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Migration in an enlarged EU: solution or problem for labour market woes and cash-strapped social security systems?
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# Migration in an enlarged EU: A challenging *solution*? *

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Abstract:
The 2004 and 2007 enlargements of the European Union were unprecedented in a number of economic and policy aspects. This essay provides a broad and in-depth account of the effects of the post-enlargement migration flows on the receiving as well as sending countries in three broader areas: labour markets, welfare systems, and growth and competitiveness. Our analysis of the available literature and empirical evidence shows that (i) EU enlargement had a significant impact on migration flows from new to old member states, (ii) restrictions applied in some of the countries did not stop migrants from coming but changed the composition of the immigrants, (iii) any negative effects in the labour market on wages or employment are hard to detect, (iv) post-enlargement migration contributes to growth prospects of the EU, (v) these immigrants are strongly attached to the labour market, and (vi) they are quite unlikely to be among welfare recipients. These findings point out the difficulties that restrictions on the free movement of workers bring about.

JEL Codes: F22, J15, J61
Keywords: migration, migration effects, EU Eastern enlargement, free movement of workers

## 1. Introduction

Europe as a crossroads of cultures and migration of people has been rather the rule than the exception. Since the 1960s immigration has been on rise especially in Western Europe (See Figure 1). In 2006, foreigners, whether non-citizens or foreign-born, constitute substantial shares of population in most of the old member states of the European Union, but also in some of the new member states (See Table 1). Yet the enlargement of the European Union in May 2004 involving eight Central and Eastern European countries[1] (EU8) along with Malta and Cyprus, and the accession of Bulgaria and Romania (EU2) in January 2007 were unprecedented in how they changed the European migration landscape. The differences in income and employment opportunities between the old EU member states[2] and most new EU member states were large (see Figures 2 and 3); there was essentially no history of free migration between the Eastern and Western parts of Europe during the decades of separation by the "Iron Curtain"; and the new members from Central and Eastern Europe had undergone a transition from a centrally-planned economy to a market-based one. These specific circumstances partly explain the sensitivity of the migration issue among policy makers and the general public across Europe, which traditionally stems from the apprehension of the potential economic, social, cultural and political consequences of migration. Concerns about labour markets and welfare systems have received particular attention.

The free movement of workers constitutes a fundamental principle of the European Union, as stated in Article 39 of the Treaty establishing the European

[1] Including the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovakia and Slovenia. EU10 includes also Cyprus and Malta.

[2] The old member states (EU15) in the context of these enlargements include Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

Community.[3] Nevertheless, transitional periods of up to seven years were implemented, which restricted access of citizens from the new member states to the labour markets in the old member states. Only a few old member states opened their labour markets with no or mild transitional measures. Given this institutional variation and other important factors, such as geographic, linguistic or cultural distances, the recent EU enlargements have had heterogeneous effects on migration flows across Europe.

The European Union faces a number of fundamental policy challenges, including an aging population, global competitiveness and growth, and the sustainability of social security systems. The diverse post-enlargement migration flows of a predominantly young labour force constitute an important policy issue that interacts with these challenges in both receiving and sending countries. Since a significant proportion of these migrants are women, their successful integration in the labour market is another important prerequisite for tackling these challenges adequately. Understanding the causes and effects of migration in an enlarged EU is a precondition for designing effective migration policies in Europe and thus a precondition for reaching the Lisbon targets as well as the key objectives of the European Employment Strategy and the Social Agenda.

A focal objective of this essay is to advance and broaden our understanding of the effects of the post-enlargement migration flows and thus provide a well-founded insight into the functioning of an enlarged EU.[4] The paper will simultaneously address the opportunities and challenges brought about by the recent EU enlargements.

[3] Article 39 entitles nationals of one EU member state to work in another EU member state under the same conditions as that member state's own citizens.

[4] We cover the whole EU wherever possible and relevant, including Romania and Bulgaria as the most recent member states. While the five year period between 2004 and 2009 is the focus of the analysis, a broader time frame is called upon whenever necessary.

Methodologically, we adopt a multilevel comparative analytical framework based on existing evidence, descriptive empirical analysis, as well as a number of in-depth case studies. Specifically, we evaluate the existing evidence of the effects of migration flows in an enlarged EU on both source and destination countries. Three broader domains of the economic effects of migration are studied: labour markets; social security systems; and economic growth. We highlight the role of the determinants and temporal character of migration on its effects and study the benefits and costs of migration.

## 2. The Contexts of the Recent EU Enlargements

During its post World War II history, Western Europe witnessed substantial movements of people. Following the periods of post-War adjustment and decolonisation, growth-driven labour migration in the late 1950s and 1960s, post oil-shock policy change and the resulting migration slowdown in the 1970s and 1980s, refugee and asylum seeker flows in the early 1990s, and the ensuing "Fortress Europe" policy reaction, EU enlargement opened gateways for new migration trajectories. Given the complexity of the issues related to migration, transitional arrangements were specified by the Accession Treaties of the 2004 and 2007 EU enlargements. These are based on the 2-3-2 formula: for the first two years following accession access to the labour markets of the incumbent member states depends on their national laws and policies. National measures may be extended for a further period of three years. However, should an EU member state find, after that period, that its labour market has been severely disrupted, it is possible to have these national measures extended for a further two years.

Following the 2004 EU enlargement, Ireland, the UK and Sweden opened access to their labour markets immediately.[5] As for social benefits, access to the welfare systems in Ireland and the UK depends on the duration of residence and employment. This is in contrast to Sweden, which decided to apply European Community rules. In the second phase of these arrangements (European Commission, 2006a), eight more member states opened their labour markets by November 2008 (Spain, Finland, France, Greece, Portugal, Italy, the Netherlands and Luxembourg). Most of the EU15 member states that have maintained restrictions have simplified their existing national access regimes or procedures by varying degrees or liberalised the access rules in some sectors or professions (Belgium, Germany and Denmark). Germany and Austria have decided to maintain national measures for the second phase. As for the 2007 enlargement, ten EU25 member states (the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Poland, Slovenia, Slovakia, Finland and Sweden) liberalised the access of Bulgarian and Romanian workers to their labour markets during the first phase.[6]

## 3. The Scale of Post Enlargement Migration

One of the main reasons for adopting the transitional arrangements was a fear of mass migration from the new member states. There is a relatively large body of literature that attempts to estimate potential migration after enlargement (see, for example, Bauer and Zimmermann, 1999; Boeri et al., 2001; Alvarez-Plata et al., 2003; and

[5] In the UK immigrants from the EU8 have to register with the Home Office administered Worker Registration Scheme if they are employed in the UK for a month or more. This requirement allows the authorities to monitor immigration and its impact on the British labour market. In Ireland individual identification, Personal Public Service Numbers, is required in order to gain employment or access to state benefits and public services.

[6] In Finland, Cyprus and Slovenia employment must subsequently be registered for monitoring purposes.

Zaiceva, 2006).[7] These studies generally predict that between 2 and 4 percent of the new member states' population will move to the EU15 countries in the long run, which constitutes about 1 percent of the EU15 population. Some studies, however, estimate the upper bound of potential migration to be 7-8 percent of the new member states' population (Sinn et al., 2000). All these studies are based on strong assumptions, project counterfactual scenarios for out-of-sample countries, and do not take into account differences in transitional arrangements.

A number of recent studies scrutinise migration intentions after the EU enlargement (Fouarge and Ester, 2007a, 2007b; Bonin et al. 2008; Zaiceva and Zimmermann, 2008; Blanchflower and Lawton, 2008). Remarkably, the proportion of individuals intending to emigrate after the 2004 enlargement was found to be larger in the new member states than in the old EU15, while it was smaller before the enlargement (see Fouarge and Ester, 2007a; Zaiceva and Zimmermann, 2008; and Drinkwater, 2003). This finding suggests that with open borders an increasing number of individuals in the EU8 consider the option to work abroad, since after EU accession the option to return or migrate again became always available.

A comprehensive account of the actual post-enlargement migration flows is currently very difficult to provide, mainly due to the general scarcity of migration data. Early evidence reported by the European Commission (2006a, 2006b) suggests that migration flows between the EU8 and EU15 member states have been quite modest on average. However, as a result of coordination failures and migration diversion[8], these immigrants are unequally distributed across different member states, with some countries experiencing a relatively large increase in the number of immigrants. According to these reports, the UK, Austria and Ireland have most

[7] See Zaiceva and Zimmermann (2008) for an extensive review.
[8] See Boeri and Brücker (2005).

probably experienced an increase in immigration as a consequence of EU enlargement. Nevertheless, in the first quarter of 2005 the proportion of the working age population from the ten new member states in the EU15 "was rather small, ranging from 0.1 percent in France and in the Netherlands to 1.4 percent in Austria and 2 percent in Ireland" (European Commission, 2006a, p. 9). The European Commission's reports also suggest that there is no conclusive evidence of a direct link between the magnitude of migration flows and the transitional arrangements in place. The data also show that a significant fraction of permits is granted to short-term or seasonal workers, that employment rates among immigrants from the new member states are comparable to those of the EU15 nationals, and that they are generally higher than for non-EU nationals.

There are several country studies that document actual migration after the enlargement in destination countries. Zaiceva and Zimmermann (2008) evaluate the scale, diversity, and determinants of labour migration in Europe, suggesting that there was an increase in immigration from the new member states into most EU15 countries, albeit this increase varied quite substantially. While in most of EU15 countries Poland was the main sending country, Estonians are dominant in Finland, and Romanians in Spain.

Gilpin et al. (2006) report a substantial increase in the number of nationals from new member states in the UK following enlargement. According to the UK Home Office (2007), there was however a decline in the number of applicants to the Worker Registration Scheme (WRS) in the first quarter of 2007 compared to the last quarter of 2006. The most recent Accession Monitoring Report (Home Office, 2008) states that the number of applicants to the WRS, the majority of whom were from Poland, followed by Slovaks and Lithuanians, rose from 134,550 in May-December

2004 to 234,725 in 2006 and fell slightly to 217,740 in 2007. According to Blanchflower and Lawton (2008) 812,000 workers from the new member states have registered to work in the UK since May 2004 at WRS, and there have been an additional 10,540 and 22,080 worker registrations from Bulgaria and Romania, respectively.

These authors warn, however, that the WRS numbers overstate actual immigration flows since the registered people are temporary workers, while the size of net migration from eight new member states is much lower (71,000 in 2006). Drinkwater et al. (2008) analyse the performance of Polish immigrants in the UK labour market. Overall, no evidence of "welfare tourism" was found. In most cases, the majority of migrants were male, young, tended to come from Poland and the Baltic states, had relatively high or medium skill levels and were concentrated in relatively low-skilled sectors (or self-employed), pointing to such issues as downgrading and transferability of human capital (Blanchflower et al. 2007). Ruhs (2007) reports that almost half of the workers who registered under WRS since May 2004 have taken temporary jobs.

According to a study by Doyle et al. (2006), which documents the situation in Ireland and Sweden, the number of immigrants from the new member states in Sweden increased between 2003 and 2005. The authors also argue that the number of post-enlargement EU10 immigrants is still small and suggest several reasons for this observation, such as few job vacancies, linguistic distance and the lack of established migration networks. They report, however, a different situation in Ireland. Although there are no data available for Ireland before 2005 which distinguish between accession country nationals and foreigners from the rest of the world, there is a remarkable increase in the number of foreigners between 2003 and 2005, and the

majority in 2005 were nationals from the new member states. Indeed, Hughes (2007) reports that there were about 54,000 EU10 immigrants in May-December 2004, 112,000 in 2005, and 139,000 in 2006 measured by the Personal Public Service Number (PPSN) registration scheme. Barrett et al. (2008) documents that nationals from the new member states constituted 3 percent of the Ireland's population in 2006. Remarkably, Brenke and Zimmermann (2007) document an increase in net immigration flows from the new member states into Germany, despite the "closed door" policy, acting through a rise in self-employment, especially among the Poles.

As for the sending countries, Iglicka (2005) argues that the majority of emigration from Poland to the EU (mainly Germany and the UK) is of a temporary nature, and emigration to the West is being replaced by immigration from the East (Ukraine) and by return migration. Kaczmarczyk and Okólski (2008) report that the accession of Poland and the Baltic states significantly increased emigration from these countries, mainly to Ireland and the UK.

The World Bank (2006) documents that Lithuania is a country with the largest emigration rate among the new member states with 3.3 percent of its population having emigrated between May 2004 and December 2005, followed by Latvia (2.4 percent), Slovakia and Poland (1 percent). An interesting observation is that while prior to enlargement most Lithuanians migrants went to Germany, Estonia, Russia, Ireland and the US, after the enlargement they headed towards the UK and Germany. These migrants were predominantly young with medium or high skills. Kadziauskas (2007) reports that the number of migrants from Lithuania has increased after the enlargement, warning that these outflows may be severely understated by official statistics. The World Bank (2006) documents a similar upward trend in emigration

using the Polish Labour Force Survey data, with 20 percent more Poles staying abroad in 2004 than in 2003.

Based on the same data, Kaczmarczyk and Okólski (2008) report that the number of Polish residents who stayed abroad for at least two months tripled since early 2004 till early 2007 from around 180,000 to around 540,000. Germany remains the most important destination country for immigrants from Poland (especially regarding seasonal migration), although its share is decreasing while the importance of the UK and Ireland is increasing (World Bank, 2006; Frelak and Kazmierkiewicz, 2007; Kaczmarczyk and Okólski, 2008). Kaczmarczyk and Okólski, (2008) confirm the findings from the receiving countries: these migrants tend to be males, work-oriented, young, relatively well-educated and temporary. The proportion of individuals with tertiary education among migrants has increased after the enlargement, leading to an emergence of two distinct emigrants groups – low-skilled individuals from the periphery and highly-skilled ones form the cores (Kaczmarczyk and Okólski, 2008).

What is the outlook concerning the migration flows from the new to the old member states? On the one hand, the emigration intentions are larger in the new EU10 than in the old EU15. On the other hand, growth in the EU10 and wage convergence, as well as new vacancies and skills shortages at home combined with the remaining cultural barriers, could negatively influence these migration flows in the future. Figure 4 shows that a significant proportion of people in the new member states (15 percent) is still thinking about "living in another Member State in order to work, but haven't decided yet". However, a large proportion of respondents have already thought about it but gave up the idea.

## 4. The Effects of Post-enlargement Migration

*The determinants of migration*

Understanding the determinants of migration flows is crucial for the understanding of their composition and characteristics and thus for evaluation of their effects on the source and destination countries. It is especially important to distinguish the nature of the economic or other migration motifs and their interaction with individual characteristics to draw conclusions not only about the skill level and age structure but also duration of migration, which all condition the effects of migration on the source and destination countries.

Early theories of the migration decision stress the significance of (expected) regional disparities in prosperity (Harris and Todaro, 1970). These theories imply the significance of earnings and income levels, costs of living, unemployment rates, quality of public goods, and the generosity of the welfare systems. Theories based on the human capital model (Becker, 1964) identify the importance of age, as older potential migrants have a shorter expected lifetime gain from moving than younger ones. More educated individuals may be in a better position to gain valuable information about the destination country, thereby reducing their costs of adjustment and thus be more inclined to migrate. Inter-regional cultural, linguistic and geographical distances should also affect the adjustment costs and thus affect the migration flows. Needless to say, the decision to move is affected by the costs of moving which also include, besides the well-understood pecuniary costs, significant psychological and social costs of forgone contacts with friends and family as well as social contacts. Indeed, family issues, such as having a child or spouse, and broader social relationships, such as ethnic networks, play a significant role (Mincer, 1978;

Massey, 1990). While having children may increase the costs of moving, ethnic networks may facilitate important information about the destination labour market.

The character of the earnings distribution in the source country affects the migration incentives of high and low skill workers differently. In a country that has a relatively flat earnings distribution, the opportunity costs of migration are higher for the low skilled workers, who enjoy wealth redistribution in their favour. On the other hand, in a country with a relatively steep income distribution, it is the high skilled workers who enjoy high returns to skills and have high opportunity costs of migration (Borjas, 1985, see also Roy 1951). Overall, migrants may be positively or negatively self-selected with respect to their observable and unobservable characteristics, both upon entry and exit (Borjas, 1987b, Chiswick, 1999).

One of the most interesting questions in the European context is whether generous welfare systems attract immigrants and whether they affect the type of immigrant inflows. Borjas (1999a) studies this issue in a model that assumes variation in terms of the generosity of welfare provisions and returns to human capital across US states. The model predicts that, relative to the native population, low-skilled immigrants should be more prone to cluster in welfare-generous states and the effect of a change in the level of welfare benefits should have stronger effects on immigrant's welfare participation, that is, the benefits elasticity of immigrants should be higher than that of the native population. Borjas empirically corroborates the prediction of immigrants' excess propensity to cluster in welfare generous states, even when controlling for demographic and socioeconomic factors as well as for possible networks effects.

What are the main determinants of East-West migration flows in an enlarged EU? While family and other social relationships, as well as housing and local

environment conditions, are important, Fouarge and Ester (2007a) and Bonin et al. (2008) show that employment-related factors, such as higher income, better working conditions, and opportunities of finding a suitable job are key migration motivators in Europe, and in the new members states in particular. Bonin et al. (2008) show that language and cultural barriers also play an important role. The authors do not find evidence that migration is primarily attracted by access to welfare payments or better public services. This is in line with De Giorgi and Pellizzari (2006), who find, using data from the European Community Household Panel, that welfare benefits are a factor which influences an immigrant's choice of destination; however, it is a small effect relative to the impact of wages.

Blanchflower et al. (2007) show that the propensity to migrate is correlated with income per capita, unemployment rates, and life satisfaction in the new member states. In line with this study, unhappiness with their lives, dissatisfaction with their salaries and working conditions, concerns about the availability of good jobs and insecurity about their jobs were show by Blanchflower and Lawton (2008) to be some of the key reasons to move abroad for Eastern Europeans. Kadziauskas (2007) reports that 90 percent of the respondents in Lithuania, a country with high levels of emigration, name low salaries as the main motive of seeking employment abroad. Zaiceva and Zimmermann (2008) show that linguistic and geographical distances, migrant networks, as well as scale seem to have played a role in the allocation of migrants across destination countries. So in general, we can conjecture that most of the post-enlargement East-West migration flows have been economic in nature, pushed by the dissatisfaction with economic opportunities in the new member states and attracted by better labour market opportunities in the old member states. Welfare does not seem to be a key factor in determining the nature of these migration flows.

*The impact of migration on wages and their distribution*

The effects of migration on labour markets are complex and multifaceted. Migration involves relocation of workers and thus affects the supply of labour and human capital in source and destination labour markets. Depending on the character of the implied changes in labour supply, migration may affect wages, employment, and other labour market outcomes of not only the natives and stayers, but also of other migrants. As a corollary, migration potentially has significant effects on economic inequality.[9]

The impact of immigration on the destination labour market has been modelled by a number of studies, including Chiswick, Chiswick and Karras (1992), and Chiswick (1980, 1998). In these models, the effects of migration on income inequality in receiving countries largely depend on the socioeconomic and demographic characteristics of the immigrant and native populations as manifested by the substitutability or complementarity of their labour. Concerning the empirical evidence for the US, Grossman (1982) finds that foreign-born workers are substitutes for native workers, and Borjas (1983) reveals complementarity between Black and Hispanic labour, and Hispanic and White male workers. Borjas (1987a) provides some evidence that White, Black, Hispanic and Asian immigrant male workers are substitutes for Whites born in the US. All these studies report effects of small magnitudes.

More recent studies, however, provide evidence of diverse and non-negligible labour market effects of immigration. Using data from the 1990 US census, Card (2001) distinguishes the effects of immigration for various occupational groups and finds significant negative employment effects in most cases. In a similar study, Orrenius and Zavodny (2007) find negative wage effects of immigration on unskilled

[9] Kahanec and Zimmermann (2008a, 2008b) extensively summarize this literature and argue that migration potentially has important consequences for economic inequality which are driven by the skill-composition of migrant flows.

natives but do not find significant effects in skilled occupations. Borjas, Freeman and Katz (1997) report that immigration explains a significant proportion of the increase in the wage gap between high and low skill labour in the US in the 1980s and early 1990s. Negative wage effects of immigrants on their co-ethnics in the same linguistic group are reported by Chiswick and Miller (2002). Borjas (1999b, 2003, 2006) and Filer (1992) provide further evidence on the negative effects of immigration in the US. In a natural experiment setting of the Mariel boatlift, which brought an influx 45,000 Cubans into Miami in 1980, Card (1990) finds that any effects of unexpected immigration were cancelled out by a mobility response of natives and former immigrants.

Considering the international evidence, Roy (1987) reports detrimental effects of immigration on native employment prospects in Canada. However, no negative employment effects of immigration are found by Akbari and DeVoretz (1992) for Canadian natives and Addison and Worswick (2002) for Australian natives. Roy (1997) reports no clear patterns of substitutability or complementarity between foreign- and Canadian-born labour. Friedberg (2001) finds no negative effects of Russian immigration on Israeli wages or employment. On the positive side, Chapman and Cobb-Clark (1999), and Parasnis, Fausten and Smyth (2006) find positive effects of immigration on the employment prospects of Australian natives

As concerns Europe, Winkelmann and Zimmermann (1993) find only small negative effects of immigration on German employment. Hunt (1992) studies the impact of the Algerian repatriates on the French labour market after the Algerian independence and finds detrimental yet weak wage and employment effects for the natives. Similarly, Carrington and de Lima (1996) find some evidence of negative effects on native wages of refugees from the former colonies in Portugal. Angrist and

Kugler (2003) report negative effects of immigration from the former Yugoslavia on employment in Europe, especially in countries with more restrictive market institutions. However, no negative effects of immigration on employment are reported by Pischke and Velling (1997) for Germany, and Dustmann, Fabbri and Preston (2005) in the case of the UK. Zorlu and Hartog (2005) report little effects of immigration on native wages for the Netherlands, the UK and Norway. De New and Zimmermann (1994) support the complementarity hypothesis by finding negative effects of (largely unskilled) immigration on the wages of the German unskilled but positive wage effects on the wages of native high-skilled.

The book "*European Migration: what do we know?*", edited by Zimmermann (2005), contains 15 chapters on European countries and the US, Canada and New Zealand summarising migration experiences since the Second World War. The conclusion reached is that immigration is largely beneficial for the receiving countries. There can be phases of adjustment, but there is no overall evidence that natives' wages are strongly depressed or that unemployment substantially increases as a consequence of immigration.

To evaluate the post enlargement migration flows we need to analyse empirical evidence on the quality of post-enlargement migrants, their position in the destination labour markets, but also on whether they leave from employment, unemployment, or inactivity (see Kaczmarczyk and Okólski, 2008). While aggregate statistical data do not identify any causal links, they provide a broad picture of economic development in receiving countries in the pre- and post-enlargement period. Aberrant patterns in aggregate statistics following enlargement could hint at some effects of post enlargement developments, while their normality would be consistent

with the hypothesis that enlargement had no extraordinary effects on the receiving labour markets.

Figure 5 shows that there is no evidence of employment growth slow down after the 2004 enlargement in the EU15, Germany and Sweden. Ireland exhibits increasing employment growth up until the third quarter of 2005, and deceleration thereafter. In the UK employment growth was fairly steady throughout the period. Figure 6 documents increasing or steady unemployment rate in the EU15, Germany and Sweden up until 2005, and a decline thereafter. The opposite pattern shows up for the UK and Ireland. Finally, Figures 7 documents vacancy rates in the EU15, Germany, Sweden and the UK, and Figure 8 provides the corresponding figures for the manufacturing sector in Germany, Sweden and the UK. The overall picture is that there is strong demand for labour in these countries, even in manufacturing, a sector with high concentration of the accession countries citizens. In the same vein, average wages do not exhibit any observable slow down during the studied period (Figures 9 and 10). We can thus summarise that aggregate data do not provide discernible signs of negative economic effects of post-enlargement migration, perhaps with the exception of Ireland and the UK, where employment growth and unemployment rates have exhibited some negative trends since 2005. It remains an open question, however, whether these can be ascribed to post enlargement migration flows.

Evidence on the direct effects of post-enlargement migration is still relatively scarce, but rising. UK Home Office (2007) provides evidence that immigrant workers from the EU10 go to sectors where the demand for their labour is the highest (hospitality and catering, agriculture, manufacturing, food processing, and business and administration), thus helping to fill the gaps in the UK labour market while placing only few demands on the UK welfare system. Gilpin et al. (2006) do not find

any significant effect of immigration from the EU8 on the claimant unemployment rate of natives. Blanchflower et al. (2007) also find no negative impact on the British economy, hinting at curbing effects of post-enlargement immigrants on inflation. Drinkwater et al. (2008) analyse the performance of Polish immigrants in the UK labour market using the UK Labour Force Survey data. The authors find evidence of "downgrading", i.e. that the majority of post-enlargement immigrants have found employment in low-skilled and low-paying jobs despite having relatively high levels of education. Hughes (2007) argues that foreign workers continued to replace Irish workers in the manufacturing sector, but that earnings growth has recently increased. Moreover, he goes on to argue that the recent vacancies data show that the demand for labour remained strong after the enlargement. This is in line with Doyle et al. (2006), who argue that displacement does not appear to affect the Irish labour market negatively since the aggregate unemployment rate remain stable, and even if some displacement takes place, native workers probably move to better-paying jobs.

Concerning the sending countries, aggregate data document decreasing unemployment, increasing number of vacancies, and employment growth, as well as increasing wages in the post-enlargement period (see Figures 11-14).[10] However, emigration of skilled specialists may exacerbate structural weaknesses in national labour markets (World Bank, 2006). Kadziauskas (2007) reports that in Lithuania there were around 12,000 unfilled vacancies, especially in manufacturing and trade sectors, at the end of 2005. In Poland, Kaczmarczyk and Okólski (2008) document similar shortages especially in manufacturing, trade and construction, arguing that around 80 percent of the registered job seekers do not match regional labour market requirements. A consequence of such mismatch is increased demand for immigrant

[10] The World Bank (2006) warns that increasing wages may generate inflation pressures.

labour, as documented for Poland, where the number of immigrants in 2004 was the highest since 1960, mainly coming form Ukraine, Belarus and Russia (Frelak and Kazmierkiewicz, 2007; Iglicka, 2005). Iglicka (2005) argues that post-enlargement emigration from Poland has contributed to the decrease in the aggregate unemployment rate in Poland after 2004, and that there already exist shortages of low and medium skilled workers, lending evidence of a mismatch between jobs and workers. One needs to be careful when interpreting these results as causal, however: overall restructuring and business cycle, rather than emigration, may be the key driving factors (Rutkowski, 2007; Kaczmarczyk and Okólski, 2008)

Kahanec and Zimmermann (2008a) provide and empirically test a theoretical model that predicts a positive (negative) effect of skilled (unskilled) immigration on earnings inequality in developed destination countries with relatively high shares of skilled workers. The effects in source countries, similarly, depend on the skill level of those who leave and the skill composition of the labour force. In the context of EU enlargement, the labour force in the EU is relatively skilled. This would imply that in sending (receiving) skilled migration increases (decreases) inequality and unskilled migration decreases (increases) it. According to this argument, brain circulation between sending and receiving countries can be expected to generate a win-win situation in terms of reduction in inequality in both sending and receiving countries.

*The consequences of migration for welfare systems*

The question of whether immigrants use welfare more or less intensively than natives has generated the most papers in the general area of immigrants and welfare.[11] Brücker et al. (2002) discuss a number of reasons why such native-immigrant

[11] See Barrett and McCarthy (2008) for an extensive summary of the literature.

differences could arise. First, immigrants may have unobserved characteristics that make them more prone to choose to migrate to countries with more generous welfare systems (self-selection). For example, economic migrants are typically less likely to claim welfare benefits, but their dependants or non-economic migrants are more likely to become welfare claimants. Second, employers' discrimination may disadvantage immigrants in the labour market by reducing their chances to obtain employment. Third, language problems or psychological trauma may lead immigrants to be more dependent on welfare benefits. Fourth, legislation in the host country may exclude immigrants' from participating in welfare systems. Fifth, ethnic enclaves may facilitate immigrant employment, for instance by providing relevant information about the labour market, but may also lead to separation from the host society. Thus, ethnic enclaves and networks may decrease or increase immigrants' welfare use, depending on which of the two effects prevails. Finally, any factor that leads immigrants to be in low-pay or low-quality employment, such as exclusion from public employment, also tends to reduce their capacity to provide for themselves and thus increases their probability of welfare use.

Considering the US evidence, Jensen (1988) compares unadjusted rates of welfare receipt and finds only a marginally greater probability that an immigrant is on welfare compared to a native. Once he controls for relevant characteristics, it even turns out that immigrant households are less likely to be among the recipients of welfare benefits. However, Borjas and Hilton (1996) show that if non-cash benefits are accounted for, the immigrants appear to be more likely to be in welfare receipt than natives. Borjas and Trejo (1991) report a cohort effect concerning immigrants' welfare use: as opposed to earlier immigrant cohorts, more recent immigrants are more likely to be among recipients of welfare benefits. Furthermore, their welfare use

is increasing with the length of stay in the U.S: the longer their stay, the more likely they are to be in receipt of welfare benefits, which implies assimilation into welfare rather than out of it.

For a European perspective of this area, Brücker et al. (2002) carry out an EU-wide analysis. Using the European Community Household Panel (1994-1996) they study the relative rates of welfare use for non-EU immigrants in eleven of the EU15 countries, assessing whether there is an "immigrant" effect on welfare receipt when controlling for individual characteristics, such as education or family situation. Their results suggest that two groups of countries can be defined. One group contains Germany, the UK, Greece and Spain, where the rates of welfare receipt for non-EU immigrants and EU citizens are similar. In some instances, it is even lower for immigrants. The other group of countries, comprising Denmark, the Netherlands, Belgium, France, Austria and Finland, includes those where there is a significantly higher rate of welfare use among non-EU immigrants than the natives. When controlling for observable characteristics, non-EU immigrants have an immigrant impact on unemployment benefits in Denmark, the Netherlands, France, Austria and Finland, but no such effects in Germany, the UK, Greece or Spain. The evidence of welfare dependency of post-enlargement migrants is scarce. One exception is Doyle et al. (2006), who find no evidence of "welfare tourism" in Ireland, and argue that the immigration to Ireland is primarily demand-driven and does not affect native employment significantly.

From a different perspective, Äslund and Fredriksson (2005) look at the impact of immigrant networks on immigrant welfare receipt in Sweden.[12] Their quasi-experimental approach alleviates the issue of the endogeneity of locational choice and

[12] See Borjas and Hilton (1996) and Hao and Kawano (2001) for evidence on the US. See also Wadensjö (2007) on immigrant inflows to Sweden.

thus enables conclusions to be drawn about neighbourhood effects on individuals. They make use of a government housing programme which took place in the late 1980s, whereby communities were selected for refugees. Their findings suggest that it is rather the rate of welfare receipt among their co-ethnics rather than the size of their population that affects individual likelihood to be in receipt of welfare. They estimate a near 7 percent increase in the rate of welfare receipt when there is a 10 percent increase in the number of welfare dependents among the co-ethnics.

As for the sending countries, the significant outflows of young and skilled individuals may have negative impacts on demographic situation and public budgets. For example, Kadziauskas (2007) estimates that the elderly dependency ratio will more than double by 2050 in Lithuania, and unless significant policy change occurs (e.g. adjusting the age of eligibility), the social security system may fail entirely. Significant decline in population and labour force over the next 50 years was also forecasted for Poland, posing serious threat on its labour market and public budgets (Kaczmarczyk and Okólski, 2008). In a similar vein, Kupiszewski and Bijak (2007) warn about the demographic consequences of post-enlargement out-migration and their effects on the labour market as well as social security system in Poland. However, if the current migration flows lead to efficient brain circulation, empowering people to leave inactivity, increase their human capital abroad, and then utilise it at home, current outflows of migrants from new member states may in fact lead to more stable welfare systems in the medium or long run.

*The growth effects of migration*

Economic migration typically contributes to a more efficient allocation of production factors, most notably human capital, thereby improving the prospects for economic

growth. Indeed, some of the main arguments for increased geographic mobility are economic. Perhaps even more important than these direct effects are the indirect effects on productivity and growth through technology transfer. Indeed, skilled migrants often act as agents of knowledge transfer. On the other hand, the loss of the best and brightest participants in the work force to developed countries, commonly known as the "brain drain", may have adverse effects on source economies. In view of circular migration, the resultant transfer of human capital and knowledge represents a "brain circulation" between the host country and the country of emigration. This phenomenon is giving way to a more complex process of sharing information between the immigrants' countries of origin and destination, which is being fuelled by a continual fall in the costs of international travel and communications. Additional second-order effects arise through the supply of labour and skills, which is a function of migrant flows, that affects investors' decisions on the allocation of their investments and thus technologies in the global context. [13]

With these factors in mind, it is necessary to stress that although migration may change the economic growth rate simply through changing the size of the labour force, it does not necessarily affect per capita income. A social planner who was concerned not only with maximisation of national income, but also about its distribution, would therefore aim at per capita growth. Complementarities in the labour market and improved skill matching are a prerequisite for positive per capita economic growth effects, as well as externalities through educational choices, human capital formation, and those of a fiscal nature.

Much of the literature on brain circulation focuses on the economic and growth aspects of geographic mobility, especially when talking about the brain

[13] The implied industrial structure has further repercussions for the adjustment capacity in case of economic shocks.

circulation and youth mobility aspects of migration.[14] A number of studies have calculated quite large additional income growth from extending the free circulation of human capital.[15] This overall conclusion is also in agreement with studies attempting to forecast potential migration and any welfare gain or loss resulting from EU enlargement.[16]

A potential negative externality of the brain gain and circulation aspects of geographic mobility may be a loss of economic potential in the sending countries that experience a brain and labour force loss. On the other hand, migrants are often not required, economically speaking, in their region of origin at the time of the migration decision, and can be found moving from unemployment in the region of origin into employment in the destination region. A recent IMF-study[17] concludes that human capital flight, especially in the case of doctors and teachers, generates a permanent reduction of per capita income growth rate in the country of emigration. When considering the drain of young, well educated people, another potential negative externality of geographic mobility is governed by the fact that this part of the labour force is, in relative terms, the most inventive: it has the most recent edition of human capital, and would bear, if the members of the labour force were to stay in the country of origin, the highest fiscal burden over the course of their lives. However, different studies do point to the positive innovation, productivity and export potentials of geographic mobility when considering brain gain and circulation.[18]

Migration of highly skilled workers has repercussions for technological and scientific progress measured as innovation that are likely to affect the future growth

[14] See Bonin et al. (2008) for an extensive review of the literature.
[15] See for example Bloom and Grant (2001), European Foundation for the Improvement of Living and Working Conditions (2006), and Kaba (2004).
[16] See, for example, Alvarez-Plata et al. (2003).
[17] See IMF (2005) and Kaba (2004).
[18] See Branstetter (2001) and Peri (2005).

rates of per capita income. Indeed, such repercussions include discoveries and technological improvements that get transferred on total factor productivity. Several empirical studies which analysed innovation as measured by the number of patents have captured such positive effects of highly educated and talented workers on the rate of scientific and technological innovation of a country. A study by Wasmer et al. (2006) arrived at the conclusion that in the long run the most important effects of immigration might be those on the innovation potential of the economy, as highly skilled experts repeatedly migrating between source and destination countries often function as major catalysts for expanding knowledge, businesses and venture initiatives. A consequence of their actions is a general enhancement of cross border knowledge transaction and exports.[19]

These potential positive externalities may, however, be outweighed by the risk that out-migration of highly productive and well-educated members of the labour force reduces the average productivity of the sending country. In such a context, as highlighted by Straubhaar et al. (2000), limited mobility could allow industries to make more efficient use of firm- or country-specific knowledge in production. However, such potential negative externality of migration is rather hard to document empirically.

The evidence on these effects in the context of post-enlargement migration flows in Europe is unfortunately limited. Brücker (2007) argues that migration from the new member states yields substantial gains for the GDP of an enlarged EU in the long-run, and that migrants themselves are the main winners of free movement. He contends further that the effects on the natives in sending and receiving countries are ambiguous and, in general, rather small. Wasmer et al. (2006) suggest that the

[19] See also Teferra (2004), Kaba (2004), and Saxenian (2002).

economic and social dynamism in the 2004 and 2007 accession states will, sooner or later, draw skilled immigrants homeward. Those who choose not to return home will still contribute to the economic efficiency of both sending and receiving countries by acting as intermediaries: they will connect businesses which are based in Western Europe to their home regions.

In summary, the consequences on brain gain and circulation resulting from geographic mobility may be economically favourable for both the sending and receiving country. If the effect is one mainly of a brain drain scenario, the sending country can experience of multitude of negative externalities. Whether or not the total outcome is positive is hindered by the difficulty in estimating the exact size of the different effects arising from the positive and negative externalities.

*The temporal dimension of migration*

One of the key factors behind the dynamism and circularity of migration are the temporal choices of migrants. Whether the observed migration flows and thus their effects are temporary or persistent determines which of the aspects of circular migration shapes the costs and benefits for sending and receiving countries. Although source countries may worry about the emigration of their most able workers and losing them to the brain drain, they may simultaneously gain know-how and human capital through return migration as brain gain. Migrants may move from unemployment in the sending country to employment in the receiving country, and then return to the sending country as easily employable workers with additional skills. While research in this area in post-enlargement Europe is scarce, it seems that much of the migration is of a temporary nature, and that the aforementioned measures on gross inflows are likely to overstate the long-term permanent immigration. According

to Home Office (2008) figures, 60 percent of the applicants in the United Kingdom in March 2008 intended to stay for less than three months. Epstein and Radu (2007) also report evidence in line with this finding in the case of Romania.

The issue, as discussed by Constant and Zimmermann (2008), of whether migrants adjust over time to become like natives or whether they stay distinct in terms of their economic characteristics and outcomes are yet to be explored in the post-enlargement context. It appears that temporary migrants typically do not invest in the destination country's specific human capital; and even long-term immigrants often do not fully adjust to the economic conditions in the destination country. The degree and time path of immigrant adjustment is thus an important factor driving the effects of migration.

*Remittances*

Migrants, especially temporary ones, typically have relatives in their country of origin. Such social relationships often channel financial resources to the source countries, as people working abroad transfer a part of the money earned to support the family back home. These flows are further increased by migrants planning to return to their country of origin and invest there accordingly. Migrant remittances are often substantial and affect the source and destination economies directly: not only through wealth transfers, which may be distributed unequally, but also indirectly, especially through the labour market choices of remittance recipients. When economies become dependent on the remittances, the adverse incentives that such dependency may create can slow down economic development.

The literature on the effects of emigration on various measures of inequality in sending rural areas of poor countries dates back to Lipton (1977), who argues that

such emigration increases interpersonal and inter-household inequality within and between rural villages.[20] A number of studies addressing this issue in national and international settings deliver conflicting findings: the direction of effects depends on applied methodologies, type of migration, and stages of the studied migration histories.[21] Stark, Taylor and Yitzhaki (1986) found that remittances from emigrants reduced income inequality in a Mexican village with an extensive experience of emigration to the US. In a later study Stark, Taylor and Yitzhaki (1988) use an extended Gini index of inequality to examine the sensitivity of the estimated positive effect of remittances from the US on a Mexican village. They find that this effect decreases as incomes of people at the bottom of the distribution are assigned higher weights. In contrast, Adams (1989) finds that remittances increased inequality in three Egyptian villages comparing the actual migration history to the no migration counterfactual. Replicating the study for four Pakistani villages (Adams, 1992), he finds neutral effects, however. Barham and Boucher (1998), find that migration reduces inequality, assuming exogeneity of remittances, while finding the opposite effects when endogeneity of remittances is accounted for. In fact, a recent World Bank report (World Bank, 2006) concludes that migration helps alleviate poverty in the sending country, regardless if the migrant is educated or not. The report goes on to state that remittances mean less child labour, more hours worked in self employment, and a higher education rate of people starting capital intensive enterprises – all together with positive impacts on economic growth. And the greater the proportion of the remittances directed into human capital or physical investment, rather than consumption, the greater the positive impact on the country which receives them. But

[20] See Kahanec and Zimmermann (2008a).
[21] See Stark, Taylor and Yitzhaki (1986, 1988), Taylor (1992), Adams (1989, 1992), Lipton (1980), Stahl (1982), Barham and Boucher (1998) and McKenzie and Rapoport (2006).

even if remittances are just consumed by the recipient and no investment externalities arise, welfare increases. [22]

As an exception to the general scarcity of literature on remittances in post-enlargement Europe, Epstein and Radu (2007) highlight the role of remittances for the Romanian economy. In general, remittances constitute a significant share of country's GDP in Bulgaria and Romania, but also in the Baltic states (Figure 15). Figure 16 shows that the countries can be divided into two groups: one in which remittances have increased from 2004 till 2005 (Poland, Lithuania, but also Bulgaria and Romania); and another one in which workers' remittances have decreased after the enlargement (Latvia, Estonia, Hungary, Slovenia). Kaczmarczyk and Okólski (2008) report that remittances equalled 2.6 percent of GDP in Estonia, 2.5 percent in Latvia, 2.1 percent in Lithuania, and 1.3 percent in Poland; and that their volume also increased substantially after the enlargement in Estonia and Lithuania. In the case of Poland, most of the money earned abroad is spent in Poland, mostly on consumption, but more recently also on investment (World Bank 2006; Kaczmarczyk and Okólski, 2008). The remittances are mostly of a seasonal nature in Poland and the Baltic states pointing to a temporary seasonal pattern of migration from these countries (Kaczmarczyk and Okólski, 2008).

## 5. Case Studies

To better understand the topics discussed, we examine several case studies providing a more detailed account of the effects of post-enlargement migration in source and destination countries. We first look at differences in welfare receipt in four destination

[22] See also World Bank (2007).

countries.[23] We then study the effects of emigration on the Polish economy, and conclude with a discussion of the structure of the migration patterns between Poland and Germany.

*Sweden*

Sweden is a country with a tradition of an extensive and encompassing welfare system, which is relatively open to immigration. Hansen and Lofstrom (2003) analyse longitudinal administrative dataset compiled over the years between 1990 and 1996 to assess whether immigrants exhibit a more intensive use of welfare compared to natives. They find that although immigrants account for just a tenth of the population in Sweden, the social assistance expenditure on them is equivalent to the amount spent on natives. The result that immigrants are more likely to receive welfare than natives is robust to controlling for individual characteristics. However, welfare receipt decreases with length of stay: immigrants tend to assimilate out of welfare. Yet, the authors conclude that this rate of convergence is not sufficiently high to erode differences between the propensity of welfare receipt of natives and immigrants in the long-run. Expanding this framework, Hansen and Lofstrom (forthcoming) study the native-immigrant differences in transition rates between employment, unemployment and social assistance receipt. They report that the degree of structural state dependence is significantly greater among refugees than among natives. However, non-refugee immigrants are similar to natives in this respect. This has important consequences for welfare policy design, as these need to reflect the different underlying mechanisms that govern welfare use among refugee and non-refugee immigrants.

[23] We draw on Barrett and McCarthy (2008).

Hansen and Lofstrom (2006) focus on transitions in and out of welfare. They examine longitudinal administrative data over a longer time period (1991-2001). Their findings show that differences between the rates of welfare receipt exhibited by immigrants and natives result from a higher rate of entry into welfare and not a lower rate of exit out of it. Their results also suggest that the key driver of the difference in welfare receipt between natives and immigrants are the time invariant differences in unobserved characteristics rather than the differences in observable characteristics between the two groups.

So in general, it appears that immigrants are overrepresented among welfare recipients in Sweden. Does this hold for those arriving from the new member states? A study by Andrén (2007) tackles the question of welfare use in a dynamic framework, examining the extent of structural state dependency for immigrants and Swedes. His findings indicate that although state dependence is witnessed in both groups, the effect is three times larger for immigrants. However, Andrén does not find any significant effect of being of an Eastern European origin on welfare use in the 1990s.

The study of Wadensjö (2007) shows that this result holds even after the 2004 EU enlargement. Studying the people born in one of the new member states and comparing them to those born in Sweden at the end of 2005, Wadensjö documents that these immigrants are overrepresented in some sectors of the Swedish economy; earn somewhat lower wages other things equal; and, remarkably, they are not overrepresented in various income transfer programs.

*Germany*

We now turn to the case of Germany, a country with an extensive welfare system and a more restrictive immigration policy, fully applying transitional arrangements vis-à-vis the nationals of the new member states. Following a study by Frick et al. (1999), which showed that an immigrant living in Germany was 3.7 times more likely to receive benefits compared to a native, Castronova et al. (2001) attempt to explain the difference. They examine whether it is higher rates of eligibility or higher rates of taking up welfare, conditional on eligibility, which account for the discrepancy. They conclude that there is no difference in the rate of taking up welfare payments between immigrants and natives, but immigrants are more likely to be eligible to claim welfare due to their income or social situation

Riphahn (2004) examines the role of differences in group characteristics in explaining the differences in welfare use between natives and immigrants. She finds that the immigrants' characteristics explain their higher propensity to be in welfare receipt and that dropping out of the labour force is a considerably stronger predictor of welfare use for an immigrant than for a native. However, she finds neither an "immigrant effect", nor an "assimilation effect". Her results show quite the opposite: the longer an immigrant stays in Germany, the greater the likelihood of receiving benefits.

The evidence on welfare use of post enlargement migrants from Eastern Europe is scarce. The aforementioned studies, however, hint at a conjecture that, other things equal, immigrants in Germany are not more likely to be recipients of welfare benefits, and that this might hold for the post-enlargement migrants from the new member states as well.

*Ireland*

Ireland is an interesting case study when comparing the receipt of welfare between immigrants and natives: Barrett and McCarthy (2007) find that immigrants in Ireland are less intensive users of the welfare system. The raw figures imply that immigrants' probability of being among welfare recipients is just one half of the corresponding probability for the natives. This finding could be explained by the high levels of immigrants' educational attainment in Ireland. Barrett and McCarthy (2007) investigate this issue and find that lower rates of welfare use among immigrants persist even when controlling for standard socio-economic factors, including education. When unemployed immigrants and natives are compared, they conclude that immigrants are significantly less likely to be in receipt of welfare. However, this could be a result of eligibility requirements rather than lower residual take-up rates. Barrett and McCarthy (2008) use the 2005 wave of the EU Survey of Income and Living Conditions, largely confirming the results found in their 2007 paper that used the 2004 wave of the same dataset. While the data do not permit distinguishing between immigrants from the new member states, they constitute a large proportion of the group labelled "non-English speaking" origin. These immigrants are found to be 8 percent less likely to be among welfare recipients, ceteris paribus. This finding may be due to the two-year residency requirement for welfare receipt in Ireland. The authors also find that immigrants of non-English speaking origin are less likely to be among welfare recipients if unemployed, and receive significantly lower welfare payments. Barrett and McCarthy (2008) conclude that immigrants do not seem to pose any significant burden on the Irish welfare system.

*Poland*

Literature on remittances in post-enlargement Europe is scarce, but a pioneering study by Kaczmarczyk and Okólski (2008) summarises the evidence on Poland and provides several findings. Although Poland has a longstanding tradition of emigration, its EU accession triggered substantial additional outflows of people, who mainly headed to Ireland and the UK, but are visible in all pre-2004 EU and EEA countries. Polish migrants became the largest immigrant group by inflows in a number of countries, most notably Ireland and the UK.[24] According to Kaczmarczyk and Okólski, the post-enlargement migrant flows are structurally different from those prior to the enlargement. Not only do the flows appear to be more individualistic and regular, but legally speaking they are more solidly based and more diversified with respect to both immigrant characteristics and destination countries. In the area of age and education, Polish workers fare well: the post-enlargement migrants from Poland are younger and better educated. Two trends seem to be at work here: the emigration of "redundant" labour from peripheries contributing to better labour and human capital allocation; and the emigration of high-skilled workers from economic cores. This could be a first sign of brain circulation. EU enlargement thus had a significant effect on the Polish labour market. While more time is needed for all the effects to unfold, it is already clear now that Poland, and more generally new member states with significant out-migration, will need to adapt to the outflows of their skilled workers and, perhaps, attract replacements from third countries.

[24] There is also evidence of substantial inflows of Polish migrants in Germany. See the section on Polish-German migration flows below.

*Polish-German migration*

We now evaluate the effects (and determinants) of migration flows for Poland and Germany. There are two reasons why Poland was selected as a source country and Germany as a destination country. Firstly, the effects of post-enlargement migration are relatively well understood in the case of more open destination countries, such as the UK, Ireland or Sweden. Germany, by contrast, is a country that fully applies transitional measures and yet receives significant numbers of immigrants from new member states. Thus Germany is a good example to enable us to shed light on the lesser known facts about post-enlargement migration. Second, most immigrants from the new member states in Germany come from Poland (as is also the case for many other old member states).

According to Brenke and Zimmermann (2007) there were about 530,000 foreigners in Germany in 2006 who had citizenship of one of the 2004-enlargement new member states. They came mainly from Poland, Slovakia, Hungary and the Czech Republic, and are mostly of the first generation. They constitute about 8 percent of the foreigner population in Germany and about 20 percent of them had a German spouse (80 percent of these were women). Although these foreigners have lower participation rates than natives and foreigners originating from the EU15, they outperform all other immigrant groups. This pattern is mirrored in the unemployment rates. Furthermore, these immigrants exhibit rates of self-employment higher than the natives; however, they are lower than those of immigrants from Asia or the EU15. The immigrants from the new member states are also distinguished in having good educational and occupational attainment, albeit lower than Germans without immigrant backgrounds; but somewhat higher than Germans with such background.

Brenke and Zimmermann (2008) continue their study to examine the effect of the 2004 enlargement. They observe for the most part a significant positive effect on immigration from EU8, mainly from Poland. Most of these migrants are of prime age, mainly in the 25-35 age group, and exhibit higher participation rates and lower unemployment rates than other immigrants arriving in the same period. A relatively high proportion of these migrants have middle levels of education and not too many are in the high-education group. This finding is consistent with the hypothesis that the closed-door policy led to a diversion of high skilled migrants to more open countries, like the UK and Ireland, and those who migrated to Germany concentrated on semi-skilled occupations operating as self-employed. Furthermore, a large share of these migrants is self-employed. This suggests that a closed-door policy motivates immigrants to find inventive ways how to penetrate the labour market, in our case using self-employment as means to avoid restrictions imposed on immigrants in wage employment. That Polish immigrants in Germany are somewhat older and their educational distribution has a thin upper tail may indicate the role of linguistic and geographical factors. Namely, it is the young and highly skilled that are the most mobile and thus willing to migrate to more distant labour markets. Furthermore, the tradition of speaking German is stronger among the older generations in Poland, whereas English is the dominant second language among the young.

## 6. Summary and Policy Conclusions

The objectives of the EU, as outlined in the Lisbon Agenda and the European Employment Strategy and Social Agenda, are the development and application of first-rate migration practices and policies. The achievement of these aims is not

possible outside the framework of a better understanding of the determinants and effects of migration.

Our analysis is a contemporary perspective focusing on the five years after the 2004 enlargements. The importance and relevance of this report is based on several insights that consistently came out from the comparative study of various aspects of migration, its determinants and effects, and a number of case studies. First, we comprehensively and comparatively describe the landscape of post-enlargement migration trajectories and their relationships to labour markets, social security systems and growth, identifying the policy considerations and stylised facts of migration in an enlarged EU. We find that EU enlargement had a significant impact on migration flows from new to old member states. While we do observe various forms of migrant diversion to those old member states that adopted the open-door policy, countries like Germany or Austria, which have not opened their labour markets, have also experienced significant inflows of migrants from the new member states. We also observe some signs that if diversion occurred, it mostly worked through migrants' characteristics, whereby more open economies attracted more educated and younger migrants.

Second, we provide an in-depth analysis of the effects of migration in the three important areas: labour markets, welfare systems, and growth. Not only does this advance our understanding of these effects in the source and destination countries, but it also allows us to evaluate the relationships between the effects in these domains, as well as between determinants and effects of migration from the selection perspective. Our findings by and large confirm the international evidence on this issue: any negative effects in the labour market on wages or employment are hard to detect. In fact, there is evidence that post-enlargement migration contributes to growth

prospects of the EU by ensuring a better allocation of human capital, that these migrants are strongly attached to the labour market, and that they are quite unlikely to be among welfare recipients.

Third, these results are strengthened by a study of a matrix of country case studies, where we highlight the different labour market and welfare effects in the source and destination countries, as well as across countries with different transitional arrangements. The case study on migration flows between a sending and a receiving country – Poland and Germany – further deepens our understanding of the effects of migration and their interaction with the determinants and institutional framework of migration flows, quite in line with our general results.

Fourth, throughout the study we look into the specific migration issues in the market for high-skilled labour as one of the main determinants of the growth potential of the EU, highlighting the role of brain circulation.

In summary, we offer a number of insights relevant for the development of migration policies and good practice in dealing with migration issues. While our ambition was not to provide an exhaustive account of such practices, we point out the difficulties that restrictions on the free movement of workers bring about, including the forgone increase in the efficiency of human capital allocation at the transnational level, and the diversion of migration flows at the country level. We also highlight the important positive role of brain circulation for the sending as well as receiving countries. We thus believe that the free movement of workers constitutes not only a fundamental principle of the European Union, but also a key precondition to reap the benefits from the opportunities offered in the labour market, to ensure sustainability of member states' welfare systems, and to strengthen the EU's global competitiveness.

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## 8. Tables

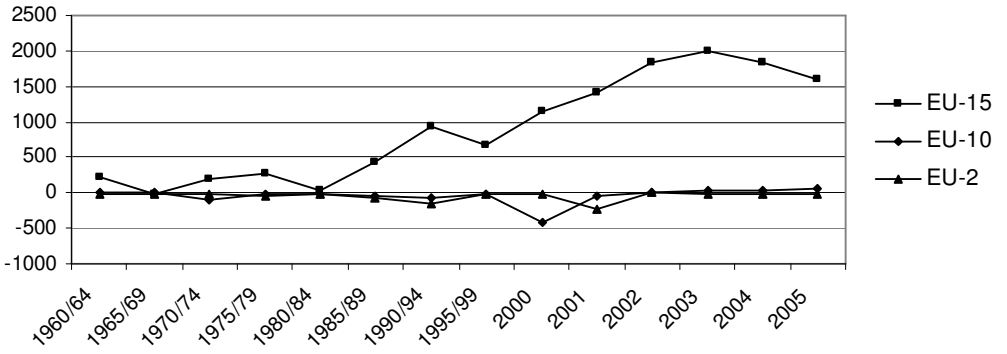
Table 1. Proportion of foreign-born and foreign citizens in European Union countries by region of origin

| | Foreign citizens | | Foreign-born | |
|---|---|---|---|---|
| | Other EU | Non-EU | Other EU | Non-EU |
| EU15: | | | | |
| Austria | 4.1 | 5.0 | 6.7 | 8.7 |
| Belgium | 6.4 | 2.6 | 6.8 | 6.7 |
| Denmark | 2.9[2] | 2.4 | 2.0 | 4.6 |
| Finland | 0.7 | 1.0 | 1.4 | 1.8 |
| France | 2.3 | 3.3 | 3.4 | 7.8 |
| Germany | 3.1 | 2.8 | n.a. | n.a. |
| Greece | 1.3 | 4.8 | 1.7 | 5.9 |
| Ireland | 5.4[1] | 2.6[1] | 8.8[1] | 3.4[1] |
| Italy[2] | 1.3 | 3.8 | 2.2 | 5.3 |
| Luxembourg | 41.2 | 5.6 | 37.9 | 8.6 |
| The Netherlands | 1.7 | 1.9 | 2.8 | 9.1 |
| Portugal | 0.6 | 2.8 | 1.8 | 5.7 |
| Spain | 3.9 | 8.3 | 4.5 | 10.0 |
| Sweden | 2.5 | 2.7 | 5.5 | 10.0 |
| UK | 2.6 | 4.3 | 3.5 | 8.8 |
| | | | | |
| EU12: | | | | |
| Bulgaria | (0.1)[4] | (0.1) | n.a. | n.a. |
| Cyprus | 8.1 | 6.5 | 8.1 | 11.0 |
| Czech Republic | 0.4 | 0.4 | 1.3 | 0.6 |
| Estonia | 0.7 | 16.8 | 0.6[4] | 13.6 |
| Hungary | 0.5 | 0.2 | 1.3 | 0.4 |
| Latvia | n.a. | 0.7[3] | 1.1[4] | 9.6 |
| Lithuania | n.a. | (0.6) | (0.3)[4] | 3.8 |
| Malta | 1.2 | 1.8 | 1.7[5] | 3.0 |
| Poland | (0.1) | 0.1 | 0.2 | 0.3 |
| Romania | 0.1[2] | 0.1 | n.a. | (0.1)[1] |
| Slovakia | (0.2) | (0.1)[1] | 0.6[4] | (0.1) |
| Slovenia | (0.2)[4] | (0.2) | (0.7)[5] | 4.6 |

Source: Bonin et al. (2008) Figures 1, 2 and 3 for foreign-born and Figures 4, 5 and Tables A5 and A6 for foreign nationals.
Notes: In percent of total population, 2006. "Other EU" and "Non EU" refer to the EU27 as region of reference. "n.a." refers to not available. Share of active working age residents is reported. Data in brackets are as in Bonin et al. (2008) and lack reliability due to small sample size.
[1] Data are from 2005.
[2] Data are from 2004.
[3] The number for non-EU citizens is suspiciously low, and similar low numbers are reported in the 2005 Labour Force Survey. This may arise because non-citizens were grouped together with nationals as in Eurostat Population Statistics (2006, p. 65).
[4] residents of EU10 and EU2 only.
[5] residents of EU15 only.

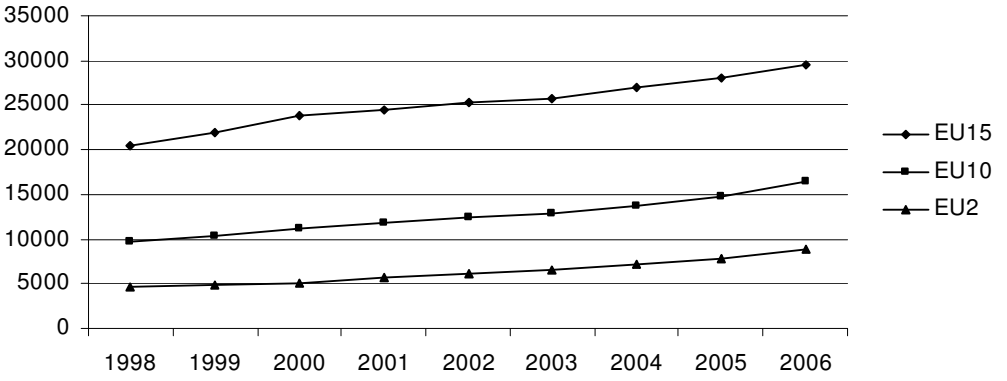
## 9. Figures

Figure 1. Net migration in Europe in EU15, EU10 and EU2



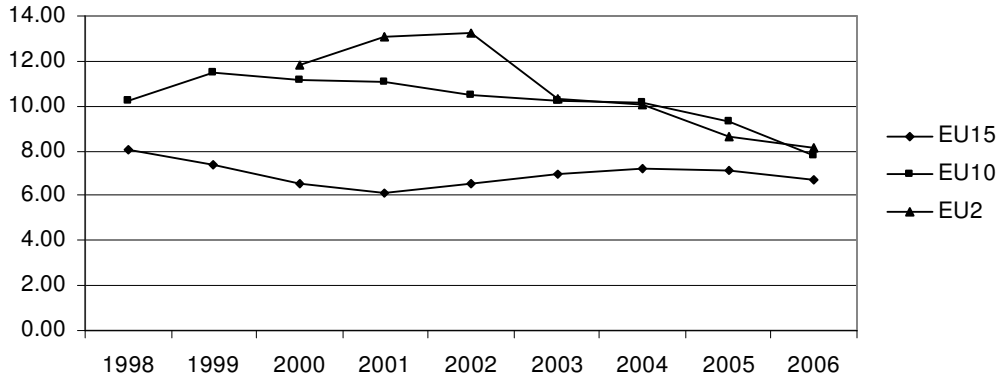

Source: Data are from Eurostat Population Statistics (2006), Table F-1 p. 95 (till 2000), and Eurostat Yearbook (2008), Table SP.22, p. 67 (from 2000 onwards).
Notes: In 1,000 of persons, 1960s-2005. Net migration is estimated as the difference between total population growth and natural increase and includes adjustments and corrections. Annual averages for the periods 1960-64, 1965-69, …, 1995-99 are reported. For Cyprus starting from 1975 government-controlled area only. 2000-2001: corrections due to census.

Figure 2. GDP per capita in EU15, EU10 and EU2



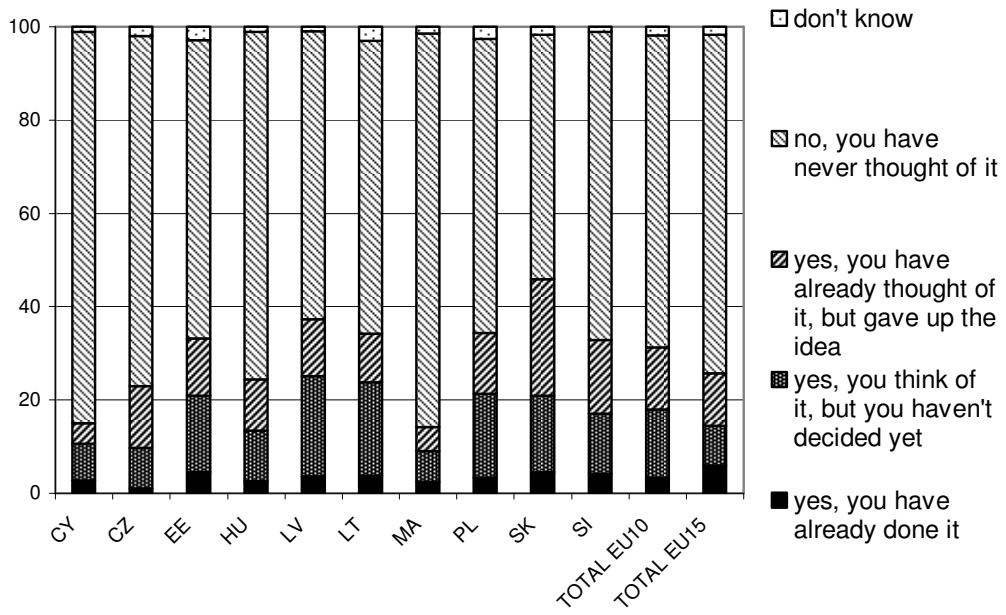

Source: Eurostat Yearbook 2006-7, Eurostat Yearbook 2008.
Notes: In purchasing power parity, 1998-2006.

Figure 3. Unemployment rates in EU15, EU10 and EU2



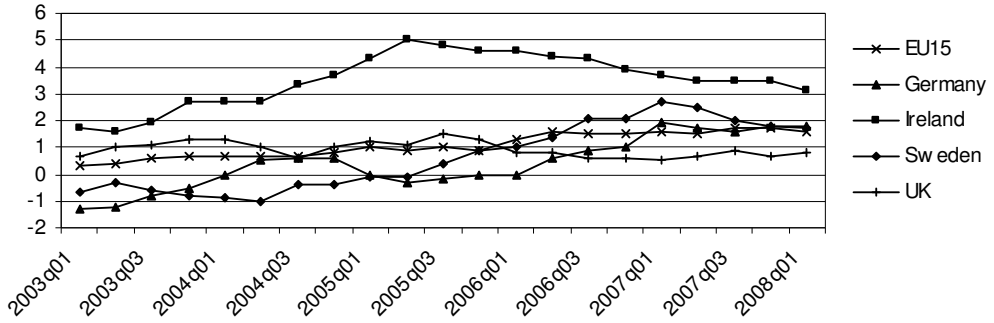

Source: Eurostat Yearbook 2006-7, Eurostat Yearbook 2008.
Notes: In percent, 1998-2006.

Figure 4. Migration intentions




Source: Authors' tabulations from the Eurobarometer EB 65.1.
Notes: Response to "Have you yourself ever considered living in another Member State in order to work?", in percent, Feb-Mar 2006.

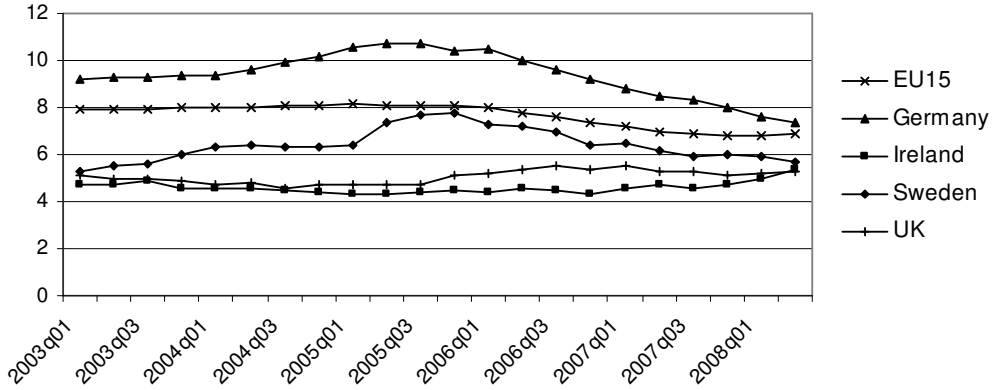
Figure 5. Employment growth rates in selected old member states




Source: Authors calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Employment and unemployment (Labour Force Survey) available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL

Notes: In percent, 2003Q1-2008Q1. The indicator employment growth gives the change in percentage from one year to another of the total number of employed persons on the economic territory of the country or the geographical area. The indicator is based on the European System of Accounts.

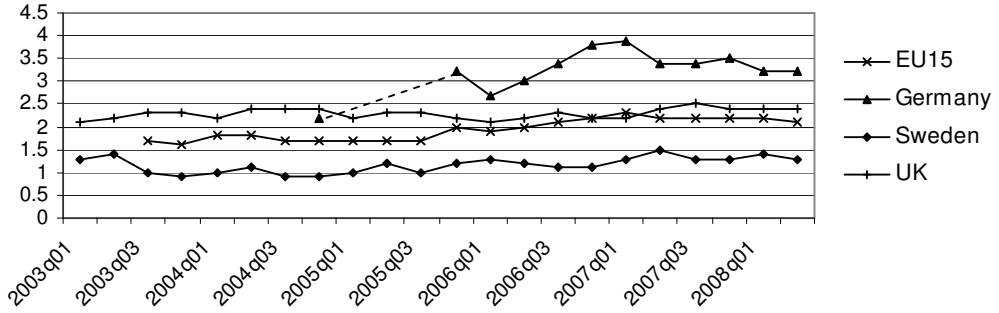
Figure 6. Unemployment rates in selected old member states




Source: Authors calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Employment and unemployment (Labour Force Survey) available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL

Notes: In percent, 2003Q1-2008Q1. Seasonally adjusted. Unemployment rates represent unemployed persons as a percentage of the labour force. The labour force is the total number of people employed and unemployed. Unemployed persons comprise persons aged 15 to 74 who were: a) without work during the reference week; b) currently available for work, i.e. were available for paid employment or self-employment before the end of the two weeks following the reference week; c) actively seeking work, i.e. had taken specific steps in the four weeks period ending with the reference week to seek paid employment or self-employment or who found a job to start later, i.e. within a period of, at most, three months.

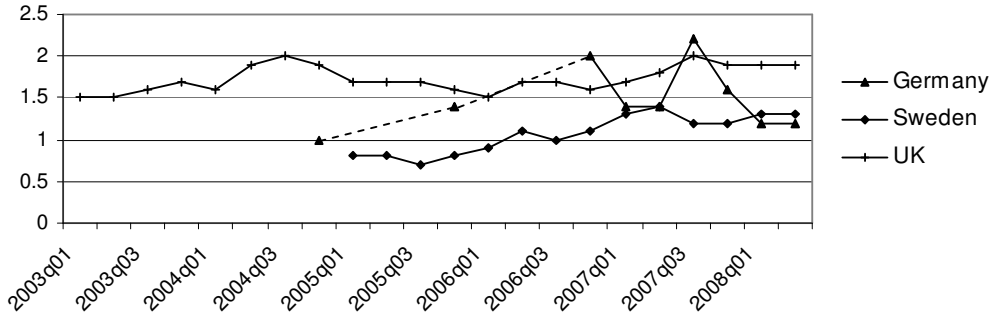
Figure 7. Job vacancy rates in selected old member states




Source: Authors calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Job vacancy statistics available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL

Notes: In percent, 2003Q1-2008Q2. A job vacancy is defined as a post (newly created, unoccupied or about to become vacant), for which the employer is taking active steps to find a suitable candidate from outside the enterprise concerned and is prepared to take more steps; and which the employer intends to fill either immediately or in the near future. The data for Ireland are not available. For the EU15 and Germany, provisional values are reported.

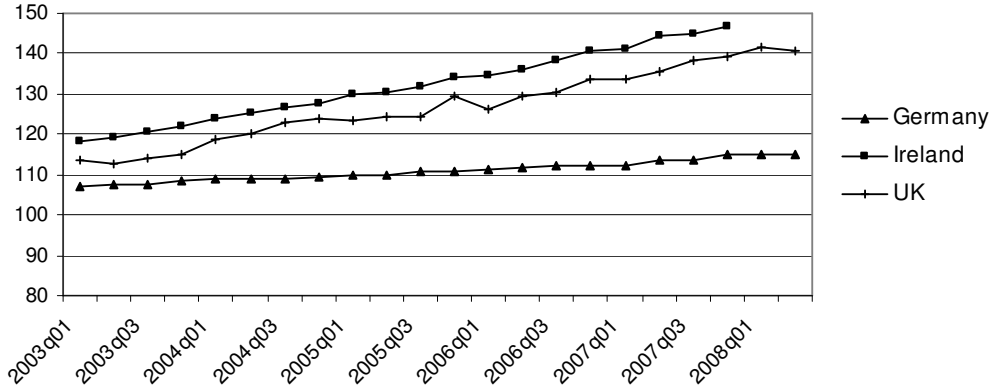
Figure 8. Job vacancy rates in manufacturing in selected old member states




Source: Authors calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Job vacancy statistics available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL

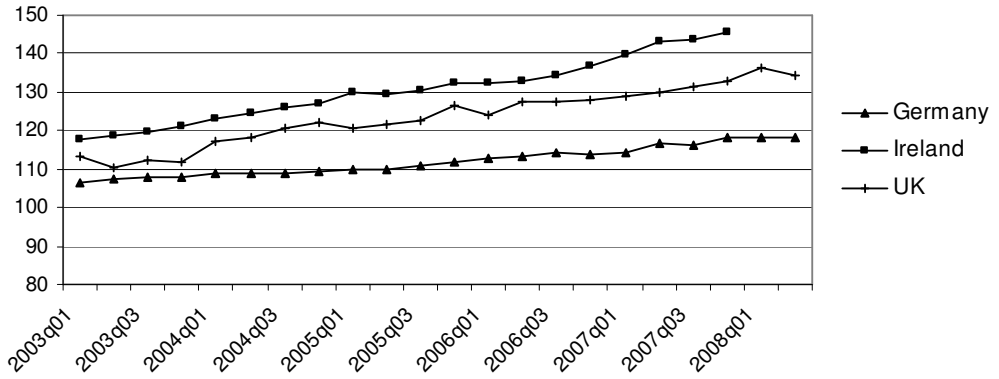
Notes: In percent, 2003Q1-2008Q2. For definitions see notes to Figure 7. The data for Ireland and EU15 are not available. For Germany, provisional values are reported.

Figure 9. Labour cost index in selected old member states



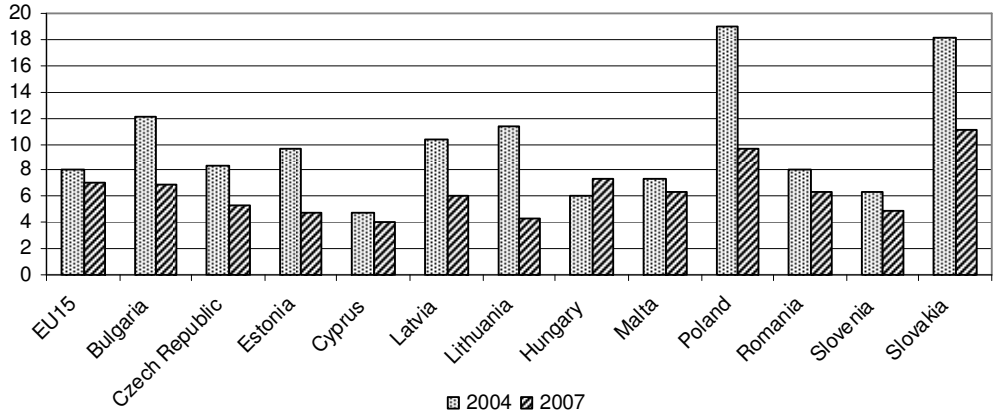

Source: Authors calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Labour costs available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL
Notes: Wages and salaries, 2003Q1-2008Q2. Index 2000=100. Wages and salaries in industries and services excluding public administration, seasonally adjusted and adjusted by working days, nominal value. Data for EU15 is not available.

Figure 10: Labour cost index in manufacturing in selected old member states




Source: Authors calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Labour costs available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL
Notes: Wages and salaries in manufacturing, 2003Q1-2008Q2. Index 2000=100. Wages and salaries in manufacturing, seasonally adjusted and adjusted by working days, nominal value. Data for EU15 not available.

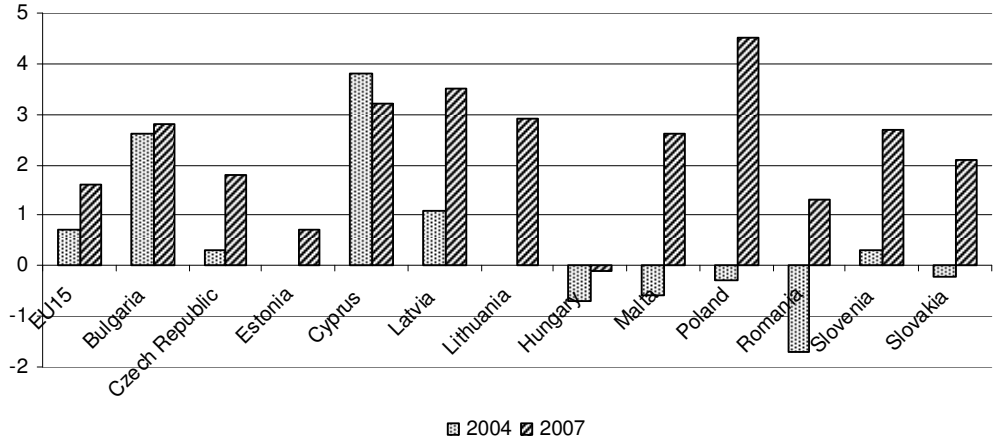
Figure 11. Unemployment rate in new member states




Source: Authors calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Employment and unemployment (Labour Force Survey) available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL

Notes: In percent, 2004 and 2007. Annual data, not seasonally adjusted. Unemployment rates represent unemployed persons as a percentage of the labour force.

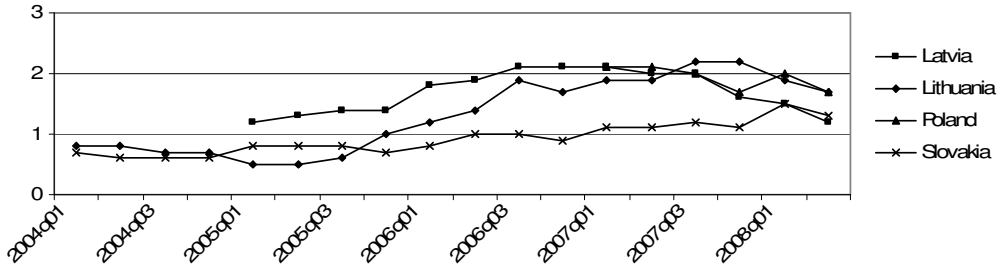
Figure 12: Employment growth in the new member states



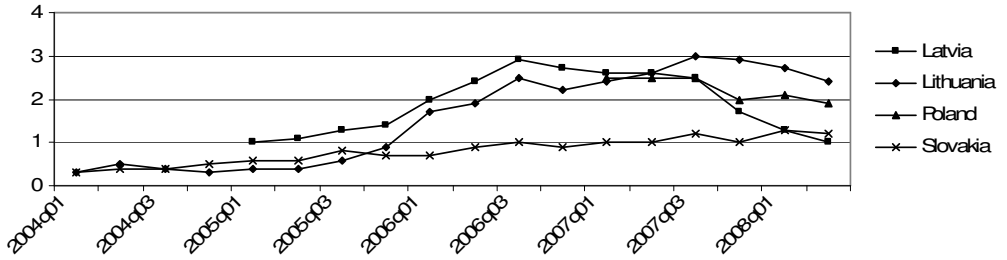

Source: Authors calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Employment and unemployment (Labour Force Survey) available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL

Notes: In percent, 2004 and 2007. The indicator employment growth gives the change in percentage from one year to another of the total number of employed persons on the economic territory of the country or the geographical area. The indicator is based on the European System of Accounts.

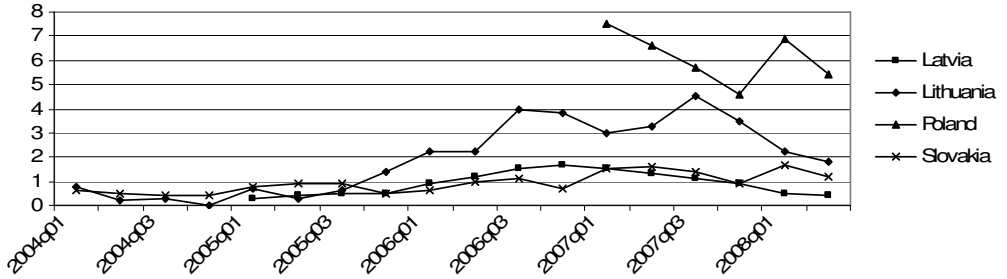
Figure 13: Job vacancy rate in selected new member states
a. Total




b. Manufacturing

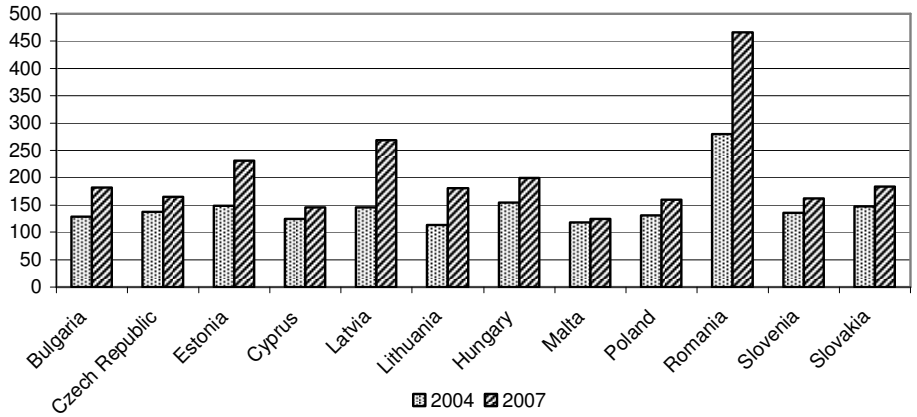



c. Construction



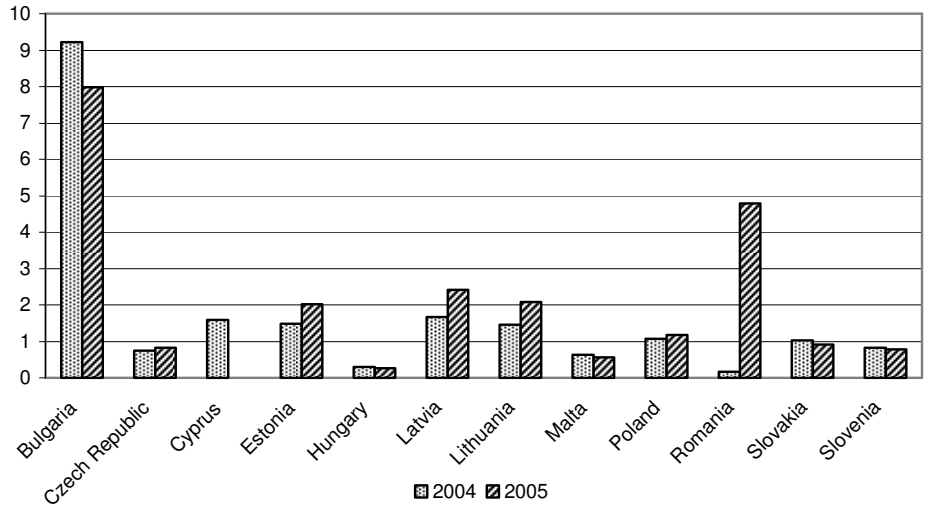

Source: Authors' calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Job vacancy statistics available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL
Notes: In percent, 2004Q1-2008Q2.

Figure 14. Labour costs index in the new member states




Source: Authors' calculations based on data from Eurostat online database for Population and Social Conditions / Labour Market / Labour costs available at: http://epp.eurostat.ec.europa.eu/portal/page?_pageid=1090,30070682,1090_30298591&_dad=portal&_schema=PORTAL
Notes: Wages and salaries, 2004 and 2007. Index 2000=100.

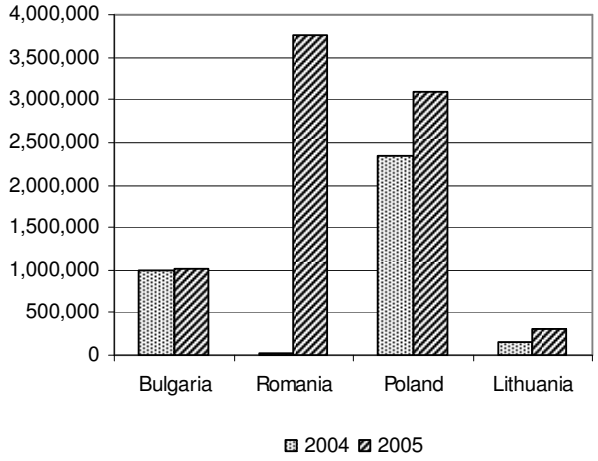
Figure 15: Remittances to the new member states



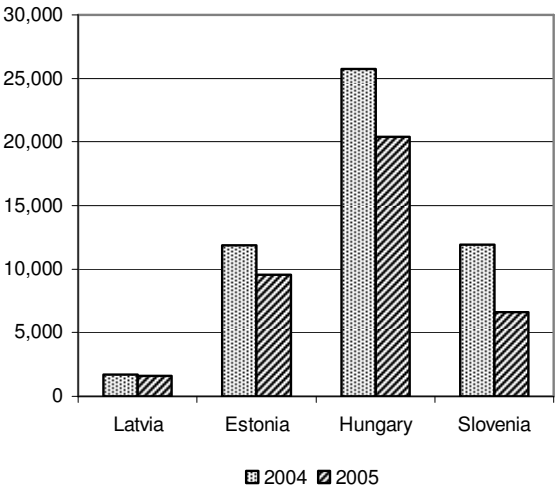

Source: World Bank World Development Indicators CD-ROM 2007.
Notes: In percent of GDP, 2004 and 2005.

Figure 16: Workers' remittances to selected new member states

a. High




b. Low




Source: World Bank World Development Indicators CD-ROM 2007.
Notes: In 1,000 current US Dollars, 2004 and 2005.

## 10. About the Authors

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