 18%. Among the natives in the EU15 there were 27% of them with low and the same percentage with high educational attainment. Holland et al. (2011) find that Luxembourg,

Demark, Sweden, and Ireland are most popular among high-skilled workers while low-skilled workers are more likely to go to Greece, Portugal, Spain, Belgium, Netherlands, and Finland. Furthermore, this study finds that for most of the EU8+2 countries' migrants heading to the EU15 over-represent the high- (except for Estonia, Slovenia, and Lithuania) as well as low-skilled (excepting Hungary and Latvia) domestic populations, but under-represent the medium-skilled population.

A book edited by Kahanec and Zimmermann (2010) systematically summarizes the available evidence on the scale, composition, and effects of free labor mobility in the early post-enlargement period. Kahanec, Zaiceva, and Zimmermann (2010) provide a broad account of post-enlargement migration in the EU documenting the cross-country differences in the scale and composition of these flows and their effects. They in particular argue that EU enlargement has had different effects in countries that opened up their labor market early on, such as the UK, and those that strictly applied transitional arrangements, such as Germany. For example, they document that while the skill composition of EU8 immigrants improved after enlargement in the UK, it worsened in Germany. Blanchflower and Lawton (2010) report that in the UK EU8 migrants had a high incidence of self-employment and high employment rates, and were well skilled. Barrett (2010) finds that the EU10 migrants in Ireland had very high employment rates and levels of education comparable to the natives. He also finds evidence for downskilling accompanied by relatively lower wages.

Brenke, Yuksel, and Zimmernann (2010) document that post-enlargement migrants from the EU8 in Germany were predominantly male and young but were less educated and older than EU8 migrants had been previously. The authors also report

higher self-employment rates but lower earnings and lower quality jobs for these immigrants. Self-employment rates as high as 38% for post-enlargement migrants from the EU10 in Germany and 51% for those coming from EU2 in the UK in 2007 reported by European Commission (2008b) may signify inefficient spurious self-employment as a way to circumvent transitional arrangements imposed in these cases. A study by de la Rica (2010) reports that EU8+2 immigrants in Spain were predominantly young and had secondary education, allowing them to achieve high employment rates, but they also struggled with relatively high unemployment. Importantly, she also reports lack of adjustment as concerns job quality. Gerdes and Wadensjö (2010) find that in Sweden post-enlargement migrants were relatively young and highly educated, but their earnings and employment rates were not as high as those of the natives. While before enlargement immigration to Sweden from the EU10 was dominated by females, in the post-enlargement its gender composition became much more even. A preliminary comparative evaluation of these experiences with post-enlargement migration in Europe indicate that transitional arrangements backfired in that they implied a negative selection of incoming workers in terms of their skills and age (Kahanec and Zimmermann, 2010).

Kaczmarczyk, Mioduszewska, and Żylicz (2010) provide evidence on the main sending country, Poland, arguing that the economic effects of relatively large out-migration are moderate. They propose that post-enlargement migration may foster the process of modernization in Poland, to the extent brain circulation facilitates restructuring and a higher allocative efficiency. Hazans and Philips (2010) and Hazans (2012) find that in the Baltic states' post-enlargement migrants were significantly less educated than stayers, with medium-skilled workers being most

likely to move after accession. They do not find evidence for brain drain but report significant brain waste in the form of downskilling.

Galgóczi, Leschke, and Watt (2012) enrich the literature by shedding light on skill-mismatches in an enlarged EU and the role of trade unions in bridging these mismatches. Using an innovative web-based survey WageIndicator, Tijdens and van Klaveren (2012) document that among EU15 residents born in the EU10 only 65 percent report a correct job-education match compared to 74% for the whole sample and 72% for all migrants. Kureková (2011) stresses the importance of skill-mismatches in the sending EU10 countries, and their interaction with the welfare state for the scale and composition of post-enlargement migration flows.

In our own analysis based on the 2009 wave of the EU Labour Force Survey we reconstruct immigrant cohorts using the year of arrival for residents born in the EU10 and EU2. We consider the population above and including 16 years of age, excluding conscripts on compulsory military or community service as well as anyone whose highest level of education or training successfully completed was attained after his or her immigration to the current country of residence in the EU15. Figure 8 reports the shares of EU10 and EU2 immigrants with high, medium, and low level of education.[13] We observe that with enlargement the share of EU10 migrants with high educational attainment residing in the EU15 increased substantially.[14] Interestingly, the share of highly educated EU10 migrants increased already in 2003, which might

[13] High level of education includes ISCED 5 and 6 levels; medium level of education comprises ISCED 3 and 4 levels; and low level of education takes in ISCED 0, 1 and 2 levels. For further details about this classification see UNESCO (1997).

[14] Given the construction of the sample, were the propensity to stay in the host country positively correlated with a migrant's educational attainment (Hazans (2012) shows this to be the case for the Baltic states before enlargement as well as since 2006), our results would underreport the true improvement in the skill composition of immigrants from the new member states.

indicate that even the prospect of impending EU accession sealed already in 2003 attracted many educated EU10 citizens. We also observe that during the first three years following the accession the share of low educated EU10 migrants was lower than before accession. In 2007 and 2009 we however observe somewhat higher shares of low educated EU10 migrants. This is consistent with the findings in the literature that the proportion of high- but also low-educated migrants from the EU10 in several EU15 countries increased after the 2004 enlargement.[15]

[Figure 8 about here]

As concerns the effects of the 2007 EU enlargement on EU2 migrants in the EU15, we observe a steady share of high-educated and an increasing share of low-educated migrants among them during the initial period 2007-2008, followed by a steep increase in the share of high-educated migrants and a similarly sharp decrease in the share of low-educated ones in 2009. Whether this signifies a reversal of the trend of decreasing share of high-educated and an increasing share of low-educated EU2 migrants in the EU observed during 2001-2007 and to what extent this is caused by Romania's and Bulgaria's EU accession remains to be seen when more recent data become available.

In 2009 among EU10 nationals in the EU15 the share of high educated was 26.1% and low educated 22.5%; i.e. they were considerably more educated than EU2 nationals in the EU15 of whom 12.2% were high and 37.5% low educated. They were more educated than the total population in the EU15 with 18.9% high and 45.7% low

[15] See Kahanec and Zimmermann (2010).

educated residents. EU10 as well as EU2 nationals in the EU15 were each positively selected compared to their source populations, with 14.4% high educated and 27.4% low educated residents in EU10 and 10.3% high educated and 40.9% low educated residents in EU2. Most of these results stay valid if we look at prime working age population (25-54), except that EU2 migrants then appear to be negatively selected form their source population.

4. The effects of post-enlargement migration in receiving and sending countries

To evaluate the effects of post-enlargement migration in an enlarged EU we consider the welfare of three key stakeholders to this process: the sending countries, the receiving countries, and the migrants themselves. Migrants from the new member states in the EU15 appear to be overrepresented in low- and medium-skilled occupations and sectors, such as construction, manufacturing, hotels and restaurants, and agriculture (Kahanec, Zaiceva and Zimmermann, 2010). Given their relatively favorable skill-composition discussed above, this discrepancy signifies a degree of downskilling and possibly brain waste. Accompanied with the separation from their families and relatives in their countries of origin, it is not too surprising that this leads to lack of satisfaction with their migration experience (Anderson et al. 2006; Blanchflower and Lawton, 2010).

In spite of their possible dissatisfaction with some aspects of their experience as migrants, post-enlargement migrants can hardly be considered elsewhere but among the winners of free labor mobility in the EU. Given the wage and unemployment gaps between sending and receiving countries, post-enlargement migrants have benefited in terms of higher salaries, improved career prospects, and a generally higher standard

of living in the EU15. Improved human capital and language skills in particular add to the benefits of their migration experience in the EU15. Kureková (2011) finds that potential employers value migrant's work experience acquired abroad upon their return, especially if they are young. By the revealed preferences argument, the sum of these benefits should exceed the pecuniary, but also psychological and social, costs migration typically entails.

As concerns the effects on receiving countries, the available empirical evidence paints a rather positive picture. Very small if any effects of post-enlargement migration on the unemployment rate or wages are found in the UK (Gilpin et al., 2006; Blanchflower Saleheen, and Shadforth, 2007; Lemos and Portes, 2008). Blanchflower and Lawton (2010) detect small effects in the least skilled sectors. Blanchflower and Shadforth (2009) and Blanchflower, Saleheen, and Shadforth (2007) point at the importance of immigration and the resulting fear of unemployment for suppressing inflationary pressures. Doyle, Hughes, and Wadensjö (2006) and Hughes (2007) report a similar picture for Ireland, where post-enlargement immigration might have caused some substitution and a temporary slow-down of wage growth in some sectors, but any displacement at the micro level was not affecting aggregate unemployment and the effects on wage growth reversed soon.

Brenke, Yuksel, and Zimmermann (2010) find that EU8 migrants compete with immigrants from outside of Europe for low-skilled jobs rather than with the natives. This may have been one of the causes behind the 50% drop in immigration from other important source countries, including Russia, Ukraine and Turkey, from 2004 to 2006 reported by these authors. Barrett (2010) argues that post-enlargement immigration helped Ireland to moderate the rather high wage growth during the pre-2008 boom,

which helped the country in terms of GNP growth. Kahanec and Zimmermann (2009) show that high-skilled immigration can be expected to decrease inequality, which highlights the importance of adjustment of high skilled migrants into corresponding jobs. As concerns the feared effects on the receiving countries' welfare systems, they have been shown to be unjustified (Gerdes and Wadensjö, 2010; Doyle, 2007; Hughes, 2007). Giulietti et al. (2012) reject the welfare magnet hypothesis for migration within and into the EU.

The massive outflow of workers from some of the EU10 and EU2 countries has sparked some fears that the risks of EU enlargement may actually be borne by the new member states. Kadziauskas (2007) warns that on the background of adverse demographic trends, the Lithuanian social security system may collapse due to post-enlargement out-migration. Kaczmarczyk and Okólski (2008) and Kadziauskas (2007) report growing shortages in some segments of the labor market soon after Poland's and Lithuania's EU accession. Kureková (2011) reports significant skill shortages in Slovakia in the post-enlargement period. A new trend in the sending countries has emerged, whereby such skill shortages are filled in by immigrants from outside the EU, mainly from Ukraine, Belarus, Russia, and some Balkan countries (Frelak and Kazmierkiewicz, 2007; Iglicka , 2005; Kureková, 2011). Kaminska and Kahancová (2011) report that in Slovakia post-enlargement outmigration enabled trade unions to obtain wage increases.

An important consideration for the sending countries is to what extent post-enlargement out-migration represents a lasting loss of labor and human capital and to what extent it might signify the beginning of an era of brain gain and circulation.

Early studies suggest that there were no signs of significant brain drain, although some skilled sectors, such as medical doctors, lost non-negligible proportions of their workforce (Frelak and Kazmierkiewicz, 2007; Brücker et al. 2009; European Commission, 2008b; Hazans 2012). The negative selection into return migration observed for migrants from the Baltic states more recently (Hazans, 2012) may pose some risks for the growth potential and sustainability of social security in the sending countries.

Also important is to what extent the gains from migration are transmitted to the left-behinds in the form of remittances. Kahanec, Zaiceva, and Zimmermann (2010) report an increasing importance of remittances in a number of sending countries, most significantly in Bulgaria and Romania, but also the Baltic states. In Romania and Bulgaria remittances constituted about 5 percent of their GDP in 2007 (Dietz, 2009). Comini and Faes-Cannito (2010) report that the overall volume of remittances to the EU8 and EU2 declined in 2009 after years of growth, probably due to the worsened economic situation in the host economies due to the financial crisis. Kaczmarczyk and Okólski (2008) document that remittances were primarily used for consumption and durable goods during the early post-enlargement period, but also report that more recently they have been invested in human capital as well. Remittances thus could partly compensate the sending countries for the possible brain drain.

In a general equilibrium model Baas, Brücker, and Hauptman (2010) argue that the aggregate GDP of an enlarged EU can be expected to increase by about 0.2%, or 24 billion Euros, from 2004 to 2007 as a consequence of post-enlargement migration from the EU8 alone. This implies 28,571 EUR per post-enlargement migrant.

European labor markets seem to absorb these flows quite seamlessly, with wages declining by up to 0.1% in the EU15 and the unemployment rate increasing by about 0.1 percentage points. For the sending EU8 countries they predict a decline of unemployment of about 0.4 percentage points and an increase in wages by about 0.3%. In the long run, however, they predict no effects on wages or unemployment in the sending or receiving countries. Similar effects are predicted by Holland et al. (2011), although given a slightly different modeling approach, the authors predict lasting effects on real wages.

Constant (2011) summarizes this evidence to conclude that the pre-enlargement fears of labor market disruptions to be caused by immigrants from the new member states were by and large unjustified. To the contrary, she maintains the migrants and the receiving as well as the sending countries gained from increased labor mobility in an enlarged EU.

5. The potential for further post-enlargement migration

To shed light on what migration flows can be expected in the foreseeable future, one can look at current migration intentions. Drawing on Eurostat (2010), Figure 9 reports the shares of a country's population that envisage working in another country. One can see an interesting pattern across an enlarged EU, whereby the most mobile appear to be Scandinavians, with more than half of the Danes reporting positive intentions. Next and very close come the Baltic states in each of which more than a third of the population answered "yes". Perhaps somewhat surprisingly, at least in view of their relatively low out-migration rates following their EU accession, Hungary and

Slovenia exhibit higher shares of people who envisage working outside of their country than Poland or Slovakia, and all exhibit greater shares than seen in Bulgaria and Romania. Probably the main explanatory factors behind these figures are the relatively adverse economic situation in Slovenia and Hungary, and the comparatively good economic prospects of Slovakia and especially Poland in late 2009. The low migration intentions of Bulgarians and Romanians may have to do with the unfavorable economic prospects in some of their main destination countries in southern Europe. As concerns which destination countries are preferred by EU8 workers, according to Eurostat (2010) it is mainly Germany (25.4%) and the UK (25.3%), followed by Austria (13.5%). Workers from EU2 countries mainly prefer Italy (17.0%), Spain (14.5%) and Germany (14.5%), but also the UK (11.5%).[16]

[Figure 9 about here]

A key question is how concrete the intentions in Figure 9 are. Figure 10 reports the answers of those respondents who envisage working in a country outside their own country at some time in the future to the question about when they expect it to happen. The results indicate that migration intentions are most imminent in the Baltic states as well as Romania and Bulgaria. The remaining new member states, Slovakia and Poland do not differ very much from the EU27 average, whereas Slovenia, the Czech Republic, and Hungary exhibit the lowest imminence of migration intentions.

[Figure 10 about here]

[16] Simple averages for the EU8 and EU2 countries of shares of respondents indicating preference for the respective country in parenthesis, Eurostat (2010). Based on spontaneous possibly multiple responses including countries outside the EU. For the sake of comparison, the US as the most preferred non-EU country was indicted by 11.3% of EU8 respondents and 12.0% of EU2 respondents.

To answer the question from which new member states one can expect the highest migration outflows in the foreseeable future, we construct a simple analytical migration imminence matrix using the data on migration intentions as reported in Figures 9 and 10. We namely plot in Figure 11 the share of population envisaging work abroad against the share of those of them who indicate that they expect to work there during the next six months (Panel a) and, as a robustness check, during the next twelve months (Panel b).[17] We then interpret the distance from the origin as a measure a country's imminent migration potential. In particular, countries that fall into the south-west quadrant of the migration imminence matrix can be interpreted to have low imminent out-migration potential. This includes the Czech Republic but also, somewhat surprisingly, Poland and Slovakia. This may indicate that the migration potential of these countries had been already partly exhausted by the end of 2009. The countries that fall into the north-west quadrant, Romania and Bulgaria, exhibit relatively low shares of people planning to work abroad. However, for a relatively large share of those planning to work abroad the indicated plans seem to be rather imminent.

[Figure 11 about here]

Slovenia and Hungary fall into the south-east quadrant with relatively high share of people envisaging work abroad, but only a relatively small share of them indicated this to happen during the next six months. With Hungary and Slovenia sharing a weak economic prospect in late 2009 and up until then relatively low out-migration rates, a

[17] These shares are normalized on the interval [0,1] to range between the respective minimums and maximums observed in the EU.

possible interpretation is that in these countries larger numbers of people were starting to consider the option of finding a job abroad, but their plans were relatively recent and not concrete yet.

The highest imminent migration potential is observed in Lithuania and Latvia in the north-east quadrant, which in 2009 exhibited a relatively high share of people expecting to work abroad and for this to happen during the next six months. Estonia is the borderline case with the largest share of people expecting to work abroad in the future among the EU8+2 countries, although the share of people expecting this to happen during the next six months is considerably lower than in Latvia and Lithuania and is close to the EU8+2 simple average. The high degree of similarity between panels a and b indicates that these findings are robust within the studied horizon of migration intentions.

Based on the migration imminence matrix we can thus conjecture that following the survey the Baltic states were going to continue to send relatively large numbers of workers abroad. Romania and Bulgaria still exhibited significant migration potential, but perhaps some of it has been exhausted by the end of 2009. Such migration fatigue seems to be even more evident for Slovakia and Poland. The Czech Republic had not been sending many migrants abroad, and it appears that its low migration potential was not going to change soon after 2009. Hungary and Slovenia, however, may be the coming sources of migrants with a larger share of people considering working abroad, although still without firm short-run plans in late 2009.

To fully grasp the prospects of future migration between the new and old member states, it is necessary to understand the prospect of return migration as well. Migration intentions of EU10 migrants are known to be rather transitory. For example, of workers registered in Worker Registration Scheme in the UK in 2008 62% envisaged staying in the UK for less than three months, up from 59% in 2007 and 55% in 2006 (Kahanec, Zaiceva and Zimmermann, 2010). The long-run trends in return migration are yet to be evaluated. First evidence by Hazans (2012) for the Baltic countries indicates that significant shares of migrants are indeed returning. Whereas they used to be positively selected from migrant populations in the period immediately following the 2004 enlargement, after 2006 the share of high-skilled workers among returnees is lower than among emigrant cohorts they come from (ibid.). Such developments could undermine the prospects for gainful brain circulation from the perspective of sending countries.

Hazans (2012) further reports that compared to the pre-crisis period, out-migration intensified in Estonia and even more so in Latvia during the crisis. The worsened economic conditions disproportionally pushed the less skilled as well as ethnic minorities to migration, mainly Russian-speakers. The author proposes that the stronger response of Latvians may have to do with their perception of the crisis as not only of financial but also of a systemic nature. Indeed, Latvian migration became more long-term oriented during the crisis. The overall increase can be linked to increased unemployment and worsened economic prospects. Perhaps the most detrimental effect of the crisis is that high-skilled workers became underrepresented among returnees, undermining the prospects of gainful brain circulation for these sending countries.

7. Conclusions

Aging, diminishing young cohorts and a lack of innovation potential, and structural mismatches in the labor market resulting in unemployment and skill shortages at the same time are some of the most important labor market challenges in the EU. These challenges have contributed to and are themselves aggravated by the current debt crisis in the Eurozone. On this backdrop embracing the freedom of movement of workers in an enlarged EU as a powerful tool to improve allocation of human capital and thus combat some of these challenges would seem rational. Yet, fear and controversies entangled the implementation of free labor mobility vis-à-vis the countries that joined the EU in 2004 and 2007.

Painstaking empirical analyses based on theoretical underpinnings and hard data surveyed in this study tell a straight story, however. The free movement of labor in an enlarged EU can with little doubt be considered a success story of EU integration and enlargement. It resulted in substantial relocation of labor that has improved the allocation of human capital in the EU. These new hands and brains appear to have been absorbed by the receiving labor markets rather seamlessly. In particular, except for some downskilling, we do not observe any significant negative effects on (un)employment or wages in the EU15. Similarly, the hypothesis of welfare tourism has not been substantiated.

The sending countries appear to have been relieved of some currently redundant labor resulting from skill-mismatches in their labor markets, as well being relieved of the related fiscal burden. Some new skill shortages have emerged, however. Additionally,

the loss of young and skilled labor may be rather worrying in view of the dismal demographic trends in most of the new member states, as well as for the sustainability of their public finances. Of key importance for the sending countries is thus their ability to benefit from brain gain resulting from brain circulation in an enlarged EU. This includes a proper policy approach to the issues of return and circular migration and inefficient downskilling. Remittances partly compensate for the loss of human capital possibly characterizing the early stages of post-enlargement migration. Migrants themselves, as well as their families, appear to have traded the benefits of migration against some pecuniary and non-pecuniary costs to their benefit.

Transitional arrangements seem to have affected not only the direction, but also the composition of post-enlargement migration flows. A full evaluation of their effects is yet to come, but the evidence so far is that the countries that delayed liberalizing the access to their labor market for citizens from the new member states disproportionally lost skilled and young migrants, who chose more welcoming countries such as Ireland and the UK. Another possibly negative effect is that transitional arrangements led to spurious self-employment as a strategy to circumvent them.

The current debt crisis in the EU is a challenge on its own. Although the effects of free labor mobility in the EU are yet to be fully evaluated, based on the available literature we propose that the freedom of movement in an enlarged EU not only contributes to the European Project by strengthening the social fabric and improving cohesion in the EU, it does so also by directly contributing to its economic viability. Namely, it provides for an improved allocative efficiency of European labor markets, a higher innovation potential, increased utilization of resources and their higher

productivity, and the resulting fiscal relief, all enabling the EU to thrive economically, socially, and politically in a globalized world.

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Tables and Figures

Table 1. Citizens from new EU member states residing in the EU15.

	Migrants from the EU8			Migrants from the EU2		
	Total	Percent of EU8 population	Percent of EU15 population	Total	Percent of EU2 population	Percent of EU15 population
1997	673,324	0.91	0.18	249,781	0.81	0.07
1998	674,972	0.91	0.18	234,743	0.76	0.06
1999	717,976	0.97	0.19	271,657	0.88	0.07
2000	753,056	1.02	0.20	315,699	1.03	0.08
2001	800,534	1.09	0.21	391,045	1.28	0.10
2002	851,250	1.16	0.22	509,160	1.71	0.13
2003	942,321	1.29	0.25	711,930	2.40	0.19
2004	1,006,851	1.38	0.26	916,298	3.10	0.24
2005	1,235,429	1.69	0.32	1,109,570	3.77	0.29
2006	1,627,625	2.23	0.42	1,376,956	4.69	0.35
2007	2,027,651	2.78	0.52	1,971,968	6.74	0.50
2008	2,252,681	3.09	0.57	2,348,523	8.05	0.60
2009	2,288,600	3.13	0.58	2,564,008	8.81	0.65

Source: Based on data provided in Holland et al. (2011), Eurostat population statistics, and own calculations.

Figure 1. Effects of skilled and unskilled immigration

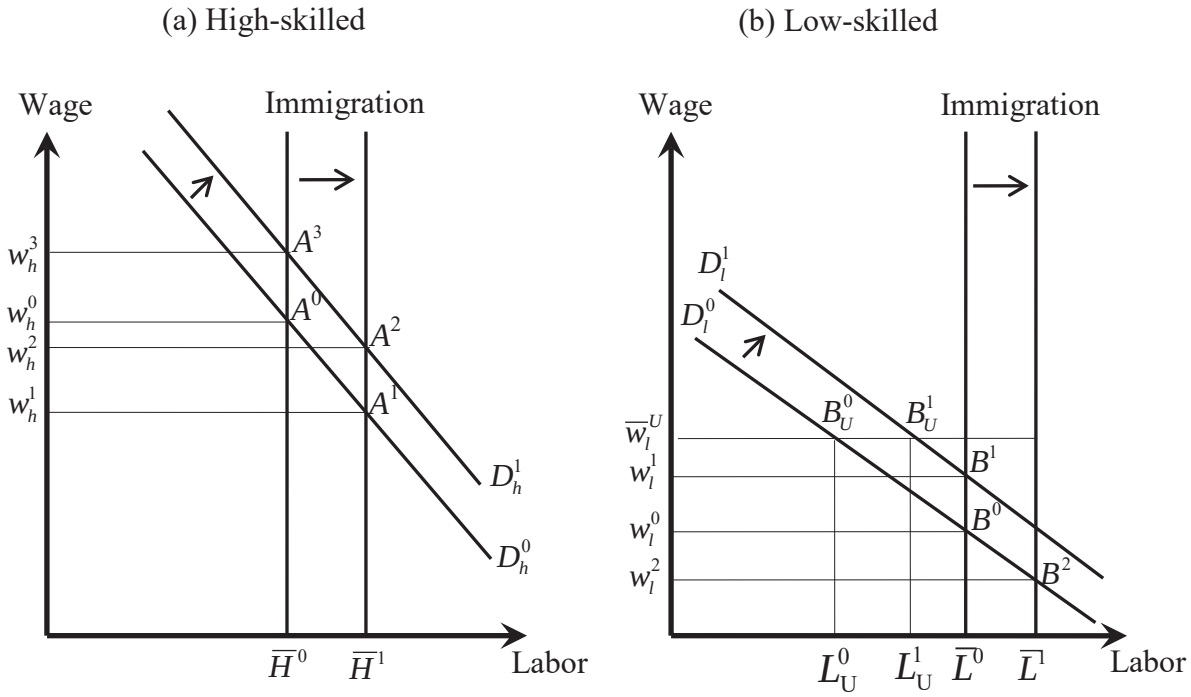


Figure 2. Effects of skilled and unskilled out-migration

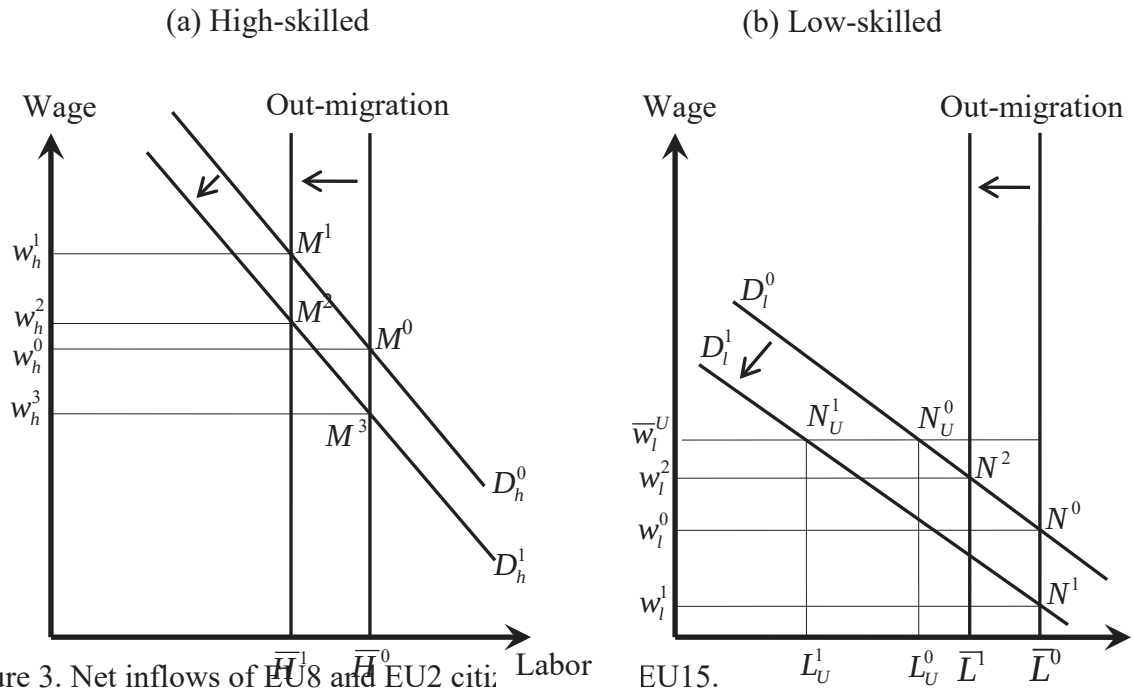
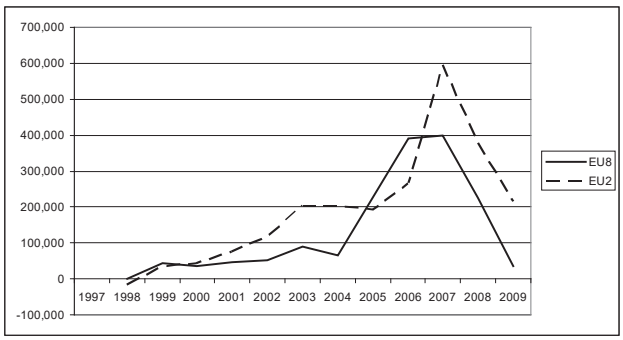


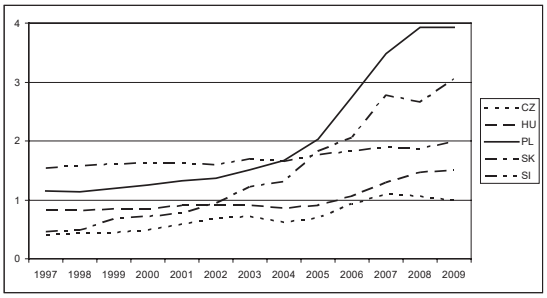
Figure 3. Net inflows of EU8 and EU2 citi EU15.



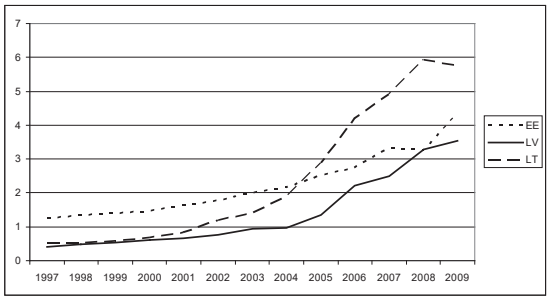
Source: Own calculations based on Holland et al. (2011) data.

Figure 4. The share of sending country's population residing in the EU15.

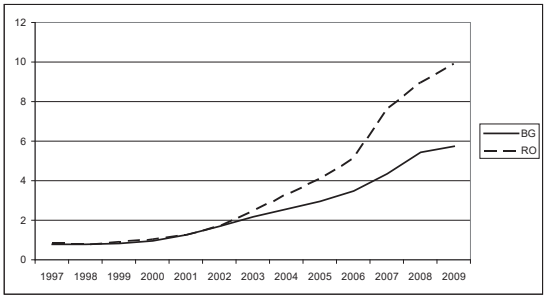
a. Visegrad countries and Slovenia



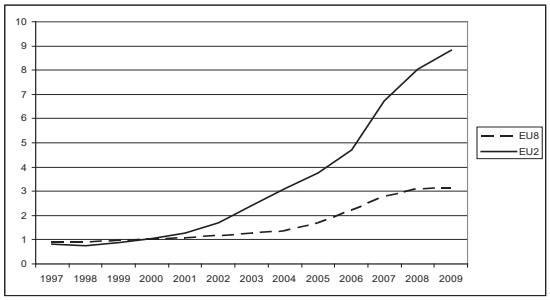
b. The Baltic states



c. Countries acceding the EU in 2007



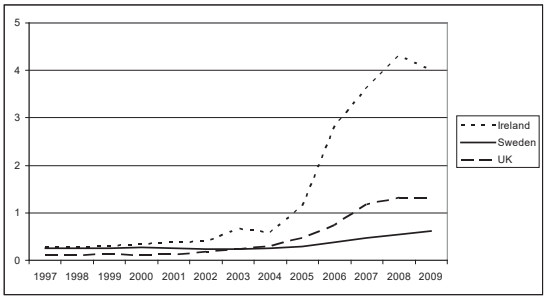
d. EU8 and EU2



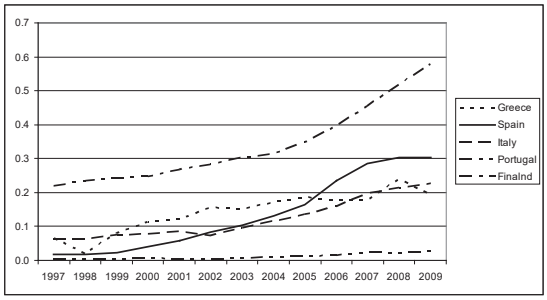
Notes: In percent of source country's population.
Source: Own calculation based on Holland et al. (2011) data and Eurostat population statistics.

Figure 5. The share of EU8 citizens residing in EU15.

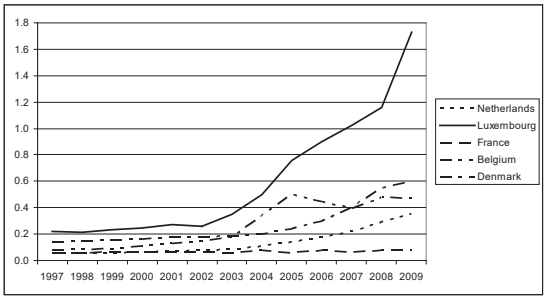
a. Liberalization as of May 1, 2004



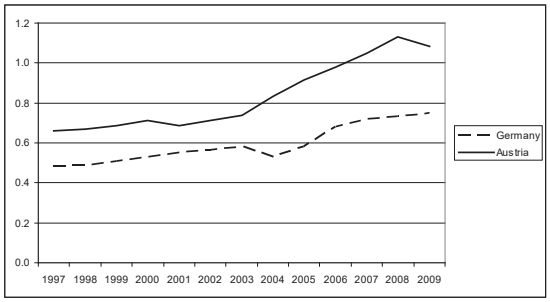
b. Liberalization in May – July 2006



c. Liberalization May 2007 – May 2009



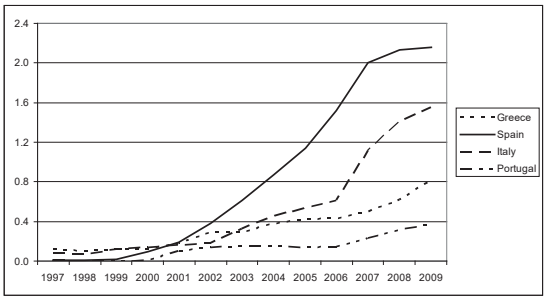
d. Liberalization as of May 1, 2011



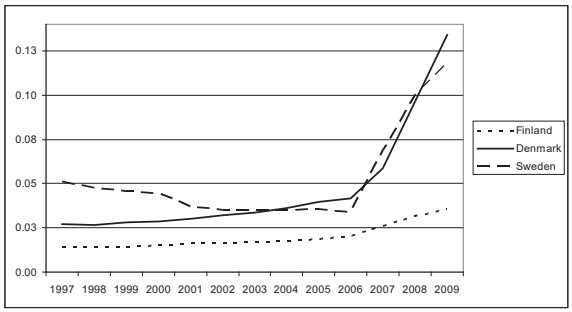
Notes: In percent of host country's population.
Source: Own calculation based on Holland et al. (2011) data and Eurostat population statistics.

Figure 6. The share of EU2 citizens residing in the EU15.

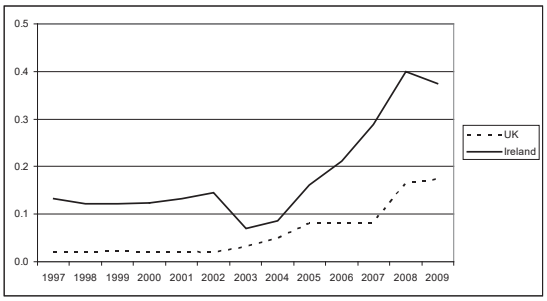
a. Southern Europe



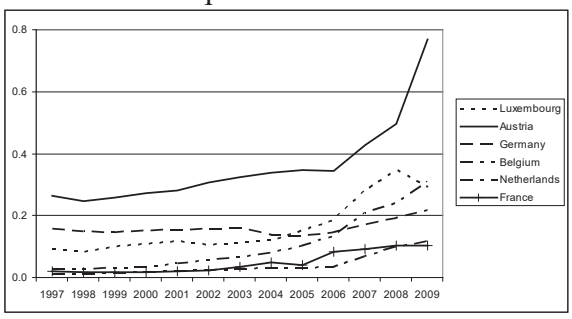
b. Scandinavia



c. Ireland and the UK



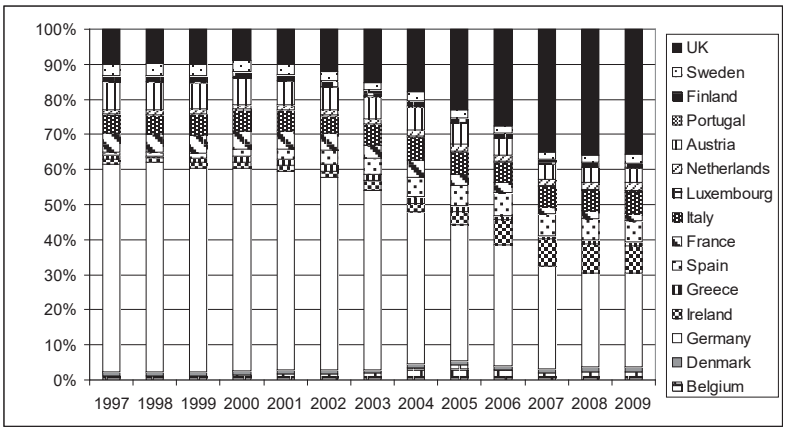
d. Western Europe



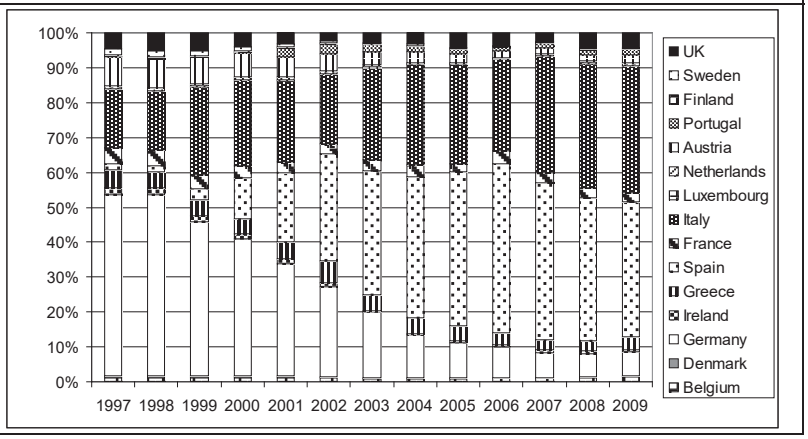
Notes: In percent of host country's population.
Source: Own calculation based on Holland et al. (2011) data and Eurostat population statistics.

Figure 7. Proportions of EU8 and EU2 citizens in EU15.

a. EU8

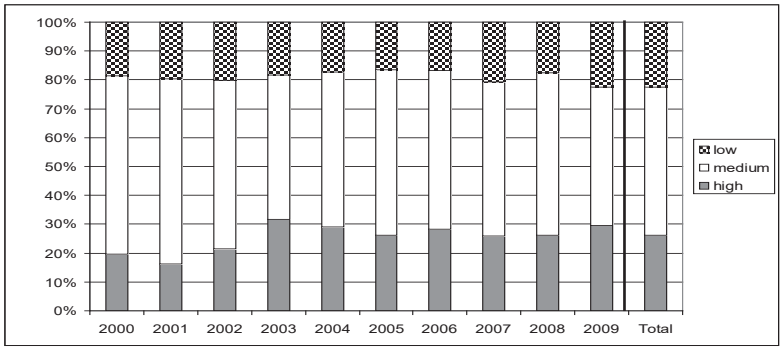


b. EU2

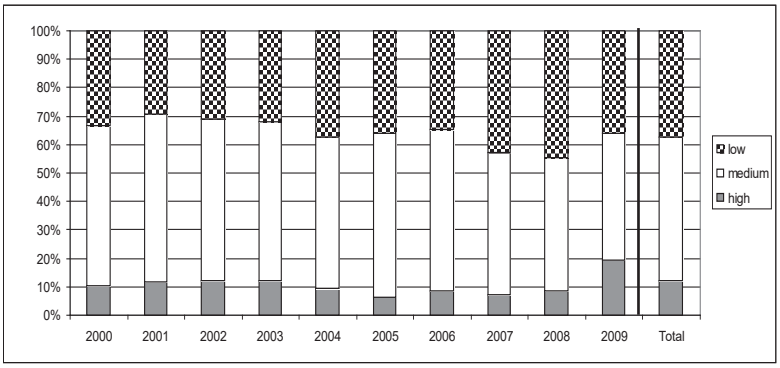


Notes: In percent of total EU8 and EU2 populations resident in EU15.
Source: Own calculation based on Fic 2011 data and Eurostat population statistics.

Figure 8. Educational attainment of EU10 and EU2 citizens in the EU15.
a. EU10

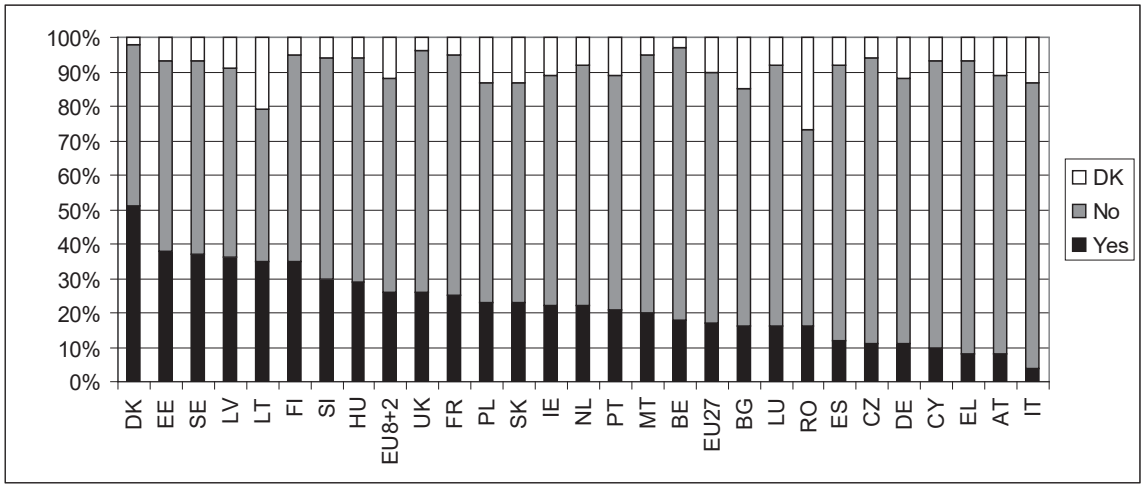


b. EU2



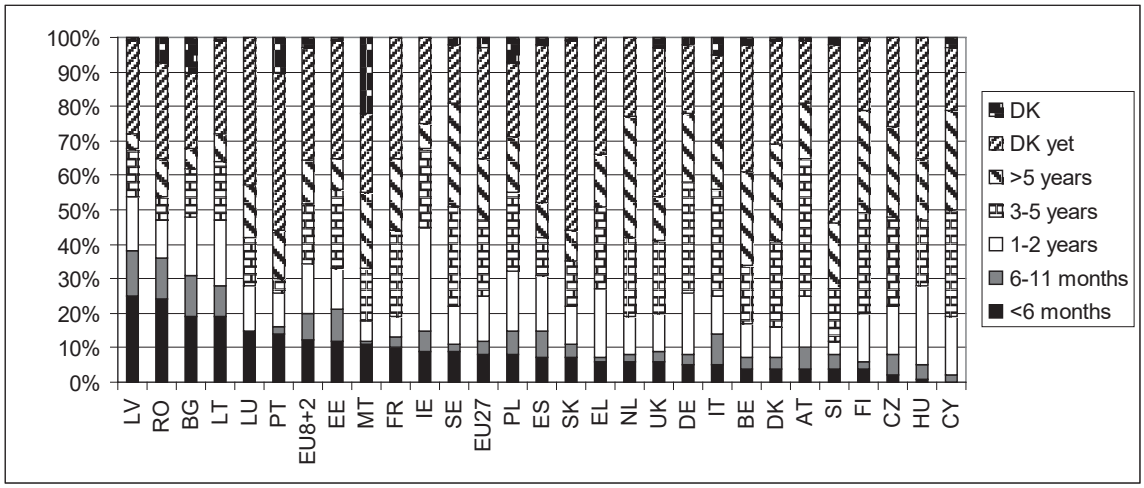
Source: Own calculation based on the EU Labour Force Survey, 2009.
Notes: In percent of total EU8 and EU2 populations resident in the EU15 above and including 16 years of age, excluding conscripts on compulsory military or community service as well as anyone whose highest level of education or training successfully completed was attained after his or her immigration to the current country of residence in the EU15. No data available for Malta. Germany excluded due to no information on migrants' country of birth.

Figure 9. Migration intentions in Europe



Source: Eurostat (2010), data collection November-December 2009.
Notes: Answers to the question QC10: Do you envisage to work in a country outside (our country) at some time in the future? DK stands for "do not know", or no answer. Sorted by "Yes". EU8+2 calculated as a simple average of the values for the EU8 and EU2 countries.

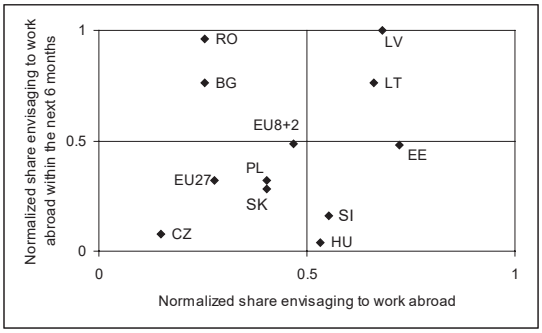
Figure 10. The time horizon of migration intentions in Europe



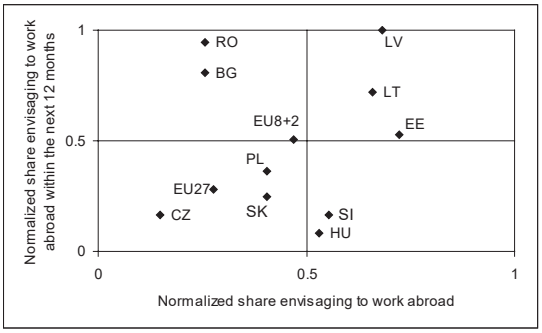
Source: Eurostat (2010), data collection November-December 2009.
Notes: Answers to the question QC11: How soon are you likely to work there? The universe consists of those respondents that answered "Yes" to QC10: Do you envisage to work in a country outside (our country) at some time in the future? "DK yet" stands for "do not know yet; DK stands for "do not know", or no answer. Sorted by <6 months. EU8+2 calculated as a simple average of the values for the EU8 and EU2 countries.

Figure 11. The migration imminence matrix, EU8+2

a. Work abroad within six months



b. Work abroad within a year



Source: Eurostat (2010), data collection November-December 2009.

Notes: Based on the answers to the question QC10: “Do you envisage to work in a country outside (our country) at some time in the future?” and QC11: “How soon are you likely to work there?”. The share of population answering “Yes” to the first question is on the x-axis, and, of those, the share answering “During the next 6 months” is on the y-axis. Values normalized with 1 representing the highest, and 0 the lowest, value observed in the EU27. EU8+2 calculated as a simple average of EU8+2 countries.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