



Hamburg Institute  
of International  
Economics

# LABOUR MOBILITY

IS THE EURO BOOSTING MOBILITY?



**BERENBERG**

PARTNERSHIP SINCE 1590



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of International  
Economics

## **Labour Mobility**

**Is the euro boosting mobility?  
Labour mobility in Europe during  
the crisis years**



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## **Glossary**

- EU-27: EU member states as of 30 June 2013:  
Belgium, Bulgaria, Denmark, Germany, Estonia, Finland, France, Greece, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Austria, Poland, Portugal, Romania, Sweden, Slovakia, Slovenia, Spain, Czech Republic, Hungary, United Kingdom, and Cyprus
- EU-15: All EU member states before the eastern expansion in 2004:  
Belgium, Denmark, Germany, Finland, France, Greece, Ireland, Italy, Luxembourg, Netherlands, Austria, Portugal, Sweden, Spain, and United Kingdom
- NMS-10: The new member states that acceded to the EU in 2004:  
Estonia, Latvia, Lithuania, Malta, Poland, Slovakia, Slovenia, Czech Republic, Hungary, and Cyprus
- NMS-2: The new member states that acceded to the EU in 2007:  
Bulgaria and Romania
- NMS-12: NMS-10 plus NMS-2
- NMS-8: NMS-10 excluding Malta and Cyprus

## Summary

- Workers in Europe have responded to the euro crisis. Cross-border migration flows have changed considerably over recent years.
- However, the single currency has not yet given mobility within the eurozone a direct, visible boost. Instead, the euro crisis primarily diverted the migration flows from the new EU member states in central and eastern Europe. Instead of heading for Spain, Ireland and Italy, workers from the accession countries are now going to other countries in Europe. Some workers from central and eastern Europe have even returned to their home countries from the countries hit by the euro crisis or moved on to other European states.
- This redirection of the migration flows from central and eastern Europe after 2007 is playing a much greater role in labour mobility in Europe than direct internal migration from the countries badly affected by the euro crisis to economically stronger eurozone countries.
- Employment and incomes are the actual drivers of labour mobility in Europe. The currency is not an issue in this regard. People go where the jobs are. In addition, the persistent income gap between the countries of central and eastern Europe and western Europe is acting as a lever initiating migration.
- The migration balances of the crisis-hit countries have come under pressure from two sources: fast-falling immigration figures coupled with rapidly rising emigration at the same time. A number of previously popular countries for immigration, like Spain, turned into net emigration countries during the crisis. Workers are reacting to the crisis.
- Migrants from the new member states in central and eastern Europe have proven to be especially mobile. They head for those eurozone countries where the labour market gives them opportunities, and they leave those countries again when the situation on the labour market deteriorates badly.

- Migrants are increasingly young and well educated. In general, a positive selection can be observed among emigrants, measured by the distribution of education in their home countries.
- Highly skilled migrants are in some cases buying their job by working below their formal qualifications at the new place of work. At the same time, a job for which they are actually over-qualified is the better choice for them, provided this represents the (only) alternative to unemployment in the short run.
- In addition, the gap between skills offered and those demanded by the labour market widened rapidly during the crisis, especially in the crisis-hit countries but also in the eurozone overall. The skill mismatch implies high structural deficits on the labour markets in the eurozone that cannot be overcome by more labour mobility alone.
- The rising average age of the population is likely to dampen labour mobility within Europe in the future. This makes it all the more important to address structural reforms in order to boost employment growth in Europe and the eurozone.
- Mobility within Europe remains a complex phenomenon, driven by a range of factors. For this reason, it is also hard to predict migration flows going forward.

## 1 The euro – on the way to an optimum currency area?

How mobile are workers in the euro currency area? Everyone involved in devising, designing and implementing the single European currency, directly or indirectly, had to deal with this question in great depth. With good reason, for according to Robert Mundell, winner of the Nobel Prize for Economics, one of the elementary characteristics of an optimum currency area is the high mobility of the factors of production. In his essay »A Theory of Optimum Currency Areas« published in 1961, Mundell defines an optimum currency area as an area at whose borders mobility of the factor »labour« comes to a halt.<sup>1</sup> When the people within the area migrate to where they have good employment prospects, there is no need for separate currencies in the regions within this area – and hence no need to devalue the currency in order to boost regional competitiveness. Mundell came to the conclusion that an area in which the factors of production are mobile should have a single currency.

Underlying this is the following concept: If various regions in a currency area are affected to a different extent by an economic shock, leading to an increase in unemployment in individual regions for instance, the job-seekers must be mobile and go to where jobs are available. In other words, it must be possible to cushion economic shocks with a high level of labour mobility, because the exchange rate is of course not available as a means of adjustment within a currency area. What this means in concrete terms is that the labour market must be flexible and open in the currency area. Flexible factor prices (mainly wages) represent a further potential instrument for cushioning economic shocks. If unemployment rises during the course of a crisis, the demand for workers can be stimulated by falling wages.

These fundamental insights of currency theory were already the subject of fierce debate before the euro was introduced. Economists were mostly of the opinion that the listed criteria of an optimum currency area were not reflected in Europe. The cross-border mobility of workers within the envisaged eurozone was too little – at least if countries like Italy, Spain or Portugal were to be included. Alongside different attitudes (to work) and less of a willingness to look for a job abroad if necessary, language barriers played a major role. Many economists viewed this as a major difference from the United States, where the same language is spoken throughout the country. Thanks to a lack of language barriers and the generally greater flexibility of US citizens, the mobility of Americans was and still is considered much greater than that of Europeans. Even if a majority of economists in the 1990s came to the conclusion that the eurozone could not become an optimum currency area, Robert Mundell, the founder of the theory of optimum currency areas was and still is – paradoxically – a fully-fledged supporter of the euro.

So much for the theory. But what does the reality look like in the eurozone? In economic terms, the individual eurozone countries were affected to very different extents first by the global crisis and later by the crisis of confidence in the euro. In countries like Spain and Greece, the unemployment rate soared from under 10% to over 25%, while the employment boom on the German labour market continued at the same time despite the euro-crisis. Were the eurozone an optimum currency

<sup>1</sup> cf. Mundell (1961).

area, Greeks and Spaniards would have needed to come to Germany in large numbers in order to exploit the opportunities offered by the German labour market.

In this study, we take a look at the empirical evidence and examine whether the pressure of the euro currency crisis has changed the behaviour of workers in Europe in terms of whether their mobility has increased. The eurozone debt crisis would then have resulted in a maturing process in the single currency area. Or are the old fears relevant that the different mentalities in the eurozone also prevent cross-border labour migration alongside the language barriers? Besides a series of further details on migration and mobility in Europe, we investigate whether migrants from third states mainly emigrate to those countries where the labour markets are currently experiencing particularly strong demand for labour. This would at least indirectly level out economic divergences in the eurozone.<sup>2</sup>

### **Aside: Benchmark USA**

When it comes to the flexibility and above all the mobility of labour, the United States is generally viewed as the perfect example. This view is reinforced by media images of Americans who set off with all their worldly belongings – sometimes their house as well – on the back of a trailer on their way to a new place of work (and domicile). Alongside this more anecdotal evidence, the high mobility of US citizens is also well documented by empirical evidence.

A series of studies comes to the conclusion that inter-regional mobility has been greater in the United States than in Europe for decades.<sup>3</sup> The study results relate to the time before the global crisis and in some cases stretch back to the 1960s. When it comes to the question of whether the United States meets the criteria of an optimum currency area, it is safe therefore to assume that the American population is mobile enough to migrate to where jobs are available in the event of asymmetrical economic shocks. Thus, the American labour market assumes part of the internal balancing function required by a currency area experiencing different regional economic trends because it is of course not possible to use the exchange rate to bring about an adjustment.

A closer look at the US migration data also shows, however, that mobility has declined over the course of time.<sup>4</sup> Even during the US financial crisis, inter-regional mobility failed to increase appreciably – as would normally have been expected.<sup>5</sup> The higher level of home ownership is sometimes put forward as a possible explanation for reduced mobility. There has been much speculation about the correlation of home-ownership rates on the one hand and mobility and labour market efficiency on the other hand.<sup>6</sup> A clear, generally accepted reason has not yet been found. It does seem highly likely, however, that especially those home-owners whose house value fell below the value of their mortgage during the course of the real estate crisis are severely restricted in their mobility (»house locks«). Relocating entails additional migration costs, because real estate losses would have to be realized. Interestingly, many authors do not view the »house locks« as a reason for the

2 We have already analysed the mobility of factor prices and other reforms aimed at restoring competitiveness elsewhere. For more details, see Berenberg (2013)

3 A good overview is provided by Jauer et. al (2014), p. 7.

Cf. also Molloy et al. (2011)

4 Cf. Dao et al. (2014)

5 Cf. Jauer et al. (2014)

6 Cf.e.g. Blanchflower/Oswald (2013)

slow recovery in the American labour market in the years following the crisis.<sup>7</sup> All in all, it is safe to assert that the United States can still be considered the benchmark despite all the necessary qualifications and the declining mobility among Americans that has been observed for some time now.

## Eurozone: Fundamentally positive attitude to labour mobility

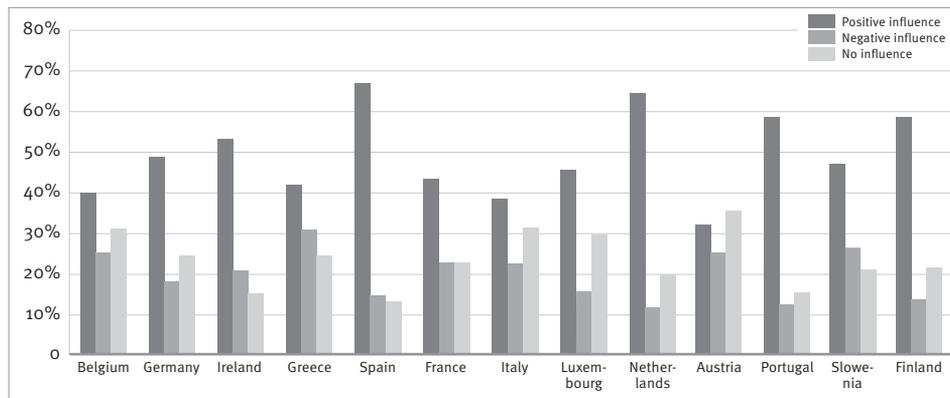
In general, the inhabitants of the eurozone<sup>8</sup> had a mostly positive view of the effects of mobility in 2009: 51.3% of respondents saw positive effects for the labour market and 48.9% for the economy. Nonetheless, there were major differences between countries regarding the question of whether and how mobility affected the economy (see Figure 1). Spain (67%), the Netherlands (65%) and Portugal (59%) are the countries in which positive effects were mentioned most frequently. Germany was in the middle with 49%. The highest scores for negative effects were recorded in Greece (31%), Slovenia (27%), Belgium and Austria (26% each).

<sup>7</sup> Cf. Dao et al. (2014)

<sup>8</sup> The term »eurozones« in this study normally refers to the 13 countries that adopted the euro in 2007.

### Does labour mobility in the EU affect the economy?

#### General opinion in the member states of the euro area, 2009



**Fig. 1** Question: »Generally speaking, do you think that when people move across regions or countries within the European Union it is a good thing, a bad thing, or neither a good nor a bad thing for the economy?« The category »no response« is not shown.

Sources: Eurobarometer 72.5 (2009); HWWI.

## 2 Characteristics of the crisis

### 2.1. Which countries were worst affected by the crisis?

The economic and financial crisis starting in 2007 had a major impact on the countries of the eurozone. The consequences for the labour market are impossible to overlook. Thus, the unemployment rate for the eurozone as a whole rose from 7.5% to 11.9% in the period from 2007 to 2013 (see Figure 2). The average unemployment rate in the eurozone was above the average rate in EU-15 and EU-27 countries in all years.

There were, however, major differences between the member states (see Figure 3). While the rate remained below 6% in Luxembourg during the whole period from 2007 to 2013 and fell from 8.7% to 5.3% in Germany, it rose from 8.2% to 26.1% in Spain over the same period. In Greece, it climbed from 8.5% to 27.3% and in Ireland from 4.7% to 13.1%. In these last three countries, the rate roughly tripled, while doubling in Portugal from 8.9% to 16.4%. All in all, the regional dis-

Unemployment rates, 2007–2013

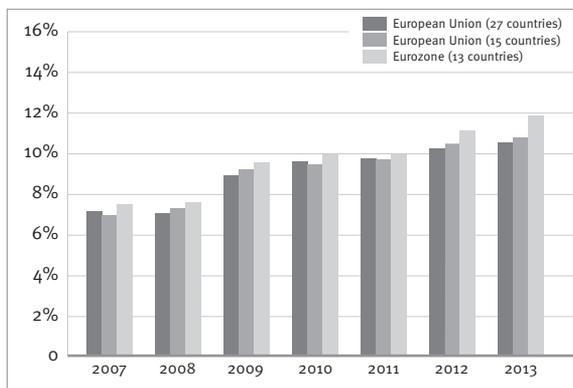


Fig. 2

Sources: Eurostat (2014 a); HWWI.

Unemployment rates in eurozone countries, 2007–2013

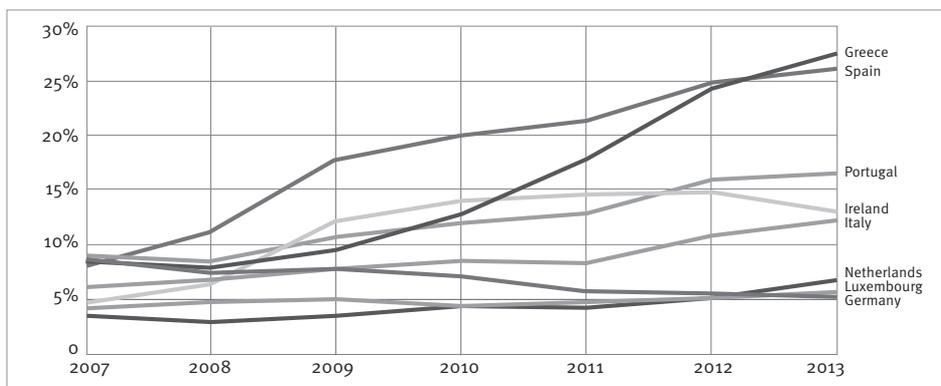


Fig. 3

Sources: Eurostat (2014 a); HWWI.

parities between states badly affected by the crisis (Spain, Greece, Ireland, Italy and Portugal) and countries less heavily affected (like Germany, Luxembourg and the Netherlands) became ever more marked across the crisis. If, however, only the developments on the labour markets in the periphery are considered using monthly data, it becomes apparent that the unemployment rates are now falling in almost all the crisis-hit countries. Thus, the unemployment rate in Spain decreased from 26.3% to 25.1% between April 2013 and April 2014, while Ireland experienced a decline from 13.7% to 11.9% during the same period. The only country not to see a fall was Italy.<sup>9</sup>

## 2.2. Construction, manufacturing and the low-skilled worst affected

Not only did the crisis have differing effects on various countries, there were also varied trends within the industries. In the eurozone, it was mainly jobs in the construction industry and manufacturing that were lost during the current crisis.<sup>10</sup> In Spain and Ireland, the construction industry was particularly badly affected; prior to the crisis, there had been a sharp rise in employment in the construction industry in both countries and a rapid collapse as a result of the crisis. Spain alone lost a million jobs in the construction industry between the second quarter of 2008 and the second quarter of 2010.<sup>11</sup> The percentage decline in employment in the construction industry totalled 33% in Spain during this period and 45% in Ireland. If the period is expanded to 2008 to 2012, it becomes apparent that a massive 53% of jobs in the Spanish construction industry disappeared.<sup>12</sup> Immigrants were particularly badly affected; 70% of the jobs they did in the Spanish construction industry were lost between 2008 and 2012. In Slovenia and Italy, it was mainly jobs in manufacturing that disappeared as a result of the crisis.<sup>13</sup>

Furthermore, job losses frequently affected low-skilled workers<sup>14</sup> more than others and they are employed in large numbers in the sectors affected. By contrast, employment of highly skilled workers rose across the eurozone as a whole during the course of the crisis, albeit at a slower rate.<sup>15</sup> Across the EU as a whole, moreover, jobs were eliminated mainly in the middle wage segment covering the lower to middle skill segment.<sup>16</sup> In terms of the various industries, it was primarily the construction industry and manufacturing that were affected here as well. Over 10% of the jobs in these sectors were lost between the first quarter of 2008 and the second quarter of 2010.

## 2.3. Migrants tended to be the first to lose their jobs during the crisis

In terms of the EU as a whole, the unemployment rate rose by 3.5 percentage points for natives between 2008 and 2013, 4.1 percentage points for migrants from other EU member states and 7.5 percentage points for migrants from non-EU countries (see Figure 4). In this context, however, the labour market success of migrants varied considerably between the individual countries, which can be attributed to the differing breakdown by sector of migrants. In Spain, the unemployment rate

9 Cf. Eurostat (2014 b)

10 Cf. European Central Bank (2012), p. 21

11 Cf. European Commission (2011 a), p. 41

12 Cf. Gago/Kirzner (2013)

13 Cf. European Central Bank (2012), p. 21

14 Cf. *ibid.*, p. 22

15 Cf. *ibid.*, p. 23

16 Cf. European Commission (2011 a), p. 43

## Unemployment rate in the EU-27 by nationality, 2007–2013

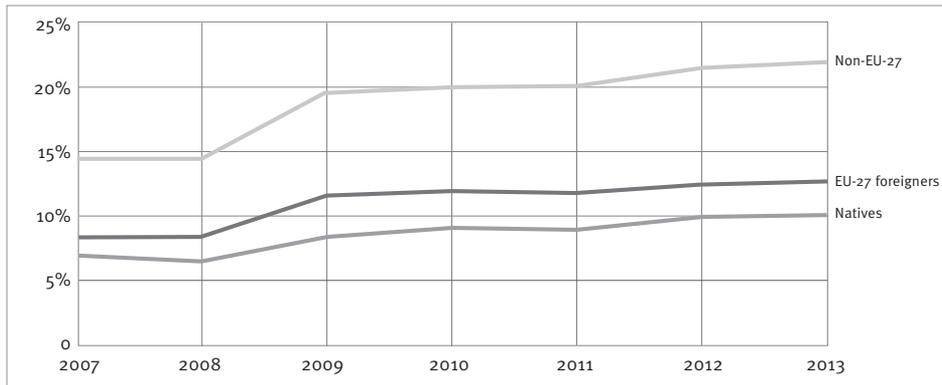


Fig. 4

Sources: Eurostat (2014 c); HWWI.

among immigrants in 2009 was almost 30%. The redundancies in the construction industry were the main reason for this.<sup>17</sup> The construction industry was also mainly responsible for the rise in unemployment among NMS<sup>18</sup> migrants from 6.4% (2008) to 19% (2009) in Ireland.<sup>19</sup>

In Germany, on the other hand, foreigners are under-represented in the most heavily affected sectors. At 31%, the largest proportion of gainfully employed foreigners worked in manufacturing in 2009, followed by professional services (16%) and retail/maintenance/car repair (13%). In contrast, the construction industry employed only around 6% of gainfully employed foreigners in Germany.<sup>20</sup> Our own analyses for September 2013 (see Table 1) show that nothing much has changed in the relative importance of the sectors for foreigners.

Immigrants employ various strategies to avoid impending long periods of unemployment.<sup>21</sup> These include switching to self-employment and moving to sectors less badly affected by the economic cycle, where this is possible.<sup>22</sup> The migration flows within Europe and the eurozone are analysed below. In this context, the eurozone encompasses only those 13 countries that had already adopted the euro in 2007, as it is not possible to draw up a meaningful comparison for the other five countries. The number of EU member states remained constant between 2007 and 2012 at 27.

17 Cf. Koehler et al. (2010), p. 19

20 Cf. *ibid.*, p. 20

18 New member states

21 Cf. Koehler et al. (2010), p. 21

19 Cf. Koehler et al. (2010), p. 19

22 Cf. *ibid.*

## Gainfully employed foreigners in Germany in selected industries, 2013

Sector	Number	Share of total workforce	Share of migrant workforce
Manufacturing	536,140	8.1%	21.7%
Construction	163,088	9.5%	6.6%
Retail, maintenance, and repairing of vehicles	300,437	7.1%	12.2%
Catering and tourist industry	242,310	25.8%	9.8%
Business-related services	499,415	11.9%	20.2%

Tab. 1

Sources: German Federal Employment Agency (2014 a); HWWI.

### 3 They go where the jobs are: Migration flows during the crisis years

#### 3.1. Eurozone less dynamic than the EU-27

Up until now, inter-state migration flows in the eurozone have only been minor. Thus, in 2006, only 0.2% of the population (or only 0.1% if Luxembourg is excluded) was mobile across national borders (total number of cross-border migrations as a proportion of the total population within the eurozone).<sup>23</sup> Estimates for the EU-15 for 2011 assume cross-border mobility of 0.115%.<sup>24</sup> The influx of citizens from the core EU-15 to the eurozone countries listed here also proved moderate. This matches other findings that changes in migration in the eurozone over recent years have not been dominated by member states overall.<sup>25</sup> Econometric analyses also show that most of the mobility on the labour market within the eurozone stems from immigrants from the 12 new member states in central and eastern Europe (NMS-12) or from non-EU countries.<sup>26</sup>

If the analysis is expanded to include immigration from the EU-27 and countries outside of the European Union, it can be stated that immigration from non-EU states to the eurozone declined by 20.3% in the period from 2008 to 2012 (see Figure 5). In contrast, immigration from the EU-27 to the eurozone rose by 2%. How did immigration to the EU-27 develop over the same period? Immigration from non-EU states to the EU-27 declined by 2.1%. In contrast, immigration from the EU-27 to the EU-27 (internal migration) rose by 19.5%.<sup>27</sup> There was an increase of 12% in internal migration within the EU compared with the previous year, 2011, alone.<sup>28</sup> Thus, immigration in the EU-27 developed more strongly during the period from 2008 to 2012 than in the eurozone.

23 The data represent own calculations based on Table A7 in Bonin et al. (2008). Data for Finland, France, Ireland, Italy and the Netherlands are not available.

24 Cf. Holland/Paluchowski (2013)

25 Cf. Bräuninger/Majowski (2011)

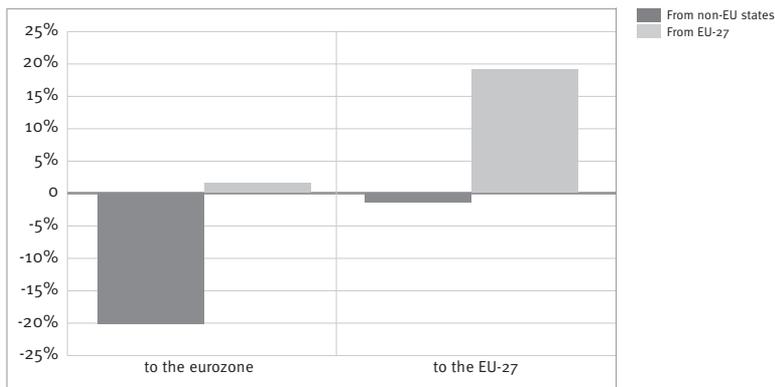
26 Cf. Jauer et al. (2014)

27 These figures do, however, only provide a guideline for the development of immigration to the EU-27.

Eurostat notes that the time series contains gaps and different definitions in various countries; in addition, the figures must be considered provisional.

28 Cf. OECD (2014)

Change in immigration, by country of previous residence, 2008–2012



Comments: Eurozone without Greece or Belgium. Data for Germany and the Netherlands in 2008 relate to 2009.

Sources: Eurostat (2014 d); HWWI.

Fig. 5

However, the picture within the eurozone varies greatly. Some countries recorded sharp rises in immigration flows, while others saw distinct declines. Furthermore, immigration also differed in line with region of origin – between the eurozone countries, there were considerable shifts in immigration from non-EU states and from EU-15 countries as well as the new member states in central and eastern Europe (NMS-12).<sup>29</sup> This is to be illustrated below for some countries in the eurozone.<sup>30</sup>

### 3.2. Crisis-hit countries with sharp decline in immigration

The countries of Spain, Italy and Ireland that were badly affected by the crisis recorded strong declines in immigration from the EU-15 and the NMS-12 as well as from non-European states between 2008 and 2012 (see Figure 6). In Spain, immigration from non-EU countries declined more markedly than in Italy and Ireland. In Italy, Spain and Ireland, immigration from the NMS-12 fell most sharply, by half in all three countries. A decrease in immigration from the EU-15 to the three crisis-hit countries listed should come as little surprise.

A different picture emerges in the geographical core regions of the eurozone, including Austria and the Netherlands. Between 2008 and 2012, total immigration rose by 24% in Austria but just 1% in the Netherlands. Of particular significance in both countries here was the influx from the NMS-12. In this regard, Austria recorded an increase of 64% and the Netherlands a still strong 24%. At the same time, immigration from the EU-15 to Austria and the Netherlands only increased slightly.

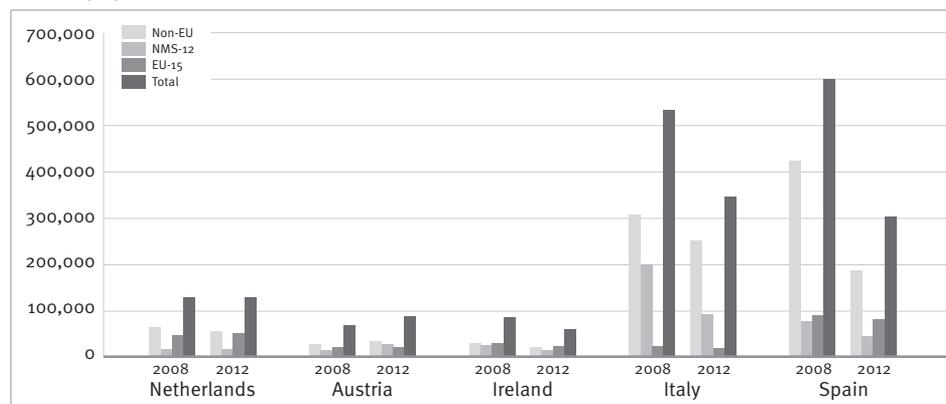
Based on Eurostat figures, it is not possible to differentiate between EU-15 and NMS-12 for Germany. Nonetheless, clear changes can be identified. Immigration to Germany increased by 71%

29 These are: Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia, Malta, Cyprus, Bulgaria and Romania.

30 The countries were selected on account of the availability of data from Eurostat. Detailed immigration data are not available for France, Luxembourg, Portugal and Greece. Slovenia and Finland are not shown due to a lack of significant change in migration flows.

#### Immigration in selected EU countries, by country of previous residence, 2008/2012

Number of people



Data for the Netherlands for 2008 comes from 2009. The reason is a break in the data series in 2009.

Sources: Eurostat (2014 d); HWWI.

Fig. 6

during that four-year period. The main reason for this is the doubling of immigration from the EU-27. But immigration from countries outside the EU-27 also rose by 37.4%.

### **3.3. Migrants from central and eastern European EU member states are particularly mobile**

Alongside economic factors, the political framework also plays a role in east-west migration. The rounds of enlargement in 2004 and 2007 gave migrants from the NMS-10, and later also the NMS-2, access to the labour markets of the EU-15, even if this has only existed in full in Germany and Austria since the transitional arrangements expired on 1 May 2011 and 1 January 2014.

Following the accession of the NMS-10 in 2004, the number of people from the NMS-8 (excluding Malta and Cyprus) living in the UK rose rapidly; this was the case in Spain (up to 2008) for immigrants from the NMS-2 and also in Italy (where the trend remains unbroken) starting in 2007.

The crisis had different effects not only on the destination countries but also on the countries of origin of east-west migration. Among the countries of origin, the Baltic states and Romania in particular were suffering economic downturns and high unemployment. Accordingly, the emigration of people from the Baltic states and Romania was driven strongly by the push factor of unemployment. Poland, by contrast, survived the crisis without an output shock. As a result, it was more the absolute income differences between destination country and country of origin that played a role as a pull factor for Polish migrants.<sup>31</sup>

Furthermore, the traditional destination countries of east-west migration were also affected to different extents by the crisis. Former destination countries like Spain suffered sharp declines in GDP together with correspondingly fast-rising unemployment rates. Migrants from the NMS-10 were particularly badly affected by this, as they were employed mainly in the sectors worst hit by the crisis (cf. Section 2.3 above). Thus, their unemployment rate in Ireland and Spain was above average, even surpassing that for non-EU foreigners in Ireland.<sup>32</sup> As a result, emigration from Spain of people coming from the NMS-12 soared between 2007 and 2009, for instance.<sup>33</sup> The high unemployment rate among such people thus acted as a push factor for migration not only for the initial move away from their home countries but also for moving on from former destination countries (see also Section 4.1 below). There are indications that shifts in migration flows of people originating from the NMS-12 are happening faster now than before the crisis.<sup>34</sup>

Migration from the new EU member states in central and eastern Europe to the older EU member states was already considerable in the period from 2003 to 2010. Estimates for this period suggest that 1.6 million people emigrated from the countries joining the EU in 2004 as part of the eastward enlargement of the EU (NMS-10) to the EU-15, which represents 2.6% of the population living in the NMS-10. The main destination countries in 2010 were the UK, followed by France and Spain.

31 Cf. Galgóczi/Leschke (2014)

32 Cf. Bräuninger/Majowski (2011)

33 Cf. *ibid.*

34 Cf. Jauer et al. (2014).

### Stock of migrants from NMS-8 in selected EU-15 countries, 2000–2007

Host country	2000	2001	2002	2003	2004	2005	2006	2007
Austria	n.a.	54,797	57,537	60,255	68,933	77,264	83,978	89,940
Germany	434,603	453,110	466,356	480,690	438,828	481,672	525,078	554,372
Ireland	n.a.	n.a.	n.a.	n.a.	43,500	94,000	147,900	178,504
Italy	40,433	40,108	41,431	54,665	66,159	77,889	91,318	117,042
Spain	19,284	29,998	41,471	46,710	61,830	77,772	100,832	131,118
UK	94,792	105,048	93,340	122,465	120,999	219,797	357,468	609,415
EU-15	706,295	755,334	833,181	892,608	949,548	1,195,850	1,504,957	1,910,370

Tab. 2

Sources: Table taken from Brücker et al. (2009), p. 24; HWWI.

### Stock of migrants from NMS-2 in selected EU-15 countries, 2000–2007

Host country	2000	2001	2002	2003	2004	2005	2006	2007
Austria	n.a.	22,387	24,926	26,802	28,367	29,573	29,958	36,792
Germany	124,453	126,245	131,098	133,404	112,532	112,196	112,406	131,402
Greece	12,961	17,344	25,612	30,583	39,220	45,551	49,086	52,567
Italy	69,020	81,444	102,363	189,279	264,223	315,316	362,124	658,755
Spain	43,676	97,020	190,185	277,814	410,403	508,776	649,076	828,772
UK	10,504	9,739	17,494	17,979	17,118	33,578	37,945	40,023
EU-15	278,682	376,550	515,477	702,312	908,938	1,079,988	1,306,576	1,863,610

Tab. 3

Sources: Table taken from Brücker et al. (2009), p. 27; HWWI.

Germany similarly had a high number of people from the ten new member states living in the country in 2010 – estimated at 605,000 – although the main immigration wave took place here between 2004 and 2007. Following the accession of the eight eastern European countries known as the NMS-8 (NMS-10 without Malta and Cyprus) in 2004, the number of immigrants from the NMS-8 living in Germany rose from 428,828 (2004) to 554,372 (2007). An increase in immigration can, however, be identified for not only Germany since accession; there was also a sharp rise in the number of migrants from the NMS-8 between 2004 and 2007 in other EU-15 countries (see Table 2).

Between 2003 and 2010, 2.1 million immigrants from Romania and Bulgaria moved to the EU-25, accounting for 7% of the local population.<sup>35</sup> It is apparent that a significant proportion of the immigration to the EU-15 had already taken place prior to accession in 2007, with Italy and Spain attracting the vast majority of the migrants a stock of 658,755 and 828,772 immigrants from Romania and Bulgaria respectively in 2007 (see Table 3). This can be attributed to bilateral agreements between the states.

But the UK also recorded a sharp rise in immigrants from these two countries. While around 38,000 Bulgarians and Romanians were living in the UK in the last quarter of 2006 (shortly before accession to the EU), the total was nearly 200,000 seven years later, in the final quarter of 2013.

<sup>35</sup> Births and deaths of corresponding nationalities within the destination country are not compiled separately are included in migration figures. Source: European Commission (2011 a), p. 252

## Impact of the crisis on stocks of NMS10 nationals (age 15–64) in EU15 countries

in thousands

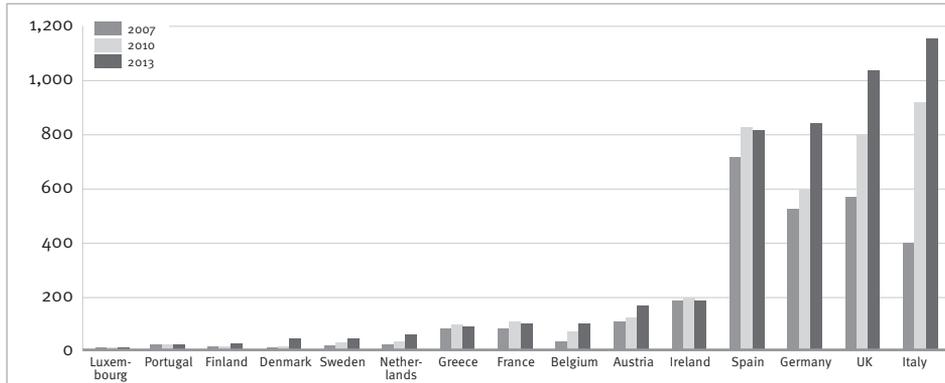


Fig. 7

Source: EU Labour Force Survey (LFS).  
Figure taken from Galgóczi/Leschke (2014), page 154.

Although the transition arrangements did not expire until 1 January 2014, most of the people were self-employed. There were no restrictions on the freedom of movement for the self-employed.<sup>36</sup>

**Conclusion:** The willingness of migrants from the member states in central and eastern Europe to relocate is thus high in terms of not only the initial move away from their countries of origin but also emigration from the destination countries first selected. In 2007, 1% of NMS-10 citizens migrated to the core EU-15; in 2012, the total was still 0.6%. This means that the mobility of people from the eight countries that joined in 2004 and the ten that joined in 2007 (without Cyprus and Malta in each case) was still much greater than internal mobility within the EU-15 even after the crisis.<sup>37</sup>

The crisis-related migration flows are apparent in the stock figures for people with NMS-10 nationality in the EU-15 for the years 2007, 2010 and 2013 (see Figure 7): Whereas countries badly affected by the crisis like Spain, Ireland and later Greece recorded a decline in residents with NMS-10 nationality between 2010 and 2013, the opposite was true for most other countries. Germany, the UK and Italy in particular experienced strong increases.

### 3.4. Declining net immigration in crisis-hit countries

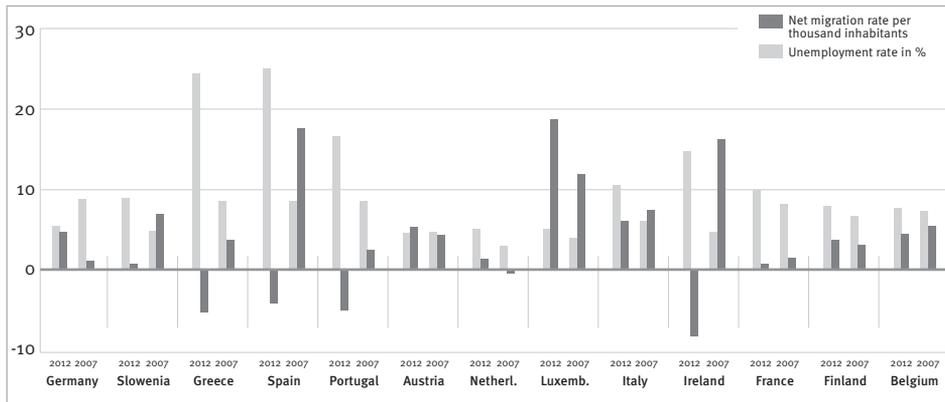
The comments on immigration thus far do not say anything about any emigration that took place at the same time. In the three years following the eastward enlargement (2004–2007), Spain, Italy and Ireland in particular recorded positive migration balances.<sup>38</sup> How did the migration balance (net migration) develop during the crisis years? Did the crisis-related distortions on the labour markets result in higher net emigrations or lower net immigrations?

<sup>36</sup> Cf. Vargas-Silva (2014), p. 124

<sup>37</sup> Cf. Barlsund/Busse (2014), p. 118

<sup>38</sup> Cf. Holland/Paluchowski (2013)

## Net migration rates\* and unemployment rates in eurozone countries\*\*, 2007/2012



\* Net immigrants per thousand inhabitants if positive, net emigrants per thousand inhabitants if negative

Sources: Eurostat (2014 a, e); HWWI.

\*\* Only countries adopting the euro in 2007 at the latest

Fig. 8

Figure 8 shows the net migration rates and unemployment rates of eurozone countries in 2007 compared with 2012 with a view to tracking down the wanted correlation. The net migration rate (in the case of a positive value) indicates how many people per thousand inhabitants more immigrated than emigrated in one year.<sup>39</sup>

The crisis is reflected in not only the immigration figures but also the migration balances. The net immigration rates have fallen sharply, or have even reversed in the form of net emigration rates, in the eurozone countries worst affected by the crisis. The highest emigration surplus in 2012, at 7.6 persons per thousand inhabitants, was recorded by Ireland against an unemployment rate of 14.7%. In Spain, net emigration in 2012 totalled three persons per thousand inhabitants; the unemployment rate was 24.8%. In Greece, four persons per thousand inhabitants emigrated in 2012 against an unemployment rate of 24.3%. And in Portugal, the net immigration rate in 2012 was negative at minus 3.6 persons per thousand inhabitants, against an unemployment rate of 15.9%. Five years earlier, all four of the countries named had both lower unemployment rates and higher net migration rates.

The worse the labour market situation became in the crisis-hit countries, the lower net immigration was. The labour market situation in the eurozone countries during the crisis years was evidently not without consequences for the net migration figures of these countries.<sup>40</sup>

Furthermore, there are indications that the willingness of migrants to move from the NMS-12 is high in terms of not only the initial migration from their countries of origin but also emigration from the destination countries they first selected.

Supporting this hypothesis is also the fact that the decline in net migration rate in the periphery (Portugal, Italy, Spain, Ireland) for the period between 2007 and 2011 was attributable to a

<sup>39</sup> The net migration rate is determined as the difference between the change in the total population and the natural change in the population. This method of calculation based on the population level means that the net migration rate is also available of data gaps exist regarding a certain country's immigration and emigration flows at a given point in time.

<sup>40</sup> Italy is a special case. Despite falling, the net migration rate remained positive at a high level (still 6.2% in 2012 after 7.5% in 2007).

decline of 45% in immigration and a doubling of emigration, while the rise in immigration set against emigration was the primary cause of the change in the net migration rate between 2007 and 2011 in the core (Belgium, Germany, France, Sweden, the UK).<sup>41</sup> However, migration from the periphery to the core in absolute figures remains low. In 2011, only 10% of immigrants to the core came from peripheral countries whereas between 15-40% came from the NMS-12.<sup>42</sup>

### **3.5. No mobility boost from the euro evident yet**

The conclusion that can be drawn is that the migration flows within the eurozone shifted during the crisis years. People from the NMS-12 immigrate less frequently to the eurozone countries less badly affected by the crisis, whereas the influx of immigrants has slowed in the heavily affected countries. The eurozone has become much less attractive for people from outside the EU-27.

If the countries are taken individually, it becomes apparent that the crisis-hit countries of Spain, Italy and Ireland in particular experienced a dramatic decline in immigration from the countries of central and eastern Europe as well as sharp falls in immigration from the EU-15. Here, too, the net migration rates as the balance of immigration and emigration numbers declined heavily. As the labour market situation deteriorated, net immigration also decreased in the crisis-hit countries.

The figures demonstrate a marked sensitivity among workers with regard to the underlying macro-economic conditions for the EU-27 including the eurozone. Greater sensitivity within the eurozone as a result of the single currency cannot, however, be proven with these figures.

<sup>41</sup> Cf. Holland/Paluchowski (2013)

<sup>42</sup> Cf. *ibid.*

## 4 Developments in selected crisis-hit countries

### 4.1. Spain: Sharp decline in immigration with rising number of emigrants

Spain evolved into a popular country for immigration in the 1990s. Immigration rose from less than 30,000 people in 1996 to almost a million people in 2007. Starting in 2000, the influx of Europeans increased, especially from Romania and Bulgaria after these two countries joined the EU in 2007. After 2007, however, immigration to Spain fell sharply. At some 370,000 people in 2012, it was only around one-third of the figure from 2007. At the same time, the number of emigrations from Spain between 2008 and 2012 rose by a factor of around 1.5.<sup>43</sup>

Whereas in Portugal, 94% of emigrants were Portuguese citizens and in Greece, Ireland and Italy no less than 50–60% of emigrants held the respective nationality, in Spain only 12.3% of the emigrants were Spaniards.<sup>44</sup> Emigration from Spain is dominated by non-EU foreigners, predominantly people from South America and Africa. The high proportion of people without Spanish nationality in the emigrants from Spain poses the question of whether these people are returning to their home countries or moving on to another country within the EU. Data from the national statistics agency (Instituto Nacional de Estadística – INE) from 2008 and 2012 show that emigrants with Spanish nationality in both years largely (45%) emigrated to other EU countries, while at least two-thirds of foreign emigrants returned to their home region.<sup>45</sup> But a significant number of former migrants who had gained Spanish citizenship are also hidden among the emigrating Spaniards. In 2012, 18,717 of the 54,392 emigrants with a Spanish passport were not born in Spain.<sup>46</sup>

Figure 9 below shows the preferred destinations among the EU-27 countries for Spanish and non-Spanish emigrants from Spain aged 15–64. According to the INE figures for the period from 2010 to 2012, 48% of emigrants from Spain with the destination of »other EU countries« went to the EU-15, 38% to Romania and 7% each to Bulgaria and the NMS-10. Given that most of the emigration (52%) was to the NMS-12, it is safe to assume that most of the people concerned were returning to their home countries.

If these figures are compared with the emigration of Spanish nationals to the EU-27 based on the statistics provided by the communal registration offices (Residential Variation Statistics – RVS) for the period from 2008 to 2011, it becomes clear that these people almost exclusively (97.3%) moved to the EU-15, while the NMS-12 played a negligible role (see Figure 10 below).

However, the number of emigrants overall (in the period 2010 to 2012) was around six times as high as the number of emigrants with Spanish nationality (in the period from 2008 to 2011). At the same time, the influx from the NMS-2 to Spain in 2012 more than halved compared with the total in 2008 (see Figure 11 below).

Even though the dataset is complex and incomplete, the findings for the overall picture in Spain indicate that labour mobility with regard to Spain can be summarized in three points. First, immigration to Spain has fallen sharply since 2007, coupled notably with a slowing of the influx of

43 Cf. Izquierdo et al. (2014)

44 Holland/Paluchowski (2013), however, point out that the data do not reflect actual emigration from Portugal and the volume of emigration is at least twice as high. This can lead to a distortion in the statistics of the proportion of emigrants holding a Portuguese passport.

45 Cf. Izquierdo et al. (2014), p. 150 and Holland/Paluchowski (2013)

46 Cf. Izquierdo et al. (2014). Estimates about the number of Spanish emigrants from Spain are, however, generally fairly uncertain, as they are based on data from the communal registers. Spaniards choosing to emigrate, however, have no clear incentive to notify the authorities (ibid.).

### Emigrants from Spain of all nationalities\* by country group, 2010–2012

Share of total emigrations to the EU-27 in %

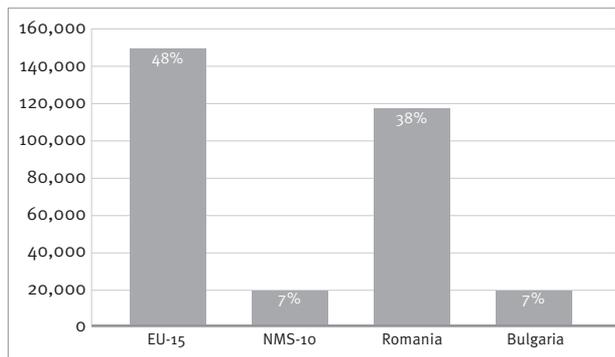


Fig. 9 \* aged 15–64 Sources: INE (2013); HWWI.

### Emigrants from Spain with a Spanish passport\* by country group, 2008–2011

Share of total emigration to the EU-27 in %

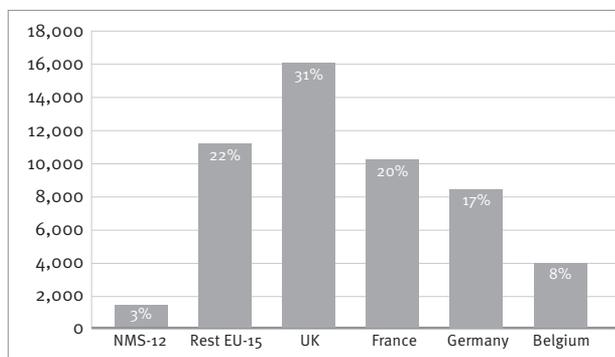


Fig. 10 \* aged 16–64 Sources: RVS (2013); HWWI.

### Immigrants from Bulgaria and Romania to Spain, 2008–2012

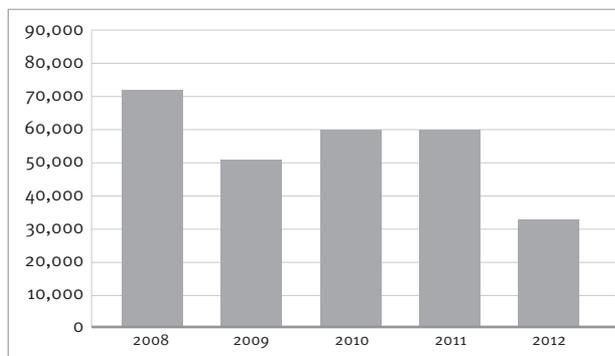


Fig. 11 Sources: Eurostat (2014 d); HWWI.

Romanians and Bulgarians to Spain. Second, emigration from Spain has risen strongly. And third, these movements are dominated by (a) foreigners resident in Spain returning to their home countries (such as Romanians and Bulgarians) and (b) emigration by Spanish nationals, mostly to EU-15 countries less badly affected by the crisis (the UK, followed by France and Germany).<sup>47</sup> This latter south-north migration is, however, less marked than many had anticipated.<sup>48</sup> The education level of the foreign nationals emigrating from Spain is on average lower than the education level of the emigrating Spaniards. Furthermore, four out of five emigrants from Spain are aged under 45, regardless of their nationality.<sup>49</sup>

#### 4.2. Italy: Sharp rise in emigration since 2012

Emigration from Italy responded to the crisis later than in Spain, as Italy was not caught up in the euro turmoil until mid-2011. Only in 2012 did a sharp rise in emigration occur, with a total of 106,216 people leaving Italy in that year (see Figure 12). Most of the increase over 2011 is attributable to people holding an Italian passport. In this context, the number of Italian emigrants from Italy remained relatively stable between 2005 and 2011, and only saw a sharp rise to 67,998 people in 2012. The main destination countries for emigrants from Italy are the EU-27, whereby the EU-15 countries again account for the lion's share. The most important destination countries within the EU-27 in 2012 were Germany followed by Romania and the UK. The importance of Romania is presumably down to flows of returning migrants, as indicated by the Eurostat data.<sup>50</sup>

#### 4.3. Ireland: Emigration to the UK and non-European regions dominates

The crisis resulted in a sharp rise in emigration from Ireland. While a total of only 48,040 people emigrated in 2007, this number had risen to 89,436 by 2012. The most popular destinations for emigrants from Ireland are outside of Europe. There was a sharp rise in emigration to these regions between 2007 and 2011. Within Europe, migration is dominated by the UK, which saw a sharp rise

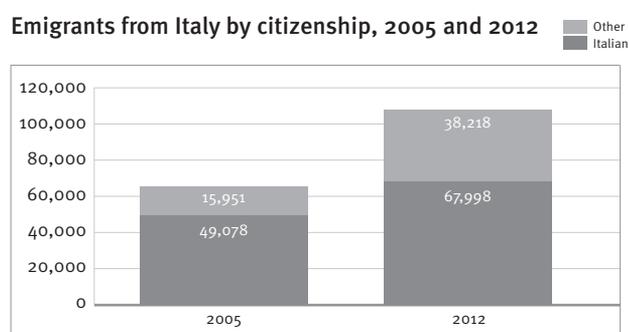


Fig. 12

Sources: Eurostat (2014 f); HWWI.

47 One of the reasons for the incomplete dataset is the fact that the people with Spanish citizenship may include people origination from central and eastern Europe who have adopted Spanish citizenship. Furthermore, the data sources and analysis periods differ.

48 Cf. Barslund/Busse (2014), p. 118

49 Cf. Izquierdo et al. (2014)

50 Cf. Eurostat (2014 f)

### Emigration from Ireland by destination region, 2006–2012

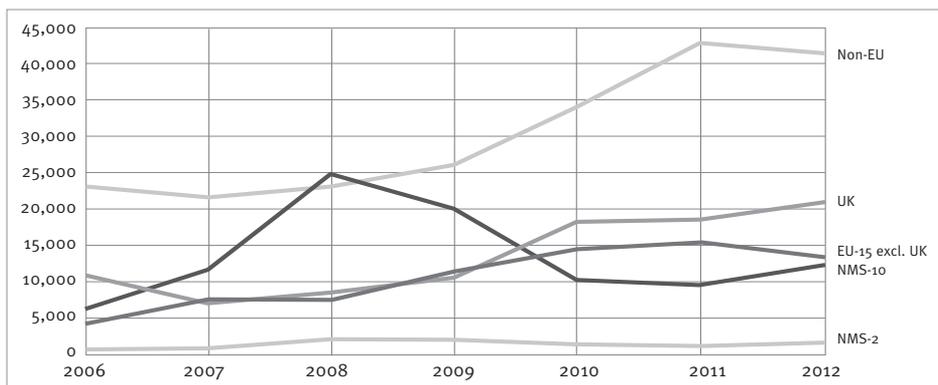


Fig. 13

Sources: Eurostat (2014 g); HWWI.

in immigration from Ireland between 2007 and 2012 (see Figure 13). Although emigration to the other EU-15 countries also rose, it was still below the aggregate total to the UK. Given that the Irish speak English, the world's lingua franca, as their native language, the significance of the UK and destination countries in the rest of the world is not surprising. Emigration from Ireland to the NMS-10 reached its peak in 2008 before falling back again. This might well reflect migrants returning to their former home countries, but this cannot be analysed any further due to a lack of relevant data.

#### 4.4. Push and pull factors reversed during the crisis

Ireland, Spain, Portugal and Greece turned from net immigration countries into net emigration countries during the crisis years between 2007 and 2012. Emigration from Italy increased sharply year-on-year for the first time in 2012. The waves of emigration from the countries listed can be attributed in part to former citizens of the NMS-12 who were returning to their home countries or moving on to another EU country less badly affected by the crisis. Added to this is south-north migration from the Mediterranean periphery to the more economically stable countries of Germany, France, the UK and the Scandinavian countries. Thus, the poor employment opportunities in the country of origin must be considered the dominant force (push factor) of both the redirected east-west and the south-north migrations. At the same time, improved employment prospects and income considerations beckon in the destination countries (pull factors). In other words, the mechanisms remained essentially the same, only the countries from which these effects emanate shifted during the crisis years. Furthermore, improved job prospects overall have become more important as a reason to migrate.<sup>51</sup>

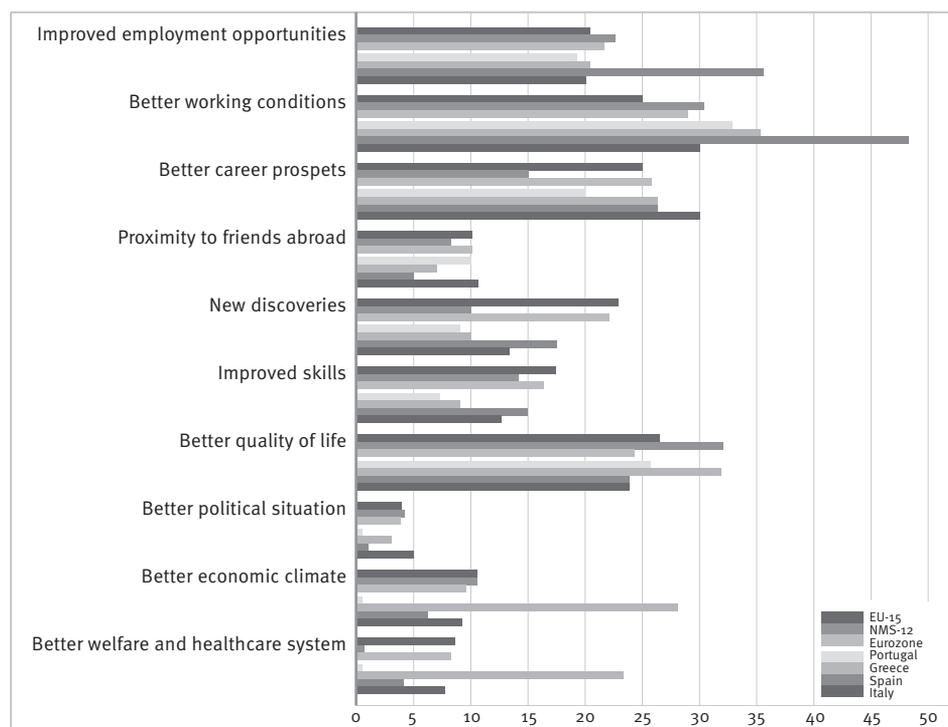
<sup>51</sup> Cf. Straubhaar (2014).

This is reinforced by a Eurobarometer survey carried out in 2009. The citizens in the member states were asked which factors they believed favoured migration (see Figure 14). As Figure 14 shows, *better working conditions* are weighted more heavily in a decision to migrate in the crisis-hit countries of southern Europe than the eurozone. Better working conditions are a reason to migrate for 48% of respondents in Spain, 36% in Greece, 33% in Portugal and 31% in Italy. *Better chances of finding employment* are a reason to migrate for 36% of respondents in Spain. For Greeks, on the other hand, a *better economic climate abroad* (28%) and a *better social and healthcare system* (23%) are important factors. Both of these factors played a much less important role for the other crisis-hit countries in southern Europe. Moreover, a *greater quality of life* is more important for migrants from the NMS-12 than for migrants from the EU-15 or eurozone countries, whereas this trend is reversed when it comes to *career or business opportunities*.

In contrast, there are also factors that hinder labour mobility (not shown here). For people in the eurozone in 2009, these were primarily *attachment to home* (cited by 38%) together with *family* (30%) and *friends* (21%). Thus, social factors predominate in opposing a decision to migrate. The

### Mobility-promoting factors

in %



Multiple responses possible. **Question:** »What factors could encourage you to work in a different country, irrespective of whether you have already worked in a different country, intend to do so in the future or do not intend to do so?»

Sources: Eurobarometer 72.5 (2009); HWWI.

Fig. 14

*difficulty of learning a new language* is a reason preventing mobility for 19% of respondents. Only then do monetary factors follow; for 18%, an *existing house or property* represents a problem; 17% state that they already have a *good job*. In Spain and Greece, attachment to home is a good reason not to leave the country for more than half of the population (51% and 57%, respectively). Ireland, similarly hard hit by the crisis, recorded the highest score in this regard – 60%. The importance of attachment to home is much less marked in Germany (33%), France (29%) and the Netherlands (37%). Interestingly, this is also a factor preventing mobility for Italians to a lesser extent (31%). Unacceptable changes for family and children are a major reason preventing mobility in all eurozone countries. Within the eurozone, the Greeks cite this factor most frequently (44%).

High levels of home ownership can similarly serve to restrict mobility.<sup>52</sup> Purchasing a home, provided it is for own use, signals a decision in favour of a certain region as the present and future centre of life. In addition, a lock-in effect may arise during a crisis that affects the property market, provided the purchase was financed by a loan. Falling property prices lead to the proceeds that can be generated on the property being less than the loan raised to purchase the property in the first place (»underwater mortgage«), meaning that selling would entail a loss. If the owner wishes to avoid this, he is forced to remain immobile. Studies for the United States find a significant reduction in the mobility of over-indebted home-owners.<sup>53</sup> Accordingly, the presence of a house or property was also cited as a reason for not moving by 29% of Greeks in the direct survey by Eurobarometer in 2009, which is the highest figure within the eurozone. This is perhaps surprising in that, although Greece has a high rate of home-ownership at 75.9%, the level is even higher in Spain (78.9%) and just as high in Italy (74.1%).<sup>54</sup>

Compared with the eurozone as a whole, social issues are cited more than most as reasons for not migrating in terms of the factors preventing mobility in the crisis-hit countries of Greece, Spain and Ireland. In Italy and Portugal, this is only the case to a minor extent.

Alongside the factors promoting or preventing mobility recorded in the Eurobarometer survey, *social change* is also significant. The rising number of two-income households as a result of more women working is leading to more complex migration decisions, as the requirements of both partners regarding the labour market in the destination country need to be taken into account.<sup>55</sup>

The fundamental decision for or against migrating, influenced by the push factors, is accompanied by the choice of destination country. **Pull factors** in the potential destination countries play an important role in this context.

The *relative economic attractiveness of a given country* compared with other potential migration destinations exerts a strong influence on the migration flows in a given country. The mechanism is self-evident in this instance. Estimates for Germany in the period from 2006 to 2012 assume that 78% of the increase in German immigration flows from the EEA and Switzerland can be put down to diversification effects by migrants.<sup>56</sup> This related most notably to immigrants from Bulgaria and Romania, who prior to 2008 emigrated primarily to Spain and Italy. The deterioration of the

52 Cf. Ferreira et al. (2010) and Donovan/Schnure (2011)

53 Cf. Ferreira et al. (2010, 2012) and Donovan/Schnure (2011)

54 Figures for 2012; cf. Eurostat (2014 h)

55 Cf. Zimmermann (2009)

56 Cf. Bertoli et al. (2013)

## Per capita GDP, 2013

in thousand

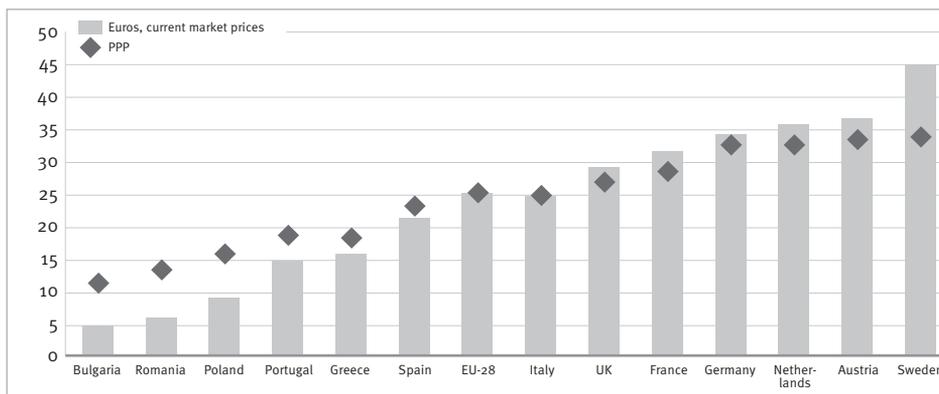


Fig. 15

Sources: Ameco (2014); HWWI.

underlying economic conditions in the destination countries caused these migration flows to shift at least in part to Germany. Accordingly, the asymmetric crisis within the eurozone has led to a redirection of immigration from third states.

Closely related to the relative economic attractiveness of a given country is the *attractiveness of the destination country compared with the country of origin*. If the economic differences between the two countries are narrow, the potential arising from economically related migration flows also declines. The main drivers in this context are income differentials<sup>57</sup> and the situation on the labour market.<sup>58</sup> Income differentials are most marked between the new member states and the EU-15. In 2008, the NMS-10 managed only 48% of the per capita GDP generated in the EU-15. The figure for Romania and Bulgaria was only 34%.<sup>59</sup> The differences in gross hourly pay are even sharper, with the eight new member states from 2004 (NMS-10 without Malta and Cyprus) only accounting for 25% of the EU-15 figure, and Bulgaria and Romania a mere 11%.<sup>60</sup>

Figure 15 shows the differences in per capita incomes in 2013. The countries are arranged from left to right in rising order of nominal per capita GDP. The ranking of Bulgaria, Romania, Poland and the crisis-hit states was the same in 2004, even if all the countries shown recorded a lower income level at that time. The presentation of per capita income in purchasing power parity (PPP) also highlights how the low cost of living in the first three countries named boosts the motivation emanating from the nominal income gap between these countries and western Europe to make transfers to the family back home or to build up savings that are available for use after returning to the home country.

57 Cf. Bonin et al. (2008) and Zimmermann (2009)

58 Cf. Zimmermann (2009)

59 Cf. Brückner et al. (2009), p. 9

60 Cf. *ibid.*, p. 11

## 5 Brain Drain? On the skills structure of migrants during the crisis years

Greater labour mobility in the eurozone can only boost adjustment of the labour markets within the single currency area if there is demand in other parts of the eurozone for the skills of those people who are made redundant. To put it another way, if the human capital demanded by booming sectors in the eurozone is available in other parts of the eurozone but not locally, the mismatch problem on the domestic labour markets is in reality a mobility problem within the eurozone. If, on the other hand, there is a structural imbalance between the human capital of the unemployed and the required skill level in the jobs that are being created, not even greater mobility can resolve the problem.

### 5.1. Fewer highly qualified migrants from the NMS-12 than the EU-15

Even before the crisis, there were major differences in the education structure between migrants from the new member states and those from the old 15 member states. Table 4 shows that in 2006 immigrants from the NMS-12 had a medium or low education level more frequently than those from the EU-15. In contrast, highly skilled workers emigrated from these latter countries to a larger degree. Furthermore, immigrants from the NMS-12 were on average much younger than immigrants from the EU-15 and came more frequently from existing jobs than the latter. Although the unemployment rates among migrants of both regions of origin were roughly equal, migrants from the EU-15 came far more frequently from the non-working population.

#### Characteristics of migrants from the EU-15/NMS-12, 2006

in %

Characteristics	EU-15		NMS-12		EU-27	
	EU-15	NMS-12	EU-15	NMS-12	EU-15	NMS-12
<b>Age group</b>						
15–24	21.2	27.9	14.5	21.7	21.0	27.7
25–34	35.4	50.1	26.7	51.7	35.1	50.1
35–44	23.1	13.9	22.7	14.3	23.1	13.9
45–54	13.1	6.9	15.8	8.7	13.2	7.0
55–64	7.2	1.2	20.3	3.6	7.6	1.3
<b>Sex</b>						
Male	52.5	45.9	68.4	46.5	53.1	45.9
Female	47.5	54.1	31.6	53.5	46.9	54.1
<b>Education</b>						
Low	22.5	26.0	18.8	24.7	22.4	26.0
Medium	40.3	57.8	45.8	56.4	40.5	57.7
High	37.1	16.2	35.4	18.9	37.1	16.3
<b>Labour market status</b>						
Employed	62.8	72.8	52.5	68.6	62.4	72.7
Unemployed	7.8	8.0	2.3	4.4	7.6	7.9
Inactive	29.4	19.2	45.2	27.0	30.0	19.4

Tab. 4

Sources: Taken from Bonin et al. (2008), p. 25, HWWI.

In connection with the formal education level, migrants from the NMS-8 work less often in occupations requiring high skill levels (categories »managers, directors, senior officials« and »professional occupations«). Thus, only 9% of people from the NMS-8 living in the UK were employed in these two categories compared with 41% of people from the EU-15.<sup>61</sup>

In line with the formal education levels, the requirements for the jobs performed by migrants also differ. 57% of EU-15 migrants are employed in mainly highly skilled positions (ISCO categories 1–3) and 35% in the categories with medium skill requirements (ISCO 4–8).<sup>62</sup> In contrast, highly skilled jobs are only held by 17% of immigrants from the NMS-10 and only 7% of immigrants from the NMS-2 (Bulgaria and Romania).<sup>63</sup>

The immigrants to the European Union from the EU-15 and the NMS-12 also differ – in line with the different occupation distributions – according to the industries in which they work. EU-15 migrants are over-represented in the NACE<sup>64</sup> categories of hospitality, ICT, financial and insurance services, and professional, scientific and technical services.<sup>65</sup> Immigrants from the NMS-12, on the other hand, are employed mainly in the construction, hospitality, manufacturing and domestic services sectors.<sup>66</sup>

Table 5 below shows that the proportion of migrants from the NMS-8 with university degrees was at around the same (low) level as Portugal in both 2008 and 2011. For migrants from the NMS-2, it was even somewhat lower in 2011. The comparison with Spain, Italy and Greece does, however, reveal the skill differences. Mainly highly skilled workers emigrated from the three crisis-hit countries listed to other EU member states. The proportion of emigrants with university degrees hardly changed between 2008 and 2011. In Portugal, by contrast, emigration was dominated by people with low skill levels; in 2011, 41% of emigrants had a low level of education and only 27% a high level. Primarily people with a medium level of education emigrated from the NMS-10 in both 2008 and 2011.<sup>67</sup>

The skill advantage of migrants from the three crisis-hit countries of Spain, Italy and Greece arose in 2008 and 2011 despite positive selection by emigrants. In other words, the share of highly

61 Cf. Vargas-Silva (2014), p. 127

62 Cf. European Commission (2011 a), p. 270

63 Cf. *ibid.*, p. 271.

64 Nomenclature Générale des Activités Economiques dans l'Union Européenne (General Name for Economic Activities in the European Union)

65 Cf. *ibid.*, p. 268

66 Cf. *ibid.*, p. 269

67 Cf. Brücker et al. (2009), p. 90

### Levels of education of EU migrants who have moved within the last three years each, by nationality

in %

Level of education	Portugal		Spain, Italy, Greece		NMS-8		NMS-2		All nationalities	
	2008	2011	2008	2011	2008	2011	2008	2011	2008	2011
Low	60	41	17	20	18	23	35	30	22	21
Medium	26	32	32	28	64	49	51	45	51	28
High	14	27	51	52	18	28	14	24	27	40

Tab. 5

Sources: Taken from: European Commission (2012), p. 38, HWWI.

skilled workers among migrants from countries in central and eastern Europe to the EU-15 was, with the exception of Slovenia and Estonia, higher in 2006 than among the relevant native populations. The proportion of low-skilled workers was higher in some cases and lower in others; migrants from Poland are, however, rarely lower skilled than the native Polish population. For Poland, for instance, there are findings suggesting that the highly skilled emigrants are not those people who are missing from the Polish labour market as skilled workers in manufacturing and construction. These studies come to the conclusion that migration in Poland causes less of a »brain drain«, helping instead to reduce a »brain overflow«. <sup>68</sup> A positive selection by Polish emigrants (more highly skilled workers are more likely to emigrate than lower skilled workers) is also confirmed by Fihel et al. (2009).<sup>69</sup>

## 5.2. Share of highly skilled migrants from the NMS-12 has risen over time

As Table 5 shows, the proportion of emigrants who are highly skilled increased by 13 percentage points as a whole across all nationalities between 2008 and 2011. A trend towards highly skilled workers was also apparent for the new member states between 2008 and 2011. At the same time, jobs were still created in the eurozone for highly skilled workers during the crisis,<sup>70</sup> meaning that successful labour market integration for highly skilled emigrants seems probable. Low-skilled workers, on the other hand, tend to migrate less frequently. One reason could be that there is less demand for their labour in the other countries.

Emigration in the period after 2004 differs from that before the eastward enlargement in 2004 in qualitative terms, because it is increasingly young people who migrate in addition.<sup>71</sup> Compared with the UK, Germany tends to attract less skilled migrants from the NMS-8. A comparison of migrants from the NMS-8 who emigrated to Germany and the UK in 2009 shows that the latter are six years younger on average and the share of highly skilled workers is 12 percentage points higher.<sup>72</sup> A similar picture emerges if only Polish immigration to the UK and Germany is considered. Immigrants to the UK are on average younger, better educated and tend to come more from urban areas, whereas more people from rural areas, who are also older and less well qualified, tend to immigrate to Germany.<sup>73</sup>

## 5.3. Germany: Better employment prospects for migrants

Table 6 below shows the socio-economic characteristics of NMS-8 migrants to Germany aged between 18 and 64 for three immigration periods. As a result of the EU enlargement, there was a decline in the average education level of the migrants in the period from 2005 to 2007, which only reversed during the course of the crisis in 2008 to 2009. The proportion of highly skilled immi-

68 Cf. Kaczmarczyk (2014), p. 133

69 Cf. Fihel et al. (2009)

70 Cf. European Central Bank (2012), p. 23

71 Cf. Brücker et al. (2009), p. 159

72 Cf. Elsner/Zimmermann (2013)

73 Cf. Kaczmarczyk (2014)

## Characteristics of migrants from the NMS-8 compared with Germans (aged 16–64)

in %

	2001–2003		2005–2007		2008–2009	
	Immigrants	Germans	Immigrants	Germans	Immigrants	Germans
Age	31	42	34	42	33	43
Male	37	50	39	50	41	50
Married	67	59	57	55	46	55
Dropouts	7	7	4	2	3	3
Lower secondary	38	60	44	60	41	59
Upper secondary	32	17	29	20	27	20
Tertiary education	23	16	23	18	29	18
Unemployed	18	11	14	8	9	8
Average pay (€)	847	1,423	1,054	1,513	1,155	1,534
Permanent	54	79	37	78	35	78
Temporary	40	10	23	11	36	11
Self-employed	6	11	41	11	28	11
Observations	551	281,520	805	264,922	864	266,259

Tab. 6

Sources: Taken from Elsner and Zimmermann (2013), p. 23; HWWI.

grants from the NMS-8 to Germany rose during this latter period. Compared with the native German population, however, migrants from the NMS-8 possessed higher education levels across all periods. Migrants who immigrate to Germany are on average less well educated than migrants moving to other EU countries, although they can still raise the average education level of the German population.<sup>74</sup> Thus, other studies show that Romanian migrants and female Italian and Polish immigrants are more highly qualified than the German average.<sup>75</sup> On the other hand, the share of low-skilled EU citizens living in Germany is particularly high among Greeks and Italians and for women from all the crisis-hit states in southern Europe. The first finding is connected with the targeted hiring of guest workers with lower skills from Greece and Italy in the 1960s at that time, while the second can be attributed to the high proportion of women working in domestic services and among seasonal workers.<sup>76</sup>

Figure 16 below shows the unemployment rate of immigrants from the NMS-8, the NMS-2 and the PIGS states (Portugal, Ireland, Greece and Spain) in Germany between January 2010 and January 2014. Although the unemployment level in all three immigrant groups is above the German average, the unemployment rate among migrants from the NMS-8 and the PIGS is falling sharply. It is not improbable that improved labour market integration among migrants can be attributed to their better skills and their lower age compared with earlier cohorts that immigrated prior to the EU enlargement.<sup>77</sup>

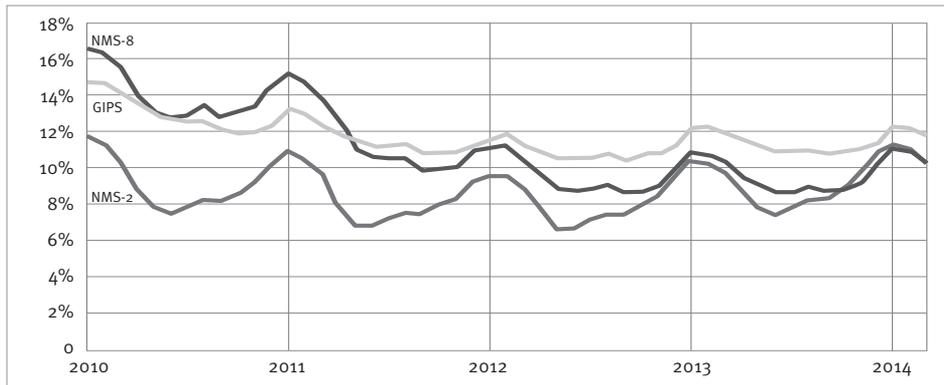
<sup>74</sup> The higher average education level of immigrants than the German population could, however, be related to the lower average age of the immigrants (younger cohorts are generally better educated than older ones).

<sup>75</sup> Cf. Baas (2014)

<sup>76</sup> Cf. *ibid.*

<sup>77</sup> Cf. Brücker et al. (2009)

## Unemployment rate\* of EU citizens in Germany, 2010–2014



**Fig. 16** \* Percentage share of unemployed persons in the total number of unemployed persons, persons in gainful employment and persons with marginal employment.

Sources: German Federal Employment Agency (2014 b); HWWI.

In addition, the statisticians no longer count immigrants who have assumed German nationality as foreigners. This related primarily to highly skilled immigrants.<sup>78</sup>

### 5.4. Share of migrants with university degrees differs in country average

The shares of migrants with university degrees in individual European countries are also the result of different developments. For a start, differing immigration rules play an important role. Canada and Australia, for instance, employ a points system that favours better educated migrants. For a long time, Germany employed a more restrictive immigration policy, only modifying it over recent years.<sup>79</sup> For a start, differing immigration rules play an important role. Canada and Australia, for instance, employ a points system that favours better educated migrants. For a long time, Germany employed a more restrictive immigration policy, only modifying it over recent years.<sup>80</sup> In terms of permanent immigration from third countries, however, Denmark has greatly tightened up on immigration and relocation arrangements for family members over recent years.<sup>81</sup>

In the case of Poland, Kaczmarczyk (2009) notes that emigration from Poland to western Europe is driven heavily by the demand for workers in the destination countries in segments with low skill requirements. For Germany, this includes domestic services, healthcare and nursing.

Many migrants are over-qualified for the jobs they do in the destination country. In other words, the requirements of the new job are below the skills the migrants bring with them, meaning that some of the skills are not used in the job. The persistent absolute income differences are presumably relevant for the decision to emigrate despite being over-qualified for the job. Moving is considered worthwhile so long as migrants can build up savings in the destination countries and/or

<sup>78</sup> Cf. Steinhardt (2012)

<sup>79</sup> Cf. Vogel/Kovacheva (2014)

<sup>80</sup> Cf. von Weizsäcker (2008)

<sup>81</sup> Cf. Danish Immigration Service/Danish Agency for Labour Market and Recruitment (2014)

### Share of highly skilled workers among persons not born in reference country

Deviation from OECD average (31%), in percentage points

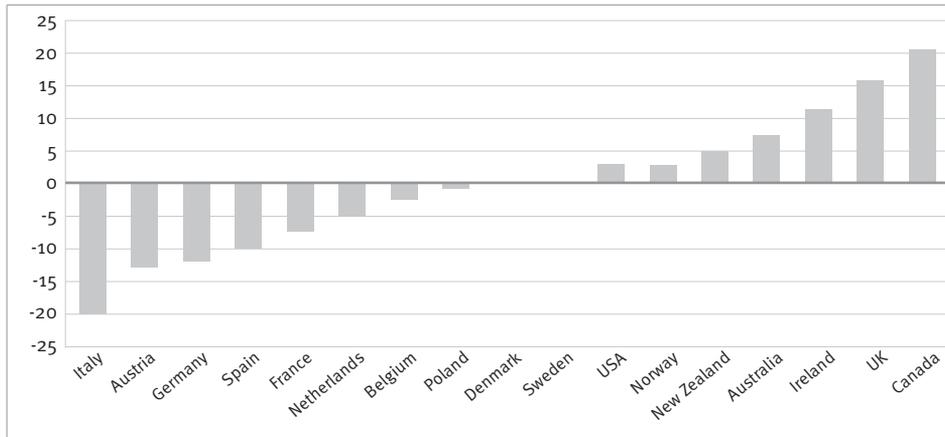


Fig. 17

Sources: OECD (2012 a); HWWI.

make remittances to their families in the home countries. The focus on absolute income differences also makes greater sense the earlier a later return to the home country is considered.<sup>82</sup>

In conclusion, the proportion of highly skilled migrants varies greatly in the different countries. Figure 17 above uses the OECD average of 31% in the years 2009–2010 as a yardstick to show the positive and negative deviations from this reference point in the countries in percentage points. Canada, the UK and Ireland have proportions of migrants with university degrees that are well above the average. Australia, New Zealand, Norway and the United States are also above the OECD average, and Sweden and Denmark precisely at the average. Western and southern European countries like Italy, Spain, France and Austria, as well as Germany and the Netherlands, achieve below-average scores.

82 Cf. Galgóczi/Leschke (2014), p. 157

## 6 Brain gain or brain waste? On the use of migrants' skills in the destination countries

### 6.1. Sharp crisis-related rise in the skill mismatch on the eurozone's labour markets

From the point of view of the destination countries, immigration represents a gain if the migrants find a job on the labour market in the destination country that would otherwise have remained unfilled. Germany among others consciously recruited highly skilled workers within the framework of the transition arrangements for the immigration of citizens from the NMS-10. The recruitment of migrants can also create a win-win situation (such as nurses, IT specialists, and so on) for shortage occupations for which there is a lack of suitably skilled workers in the destination country, resulting in what might be called a »brain gain«. As the following analyses show, however, it is more appropriate as a whole to speak of a »brain waste«. This is especially the case for movements of highly skilled, young migrants after 2004 and 2007 and has a wide range of reasons. One such reason is the non-recognition of foreign qualifications. In any case, the skill mismatch between the supply and demand of skills on the labour market means that human capital is not properly exploited. This mismatch varies greatly across the various European countries.

Around 30% of immigrants from the NMS-12 are over-qualified for the work they do when they have a job in the EU-15. The European Commission arrives at this estimate by comparing the distribution of formal qualifications held by migrants from the NMS-12 against the breakdown of occupation groups for the migrants in accordance with the ISCO classification.<sup>83</sup> Studies on an individual level also come to similar results for migrants from the NMS-12. Based on the direct survey of participants in the »wage indicator«, 28.5% of migrants from the NMS-12 countries in the EU-15 are over-qualified for the work they do.<sup>84</sup> It is also possible to determine the proportion of over-qualified workers for other groups of migrants in this way. Thus, only 23.6% of the mobile workers within the EU-15 who themselves come from one of the EU-15 states consider themselves over-qualified for the job they currently do, while the equivalent total for natives is 21.5%.<sup>85</sup>

The figures show that immigrants from the NMS-12 in particular are exposed to increased risk of over-qualification. As discussed above in the case of Poland, this relates among other things to the fact that skilled workers for certain occupations below the academic level or even basic workers are specifically sought in the destination countries, while it is mainly people with higher levels of education who leave the countries of origin. In the case of Poland, Kaczmarczyk (2009) notes that Polish migrants hardly improve their professional position by emigrating.

In contrast to over-qualification, which is compiled on an individual level, the European Central Bank has drawn on a concept by Esteveao and Tsounta (2011)<sup>86</sup> to formulate a skill mismatch index (SMI) that shows the relationship of supply and demand for different skill classes at various regional levels.<sup>87</sup> The six education categories used correspond to the ISCED classification: primary education, lower secondary education, upper secondary education, post-secondary non-tertiary

<sup>83</sup> Cf. European Commission (2011 a), p. 272.

<sup>84</sup> Cf. Tijdens/Van Klaveren (2012). The exact question is: »Do your qualifications match your job?« The possible answers are: »Yes«, »No, I am overqualified for my job« and »No, I am underqualified for my job«.

<sup>85</sup> Cf. Tijdens/Van Klaveren (2012)

<sup>86</sup> Cf. Esteveao/Tsounta (2011) cited after European Central Bank (2012), p. 73

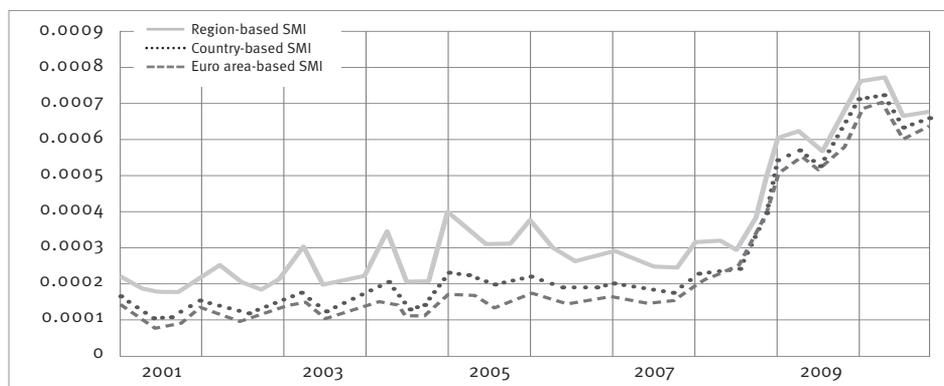
<sup>87</sup> Cf. European Central Bank (2012), p. 72–77

education, tertiary education (first stage), tertiary education (second stage). The supply of skills is measured as the percentage share of the economically active population possessing the skill concerned, while demand is defined as the proportion of people in gainful employment possessing the skill concerned. A skill mismatch exists when the supply is greater or less than the demand. The extent of the difference between supply and demand is measured and aggregated at each of the six education levels to determine the skill mismatch index for a regional unit. In other words, the higher the index, the higher the mismatch. Three regional levels are analysed: the eurozone as a whole, the eurozone countries and regions within the eurozone countries. The SMI at the level of the eurozone encompasses 16 countries.<sup>88</sup>

The index can be used to measure the development of the skill mismatch in a given regional unit over time. For example, it is possible to analyse how the concurrence of skills supply and demand evolved in Spain during the first decade of the new millennium. At the same time, comparisons can be made between units of the same regional level (e.g. states) at a given point in time. The SMI for the eurozone (Euro-16 SMI) was formed by comparing the aggregated supply for the eurozone with the aggregated demand for each skill level. Different supply-demand ratios in individual skill levels between the countries disappear in this construct as they eliminate each other. If, say, Italy has excess supply at the second skill level and France has an equivalent excess demand at the same level, the consolidated supply-demand balance of these two countries would be offset: the supply would match the demand. This is precisely the method used to calculate the SMI for the eurozone, except that not two but 16 eurozone countries are analysed. To be able to offset the surpluses and deficits of skills between countries, however, it is necessary to make the assumption that the people with the right skills who are out of work at one place migrate to the place where the employment opportunity is. Consequently, the SMI for the eurozone implicitly presupposes perfect labour mobility in the euro area. It shows the extent of the mismatch that continues to exist even if all workers

88 (without Malta, due to lack of disaggregated data)

### Skill-Mismatch-Index (SMI)



**Fig. 18** Key: The crisis led to a sharp rise in the skill mismatch in the eurozone. The scope to reduce the mismatch by means of internal migration started contracting sharply in 2009. This was also the case (although to a lesser extent) even earlier with cross-border migration, starting in around 2008.

Source: EU Labour Force Survey (LFS);  
Picture taken from:  
European Central Bank (2012), p. 75.

in the eurozone were fully willing to migrate. Accordingly, the national SMI of one eurozone country, such as Spain, represents the maximum mismatch that would still exist given complete internal mobility of Spanish workers within Spain. SMIs can be determined for individual regions within the eurozone countries in the same way.

Figure 18 above shows the trend for the SMI at the three aggregation levels of the eurozone, the eurozone countries (weighted average of the national SMIs, see above) and regions for the period from 2001 to 2010. The vertical gap between the continuous and the dotted curve shows how much the mismatch would fall, if people were mobile not just within but also between the regions of a eurozone country. The vertical gap between the dotted and the broken curve shows the extent to which the mismatch could additionally be reduced if people were also completely mobile between eurozone countries. As the chart illustrates, the crisis led to a sharp increase in the mismatch between available and required education levels in the eurozone as a whole. Starting in 2009, the SMI rises rapidly at all three levels cited to be well above the level achieved in the first half of the de-cade analysed by the end of the period considered here, following a slight easing in 2010.

## **6.2. Greater labour mobility in the eurozone would hardly reduce the skill mismatch**

Two further findings arising from the correlations shown in Figure 13. First, up until around 2008 regional internal mobility still contained appreciable scope to reduce the skill mismatch at country level, although this had largely been exhausted as of 2009. Second, the picture is similar, but less marked, for inter-state mobility. Up until 2007, internal labour migration in the countries of the eurozone still demonstrated a certain scope to reduce the mismatch at eurozone level. Between around 2004 and 2007/2008, the share of the mismatch that could be reduced by greater mobility within the eurozone declined. This indicates improved labour market integration in the eurozone during this period – a development that had already started prior to the crisis. However, these integration trends were not capable of preventing the rapid rise in the structural mismatch starting in 2008. Overall, the findings suggest that the mismatch problem on the eurozone labour markets represents more of a structural problem and less of a mobility problem.

Workers who have few employment opportunities even in economically stable eurozone countries have little cause to migrate. Consequently, the structural change that is superimposed on the economic cycles and asymmetric shocks on the markets of the eurozone and causes the skill requirements to increase may help to keep mobility in the core EU-15 at moderate levels. In 2010, mobility across national borders only totalled 0.35%. By comparison, inter-state/inter-province mobility amounted to 2.4% in the United States, 1.5% in Australia and 1% in Canada.<sup>89</sup>

<sup>89</sup> Cf. OECD (2012 b), cited after Holland/Paluchowski (2013)

### 6.3. Varying regional mobility in eurozone countries

Developments do, however, vary between the individual countries, as Figure 19 below shows. This chart compares the development of the SMI at country level with the average of the regional SMIs for the country concerned. The dotted line represents the mismatch at country level and the continuous line the mismatch at regional level.

A sharp rise in the mismatch can be seen in the crisis-hit countries of Spain and Ireland, as well as in Estonia, from around 2007. In this context, the increase in Spain and Ireland started from a level of more or less zero. Some other countries also experienced an increase of varying degrees starting in 2007/2008, and the mismatch here was already falling (in the case of Sweden, Finland, Italy and Belgium) or rising (Portugal and Greece) more or less strongly in the years leading up to the crisis. In Greece and Italy, the rise in the mismatch during the course of the crisis proved relatively moderate. In Germany and Austria, on the other hand, the crisis singularly failed to increase the mismatch. On the contrary, it has been falling in Germany (Austria) since around 2003 (2005).

In addition, it is apparent that the countries had different scopes for reducing the mismatch by means of appropriate regional mobility within their national borders. The extent of internal migration in the eurozone countries differed accordingly. Whereas only 1% of the population changed regions on average across the eurozone countries<sup>90</sup> in 2006, mobility was above average in Belgium (1.6%), France (1.7%) and Germany (1.3%) and well below average in Italy and Greece at 0.2% in each case. According to studies by the European Central Bank, scope was available in around 2010/2011 primarily in Portugal, Germany and Belgium and (to a lesser extent) in Greece and France.<sup>91</sup> For the EU-15, regional mobility 2010 amounted to 1%.<sup>92</sup>

### 6.4. Structural challenges on the labour market remain in place

In conclusion, it can be stated that migration flows seem to be the result of the interplay of economy-related, asymmetric regional shocks and the cross-national structural changes superimposed on them. It looks as though people react to the crisis and prefer countries that are less badly affected. However, it is generally not the low-skilled workers that migrate because, although they demonstrate a strong push, they also feel a weak pull effect on the part of the destination country. The demand for low-skilled workers is declining across the board. Although migrants are deliberately courted for future-looking occupations in healthcare and nursing (by Germany, for instance), such people are cheaper in terms of payroll costs than native low-skilled, long-term unemployed even though they are frequently over-qualified for their jobs.

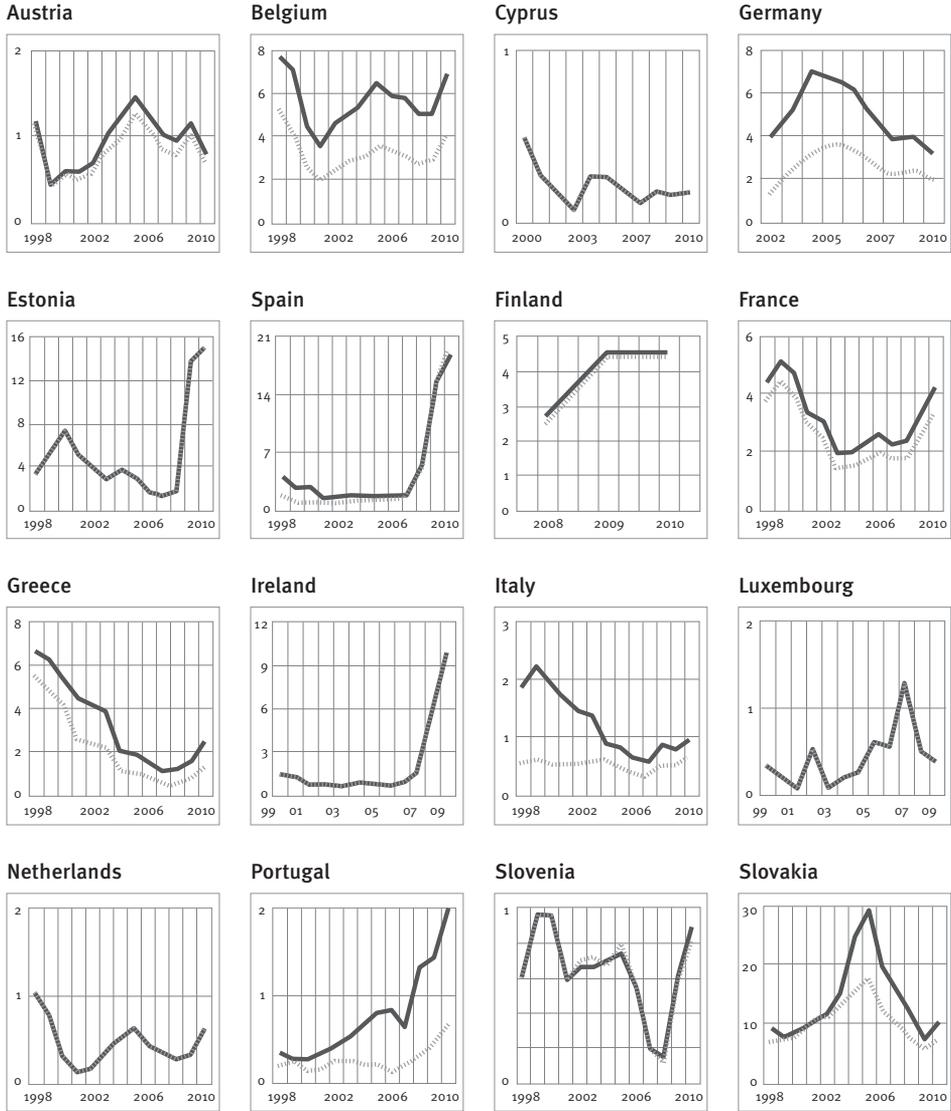
So it comes as no great surprise that mobility in the eurozone – at least at the level seen to date – is able to do little about the structural problems on the labour market in the eurozone. As

<sup>90</sup> Without Ireland, Luxembourg and the Netherlands due to a lack of available data

<sup>91</sup> European Central Bank (2012), p. 73–77

<sup>92</sup> OECD (2012), cited after Holland/Paluchowski (2013)

Skill mismatch index for individual countries



**Fig. 19** Key: The continuous line shows the development of the skill mismatch index at regional level, while the dotted line shows its development at the level of the individual eurozone country. Not only do the lines indicate different progressions for the two indexes in the eurozone countries, they also imply that the individual countries have differing scope to reduce the mismatch by means of internal migration. Index figures rescaled from Figure 18: index x 105.

Source: EU Labour Force Survey (LFS);  
Picture taken from: European Central Bank (2012), p. 110–111.

### Unemployed persons in the eurozone, by duration of unemployment

in '000



Fig. 20

Sources: Eurostat (2014 i); HWWI.

### Unemployment rates for 15-39-year-olds in the eurozone, by highest level of education attained

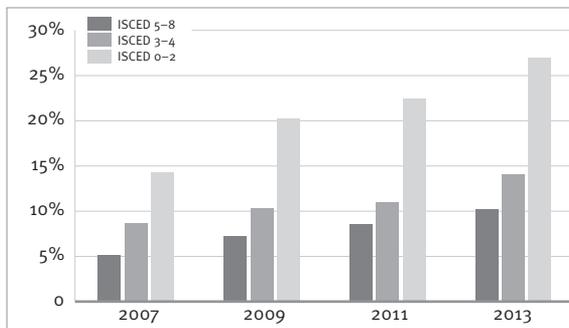


Fig. 21

Sources: Eurostat (2014 j); HWWI.

the skill mismatch index for the eurozone shows, nothing much would change in terms of the mismatch between supply and demand for low-skilled workers even if all workers in the eurozone were completely mobile. Thus, mobility is not in a position to resolve the problem of structural unemployment.

Figure 20 shows how heavily the eurozone is affected by structural unemployment. It demonstrates how the average duration of unemployment has risen in the 13 countries of the eurozone tracked from 2007. The number of people unemployed for two years or longer increased from 1.445 million people in 2007 to 2.109 million people in 2013.

Young people have been particularly badly affected, with youth unemployment continuing to rise across the eurozone during the crisis years. As Figure 21 shows, this holds true for all three education levels. Worst affected are low-skilled workers, who have not just a greater but also a faster-growing risk of unemployment than better educated workers.

## 7 Conclusion

Mobility within Europe is a complex phenomenon that is driven by a number of factors. For this reason, it will remain hard to predict migration flows going forward.

**Employment opportunities are the clincher.** Alongside income differences which drive primarily east-west migration, employment prospects in the destination country also play an important role. The latter became more important during the course of the economic and financial crisis starting in 2007. In the years after 2007, there was a redirection of migration flows from the new members states (NMS-10) and additional migrations from crisis-hit countries (Portugal, Ireland, Italy, Greece and Spain) to the countries less badly affected by the crisis. Compared with the east-west migration during the course of the waves of EU enlargement in 2004 and 2007, south-north migration proved moderate during the course of the economic crisis, however; this is all the more surprising when it is borne in mind that some of the emigrants from the crisis-hit countries originally came from the NMS-10.

**Brain drain or brain train?** In terms of the education structure of the native population, it is increasingly highly skilled workers who emigrate (positive selection). Furthermore, the migrants opt for different destination countries, depending on the immigration rules and the demand for labour in the destination country. Compared with the UK, Germany tends to attract less well educated migrants. Accordingly, it is not appropriate to speak of a »brain drain« everywhere. In light of the significant return flows of migrants during the course of the crisis, a »brain train« is just as suitable a phrase to use.

**Brain gain or brain waste?** Furthermore, around one-third of migrants are over-qualified for the jobs they do in the destination country. This means that skills that migrants have acquired at least in the country of origin are only employed to a limited extent in their new position. Over-qualification for the job is the price that many highly skilled migrants pay for employment in the destination country. The freedom of movement for workers in the single market is of greater benefit to them than low-skilled workers who also have problems finding work in different places. Measured in terms of the skill-appropriate deployment of labour, over-qualification represents a form of wasted resources. If, however, unemployment at the present place of work is the (only) alternative, over-qualified employment at the new place of work is more beneficial for both the individual and the economy as a whole. Consequently, the mobility of increasingly young and well-educated people within Europe helps to boost integration of the labour markets, even if it is bought to some extent by over-qualification. Nonetheless, politicians and governments should not ease their efforts to achieve the best case of skill-appropriate employment of migrants on the labour markets of the destination countries, especially when it comes to the recognition of foreign educational and vocational qualifications.

**The declining demand for low-skilled workers has structural causes.** The freedom of movement for labour in the EU-27 benefits mainly the more highly skilled. The falling demand for low-skilled workers is connected to the economic shift towards knowledge-based services and a general rise in education requirements in working life confronting all European countries (and not just these). As the mismatch indexes created by the ECB show, the level of skill mismatches on both the labour supply and the labour demand side rose massively in Ireland, Spain and Estonia in particular after 2007, since low-skilled workers in these countries were (and still are) affected far more heavily by unemployment than highly skilled workers. The economic shift described has, however, been seen in all European states, defining a common challenge for the labour markets in all European countries, irrespective of the asymmetric economic shocks. In other words, low-skilled workers who became unemployed in the crisis-hit countries can only be diverted to new jobs in economically more stable countries to a limited extent. Even with perfect mobility, the mismatch in the euro-zone could only be reduced marginally.

**People from central and eastern countries are especially mobile.** The integration of the European labour markets has received a major boost from the waves of enlargement. The freedom of movement for labour has created the conditions for asymmetric economic and employment shocks within Europe to have an impact on labour mobility. However, the citizens of Europe have always – as also in the current crisis – demonstrated differing levels of willingness to migrate. A robust conclusion from the migration statistics is that people from the countries in central and eastern Europe are particularly mobile, meaning that they are highly sensitive in their response to underlying macro-economic data. This may be due to different cultures and language habits, but it is probable that the persistently clear gap in per capita income between central and eastern European countries and western Europe – even with crisis-hit countries like Spain – is a factor behind this greater mobility of central and eastern Europeans.

**No boost from the euro. Employment and income are the actual drivers of labour mobility in Europe.** People go where the jobs are – and where they can earn a higher wage. As this study shows, employment and income prospects give rise to much stronger leverage on intra-European migration than the single currency. In other words, the mobility of workers in the eurozone is dominated by the rate of immigration from outside, primarily from the new member states in central and eastern Europe, and not the internal mobility of its citizens. The migrants from these countries head for those eurozone countries where the labour market offers them opportunities, and they move away from the countries again when the situation on the labour market deteriorates badly. So it is the respective labour market situation, and not the single currency, that should be seen as the actual driving force behind migration.

### Share of 15-64-year-olds in total population – forecast for 2060

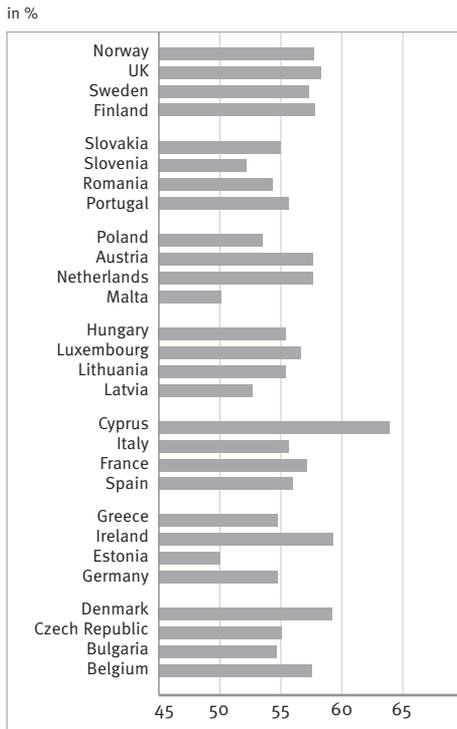
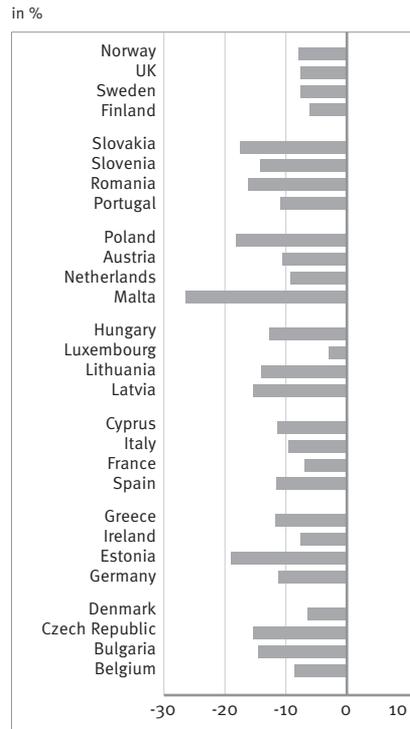


Fig. 22

### Change in share of 15-64-year-olds in total population, 2010–2060 (forecast)



Sources: European Commission (2011 b); HWWI.

**An ageing population is likely to depress mobility further in the future.** In the medium to long run, the ageing of the population will in any case dampen the internal mobility in the EU and the eurozone. As a general rule, older people are less mobile.<sup>93</sup> Since demographic change will also lead to a decline in the share of 20- to 64-year olds in the total population in most of the new member states (see Figure 22 for a forecast through 2060), immigrants from these countries will only be able to offset worker shortages for demographic or structural reasons in the future to a limited extent.

Even though intra-European labour mobility certainly still has **upward scope** that it would be desirable to see exploited, Europe would do well not to »put all its apples in one basket« when it comes to further efforts to integrate its labour markets. It is just important, and will remain so, to press ahead with structural reforms and make the eurozone and Europe attractive for young, skilled immigrants from third countries.

93 Cf. European Commission (2011 a), p. 279.

## Annex

### The skill mismatch index

The formula used to calculate the skill mismatch index (SMI) is as follows:<sup>94</sup>

$$SMI_{it} = \sum_{j=1}^6 (S_{ijt} - D_{ijt})^2$$

$i$  stands for the region for which the index is being measured (eurozone or country or region within a country),  $t$  for the year of observation and  $j$  for the skill level concerned.  $S$  stands for supply and  $D$  for demand.  $S_{ijt}$  ( $D_{ijt}$ ) thus corresponds to the supply (demand) of skill  $j$  at the date  $t$  in region  $i$ . The squared differences on the individual skill levels are added together to give the SMI for the region concerned at the date  $t$ .

As explained in the text, it is particularly interesting to compare the aggregate variable »Euro-16 SMI« with the weighted average of the 16 SMIs at country level. If the adjustments of skill supply and demand are smooth in the eurozone, the Euro-16 SMI largely corresponds to the average of the aggregated country SMIs. If, however, there are surpluses in certain skills in some countries and deficits in others, this increases the SMI for the country concerned (and hence also the weighted average of the country SMIs), but not the Euro-16 SMI, as these differences offset each other at eurozone level. Accordingly, the positive gap between the weighted average of the country SMIs and the Euro-16 SMI indicates the extent to which the mismatch on the labour markets in the eurozone could be reduced if eurozone workers were completely mobile.

<sup>94</sup> Cf. European Central Bank (2012), p. 73

## List of sources

- Annual macro-economic database (AMECO) (2014): Online database, [[http://ec.europa.eu/economy\\_finance/db\\_indicators/ameco/index\\_en.htm](http://ec.europa.eu/economy_finance/db_indicators/ameco/index_en.htm)] (18 June 2014)
- Baas, T. (2014): The Macroeconomic Impact of Intra-EU Migration on the German Economy, *Intereconomics* 49 (3), p. 137–144.
- Barslund, M.; Busse, M. (2014): Too Much or Too Little Labour Mobility? State of Play and Policy Issues, *Intereconomics* 49 (3), p. 116–123
- Berenberg (2013): The 2013 Euro Plus Monitor – From Pain to Gain, Hamburg.
- Bertoli, S.; Brücker, H.; Fernández-Huertas Moraga, J. (2013): The European Crisis and Migration to Germany: Expectations and the Diversion of Migration Flows, IZA Discussion Papers 7170, Institute for the Study of Labor (IZA).
- Blanchflower, D.G.; Oswald, A.J. (2013): Does High Home-Ownership Impair the Labor Market?, Peterson Institute for International Economics, Working Paper Series, 13-3.
- Bonin, H.; Eichhorst, W.; Florman, C.; Hansen, M. O.; Skiöld, L.; Stuhler, J.; Tatsiramos, K.; Thomasen, H.; Zimmermann, K. F. (2008): Report No. 19: Geographic Mobility in the European Union: Optimising its Economic and Social Benefits, IZA Research Reports 19, Institute for the Study of Labor (IZA), Bonn.
- Bräuninger, D.; C. Majowski (2011): Labour mobility in the euro area, Deutsche Bank Research, Reports on European integration EU Monitor 85, Deutsche Bank, Frankfurt am Main.
- Brücker, H.; Baas, T.; Beleva, I.; Bertoli, S.; Boeri, T.; Damelang, A.; Duval, L.; Hauptmann, A.; Fihel, A.; Huber, P.; Iara, A.; Ivlevs, A.; Jahn, E. J.; Kaczmarczyk, P.; Landesmann, M. E.; Mackiewicz-Lyziak, J.; Makovec, M.; Monti, P.; Nowotny, K.; Okolski, M.; Richter, S.; Upward, R.; Vidovic, H.; Wolf, K.; Wolfel, N.; Wright, P.; Zaiga, K.; Zyllicz, A. (2009): Labour mobility within the EU in the context of enlargement and the functioning of the transitional arrangements, final report. Nuremberg et al.
- German Federal Employment Agency (2014 a): Analyse des Arbeitsmarktes für Ausländer, April 2014, [<http://statistik.arbeitsagentur.de/Navigation/Statistik/Statistische-Analysen/Analytikreports/Zentral/Monatliche-Analytikreports/Analyse-Arbeitsmarkt-Auslaender-nav.html>]
- German Federal Employment Agency (2014 b): Hintergrundinformation: Auswirkungen der Arbeitnehmerfreizügigkeit und der EU-Schuldenkrise auf den deutschen Arbeitsmarkt, Nuremberg, [<http://statistik.arbeitsagentur.de/Statischer-Content/Statistische-Analysen/Auswirkungen-der-Arbeitnehmer-freizuegigkeit-und-der-Schuldenkrise-auf-den-Arbeitsmarkt.pdf>]
- Danish Immigration Service (under the Ministry of Justice); Danish Agency for Labour Market and Recruitment (under the Ministry of employment) (2014): Onlineinformation, [[http://www.nyidanmark.dk/en-us/coming\\_to\\_dk/work/work.htm](http://www.nyidanmark.dk/en-us/coming_to_dk/work/work.htm)] (20 June 2014)
- Dao, M.; Furceri, D.; Loungani, P. (2014): Regional Labor Market Adjustments in the United States and Europe, IMF Working Paper 14/26.
- Donovan, C.; Schnure, C. (2011): Locked in the House: Do Underwater Mortgages Reduce Labor Market Mobility? Available at SSRN, [<http://ssrn.com/abstract=1856073>]Elsner, B.; Zimmermann, K. F. (2013): 10 Years After: EU Enlargement, Closed Borders, and Migration to Germany, IZA Discussion Papers 7130, Institute for the Study of Labor (IZA).
- Estevao, M.; Tsounta, E. (2011): Has the Great Recession raised US structural unemployment?, IMF Working Paper WP/11/105, OECD Publishing.
- European Commission (2011 a): Employment and Social Developments in Europe 2011, DG for Employment, Social Affairs and Inclusion, Brussels.
- European Commission (2011 b): The 2012 Ageing Report: Underlying Assumptions and Projection Methodologies, Brussels.
- European Commission (2013): Eurobarometer 72.5 (Oct–Nov 2009). TNS OPINION & SOCIAL, Brussels (Producer). GESIS Data Archive, Cologne. ZA4999 Data file Version 5.1.0, [<https://dbk.gesis.org/dbksearch/sdesc2.asp?no=4999&db=e&doi=10.4232/1.11642>]
- Eurostat (2014 a): Online database, Unemployment rate by sex and age groups - annual average (une\_rt\_a), [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une\\_rt\\_a&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_rt_a&lang=en)] (11. Juni 2014)
- Eurostat (2014 b): Online database, Unemployment rate by sex and age groups - monthly average (une\_rt\_m), [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une\\_rt\\_m&lang=de](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=une_rt_m&lang=de)] (19 June 2014)
- Eurostat (2014 c): Online database, Unemployment rates by sex, age and nationality (%) (lfsa\_organ), [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa\\_organ&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_organ&lang=en)] (11 June 2014)
- Eurostat (2014 d): Online database, Immigration by sex, age group and country of previous residence (migr\_imm5prv), [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr\\_imm5prv&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_imm5prv&lang=en)] (26 May 2014)
- Eurostat (2014 e): Online database, Crude rate of net migration plus adjustment (tsdde230), [<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&ocode=tsdde230>] (26 May 2014)
- Eurostat (2014 f): Online database, Emigration by sex, age group and citizenship (migr\_emi1ctz), [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr\\_emi1ctz&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_emi1ctz&lang=en)] (17 June 2014)
- Eurostat (2014 g): Online database, Emigration by sex, age group and country of next usual residence (migr\_emi3nxt), [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr\\_emi3nxt&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=migr_emi3nxt&lang=en)] (11 June 2014)

- Eurostat (2014 h): Online database, Distribution of population by tenure status, type of household and income group, [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc\\_lvh002&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=ilc_lvh002&lang=en)] (6 May 2014)
- Eurostat (2014 i): Online database, Unemployment by sex, age and duration of unemployment (lfsa\_ugad), [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa\\_ugad&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_ugad&lang=en)] (17 June 2014)
- Eurostat (2014 j): Online database, Unemployment by sex, age and duration of unemployment (lfsa\_ugad), [[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa\\_urgad&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_urgad&lang=en)] (17 June 2014)
- European Central Bank (2012): Euro area labour markets and the crisis, ECB Occasional Paper 138, ECB, Frankfurt am Main.
- Ferreira, F.; Gyourko, J.; Tracy, J. (2010): Housing busts and household mobility, *Journal of Urban Economics*, Elsevier, vol. 68(1), p. 34–45.
- Ferreira, F.; Gyourko, J.; Tracy, J. (2012): Housing busts and household mobility: an update, *Economic Policy Review*, Federal Reserve Bank of New York, Nov, p. 1–15.
- Fihel, A.; Kaczmarczyk, P.; Wolfeil, N.; Zyllicz, A. (2009): Brain drain, brain gain and brain waste, in: Brücker, H. (ed. *Labour mobility within the EU in the context of enlargement and the functioning of the transitional arrangements*), Nuremberg 2009, IAB.
- Gago, E. G.; Kirzner, M.S. (2013): Geographical labour mobility in the context of the crisis: Spain, Ad-hoc Request, European Employment Observatory, Birmingham.
- Galgóczy, B.; Leschke, J. (2014): Post-Enlargement Intra-EU Labour Mobility Under Stress Test, *Intereconomics* 49 (3), p. 152–158.
- Holland, P.; Paluchowski, P. (2013): Geographical labour mobility in the context of the crisis. European Employment Observatory, ad-hoc request, June 2013, verfügbar unter: [<http://niesr.ac.uk/sites/default/files/publications/ESDE-SynthesisPaper-June2013-Final.pdf>]
- Instituto Nacional de Estadística (2014): Online database. Migraciones exteriores, Serie 2008–2012, [<http://www.ine.es/jaxi/menu.do?type=pcaxis&path=/t20/p277/serie/e01/&file=pcaxis>]
- Izquierdo, M.; Jimeno, J. F.; Lacuesta, F. (2014): The Impact of the Crisis on Migration Flows in Spain, *Intereconomics* 49 (3), p. 144–151.
- Jauer, J.; Liebig, T.; Martin, J. P.; Puhani, P. (2014): Migration as an Adjustment Mechanism in the Crisis? A Comparison of Europe and the United States, *OECD Social, Employment and Migration Working Papers* 155, OECD Publishing.
- Kaczmarczyk, P. (2014): EU Enlargement and Intra-EU Mobility – Lessons to Be Drawn from the Post-2004 Migration of Poles, *Intereconomics* 49 (3), p. 128–136.
- Koehler, J.; Laczko, F.; Aghazarm, C.; Schad, J. (2010): Migration and the Economic Crisis: Implications for Policy in the European Union, IOM Thematic Study, International Organization for Migration, Brussels.
- Molloy, R.; Smith, C.L.; Wozniak, A. (2011): Internal Migration in the United States, *IZA Discussion Paper Series*, No. 5903.
- Mundell, R. (1961): A Theory of Optimum Currency Areas, *The American Economic Review* 51 (4), p. 657–665, [<http://www.aeaweb.org/aer/top20/51.4.657-665.pdf>]
- OECD (2012 a): Settling in: OECD Indicators of Immigrant Integration 2012, OECD publishing.
- OECD (2012 b): OECD Economic Surveys: European Union 2012, OECD Publishing.
- OECD (2014): Is migration really increasing? OECD Policy Migration Debates, May 2014.
- Residential Variation Statistics (2014): Online database. Variaciones Residenciales Exteriores, Bajas por país de destino y edad, [[http://www.ine.es/jaxi/tabla.do?path=/t20/p307/serie/l0/&file=2\\_16.px&type=pcaxis&L=0](http://www.ine.es/jaxi/tabla.do?path=/t20/p307/serie/l0/&file=2_16.px&type=pcaxis&L=0)]
- Steinhardt, M., F. (2012): Does citizenship matter? The economic impact of naturalizations in Germany, *Labour Economics*, 19(6), p. 813–823.
- Straubhaar, T. (2014): Zuwanderung: aus ökonomischen und demografischen Gründen wichtig für die Zukunft. In: *Zeitgespräch: Zuwanderung nach Deutschland – Problem und Chance für den Arbeitsmarkt*, Wirtschaftsdienst 92 (9), p. 583–587.
- Tijdens, K.; Van Klaveren, M. (2012): A skill mismatch for migrant workers? Evidence from Wage Indicator survey data, in: Galgóczy, B. et al. (eds.), *EU Labour Migration in Troubled Times* Ashgate Publishing Ltd, Farnham, UK.
- Vargas-Silva, D. (2014): EU Migration to the UK: Trends and Impacts, *Intereconomics* 49 (3), 2004, p. 123–128.
- Vogel, D.; Kovacheva, V. (2014): Germany. In Anna Triandafyllidou (Ed.): *European Immigration. A sourcebook*. 2. ed. Farnham: Ashgate (Research in migration and ethnic relations series), p. 148–159.
- Von Weizsäcker, J. (2008): Divisions of labour: rethinking Europe’s migration policy, *Blueprints*, Bruegel, 10, June.
- Zimmermann, K. F. (2009): Labor Mobility and the Integration of European Labor Markets, *Discussion Papers of DIW Berlin* 862, DIW Berlin, German Institute for Economic Research.

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We have endeavoured to meticulously research and process the information contained in this study.

In part, we have drawn upon information collected by others. Certain data may no longer be correct, especially due to the passage of time or as a result of changes in legislation.

We can therefore accept no responsibility for guaranteeing that all information is accurate, complete and up to date.

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