



European Employment Observatory

Ad-hoc Request

Geographical labour mobility in the context of the crisis¹

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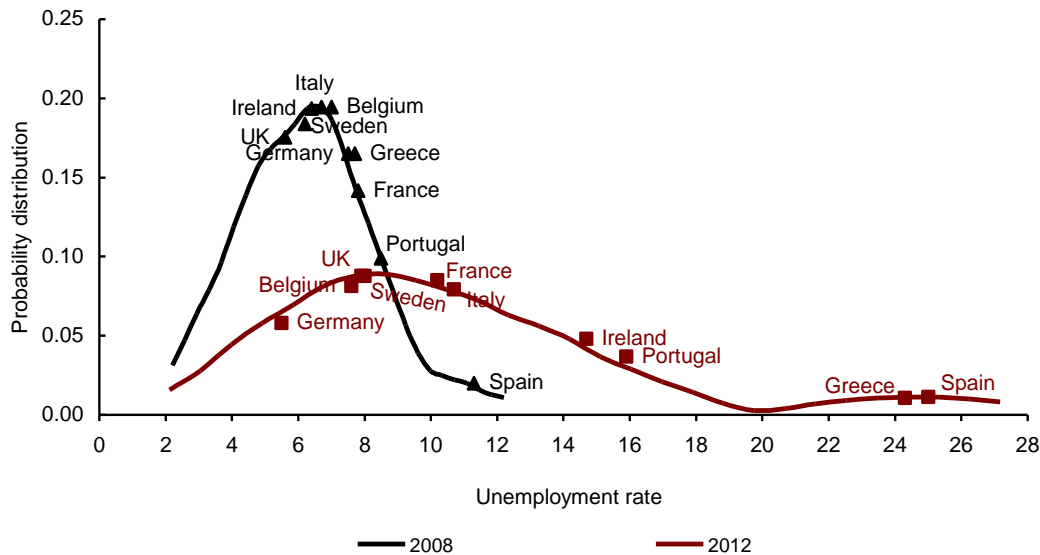
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¹ The paper draws heavily on 10 in-depth country studies: **Belgium**: Plasman, R., Bouajaja, J., de Wind, L. and Flament, S. (2013); **France**: Gineste, S. (2013); **Germany**: Düll, N. (2013); **Greece**: Karantinos, D. (2013); **Ireland**: Sexton, J.J. (2013); **Italy**: Ciccarone, G. (2013); **Portugal**: Naumann, R. (2013); **Spain**: Gonzalez, E. and Kirzner, M.S. (2013); **Sweden**: Anxo, D. and Ekberg, J. (2013); **UK**: Walsh, K. (2013). All errors of interpretation, however, are our own.

1. Introduction

Free mobility of workers within the EU was achieved in 1968, and acts as one of the four pillars of the EU Single Market. The policy was introduced with the aim of removing barriers to the functioning of a fully integrated market economy in Europe and improving the matching of labour supply and demand, allowing labour markets to operate more efficiently. In principle, labour mobility offers a way to reduce unemployment disparities across regions and countries. This channel of labour market flexibility has become increasingly important since the onset of the financial and economic crisis in 2008, as the economies of Europe have diverged significantly.

Figure 1. Distribution of unemployment rates in the European Union



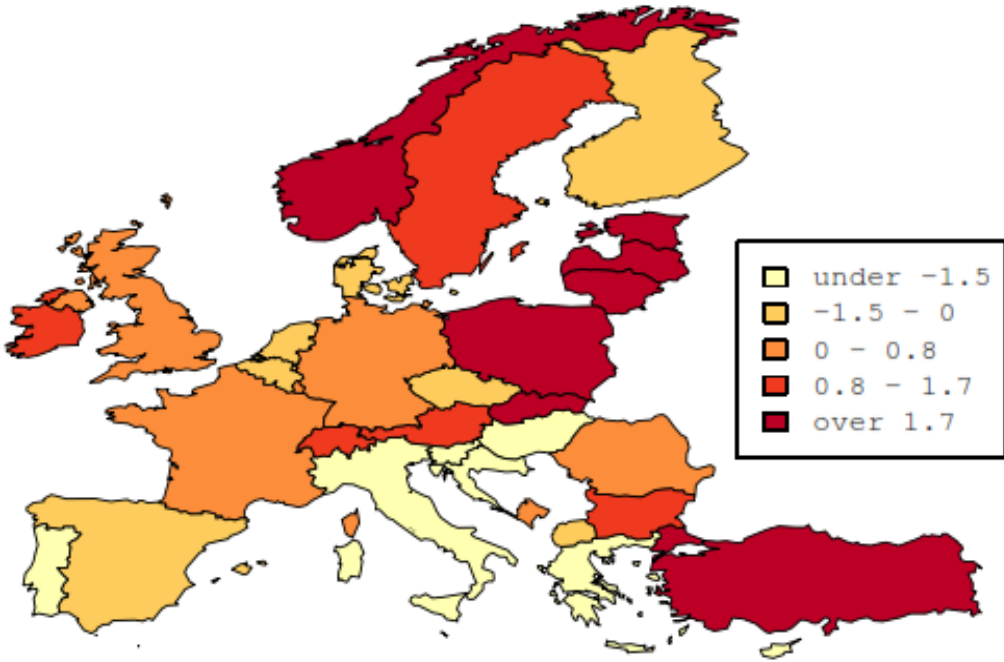
Source²: Derived from Eurostat unemployment rates for EU-27. Probability distributions shown are based on kernel density estimation.

Figure 1 illustrates the distribution of unemployment rates in the EU in 2008 and 2012, and identifies within these distributions the positions of the 10 countries that form the focus of this study. The distribution of unemployment rates within the EU has widened significantly and become more skewed over the last four years. While in 2008 the unemployment rates in our sample were within 5.7 percentage points of one another, there now stands close to 20 percentage points between the upper and lower bounds of our 10 country sample. The sample includes 4 countries with unemployment rates somewhat below the EU average (Germany, Belgium, the UK and Sweden), 2 countries with unemployment rates close to the EU average (France and Italy) and 4 countries with unemployment rates significantly above the EU average (Ireland, Portugal, Greece and Spain).

Sharp declines in output were recorded last year (2012) in Greece, Portugal and Italy, with more moderate output declines in Belgium and Spain (Figure 2). While economic growth in the other five countries in our sample was far from impressive – ranging from 0 in France to 1.2 % in Sweden – economic disparities across the EU have continued to rise. Spain, Greece, Portugal and Italy are all expected to record a further significant contraction in GDP in 2013, pushing their unemployment rates up higher and widening the North-South economic divide within the EU.

² We would like to thank Tatiana Fic for contributing the foundations of this figure.

Figure 2. GDP growth in 2012



Source: Eurostat. © EuroGeographics for the administrative boundaries.

A mobile labour market should be able to act as a partial cushion against these increasing economic disparities across Member States, as it allows labour market participants to relocate to areas where there are more job opportunities. However, even where there are no legal restrictions on the mobility of workers, there may still be both financial and non-financial barriers to movement. Despite the open access to labour markets within the EU, which has been in place for over 40 years, intra-EU mobility of workers remains low relative to the US, Australia and Canada, and is even low at the regional level within EU-15³ countries (Puhani, 2001). In 2010, inter-regional mobility within EU-15 member states stood at just 1 %, with cross-border mobility of just 0.35 %. This compares to inter-state/province mobility in the US, Australia and Canada of 2.4, 1.5 and 1 %, respectively (OECD, 2012).

In this paper we will review the recent trends in labour mobility to and from the 10 countries covered by our study. The primary aim is to identify whether the free mobility of labour within the EU has indeed acted as a stabilising mechanism to partially offset widening economic asymmetries across countries since 2008. We consider the rate of mobility at an aggregate level within the EU, the evidence of a change in the pattern of mobility within the EU that might reflect the widening North-South economic divide, and whether this has allowed a more efficient distribution of labour within the Union. We will also touch on the impact of mobility on the labour markets in both sending and receiving countries.

2. Intra-EU Labour mobility

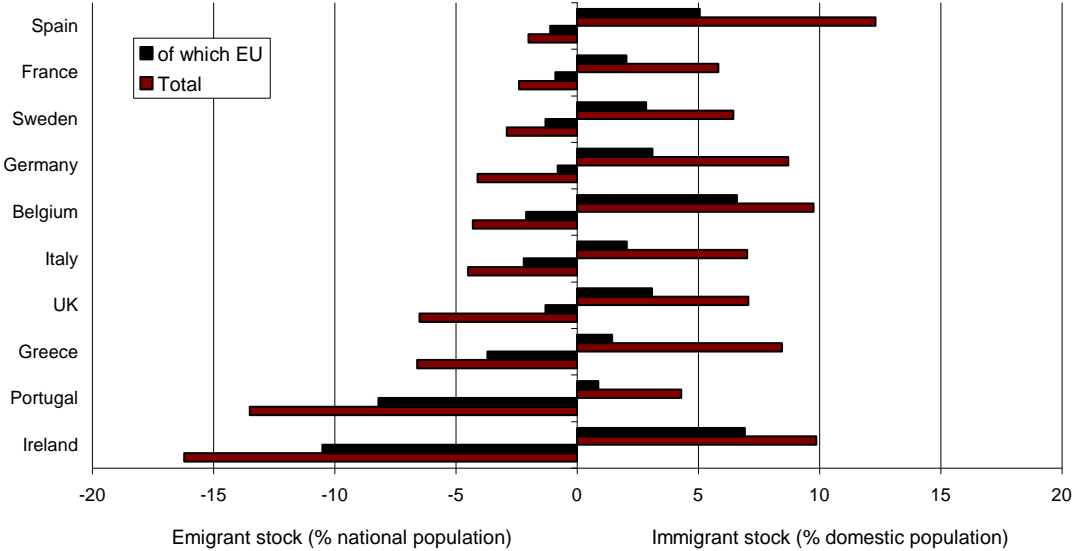
In order to assess the ability of labour mobility to act as a shock absorber against economic asymmetries within the EU, it is important to establish a picture of the historical mobility tendencies of

³ EU-15 refers to the 15 Member states that formed the EU prior to the enlargement in 2004: Belgium, Denmark, Germany, Ireland, Greece, Spain, France, Italy, Luxembourg, Netherlands, Austria, Portugal, Finland, Sweden, United Kingdom

EU nationals. At the onset we would stress that all migration figures cited within this paper should be viewed with a degree of caution. While there is a binding regulation on the collection of certain migration data on an annual basis by each Member State, there is not a common methodological approach to this collection, and the collection methods for establishing cross-border flows versus stocks of the mobile population are not fully reconcilable within a country, let alone across countries. Information derived from different sources (e.g. labour force surveys, census, passenger surveys, municipal registrations, etc.) can give very different impressions of both the level and trends of the mobile population. Intra-EU mobility flows are particularly difficult to monitor given the free mobility within most of the EU, and in many EU countries, such as France, residence permits are not required by other EU nationals (Gineste, 2013) so there are few sources of information available. Even where registration is required, short-term mobile workers, cross-border commuting, short-term migration for study or seasonal work are all likely to be absent or underreported in measured figures.

Given these caveats, Figure 3 illustrates an estimate of the stocks of emigrant and immigrant populations for each of the 10 countries in our sample, as well as the share of these populations that are resident in or nationals of other EU countries. Of the 10 countries shown, only Ireland and Portugal have an emigrant population stock that exceeds the stock of non-national residents. In both cases, more than 50 % of nationals resident abroad reside within another EU country, indicating a relatively strong historical propensity for intra-EU mobility from Portugal and Ireland. For the other 8 countries shown, fewer than 4 % of nationals reside within another EU country, suggesting that historically there has not been much uptake of the opportunities afforded by the EU Single Market to work and live in another EU country. The total immigrant stock figures for Greece probably underestimate the number of foreign nationals residing in Greece, as illegal immigration constitutes about one quarter of non-Greek nationals resident in Greece (Karantinos, 2013).

Figure 3. Immigration and emigration stocks



Source: DIOC 2005/06 and Eurostat Population by citizenship. Emigrant stocks are based on 2005/6⁴ (or nearest available) observations while the immigrant stock is based on 2010 observations, so that they include the recent waves of mobility related to EU expansions in 2004 and 2007.

However, a significant share of mobility flows are temporary in nature, and 10 % of EU citizens report having worked in another member state at some point in their lives (Eurobarometer, 2011). The surveys continue to support the higher rate of mobility from Ireland and Portugal, where 21 % and 15

⁴ The total emigrant stock figures for France are consistent with information from the world register of French living outside France in 2012 (Gineste, 2013). The total emigrant stock figures for Spain are slightly below PERE estimates for 2013 (Gonzalez and Kirzner, 2013), however, the broad picture remains unchanged, with Spain having among the lowest emigrant populations.

% of the population report working in another EU country at some point. This appears, at first sight, to be inconsistent with Portuguese national survey data, which suggest that the willingness to emigrate is below the EU average (Naumann, 2013). This suggests that Portuguese mobility has historically been predominantly out of necessity (e.g. for employment) rather than a cultural preference.

While the historical precedence for mobility has been relatively limited, surveys point to increasing mobility intentions in countries that have been hardest hit by the economic crisis, especially among young people (European Commission, 2012). For example, Gallup polls for 2008-2010 indicate that 19 % of Greeks aged 15 and over would like to move to another country permanently if they had the opportunity, and the European Job Mobility Portal (EURES) indicates a significant rise (more than 3-fold) in the number of Greek citizens posting CVs since 2010 (Karantinos, 2013). A relatively large number of Portuguese citizens have also posted CVs on the EURES platform (Naumann, 2013). A survey published by Le Figaro newspaper in April 2013 showed that half of 18-34 year olds in France wished to live in another country (Gineste, 2013). The Spanish Barometer conducted by the Sociological Research Centre in February 2012 found that 64 % of the sample in Spain considered living abroad a positive experience, with an even higher percentage of young people viewing emigration favourably (Gonzalez and Kirzner, 2013). This is in contrast to the general sentiment in Italy and Portugal, where moving abroad is more likely to be viewed as a necessity rather than a preference (Ciccarone, 2013 and Naumann, 2013 respectively).

The economic downturn has been particularly severe in Greece, Portugal, Italy, Spain and Ireland, where the level of GDP at the end of 2012 remained at least 6 % below its peak in 2008 (and more than 20 % in the case of Greece (Karantinos, 2013)). The five countries have been severely hit, to varying degrees, by the banking and financial crisis (especially Ireland and Italy, but also throughout Europe), a collapse of the housing market (especially Greece, Spain and Ireland), a loss of financial market confidence in government solvency (especially Greece, where holders of government debt have actually faced significant losses, but also Ireland and Portugal, and to a lesser extent Spain and Italy), and a severely restrictive process of fiscal adjustment. The crises have compounded longer-term competitiveness losses incurred over the previous decade in several of these economies, which have made recovery exceptionally difficult and painful. For the purposes of this study we will refer to this group of five countries as the “Periphery”, while we will refer to the other five countries in our sample, where the economies have fared somewhat better (Germany, France, the UK, Belgium and Sweden), as the “Core”⁵.

The exceptionally weak economic performance of the Periphery and rise in economic asymmetries within the Union should act as a push factor, encouraging a rise in mobility within the EU. However, we should also remember that while the economic downturn of the Core has not been as severe as in the Periphery, almost all countries have suffered to some degree, and only Germany has seen its unemployment rate decline since 2008 (Düll, 2013). Mobility pull factors, in terms of job opportunities elsewhere, have clearly declined throughout the EU (with the exception of Germany), so it is not obvious whether we should expect the overall rate of mobility to have increased or decreased since 2008.

A standard measure of the rate of intra-EU mobility is the cumulative flow of migration from one EU Member State to another in a given year, relative to the size of the EU population. In principle labour mobility should be measured using the population of working age, rather than total population flows. However, there is a trade-off between data precision and data availability, and a much broader county coverage is available for total migration flows. In most of the countries in our sample, the working age population is over-represented in the stock of inward migrants and trends in the working-age population have closely mirrored those of the working-age population (Anxo and Ekberg, 2013; Düll, 2013; Ciccarone, 2013) suggesting that any bias introduced by this is likely to be limited. The only country where it may be an issue is Spain, where immigration from Germany and the UK has a strong proportion aged 55 or over. However, in net terms migration flows from and to Spain of the working population closely mirrors the total population figures for 2010-2012, although the share of Spanish

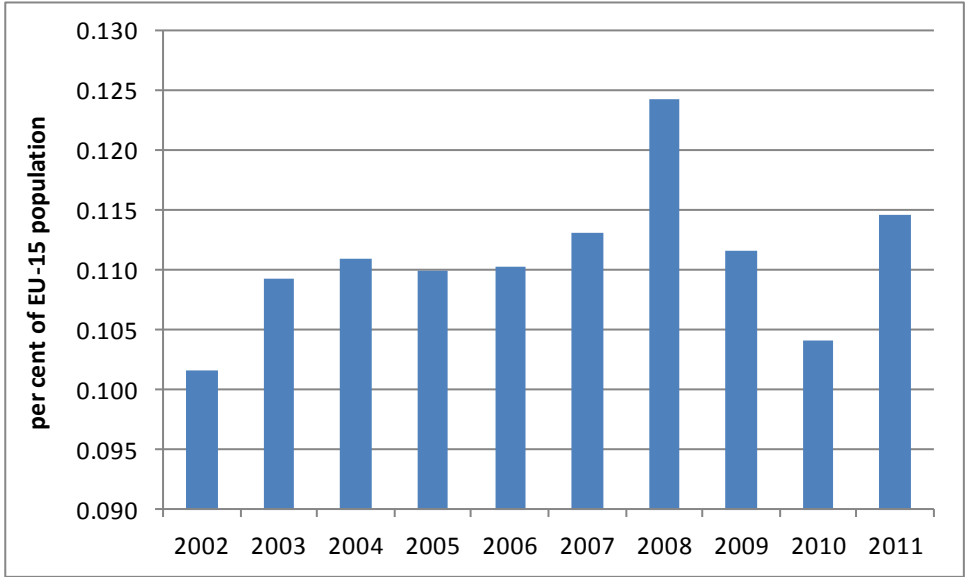
⁵ These labels do not imply anything in regards to the relative levels of development of the 10 countries in our sample.

nationals is slightly higher among the working age mobile population (Gonzalez and Kirzner, 2013). Our conclusions are, therefore, unlikely to be significantly affected by the use of total rather than working-age population flows.

In order to abstract from mobility flows related to the EU enlargements of 2004 and 2007, we focus only on intra-EU-15 mobility, to see whether there is any evidence that the rate of intra-EU mobility has been affected by the economic crisis. While a complete dataset for intra-EU-15 mobility is not available, and observations for some countries are patchy over time, Figure 4 illustrates an estimate of the intra-EU-15 mobility rate based on available information. The figure suggests a sharp rise in mobility in 2008, followed by a sharp fall in mobility in 2010, and so does not give a conclusive view on the impact of the economic downturn on intra-EU mobility.

While there was clearly a slowdown in mobility flows in 2010, by 2011 the rate of mobility appeared to have reverted towards its pre-crisis levels, suggesting that the push factors from the harder hit economies in the Periphery are beginning to outweigh the lack of strong pull factors from the more stable Core economies. This pattern is corroborated by EU-LFS data, which indicate a slight rebound in intra-EU mobility in 2011-12, following the drop in 2009-10, and is also consistent with observations by the OECD, that while the financial crisis resulted in a fall in global migration, and in particular in movement within the EU and migration for temporary work, the decline did not take place on the scale expected, given the intensity of the economic crisis (Plasman *et al*, 2013). As the level of long-term unemployment continues to rise in the most severely affected economies such as Spain and Greece, we can expect the rate of mobility to increase further in 2012-14, especially towards Germany where labour market conditions are relatively favourable.

Figure 4. Intra-EU-15 mobility rate



Source: Estimates based on Eurostat immigration by citizenship, OECD inflows of foreign population by nationality, and for Germany (BAMF Migration Report 2011, fig. 2.2.1⁶), Belgium (Plasman *et al*, 2013, Table 8), Greece (Karantinos, 2013, Table A.1) and Ireland (Sexton, 2013, Table 3). No information is available for France, which is excluded from the calculations.

⁶ The data used for Germany throughout this report is primarily sourced from the Federal Statistics Office, which is based on registration and de-registration of the population at the municipalities. This differs from migration data published by Eurostat as it includes short-term migrants staying for less than 12 months. Migration statistics published by Eurostat for Germany exhibit a break in the series in 2009 (the published level of immigration and emigration drops by 50 and 60 % respectively in this data), and so cannot be used for comparing the level of flows in the pre- and post-crisis periods.

3. Core-Periphery economic divergence and net migration

In the previous section we established that there may have been a temporary negative impact of the economic crisis on total intra-EU mobility flows, but in aggregate the rate of mobility appeared to have reverted to pre-crisis levels by 2011. However, the destination of mobility flows is likely to have been more significantly affected than the rate of mobility in aggregate, given the widening divergence between the Core and Periphery economies. We next turn to consider the destination of migration flows to and within the EU, distinguishing between the crisis-stricken economies of southern Europe and Ireland and the somewhat more robust economies of northern Europe.

The maps illustrate average crude rates of net migration⁷ in the pre-crisis period (2004-2007) compared to the post-crisis period (2008-11). The first map highlights that Spain, Italy and Ireland had very high net inflows of migration in the period 2004-2007, which was strongly linked to the EU enlargements and inflows from the newer Member States. As can be seen, many of the newer Member States exhibited a net outflow over this period.

The 2008-2011 averages of crude net migration clearly show that migration patterns have shifted since the crisis. The southern EU countries, as well as the crisis stricken Ireland, have had a significant drop in their net migration rate, although in the case of Italy the overall level of net migration remains high. Italy experienced very strong immigration in 2007, following the accession of Romania and Bulgaria to the EU, but immigration to Italy dropped by 30 % between 2007 and 2011.

Ireland is an exceptional case, as it experienced very high net inward migration before the crisis, but has become a net emigration country since 2010. Strong immigration in the pre-crisis years was closely linked to the EU enlargement process. While inflows from the newer Member States slowed sharply after 2008, the majority of those who migrated to Ireland in the pre-crisis years have remained in the country, with recent outflows dominated by Irish nationals (Sexton, 2013). Greece, Spain and Portugal have also recorded net outflows since 2010-11 (Karantinos, 2013; Gonzalez and Kirzner, 2013; Naumann, 2013).

Generally, the Core group has recorded a higher inward net migration rate compared to the pre-crisis years. New migration figures for Germany for 2012 show a sharp rise in immigration. Roughly three quarters of net migrants to Germany in 2012 arrived from other EU countries (Düll, 2013). About a third of this rise in net migration can be attributed to net inflows from Greece, Italy, Spain and Portugal. Net migration to Germany from the EU-12⁸ has also increased by a similar amount, reflecting a general trend in location decisions away from some of the pre-crisis destinations of choice (UK, Ireland and Spain) towards Germany and the Netherlands.

⁷ The crude rate of net migration includes a statistical adjustment, and is calculated as a residual of population growth, births and deaths. Crude rates are a convenient measure to use as they are available for most countries with a long time series, but for some countries are not very closely aligned with immigration and emigration statistics (for example Spain and France).

⁸ For the purposes of the present paper, by EU-12 we refer to the 12 countries that joined the EU in 2004 and 2007: Bulgaria, Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta Poland, Romania, Slovenia, Slovakia.

Figure 5. Crude rate of net migration, pre- and post-crisis



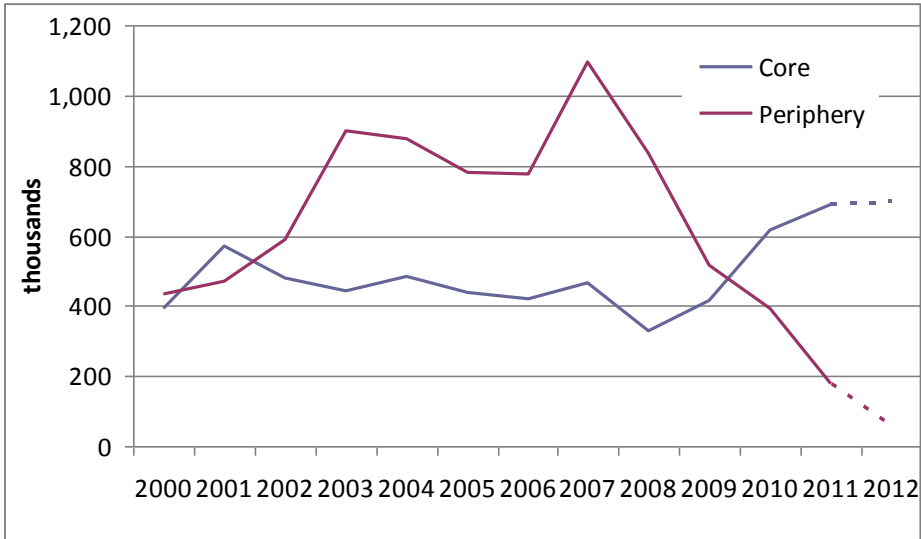
Note: Net migration inflows per thousand. Net migration includes statistical adjustment.

Source: Eurostat Demography balance and crude rates. © EuroGeographics for the administrative boundaries.

Just over half of non-UK nationals resident in England and Wales have arrived since 2001, with the bulk arriving post-2004 and primarily from Poland. The stock of Polish nationals resident in the UK increased by 10-fold in the decade to 2011, and Poland ranked second after India of the country of birth of non-national residents in the UK in 2011 (Walsh, 2013). But flows from Poland to the UK have clearly slowed since the crisis, partly reflecting the relative strength of the Polish economy compared to the UK and partly due to the lifting of restrictions on access to the labour market in Germany. Net migration to Sweden, on the other hand, has not been significantly affected by the economic crisis (Anxo and Ekberg, 2013).

Figure 6 illustrates the level of net migration to the two divergent regions that form the focus of this study, which emphasises the shift in migration patterns within the EU since 2008. Between 2003 and 2008, the net inflow of migrants to the Periphery was about double that to the Core. There was a sharp reversal of this pattern in 2009, and the divergence of the regions deepened over the next few years. By 2011, Greece, Ireland, Portugal and Spain all recorded a net outflow of migrants, with just Italy in the Periphery region continuing to attract more inflows than outflows.

Figure 6. Net migration to economic divergent regions



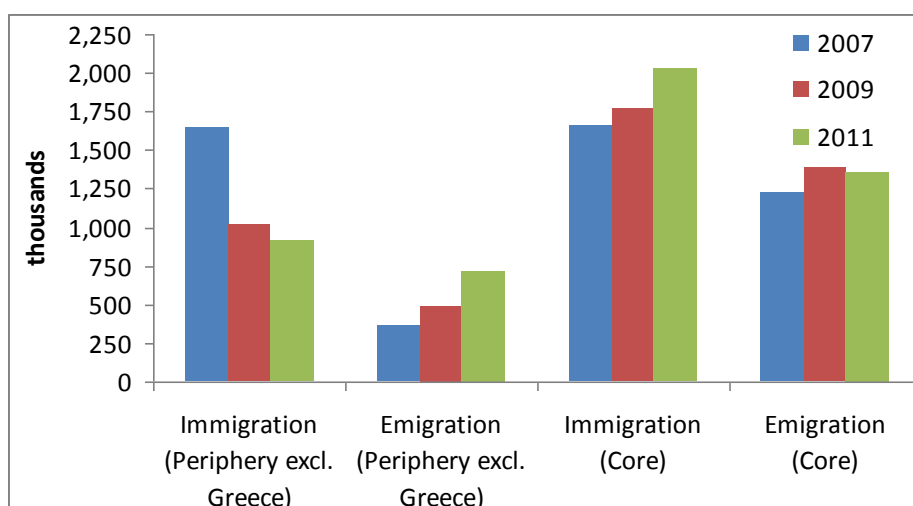
Note: Core refers to Belgium, Germany, France, Sweden and UK; Periphery to Greece, Spain, Ireland, Italy and Portugal. Estimates for 2012 are based on based on partial data for Germany, Sweden, UK (Core) and Spain and Ireland (Periphery).

Source: Estimates derived from Belgium (Plasman et al, 2013, Table 7); Germany (Düll, 2013, Table A1 and BAMF Migration Report 2011, Table 1-1); Ireland (Sexton, 2013, Table 1); Spain (Gonzalez and Kirzner, 2013, Table 6); Sweden (Anxo and Ekberg, 2013, Tables 1 and 2); UK (Walsh, 2013, p. 6); Greece, Italy, Portugal, France and missing observations from other countries (Eurostat immigration less emigration statistics). Where unavailable, missing observations filled using crude rate of net migration (Eurostat). Experimenting with alternative data sources does not alter the general trends illustrated in the figure.

4. Inflows versus outflows of the mobile populations

A decline in net migration can reflect a drop in immigration or a rise in emigration, or some combination of the two. It also reflects inflows and outflows of nationals, of non-nationals from other EU countries and non-nationals from the rest of the world, and all of these have slightly different implications for the domestic labour market. In this section we delve more deeply into the observed changes in net migration flows – particularly to the Periphery – to identify the main sources of these changes. Figure 7 focuses on the period from 2007-2011, when the net migration rates diverge sharply from their previous trend. The change in net migration to the Periphery is the combined effect of a 45 % drop in immigration over this period and a doubling of emigration.

Figure 7. Immigration and emigration



Note: Core refers to Belgium, Germany, France, Sweden and UK; Periphery excl. Greece refers to Spain, Ireland, Italy and Portugal.

Source: Eurostat total immigration flows [migr_imm1ctz], BAMF Migration Report 2011, Table 1-1 for Germany (see footnote 7 above).

The rise in net migration in the Core group of countries is clearly linked to a rise in immigration, while emigration has remained relatively stable. In the case of Germany, we can observe some shifts in the national composition of emigration, despite stability in the overall levels. Outflows of nationals from Greece, Spain, Italy and Portugal all declined 2009-12, while there has been a rise in outflows to some of the newer Member States, notably Bulgaria, Hungary, Romania and to a lesser extent Poland (Düll, 2013). Recent shifts in the direction of mobility within the EU is consistent with the diverging economic conditions. The Periphery has become less attractive for the mobile population, as there are few job opportunities, especially in Greece and Spain where about one quarter of the workforce is unemployed. Residents in the Periphery who have recently become unemployed, especially non-nationals, are likely to consider job options abroad, and there has been a significant rise in return migration. Given the historical precedence, we might expect nationals from Portugal and Ireland to be more likely to relocate to another EU country for work, although the percentage increase in emigration from Spain since 2007 has exceeded both of these countries (about 125 %). Emigration from Italy, on the other hand, has not risen as much (about 25 %), and the change in net migration to Italy is dominated by the decline in immigration. Higher immigration flows to the Core can reflect both the increase in emigration from the Periphery and a change in location preferences for the external mobile population (from Poland and Romania, for example) away from the Periphery and towards the Core.

4.1. Inflows to the Core

The rise in immigration in the Core group is dominated by the rise in flows to Germany. Table A1 (see Annex) shows that the level of immigration in Belgium, Sweden and the UK actually declined between 2008 and 2011, while there was a steep rise in flows to Germany. This is consistent with the labour market developments in the Core, as Germany is the only country to have recorded a decline in the unemployment rate over this period. The rising flows to Germany and declining flows to the UK persisted into 2012 (Düll, 2013; Walsh, 2013), with total inflows to Germany exceeding 1 million, an increase of nearly 15 % relative to 2011. Of this only 12.3 % arrived from the Periphery, whereas 43.2 % arrived from the 12 countries that joined the EU in 2004 and 2007⁹. Nonetheless, this reflects a significant increase in flows from the Periphery towards Germany, accounting for about one third of the 15 % rise in total inflows. Inflows of Greek nationals have been particularly strong, exceeding the

⁹ A sharp rise in inflows from the EU-8 in 2011 is linked to the establishment of the right to free movement for EU-8 nationals from May 2011. Immigration of Polish nationals increased by 63 % and of Hungarians by over 50 % (Düll, 2013).

number of arrivals from both Spain and Portugal (Karantinos, 2013). Germany has not traditionally been a favoured destination for Spanish nationals, but recent surveys suggest it currently ranks highest among preferred destinations (Gonzalez and Kirzner, 2013), pointing to a significant change in behaviour. This suggests that we may see a rise in flows from Spain to Germany over the next few years. Non-EU nationals have increasingly immigrated to Germany from other EU Member States, especially Italy and Spain, indicating that this group is more mobile and sensitive to business cycle differences between Member States (Düll, 2013).

France also recorded an increase in inflows between 2008 and 2011, but on a much more modest scale (less than 20 % of the increase in flows to Germany). While there is little detail available on the citizenship or source countries of inflows to France, it is clear that the vast majority of the increase is accounted for by a rise in inflows of French nationals, suggesting a significant degree of return migration as economic conditions worsen elsewhere. Inflows from outside the EU are largely for family reasons (40 %) and this type of immigration has been quite stable since the crisis. Student immigration from outside the EU, on the other hand, has increased significantly since 2007 (Gineste, 2013).

Total inflows to Belgium, Sweden and the UK were all lower in 2011 than they were in 2008. In the case of the UK this is largely a reflection of a one-off jump in the level of inflows in 2008, rather than a subsequent decline. In both Belgium and Sweden, inflows from the Periphery increased over this period, despite the overall decline in immigration. This is likely to reflect the relative resistance of the job market in these countries to the crisis, as illustrated in Figure 1 above. In the case of Belgium, Spain, in particular, has continued to account for high numbers of immigrants according to National Register statistics. The number of Italian and Irish immigrants dropped slightly between 2008 and 2009, but increased again rapidly in 2010. On the other hand, immigration from Greece and, most notably, Portugal has continued to fall throughout this period (Plasman *et al*, 2013, Table 5). In any case, inflows of EU-12 nationals have driven the rise in immigration to Belgium since 2004 and are about twice as important as flows from the Periphery.

Immigration to Sweden from Spain, Italy and especially Greece has increased since 2007. The rise in inflows from Greece may be related to the historical stock of Greek nationals resident in Sweden, which provides established networks for new arrivals (Anxo and Ekberg, 2013). New arrivals from Spain, however, are predominantly not Spanish nationals. Of the non-Spanish arrivals to Sweden from Spain, roughly two thirds are returning Swedish nationals, while the remainder reflects the relocation of third-country nationals from Spain to Sweden. Inflows from Ireland and Portugal have also increased, but remain very limited. Inflows from Poland to Sweden, on the other hand, have moderated since their peak in 2007, reflecting the relatively strong labour market position in Poland compared to many other EU countries (Anxo and Ekberg, 2013).

While there is little information on total inflows from the Periphery to the UK from Eurostat's statistics on migration flows, what information there is indicates that inflows from Italy increased over this period, in contrast to a significant decline in inflows from the EU as a whole. We can also gain some insight from National Insurance Number (NINo) allocations, which increased significantly in 2011 for nationals from Greece, Spain, Hungary, Italy and Portugal – all of which have been significantly affected by the crisis – while registrations from most other Member States declined (Walsh, 2013).

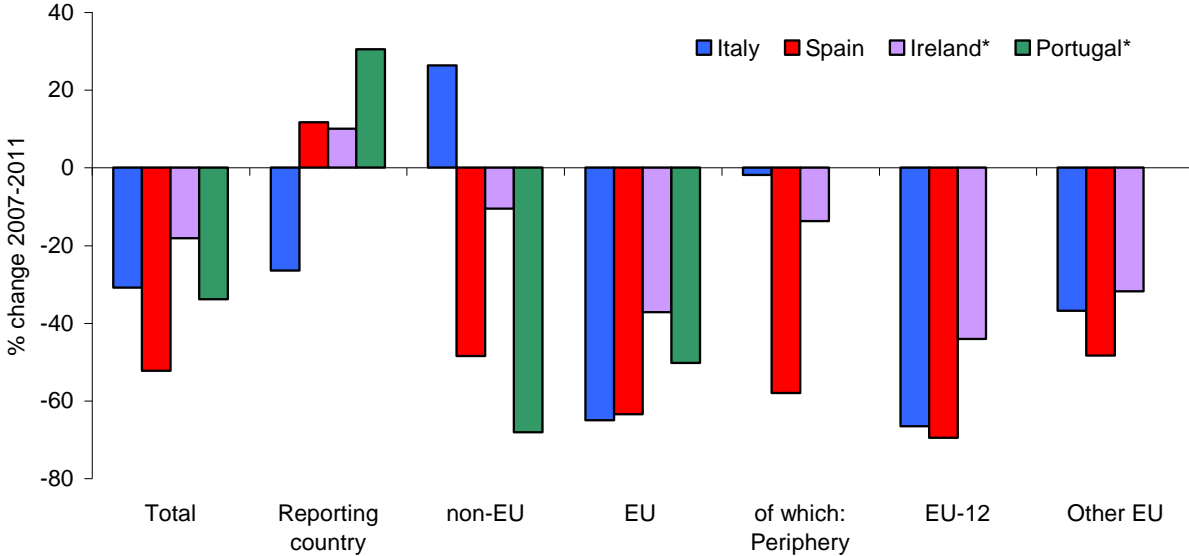
While there has clearly been a significant rise in mobility flows from the Periphery to the Core since 2008, and especially since 2010, in absolute terms the level of mobility between the two regions remains limited. In 2011, following 2-3 years of significant increases in this direction of mobility, less than 10 % of new arrivals to the host countries in the Core came from the depressed economies of the Periphery, compared to 15-40 % from the 12 newer Member States. Given the significant economic asymmetries between the regions, this suggests that there continue to be barriers or cultural factors that restrain intra-EU mobility. Language barriers can obviously act as a barrier to flows between certain countries. In addition, Martin and Scarpetta (2011) argue that high levels of employment protection, as in many EU countries, are associated with low levels of labour reallocation. Recognition of qualifications is also a problem in some countries, especially for higher skilled workers (Düll, 2013).

Concerns have been raised regarding the potential abuse of benefit systems from intra-EU migration in some countries, such as the UK and Germany. However, there is little evidence that benefit levels affect the location decision of intra-EU mobile population (Walsh, 2013). Given that little control can be exerted over migration from the EU, migration policy in some countries (e.g. UK, France) has focused on implementing stricter controls on non-EU immigration, especially of lower-skilled workers (Walsh, 2013; Gineste, 2013). In Germany, on the other hand, labour force immigration is increasingly becoming a key strategic issue, as population aging is leading to a long-term labour force decline. Skill shortages, in particular in healthcare-related, educational and some technical or engineering occupations are rising and expected to rise further.

4.2. Inflows to the Periphery

The decline in net migration to the Periphery since 2007 reflects both a drop in immigration and a rise in emigration from the region. Inflows to Spain¹⁰ have dropped more sharply than elsewhere, while inflows to Ireland have held up comparatively well (Figure 8). Italy stands out for two reasons. First, it is the only country that has seen a drop in inflows of nationals. This drop in return migration may be a consequence of the current economic crisis (Ciccarone, 2013). Return migration seems to be an important factor in the other countries, especially in Portugal. Italy is also the only country in our sample of four that has seen a rise in inflows from outside the EU (Ciccarone, 2013). Most of these have arrived from Asia (China, India, Philippines, Bangladesh). Inflows from the EU have dropped in all countries, although only in Spain has the percentage decline of inflows from citizens of the other four countries in the Periphery group declined significantly. This suggests that citizens of the Periphery have become increasingly mobile in relative terms compared to other EU Member States.

Figure 8. Change in immigration by citizenship, 2007-2011



* figures for Ireland and Portugal are for 2008-2011. Information for Greece is unavailable.

Source: Eurostat immigration by citizenship.

Table A2 (see Annex) puts the percentage changes illustrated in Figure 8 into context in absolute terms. This highlights the magnitude of return migration to Ireland and especially Portugal, where more than 60 % of inflows in 2011 were Portuguese nationals. This is consistent with the evidence from Figure 3 above, which highlights Ireland and Portugal as much more mobile populations, with a significant stock of nationals resident abroad. Information on Greece is not included in the table due to

¹⁰ The figures reported in table A2 and shown in figure 8 are based on total inflows, and so may include some people taking retirement in Spain. As we discussed above, the trends in working-age (-20.0%) and total (-19.8%) migration flows to Spain moved closely together 2010-12, and any bias in the figures is likely to be limited.

the lack of data prior to 2010, but return migration to Greece has also been very important, with more than half of inflows in 2011 Greek nationals (Karantinos, 2013). The table also shows that in both Spain and Italy, more than half of inflows in 2011 were of non-EU nationals. The majority of non-Greek nationals arriving in Greece were also from outside the EU. This is again consistent with the longer-term evidence from Figure 3, which shows that less than half of the immigrant stock resident in Greece, Spain and Italy is made up of EU nationals. Arrivals from outside the EU may also be less sensitive to the EU business cycle, as they are more likely to be migrating for family or humanitarian reasons, or may be arriving from areas where the economic situation is worse than in the EU Periphery. From within the EU, inflows to Spain, Ireland and Italy were dominated by nationals of the newer EU Member States, despite the fact that these inflows had decline by 40-70 % since 2007. Bulgarians and Romanians are also the dominant groups of EU nationals resident in Greece (Karantinos, 2013).

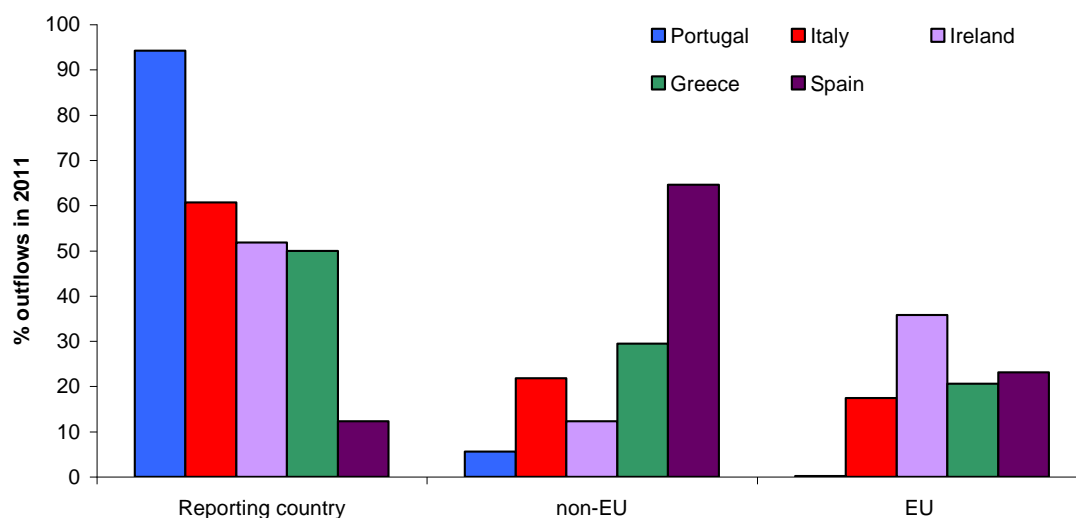
When viewed in context with the size of the domestic population, it is clear that immigration to the Periphery has been modest, with an immigration rate of just 0.2 % in Portugal, 0.6 % in Italy, and about 1 % in Spain, Greece and Ireland.

4.3. Outflows from the Periphery

Total outflows from the Periphery were exceptionally low in 2007, at just 0.3 % of the population. While they rose sharply over the next few years, outflows reached just 846 thousand, or 0.6 % of the resident population in 2011. There are two key questions that arise regarding the outflows: (1) who is moving? and (2) where are they going?. To answer the first of these questions, we look at the composition of outflows by citizenship in 2011. The data reveals stark differences across the five countries in our sample.

Nearly all of the outflows from Portugal in 2011 were Portuguese nationals (94 %), while very few emigrants from Spain were Spanish nationals (12.3 %). Again, this supports the evidence from Figure 3, suggesting that the Portuguese are a much more mobile population. In Greece, Ireland and Italy, 50-60 % of emigrants were nationals of the reporting country, which leaves a significant share attributed to return migration and relocation of third-country nationals. In the case of Ireland and Portugal, nearly all of the rise in emigration between 2008 and 2011 can be attributed to the rise in outflows of nationals, whereas in the case of Italy the national share was relatively constant over time, following a significant rise in the share of non-Italian emigrants after 2005 (Ciccarone, 2013). Outflows from Spain were dominated by non-EU nationals, largely from Morocco and South America. It is not surprising that a significant share of emigrants from Greece are non-Greek nationals, as unemployment among non-nationals is even higher than average, at 36.9 % in 2012Q4. Foreigners were overrepresented in occupations and activities that were hardest hit by the economic crisis in Greece, especially males from outside the EU. However, outflows of non-EU citizens from Greece may have been limited to some extent by changes to citizenship laws in March 2010, which make it easier for long-term residents to obtain citizenship and voting rights (Karantinos, 2013).

Figure 9. Composition of outflows by citizenship, 2011



Source: Eurostat emigration by citizenship and for Ireland (Sexton, 2013, Table 3)

While nearly all emigrants from Portugal were Portuguese nationals, this masks the small overall numbers of measured outflows, as the rate of emigration of nationals in 2011 was just 0.4 % of the resident population. However, Portuguese experts point out that the emigration numbers in national statistics do not reflect the real dimensions of the outflows, which are probably at least double the official figures, as some important destination countries (e.g. France, Angola) are not reported, while France, for example, accounts for about 30 % of Portuguese emigrant remittances (Naumann, 2013). This compares to emigration rates of 0.6 % for Greek nationals and 0.9 % for Irish nationals, where the rate of mobility is clearly higher than in other countries. Outflows of nationals from Italy and Spain have remained very low relatively to the size of the population (0.1 %).

Information on the destination of population outflows from these countries is patchy. From Portugal, emigrants have moved primarily to Angola, the UK and Switzerland, while emigration to the neighbouring Spain has dropped due to the economic crisis (Naumann, 2013). Given the large stock of Portuguese nationals resident in France – about one third of the emigrant stock – we would expect a significant level of mobility between Portugal and France as well. However, there is very little data available to monitor these flows. EU-LFS data confirms that France remains one of the most important destination countries for the Portuguese mobile population, although the sample sizes are too small to establish whether there has been a significant rise in flows between Portugal and France since the crisis.

About half of emigrants from Italy have relocated to another EU country, with Germany, Romania, the UK and France receiving the highest levels of inflows (Ciccarone, 2013). In the case of Romania, this probably reflects return migration of Romanian nationals, as Italy hosts more than 40 % of the mobile population of Romanian citizens within the EU. Outside the EU, the largest inflows from Italy have been received in Switzerland, the United States and Brazil (Ciccarone, 2013).

About 10 % of outflows from Spain in 2010-12 have also been destined for Romania. As in Italy, a large percentage of recently arrived Romanian nationals have become unemployed as a result of the current economic crisis, which has clearly acted as a push factor to return to Romania. About 13 % of outflows from Spain were destined for Morocco. Again, this probably reflects return migration, as 12.4 % of outflows in 2012 were Moroccan citizens. Return migration to Ecuador, Colombia, Brazil and Bolivia have also been significant. Spanish nationals have primarily moved to the UK, the US, France and Germany (Gonzalez and Kirzner, 2013).

In the case of Ireland, the most common destination has been Australia, followed by the UK. Historically there has always been a high level of flows between the UK and Ireland, but the rise in emigration to Australia reflects a newer trend. This may be a reflection of both the lack of linguistic

barriers and the relative strength of the Australian economy, which did not suffer a severe economic downturn during the financial crisis. There have also been significant outflows to the US and Poland, with the latter probably reflecting return migration following the huge inflows from Poland after the 2004 EU enlargement (Sexton, 2013).

There is little information on the destination of emigrants from Greece, although according to Eurostat's migration statistics roughly half relocated to another EU country and half outside the EU. Historically, preferred destinations for Greek nationals have been Germany, the US, Australia and Canada, plus the UK, Belgium, Italy, France and Sweden (Karantinos, 2013). Within the EU, inflows to Germany, Sweden and Spain have clearly increased over the last few years (Düll, 2013; Anxo and Ekberg, 2013; Gonzalez and Kirzner, 2013).

5. Employment status of nationals and non-nationals

In order to assess the labour market impact of mobility within the EU, it would be useful to know the labour status of recent migrants both before and after moving. The former is far more difficult to determine, as this information is not routinely collected through standard surveys or registrations. Some information can be gleaned for Portugal, based on the withdrawal of registered unemployed due to emigration. Table 1 shows that there was a steady increase in withdrawals between 2008 and 2011. The level of withdrawals in 2011 is equal to more than half of the measured level of emigration estimated by Statistics Portugal. Considering that there is a further large portion of Portuguese emigrants who were not entitled to receive unemployment benefits and so not registered as unemployed, it appears that the majority of Portuguese emigrants in recent years have been unemployed prior to moving (Naumann, 2013). By contrast, anecdotal evidence for Italy and Ireland has suggested that a significant share of outflows have been drawn from among the highly-skilled employed population, which does less to ease labour market tensions and raises the risk of skilled labour shortages and the economies suffering from brain drain. However, it is difficult to support these assertions with hard data.

Table 1: Number of unemployed registered at Public Employment Services who withdraw their registration due to emigration (2004 – 2011)

Gender / Year	2004	2005	2006	2007	2008	2009	2010	2011
Men	4178 (58%)	5422 (57%)	6913 (58%)	8740 (57%)	8468 (57%)	12118 (61%)	14325 (63%)	14982 (65%)
Women	3030 (42%)	4075 (43%)	5018 (42%)	6513 (43%)	6475 (43%)	7597 (39%)	8587 (37%)	8003 (35%)
Total	7208	9497	11931	15253	14943	19715	22912	22985

Source: Naumann (2013)¹¹

In many of the Periphery economies (Greece, Spain, Ireland and Portugal) the construction sector has been hit particularly hard during the crisis. In Spain, 53 % of job losses have been focused on the construction sector, and 70 % of jobs held by foreign nationals in this sector were lost between 2008-12. Males from Latin American have suffered disproportionately (Gonzalez and Kirzner, 2013). Similarly, in Ireland job losses in construction were significantly biased towards non-nationals. The foreign share of construction employment dropped from 17 % in 2006 to 10 % in 2012, with 75 % of jobs held by foreign nationals in construction lost (Sexton, 2013). The profile of emigrants from Portugal – dominated by males in the 35-54 age group – suggests that unemployed construction workers constitute a significant share of the rise in Portuguese emigrants (Naumann, 2013). Emigration from Spain has also been dominated by males and is clearly linked to the job losses in this sector (Gonzalez and Kirzner, 2013).

France, on the other hand, has seen a sharp rise in the number of 'seconded' employees in the construction sector since 2008 – a rise of nearly 10-fold – which may suggest a temporary relocation

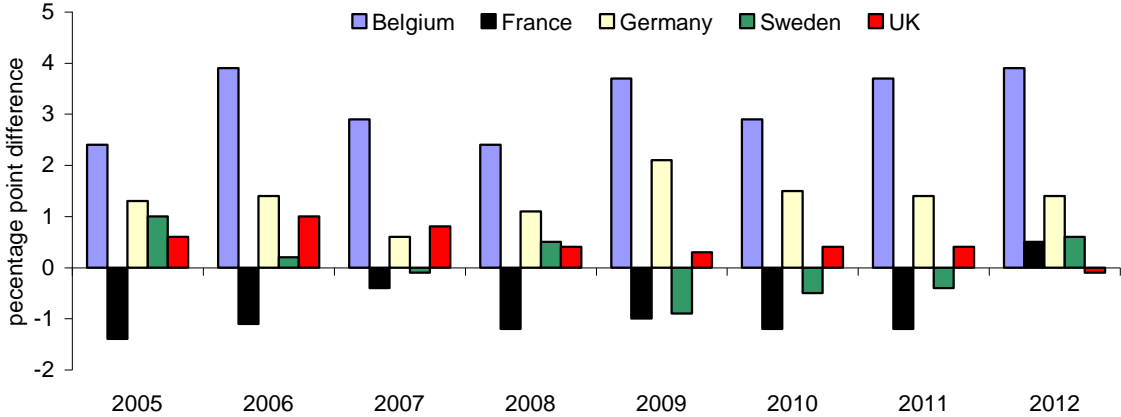
¹¹ Naumann (2013) note: IEFPP, data provided on request to Joana Azevedo, researcher at the Observatory of Emigration (by e-mail 21st of March 2012)

from the most severely affected countries towards France. There has also been a clear rise in the share of seconded employees in the French agricultural sector of Spanish and Portuguese nationals, although the majority continue to come from the newer Member States. The average duration of seconded employees in France is about 50 days, so this is unlikely to offer a solution to the labour market crisis, but may have provided some short-term relief (Gineste, 2013). In Germany, a relatively small share of building sector employment is filled by citizens from the Periphery and EU-12, although construction occupations have increased in importance for immigrants since 2005 (Düll, 2013).

While there is some information available from Labour Force Surveys on labour market status by citizenship, the sample sizes are generally too small for reliable conclusions to be drawn on an individual citizenship basis. However, we can compare unemployment rates for the EU-15 as a whole to rates for nationals of the reporting country, and this can also be compared to unemployment rates for resident citizens of the newer EU Member States (EU-12) and to unemployment rates for resident non-EU citizens. Figures 10-12 illustrate the percentage point difference between unemployment rates for each of these groups and the reporting country for our five destination countries in the Core.

The figures indicate that there is no evidence in the UK or Sweden that unemployment rates of other EU-15 citizens resident in the UK and Sweden have risen faster than that of nationals. Comparing the average spread between national and other EU-15 citizen unemployment rates in Belgium and Germany for 2005-2008 and 2009-2012, there may have been a slight rise on average since 2009. However, the differences are small, and do not exhibit a worrying trend.

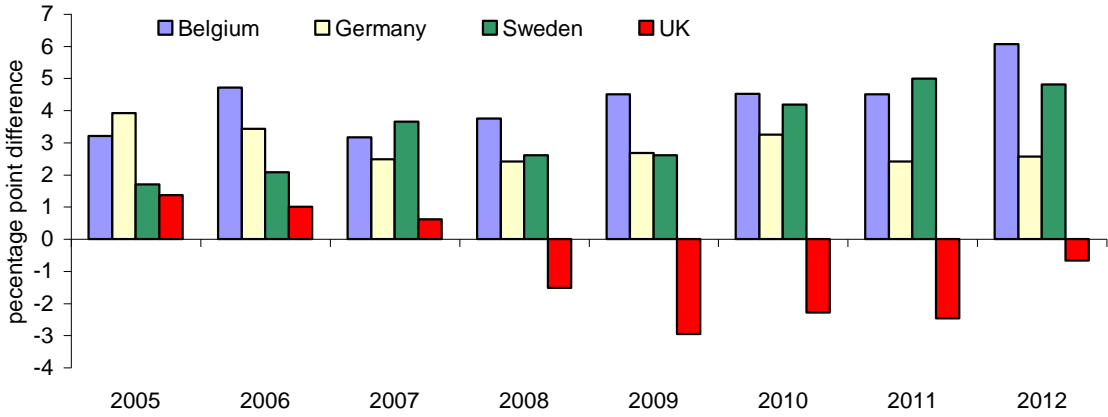
Figure 10. Unemployment rates by citizenship: EU-15 versus reporting country



Source: derived from EU LFS

Note: Figure illustrates the percentage point difference in the unemployment rate of EU-15 citizens (excluding the reporting country) and the unemployment rate of nationals resident in the reporting country

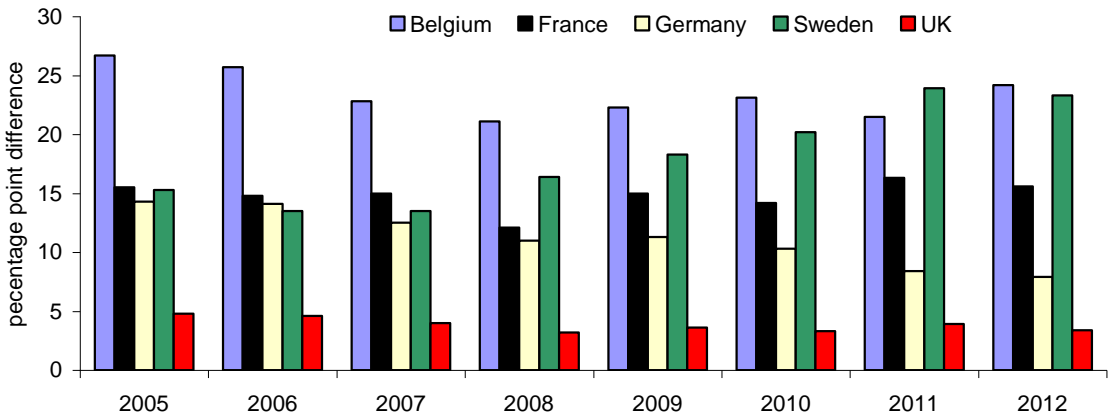
Figure 11. Unemployment rates by citizenship: EU-12 versus reporting country



Source: derived from EU LFS

Note: Figure illustrates the percentage point difference in the unemployment rate of EU-12 citizens and the unemployment rate of nationals resident in the reporting country

Figure 12. Unemployment rates by citizenship: Extra-EU less reporting country



Source: derived from EU LFS

Note: Figure illustrates the percentage point difference in the unemployment rate of non-EU citizens and the unemployment rate of nationals resident in the reporting country

In France, average unemployment rates for other EU-15 nationals have tended to be slightly below that of French nationals, but the differential became positive in 2012. Given the volatility of the LFS data, we should not read too much into a single annual observation, but if this trend were to persist it would reflect a significant shift from past behaviour.

Estimates for the EU-15 as a whole can only be used as a very crude guide to the labour market status of citizens of the five countries that make up our Periphery aggregate. However, in Germany, France and the UK, these five countries account for at least 50 % of resident EU-15 nationals.

The average unemployment rates in Belgium and Sweden of EU-12 citizens has risen slightly relative to nationals of the reporting country, while the spread has been relatively stable in Germany and in the case of the UK has actually declined since 2008. This suggests that EU-12 citizens have either been more successful at retaining their jobs than UK national, or that those that have become unemployed have been more likely to relocate to another country. The latter is more likely, and is consistent with the evidence in Table A1, which shows that inflows from the newer Member States to the UK have slowed sharply since 2008.

Figure 12 suggests that unemployment rates of non-EU citizens resident in Belgium, Germany, France and Sweden have been consistently higher than that of nationals. Only in Sweden does it appear that this difference has widened since 2008, while it has been on a downward trend in Germany. In the case of France it should be noted that the majority of immigration from outside the EU is for family reasons rather than employment reasons, and this type of migration is far less sensitive to business cycle developments (Gineste, 2013).

In order to gain more insight into the labour market status of the citizens of the Periphery, we can refer to national statistics for Germany, which hosts that largest number of citizens from this group. While it is not possible to directly compare net migration data to changes in employment and unemployment, a comparison can give an indication of the degree to which employment/unemployment growth of a specific citizenship group is linked to net migration (Düll, 2013). In principle, the change in unemployment plus the rise in net immigration of labour market participants should be roughly equivalent to the change in the level of employment. In practice, the change in unemployment plus net migration has tended to exceed the measured change in employment by citizenship, although not in the case of Greece, Italy and Portugal in 2010 (see Table A3 in Annex). This makes it difficult to assess whether the observed changes in employment reflect new arrivals or longer-term residents moving from unemployment into employment.

In 2010, the figures suggest that a significant part of the rise in employment for citizens of Italy, Greece and Portugal in Germany can be explained by outflows from unemployment. This persisted into 2011 in the case of Italy and to a lesser extent Portugal, but is less evident in the case of Spain. For Italy and Portugal, this is also supported by statistics from the Federal Labour Agency on the evolution of employment and unemployment by citizenship between September 2010 and September 2012.

In 2012, unemployment increased for all groups, except for Portuguese. However, in Germany the total number of registered unemployed remained rather stable, suggesting a relative deterioration of labour market conditions for citizens of the Periphery in Germany. The development of employment for the year 2012 is available by broad categories, but not by nationalities. Employment in Germany grew by 1.1 % between January 2012 and January 2013, by 27 % among EU-8 nationals¹², by 29 % among EU-2 nationals¹³ and by 7.7 % for the four Southern European countries of the Periphery (Düll, 2013). The rise in unemployment in 2012 suggests a significant number of new arrivals coming without a pre-arranged job.

6. Education/skills

The impact of labour mobility flows on the labour market and macro-economy of both the sending and receiving countries also depends on the average skill level of the mobile population. European Commission (2012) highlights an important distinction in this regard between Portugal on the one hand and other sending countries in the Periphery and in the newer Member States on the other hand. EU-LFS figures suggest that the mobile population from Portugal tends to be dominated by lower-skilled individuals, while from Spain, Italy and Greece mobile citizens are predominantly high-skilled¹⁴ and from the EU-12 mobile citizens are dominated by those with a medium level of education (Table 2).

In one sense, this would suggest that Portugal is less likely to suffer from brain drain than the other countries. However, there is some (inconclusive) evidence that, since the onset of the financial crisis, outflows from Portugal have been increasingly biased towards higher skilled individuals (see Naumann, 2013). There is some indication of a similar rise in the share of higher skilled emigrants from Italy (Ciccarone, 2013). This may be particularly important in the case of Portugal, where huge investments in its education system (schools and universities) and in vocational education and training

¹² Here EU-8 is used to designate the 8 countries of Central and Eastern Europe that joined the EU in 2004 (Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia, Slovakia).

¹³ EU-2 refers to the countries that joined the EU in 2007: Bulgaria and Romania.

¹⁴ However, Istat figures indicate that only 17-28 % of Italian emigrants 2005-11 held higher education qualifications, so these figures should be viewed with some caution (Ciccarone, 2013).

(VET) have been ongoing over the last decades. While the national workforce is still considerably below European standards in education and VET, it is undeniable that the country has made significant progress in these areas (Naumann, 2013).

Table 2. Distribution by level of education of the recently arrived (less than 3 years) economically active EU mobile citizens, by nationality, in % of total

Level of education	Portugal		Spain, Italy and Greece		EU-8 countries		EU-2 countries		All nationalities	
	2008	2011	2008	2011	2008	2011	2008	2011	2008	2011
Low	60%	39%	15%	16%	18%	23%	35%	29%	22%	20%
Medium	27%	33%	32%	28%	64%	49%	51%	47%	52%	39%
High	13%	27%	52%	57%	18%	28%	14%	24%	26%	40%

Note: EU-8 countries are the eight Member States from Central and Eastern Europe that joined the EU in 2004 (CZ, EE, LT, LV, HU, PL, SI, SK) while EU-2 refers to BG and RO.

Source: EC 2012, p. 38, Table 12. Note that the table has been corrected by the EC since data for Belgium were incorrect as far as the variable 'years of residence' is concerned. The data therefore refers (in terms of destination countries) to all EU Member States except Belgium.

Limited evidence suggests that the higher-skilled mobile population within the EU has increasingly located within the Core economies, at the expense of the Periphery. The average education level of non-natives resident in Spain has dropped since the crisis (Gonzalez and Kirzner, 2013), while the average skill level of arrivals in Belgium have had a higher level of education than arrivals in the three years to 2008 (Plasman *et al*, 2013). Unemployed migrants from Portugal have continued to be drawn largely from the pool of lower-skilled workers (Naumann, 2013), which suggests that the higher skilled are leaving existing jobs in Portugal, increasing the risk that the rise in emigration from Portugal may leave the economy with skill shortages. Many companies in Portugal have found it difficult to effectively exploit the better educated and qualified workforce, leading new graduates to accept under-skilled positions or seek employment abroad. The present cuts in publicly financed research have also forced a growing number of scientific staff to look for work opportunities abroad (Naumann, 2013). There is a risk that the investments made to raise the average skill level of the workforce will be partially lost through emigration. Similarly, in Spain cutbacks in R&D spending jeopardise longer-term career prospects for higher skilled workers, raising the risks of permanent losses of human capital through emigration (Gonzalez and Kirzner, 2013). Greece faces the same problem. In the past, return migrants to Greece followed a clear trend: savings earned abroad were used to set up small businesses in Greece. While measures are being taken to encourage such investments, the business environment in Greece is expected to remain extremely difficult for the next few years, which will limit the extent of such circular migration, increasing the risks of long-term losses of human capital (Karantinos, 2013). However, we should recall that the rate of emigration from Portugal and emigration of Spanish nationals from Spain remained quite low in 2011, despite recent increases, and therefore any effects of the brain drain at the macro level are likely to be limited.

Across much of the EU, there is a tendency for the higher-skilled non-native population to work in lower-skilled jobs. To some extent this may be related to language barriers, and also to a lack of recognition of foreign qualifications. This form of over-qualification is particularly prevalent in Germany, where the under-skilling of migrant jobs is among the highest in the OECD (Düll, 2013). It is also widespread in the UK (Walsh, 2013) and Spain (Gonzalez and Kirzner, 2013). About one quarter of the highly educated Greek emigrant population are employed in low- and medium-skilled jobs abroad (Karantinos, 2013). However, the pay-off for higher-skilled jobs abroad tends to be higher. Of Greek scientists working abroad, nearly 70 % were earning more than EUR 40 000 – twice the share working in Greece.

Students constitute an important component of intra-EU mobility. In relation to its population, Greece has one of the largest communities of students studying abroad, with about half of them in the UK (Karantinou, 2013). Inflows of students in Germany have become increasingly important. The recent rise in Italian and Spanish students in Germany may be linked to the crisis (Düll, 2013). Language barriers remain an obstacle to migration from these countries to Germany, and young people may be using opportunities as students to develop language skills in anticipation of subsequently seeking employment in Germany. In France, rising numbers of student immigrants from outside the EU are predominantly at the PhD level. About one third of these tend to stay to work in France after their studies, raising the average education levels of the migrant population in France. The immigration debate in France is likely to encourage inflows of highly-skilled workers from outside the EU, but may restrict access of lower qualified workers (Gineste, 2013).

7. Conclusions

The widening economic asymmetries within the European Union have called into question the ability of labour mobility to act as a shock absorber within the EU. While free movement of workers within the EU was established more than 40 years ago, the rate of mobility within the EU has remained relatively low compared to other free mobility regions such as the US, Canada and Australia. Historically, stock data indicate that nationals of Ireland and Portugal have had a more mobile population than the other countries covered by this study. As two of the economies that have suffered more than most since 2008, this should have put them in a better position to use mobility as a cushion against the economic downturn. While there is some evidence from recent flows to support this in the case of Ireland, the emigration rate from Portugal has remained very low in recent years. However, official migration statistics for Portugal appear to significantly underestimate population outflows and inflows, and so may understate the role of labour mobility in stabilising the labour market in Portugal.

Intra-EU mobility clearly slowed in the immediate aftermath of the financial crisis. However, the rate of intra-EU-15 mobility, as captured by aggregate internal migration flows, seemed to have largely recovered by 2011. However, a closer look at the migration patterns within the EU demonstrates a significant shift in the direction of flows since 2008. Net migration to the Core has been increasing, while net migration to the Periphery has dropped sharply, and by 2011 Greece, Ireland, Portugal and Spain all recorded net outflows of migrants, in sharp contrast to their pre-crisis trend. Inflows to the Core have been largely directed towards Germany, where labour market conditions have been significantly better than elsewhere in the EU. The rise in inflows to Germany is partly linked to the rising emigration from the Periphery, but remains surprisingly low given the stark labour market differences between Germany on the one hand and Greece and Spain on the other. The magnitude of flows from the Periphery to Germany is dwarfed by the flow of citizens of the EU-12, which comprised over 40 % of immigration to Germany in 2011. Mobile workers from the EU-12 have been diverted from the traditional pre-crisis destinations of the UK, Spain and Ireland towards Germany.

While emigration from the Periphery has increased significantly since 2008, in absolute terms the level of mobility flows from this region remains extremely limited, especially from Italy, which recorded an emigration rate of just 0.1 % in 2011. In relative terms, Ireland has exhibited the greatest degree of mobility, with close to 2 % of the resident population emigrating in 2011. In absolute terms, outflows from Spain have been much higher than elsewhere, which is consistent with the magnitude of the labour market crisis in Spain. But these outflows have been predominantly non-Spanish nationals. Extra-EU nationals resident within the EU tend to hold more vulnerable labour market positions, and have suffered greater job losses in several countries, such as Greece, Spain, Ireland and Sweden (Karantinou, 2013; Gonzalez and Kirzner, 2013; Sexton, 2013; Anxo and Ekberg, 2013), most notably within the construction sector in the Periphery economies. Free movement of workers within the EU does not appear to be acting as a significant shock absorber against the widening economic asymmetries between Core and Periphery within the EU.

There is some concern that the rising share of high-skilled emigrants from the Periphery may lead to a permanent loss of human capital, especially where investment in the research base is adversely affected by fiscal adjustment measures. Naumann (2013) argues that 'brain drain' is better than 'brain waste' – the loss of skills due to unemployment or under-skilled employment. This suggests that in the absence of skilled job opportunities at home, the second-best outcome may well be for higher-skilled

workers to seek employment opportunities elsewhere in the EU. The risk, however, is that this leads to further economic divergence of EU regions, making the longer-term target of economic convergence across the EU more remote. However, given the relatively modest magnitude of population flows within the EU, the macroeconomic effects of the ongoing brain drain are likely to be limited.

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Annex

Table A1. Change in immigration by citizenship, 2008-2011

		Total	Reporting country	Non-EU	EU	<i>of which:</i>		
						Periphery	EU-12	Other EU
Belgium*	Absolute change	-1711	-18057	12966	3380	4011	3175	-3806
	% change	-1.2	-49.5	25.0	5.8	52.6	16.2	-12.3
	% total 2011	100.0	12.7	44.8	42.4	8.0	15.7	18.7
France	Absolute change	50430	43298	1004	6128			
	% change	23.2	67.6	1.1	9.6			
	% total 2011	100.0	40.1	33.7	26.2			
Germany	Absolute change	276153	8273	32576	235304	37952	190380	6972
	% change	40.5	7.6	14.5	67.3	66.4	89.7	8.7
	% total 2011	100.0	12.2	26.8	61.0	9.9	42.0	9.1
Sweden	Absolute change	-4704	2762	-2183	-5283	387	-3132	-2538
	% change	-4.6	15.5	-4.1	-17.4	16.1	-22.6	-18.0
	% total 2011	100.0	21.4	52.6	26.0	2.9	11.1	12.0
UK	Absolute change	-24198	-6651	6038	-23585		-16026	-7559
	% change	-4.1	-7.8	2.0	-11.9		-14.9	-8.4
	% total 2011	100.0	13.9	55.4	30.8		16.1	14.6

Notes: Absolute change shows the difference between the inflows in 2011 and inflows in 2008. % change shows this in percentage terms. % total 2011 is the share of total inflows in 2011 of each citizenship group.

**For Belgium the time period used is 2007-2011.*

Source: Eurostat immigration by citizenship. Germany: Düll (2013) Table 1, Table A1; BAMF Migration Report 2011, Table 1-1, Table 2-33, See footnote 7.

Table A2. Change in immigration by citizenship, 2007-2011

	Total	Reporting country	Non-EU	EU	of which: Periphery			
						EU-12	Other EU	
Italy	Absolute change	-172226	-11352	50119	-210993	-54	-206756	-4183
	% change	-30.9	-26.5	26.3	-65.0	-1.9	-66.6	-36.9
	% total 2011	100.0	8.2	62.3	29.5	0.7	26.9	1.9
Spain	Absolute change	-500617	4396	-257902	-247111	-29558	-177391	-40162
	% change	-52.2	11.7	-48.5	-63.5	-58.0	-69.5	-48.3
	% total 2011	100.0	9.2	59.7	31.0	4.7	17.0	9.4
Ireland*	Absolute change	-11626	1794	-1472	-11948	-417	-8165	-3366
	% change	-18.2	10.0	-10.6	-37.2	-13.7	-44.1	-31.8
	% total 2011	100.0	37.6	23.8	38.6	5.0	19.8	13.8
Portugal*	Absolute change	-10051	2926	-10926	-2051			
	% change	-33.8	30.5	-68.1	-50.2			
	% total 2011	100.0	63.6	26.1	10.3			

Notes: Absolute change shows the difference between the inflows in 2011 and inflows in 2007. % change shows this in percentage terms. % total 2011 is the share of total inflows in 2011 of each citizenship group.

*For Ireland and Portugal the time period used is 2008-2011.

Source: Eurostat immigration by citizenship.

Table A3. Change in the number of employed, unemployed and net migration in Germany by citizenship

	Poland	Hungary	Romania	Bulgaria	Italy	Spain	Greece	Portugal
Employment (Jan-Dec 2010)	7262	1947	7089	3041	10184	1783	5197	1944
<i>Change in unemployed plus net migration</i>	<i>24026</i>	<i>8744</i>	<i>11677</i>	<i>15308</i>	<i>6426</i>	<i>2280</i>	<i>3507</i>	<i>1745</i>
Unemployed (Jan-Dec 2010)	-2974	-323	-264	265	-5605	-492	-2466	-1372
Net Migration (CFR) 2010	21052	8421	11413	15573	821	1788	1041	373
Employment Jan-Dec 2011	49036	11045	11141	4596	9316	3472	8488	2490
<i>Change in unemployed plus net migration</i>	<i>58703</i>	<i>16455</i>	<i>35757</i>	<i>19088</i>	<i>10322</i>	<i>5201</i>	<i>10321</i>	<i>3723</i>
Unemployment (Jan-Dec 2011)	-649	-206	-230	427	-5516	-157	-1183	-1130
Net Migration (CFR) 2011	58054	16249	35527	19515	4806	5044	9138	2593
Unemployment (Jan-Dec 2012)	2533	576	1233	1247	606	379	1398	-109

Source: Düll (2013)¹⁵ and authors' calculations

¹⁵ Düll, 2013 notes on source: Federal Labour Agency 2013, Federal Statistical Office