

**Labour mobility within the EU in the context of enlargement and the functioning  
of the transitional arrangements**

**VC/2007/0293**

Deliverable 2

Institute for Employment Research (IAB)

**Analysis of the scale, direction and structure of labour mobility**

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**Abstract**

This background report is part of the study "Labour mobility within the EU in the context of enlargement and the functioning of transitional arrangements" (VC/2007/0293). The objective of this report is to provide an overview on the main patterns of labour migration in the context of the EU Eastern enlargement and on the fundamental economic forces which cause these patterns.

The income gap between the EU-15 and the new member states from Central and Eastern Europe is larger than in previous enlargement rounds. In particular, the nominal gap in per capita GNI and wage levels is high, reflecting poor capital endowments and particularly large productivity differences in the tradable sectors. Although economic incentives to migrate are considerable at present, we also observe a fast convergence of per capita GDP and wage levels which mitigate migration incentives over time. Particularly wages have converged very fast since the enlargement. Convergence between the EU-15 and the new member states is faster than convergence between the EU-15 and the candidate countries in South-Eastern Europe. Transport costs have declined since enlargement and depend less on geographical distance. This may be one of the reasons for the fast shift in migration away from destinations neighbouring the new member states toward destinations such as Ireland, the UK and Spain.

The stock of foreign residents from the NMS-8 in the EU-15 has increased from 893,000 persons in 2003 to about 1.91 million persons in 2007, or by 254,000 persons p.a. The number of foreign residents from Bulgaria and Romania has increased from 702,000 to about 1.86 million persons during the same period of time, or by 290,000 persons p.a. This increase in migration is associated with a shift in the regional structure of migration, i.e. away from Austria and Germany towards Ireland and the UK in case of migrants from the NMS-8, and towards Spain and Italy in case of migrants from Bulgaria and Romania. Migrants from the NMS are highly concentrated at the medium level of the skill spectrum, i.e. in the group with a vocational training degree. They are highly concentrated in the young age groups. The unemployment risk of migrant workers from the NMS is slightly higher than that of the native labour force in the EU-15 on average, but below that of the main other foreigner groups in the EU.

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## 1 Introduction

This background report provides an overview on the key trends in labour mobility in the enlarged European Union (EU) and on the fundamental economic forces which affect these mobility patterns in one way or another. The description of mobility patterns presented here serves as a starting point for the further analysis which is carried out in the later sections of this study.

Throughout the analysis, we distinguish four groups of countries: The first group contains the fifteen EU member states which belonged to the Community before May 2004 (EU-15), the second group includes the eight new member states from Central and Eastern Europe (NMS-8)<sup>1</sup> which joined at the 1<sup>st</sup> of May, 2004. The third group consist of Bulgaria and Romania (NMS-2), which acceded in 2007, and the final group comprises the six candidate and potential candidate countries from South-Eastern Europe (CAND-6).<sup>2</sup>

Our analysis starts with a presentation of the main economic forces which affect labour mobility within the enlarged EU and between the EU and the candidate countries from South-Eastern Europe. Migration theories state that migration decisions are driven by expectations on income levels in the relative destinations and the social and economic costs of migration. We therefore examine the present gap in per capita income levels and the convergence of income levels which may affect expectations on future developments. Finally, we analyse new patterns of transport costs which arise from the emergence of low-cost carriers in air transport. As a consequence, geographical proximity may loose its important role in determining geographical migration patterns in Europe (Section 2).

Section 3 presents the main migration trends in the enlarged EU and between the EU and the candidate countries. Based on the available data from population statistics and Labour Force Survey (LFS) data we present the development of migration stocks in the enlarged EU from the NMS-8, NMS-2 and the candidate countries both from a receiving and sending country perspective. In the next step we analyse the skill, age and gender patterns of migration from the NMS and the candidate countries (Section 4). Finally, we analyse the labour market performance of the migrant communities from the NMS within the EU-15 based on standard indicators on unemployment and labour market participation (Section 5).

The analysis presented here – as any other analysis on migration patterns in Europe – is hampered by several shortcomings in the available data. In particular, only a minority of the EU member states report data on the stocks and flows of migrants by country of origin in their population statistics. This concerns also destinations particularly relevant in the context of the EU's eastern enlargement such as Ireland and the UK. Large parts of

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<sup>1</sup> Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, Slovenia.

<sup>2</sup> Albania, Bosnia-Herzegovina, Croatia, the former Yugoslav Republic of Macedonia, Serbia and Montenegro, Turkey.

our analysis rely therefore on LFS data, which may especially underreport migrants from small countries. Moreover, the concept of nationality differs in the EU member states, such that the available data are not entirely comparable across countries. Finally, illegal migration is not reported in official data by definition and reliable estimates for the scale of illegal migrants from the NMS and the candidate countries do not exist. We therefore do not cover illegal migration in our analysis. Nevertheless, the available data sources enables us to sketch a picture on the scale of labour mobility and migration in the context of EU enlargement, as well as a picture on the skill and age structure of migration. The reader should however consider the caveats which result from the shortcomings of the available data.

## **2 The economic incentives to migrate**

Migration theory suggests that monetary and non-monetary arguments affect migration decisions (Sjaastadt, 1962; Stark, 1991). Individuals form expectations on income levels at different destinations which are determined by the respective wage levels and employment opportunities (Harris/Todaro, 1970). Moreover, since migration involves sunk costs, expectations on the future development of wages and employment opportunities are relevant (Burda, 1995). If migrants are heterogeneous with regard to their preferences or productivity, an equilibrium stock of migrants emerges eventually which is determined by the differences in income levels, labour market conditions and other factors which affect the benefits and costs from migration (Brücker/Schröder, 2006). We therefore describe here the current income gap within the enlarged EU and between the EU and the candidate countries as a starting point (Section 2.1). In the next step we analyse the factor endowments in the sending countries, particularly the endowments with human capital, since this may provide a first hint regarding the migration potential by skill levels (Section 2.2). On this basis we analyse the convergence of per capita GDP and wage levels in the EU (Section 2.3) and the convergence of employment opportunities (Section 2.4). Finally, we discuss the implications of new patterns of transport costs for the geographical structure of migration in the enlarged EU (Section 2.5).

### **2.1 The income gap in the enlarged EU**

The income gap between the EU-15 and the new member states from Central and Eastern Europe creates substantial monetary incentives for labour mobility. Measured at purchasing power parity standards (PPS), Eurostat (2008) estimates the GNI per capita in the ten new member states from Central and Eastern Europe (NMS-10) at 48 per cent of that in the EU-15 in 2007. The GNI per capita of the eight new member states (NMS-8) which joined the EU in 2004 amounted to 53 per cent at PPS in 2007, and that of Bulgaria and Romania to about 34 per cent of that in the EU-15 at the same time. The PPS estimate of the per capita GNI of the candidate and potential candidate countries by Eurostat amounted to 38 per cent of the respective level in the EU-15, such that the

income gap between the EU-15 and the NMS-2 resembles roughly that between the EU-15 and the candidate countries.

Purchasing power parity estimates tend to understate monetary incentives for labour mobility, since migrants can consume a part of their earnings in their home countries or remit a part of the income to their families. Consequently, differences in earnings at current exchange rates may affect migration decisions as well. At current exchange rates, the GNI per capita of the NMS-10 amounted to slightly more than one quarter of that in the EU-15 in 2007. The GNI per capita at market prices of the NMS-8 is reported to be at 31 per cent in 2007, and that of the NMS-2 at 17 per cent. The GNI per capita at market prices of the CAND-6 countries amounted to 22 per cent of those in the EU-15 at the same time (see Table 1).

The wage gap is even larger. The average level of hourly gross wages and salaries in the NMS-8 was 25 per cent of that in the EU-15 in 2006, and that of the NMS-2 at about 11 per cent. Note that substantial differences in wage and GNI levels across the new member states and the candidate countries exist, ranging from a wage of 8 per cent of the average level in the EU-15 in Bulgaria to 57 per cent in Slovenia.

Altogether, a relatively moderate GNI gap between the old and the new member states measured in purchasing power parities translates in a much larger GNI gap at current exchange rates. Low-income countries usually have a higher income in purchasing power parities than at current exchange rates, since the productivity gap to high-income countries is lower in non-tradable sectors (e.g. services) compared to tradable sectors (e.g. manufacturing industries). In case of the NMS this income gap is nevertheless strikingly high. Moreover, the high wage and GNI gap reflects rather poor endowments with physical capital in the new member states.

**Table 1: GNI per capita, hourly gross wages and salaries and net migration in the EU, the other EEA and the candidate countries, 2007**

|                    | GNI per capita at PPS <sup>1</sup> |                  | GNI per capita |                  | hourly gross wages and salaries <sup>2</sup> |               | net migration <sup>3</sup> |                    |
|--------------------|------------------------------------|------------------|----------------|------------------|--|---------------|----------------------------|--------------------|
|                    | in EUR                             | in % of EU-15    | in EUR         | in % of EU-15    | in EUR                                       | in % of EU-15 | in 1,000                   | rate per 1,000     |
| Austria            | 31,400                             | 114 <sup>f</sup> | 32,400         | 112 <sup>f</sup> | 15.00  | 103           | 29                         | 3.59               |
| Belgium            | 29,900                             | 108              | 31,500         | 109              | 17.53  | 120           | 53                         | 5.12               |
| Denmark            | 31,400                             | 114              | 42,500         | 147              | 24.23  | 166           | 10                         | 1.87               |
| France             | 27,700                             | 100              | 29,900         | 103              | 17.58  | 121           | 90                         | 17.24              |
| Finland            | 29,600                             | 107              | 34,000         | 117              | 15.46  | 106           | 11                         | 0.18               |
| Germany            | 28,600                             | 104              | 29,700         | 102              | 16.56  | 114           | 26                         | 0.31               |
| Greece             | 23,800                             | 86               | 20,000         | 69               | 5.71   | 39            | 40                         | 3.62               |
| Ireland            | 31,000                             | 112              | 36,500         | 126              | 17.55  | 121           | 69                         | 16.93              |
| Italy              | 25,100                             | 91               | 25,700         | 89               | 9.86   | 68            | 377                        | 6.56               |
| Luxembourg         | 56,300                             | 204              | 60,400         | 208              | 25.25  | 173           | 5                          | 11.81              |
| Netherlands        | 33,300                             | 121              | 34,800         | 120              | 17.71  | 122           | -26                        | -1.59              |
| Portugal           | 17,600                             | 64               | 14,700         | 51               | 6.72   | 46            | 26                         | 2.48               |
| Spain              | 25,200                             | 91               | 22,800         | 79               | 10.88  | 75            | 605                        | 14.17              |
| Sweden             | 31,300                             | 113              | 37,100         | 128              | 17.68  | 121           | 51                         | 5.65               |
| United Kingdom     | 29,400                             | 107              | 33,400         | 115              | 16.84  | 116           | 214                        | 3.57               |
| <b>EU-15</b>       | <b>27,600</b>                      | <b>100</b>       | <b>29,000</b>  | <b>100</b>       | <b>14.56</b>                                 | <b>100</b>    | <b>1580</b>                | <b>4.12</b>        |
| Cyprus             | 22,100                             | 80               | 19,200         | 66               | 8.28   | 57            | 6                          | 7.26               |
| Malta              | 18,700                             | 68               | 12,800         | 44               | 7.27   | 50            | 1                          | 2.49               |
| Czech Republic     | 18,700                             | 68 <sup>f</sup>  | 11,500         | 40 <sup>f</sup>  | 3.71   | 25            | 35                         | 3.40               |
| Estonia            | 16,700                             | 61               | 10,900         | 38               | 3.51   | 24            | 0                          | 0.12               |
| Hungary            | 14,800                             | 54               | 9,300          | 32               | 4.16   | 29            | 21                         | 2.11               |
| Latvia             | 13,900                             | 50               | 8,000          | 28               | 2.92   | 20            | -2                         | -1.06              |
| Lithuania          | 14,300                             | 52               | 9,300          | 32               | 2.95   | 20            | -5                         | -1.41              |
| Poland             | 12,900                             | 47               | 7,700          | 27               | 3.34   | 23            | -36                        | -0.95              |
| Slovak Republic    | 16,400                             | 59               | 9,800          | 34               | 3.42   | 24            | 4                          | 0.72               |
| Slovenia           | 22,000                             | 80               | 16,300         | 56               | 8.31   | 57            | 6                          | 3.14               |
| <b>NMS-8</b>       | <b>14,700</b>                      | <b>53</b>        | <b>9,000</b>   | <b>31</b>        | <b>3.65</b>                                  | <b>25</b>     | <b>23</b>                  | <b>0.31</b>        |
| Bulgaria           | 9,300                              | 34               | 3,700          | 13               | 1.11   | 8             | -34                        | -4.35              |
| Romania            | 9,600                              | 35 <sup>f</sup>  | 5,400          | 19 <sup>f</sup>  | 1.76   | 12            | -100                       | -4.61              |
| <b>NMS-2</b>       | <b>9,400</b>                       | <b>34</b>        | <b>5,000</b>   | <b>17</b>        | <b>1.60</b>                                  | <b>11</b>     | <b>-134</b>                | <b>-4.54</b>       |
| <b>NMS-10</b>      | <b>13,200</b>                      | <b>48</b>        | <b>7,800</b>   | <b>27</b>        | <b>3.03</b>                                  | <b>21</b>     | <b>-111</b>                | <b>-1.08</b>       |
| <b>EU-25</b>       | <b>25,600</b>                      | <b>93</b>        | <b>25,900</b>  | <b>89</b>        | <b>12.74</b>                                 | <b>88</b>     | <b>1470</b>                | <b>3.02</b>        |
| <b>EU-27</b>       | <b>24,600</b>                      | <b>89</b>        | <b>24,600</b>  | <b>85</b>        | <b>12.12</b>                                 | <b>83</b>     | <b>1477</b>                | <b>3.03</b>        |
| Iceland            | 32,000                             | 116              | 46,900         | 162              | n.a.   | n.a.          | 5                          | n.a.               |
| Norway             | 45,700                             | 166              | 60,400         | 208              | 26.14  | 179           | 24                         | n.a.               |
| Switzerland        | 34,700                             | 126              | 41,500         | 143              | 22.59  | 155           | 37                         | n.a.               |
| Albania            | n.a.                               | n.a.             | n.a.           | n.a.             | n.a.   | n.a.          | -20                        | -6.43 <sup>4</sup> |
| Bosnia-Herzegovina | n.a.                               | n.a.             | n.a.           | n.a.             | n.a.   | n.a.          | 8                          | 2.05 <sup>4</sup>  |
| Croatia            | 13,900                             | 50 <sup>f</sup>  | 8,600          | 30               | n.a.   | n.a.          | 7                          | 1.64               |
| Macedonia          | 7,300                              | 26 <sup>f</sup>  | 2,700          | 9 <sup>f</sup>   | n.a.   | n.a.          | -1                         | -0.26              |
| Serbia-Montenegro  | n.a.                               | n.a.             | n.a.           | n.a.             | n.a.   | n.a.          | -20                        | -2.45 <sup>4</sup> |
| Turkey             | 10,500                             | 38 <sup>f</sup>  | 6,500          | 22 <sup>f</sup>  | n.a.   | n.a.          | -3                         | -0.04              |
| <b>CAND-6</b>      | <b>10,600</b>                      | <b>38</b>        | <b>6,500</b>   | <b>22</b>        | <b>n.a.</b>                                  | <b>n.a.</b>   | <b>-28</b>                 | <b>-0.30</b>       |

1) Purchasing power parity standards (Eurostat estimate).

2) 2006: Hourly labour cost according to Eurostat.

3) 2005.

4) 2005 (World Development Indicators, 2007).

f) forecast.

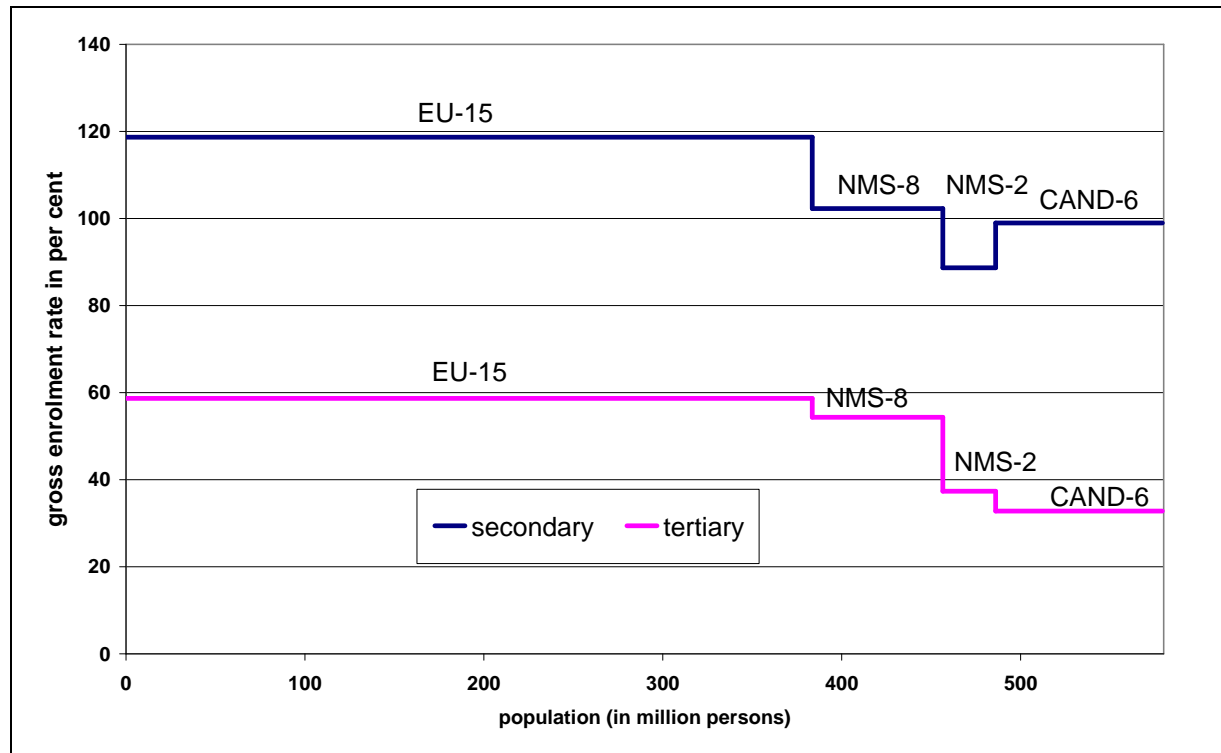
Sources: GNI and hourly labour costs: Eurostat, net migration: Eurostat, supplemented by WDI. Own calculations and presentation.

## 2.2 Human capital investment

The difference in the income levels between the EU-15, the new member states and the candidate countries can be largely traced back to differences in factor endowments. Although data on physical capital stocks is scarce, it is likely that the substantial gap in GNI and wages can be largely traced back to differences in capital endowments.

However, one important feature sets the NMS apart from traditional emigration countries: The NMS have a human capital endowment which is only slightly below that of the EU-15. In particular, school enrolment rates catch-up to average levels in the EU-15, such that existing differences will decline over time.

**Figure 1: Gross enrolment rates in secondary and tertiary education, 2006**



Source: World Bank 2007. Own calculations and presentation.

Figure 1 displays the gross school enrolment rates<sup>3</sup> in secondary and tertiary education for the EU-15, the NMS-8, the NMS-2 and the CAND-6 countries, which have been compiled by the World Bank in the World Development Indicators 2007. The gap in both secondary and tertiary school enrolment rates between the EU-15 and the NMS-8 is very moderate. Note that substantial differences across individual EU-15 countries exist. However, there is a gap in the enrolment rates in tertiary education between the EU-15 and the NMS-2 and the candidate countries of about 20 percentage points, which reflects particularly large differences in university education. However, we observe an increasing school enrolment in all new member states, such that a convergence or even an overtaken in school enrolment is rather likely in the future.<sup>4</sup>

Compared to other countries of a similar income level the new member states possess rich endowments with human capital. This may have two consequences which are relevant in the context of this study: The rich human capital endowment may support faster convergence of per capita income levels, and it may result in the emigration of a

<sup>3</sup> Note that gross school enrolment rates can exceed 100 per cent.

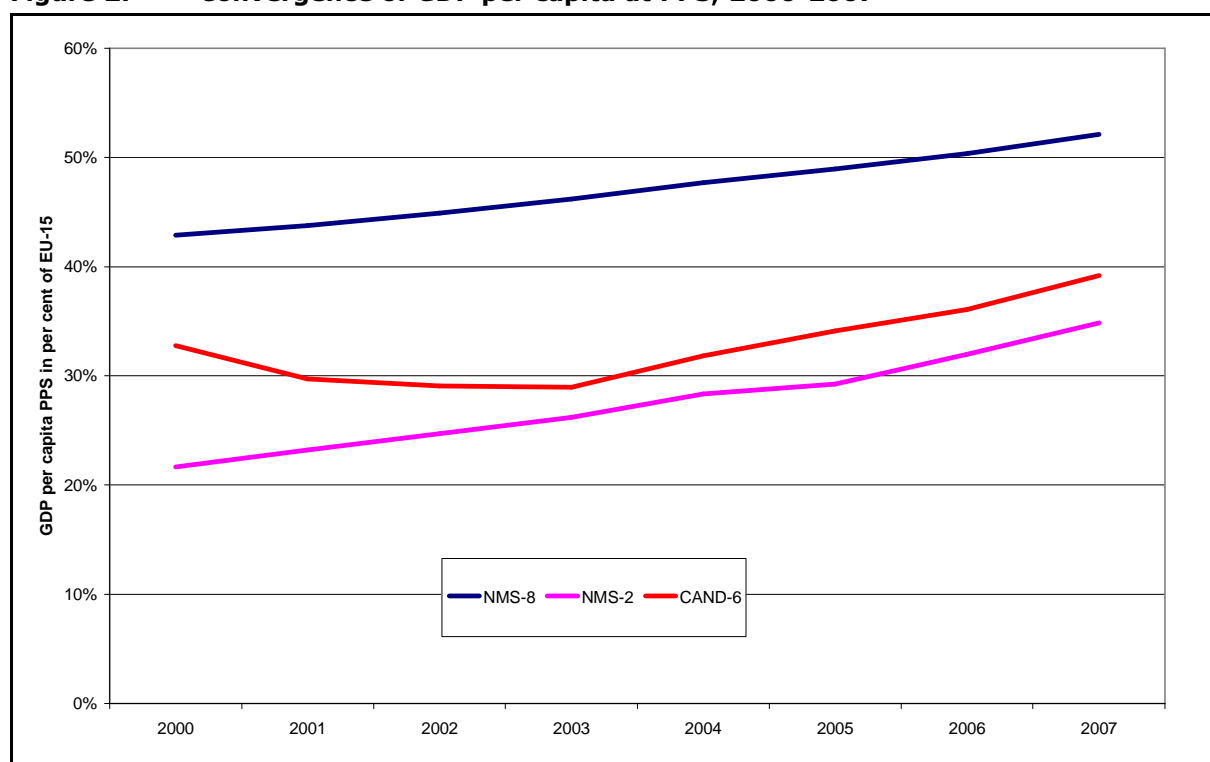
<sup>4</sup> The trends in school enrolment will be discussed in the report to Deliverable 7.

relatively well-educated workforce compared to the traditional sending countries of labour migration in Northern Africa and South-Eastern Europe.

### 2.3 Convergence of GDP per capita and wage levels

We find indeed strong evidence that GDP and wage levels between the old and the new member states tend to converge. In the year 2000, the GDP per capita of the NMS-8 measured in PPS amounted to 43 per cent of that in the EU-15, while it is forecasted to achieve 52 per cent in the year 2007. A similar convergence trend can be observed for Bulgaria and Romania. Interestingly enough, in the candidate and potential candidate countries we observe a slower speed of convergence compared to the new member states since the beginning of this millennium (see Figure 2).

**Figure 2: Convergence of GDP per capita at PPS, 2000-2007<sup>5</sup>**



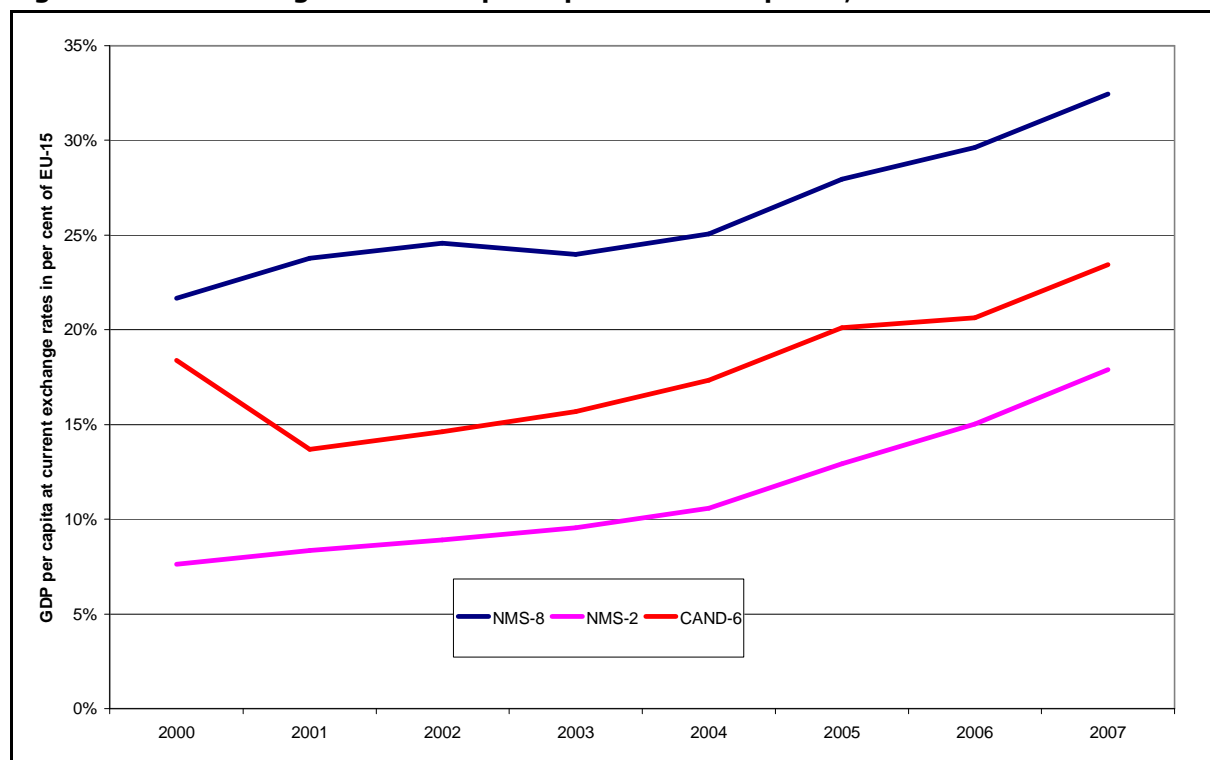
Source: Eurostat 2008. Own calculations and presentation.

A similar picture emerges regarding the convergence of the GDP per capita at current exchange rates: The initial gap in the year 2000 declined both in case of the NMS-8 and the NMS-2 by 10 percentage points until 2007, but only by 5 percentage points in case of the candidate countries during the same time span (see Figure 3).

<sup>5</sup> Values for 2007 are forecasted by Eurostat.



**Figure 3: Convergence of GDP per capita at market prices, 2000-2007<sup>6</sup>**



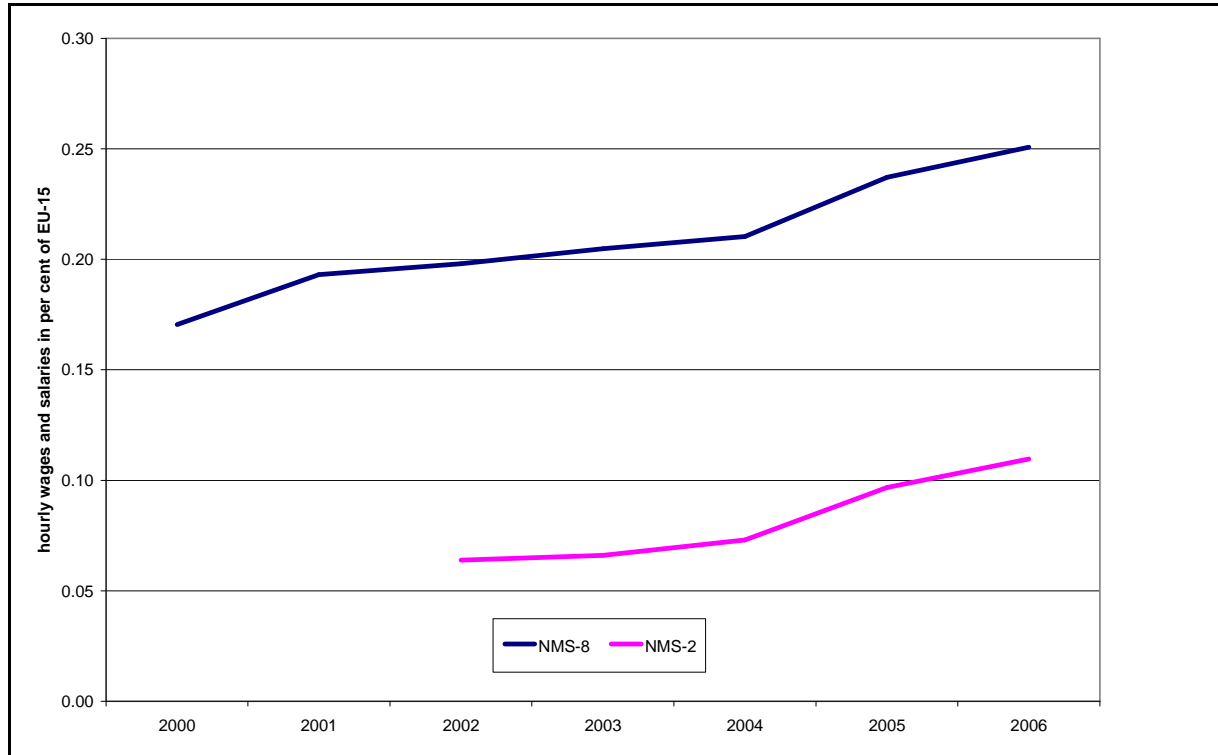
Source: Eurostat 2008. Own calculations and presentation.

We do not investigate the causes of per capita GDP convergence at this stage of our analysis. A number of factors may have contributed to the fast GDP convergence in the new member states, inter alia the rich human capital endowments, the transfers of the EU in the context of the integration of the NMS into the Common Agricultural Policy (CAP) and the regional policies as well as private capital mobility and private investment. Whether migration has contributed to the convergence of GDP levels and wages will be discussed in detail in Deliverable 4. However, it is important to note that the fast convergence of GDP levels between the EU-15 and the NMS-8 and the NMS-2 mitigates economic incentives to migrate considerably over time.

The impact of convergence on migration incentives is even larger if we look at the development of wages: The hourly gross wages and salaries have increased between 2000 and 2006 in the NMS-8 by almost 10 percentage points, and in case of the NMS-2 by 5 percentage points between 2002 and 2006. In particular, wages have jumped in the NMS-8 after enlargement in 2004. Labour mobility may have contributed to this wage hike (see Deliverable 4), but is sincerely not the only cause: Transfers into the NMS and capital mobility may have contributed to the increasing wages as well (see Figure 4). But the rapid convergence since 2004 is to be interpreted carefully as it refers only to two observations.

<sup>6</sup> Values for 2007 are forecasted by Eurostat.

**Figure 4: Convergence of wage levels, 2000-2006**



Source: Eurostat 2008. Own calculations and presentation.

## 2.4 Convergence of labour market conditions

The labour market conditions between the EU-15 and the new member states have also converged since the trough of the transitional recession. Unemployment rates both in the NMS-8 and the NMS-2 meanwhile match the average unemployment rates in the EU-15 (see Table 2). Participation rates are – due to a higher female participation in the labour force – higher in the NMS compared to the EU-15. Altogether, unemployment risks do not create specific migration incentives in the NMS.

However, two aspects are worthwhile to mention in this context: First, replacement rates are in the NMS well below those in the EU-15 (OECD, 2008). This may not only create additional migration incentives for those who are unemployed or suffer from an unemployment risk. It may also result in an underreporting of unemployment in the NMS. Second, migrants can optimise with regard to wage levels and unemployment risks across locations. In particular, migrants from the NMS-8 cluster in countries and regions with high wage levels and low unemployment rates in the EU-15, such that a comparison of average unemployment and wage rates between the EU-15 and the NMS is misleading.

**Table 2: Unemployment rates in the EU, the NMS and the candidate countries, 2000-2007**

|                   | 2000         | 2001         | 2002         | 2003         | 2004         | 2005         | 2006        | 2007        |
|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-------------|
| Austria           | 3.60         | 3.60         | 4.20         | 4.30         | 4.80         | 5.20         | 4.70        | 4.40        |
| Belgium           | 6.90         | 6.60         | 7.50         | 8.20         | 8.40         | 8.40         | 8.20        | 7.50        |
| Denmark           | 4.30         | 4.50         | 4.60         | 5.40         | 5.50         | 4.80         | 3.90        | 3.70        |
| France            | 9.00         | 8.30         | 8.60         | 9.00         | 9.30         | 9.20         | 9.20        | 8.30        |
| Finland           | 9.80         | 9.10         | 9.10         | 9.00         | 8.80         | 8.40         | 7.70        | 6.90        |
| Germany           | 7.50         | 7.60         | 8.40         | 9.30         | 9.70         | 10.70        | 9.80        | 8.40        |
| Greece            | 11.20        | 10.70        | 10.30        | 9.70         | 10.50        | 9.80         | 8.90        | n.a.        |
| Ireland           | 4.20         | 4.00         | 4.50         | 4.70         | 4.50         | 4.30         | 4.40        | 4.50        |
| Italy             | 10.10        | 9.10         | 8.60         | 8.40         | 8.00         | 7.70         | 6.80        | n.a.        |
| Luxembourg        | 2.30         | 2.00         | 2.70         | 3.70         | 5.10         | 4.50         | 4.70        | 4.70        |
| Netherlands       | 2.80         | 2.20         | 2.80         | 3.70         | 4.60         | 4.70         | 3.90        | 3.20        |
| Portugal          | 3.90         | 4.00         | 5.00         | 6.30         | 6.70         | 7.60         | 7.70        | 8.00        |
| Spain             | 11.10        | 10.30        | 11.10        | 11.10        | 10.60        | 9.20         | 8.50        | 8.30        |
| Sweden            | 5.60         | 4.90         | 4.90         | 5.60         | 6.30         | 7.40         | 7.10        | 6.10        |
| United Kingdom    | 5.30         | 5.00         | 5.10         | 4.90         | 4.70         | 4.80         | 5.30        | n.a.        |
| <b>EU-15</b>      | <b>7.70</b>  | <b>7.20</b>  | <b>7.60</b>  | <b>7.90</b>  | <b>8.00</b>  | <b>8.10</b>  | <b>7.70</b> | <b>7.00</b> |
| Cyprus            | 4.90         | 3.80         | 3.60         | 4.10         | 4.60         | 5.20         | 4.60        | 3.90        |
| Malta             | 6.70         | 7.60         | 7.50         | 7.60         | 7.40         | 7.30         | 7.30        | 6.30        |
| Czech Republic    | 8.70         | 8.00         | 7.30         | 7.80         | 8.30         | 7.90         | 7.10        | 5.30        |
| Estonia           | 12.80        | 12.40        | 10.30        | 10.00        | 9.70         | 7.90         | 5.90        | 4.90        |
| Hungary           | 6.40         | 5.70         | 5.80         | 5.90         | 6.10         | 7.20         | 7.50        | 7.20        |
| Latvia            | 13.70        | 12.90        | 12.20        | 10.50        | 10.40        | 8.90         | 6.80        | 5.90        |
| Lithuania         | 16.40        | 16.50        | 13.50        | 12.40        | 11.40        | 8.30         | 5.60        | 4.30        |
| Poland            | 16.10        | 18.20        | 19.90        | 19.60        | 19.00        | 17.70        | 13.80       | 9.60        |
| Slovak Republic   | 18.80        | 19.30        | 18.70        | 17.60        | 18.20        | 16.30        | 13.40       | 11.30       |
| Slovenia          | 6.70         | 6.20         | 6.30         | 6.70         | 6.30         | 6.50         | 6.00        | 4.70        |
| <b>NMS-8</b>      | <b>11.27</b> | <b>12.22</b> | <b>12.94</b> | <b>12.76</b> | <b>12.41</b> | <b>11.61</b> | <b>9.30</b> | <b>6.90</b> |
| Bulgaria          | 16.40        | 19.50        | 18.10        | 13.70        | 12.00        | 10.10        | 9.00        | 6.90        |
| Romania           | 7.20         | 6.60         | 8.40         | 7.00         | 8.10         | 7.20         | 7.30        | n.a.        |
| <b>NMS-2</b>      | <b>9.66</b>  | <b>10.04</b> | <b>10.98</b> | <b>8.77</b>  | <b>9.13</b>  | <b>7.97</b>  | <b>7.75</b> | <b>n.a.</b> |
| <b>NMS-10</b>     | <b>10.80</b> | <b>11.58</b> | <b>12.37</b> | <b>11.61</b> | <b>11.47</b> | <b>10.56</b> | <b>8.85</b> | <b>n.a.</b> |
| Iceland           | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.        | n.a.        |
| Norway            | 3.40         | 3.60         | 3.90         | 4.50         | 4.40         | 4.60         | 3.50        | 2.60        |
| Switzerland       | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.        | n.a.        |
| Albania           | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.        | n.a.        |
| Bosnia-Herzegovir | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.        | n.a.        |
| Croatia           | na           | na           | 14.70        | 14.10        | 13.60        | 12.60        | 11.10       | 9.10        |
| Macedonia         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.        | n.a.        |
| Serbia-Montenegr  | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.        | n.a.        |
| Turkey            | 5.20         | 6.80         | 8.90         | 9.30         | 9.00         | 8.80         | 8.40        | n.a.        |
| <b>CAND-6</b>     | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b> | <b>n.a.</b> |
| <b>EU-25</b>      | <b>8.60</b>  | <b>8.40</b>  | <b>8.70</b>  | <b>9.00</b>  | <b>9.00</b>  | <b>8.90</b>  | <b>8.20</b> | <b>7.20</b> |
| <b>EU-27</b>      | <b>8.60</b>  | <b>8.50</b>  | <b>8.90</b>  | <b>8.90</b>  | <b>9.00</b>  | <b>8.90</b>  | <b>8.20</b> | <b>7.10</b> |

Source: Eurostat 2008. Own calculations and presentation.

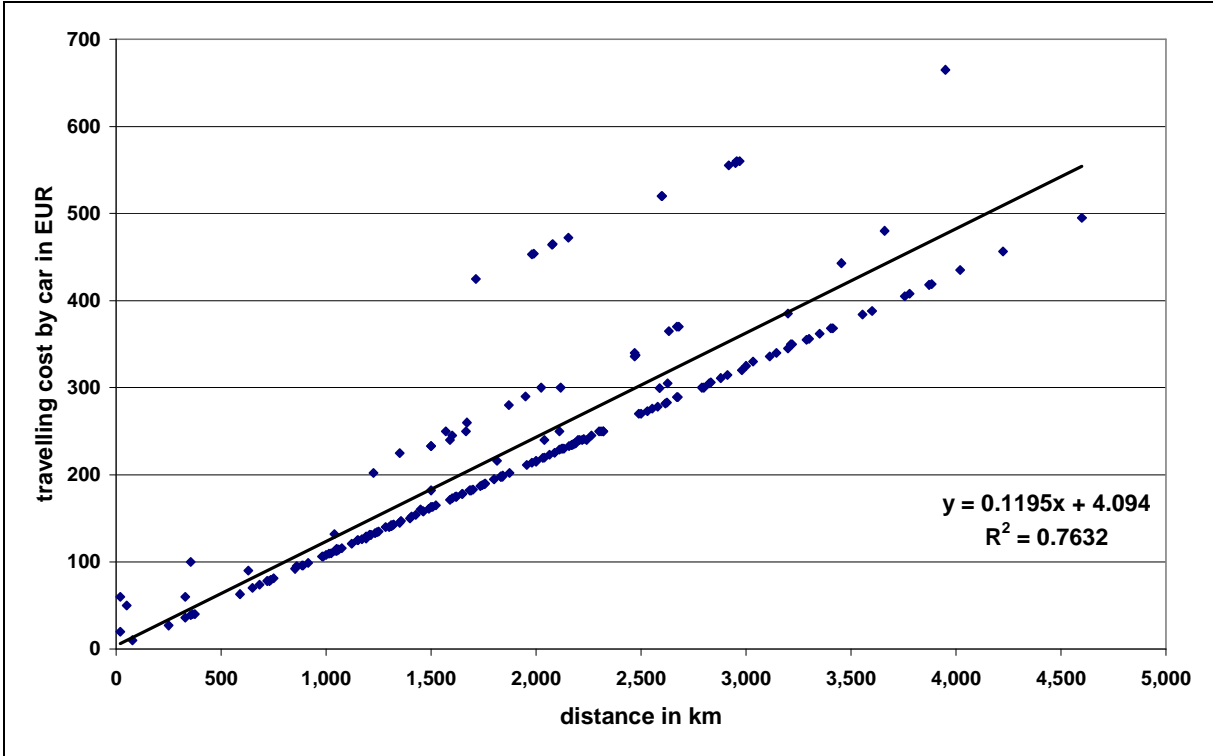
## 2.5 The eroding role of distance

Theories of the migration decision traditionally highlight the role of migration costs, particularly the costs of distance (Sjaastadt, 1962; Stark, 1991). The social and psychic

costs of moving to an unfamiliar environment play indeed an important role and affect the structure of migration (Brücker/Schröder, 2006). However, the role of geographical distance for migration costs tends to decline with the emergence of low-cost air carriers. Low-budget air transport has two important effects on migration particularly in the European context: First, the role of fixed costs in transport increases, while the role of variable costs diminishes. As a consequence, the impact of geographical distance decreases. Second, due to the high share of fixed costs, transport costs tend to decline with an increasing migrant community. As a consequence, transport costs become endogenous: The more migrants settle in a certain location, the lower are the migration costs. Thus, within the European context, it becomes more and more uncertain where migrants settle.

We have collected data on distance and different types of transport costs to illustrate this point. Geographical distance and the costs for road and air transport are calculated for 13 sending and 15 destination countries, which gives 195 data points. The data are reported in Annex Table 1. Road transport by car is largely determined by variable costs, i.e. gasoline, fares for ferries, and depreciation. Depreciation depends largely – albeit not only – on the kilometres run by the vehicle. We use a standard route planning system to calculate the costs by car, which are – as a consequence of assumptions applied here – largely linear in distance (see Figure 5).

**Figure 5: Transport costs by car and distance**



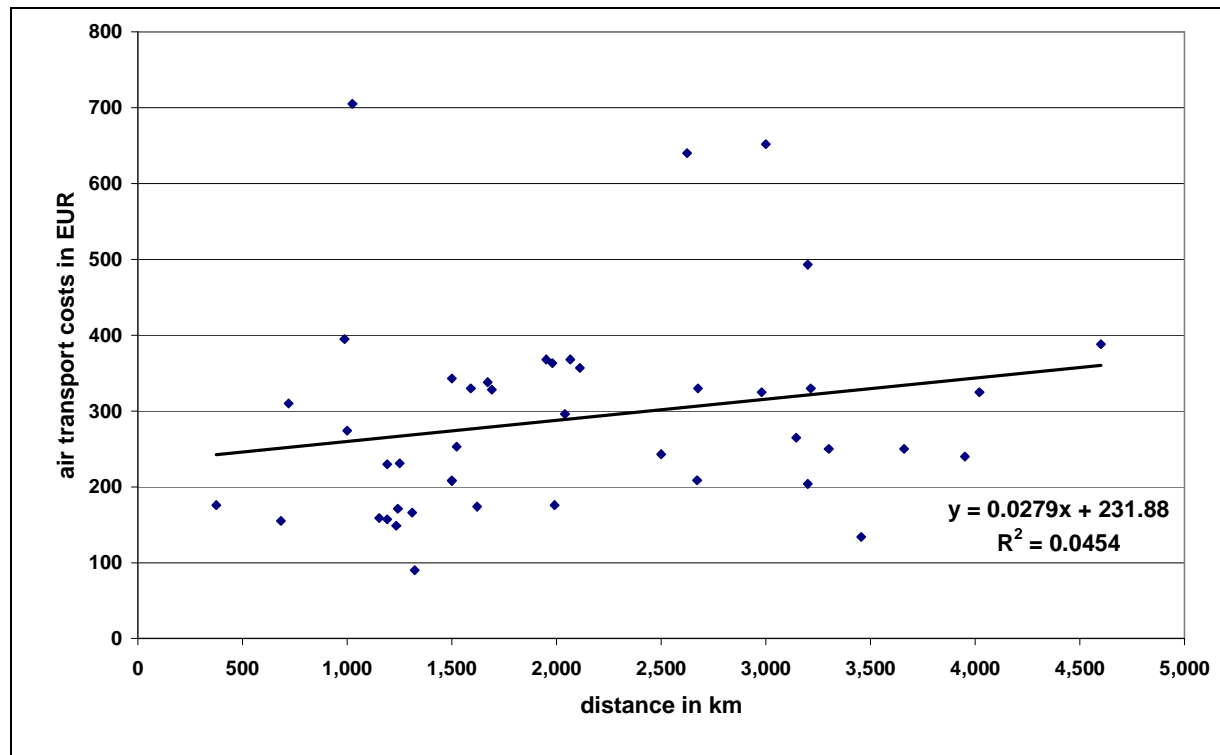
Source: Own calculations based on the Falk-route planning system.

In contrast, there is only a weak correlation between air transport costs and distance. For the calculation we have used the cheapest connection provided by the OPODO booking system. As Figure 5 demonstrates, the costs of air transport are only weakly increasing

with geographical distance. In particular, for the relevant range between 500 and 2,500 kilometres, there is no clear correlation between air fares and distance (see Figure 6).

Of course this illustrative evidence can only sketch the changing role of transport costs. It may, however, have very important implications for the geographical structure of labour mobility in the context of EU enlargement: While past migration patterns in the EU have been largely determined by geographical proximity, the emergence of low-cost carriers makes it more and more likely that migrants choose destinations by other criteria such as language, climate or labour market conditions. Moreover, network effects may become more important, since transport costs depend on the size of the migrant community. Thus, even if Austria or Germany open their labour markets, long-distance destinations such as Ireland and the UK might remain attractive destinations for migrants from the NMS in the future.

**Figure 6: Costs of air transport and distance**



Source: Own calculations based on the OPODO-booking system.

## 2.6 Concluding remarks

Particularly the nominal gap in wages between the EU-15 and the NMS as well as between the EU-15 and the candidate countries creates substantial migration incentives at present. These incentives however diminish over time, since the convergence of wages and employment conditions is fast particularly in the NMS-8. The difference in the speed of convergence between the NMS-8 and candidate countries suggests that Eastern enlargement may have contributed to mitigate monetary migration incentives.

The NMS are, relative to their income levels, well endowed with human capital. This is particularly true for the NMS-8. Their school enrolment rates are only slightly below those of the EU-15 average, and well above those of the Southern EU-15 member states. School enrolment in tertiary education is substantially higher in the NMS-8 compared to the candidate countries and other traditional sending countries of European immigration, e.g. in Northern Africa. This creates a large potential of medium and high skilled migrants particularly in the NMS-8.

The role of geographical distance for transport costs diminishes in Europe due to the emergence of low-cost carriers in air transport. As a consequence, geographical proximity plays a less important role for the choice of migration destinations. Migrants from Central and Eastern Europe may therefore prefer destinations even if the geographical distance is large if other factors such as wages, employment opportunities, language, climate etc. motivate migration. Moreover, the role of network effects increases since transport costs depend more and more on the size of the migrant community.

### **3 The scale of labour mobility**

This section presents the main migration trends in the enlarged EU. The section starts with a brief discussion of the definitions applied in the analysis and limitations of the available data (Section 3.1). We then present the development of migration stocks in the enlarged EU both from the receiving (Section 3.2 - 3.4) and the sending countries (Section 3.5).

#### **3.1 Definitions and data restrictions**

Throughout the analysis, we refer to the concept of citizenship in describing migrations patterns in the context of the EU's eastern enlargement. This excludes a part of the migrants from the new member states residing in the EU-15, e.g. ethnic Germans (so-called "Spätaussiedler") which have migrated from the NMS into the EU-15 during the 1990s. Nevertheless, the free movement of workers and the transitional arrangements refers to the concept of citizenship, such that we believe that a nationality-based concept is most appropriate in the context of our analysis. It is however important to keep in mind that the definition of foreign nationals differs across destination countries in the EU depending on legal traditions and naturalisation practices, such that figures about the stocks of foreign residents are not entirely comparable across the EU member states. Nonetheless, since migration from NMS is a recent phenomenon in most EU countries, these differences have only a minor quantitative impact.<sup>7</sup>

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<sup>7</sup> Germany is the main exception here, since the number of ethnic Germans which have immigrated into Germany has roughly the same size as the immigration of citizens from the NMS during the 1990s. However, the immigration of ethnic Germans has ceased since the beginning of this decade.

Moreover, our analysis is restricted to legal migration. Data on illegal migration are scarce and highly unreliable, such that we cannot cover this phenomenon empirically. Since the free movement of workers is likely to diminish incentives for illegal migration from the NMS, this affects our analysis in several ways. Current immigration flows might be overstated if illegal migrants use the new opportunities to legalise their status of residency and employment in host countries. Similarly, the wage and employment effects of immigration from the NMS may be overstated if legal activities of immigrants replace illegal activities. Finally, migration may have a different impact on public finances if we consider that activities in the shadow economy are replaced by activities in the first labour market.

The figures picturing the migration trends are drawn from different data sources depending on the availability of data. Priority is given to figures which are derived from the population statistics and provided by National Statistical Offices and Eurostat. Unfortunately, these figures are only available for about two-third of the EU-15 countries. For the remaining countries, we report the figures from the European Labour Force Survey (LFS), in case of UK from the UK LFS. The LFS is an EU wide household survey collecting data about labour force participation and other socio-economic factors which was first implemented in 1960 by the six original EU Member States. Today, the survey – hosted by Eurostat – covers all 27 States and is a key research instrument by providing unique time series data about economic and social developments in Europe.

In case of Ireland, the main destination of immigrants from the NMS in relative terms, specific data problems arise. The European LFS does not include data for Ireland for most of the sample periods. Since 2004 we employ data from the Irish Labour Force Survey. Unfortunately, this dataset reports only aggregate figures for the NMS-8 and since 2007 for the NMS-10 such that we use the contingent derived from the Personal Public Service Numbers (PPSN)<sup>8</sup> to disentangle migration from each sending country. Moreover, no information on the skill and age structure is available. Beyond Ireland, there are also a number of other EU member states which do not report the entire information on immigrants from the NMS due to low response rates. However, these countries are relatively small such that this does not much affect the overall results.

Although using three different data sources, it was not possible to obtain information about the stock of foreign residents for all individual sending countries. In some cases, response rates have been too small to cover all countries of origin from the NMS. As a consequence, the aggregate figures of migration stocks from NMS-8, NMS-2, and Cand-6 migrants as reported below may slightly underestimate the actual number of foreign residents in the EU-15.

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<sup>8</sup> The PPS Number is a unique reference number that helps to gain access to social welfare benefits, public services and information in Ireland. State agencies that use PPS Numbers to identify individuals include the Department of Social and Family Affairs, the Revenue Commissioners and the Health Services Executive (HSE) Areas.

Some further restrictions apply to the LFS data sources in our context. First, immigrants may generally be under-represented in the LFS as the survey is usually carried out in the national languages of the host countries. Second, many immigrants from the NMS are employed as seasonal workers, e.g. in agriculture and construction, which are likely to be underreported particularly if the LFS is undertaken off season. Third, the sample design and rotation patterns are not fully harmonised: Various schemes are used to sample the units in the different member states. This may, in turn, lead to a long time span until new migration waves (households) rotate in the sample, resulting in a possible under-representation of migrants in the current year LFS.

In contrast, migration figures in the population statistics may overstate legal migration from the NMS. These statistics on the stocks of residents relies usually on registers of the foreign population, which tend to understate return migration since no incentives exist to deregister.

Our analysis of the skill and age structure of immigrants from the NMS as well as on their employment status is based again on LFS sources. We restrict our analysis to the employed working age population (15-64 age group) in case of skill and age structure, and to the overall working age population in case of employment status. The figures are drawn from a special provision from the European LFS for second quarter 2006. In case of missing information, we use the 2005 values wherever necessary.

### **3.2 Immigration from the NMS-8 into the EU and EEA**

The number of foreign residents from the NMS-8 in the EU-15 has increased from 893,000 persons in the year before Eastern Enlargement (2003) to 1.91 million persons or 0.5 per cent of the population of the EU-15 by the end of 2007. This corresponds to an annual increase of 254,000 persons p.a. on average since Eastern enlargement compared to 62,000 persons p.a. in the years from 2000 to 2003. The stock of migrants from the NMS-8 in the new member states of the EU is at about 100,000 persons small and only slightly increasing. In the remaining member states of the European Economic Area (Iceland, Norway, Liechtenstein) and Switzerland, the number of foreign residents from the NMS-8 has increased from 28,000 to approximately 61,000 persons during the 2003-2007 period (see Tables 3a/b).

Since the beginning of Eastern enlargement in 2003, almost 70 per cent of the immigrants from the NMS-8 have been absorbed by the UK and Ireland. These two countries have replaced Austria and Germany as the main destinations for migrants from the NMS-8. The stock of foreign residents from the NMS-8 increased from 95,000 to about 609,000 persons in the UK since 2000 according to the LFS data and from 44,000 to about 179,000 persons in Ireland since 2004. By the end of 2007, the stock of foreign residents from the NMS-8 achieves 4 per cent of the population in Ireland and about 1 per cent of the population in the UK.



**Table 3a: Foreign residents from the NMS-8 in the EU and EEA, 2000-2007**

| Host country                 | 2000           | 2001           | 2002           | 2003           | 2004           | 2005             | 2006             | 2007                 |
|------------------------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|----------------------|
| <i>in persons</i>            |                |                |                |                |                |                  |                  |                      |
| Austria <sup>1</sup>         | n.a.           | 54,797         | 57,537         | 60,255         | 68,933         | 77,264           | 83,978           | 89,940               |
| Belgium <sup>1</sup>         | 9,667          | 12,102         | 14,106         | 16,151         | 19,524         | 25,638           | 32,199           | 42,918               |
| Denmark <sup>1</sup>         | 9,101          | 9,447          | 9,805          | 9,807          | 11,635         | 14,282           | 16,527           | 22,146               |
| Finland <sup>1</sup>         | 12,804         | 13,860         | 14,712         | 15,825         | 16,459         | 18,266           | 20,801           | 23,957               |
| France <sup>3</sup>          | 37,832         | 44,946         | 44,857         | 33,858         | 43,138         | 36,237           | 44,181           | 36,971               |
| Germany <sup>1</sup>         | 434,603        | 453,110        | 466,356        | 480,690        | 438,828        | 481,672          | 525,078          | 554,372              |
| Greece <sup>3</sup>          | 13,832         | 12,695         | 14,887         | 16,413         | 15,194         | 19,513           | 18,357           | 20,257               |
| Ireland <sup>4</sup>         | n.a.           | n.a.           | n.a.           | n.a.           | 43,500         | 94,000           | 147,900          | 178,504              |
| Italy <sup>2</sup>           | 40,433         | 40,108         | 41,431         | 54,665         | 66,159         | 77,889           | 91,318           | 117,042              |
| Luxembourg <sup>1</sup>      | n.a.           | n.a.           | 1,156          | 1,574          | 2,278          | 3,488            | 4,217            | 5,101 <sup>e</sup>   |
| Netherlands <sup>1</sup>     | 10,063         | 11,152         | 12,147         | 13,048         | 17,814         | 23,155           | 28,344           | 36,317               |
| Portugal                     | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Spain <sup>1</sup>           | 19,284         | 29,998         | 41,471         | 46,710         | 61,830         | 77,772           | 100,832          | 131,118 <sup>e</sup> |
| Sweden <sup>1</sup>          | 23,884         | 22,868         | 21,376         | 21,147         | 23,257         | 26,877           | 33,757           | 42,312               |
| United Kingdom <sup>5</sup>  | 94,792         | 105,048        | 93,340         | 122,465        | 120,999        | 219,797          | 357,468          | 609,415              |
| <b>EU-15</b>                 | <b>706,295</b> | <b>755,334</b> | <b>833,181</b> | <b>892,608</b> | <b>949,548</b> | <b>1,195,850</b> | <b>1,504,957</b> | <b>1,910,370</b>     |
| Island <sup>1</sup>          | 1,865          | 2,232          | 2,462          | 2,547          | 2,644          | 4,251            | 7,803            | 10,782               |
| Norway <sup>1</sup>          | 3,366          | 3,658          | 4,195          | 5,166          | 5,549          | 7,427            | 11,240           | 20,074               |
| Switzerland <sup>1</sup>     | 17,598         | 18,733         | 19,997         | 20,308         | 20,909         | 22,060           | 25,711           | 29,786               |
| <b>EEA-2 and CH</b>          | <b>22,829</b>  | <b>24,623</b>  | <b>26,654</b>  | <b>28,021</b>  | <b>29,102</b>  | <b>33,738</b>    | <b>44,754</b>    | <b>60,642</b>        |
| Cyprus                       | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Malta                        | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| <b>Cyprus and Malta</b>      | <b>n.a.</b>    | <b>n.a.</b>    | <b>n.a.</b>    | <b>n.a.</b>    | <b>n.a.</b>    | <b>n.a.</b>      | <b>n.a.</b>      | <b>n.a.</b>          |
| Czech Republic <sup>1</sup>  | 62,095         | 70,581         | 77,947         | 81,484         | 64,546         | 68,300           | 78,428           | 90,258 <sup>e</sup>  |
| Estonia                      | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Hungary <sup>6</sup>         | 4,632          | 4,715          | 3,739          | 5,001          | 3,596          | 6,346            | 7,445            | 8,755 <sup>e</sup>   |
| Latvia <sup>6</sup>          | n.a.           | n.a.           | 2,524          | 3,121          | n.a.           | 3,755            | 4,119            | 4,526 <sup>e</sup>   |
| Lithuania <sup>6</sup>       | n.a.           | n.a.           | n.a.           | n.a.           | 735            | 934              | 992              | 1,061 <sup>e</sup>   |
| Poland                       | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Slovak Republic <sup>6</sup> | n.a.           | n.a.           | n.a.           | 9,372          | 7,698          | 9,057            | 11,017           | 13,429 <sup>e</sup>  |
| Slovenia <sup>6</sup>        | n.a.           | n.a.           | 418            | 492            | 203            | 656              | 711              | 794 <sup>e</sup>     |
| <b>NMS-8</b>                 | <b>66,727</b>  | <b>75,296</b>  | <b>84,628</b>  | <b>99,470</b>  | <b>76,778</b>  | <b>89,048</b>    | <b>102,712</b>   | <b>118,823</b>       |
| Bulgaria                     | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Romania <sup>6</sup>         | n.a.           | 372            | n.a.           | 372            | 373            | 365              | 362              | 359 <sup>e</sup>     |
| <b>NMS-2</b>                 | <b>n.a.</b>    | <b>372</b>     | <b>n.a.</b>    | <b>372</b>     | <b>373</b>     | <b>365</b>       | <b>362</b>       | <b>359</b>           |

Sources: National population statistics, Eurostat, LFS, own calculations and presentation.

1) National Statistics; 2) 2000-01: Eurostat; 2002-07: National Statistics; 3) LFS annual 4) 2004-07: Irish-LFS 4th Qu. (15+);

5) 2000-07: UK-LFS 2th Qu.; 6) Eurostat; e: estimated

In contrast, Austria and Germany experienced only a modest increase in the number of foreign residents from the NMS-8 during the 2003 – 2007 period. The stock of foreign residents from the NMS-8 has increased by about 30,000 persons in Austria. Germany has revised its migration statistics in 2004 such that the actual increase cannot be calculated properly. Taking the data revision into account, we can estimate the actual increase in the number of foreign residents at 70,000 persons for the 2003 - 2007 period. Foreigners from the new member states achieve meanwhile a share of 1 per cent of the population in Austria and 0.7 per cent in Germany. Other important destinations for migrants from the NMS-8 are Spain (85,000 persons), Italy (62,000 persons), Belgium (26,000 persons), The Netherlands (23,000 person) and Belgium (21,000 persons), but the share of foreign residents from the NMS-8 in the population of these countries does not exceed the EU-15 average of 0.5 per cent.

**Table 3b: Foreign residents from the NMS-8 in the EU and EEA in per cent of the host population, 2000-2007**

| Host country                     | 2000         | 2001         | 2002         | 2003         | 2004         | 2005         | 2006         | 2007               |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------|
| <i>share of total population</i> |              |              |              |              |              |              |              |                    |
| Austria <sup>1</sup>             | n.a.         | 0.68%        | 0.71%        | 0.74%        | 0.84%        | 0.94%        | 1.01%        | 1.08%              |
| Belgium <sup>1</sup>             | 0.09%        | 0.12%        | 0.14%        | 0.16%        | 0.19%        | 0.24%        | 0.31%        | 0.40%              |
| Denmark <sup>1</sup>             | 0.17%        | 0.18%        | 0.18%        | 0.18%        | 0.22%        | 0.26%        | 0.30%        | 0.41%              |
| Finland <sup>1</sup>             | 0.25%        | 0.27%        | 0.28%        | 0.30%        | 0.31%        | 0.35%        | 0.39%        | 0.45%              |
| France <sup>3</sup>              | 0.06%        | 0.07%        | 0.07%        | 0.05%        | 0.07%        | 0.06%        | 0.07%        | 0.06%              |
| Germany <sup>1</sup>             | 0.53%        | 0.55%        | 0.57%        | 0.58%        | 0.53%        | 0.58%        | 0.64%        | 0.67%              |
| Greece <sup>3</sup>              | 0.13%        | 0.12%        | 0.14%        | 0.15%        | 0.14%        | 0.18%        | 0.16%        | 0.18%              |
| Ireland <sup>4</sup>             | n.a.         | n.a.         | n.a.         | n.a.         | 1.07%        | 2.26%        | 3.47%        | 4.09%              |
| Italy <sup>2</sup>               | 0.07%        | 0.07%        | 0.07%        | 0.09%        | 0.11%        | 0.13%        | 0.15%        | 0.20%              |
| Luxembourg <sup>1</sup>          | n.a.         | n.a.         | 0.26%        | 0.35%        | 0.50%        | 0.76%        | 0.90%        | 1.06% <sup>e</sup> |
| Netherlands <sup>1</sup>         | 0.06%        | 0.07%        | 0.08%        | 0.08%        | 0.11%        | 0.14%        | 0.17%        | 0.22%              |
| Portugal                         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Spain <sup>1</sup>               | 0.05%        | 0.07%        | 0.10%        | 0.11%        | 0.14%        | 0.18%        | 0.23%        | 0.29% <sup>e</sup> |
| Sweden <sup>1</sup>              | 0.27%        | 0.26%        | 0.24%        | 0.24%        | 0.26%        | 0.30%        | 0.37%        | 0.46%              |
| United Kingdom <sup>5</sup>      | 0.16%        | 0.18%        | 0.16%        | 0.21%        | 0.20%        | 0.36%        | 0.59%        | 1.00%              |
| <b>EU-15</b>                     | <b>0.20%</b> | <b>0.21%</b> | <b>0.23%</b> | <b>0.24%</b> | <b>0.25%</b> | <b>0.32%</b> | <b>0.40%</b> | <b>0.50%</b>       |
| Island <sup>1</sup>              | 0.66%        | 0.78%        | 0.86%        | 0.88%        | 0.91%        | 1.43%        | 2.57%        | 3.47%              |
| Norway <sup>1</sup>              | 0.07%        | 0.08%        | 0.09%        | 0.11%        | 0.12%        | 0.16%        | 0.24%        | 0.43%              |
| Switzerland <sup>1</sup>         | 0.24%        | 0.26%        | 0.27%        | 0.28%        | 0.28%        | 0.30%        | 0.34%        | 0.39%              |
| <b>EEA-2 and CH</b>              | <b>0.19%</b> | <b>0.20%</b> | <b>0.22%</b> | <b>0.23%</b> | <b>0.24%</b> | <b>0.27%</b> | <b>0.36%</b> | <b>0.48%</b>       |
| Cyprus                           | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Malta                            | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| <b>Cyprus and Malta</b>          | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>        |
| Czech Republic <sup>1</sup>      | 0.60%        | 0.69%        | 0.76%        | 0.80%        | 0.63%        | 0.67%        | 0.76%        | 0.87% <sup>e</sup> |
| Estonia                          | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Hungary <sup>6</sup>             | 0.05%        | 0.05%        | 0.04%        | 0.05%        | 0.04%        | 0.06%        | 0.07%        | 0.09% <sup>e</sup> |
| Latvia <sup>6</sup>              | n.a.         | n.a.         | 0.11%        | 0.13%        | n.a.         | 0.16%        | 0.18%        | 0.20% <sup>e</sup> |
| Lithuania <sup>6</sup>           | n.a.         | n.a.         | n.a.         | n.a.         | 0.02%        | 0.03%        | 0.03%        | 0.03% <sup>e</sup> |
| Poland                           | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Slovak Republic <sup>6</sup>     | n.a.         | n.a.         | n.a.         | 0.17%        | 0.14%        | 0.17%        | 0.20%        | 0.25% <sup>e</sup> |
| Slovenia <sup>6</sup>            | n.a.         | n.a.         | 0.02%        | 0.02%        | 0.01%        | 0.03%        | 0.04%        | 0.04% <sup>e</sup> |
| <b>NMS-8</b>                     | <b>0.09%</b> | <b>0.10%</b> | <b>0.12%</b> | <b>0.14%</b> | <b>0.11%</b> | <b>0.12%</b> | <b>0.14%</b> | <b>0.16%</b>       |
| Bulgaria                         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Romania <sup>6</sup>             | n.a.         | 0.00%        | n.a.         | 0.00%        | 0.00%        | 0.00%        | 0.00%        | 0.00% <sup>e</sup> |
| <b>NMS-2</b>                     | <b>n.a.</b>  | <b>0.00%</b> | <b>n.a.</b>  | <b>0.00%</b> | <b>0.00%</b> | <b>0.00%</b> | <b>0.00%</b> | <b>0.00%</b>       |

Sources: National population statistics, Eurostat, LFS, own calculations and presentation.

1) National Statistics; 2) 2000-01: Eurostat; 2002-07: National Statistics; 3) LFS annual 4) 2004-07: Irish-LFS 4th Qu. (15+);

5) 2000-07: UK-LFS 2th Qu.; 6) Eurostat; e: estimated

The share of Austria and Germany in the total number of foreign residents from the NMS-8 in the EU-15 has declined from almost 63 per cent in 2002 to 34 per cent in 2007, while that of Ireland and the UK has increased from 11 per cent to 41 per cent during the same period of time. This diversion process can be inter alia explained by the selective application of the transitional arrangements for the free movement of workers. While Ireland and the UK opened their labour markets, Austria and Germany maintained their immigration restrictions. Interestingly enough, other destinations which have opened their labour markets completely (Sweden) or partially (Denmark) have not been affected by this diversion effect.

The available data for the years 2006 and 2007 do moreover not suggest that the removal of immigration restrictions in numerous EU member states (Finland, Greece, Italy, Portugal, Netherlands, Spain) for the second period of the transitional

arrangements has involved a visible increase in immigration flows from the NMS-8. By and large, the removal of migration barriers in these 'second-movers' has not affected the scale of migration in the enlarged EU.

The available evidence thus suggests that the high share of migrants from the NMS-8 in Ireland and the UK cannot be explained by the selective application of transitional arrangements for the free movement of workers alone. Other factors, such as the increasing English language proficiency particularly among the young cohorts in the NMS, favourable labour market conditions and flexible labour market institutions, and the declining costs of distance, have facilitated the diversion of migration flows to these destinations as well.

### **3.3 Immigration from the NMS-2 into the EU and EEA**

Immigration from Bulgaria and Romania – summarised as the two new member states (NMS-2) – into EU-15 countries is heavily restricted in most EU-15 countries. Nonetheless, the number of foreign residents from there has increased from 279,000 persons in 2000 to 1.86 million by the end of 2007. This corresponds to an annual increase in the number of residents of about 226,000 persons p.a. Meanwhile, the stock of foreign residents from the NMS-2 has achieved 0.49 per cent of the population in the EU-15. In the NMS-8 the stock of NMS-2 immigrants stagnates at about 77,000 persons. In the other member states of the EEA and Switzerland, immigration from the NMS-2 is at some 9,000 persons negligible (see Tables 4a/b).

Immigration from Bulgaria and Romania has been facilitated by bilateral agreements between Spain and Italy and the sending countries and the legalisation of immigrants there. Spain is the main destination for migrants from the NMS-2 at a migration stock of about 829,000 persons, followed by Italy with 659,000 persons.<sup>9</sup> By the end of 2007, the share of NMS-2 immigrants in the population achieves 1.9 per cent in Spain and 1.1 per cent in Italy. Other important destinations in the EU-15 are Germany (131,000 persons), Greece (53,000 persons), the UK (40,000 persons) and Austria (37,000 persons).

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<sup>9</sup> Note that the official statistics may underreport migrants from the NMS-2 in Italy, since it does inter alia not count people whose residence permit has expired but still stay in the country and wait for a prolongation. The Italian Caritas estimates therefore the stock of migrants from the NMS-2 in Italy at about 560,000 persons by the end of 2006.

**Table 4a: Foreign residents from the NMS-2 in the EU and EEA, 2000-2007**

| Host country                 | 2000           | 2001           | 2002           | 2003           | 2004           | 2005             | 2006             | 2007                 |
|------------------------------|----------------|----------------|----------------|----------------|----------------|------------------|------------------|----------------------|
| <i>in persons</i>            |                |                |                |                |                |                  |                  |                      |
| Austria <sup>1</sup>         | n.a.           | 22,387         | 24,926         | 26,802         | 28,367         | 29,573           | 29,958           | 36,792               |
| Belgium <sup>1</sup>         | 3,435          | 4,642          | 5,900          | 6,831          | 8,238          | 10,814           | 14,095           | 23,810               |
| Denmark <sup>1</sup>         | 1,580          | 1,646          | 1,746          | 1,834          | 1,987          | 2,200            | 2,350            | 3,316                |
| Finland <sup>1</sup>         | 786            | 854            | 873            | 887            | 909            | 970              | 1,089            | 1,388                |
| France <sup>3</sup>          | 5,752          | 8,761          | 7,960          | 8,840          | 17,282         | 12,027           | 39,069           | 43,652               |
| Germany <sup>1</sup>         | 124,453        | 126,245        | 131,098        | 133,404        | 112,532        | 112,196          | 112,406          | 131,402              |
| Greece <sup>3</sup>          | 12,961         | 17,344         | 25,612         | 30,583         | 39,220         | 45,551           | 49,086           | 52,567               |
| Ireland <sup>4</sup>         | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | 24,496               |
| Italy <sup>2</sup>           | 69,020         | 81,444         | 102,363        | 189,279        | 264,223        | 315,316          | 362,124          | 658,755              |
| Luxembourg <sup>1</sup>      | n.a.           | n.a.           | 477            | 498            | 545            | 700              | 871              | 1,085 <sup>e</sup>   |
| Netherlands <sup>1</sup>     | 2,564          | 3,168          | 3,720          | 4,413          | 4,944          | 5,082            | 5,427            | 11,272               |
| Portugal                     | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Spain <sup>1</sup>           | 43,676         | 97,020         | 190,185        | 277,814        | 410,403        | 508,776          | 649,076          | 828,772 <sup>e</sup> |
| Sweden <sup>1</sup>          | 3,951          | 3,300          | 3,123          | 3,148          | 3,170          | 3,205            | 3,080            | 6,280                |
| United Kingdom <sup>5</sup>  | 10,504         | 9,739          | 17,494         | 17,979         | 17,118         | 33,578           | 37,945           | 40,023               |
| <b>EU-15</b>                 | <b>278,682</b> | <b>376,550</b> | <b>515,477</b> | <b>702,312</b> | <b>908,938</b> | <b>1,079,988</b> | <b>1,306,576</b> | <b>1,863,610</b>     |
| Island <sup>1</sup>          | 108            | 123            | 141            | 143            | 154            | 178              | 204              | 241                  |
| Norway <sup>1</sup>          | 835            | 893            | 1,049          | 1,205          | 1,313          | 1,427            | 1,520            | 1,543                |
| Switzerland <sup>1</sup>     | 5,060          | 5,745          | 6,480          | 6,535          | 6,748          | 6,813            | 6,846            | 6,943                |
| <b>EEA-2 and CH</b>          | <b>6,003</b>   | <b>6,761</b>   | <b>7,670</b>   | <b>7,883</b>   | <b>8,215</b>   | <b>8,418</b>     | <b>8,570</b>     | <b>8,727</b>         |
| Cyprus                       | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Malta                        | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| <b>Cyprus and Malta</b>      | <b>n.a.</b>    | <b>n.a.</b>    | <b>n.a.</b>    | <b>n.a.</b>    | <b>n.a.</b>    | <b>n.a.</b>      | <b>n.a.</b>      | <b>n.a.</b>          |
| Czech Republic <sup>1</sup>  | 6,408          | 6,405          | 6,485          | 6,303          | 7,035          | 7,252            | 7,451            | 7,656 <sup>e</sup>   |
| Estonia                      | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Hungary <sup>6</sup>         | 44,371         | 46,123         | 48,366         | 56,794         | 68,785         | 67,390           | 68,074           | 68,766 <sup>e</sup>  |
| Latvia <sup>6</sup>          | n.a.           | n.a.           | 26             | 42             | n.a.           | 37               | 44               | 52 <sup>e</sup>      |
| Lithuania <sup>6</sup>       | n.a.           | n.a.           | n.a.           | n.a.           | 33             | 46               | 107              | 249 <sup>e</sup>     |
| Poland                       | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Slovak Republic <sup>6</sup> | n.a.           | n.a.           | n.a.           | 2,757          | 1,051          | 971              | 1,247            | 1,711 <sup>e</sup>   |
| Slovenia <sup>6</sup>        | n.a.           | n.a.           | 213            | 240            | 199            | 208              | 284              | 396 <sup>e</sup>     |
| <b>NMS-8</b>                 | <b>50,779</b>  | <b>52,528</b>  | <b>55,090</b>  | <b>66,136</b>  | <b>77,103</b>  | <b>75,904</b>    | <b>77,207</b>    | <b>78,831</b>        |
| Bulgaria                     | n.a.           | n.a.           | n.a.           | n.a.           | n.a.           | n.a.             | n.a.             | n.a.                 |
| Romania <sup>6</sup>         | n.a.           | 189            | n.a.           | 189            | 190            | 186              | 186              | 186 <sup>e</sup>     |
| <b>NMS-2</b>                 | <b>n.a.</b>    | <b>189</b>     | <b>n.a.</b>    | <b>189</b>     | <b>190</b>     | <b>186</b>       | <b>186</b>       | <b>186</b>           |

Sources: National population statistics, Eurostat, LFS, own calculations and presentation.

1) National Statistics; 2) 2000-01: Eurostat; 2002-07: National Statistics; 3) LFS annual 4) 2004-07: Irish-LFS 4th Qu. (15+);

5) 2000-07: UK-LFS 2th Qu.; 6) Eurostat; e: estimated

Again, we observe a diversion effect: Germany has been with some 260,000 residents the main destination for migrants from the NMS-2 in the beginning of the 1990s, a figure which has declined to some 124,000 persons by the beginning of this decade. At the same time, migration from Romania and Bulgaria to Spain and Italy has increased substantially.

It is worthwhile to note in this context that the figures presented here refer to legal migration only. Incentives for illegal migration are high in case of Bulgaria and Romania, since legal immigration opportunities are limited. Anecdotal evidence suggests that actual migration stocks from the NMS-2 in the EU-15 might be twice the official figures, but reliable evidence is missing.

**Table 4b: Foreign residents from the NMS-2 in the EU and EEA in per cent of the host population, 2000-2007**

| Host country                     | 2000         | 2001         | 2002         | 2003         | 2004         | 2005         | 2006         | 2007               |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------|
| <i>share of total population</i> |              |              |              |              |              |              |              |                    |
| Austria <sup>1</sup>             | n.a.         | 0.28%        | 0.31%        | 0.33%        | 0.35%        | 0.36%        | 0.36%        | 0.44%              |
| Belgium <sup>1</sup>             | 0.03%        | 0.05%        | 0.06%        | 0.07%        | 0.08%        | 0.10%        | 0.13%        | 0.22%              |
| Denmark <sup>1</sup>             | 0.03%        | 0.03%        | 0.03%        | 0.03%        | 0.04%        | 0.04%        | 0.04%        | 0.06%              |
| Finland <sup>1</sup>             | 0.02%        | 0.02%        | 0.02%        | 0.02%        | 0.02%        | 0.02%        | 0.02%        | 0.03%              |
| France <sup>3</sup>              | 0.01%        | 0.01%        | 0.01%        | 0.01%        | 0.03%        | 0.02%        | 0.06%        | 0.07%              |
| Germany <sup>1</sup>             | 0.15%        | 0.15%        | 0.16%        | 0.16%        | 0.14%        | 0.14%        | 0.14%        | 0.16%              |
| Greece <sup>3</sup>              | 0.12%        | 0.16%        | 0.23%        | 0.28%        | 0.35%        | 0.41%        | 0.44%        | 0.47%              |
| Ireland <sup>4</sup>             | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | 0.56%              |
| Italy <sup>2</sup>               | 0.12%        | 0.14%        | 0.18%        | 0.33%        | 0.45%        | 0.54%        | 0.61%        | 1.11%              |
| Luxembourg <sup>1</sup>          | n.a.         | n.a.         | 0.11%        | 0.11%        | 0.12%        | 0.15%        | 0.19%        | 0.23% <sup>e</sup> |
| Netherlands <sup>1</sup>         | 0.02%        | 0.02%        | 0.02%        | 0.03%        | 0.03%        | 0.03%        | 0.03%        | 0.07%              |
| Portugal                         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Spain <sup>1</sup>               | 0.11%        | 0.24%        | 0.46%        | 0.66%        | 0.96%        | 1.17%        | 1.47%        | 1.85% <sup>e</sup> |
| Sweden <sup>1</sup>              | 0.04%        | 0.04%        | 0.03%        | 0.04%        | 0.04%        | 0.04%        | 0.03%        | 0.07%              |
| United Kingdom <sup>5</sup>      | 0.02%        | 0.02%        | 0.03%        | 0.03%        | 0.03%        | 0.06%        | 0.06%        | 0.07%              |
| <b>EU-15</b>                     | <b>0.08%</b> | <b>0.10%</b> | <b>0.14%</b> | <b>0.19%</b> | <b>0.24%</b> | <b>0.29%</b> | <b>0.35%</b> | <b>0.49%</b>       |
| Island <sup>1</sup>              | 0.04%        | 0.04%        | 0.05%        | 0.05%        | 0.05%        | 0.06%        | 0.07%        | 0.08%              |
| Norway <sup>1</sup>              | 0.02%        | 0.02%        | 0.02%        | 0.03%        | 0.03%        | 0.03%        | 0.03%        | 0.03%              |
| Switzerland <sup>1</sup>         | 0.07%        | 0.08%        | 0.09%        | 0.09%        | 0.09%        | 0.09%        | 0.09%        | 0.09%              |
| <b>EEA-2 and CH</b>              | <b>0.05%</b> | <b>0.06%</b> | <b>0.06%</b> | <b>0.06%</b> | <b>0.07%</b> | <b>0.07%</b> | <b>0.07%</b> | <b>0.07%</b>       |
| Cyprus                           | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Malta                            | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| <b>Cyprus and Malta</b>          | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>        |
| Czech Republic <sup>1</sup>      | 0.06%        | 0.06%        | 0.06%        | 0.06%        | 0.07%        | 0.07%        | 0.07%        | 0.07% <sup>e</sup> |
| Estonia                          | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Hungary <sup>6</sup>             | 0.43%        | 0.45%        | 0.48%        | 0.56%        | 0.68%        | 0.67%        | 0.68%        | 0.68% <sup>e</sup> |
| Latvia <sup>6</sup>              | n.a.         | n.a.         | 0.00%        | 0.00%        | n.a.         | 0.00%        | 0.00%        | 0.00% <sup>e</sup> |
| Lithuania <sup>6</sup>           | n.a.         | n.a.         | n.a.         | n.a.         | 0.00%        | 0.00%        | 0.00%        | 0.01% <sup>e</sup> |
| Poland                           | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Slovak Republic <sup>6</sup>     | n.a.         | n.a.         | n.a.         | 0.05%        | 0.02%        | 0.02%        | 0.02%        | 0.03% <sup>e</sup> |
| Slovenia <sup>6</sup>            | n.a.         | n.a.         | 0.01%        | 0.01%        | 0.01%        | 0.01%        | 0.01%        | 0.02% <sup>e</sup> |
| <b>NMS-8</b>                     | <b>0.07%</b> | <b>0.07%</b> | <b>0.08%</b> | <b>0.09%</b> | <b>0.11%</b> | <b>0.10%</b> | <b>0.11%</b> | <b>0.11%</b>       |
| Bulgaria                         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Romania <sup>6</sup>             | n.a.         | 0.00%        | n.a.         | 0.00%        | 0.00%        | 0.00%        | 0.00%        | 0.00% <sup>e</sup> |
| <b>NMS-2</b>                     | <b>n.a.</b>  | <b>0.00%</b> | <b>n.a.</b>  | <b>0.00%</b> | <b>0.00%</b> | <b>0.00%</b> | <b>0.00%</b> | <b>0.00%</b>       |

Sources: National population statistics, Eurostat, LFS, own calculations and presentation.

1) National Statistics; 2) 2000-01: Eurostat; 2002-07: National Statistics; 3) LFS annual 4) 2004-07: Irish-LFS 4th Qu. (15+);

5) 2000-07: UK-LFS 2th Qu.; 6) Eurostat; e: estimated

### 3.4 Immigration from the candidate countries into the EU and EEA

The six candidate and potential candidate countries (CAND-6) from South-Eastern Europe have been one of the main sources of immigrants in Western Europe during the post-WW II period. Especially workers from Turkey and from former Yugoslavia have been the main targets for guestworker recruitment in Austria, Germany, Switzerland and other Western European countries. In addition, migrants from Albania, one of the countries with the lowest per capita income in Europe, form an important source of immigration in Italy and Greece since the removal of emigration barriers in the beginning of the 1990s. Altogether, the stock of immigrants from the candidate countries in the EU-15 amounted

to 4.1 million people in the EU-15<sup>10</sup> in 2000 and another 476,000 people residing in the other EEA countries and Switzerland at the same time. Since the EU's Eastern enlargement, the stock of migrants from this region however stagnates in the EU-15. By the end of 2007, the EU-15 countries reports about 4.3 million migrants from the candidate countries (see Tables 5a/b).

**Table 5a: Foreign residents from the candidate countries in the EU and the EEA, 2000-2007**

| Host country                 | 2000             | 2001             | 2002             | 2003             | 2004             | 2005             | 2006             | 2007                |
|------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---------------------|
| <i>in persons</i>            |                  |                  |                  |                  |                  |                  |                  |                     |
| Austria <sup>1</sup>         | n.a.             | 432,149          | 437,481          | 428,386          | 420,237          | 415,857          | 405,949          | 401,885             |
| Belgium <sup>1</sup>         | 66,240           | 56,872           | 54,018           | 53,811           | 52,525           | 53,857           | 54,758           | 66,349              |
| Denmark <sup>1</sup>         | 58,086           | 52,841           | 50,319           | 48,146           | 47,304           | 45,494           | 44,872           | 45,065              |
| Finland <sup>1</sup>         | 5,061            | 6,107            | 6,561            | 7,328            | 7,937            | 8,101            | 8,395            | 8,397               |
| France <sup>3</sup>          | 240,328          | 233,120          | 250,124          | 116,420          | 159,829          | 186,629          | 153,974          | 168,246             |
| Germany <sup>1</sup>         | 3,097,721        | 3,025,940        | 2,968,399        | 2,922,084        | 2,346,782        | 2,519,298        | 2,477,923        | 2,405,952           |
| Greece <sup>3</sup>          | 181,842          | 209,475          | 252,780          | 288,834          | 338,863          | 343,603          | 337,901          | 376,487             |
| Ireland <sup>4</sup>         | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.                |
| Italy <sup>2</sup>           | 227,148          | 291,816          | 346,331          | 422,471          | 487,518          | 533,861          | 576,251          | 611,807             |
| Luxembourg <sup>1</sup>      | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.                |
| Netherlands <sup>1</sup>     | 113,851          | 112,596          | 112,195          | 113,584          | 111,725          | 109,321          | 106,411          | 102,798             |
| Portugal                     | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.                |
| Spain <sup>1</sup>           | 6,584            | 7,970            | 9,172            | 8,914            | 10,468           | 10,493           | 9,939            | 9,458 <sup>e</sup>  |
| Sweden <sup>1</sup>          | 48,342           | 42,437           | 36,736           | 33,699           | 32,309           | 30,224           | 27,083           | 27,271              |
| United Kingdom <sup>5</sup>  | 61,074           | 83,063           | 89,731           | 96,260           | 81,866           | 77,995           | 106,430          | 102,255             |
| <b>EU-15</b>                 | <b>4,106,277</b> | <b>4,554,386</b> | <b>4,613,847</b> | <b>4,539,937</b> | <b>4,097,363</b> | <b>4,334,733</b> | <b>4,309,886</b> | <b>4,325,970</b>    |
| Island <sup>1</sup>          | 609              | 697              | 740              | 724              | 699              | 734              | 813              | 680                 |
| Norway <sup>1</sup>          | 27,507           | 25,723           | 20,810           | 19,707           | 17,539           | 17,053           | 15,552           | 14,072              |
| Switzerland <sup>1</sup>     | 447,839          | 452,933          | 455,804          | 452,495          | 445,797          | 436,546          | 423,670          | 413,089             |
| <b>EEA-2 and CH</b>          | <b>475,955</b>   | <b>479,353</b>   | <b>477,354</b>   | <b>472,926</b>   | <b>464,035</b>   | <b>454,333</b>   | <b>440,035</b>   | <b>427,841</b>      |
| Cyprus                       | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.                |
| Malta                        | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.                |
| <b>Cyprus and Malta</b>      | <b>n.a.</b>      | <b>n.a.</b>      | <b>n.a.</b>      | <b>n.a.</b>      | <b>n.a.</b>      | <b>n.a.</b>      | <b>n.a.</b>      | <b>n.a.</b>         |
| Czech Republic <sup>1</sup>  | 8,556            | 7,976            | 8,098            | 7,917            | 9,036            | 9,413            | 10,134           | 10,959 <sup>e</sup> |
| Estonia                      | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.                |
| Hungary <sup>6</sup>         | 1,916            | 1,965            | 9,628            | 14,310           | 2,962            | 14,459           | 14,913           | 15,391 <sup>e</sup> |
| Latvia <sup>6</sup>          | n.a.             | n.a.             | 45               | 46               | n.a.             | 79               | 70               | 72 <sup>e</sup>     |
| Lithuania <sup>6</sup>       | n.a.             | n.a.             | n.a.             | n.a.             | 70               | 71               | 132              | 265 <sup>e</sup>    |
| Poland                       | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.                |
| Slovak Republic <sup>6</sup> | n.a.             | n.a.             | n.a.             | 2,784            | 1,160            | 1,170            | 1,626            | 2,786 <sup>e</sup>  |
| Slovenia <sup>6</sup>        | n.a.             | n.a.             | 40,424           | 40,553           | 40,306           | 43,371           | 48,130           | 53,577 <sup>e</sup> |
| <b>EU-8</b>                  | <b>10,472</b>    | <b>9,941</b>     | <b>58,195</b>    | <b>65,610</b>    | <b>53,534</b>    | <b>68,563</b>    | <b>75,005</b>    | <b>83,051</b>       |
| Bulgaria                     | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.             | n.a.                |
| Romania <sup>6</sup>         | n.a.             | 3,027            | n.a.             | 3,027            | 3,069            | 3,071            | 3,079            | 3,087 <sup>e</sup>  |
| <b>EU-2</b>                  | <b>n.a.</b>      | <b>3,027</b>     | <b>n.a.</b>      | <b>3,027</b>     | <b>3,069</b>     | <b>3,071</b>     | <b>3,079</b>     | <b>3,087</b>        |

Sources: National population statistics, Eurostat, LFS, own calculations and presentation.

1) National Statistics; 2) 2000-01: Eurostat; 2002-07: National Statistics; 3) LFS annual 4) 2004-07: Irish-LFS 4th Qu. (15+);

5) 2000-07: UK-LFS 2th Qu.; 6) Eurostat; e: estimated

<sup>10</sup> Unfortunately, we have no figures for Ireland, Luxembourg and Portugal.

**Table 5b: Foreign residents from the candidate countries in the EU and the EEA in per cent of the host population, 2000-2007**

| Host country                     | 2000         | 2001         | 2002         | 2003         | 2004         | 2005         | 2006         | 2007               |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------------|
| <i>share of total population</i> |              |              |              |              |              |              |              |                    |
| Austria <sup>1</sup>             | n.a.         | 5.37%        | 5.41%        | 5.27%        | 5.14%        | 5.05%        | 4.90%        | 4.83%              |
| Belgium <sup>1</sup>             | 0.65%        | 0.55%        | 0.52%        | 0.52%        | 0.50%        | 0.51%        | 0.52%        | 0.62%              |
| Denmark <sup>1</sup>             | 1.09%        | 0.99%        | 0.94%        | 0.89%        | 0.88%        | 0.84%        | 0.83%        | 0.83%              |
| Finland <sup>1</sup>             | 0.10%        | 0.12%        | 0.13%        | 0.14%        | 0.15%        | 0.15%        | 0.16%        | 0.16%              |
| France <sup>3</sup>              | 0.40%        | 0.38%        | 0.41%        | 0.19%        | 0.26%        | 0.30%        | 0.24%        | 0.26%              |
| Germany <sup>1</sup>             | 3.77%        | 3.67%        | 3.60%        | 3.54%        | 2.84%        | 3.05%        | 3.01%        | 2.92%              |
| Greece <sup>3</sup>              | 1.67%        | 1.91%        | 2.30%        | 2.62%        | 3.06%        | 3.09%        | 3.03%        | 3.36%              |
| Ireland <sup>4</sup>             | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Italy <sup>2</sup>               | 0.40%        | 0.51%        | 0.61%        | 0.73%        | 0.84%        | 0.91%        | 0.98%        | 1.03%              |
| Luxembourg <sup>1</sup>          | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Netherlands <sup>1</sup>         | 0.71%        | 0.70%        | 0.69%        | 0.70%        | 0.69%        | 0.67%        | 0.65%        | 0.63%              |
| Portugal                         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Spain <sup>1</sup>               | 0.02%        | 0.02%        | 0.02%        | 0.02%        | 0.02%        | 0.02%        | 0.02%        | 0.02% <sup>e</sup> |
| Sweden <sup>1</sup>              | 0.54%        | 0.48%        | 0.41%        | 0.38%        | 0.36%        | 0.33%        | 0.30%        | 0.30%              |
| United Kingdom <sup>5</sup>      | 0.10%        | 0.14%        | 0.15%        | 0.16%        | 0.14%        | 0.13%        | 0.18%        | 0.17%              |
| <b>EU-15</b>                     | <b>1.15%</b> | <b>1.25%</b> | <b>1.26%</b> | <b>1.23%</b> | <b>1.10%</b> | <b>1.16%</b> | <b>1.15%</b> | <b>1.15%</b>       |
| Island <sup>1</sup>              | 0.22%        | 0.24%        | 0.26%        | 0.25%        | 0.24%        | 0.25%        | 0.27%        | 0.22%              |
| Norway <sup>1</sup>              | 0.61%        | 0.57%        | 0.46%        | 0.43%        | 0.38%        | 0.37%        | 0.33%        | 0.30%              |
| Switzerland <sup>1</sup>         | 6.23%        | 6.26%        | 6.26%        | 6.17%        | 6.03%        | 5.87%        | 5.66%        | 5.47%              |
| <b>EEA-2 and CH</b>              | <b>3.98%</b> | <b>3.99%</b> | <b>3.94%</b> | <b>3.88%</b> | <b>3.78%</b> | <b>3.68%</b> | <b>3.53%</b> | <b>3.40%</b>       |
| Cyprus                           | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Malta                            | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| <b>Cyprus and Malta</b>          | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>  | <b>n.a.</b>        |
| Czech Republic <sup>1</sup>      | 0.08%        | 0.08%        | 0.08%        | 0.08%        | 0.09%        | 0.09%        | 0.10%        | 0.11% <sup>e</sup> |
| Estonia                          | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Hungary <sup>6</sup>             | 0.02%        | 0.02%        | 0.09%        | 0.14%        | 0.03%        | 0.14%        | 0.15%        | 0.15% <sup>e</sup> |
| Latvia <sup>6</sup>              | n.a.         | n.a.         | 0.00%        | 0.00%        | n.a.         | 0.00%        | 0.00%        | 0.00% <sup>e</sup> |
| Lithuania <sup>6</sup>           | n.a.         | n.a.         | n.a.         | n.a.         | 0.00%        | 0.00%        | 0.00%        | 0.01% <sup>e</sup> |
| Poland                           | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Slovak Republic <sup>6</sup>     | n.a.         | n.a.         | n.a.         | 0.05%        | 0.02%        | 0.02%        | 0.03%        | 0.05% <sup>e</sup> |
| Slovenia <sup>6</sup>            | n.a.         | n.a.         | 2.03%        | 2.03%        | 2.02%        | 2.17%        | 2.40%        | 2.65% <sup>e</sup> |
| <b>EU-8</b>                      | <b>0.01%</b> | <b>0.01%</b> | <b>0.08%</b> | <b>0.09%</b> | <b>0.07%</b> | <b>0.09%</b> | <b>0.10%</b> | <b>0.11%</b>       |
| Bulgaria                         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.         | n.a.               |
| Romania <sup>6</sup>             | n.a.         | 0.01%        | n.a.         | 0.01%        | 0.01%        | 0.01%        | 0.01%        | 0.01% <sup>e</sup> |
| <b>EU-2</b>                      | <b>n.a.</b>  | <b>0.01%</b> | <b>n.a.</b>  | <b>0.01%</b> | <b>0.01%</b> | <b>0.01%</b> | <b>0.01%</b> | <b>0.01%</b>       |

Sources: National population statistics, Eurostat, LFS, own calculations and presentation.

1) National Statistics; 2) 2000-01: Eurostat; 2002-07: National Statistics; 3) LFS annual 4) 2004-07: Irish-LFS 4th Qu. (15+);

5) 2000-07: UK-LFS 2th Qu.; 6) Eurostat; e: estimated

The main destination for immigrants from the candidate and potential countries is Germany. In 2000, about 3.1 million or 75 per cent of the immigrants from the candidate countries in the EU-15 resided in Germany. The German migration statistics reports 2.4 million residents from the candidate countries or 56 per cent of the migrants from there in the EU-15 by the end of 2007. This decline can be largely traced back to the revision of the migration statistics which reduced the number of migrants from the candidate countries by about 600,000 persons. Moreover, the repatriation of refugees from the civil wars in the former Yugoslavia and an increasing number of naturalisations following the reform of the immigration act in 2000 has contributed to this decline. Other important destinations for migrants from the candidate countries are Italy (612,000 persons), Austria (402,000 persons), Greece (376,000 persons) and France (168,000 persons), and among the EEA countries Switzerland with 413,000 persons. While the number of immigrants from the candidate countries has declined or stagnated in most destination

countries, it has substantially increased in Italy (+385,000 persons) and Greece (+195,000 persons) since the beginning of this decade. This can be traced back largely to the immigration of Albanians and some successor states of the former Yugoslavia to these destinations.

To sum up, immigrants from the candidate and potential candidate countries exceed the stock of foreign residents from the new member states at a share of 1.2 per cent of the population in the EU-15 by far. However, with the notable exceptions of Italy and Greece, this stock is stagnating or declining in most destinations since the beginning of this decade. Tighter immigration conditions for third country nationals in most EU member states (Boeri/Brücker, 2005) and adverse economic conditions in main destinations such as Germany have contributed to this development.

### **3.5 Main emigration trends from a sending country perspective**

By the end of 2007, the migration data from the statistics in the receiving countries indicates that about 3.8 million emigrants from the NMS-10 resided in the EU-15. The main sending countries are Romania (1.6 million) and Poland (1.3 million). The share of EU-emigrants in the population of the sending countries fluctuates heavily across country groups and individual countries. About 2.6 per cent of the population in the NMS-8 and 6.4 per cent of the population of the NMS-2 resided by the end of 2007 in the EU-15. The emigration shares in the population vary with the per capita income level: While emigration shares are relatively low in the Czech Republic (1.0 per cent), Hungary (1.3 per cent), and Slovenia (1.8 per cent), they are particularly high in Romania (7.2 per cent), Bulgaria (4.1 per cent), Lithuania (3.8 per cent), and Poland (3.4 per cent) (see Tables 6a/b).



**Table 6a: EU-15 emigrants from the NMS-8, NMS-2 and CAND-6, 2000-2007**

| Sending country    | 2000             | 2001             | 2002             | 2003             | 2004             | 2005             | 2006             | 2007             |
|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| <i>in persons</i>  |                  |                  |                  |                  |                  |                  |                  |                  |
| Czech Republic     | 42,379           | 52,810           | 58,138           | 71,119           | 62,894           | 71,185           | 90,952           | 104,442          |
| Estonia            | 18,458           | 20,924           | 22,639           | 26,699           | 26,746           | 30,567           | 32,885           | 36,735           |
| Hungary            | 84,976           | 94,905           | 98,492           | 94,274           | 91,961           | 102,158          | 105,939          | 132,582          |
| Latvia             | 21,713           | 19,309           | 22,184           | 24,632           | 24,194           | 32,920           | 42,119           | 42,547           |
| Lithuania          | 24,154           | 36,567           | 41,577           | 53,572           | 52,613           | 85,364           | 114,185          | 128,361          |
| Poland             | 476,229          | 531,986          | 545,072          | 576,939          | 606,442          | 757,252          | 992,924          | 1,297,647        |
| Slovak Republic    | 25,195           | 36,947           | 39,019           | 43,948           | 52,343           | 81,705           | 91,560           | 132,207          |
| Slovenia           | 23,814           | 30,697           | 31,218           | 35,672           | 32,355           | 34,698           | 34,395           | 35,848           |
| <b>NMS-8</b>       | <b>716,917</b>   | <b>824,145</b>   | <b>858,338</b>   | <b>926,854</b>   | <b>949,548</b>   | <b>1,195,850</b> | <b>1,504,957</b> | <b>1,910,370</b> |
| Bulgaria           | 71,437           | 102,980          | 140,864          | 166,330          | 203,528          | 219,233          | 255,163          | 310,335          |
| Romania            | 217,669          | 285,075          | 389,045          | 553,508          | 724,697          | 880,738          | 1,072,307        | 1,553,276        |
| <b>NMS-2</b>       | <b>289,106</b>   | <b>388,054</b>   | <b>529,909</b>   | <b>719,839</b>   | <b>928,225</b>   | <b>1,099,971</b> | <b>1,327,470</b> | <b>1,863,610</b> |
| Albania            | 412,915          | 434,002          | 514,291          | 581,605          | 670,751          | 717,450          | 743,485          | 805,416          |
| Bosnia-Herzegovina | 227,011          | 323,006          | 323,929          | 330,751          | 313,440          | 314,624          | 310,651          | 319,347          |
| Croatia            | 249,031          | 316,953          | 329,448          | 334,136          | 324,698          | 326,088          | 322,926          | 316,504          |
| Macedonia          | 83,848           | 103,932          | 112,922          | 137,863          | 146,209          | 153,059          | 161,556          | 171,450          |
| Serbia-Montenegro  | 679,548          | 835,178          | 806,739          | 777,571          | 342,551          | 521,495          | 508,255          | 471,764          |
| Turkey             | 2,453,924        | 2,541,316        | 2,526,518        | 2,378,011        | 2,299,713        | 2,302,017        | 2,263,013        | 2,241,489        |
| <b>Cand-6</b>      | <b>4,106,277</b> | <b>4,554,386</b> | <b>4,613,847</b> | <b>4,539,937</b> | <b>4,097,363</b> | <b>4,334,733</b> | <b>4,309,886</b> | <b>4,325,970</b> |

Sources: National population statistics, Eurostat, LFS, own calculations and presentation.

2000: without Austria; 2000-2001: without Luxembourg; 2000-2003: without Ireland

2004-2007: Ireland included with structure of PPSN

These figures refer to migration stocks, which hide a large number of inflows and outflows every year. The statistics of gross migration inflows and outflows in countries such as Germany or the large difference between gross figures on work permits in the UK and the actual number of foreigner workers there suggests that return migration is substantial and has increased recently. As in other migration episodes, a high share of migration from the new member states is temporary. The relatively short distance and falling communication and transport costs make it likely that the share of temporary migration is higher in case of the NMS than in other migration episodes.

**Table 6b: EU-15 emigrants from the NMS-8, NMS-2 and CAND-6 in per cent of the home population, 2000-2007**

| Sending country                  | 2000         | 2001         | 2002         | 2003         | 2004         | 2005         | 2006         | 2007         |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <i>share of total population</i> |              |              |              |              |              |              |              |              |
| Czech Republic                   | 0.41%        | 0.52%        | 0.57%        | 0.70%        | 0.62%        | 0.70%        | 0.89%        | 1.01%        |
| Estonia                          | 1.35%        | 1.53%        | 1.67%        | 1.97%        | 1.98%        | 2.27%        | 2.45%        | 2.74%        |
| Hungary                          | 0.83%        | 0.93%        | 0.97%        | 0.93%        | 0.91%        | 1.01%        | 1.05%        | 1.32%        |
| Latvia                           | 0.91%        | 0.82%        | 0.95%        | 1.06%        | 1.05%        | 1.43%        | 1.84%        | 1.87%        |
| Lithuania                        | 0.69%        | 1.05%        | 1.20%        | 1.55%        | 1.53%        | 2.50%        | 3.36%        | 3.80%        |
| Poland                           | 1.24%        | 1.39%        | 1.43%        | 1.51%        | 1.59%        | 1.98%        | 2.60%        | 3.40%        |
| Slovak Republic                  | 0.47%        | 0.69%        | 0.73%        | 0.82%        | 0.97%        | 1.52%        | 1.70%        | 2.45%        |
| Slovenia                         | 1.20%        | 1.54%        | 1.57%        | 1.79%        | 1.62%        | 1.73%        | 1.71%        | 1.78%        |
| <b>EU 8</b>                      | <b>0.96%</b> | <b>1.10%</b> | <b>1.15%</b> | <b>1.25%</b> | <b>1.28%</b> | <b>1.61%</b> | <b>2.03%</b> | <b>2.57%</b> |
| Bulgaria                         | 0.87%        | 1.28%        | 1.79%        | 2.13%        | 2.62%        | 2.83%        | 3.31%        | 4.05%        |
| Romania                          | 0.97%        | 1.29%        | 1.78%        | 2.55%        | 3.34%        | 4.07%        | 4.97%        | 7.21%        |
| <b>EU 2</b>                      | <b>0.94%</b> | <b>1.29%</b> | <b>1.79%</b> | <b>2.43%</b> | <b>3.15%</b> | <b>3.74%</b> | <b>4.53%</b> | <b>6.38%</b> |
| Albania                          | 13.49%       | 14.12%       | 16.63%       | 18.69%       | 21.45%       | 22.83%       | 23.56%       | 25.46%       |
| Bosnia-Herzegovina               | 6.02%        | 8.50%        | 8.48%        | 8.63%        | 8.16%        | 8.19%        | 8.08%        | 8.31%        |
| Croatia                          | 5.57%        | 7.14%        | 7.41%        | 7.52%        | 7.31%        | 7.34%        | 7.27%        | 7.13%        |
| Macedonia                        | 4.14%        | 5.11%        | 5.56%        | 6.80%        | 7.19%        | 7.51%        | 7.92%        | 8.39%        |
| Serbia-Montenegro                | 6.39%        | 7.84%        | 8.60%        | 9.57%        | 4.22%        | 6.47%        | 6.30%        | 5.85%        |
| Turkey                           | 3.64%        | 3.72%        | 3.65%        | 3.39%        | 3.23%        | 3.19%        | 3.18%        | 3.20%        |
| <b>Cand 6</b>                    | <b>4.49%</b> | <b>4.93%</b> | <b>5.01%</b> | <b>4.95%</b> | <b>4.42%</b> | <b>4.63%</b> | <b>4.65%</b> | <b>4.72%</b> |

Sources: National population statistics, Eurostat, LFS, own calculations and presentation.

2000: without Austria; 2000-2001: without Luxembourg; 2000-2003: without Ireland

2004-2007: Ireland included with structure of PPSN

#### 4 The structure of migration: Skills, age and gender

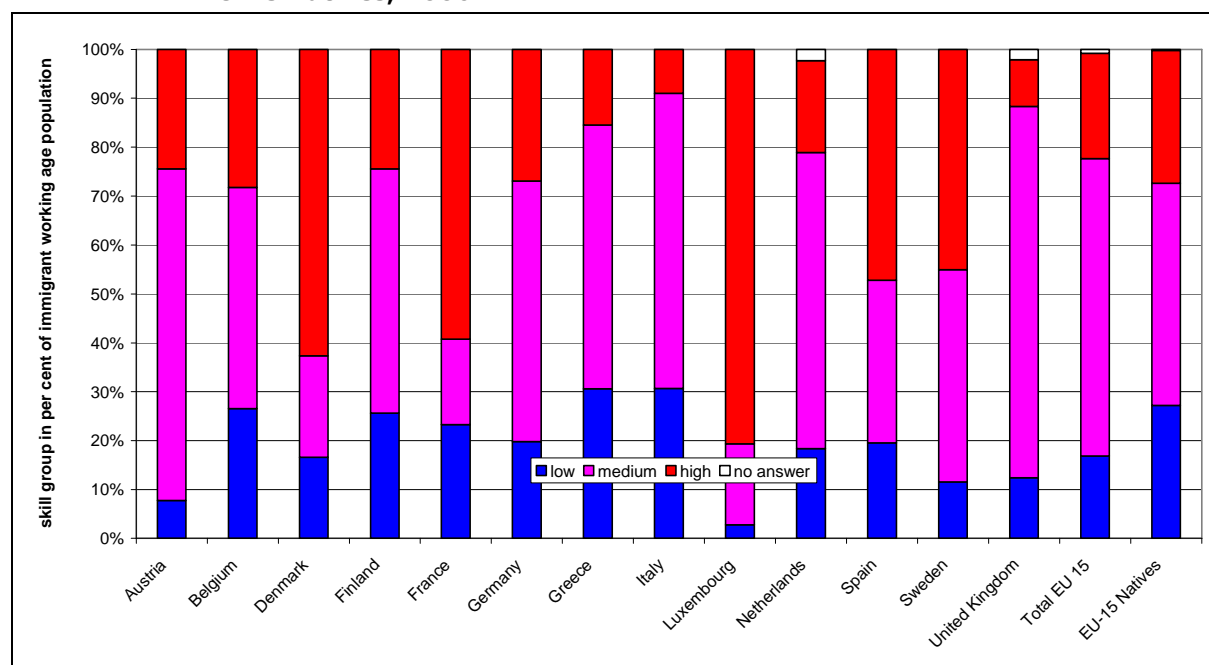
The qualification structure of migrants from the NMS is concentrated about the mean. The migrant population from the NMS has a smaller share of less skilled workers than the native population in the EU-15, but also a smaller share of high-skilled workers compared to the native workforce in the EU-15. However, the migrant workforce from the NMS is better qualified compared to the native population which stayed behind in the NMS. In general, we observe a moderate 'brain drain' in the sending countries, but not a large impact on human capital endowments in the receiving countries of the enlarged EU. In contrast, education levels of migrants from the candidate countries are well below those of natives in the receiving countries of the EU-15 (Section 4.1). Not surprisingly, the age of migrants from the NMS is well below that of natives in the receiving and the sending countries. In those countries which have been heavily affected by the recent immigration episode from the NMS the age of migrants is particularly low. Although the age of migrants from the NMS will grow over time, the relatively high share of temporary migrants will result in a younger age of the migrants from the NMS compared to other immigrant groups with a lower share of temporary migrants (Section 4.2).

## 4.1 Skill structure

### 4.1.1 Skill structure of immigrants from the NMS-8

Figure 7 and Annex Table A2 display the skill structure of the migrants from the NMS-8 in the EU-15 by their highest level of completed education. The LFS classification of education levels is based on the ISCED classification. The data reported here are aggregated to three levels: Lower secondary education (low), upper secondary education (medium), and tertiary education levels (high). Note that education degrees are not comparable across countries. Many education degrees are therefore not acknowledged. Moreover, misclassification in the LFS is widespread if education systems differ largely between receiving and sending countries.

**Figure 7: Skill structure of immigrants from the NMS-8 in the EU-15 compared to EU-15 natives, 2006**



Source: European LFS, special provision 2008. Own calculations and presentation.

With a share of 61 per cent the working age population from the NMS-8 in the EU-15 is heavily concentrated in the middle of the skill spectrum. Only 17 per cent of the NMS-8 migrants belong to the less qualified group, compared to 27 per cent in the native workforce in the EU-15. However, the share of the high-skilled is at 22 per cent of the working age population of the NMS-8 immigrants slightly below that of natives in the EU-15 (27 per cent).

The results for the individual EU-15 member states are however quite heterogeneous: Only a very small fraction of immigrants in Austria, Sweden, and the UK belong to the less qualified group (8-12 per cent), while that fraction is substantially higher in the

other EU-15 countries (varying between 17 per cent in Denmark to 31 per cent in Italy).<sup>11</sup> The share of medium skilled immigrants differs considerably. While their fraction is relatively low in Denmark and France (17-20 per cent), it is extraordinarily high in the UK, Austria, the Netherlands, and Italy. However, measurement errors bias the results to the mean. In the UK as an example, the category of 'unknown education' has been classified as medium education during the last survey years which has biased the education structure of the foreign population in one way or another.

Austria, Belgium, Finland, and Germany each report that approximately 25 per cent of the NMS-8 immigrants are highly qualified, while Sweden and Spain have values of about 45 per cent. Low shares of highly qualified immigrants from the NMS-8 are found in Greece, the Netherlands, and the UK (10-20 per cent). The extremely high values for Denmark, France and Luxembourg are based on low response rates and may therefore result from measurement or classification errors.

Altogether, the skill structure of the workforce from NMS-8 countries in the EU-15 is high compared to other foreigner groups. In almost all EU-15 countries the share of less skilled workers in the immigrant workforce from the NMS-8 is below that of the native workforce. Belgium, Finland and Germany are notable exceptions in this respect. However, the share of high skilled workers, i.e. workers with a university degree, is in most receiving countries well below that of the native workforce.

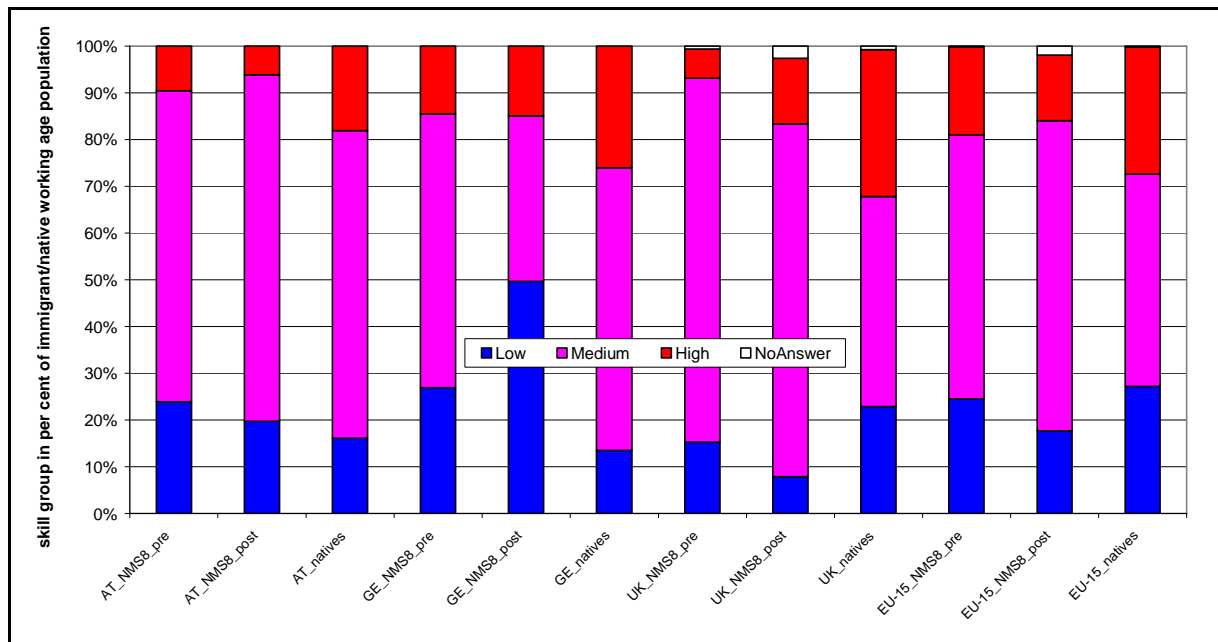
The figures presented above refer to the skill structure of the current stock of migrants, which has been accumulated both before and after EU enlargement. As a result of the new immigration opportunities the skill structure of migrants may have changed in the context of Enlargement. The LFS allows to identify the year of arrival which enables us to disentangle the skill structure of migrants which have arrived before and after enlargement. Low response rates restrict our analysis only on the main destinations, i.e. Austria, Germany and the UK.

We find indeed that the skill structure of immigrants which have arrived after enlargement deviates from that of the earlier vintages: In Germany, which has been the main destination before enlargement, we observe that the average education level of the new arrivals from the NMS-8 has significantly deteriorated. Particularly the share of the group with a low educational degree has substantially increased in Germany. In contrast, that of NMS-8 immigrants in the UK has slightly improved. In Austria, the average education level of the immigrants from the NMS-8 which have arrived after Enlargement are slightly higher than that of the groups which have arrived before Enlargement, but the differences are within the range of measurement errors. At the level of the EU-15, we observe a slight increase in the average education level of the NMS-8 immigrants since enlargement, particularly the share of the less-skilled immigrants has declined (see Figure 8).

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<sup>11</sup> The figures for Luxembourg are not plausible and may suffer from low response rates.

**Figure 8: Skill structure of NMS-8 immigrant cohorts which have arrived before and after EU enlargement in the EU-15 and selected member states, 2006**



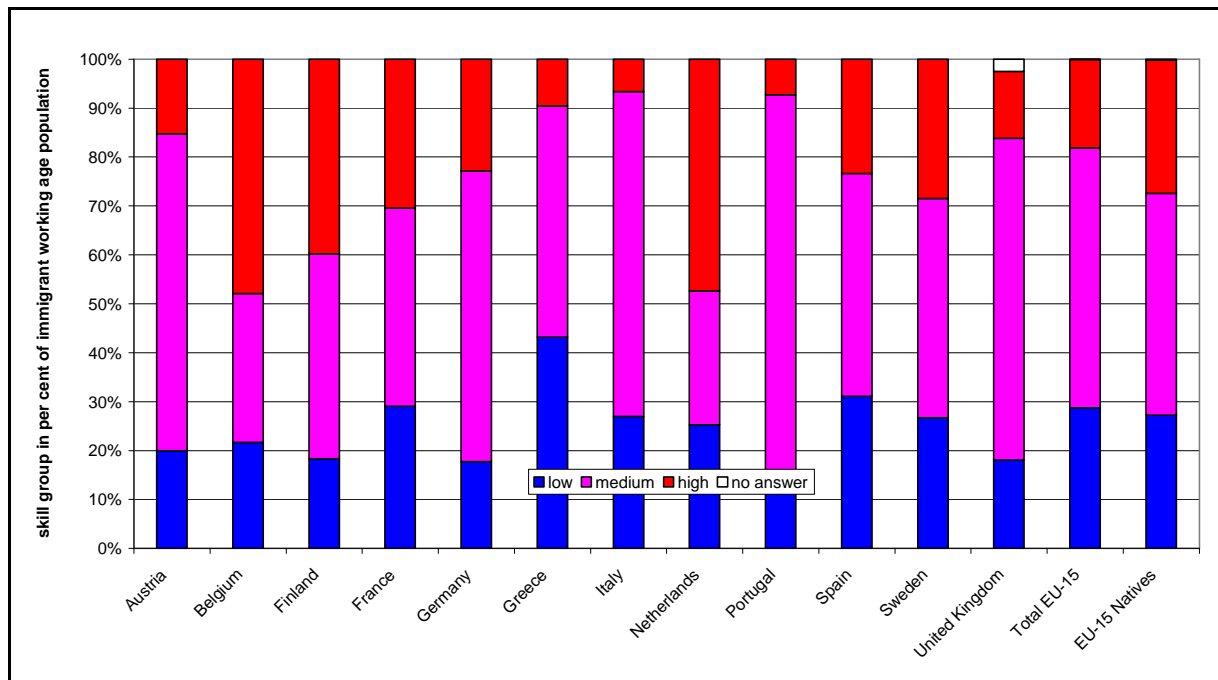
Source: European LFS, special provision 2008. Own calculations and presentation.

#### 4.1.2 Skill structure of immigrants from Bulgaria and Romania

The average education level of the native population in Bulgaria and Romania is below that of natives in the NMS-8. The skill structure of the working age population from the NMS-2 in the EU-15 reflects this lower education level of the native population in the sending countries: About 29 per cent of the immigrant population in working age from the NMS-2 belong to the less-educated skill group, compared to 17 per cent in the workforce from the NMS-8 and 27 per cent in the native workforce of the EU-15. At the upper end of the skill spectrum, about 18 per cent of the NMS-2 immigrants belong to the high-skilled group, compared to 22 per cent in the NMS-8 workforce and 27 per cent in the native workforce of the EU-15.

However, in the main destinations of the NMS-2 migrants, Spain and Italy, the share of less- and high-skilled workers in the NMS-2 workforce is well below that of the native population there. Altogether, immigration from the NMS-2 has a similar impact as immigration of the NMS-8 on the skill structure of the workforce in the main destinations: It increases the labour supply more than proportional at the medium levels of the skill spectrum, but less than proportional both at the lower and the upper end of the skill spectrum. In Greece, where immigration from the NMS-2 is important in relative terms, we observe a similar pattern (see Figure 9 and Table A2).

**Figure 9: Skill structure of immigrants from Bulgaria and Romania in the EU-15 compared to EU-15 natives, 2006**



Source: European LFS, special provision 2008. Own calculations and presentation.

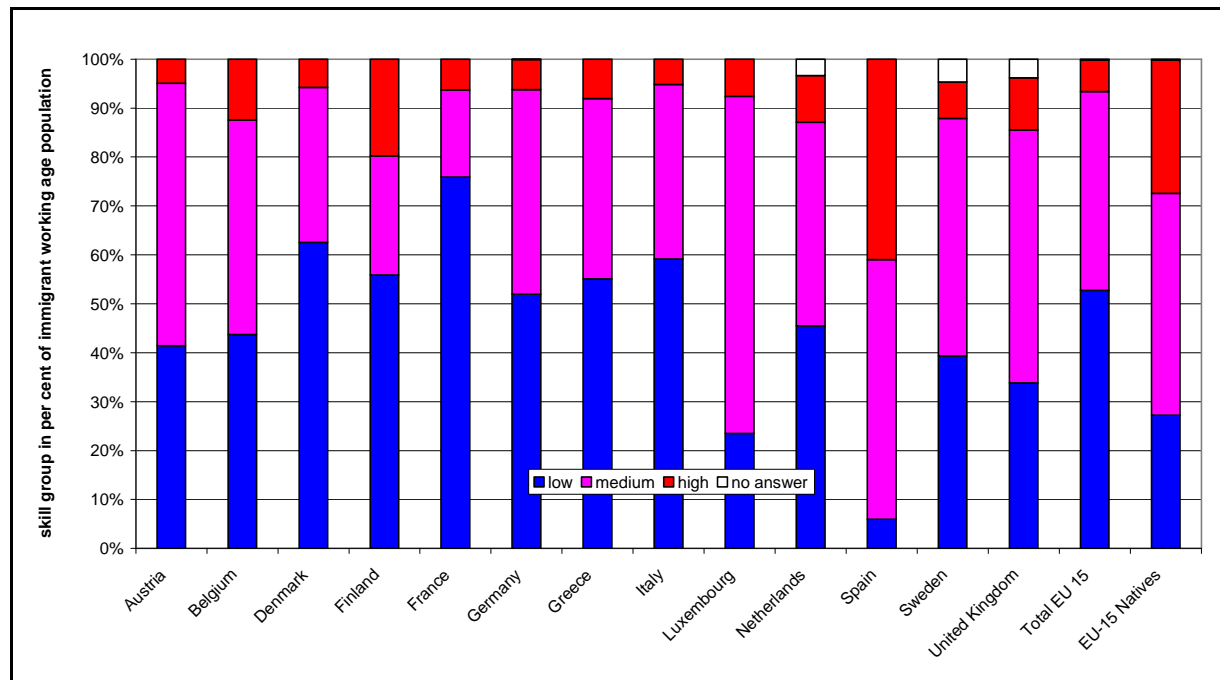
#### 4.1.3 Skill structure of immigrants from the candidate countries

The qualification structure of the working age population from the six candidate and potential candidate countries in the EU-15 displays a completely different pattern than that of the NMS immigrant workforce: 53 per cent belong to the less qualified group, 41 to the medium qualified group and only 6 per cent to the highly qualified education group. Immigration from these countries has a long history in the EU and reflects inter alia the recruitment of manual workers during the 1960s and early 1970s, which leaves its traces in the skill structure of the immigrant workforce from there until today.

In the main destinations of migrants from these countries, i.e. in Germany, Austria, Italy and the Netherlands, the share of the less-skilled in the working age population from the candidate countries varies between 40 and 60 per cent, compared to 14 to 20 per cent in the native population of the receiving countries with the exception of Italy (39 per cent). The share of the high skilled varies between 5 and 7 per cent and is thus well that of the native population (see Figure 10 and Table A2).

Altogether, the average education level of the workforce from the candidate countries is well below that of the native labour force in the receiving countries. This is true for both the traditional destinations such as Germany and Austria as well as new destinations such as Italy and Greece.

**Figure 10: Skill structure of immigrants from the candidate countries in the EU-15 compared to EU-15 natives, 2006**



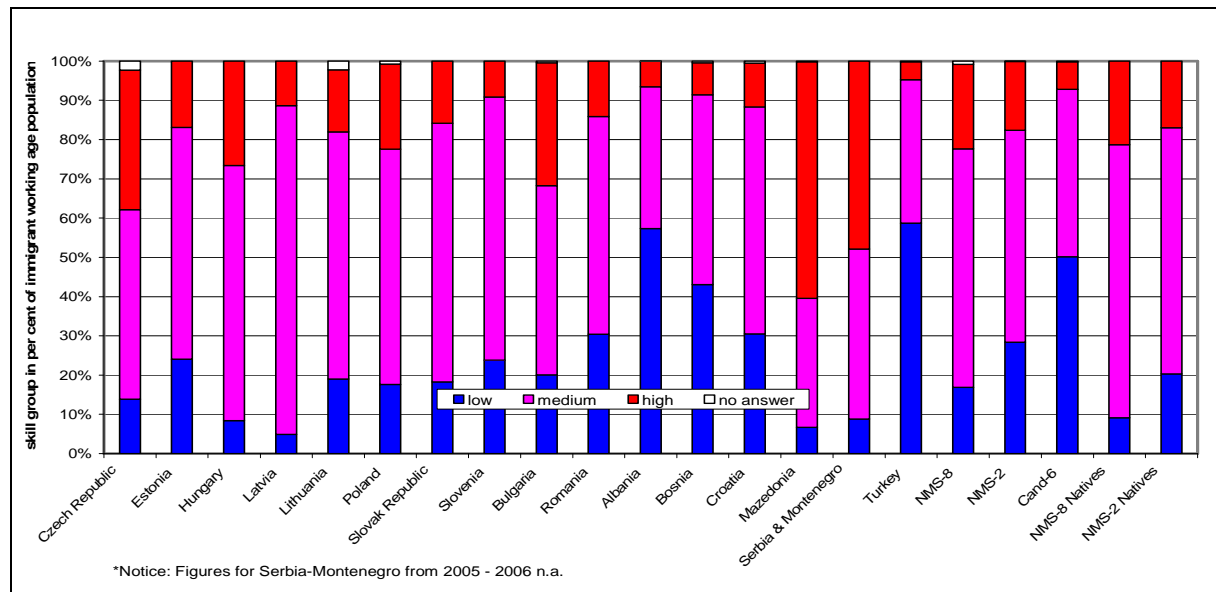
Source: European LFS, special provision 2008. Own calculations and presentation.

#### 4.2 Does Eastern enlargement involve a brain drain?

The average education level of the migrant workforce from the NMS-8 residing in the EU-15 is well above that of the native workforce staying behind. In the NMS-8, the share of the high-skilled segment of the workforce is at 22 per cent more than twice as high as that of the native workforce (9 per cent), while the share of the less-skilled group is at 17 per cent well below that of the native workforce in the sending countries (21 per cent). In contrast, average education levels of the migrant workforce from the NMS-2 are not above those of the native population: The share of the high-skilled group is about 18 per cent of the migrant workforce from the NMS-2 residing in the EU-15 compared to 20 per cent in the native working age population in the sending countries. Analogously, about 28 per cent of the migrants from the NMS-2 belong to the less-skilled group, but only 17 per cent of the native population in working age in the NMS-2. However, these figures have to be taken with a grain of salt since survey results from the sending and receiving countries are biased due to classification and measurement errors (see Figure 11 and Table A3).

The results for the individual sending countries differ widely. The Labour Force Survey suggests that the migrant workforce from the Czech Republic, Hungary, Bulgaria and Poland is particularly high skilled compared to the native population, while the skill level of the migrant working age population is below the native population in case of Romania and Slovenia.

**Figure 11: Skill structure of immigrants in the EU-15 by country of origin compared to NMS-8 and NMS-2 natives, 2006**



Source: European LFS, special provision 2008. Own calculations and presentation.

### 4.3 Is there evidence for brain waste?

To illustrate the issue of possible brain waste among migrants (compared to the native population), we restrict the analysis to the group of high-skilled persons in order to investigate whether and to what extent these highly qualified individuals work in jobs that would generally require only medium or low qualification (see Table A4 for medium skilled persons). We expect to see high-skilled individuals working in jobs requiring a high level of education; hence there should be an accumulation of individuals working as professionals or managers and only a minority of individuals working in fields such as agriculture, crafts or machine operating. As the dataset gives only a loose overview of the occupational structure we refer to the occupational structure of natives in order to identify different employment patterns. Hence, Table 7 describes the occupational structure of employed individuals within the EU-15 of foreigners and natives for the year 2006.

For our analysis we refer to data based on the International Standard Classification of Occupations, ISCO, which enables us to distinguish the basic occupational fields in which an individual works. We drop the 'Armed Forces' category due to missing values for the NMS-8, NMS-2, and Cand-6 group. There are two classes used in the table: '>10years', i.e. immigrants that lived in the host country for more than ten years, and 'newly arrived', the group of persons that moved to the host country within the last decade.



**Table 7: Occupational structure of highly skilled employed individuals by migration status in the EU-15, 2006**

|  | immigrants from NMS-8 |               | immigrants from NMS-2 |               | immigrants from CAND-6 |               | natives    |
|--|-----------------------|---------------|-----------------------|---------------|------------------------|---------------|------------|
|  | > 10years             | newly arrived | > 10years             | newly arrived | > 10years              | newly arrived |            |
| <i>in per cent of highly skilled employed individuals aged 15-64</i> |                       |               |                       |               |                        |               |            |
| Clerks   | 0.7                   | 8.9           | 0.9                   | 3.4           | 17.6                   | 3.3           | 8.1        |
| Craft and related trade workers                                      | 15.0                  | 12.6          | 15.8                  | 32.6          | 13.5                   | 20.0          | 3.8        |
| Elementary occupations   | 9.8                   | 9.2           | 4.9                   | 20.9          | 10.8                   | 18.5          | 1.2        |
| Legislators, senior officials and managers                           | 5.0                   | 10.8          | 1.2                   | 1.6           | 5.5                    | 9.9           | 12.6       |
| Plant and machine operators and assemblers                           | 0.4                   | 2.7           | 27.2                  | 2.4           | 5.9                    | 11.9          | 1.4        |
| Professionals  | 23.8                  | 21.1          | 29.2                  | 8.0           | 21.4                   | 18.5          | 42.8       |
| Service workers and shop and market sales workers                    | 8.7                   | 16.7          | 2.6                   | 19.8          | 7.2                    | 8.6           | 5.1        |
| Skilled agricultural and fishery workers                             | 0.2                   | 0.0           | 0.0                   | 0.4           | 0.7                    | 2.6           | 0.8        |
| Technicians and associate professionals                              | 36.6                  | 17.9          | 18.1                  | 11.0          | 17.4                   | 6.6           | 23.7       |
| <i>Total (in persons)</i>  | 41,278                | 91,350        | 15,673                | 109,696       | 57,800                 | 33,373        | 42,512,500 |

Results for immigrants can be biased due to measurement and classification errors.-- Figures need not add up to 100 per cent since the category 'armed forces' is not reported here.

Source: European LFS, special provision 2008. Own calculations and presentation.

Using natives' occupational structure as reference, which is characterised by a high share of professionals (43 per cent), technicians (24 per cent) and legislators (13 per cent), sizeable differences between natives and foreigners become apparent. However, these differences vary also between newly arrived immigrants and those who are in the respective country for more than 10 years. It is obvious that foreigners, independent of their origin, work more often in occupations which require only elementary skills (craft and related trade workers, elementary occupations, plant and machine operators, service workers and shop and market sales workers). Moreover, the group which stays more than 10 years is less represented in these occupational groups than the new arrivals.

#### 4.4 Changing the age structure of the workforce

One important feature of the recent migration wave from the new member states is that the immigrant population from the NMS is particularly young. Almost two-thirds (63 per cent) of the working age population from the NMS-8 in the EU-15 belongs to the age group from 15 to 34 years, compared to 58 per cent in the immigrant workforce from the NMS-2 and 34 per cent of the native workforce in the EU-15. This can be traced back to the fact that immigration from the NMS has started only recently. In countries like Austria and Germany, where immigration from the NMS began already in the early 1990s, the share of the 15 to 34 age group among the working age population from the NMS-8 is at 37 per cent and 49 per cent, respectively, well below that of the UK (86 per cent). Due to the long migration tradition, the working age population from the candidate countries in the EU-15 is much older than the immigrant workforce from the NMS: The

share of the 15 to 34 age group of the CAND-6 amounts to 46 per cent on average. This share is still higher than among the native working age population, but considerably smaller than in the workforce from the NMS (see Table 8).

**Table 8: Age composition of the working age population by migration status in the EU-15, 2006**

|  | immigrants from NMS-8 |       |       | immigrants from NMS-2 |       |       | immigrants from CAND-6 |       |       | natives |       |       |
|--|-----------------------|-------|-------|-----------------------|-------|-------|------------------------|-------|-------|---------|-------|-------|
|  | 15-34                 | 35-49 | 50-64 | 15-34                 | 35-49 | 50-64 | 15-34                  | 35-49 | 50-64 | 15-34   | 35-49 | 50-64 |
| <i>in per cent of working age population</i> |                       |       |       |                       |       |       |                        |       |       |         |       |       |
| Austria                                      | 36.8                  | 38.8  | 24.4  | 70.5                  | 24.7  | 4.8   | 45.4                   | 41.2  | 13.4  | 35.5    | 45.3  | 19.2  |
| Belgium                                      | 64.1                  | 31.2  | 4.7   | 74.9                  | 18.4  | 6.7   | n.a.                   | n.a.  | n.a.  | 34.6    | 45.1  | 20.3  |
| Denmark                                      | 85.0                  | 5.7   | 9.4   | n.a.                  | n.a.  | n.a.  | 66.7                   | 28.2  | 5.0   | 34.8    | 37.5  | 27.7  |
| Finland                                      | 44.0                  | 49.5  | 6.4   | 39.8                  | 41.9  | 18.3  | 42.3                   | 47.8  | 9.9   | 32.6    | 38.1  | 29.3  |
| France                                       | 46.2                  | 45.4  | 8.4   | 68.2                  | 20.2  | 11.6  | 53.2                   | 36.0  | 10.8  | 34.0    | 42.6  | 23.3  |
| Germany                                      | 48.7                  | 36.5  | 14.9  | 55.5                  | 32.9  | 11.6  | 44.3                   | 38.2  | 17.5  | 30.3    | 44.9  | 24.8  |
| Greece                                       | 38.3                  | 52.1  | 9.6   | 41.1                  | 45.6  | 13.3  | 46.4                   | 44.7  | 8.9   | 34.2    | 42.4  | 23.4  |
| Ireland                                      | n.a.                  | n.a.  | n.a.  | n.a.                  | n.a.  | n.a.  | n.a.                   | n.a.  | n.a.  | 43.3    | 35.3  | 21.4  |
| Italy  | 58.3                  | 28.7  | 12.9  | 60.3                  | 33.2  | 6.5   | 46.9                   | 47.9  | 5.2   | 32.2    | 45.6  | 22.2  |
| Luxembourg                                   | 74.5                  | 19.5  | 6.0   | 36.7                  | 48.7  | 14.6  | 44.8                   | 52.2  | 3.0   | 29.6    | 48.2  | 22.3  |
| Netherlands                                  | 53.8                  | 40.6  | 5.6   | 0.0                   | 0.0   | 0.0   | 52.9                   | 40.9  | 6.2   | 37.5    | 39.6  | 22.8  |
| Portugal                                     | n.a.                  | n.a.  | n.a.  | 56.7                  | 38.9  | 4.3   | n.a.                   | n.a.  | n.a.  | 36.7    | 39.7  | 23.6  |
| Spain  | 70.9                  | 21.6  | 7.5   | 57.3                  | 35.1  | 7.6   | n.a.                   | n.a.  | n.a.  | 38.5    | 40.3  | 21.2  |
| Sweden                                       | 35.8                  | 43.9  | 20.3  | 71.5                  | 19.8  | 8.7   | 49.1                   | 44.3  | 6.7   | 32.3    | 36.8  | 30.8  |
| United Kingdom                               | 86.0                  | 11.2  | 2.9   | 79.8                  | 13.8  | 6.4   | 51.4                   | 45.1  | 3.5   | 34.5    | 39.3  | 26.3  |
| Total EU 15                                  | 63.0                  | 26.8  | 10.2  | 58.3                  | 33.9  | 7.8   | 45.8                   | 40.8  | 13.3  | 33.9    | 42.2  | 23.9  |

Results for immigrants can be biased due to measurement and classification errors.-- Figures need not add up to 100 per cent since the category 'no answer' is not reported here.

Source: European LFS, special provision 2008. Own calculations and presentation.

From the sending country perspective, the share of emigrants in the young cohorts increases with the share of people which have emigrated during the last years: The share of the 15 to 34 cohort in the migrant population is particularly high in Lithuania, Latvia, the Slovak Republic, the Czech Republic and Poland, i.e. in case of sending countries for which migration barriers have been recently removed. In the successor states of the former Yugoslavia, where emigration has started already during the guestworker recruitment phase in the 1960s and accelerated during the civil wars in the 1990s, the average age of the emigrant population is high compared to the other sending countries (see Table 9).

Altogether, the migrant workforce from the NMS is particularly young, which reduces labour supply in the young cohorts substantially in the sending countries and increases it in the main destinations such as the UK and Ireland. Of course, the age of the workforce from the new member states will increase over time. The higher share of temporary migration which is facilitated by the migration opportunities within the EU and the geographical proximity may however result in a higher labour mobility among the young cohorts of the labour force from the NMS and, hence, a lower average age of the migrant workforce from the NMS in the EU-15 compared to other immigrant groups even in the long-run.

**Table 9: Age composition of the working age population by migration status in the sending countries, 2006**

| age group                                    | EU-15 emigrants |       |       | natives |       |       |
|--|-----------------|-------|-------|---------|-------|-------|
|  | 15-34           | 35-49 | 50-64 | 15-34   | 35-49 | 50-64 |
| <i>in per cent of working age population</i> |                 |       |       |         |       |       |
| Czech Republic                               | 65.4            | 21.5  | 13.1  | 14.5    | 79.7  | 5.8   |
| Estonia                                      | 54.0            | 41.6  | 4.4   | 35.7    | 53.6  | 10.7  |
| Hungary                                      | 43.4            | 33.4  | 23.2  | 21.3    | 65.3  | 13.4  |
| Latvia                                       | 70.6            | 22.7  | 6.7   | 23.9    | 62.3  | 13.7  |
| Lithuania                                    | 77.6            | 15.2  | 7.2   | 31.2    | 61.0  | 7.9   |
| Poland                                       | 64.7            | 27.2  | 8.1   | 22.4    | 68.4  | 9.2   |
| Slovak Republic                              | 69.3            | 23.2  | 7.6   | 16.6    | 78.7  | 4.7   |
| Slovenia                                     | 38.9            | 31.4  | 29.7  | 23.4    | 62.2  | 14.4  |
| Bulgaria                                     | 57.4            | 32.8  | 9.8   | 25.2    | 59.3  | 15.6  |
| Romania                                      | 58.4            | 34.4  | 7.2   | 14.2    | 63.9  | 21.9  |
| Albania                                      | 48.7            | 44.5  | 6.9   | n.a.    | n.a.  | n.a.  |
| Bosnia-Herzegovina                           | 37.6            | 42.6  | 19.8  | n.a.    | n.a.  | n.a.  |
| Croatia                                      | 35.8            | 34.8  | 29.4  | 35.7    | 53.6  | 10.7  |
| Mazedonia                                    | 39.2            | 57.1  | 3.7   | n.a.    | n.a.  | n.a.  |
| Serbia-Montenegro                            | 44.6            | 31.3  | 24.1  | n.a.    | n.a.  | n.a.  |
| Turkey                                       | 50.1            | 39.4  | 10.5  | n.a.    | n.a.  | n.a.  |
| NMS-8  | 63.0            | 26.8  | 10.2  | 37.7    | 40.0  | 22.4  |
| NMS-2  | 58.2            | 34.1  | 7.7   | 36.5    | 41.0  | 22.5  |
| Cand-6                                       | 45.7            | 39.6  | 14.7  | n.a.    | n.a.  | n.a.  |

Results for immigrants can be biased due to measurement and classification errors.--  
 Figures need not add up to 100 per cent since the category 'no answer' is not reported here.

Source: European LFS, special provision 2008. Own calculations and presentation.

#### 4.5 Gender patterns

Another feature of the recent immigration wave from the new member states is the relatively high participation of females in the migrant labour force. Table 10 displays the share of females in the labour force of immigrants from the NMS-8, NMS-2, the CAND-6 and natives in the EU-15. The share of females in the native labour force is below 50 per cent in all EU-15 countries and particularly low in Italy and Greece. In the labour force from the NMS-8 we observe a share of females of 51 per cent, which is considerably higher compared to the native labour force. The share of females in the NMS-2 labour force in the EU-15 is at 47 per cent lower than that in the NMS-8 labour force, but still higher than that of females in the native labour force of the EU-15 (45 per cent). However, the LFS data reports for some countries implausible high shares of females in the immigrant labour force from the NMS, such that we have to take these results with a grain of salt (see Table 10).

In the labour force from the candidate countries we observe a different gender pattern: The share of females is at 34 per cent much lower than among the native and the

immigrant labour force from the NMS, which reflects both a lower participation of females in the migrant population from these countries and a lower labour market participation of females from the candidate countries residing in the EU-15.

Altogether, the relatively high share of females in the immigrant labour force demonstrates that labour mobility from the new member states deviates from the breadwinner model which influences migration patterns and the female labour market participation in many migrant groups until today.

**Table 10: Share of females in labour force by migrant status in the EU-15, 2006**

|                                    | NMS-8 | NMS-2 | CAND-6 | natives |
|------------------------------------|-------|-------|--------|---------|
| <i>in per cent of labour force</i> |       |       |        |         |
| Austria                            | 46.6  | 56.5  | 35.9   | 45.6    |
| Belgium                            | 63.4  | 53.2  | n.a.   | 44.5    |
| Denmark                            | n.a.  | n.a.  | 45.9   | 46.8    |
| Finland                            | n.a.  | n.a.  | n.a.   | 48.6    |
| France                             | 74.4  | n.a.  | 17.2   | 46.8    |
| Germany                            | 54.5  | 63.4  | 36.9   | 46.3    |
| Greece                             | 55.3  | 58.9  | 30.1   | 39.2    |
| Italy                              | 81.7  | 40.9  | 26.8   | 39.7    |
| Luxembourg                         | 69.1  | n.a.  | n.a.   | 43.3    |
| Netherlands                        | 69.3  | n.a.  | 34.1   | 45.1    |
| Portugal                           | n.a.  | n.a.  | n.a.   | 46.3    |
| Spain                              | 48.3  | 47.7  | 53.0   | 40.2    |
| Sweden                             | n.a.  | n.a.  | n.a.   | 47.5    |
| United Kingdom                     | 43.4  | n.a.  | 23.9   | 47.0    |
| EU-15                              | 51.3  | 47.4  | 33.5   | 44.7    |

Source: European LFS, special provision 2008. Own calculations and presentation.

## 5 Unemployment and labour market participation

This section deals with the labour market status of immigrants from the new member states and the candidate countries in the EU-15. We distinguish between employed, unemployed, and inactive persons in the working age population based again on the information provided by the European LFS. The employment share of the immigrant population in working age from the NMS-8 is at 68 per cent similar to that of natives (67 per cent). Interestingly enough, the LFS reports a considerably higher employment share for the working age population from the NMS-2 in the EU-15 (74 per cent). The share of unemployed individuals in the working age population<sup>12</sup> from the NMS is at some 8.5 per cent somewhat higher compared to the native population in the EU-15 (5.2 per cent). The inactivity rate is at 18 per cent (NMS-2) and 24 per cent (NMS-8) well below that of

<sup>12</sup> Note that the share of unemployed in the total working age population is not comparable to the unemployment rate, which is usually defined as the share of unemployed in the civil labour force.

natives in the EU-15 (28 per cent), which reflects inter alia the lower age of the migrant population from the NMS. In contrast, the working age population from the candidate countries shows a substantially higher share of inactive (36 per cent) and unemployed persons (11 per cent) (see Table 11). The differences in the labour market performance between immigrants from the new member states and the candidate countries reflect both to other demographic characteristics and differences in education levels which have been described above.

**Table 11: Employment, unemployment and inactivity by migrant status in EU-15, 2006**

|  | immigrants from NMS-8 |            |          | immigrants from NMS-2 |            |          | immigrants from CAND-6 |            |          | natives  |            |          |
|--|-----------------------|------------|----------|-----------------------|------------|----------|------------------------|------------|----------|----------|------------|----------|
|  | employed              | unemployed | inactive | employed              | unemployed | inactive | employed               | unemployed | inactive | employed | unemployed | inactive |
| <i>in per cent of working age population</i> |                       |            |          |                       |            |          |                        |            |          |          |            |          |
| Austria                                      | 68.7                  | 6.6        | 24.8     | 60.0                  | 5.6        | 34.3     | 61.7                   | 7.5        | 30.8     | 70.8     | 3.1        | 26.2     |
| Belgium                                      | 52.9                  | 3.5        | 43.6     | 53.6                  | 19.2       | 27.2     | 27.8                   | 12.7       | 59.5     | 61.5     | 5.0        | 33.4     |
| Denmark                                      | n.a.                  | n.a.       | n.a.     | n.a.                  | n.a.       | n.a.     | 60.6                   | 5.0        | 34.4     | 77.3     | 3.2        | 19.6     |
| Finland                                      | 71.7                  | 2.9        | 25.4     | 60.0                  | 18.7       | 21.3     | 54.5                   | 15.5       | 30.0     | 70.2     | 6.8        | 23.1     |
| France                                       | 61.4                  | 6.8        | 31.7     | 27.8                  | 34.0       | 38.2     | 43.4                   | 9.6        | 47.0     | 64.5     | 5.7        | 29.8     |
| Germany                                      | 58.6                  | 12.3       | 29.1     | 60.8                  | 8.8        | 30.5     | 49.5                   | 13.5       | 37.1     | 68.9     | 7.1        | 24.0     |
| Greece                                       | 69.9                  | 1.6        | 28.4     | 78.4                  | 6.6        | 15.0     | 69.0                   | 5.2        | 25.8     | 60.6     | 6.0        | 33.4     |
| Ireland                                      | n.a.                  | n.a.       | n.a.     | n.a.                  | n.a.       | n.a.     | n.a.                   | n.a.       | n.a.     | 67.7     | 2.9        | 29.3     |
| Italy  | 57.4                  | 3.7        | 38.9     | 73.3                  | 8.2        | 18.4     | 62.7                   | 8.4        | 28.9     | 58.4     | 4.0        | 37.6     |
| Luxembourg                                   | 79.1                  | 3.5        | 17.4     | 74.2                  | 6.1        | 19.7     | 62.8                   | 12.3       | 24.9     | 60.9     | 1.9        | 37.2     |
| Netherlands                                  | 58.4                  | 5.6        | 36.0     | 53.5                  | 5.7        | 40.9     | 48.8                   | 5.8        | 45.4     | 75.0     | 2.9        | 22.1     |
| Portugal                                     | n.a.                  | n.a.       | n.a.     | 72.5                  | 14.7       | 12.8     | n.a.                   | n.a.       | n.a.     | 68.0     | 5.6        | 26.4     |
| Spain  | 75.6                  | 8.1        | 16.3     | 77.3                  | 8.1        | 14.6     | 85.6                   | 9.2        | 5.2      | 63.9     | 5.6        | 30.4     |
| Sweden                                       | 60.9                  | 15.9       | 23.3     | n.a.                  | n.a.       | n.a.     | 46.0                   | 12.8       | 41.1     | 74.0     | 6.2        | 19.8     |
| United Kingdom                               | 82.3                  | 5.4        | 12.4     | 84.1                  | 8.2        | 7.7      | 41.1                   | 8.3        | 50.6     | 71.7     | 3.9        | 24.4     |
| Total EU 15                                  | 67.6                  | 8.5        | 23.9     | 73.7                  | 8.5        | 17.8     | 53.1                   | 11.2       | 35.8     | 66.5     | 5.2        | 28.2     |

Results for immigrants can be biased due to measurement and classification errors.-- Figures need not add up to 100 per cent since the category 'no answer' is not reported here.

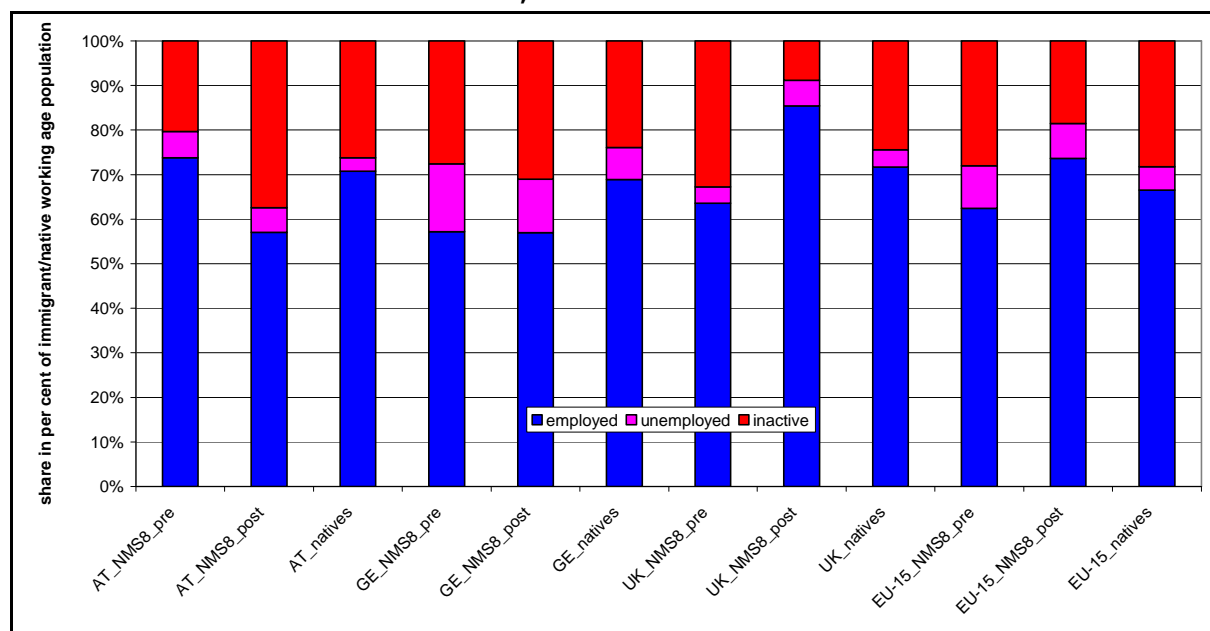
Source: European LFS, special provision 2008. Own calculations and presentation.

The labour market performance of migrants from the new member states and the candidate countries varies considerably across destination countries. Employment shares of migrants from the NMS are particularly high in the UK, Luxembourg, Spain, Greece, and Italy. Note that immigration from the NMS is a recent phenomenon in these countries. Moreover, the UK has restricted the access to unemployment benefits for migrants from the NMS. In contrast, employment shares are particularly low in Belgium, France, Germany, and the Netherlands. Note again that particularly the country results may suffer from low response rates in the LFS.

Figure 12 compares the labour market performance of immigrants from the NMS-8 which moved before and after EU enlargement for the EU-15 and selected destinations. At the EU-15 average, the immigrant cohorts which arrived after EU enlargement are characterised by a higher employment and a lower inactivity ratio compared to the cohorts which arrived before enlargement. Nonetheless, the picture differs by destination countries. In Austria we find a high employment share among the pre-enlargement migrants and in Germany the employment ratio is roughly the same for both groups. In contrast, the post-enlargement cohorts outpace the employment share of their predecessors by far in the UK. These differences in the labour market performance may

reflect different migration patterns: While immigration in the UK is largely driven by the opening of the labour markets, the main channels for permanent migration from the NMS to Germany are family reunification.

**Figure 12: Employment, unemployment, and inactivity of NMS-8 immigrant cohorts which have arrived before and after EU enlargement in the EU-15 and selected member states, 2006**



Source: European LFS, special provision 2008. Own calculations and presentation.

Table 12 compares the employment, unemployment and inactivity shares of the working age population of the EU-15 migrants with that of natives in the sending countries. Note that the observable and unobservable human capital characteristics of the migrant population differ from those of the native population, such that this does not provide information on the labour market performance of individuals in the home and the host country. According to the LFS data, the inactivity rate of the migrant population of the NMS-8 and the NMS-2 is at 24 per cent and 18 per cent, respectively, well below that of the native population in the NMS-8 (35 per cent) and the NMS-2 (36 per cent), while the unemployment rate is slightly higher. The employment rates of the migrant population are in most sending countries well above those of the native population. The higher activity of the migrant population relative to the native population is not surprising, since the age is substantially lower and the education levels are usually higher compared to the native population. Moreover, specific characteristics of the migrant population may play a role here. Interestingly enough, this pattern does not hold for all sending countries: The employment rates of migrants from the successor states of the former Yugoslavia are on average below those of the new member states, and that of Turkey are at 46 per cent particularly low. Although data on the labour market participation of natives in the home countries are not available for most of these countries, these figures suggest that employment shares of the migrant population may be below those of natives in the sending countries.

**Table 12: Employment, unemployment and inactivity of EU-15 emigrants and natives in the sending countries, 2006**

|                    | EU-15 emigrants                              |            |          | natives  |            |          |
|--------------------|--|------------|----------|----------|------------|----------|
|                    | employed                                     | unemployed | inactive | employed | unemployed | inactive |
|                    | <i>in per cent of working age population</i> |            |          |          |            |          |
| Czech Republic     | 63.8   | 8.7        | 27.5     | 65.2     | 5.0        | 29.8     |
| Estonia            | 73.1   | 2.7        | 24.2     | 68.7     | 4.0        | 27.3     |
| Hungary            | 72.6   | 9.3        | 18.2     | 57.3     | 4.5        | 38.2     |
| Latvia             | 70.3   | 13.7       | 16.0     | 65.4     | 5.2        | 29.4     |
| Lithuania          | 75.7   | 9.6        | 14.7     | 63.6     | 3.8        | 32.5     |
| Poland             | 67.1   | 8.0        | 24.9     | 54.0     | 9.0        | 37.0     |
| Slovak Republic    | 64.4   | 8.5        | 27.1     | 59.2     | 9.3        | 31.5     |
| Slovenia           | 65.7   | 9.7        | 24.6     | 67.2     | 4.3        | 28.6     |
| Bulgaria           | 71.3   | 8.0        | 20.7     | 59.1     | 5.8        | 35.0     |
| Romania            | 74.3   | 8.7        | 17.1     | 59.6     | 4.8        | 35.6     |
| Albania            | 64.7   | 6.7        | 28.6     | n.a.     | n.a.       | n.a.     |
| Bosnia-Herzegovina | 60.1   | 10.3       | 29.5     | n.a.     | n.a.       | n.a.     |
| Croatia            | 63.5   | 10.1       | 26.4     | 68.7     | 4.0        | 27.3     |
| Mazedonia          | 62.2   | 7.5        | 30.3     | n.a.     | n.a.       | n.a.     |
| Serbia-Montenegro  | 61.0   | 7.0        | 32.1     | n.a.     | n.a.       | n.a.     |
| Turkey             | 45.6   | 13.1       | 41.3     | n.a.     | n.a.       | n.a.     |
| NMS-8              | 67.7   | 8.4        | 23.9     | 57.8     | 7.3        | 34.9     |
| NMS-2              | 73.6   | 8.5        | 17.8     | 59.5     | 5.0        | 35.5     |
| Cand-6             | 53.6   | 10.9       | 35.5     | n.a.     | n.a.       | n.a.     |

Results for immigrants can be biased due to measurement and classification errors.--  
 Figures need not add up to 100 per cent since the category 'no answer' is not reported here.

Source: European LFS, special provision 2008. Own calculations and presentation.

Altogether, the labour market performance of the migrants from the new member states reflects both their relatively high education level and low age compared to other foreigner groups. Employment and activity rates are above the native population in the receiving and the sending countries. However, the share of unemployed individuals in the working age population is higher in the migrant population from the NMS compared to those of natives in the receiving countries.

## 6 Conclusions

This background report has described the main migration patterns and fundamental economic conditions which may have contributed to the migration from the new member states and the candidate countries in the context of the EU eastern enlargement. We find that differences particularly in nominal per capita GDP and wage levels create substantial monetary incentives for migration, although the fast convergence of per capita GDP and

wage levels erodes these incentives over time. The speed of wage and income convergence is faster in the new member states compared to the candidate countries and has considerably accelerated after enlargement.

The removal of immigration barriers in selected EU countries is associated with a substantial increase in migration from the NMS-8 into the EU-15 since 2004 and a diversion of migration flows away from Austria and Germany towards Ireland and the UK. An annual increase in the stock of migrants of some 254,000 persons p.a. corresponds to the forecasts of potential migration from the NMS-8 into the EU-15 which have been undertaken before enlargement (e.g. Alvarez-Plata et al., 2003), although the large influx of migrants to destinations such as Ireland and the UK has not been expected. Immigration from Bulgaria and Romania has substantially increased and amounts to some 226,000 persons p.a. since the beginning of this decade, although most EU member states have maintained their immigration restrictions vis-à-vis both countries after their accession in 2007. This substantial influx has been mainly facilitated by bilateral agreements between Spain and Italy and the NMS-2.

The 2007 immigration data suggest that net immigration from the NMS-8 into the EU-15 starts to decline, which would coincide with standard migration patterns (Brücker/Schröder, 2006), while net immigration from Bulgaria and Romania remains at the levels of the previous years. Immigration from the candidate countries, which have been one of the main sources of immigration in the EU-15 during the last decades, however stagnates since the beginning of this decade.

The influx of migrants from the NMS will not much change the skill structure of the workforce in the receiving countries of the EU-15 since they are, similar to the native population, mainly concentrated at the mean of the skill spectrum. However, the shares of low- and high-skilled workers from the NMS are slightly below those of the native workforce. The average education level of migrants from the NMS-2 are slightly below those of the NMS-8, but compared to the education level of the native workforce in the main destinations of immigrants from the NMS-2 a similar pattern as in case of immigration from the NMS-8 emerges. This distinguishes the skill level of the workforce from the new member states in the EU-15 from that of other immigrant groups, which are characterised by lower education levels compared to the native workforce.

Comparing the skill structure of migrants with natives in the sending countries, we find that migrants from the NMS-8 are better qualified than natives in their home countries. Particularly the share of the high-skilled group in the migrant workforce is more than twice as high as that of the native workforce of the NMS-8. A brain drain may therefore be an issue for some of these countries, although recent research suggests that sending countries can benefit from high-skilled emigration if it is temporary and involves additional human capital investment in the sending countries. This will be discussed in detail in Deliverable 6 of this study.

Eastern enlargement is associated with an improvement of the skill structure of the workforce from the NMS-8 if we compare migration cohorts which arrived before and



after enlargement. An explanation of this phenomenon is not self-evident, since lower migration barriers are often associated with a lower skill level of the migrant population (Belot/Hatton, 2008; Brücker/Defoort, 2006). A possible explanation is that the regulation of immigration from the NMS by family reunification and seasonal work permits has reduced the skill level of the workforce which immigrated before enlargement.

The immigrant workforce from the NMS is particularly young compared to the native workforce in the receiving countries but also compared to the workforce of other immigrant groups. The age pattern of the migrant workforce reflects the fact that immigration from the NMS is in many countries a very recent phenomenon. The age of the immigrant workforce from the NMS will therefore increase over time. Nevertheless, geographical proximity, low transport and communication costs create together with the free movement of workers in the EU special incentives for temporary migration, which will be more than proportionally utilised by the young cohorts in the labour market. It is therefore likely that the age of the workforce from the NMS will remain below that of natives and other immigrant groups in the long-run.

The low age of the workforce from the NMS creates benefits for the public sector in the receiving countries and costs in the sending countries. Over the life-cycle, individuals contribute in the age brackets where the migrants from the NMS are more than proportionally represented much more to the public sector by taxes and social security contributions than they receive in terms of transfers. This generates a net gain for the public sector in the receiving countries, particularly if migration is temporary. This will be discussed further in Deliverable 5.

The patterns of labour market participation of migrants from the NMS in the EU-15 reflect their human capital characteristics. Inactivity rates are particularly low compared to the native workforce as well as compared to other immigrant groups, and employment rates are relatively high. This is not surprising given the low age of the immigrant workforce and the small share of less-skilled workers in the immigrant workforce from the NMS. However, the share of unemployed individuals is considerably higher compared to the native workforce, reflecting problems of labour market integration of immigrants. It is however worthwhile to note that the unemployment risks of migrants from the NMS are lower than those of other immigrant groups. We observe moreover distinct differences between destination countries, reflecting different labour market conditions and institutions as well as different modes of regulating the entry of immigrants from the NMS.

## 7 References

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## 8 Annex

**Table A1: Distance and transport costs, 2008**

|     | AT   | BE    | DK    | DE    | FI    | FR    | GRE   | IE    | IT    | LX    | NL    | PT    | SWE   | SP    | UK    |
|-----|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|     | <i>distance in km</i>                      |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| BU  | 1,013                                      | 2,112 | 2,032 | 1,648 | 2,589 | 2,189 | 736   | 2,918 | 1,650 | 1,955 | 2,171 | 3,555 | 2,633 | 2,833 | 2,474 |
| CZE | 330  | 915   | 981   | 355   | 1,500 | 1,050 | 1,980 | 1,713 | 1,300 | 750   | 890   | 2,790 | 1,350 | 2,320 | 1,226 |
| EST | 1,754                                      | 2,185 | 1,758 | 1,463 | 20    | 2,530 | 3,289 | 2,950 | 2,825 | 2,185 | 2,088 | 4,224 | 50    | 3,757 | 2,470 |
| HRV | 365  | 1,283 | 1,615 | 1,075 | 2,122 | 1,400 | 1,450 | 2,080 | 860   | 1,150 | 1,350 | 2,800 | 2,025 | 2,200 | 1,600 |
| HUN | 250  | 1,356 | 1,508 | 886   | 1,814 | 1,490 | 1,426 | 2,154 | 1,208 | 1,192 | 1,407 | 3,113 | 1,870 | 2,554 | 1,667 |
| LAT | 1,462                                      | 1,832 | 1,316 | 1,043 | 330   | 2,178 | 2,912 | 2,598 | 2,579 | 1,833 | 1,735 | 3,872 | 20    | 3,405 | 2,117 |
| LIT | 1,170                                      | 1,841 | 1,620 | 1,050 | 630   | 2,132 | 2,616 | 2,600 | 2,240 | 1,840 | 1,744 | 3,884 | 355   | 3,414 | 2,126 |
| MAC | 1,050                                      | 2,157 | 2,310 | 1,684 | 2,627 | 2,227 | 650   | 2,955 | 852   | 2,000 | 2,208 | 3,600 | 2,670 | 3,033 | 2,470 |
| POL | 730  | 1,310 | 1,190 | 590   | 1,040 | 1,600 | 2,264 | 2,076 | 1,800 | 1,310 | 1,213 | 3,350 | 1,570 | 2,880 | 1,590 |
| ROM | 1,060                                      | 2,170 | 2,320 | 1,700 | 2,040 | 2,300 | 1,122 | 2,970 | 1,874 | 2,000 | 2,220 | 3,780 | 2,680 | 3,220 | 2,490 |
| SVK | 78   | 1,190 | 1,310 | 683   | 1,690 | 1,322 | 1,620 | 1,990 | 1,152 | 1,025 | 1,234 | 3,000 | 1,670 | 2,500 | 1,500 |
| SVN | 374  | 1,190 | 1,522 | 1,000 | 2,111 | 1,250 | 1,590 | 1,980 | 720   | 987   | 1,242 | 2,623 | 1,950 | 2,065 | 1,500 |
| TK  | 2,040                                      | 3,145 | 3,300 | 2,671 | 3,200 | 3,214 | 1,500 | 3,950 | 2,675 | 2,980 | 3,200 | 4,600 | 3,660 | 4,020 | 3,455 |
|     | <i>cost of road transport by car (EUR)</i> |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| BU  | 109  | 229   | 219   | 178   | 300   | 236   | 79    | 555   | 178   | 211   | 235   | 384   | 365   | 306   | 337   |
| CZE | 36   | 99    | 106   | 39    | 182   | 113   | 214   | 425   | 140   | 81    | 96    | 300   | 225   | 250   | 202   |
| EST | 189  | 236   | 190   | 158   | 20    | 273   | 355   | 558   | 305   | 236   | 226   | 456   | 50    | 405   | 336   |
| HRV | 40   | 140   | 175   | 116   | 230   | 150   | 160   | 465   | 95    | 125   | 145   | 300   | 300   | 240   | 245   |
| HUN | 27   | 147   | 163   | 96    | 216   | 161   | 154   | 472   | 131   | 129   | 152   | 336   | 280   | 276   | 250   |
| LAT | 158  | 198   | 142   | 113   | 60    | 235   | 315   | 520   | 278   | 198   | 187   | 418   | 60    | 368   | 300   |
| LIT | 126  | 199   | 175   | 113   | 90    | 230   | 282   | 520   | 240   | 198   | 188   | 419   | 100   | 368   | 230   |
| MAC | 115  | 233   | 250   | 182   | 305   | 241   | 70    | 560   | 92    | 215   | 240   | 388   | 370   | 330   | 340   |
| POL | 78   | 141   | 129   | 63    | 132   | 173   | 245   | 464   | 195   | 142   | 131   | 362   | 250   | 311   | 240   |
| ROM | 114  | 234   | 250   | 183   | 240   | 250   | 121   | 560   | 202   | 216   | 240   | 408   | 370   | 350   | 270   |
| SVK | 10   | 127   | 141   | 74    | 182   | 143   | 175   | 454   | 125   | 110   | 133   | 325   | 260   | 270   | 233   |
| SVN | 40   | 129   | 165   | 108   | 250   | 135   | 171   | 453   | 78    | 106   | 134   | 283   | 290   | 223   | 233   |
| TK  | 220  | 340   | 356   | 289   | 385   | 350   | 163   | 665   | 289   | 320   | 345   | 495   | 480   | 435   | 443   |
|     | <i>costs of air transport (EUR)</i>        |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| BU  | 101  | 167   | 292   | 174   | 316   | 167   | 99    | 245   | 100   | 305   | 167   | 330   | 308   | 200   | 145   |
| CZE | 169  | 106   | 110   | 200   | 124   | 195   | 142   | 104   | 340   | 620   | 106   | 198   | 140   | 140   | 90    |
| EST | 156  | 119   | 80    | 125   | 49    | 159   | 246   | 127   | 141   | 247   | 142   | 500   | 61    | 250   | 112   |
| HRV | 187  | 196   | 250   | 215   | 310   | 197   | 360   | 840   | 207   | 385   | 197   | 663   | 290   | 351   | 197   |
| HUN | 221  | 103   | 315   | 148   | 325   | 130   | 224   | 160   | 140   | 265   | 147   | 211   | 290   | 122   | 129   |
| LAT | 172  | 146   | 132   | 88    | 82    | 153   | 250   | 180   | 193   | 172   | 140   | 254   | 90    | 227   | 140   |
| LIT | 168  | 110   | 124   | 100   | 82    | 165   | 250   | 168   | 160   | 168   | 110   | 183   | 105   | 220   | 124   |
| MAC | 221  | 239   | 228   | 312   | 371   | 228   | 340   | 323   | 203   | 408   | 239   | 460   | 340   | 340   | 165   |
| POL | 90   | 127   | 72    | 108   | 132   | 216   | 249   | 115   | 179   | 411   | 127   | 254   | 143   | 105   | 127   |
| ROM | 165  | 333   | 188   | 327   | 290   | 195   | 125   | 160   | 180   | 430   | 311   | 223   | 293   | 170   | 145   |
| SVK | n.a.                                       | 157   | 166   | 155   | 328   | 90    | 174   | 176   | 159   | 705   | 149   | 652   | 338   | 243   | 208   |
| SVN | 176  | 230   | 253   | 274   | 357   | 231   | 330   | 363   | 310   | 395   | 171   | 640   | 368   | 368   | 343   |
| TK  | 296  | 265   | 250   | 209   | 493   | 330   | 208   | 240   | 330   | 325   | 204   | 388   | 250   | 325   | 134   |

Distance refers to the distance between capitals in km.-- Travelling costs by car are computed by using the Falk-routing planner, calculated for the fastest route. Travelling costs refer to one person per car and include ferry fares.-- Air transport costs are taken from OPODO for the cheapest carrier, booking one week before travelling.

Sources: Own calculations using the Falk-route planning system and the OPODO booking system.

**Table A2: Skill composition of the working age population by migration status in the EU15, 2006**

|  | immigrants from NMS-8 |        |      | immigrants from NMS-2 |        |      | immigrants from CAND-6 |        |      | natives |        |      |
|--|-----------------------|--------|------|-----------------------|--------|------|------------------------|--------|------|---------|--------|------|
|  | low                   | medium | high | low                   | medium | high | low                    | medium | high | low     | medium | high |
| <i>share in per cent of working age population</i> |                       |        |      |                       |        |      |                        |        |      |         |        |      |
| Austria  | 7.7                   | 67.8   | 24.4 | 20.0                  | 64.8   | 15.2 | 41.4                   | 53.6   | 4.9  | 16.1    | 65.9   | 18.0 |
| Belgium  | 26.5                  | 45.3   | 28.2 | 21.7                  | 30.4   | 47.9 | 43.7                   | 43.8   | 12.5 | 23.7    | 38.7   | 37.6 |
| Denmark  | 16.6                  | 20.7   | 62.7 | n.a.                  | n.a.   | n.a. | 62.6                   | 31.7   | 5.8  | 20.1    | 47.3   | 32.5 |
| Finland  | 25.6                  | 50.0   | 24.4 | 18.3                  | 41.9   | 39.8 | 55.9                   | 24.3   | 19.8 | 17.6    | 47.1   | 35.3 |
| France   | 23.3                  | 17.5   | 59.2 | 29.1                  | 40.6   | 30.4 | 75.9                   | 17.8   | 6.3  | 24.8    | 45.5   | 29.7 |
| Germany  | 19.8                  | 53.3   | 26.9 | 17.8                  | 59.4   | 22.8 | 52.0                   | 41.8   | 6.1  | 13.5    | 60.5   | 26.0 |
| Greece   | 30.5                  | 54.0   | 15.5 | 43.2                  | 47.2   | 9.5  | 55.1                   | 36.9   | 8.0  | 34.7    | 39.3   | 25.9 |
| Ireland  | n.a.                  | n.a.   | n.a. | n.a.                  | n.a.   | n.a. | n.a.                   | n.a.   | n.a. | 26.6    | 40.1   | 32.3 |
| Italy  | 30.7                  | 60.3   | 9.0  | 27.0                  | 66.4   | 6.6  | 59.2                   | 35.6   | 5.2  | 39.0    | 45.8   | 15.3 |
| Luxembourg   | 2.7                   | 16.6   | 80.7 | n.a.                  | n.a.   | n.a. | 23.5                   | 68.9   | 7.6  | 26.0    | 50.3   | 23.7 |
| Netherlands  | 18.4                  | 60.5   | 18.8 | 25.3                  | 27.3   | 47.4 | 45.5                   | 41.6   | 9.6  | 25.9    | 43.5   | 30.2 |
| Portugal   | n.a.                  | n.a.   | n.a. | 12.2                  | 80.5   | 7.3  | n.a.                   | n.a.   | n.a. | 70.1    | 15.4   | 14.5 |
| Spain  | 19.5                  | 33.3   | 47.2 | 31.1                  | 45.6   | 23.3 | 5.9                    | 53.1   | 41.0 | 44.9    | 21.5   | 33.5 |
| Sweden   | 11.6                  | 43.4   | 45.0 | 26.7                  | 44.8   | 28.5 | 39.3                   | 48.5   | 7.5  | 14.4    | 55.2   | 29.7 |
| United Kingdom                                     | 12.4                  | 76.0   | 9.5  | 18.1                  | 65.7   | 13.7 | 33.8                   | 51.7   | 10.7 | 22.9    | 44.9   | 31.5 |
| Total EU 15  | 16.9                  | 60.8   | 21.5 | 28.8                  | 53.1   | 18.0 | 52.7                   | 40.6   | 6.4  | 27.2    | 45.4   | 27.2 |

Results for immigrants can be biased due to measurement and classification errors.-- Figures need not add up to 100 per cent since the category 'no answer' is not reported here.

Source: European LFS, special provision 2008. Own calculations and presentation.

**Table A3: Skill composition of the working age population in the sending countries by migration status, 2006**

|  | EU-15 emigrants |        |      | natives |        |      |
|--|-----------------|--------|------|---------|--------|------|
|  | low             | medium | high | low     | medium | high |
| <i>in per cent of working age population</i> |                 |        |      |         |        |      |
| Czech Republic                               | 13.9            | 48.3   | 35.6 | 14.5    | 79.7   | 5.8  |
| Estonia                                      | 24.1            | 59.0   | 16.9 | 35.7    | 53.6   | 10.7 |
| Hungary                                      | 8.4             | 65.0   | 26.6 | 21.3    | 65.3   | 13.4 |
| Latvia                                       | 4.9             | 83.8   | 11.3 | 23.9    | 62.3   | 13.7 |
| Lithuania                                    | 19.0            | 62.9   | 15.9 | 31.2    | 61.0   | 7.9  |
| Poland                                       | 17.6            | 60.0   | 21.7 | 22.4    | 68.4   | 9.2  |
| Slovak Republic                              | 18.2            | 65.9   | 15.8 | 16.6    | 78.7   | 4.7  |
| Slovenia                                     | 23.8            | 67.0   | 9.2  | 23.4    | 62.2   | 14.4 |
| Bulgaria                                     | 20.1            | 48.2   | 31.3 | 25.2    | 59.3   | 15.6 |
| Romania                                      | 30.4            | 55.5   | 14.1 | 14.2    | 63.9   | 21.9 |
| Albania                                      | 57.3            | 36.2   | 6.5  | n.a.    | n.a.   | n.a. |
| Bosnia-Herzegovina                           | 43.1            | 48.4   | 8.2  | n.a.    | n.a.   | n.a. |
| Croatia                                      | 30.5            | 57.7   | 11.2 | 35.7    | 53.6   | 10.7 |
| Mazedonia                                    | 6.7             | 32.9   | 60.2 | n.a.    | n.a.   | n.a. |
| Serbia-Montenegro                            | 8.8             | 43.3   | 47.9 | n.a.    | n.a.   | n.a. |
| Turkey                                       | 58.8            | 36.5   | 4.6  | n.a.    | n.a.   | n.a. |
| NMS-8  | 16.8            | 60.8   | 21.5 | 21.3    | 69.6   | 9.1  |
| NMS-2  | 28.4            | 54.0   | 17.5 | 17.0    | 62.7   | 20.3 |
| Cand-6                                       | 48.2            | 41.0   | 6.7  | n.a.    | n.a.   | n.a. |

Results for immigrants can be biased due to measurement and classification errors.-- Figures need not add up to 100 per cent since the category 'no answer' is not reported here.

Source: European LFS, special provision 2008. Own calculations and presentation.

**Table A4: Occupational structure of medium skilled employed individuals by migration status in the EU-15, 2006**

|  | immigrants from NMS-8 |               | immigrants from NMS-2 |               | immigrants from CAND-6 |               | natives    |
|--|-----------------------|---------------|-----------------------|---------------|------------------------|---------------|------------|
|  | > 10years             | newly arrived | > 10years             | newly arrived | > 10years              | newly arrived |            |
| <i>in per cent of medium skilled employed individuals aged 15-64</i> |                       |               |                       |               |                        |               |            |
| Clerks   | 8.6                   | 3.2           | 7.4                   | 3.0           | 7.3                    | 3.1           | 16.4       |
| Craft and related trade workers                                      | 18.7                  | 18.1          | 27.9                  | 29.2          | 30.1                   | 37.3          | 14.8       |
| Elementary occupations   | 18.1                  | 33.6          | 21.2                  | 38.5          | 15.7                   | 26.2          | 7.2        |
| Legislators, senior officials and managers                           | 5.9                   | 2.3           | 0.6                   | 1.1           | 3.8                    | 1.0           | 7.9        |
| Plant and machine operators and assemblers                           | 7.4                   | 13.5          | 14.1                  | 9.5           | 11.5                   | 14.8          | 8.2        |
| Professionals  | 4.7                   | 3.6           | 0.3                   | 0.8           | 1.2                    | 0.0           | 4.5        |
| Service workers and shop and market sales workers                    | 20.3                  | 19.4          | 20.6                  | 15.3          | 16.6                   | 15.4          | 16.8       |
| Skilled agricultural and fishery workers                             | 0.4                   | 1.9           | 5.8                   | 1.2           | 0.8                    | 0.8           | 2.5        |
| Technicians and associate professionals                              | 16.0                  | 4.6           | 2.1                   | 1.5           | 13.0                   | 1.5           | 20.9       |
| <i>Total (in persons)</i>  | 106,030               | 267,438       | 48,006                | 396,778       | 431,526                | 136,763       | 70,896,574 |

Results for immigrants can be biased due to measurement and classification errors.-- Figures need not add up to 100 per cent since the category 'armed forces' is not reported here.

Sources: European LFS, special provision 2008. Own calculations and presentation.