



Alexander Schellinger (Ed.)

Brain Drain – Brain Gain: European Labour Markets in Times of Crisis

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Foreword

In the European Union there is a tale and it goes like this: In some member states the economy is on the upswing and unemployment is low, in others the economy is in a downturn and unemployment is high. As the European Union guarantees free movement for persons, labor market mobility provides for the necessary adjustment. If there are no jobs in one country, workers will relocate to another with better employment prospects. Once their ›home economy‹ is on the upbeat trend again, they will return and – bring with them the experiences acquired abroad. The functioning of the Eurozone is ensured, national economies benefit, and people are in work. And everyone lives happily ever after.

To debunk this myth will have to be the task of a progressive European alliance. In doing so, it will be clear that there is no way back to nation states with closed borders that some observers seem to have in mind in the current debates on the refugee crisis. But it is also equally clear that free movement does not always produce ›win-win situations,‹ but advantages and disadvantages, on the individual and state level, in economic and social terms.

This study sheds light on the mobility of the highly-skilled that can result in *brain drain* or *brain gain*. The movement of high-skilled workers is difficult to trace and to assess. Caution is warranted with any general assessment that identifies entire countries as winners or losers. Indeed, the wealth and richness of this study lies in the specificities of national contexts. Our analysts that were brought together in close cooperation with the country offices of the Friedrich-Ebert-Stiftung bring these differences to the fore.

Let there be no mistake, trends may be difficult to evaluate, but winners and losers from free movement exist and, on a speculative note, they are becoming more and not less. It is remarkable that in light of the diversity of national experiences virtually all of the contributors to this study call for European-level solutions. What seems to be a technical question of choice is in reality a deeply political issue which is yet to fully unfold in front of us. May this study contribute to an informed debate in the political battles awaiting us!

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Executive Summary

Céline Teney, University of Bremen

In 2012, 1.7 million European citizens migrated to another European country. Analysis of the EU immigrant stock of 11 EU countries shows that the population of immigrants originating from the EU15 countries tends, on average, to be much more highly educated than the national population and the non-EU immigrant population. By contrast, the proportion of highly educated persons among Central and Eastern European immigrants is lower and shows larger variation between the destination countries. Most highly qualified immigrants from both EU15 countries and new member states moved to the United Kingdom, Sweden and Ireland.

The complexity and heterogeneity of the migration and integration patterns of highly qualified intra-EU immigrants make it difficult to single out brain drain and gain processes within the EU. For instance, highly qualified intra-EU immigrants might hold positions in the destination country for which they are over-qualified. Such a situation is faced, for instance, by many highly qualified Poles residing in the United Kingdom and is referred as »brain waste«.

Conflicting national interests seem to explain the divergence in the reactions and positions on intra-EU brain drain of key actors from net sending and receiving countries. Consequently, the EU constitutes the appropriate political entity to address such issues insofar as they result from European integration and have clear European scope: actors operating at EU level in the interests of all European citizens play a significant role in problematising the downsides of European integration and proposing EU-wide solutions to mitigate them.

1

INTRODUCTION

Céline Teney, University of Bremen

The normative discourse on European integration tends to praise intra-EU labour mobility and frame it as desirable. Intra-EU labour mobility has indeed been considered an essential component in the vision of an integrated European Union. Accordingly, spatial mobility of workers represents a means of optimising economic stability within the monetary union: labour mobility is the employment solution for potential growth imbalances in an integrating economic system (Recchi 2008: 213). As a result, policies intended to facilitate worker mobility have constituted a core component of the EU policy agenda for decades: European citizenship, free movement rights and institutionalised educational mobility (for example, through the Bologna process) undoubtedly illustrate the priority attributed by the EU to intra-EU labour mobility. Besides this general conception of labour mobility, the intra-EU mobility of highly qualified workers is envisioned as likely to stimulate innovation and to boost the knowledge economy within the EU.

While the normative discourse on the importance for EU integration of intra-EU highly qualified labour mobility tends to be consensual, little is known empirically about the extent of this phenomenon and its economic, social and political consequences. The fact that intra-EU labour mobility has remained of limited magnitude until recently to some extent explains the marginalisation of this issue in the empirical academic debate. However, intra-EU mobility has boomed in recent years mainly as a consequence of (i) central and eastern European citizens' access to the EU labour market (Galgóczi, Leschke and Watt 2012) and (ii) the recent economic crisis and the resulting high unemployment in several European countries (OECD 2013). Intra-EU immigration flow has indeed become as large as the flow of non-EU immigrants to the EU: 1.7 million EU citizens emigrated to another EU member state and 1.7 million third-country citizens immigrated to the EU in 2012 (Eurostat 2014). Intra-EU labour mobility is thus becoming increasingly significant within the EU. Moreover, this intra-EU labour mobility is likely to be characterised by an overrepresentation of highly qualified Europeans who tend to possess the kind of human capital – including foreign language proficiency – and information on the destination country needed to facilitate migration. This mobility on the part of highly qualified workers and its potential economic,

social and political consequences for the EU and its member states have therefore become crucial empirical issues. This, in turn, would help to refine the normative discourse by providing empirical insights into intra-EU highly qualified labour mobility and its impact across a range of different EU member states.

The main question discussed in this study is the extent to which this intra-EU highly qualified labour mobility reflects an emerging brain drain and gain within the EU. This question is investigated in more detail in a selection of country studies covering three regions facing contrasting experiences with intra-EU highly qualified labour mobility: (i) western Europe, which is the region with the largest intra-EU immigration flows; (ii) central and eastern Europe (hereafter CEE), which has been facing large intra-EU emigration flows since the implementation of free movement rights; and (iii) southern European countries that have been characterised by a sudden increase of intra-EU emigration flows as a result of the recent economic crisis. In the next section, I will briefly describe the concepts of brain drain and brain gain and their implications in the EU context and subsequently provide an overview of intra-EU immigration flows and stocks among the 28 EU member states (EU28).

1.1 CONCEPTS AND METHODS

1.1.1 DEFINITION OF INTRA-EU BRAIN DRAIN AND BRAIN GAIN

The term »brain drain« refers to the international transfer of »human capital resources«, mainly in the sense of the migration of highly educated individuals from less to more prosperous countries (Beine, Docquier and Rapoport 2008: 631). Within the EU context, brain drain implies that the intra-EU immigration of highly qualified workers tends to be permanent and unidirectional and results in a growing skilled labour shortage in the sending countries. This is likely to lead to new asymmetries and inequalities between sending and destination EU countries: brain drain renders »human capital scarcer where it is already scarce and more abundant where it is already abundant« (Docquier and Rapoport 2012: 725).

The concept of brain drain is used mainly by economists for macro-analyses of human capital transfer from developing to developed countries (for example, Boeri, Brücker, Docquier and Rapoport 2012). It provides a helpful framework for understanding highly qualified migration within the EU. International labour migration is characterised by positive selection (in other words, migrants have above-average skills; Chiswick 1999) and positive sorting (that is, highly skilled migrants tend to emigrate to countries where there is a high return to skills; Docquier and Rapoport 2012).

This, in turn, leads to brain *gain* for the destination countries: they make use of immigrants' qualifications, for whose acquisition they did not incur any costs, to offset labour shortages and boost their knowledge economy. From the perspective of the sending countries, on the other hand, highly qualified emigration implies brain *drain*: on one hand, they lose their »investment« in education and skills and, on the other hand, have to face a shortage of qualified workers. The cost of brain drain depends on the sectoral composition of highly qualified emigration, especially if the professions that are the most affected influence the production potential of others (such as health care professionals or engineers; Beine et al. 2008). Sending countries might nevertheless benefit from highly qualified emigration through remittances, transnational networks (Chiswick 2005) or knowledge transfer (Gibson and McKenzie 2012). Brain drain happens not only from developing to developed countries, but also between developed countries, such as between EU countries (Galgóczi, Leschke and Watt 2009). Highly qualified immigration is indeed becoming an essential component of national technology and economic development policies in European and most other industrialised countries (Mahroum 2001: 27). This is leading to competition between countries to attract the brightest workers (Boeri et al. 2012). The extent to which the current intra-EU mobility of highly qualified workers can be equated with intra-EU brain drain and gain, however, remains an open question that has to be assessed empirically.

1.1.2 METHODOLOGICAL ISSUES IN EVALUATING INTRA-EU BRAIN DRAIN AND GAIN

Investigating the presence of brain drain within the EU, ideally, requires considering the duration of the immigration of highly qualified workers: the concepts of brain drain and gain imply permanent or long-term immigration of highly qualified workers from economically less prosperous sending countries to the most prosperous destination countries. By contrast, a scenario of intra-EU mobility of highly qualified workers characterised by a fluidity of movement between sending and destination countries would provide evidence of an intra-EU »brain circulation«. Whether intra-EU mobility of highly qualified citizens contributes to the building of an integrated EU skilled labour market – the brain circulation scenario – or whether it leads to new forms of inequality between EU countries thus depends on the duration of the migration of intra-EU highly qualified immigrants: distinguishing between short- and long-term, as well as permanent immigration is essential for answering this question. This distinction between short- and long-term immigration is particularly relevant in

the EU context because of the very low mobility constraints and costs for EU workers as result of the free movement rights and EU citizenship. Unfortunately, macro-level and cross-national population survey data only provide information on aggregate migration flows and stocks and do not enable the assessment of multiple and complex migration trajectories, which would be required to measure this phenomenon with confidence and precision. The analyses presented in this study can therefore only grossly approximate the significance of brain drain and brain gain within the EU.

Moreover, and due to the limited comparability of the available data, in this study intra-EU brain drain and gain will be assessed by applying a broad definition of highly qualified workers: intra-EU highly qualified immigrants will be operationalised as EU citizens with a tertiary degree residing in an EU country that is not their country of citizenship. Such a broad definition has the advantage of being applicable to a wide range of national data and of providing more comparable findings across national survey data for the country studies. Nevertheless, there are obviously many variations in the socio-economic profiles of citizens with a tertiary degree and in the migration plans and trajectories of highly qualified intra-EU immigrants that would affect the severity of brain drain and gain. Investigating the presence of intra-EU brain drain and gain ideally requires such a fine-grained analysis of the socio-demographic profiles of intra-EU immigrants. Unfortunately, this is beyond the scope of this study, whose aim is to provide a first overview of this issue in a selection of countries.

Lastly, brain drain and gain can best be assessed by considering not only the immigration stock but also the immigration and emigration flows of highly qualified intra-EU immigrants. Intra-EU immigration stock refers to the total population of EU citizens residing in a different member state from their country of origin. By contrast, intra-EU immigration flow refers to the population of EU citizens who immigrate to another EU member state than their country of origin in a given year. In a similar vein, intra-EU emigration flow refers to the population of EU citizens who emigrated from their country of origin to another EU member state within a given year. Applied to the population of highly qualified workers, immigration stock provides information on the total population of highly qualified intra-EU immigrants, while immigration flow provides insights into the amplitude of this on-going process. The availability of the data required for assessing the extent of intra-EU labour mobility differs strongly for immigration stock, immigration and emigration flows. Intra-EU immigration stock is the easiest component to assess: general population surveys carried out by EU member states, such as the European Labour Force Survey (EU-LFS), are based on representative samples of the population residing in a country. Such representative samples of the overall population therefore contain a subsample of non-national citizens – composed of EU and non-EU immigrants – that can be used for assessing immigrant stocks. Moreover, such surveys contain detailed questions on respondents' education and socio-economic status. The analysis of general population surveys carried out by EU member states can thus shed light on the stock of highly qualified intra-EU immigrants. However, such general population surveys can provide data

only on immigration stocks, not immigration and emigration flows: the latter can be estimated only by using aggregate data collected by national statistical agencies, of the kind published, for instance, by Eurostat. Moreover, intra-EU migration flows cannot be estimated as precisely and reliably as the flow of non-EU immigrant within the EU: in contrast to non-EU immigrants, intra-EU immigrants are allowed to cross national borders within the EU without notifying the authorities of the sending and destination countries, in the form of either registration or permission. National statistical agencies therefore have few means of obtaining accurate and reliable intra-EU immigration flow statistics. This accuracy and reliability issue is even more severe for emigration flows: national statistical agencies face much more difficulties in counting people leaving the country than in counting people entering the country (Eurostat 2014). This lack of reliability and accuracy in the statistics on intra-EU labour mobility should be kept in mind when interpreting the findings presented here and in the country studies.

1.2 EMPIRICAL ANALYSIS

In this part, I will first provide an overview of intra-EU highly qualified labour mobility within the EU: this overview will encompass statistics on intra-EU immigration and emigration flows, followed by statistics on intra-EU highly qualified immigration stock in EU member states.

1.2.1 INTRA-EU HIGHLY QUALIFIED MIGRATION IN THE EU: AN OVERVIEW

INTRA-EU IMMIGRATION AND EMIGRATION FLOW

As already mentioned in the section on methodology, aggregate statistics provided to Eurostat by national statistical agencies are the only sources for estimating intra-EU immigration and emigration flows. These aggregate statistics do not differentiate migration flows by levels of education. Therefore, the statistics presented in Tables 1 and 2 relate to the overall intra-EU immigration and emigration flows across EU countries. Moreover, some national statistical agencies changed their identification of intra-EU immigrants over time, which renders estimations of trends of intra-EU immigration and emigration flows over time for some EU countries unreliable. Lastly and as already mentioned, Table 2 on intra-EU emigration flow should be interpreted with caution, because it is difficult to draw accurate inferences from the emigration statistics made available by the national statistical agencies.

Table 1 presents the intra-EU immigration flow for each EU member state in 2012. The first column shows the absolute number of EU citizens who immigrated in another EU member state in 2012. The country facing the largest immigration of EU non-national citizens is Germany (with about 300,000 EU non-nationals who immigrated in 2012, which represents 0.36 per cent of the total population), followed by the United Kingdom (about 150,000; 0.25 per cent of total population), then Spain, Italy and France (with a flow of approximately 100,000 EU non-national immigrants).

The two main destination countries are the two largest western European countries, which have remained relatively prosperous despite the current economic crisis. However, when this intra-EU immigration flow is estimated relative to the overall country population (see the second column), Germany and the United Kingdom are far behind other western countries, such as Luxembourg (the 2012 immigration flow represents about 3 per cent of the total population of Luxembourg), Cyprus (1.18 per cent), and Austria, Malta and Belgium (about 0.6 per cent). Thus, small countries are facing the highest intra-EU immigration flow relative to total population size. By contrast, central and eastern European countries experience very low intra-EU immigration flows. The third column presents the proportion of intra-EU immigration flow relative to the overall non-national immigration flow. That is, this column enables an assessment of the importance of intra-EU immigration flow in relation to the immigration flow of non-EU citizens. More than half of the immigration flow faced by western EU countries (such as Denmark), as well as by Cyprus, Hungary and Slovakia is composed of non-national EU immigrants (with the exception of the United Kingdom and France). By contrast, in most northern, southern, central and eastern EU countries the majority of the immigration flow remains of non-EU origin. The last column presents the percentage changes in intra-EU immigration flows in 2012 compared with 2009. The largest increases in intra-EU immigration flows are to be found in Lithuania (+183 per cent), followed by Germany (+137 per cent), Poland (+94 per cent), Finland and France (about +60 per cent). By contrast, southern European countries that have been strongly hit by the recent economic crisis display a decrease in intra-EU immigration flow. Further trends in the changes in intra-EU immigration flows for CEE countries and the other new member states cannot be detected because of numerous missing statistics.

Table 2 presents the intra-EU emigration flows for the 28 EU countries. The first two columns show absolute and relative intra-EU emigration flows, respectively. In absolute terms, Poland (approximately 190,000 intra-EU emigrants, which represents 0.49 per cent of the total Polish population), followed by Spain (around 175,000 emigrants or 0.37 per cent of the total population) and Romania (about 160,000 or 0.76 per cent of the total population) are the countries with the largest 2012 intra-EU emigration flows. However, relative to the total population, intra-EU emigration flows are largest in Luxembourg (1.72 per cent), Lithuania (1.08 per cent), Ireland (1.05 per cent), Latvia (0.93 per cent), Greece (0.82 per cent) and Romania (0.76 per cent). Thus and similar to the relative intra-EU immigration flow (see Table 1), the countries with the highest relative intra-EU emigration flow are those with a small total populations. However and in contrast to the statistics on intra-EU immigration flow, the countries facing large intra-EU emigration flows (in absolute or relative terms) are all countries that either have been severely hit by the economic crisis (i.e., Ireland, Spain, Greece) or joined the EU after 2004 (the so-called »new member states«), with the exception of Luxembourg. The last column presents the proportion of emigrants who enter another EU member state compared with the overall emigration flow. The percentages of emigrants who leave their country of origin for another EU

Figure 1
Intra-EU immigration flow by country of destination

	Intra-EU immigration flow in 2012	% of intra-EU immigrants flow relative to total country population in 2012	% of intra-EU immigration flow relative to total immigration flow in 2012	% change in intra-EU immigration flow 2012 compared with 2009 flow
Western Europe				
Austria	51,887	0.62	62.33	43.47
Belgium	64,857	0.58	50.02	n.a.
France	90,774	0.14	42.88	56.66
Germany	298,541	0.36	59.28	137.37
Ireland	22,252	0.49	58.73	-5.29
Luxembourg	15,561	2.96	80.21	30.45
Netherlands	51,216	0.31	61.73	21.20
United Kingdom	157,554	0.25	37.71	-5.90
Northern Europe				
Denmark	19,802	0.35	55.38	22.10
Finland	10,281	0.19	45.02	58.85
Sweden	25,338	0.27	30.80	-5.66
Southern Europe				
Greece	24,832	0.22	36.75	n.a.
Italy	104,078	0.17	32.39	-23.55
Portugal	1,341	0.01	25.44	-67.46
Spain	100,321	0.21	36.82	-19.10
Central and Eastern Europe				
Bulgaria	4,136	0.06	45.33	n.a.
Croatia	1,342	n.a.	28.25	n.a.
Cyprus	10,197	1.18	63.04	n.a.
Czech Republic	12,075	0.11	43.80	-22.11
Estonia	70	0.01	6.33	-93.28
Hungary	10,358	0.10	50.93	n.a.
Latvia	539	0.03	14.70	n.a.
Lithuania	738	0.02	29.69	182.76
Malta	2,461	0.59	45.96	11.06
Poland	24,446	0.06	29.99	94.28
Romania	3,450	0.02	29.74	-28.59
Slovenia	2,179	0.11	17.74	15.84
Slovakia	2,418	0.04	82.24	n.a.

Notes: n.a. (not available): The changes in immigration flows between 2008 and 2012 cannot be calculated because of breaks in the national immigration statistics series. Total immigration flow: non-national EU-immigration flow + non-EU immigration flow.

Source: Immigration by citizenship [migr-imm1ctz], Eurostat, retrieved on 23 February 2015, author's calculations. Eurostat defines immigration as »the action by which a person establishes his or her usual residence in the territory of a Member State for a period that is, or is expected to be, of at least 12 months, having previously been usually resident in another Member State or a third country«.

member state compared with the total number of emigrants differ substantially across EU countries. It ranges from rates closed to 100 per cent for Romania (95 per cent) and Estonia (93 per cent) to rates as low as 30 per cent for France (28 per cent), the Czech Republic (29 per cent), Cyprus and Croatia (30 per cent each) and the United Kingdom (36 per cent). Compared with the other immigration and emigration flows indicators, clear regional patterns of intra-EU emigration flow relative to the overall emigration flow have not emerged.

All in all, intra-EU emigration flows in 2012 were particularly high in the majority of CEE countries and some countries

particularly affected by the economic crisis, such as Greece and Ireland. By contrast, small western European countries (such as Luxembourg, Belgium and Austria), as well as Malta and Cyprus, are the EU countries that have been facing the largest intra-EU immigration flows relative to their total population. In absolute terms, Germany was the main destination for intra-EU immigrants in 2012, followed by the United Kingdom.

Figure 2
Intra-EU emigration flow by country of origin

	Intra-EU emigration flow in 2012	% of intra-EU emigration flow relative to total country population in 2012	% of intra-EU emigration flow relative to total emigration flow in 2012
Western Europe			
Austria	30,834	0.37	59.51
Belgium	47,590	0.43	63.69
France	80,733	0.12	28.00
Germany	111,694	0.14	46.54
Ireland	47,973	1.05	53.64
Luxembourg	9,045	1.72	86.62
Netherlands	59,482	0.36	53.86
United Kingdom	114,206	0.18	35.55
Northern Europe			
Denmark	20,014	0.36	45.84
Finland	8,714	0.16	62.94
Sweden	20,688	0.22	39.98
Southern Europe			
Greece	92,758	0.82	60.06
Italy	54,706	0.09	51.50
Portugal	34,418	0.33	66.24
Spain	175,244	0.37	39.24
Central and Eastern Europe			
Bulgaria	11,300	0.15	68.01
Croatia	3,877	n.a.	30.11
Cyprus	5,443	0.63	30.06
Czech Republic	13,594	0.13	29.48
Estonia	5,902	0.45	93.37
Hungary	19,520	0.20	85.31
Latvia	19,085	0.93	75.85
Lithuania	32,573	1.08	79.25
Malta	2,638	0.63	65.87
Poland	189,085	0.49	68.61
Romania	162,067	0.76	95.23
Slovenia	6,446	0.31	44.83
Slovakia	1,691	0.03	84.42

Notes: The changes in emigration flows between 2008 and 2012 cannot be calculated because of breaks in the national emigration statistics series. Total emigration flow: emigration flow to EU countries + emigration flow to non-EU countries

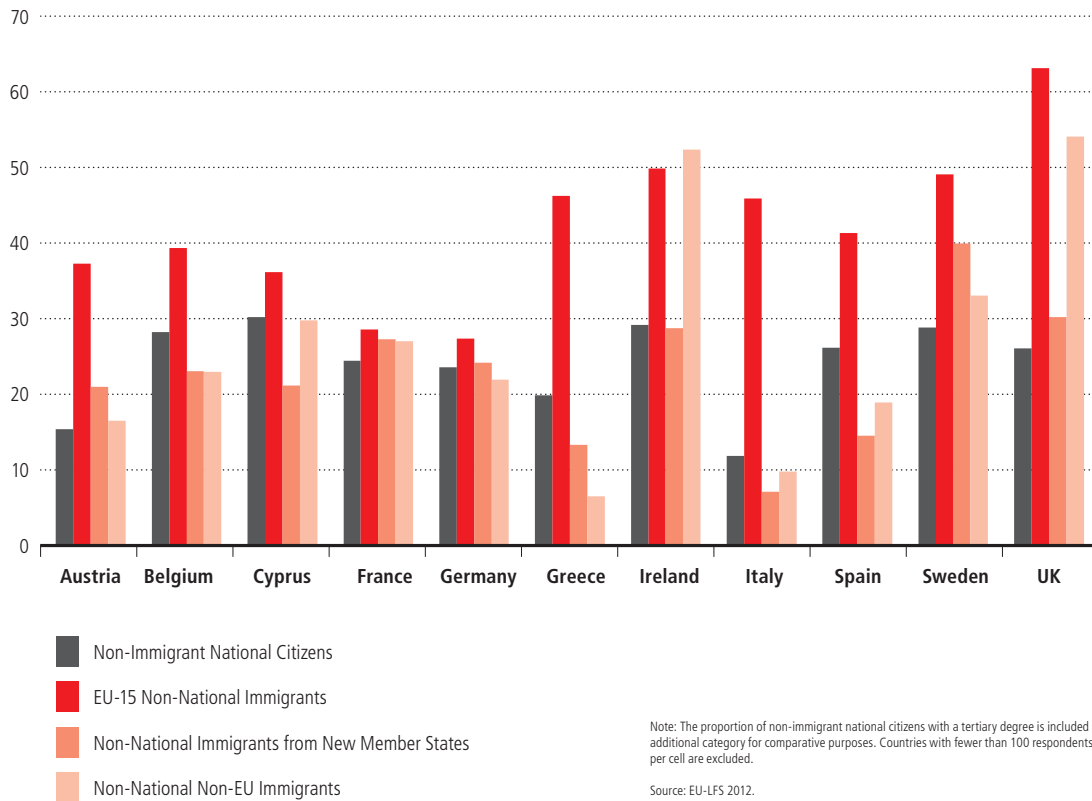
Source: Emigration by country of next usual residence [migr-emi3nxt], Eurostat, retrieved on 23 February 2015, author's calculation. Eurostat defines emigration as «the action by which a person, having previously been usually resident in the territory of a Member State, ceases to have his or her usual residence in that Member State for a period that is, or is expected to be, of at least 12 months».

INTRA-EU HIGHLY QUALIFIED IMMIGRATION STOCK

While statistics on intra-EU immigration and emigration flows give some insights into the magnitude of intra-EU mobility, statistics on intra-EU immigration stocks enable us to assess the total EU population settled in an EU member state other than their country of origin. Moreover, in contrast to migration flows, intra-EU immigration stocks can be estimated using general population surveys, which enables the differentiation of intra-EU immigrants by educational level. The EU Labour Force Survey is the only large-scale cross-national

survey that allows a straightforward comparison of intra-EU highly qualified immigrants across EU countries. Thus, the EU Labour Force Survey provides the principal reliable data that are suited for comparative studies of intra-EU highly qualified immigration stocks. Figure 1 presents the proportion of highly qualified immigrants relative to the overall immigrant population who had lived for less than 15 years in EU countries by their regions of origin (due to sample size issues for the immigrant subpopulations in the EU-LFS data, this analysis can be provided only for eleven EU countries). Figure 1 shows that the population of immigrants originating from the EU15

Figure 3
Proportion of non-national citizens with a tertiary degree relative to the overall population of non-national citizens who immigrated within the past 15 years, by region of origin (%)



countries is, on average, much more highly educated than the national population and the group of non-EU immigrants in all eleven countries. The countries with the largest proportion of highly educated immigrants from EU15 countries are the United Kingdom (with 63 per cent of immigrants from the EU15 holding a tertiary degree), followed by Ireland (50 per cent) and Sweden (49 per cent). The countries with the lowest proportion of highly educated immigrants from the EU15 are Germany (27 per cent) and France (29 per cent). The EU15 immigrant population in Germany and France is nevertheless more highly educated than the national population. In contrast to the EU15 immigrant population, the proportion of highly educated people among immigrants from the new EU member states is not as high and shows larger variation between countries of destination. The countries with the lowest proportion of highly educated immigrants from the new member states are the southern European countries: Italy (7 per cent), Greece (13 per cent) and Spain (15 per cent). The countries with the largest proportion of highly educated immigrants from the new EU member states are Sweden (40 per cent), followed by the United Kingdom (30 per cent), Ireland (29 per cent) and France (27 per cent). With the exception of Ireland, these countries are (together with Austria) the only destination countries where the immigrants from the new EU member states are more highly educated than the national population.

All in all, this cross-national comparison of highly qualified intra-EU immigrants shows that EU15 immigrants are much

more highly educated than the group of non-EU immigrants and the national population in every analysed country. By contrast, the proportion of highly qualified immigrants from the new EU member states varies substantially across destination countries: southern European countries are composed of a very low proportion of highly qualified immigrants from new EU member states, while the other destination countries have attracted a much larger proportion of highly qualified immigrants from the new EU member states.

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2

GERMANY: A MAJOR INTRA-EU BRAIN GAIN COUNTRY?

OVERVIEW OF AVAILABLE STATISTICS AND THE POSITIONS OF KEY ACTORS

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Summary

- Germany has newly acquired the status of the country that benefits the most from intra-EU immigration: intra-EU immigration flows to Germany doubled between 2007 and 2013. The main factors behind this intra-EU immigration growth are EU enlargement to the central and eastern European countries, together with the current economic crisis, which has hit southern EU countries particularly hard. According to the most recent statistics, among all EU immigrants to Germany in the past five years, the proportion of highly qualified workers has been as high as the proportion of highly qualified Germans among the domestic population.
- Analysis of one of the three highly skilled professions characterised by the most acute labour shortage in Europe – medical doctors – shows that the number of non-German EU doctors practicing in Germany has more than doubled since 2005, which points to an intra-EU brain gain for this profession. However, the brain gain status of Germany for this profession becomes more uncertain once German medical doctors leaving Germany are also taken into account: the number of non-German medical doctors registering with the German chamber of medical doctors has outperformed the number of German medical doctors leaving Germany only since 2011.
- With few exceptions, most key actors in German society support the increase in qualified immigration to Germany as a way of coping with the predicted demographic changes and to ensure economic growth and prosperity in the long run. However, the largest trade union (DGB) is the only actor so far that has acknowledged the potential emerging economic imbalances for the sending (EU and non-EU) countries experiencing the brain drain of which Germany might become a major beneficiary.

INTRODUCTION

Over the past ten years, patterns of migration have changed dramatically in Germany. Until recently, Germany was considered a non-immigration country by its leading political figures (see, for instance, the famous speech of Helmut Kohl in 1991 in which he stated that »Germany is not an immigration country«, Kohl, 1991) and imposed strict restrictions on immigration and citizenship of non-EU nationals compared with its western European neighbours (Koopmans, Michalowski and Waibel 2012). This profile as an EU member state with restrictive and conservative immigration policies has evolved radically over the past few years, however: first, national opinion-formers have started to acknowledge Germany's need for additional labour in order to cope with the demographic changes due to falling birth rates coupled with the ageing of the German population. The current workforce in Germany is not large enough to meet the needs of the national economy, which has continued to grow – with only a brief interruption – despite the recent EU economic and financial crisis. Moreover, due to the decreasing workforce, the current level of prosperity – including the level of pensions for the growing population of retirees – cannot be maintained in the long run without a strong increase in the labour force. This situation led the EU to introduce the EU Blue Card in 2012, which aims to facilitate the process of obtaining a work visa for highly skilled non-EU immigrants. The programme has not met with the expected success, however, as a much lower number of highly qualified non-EU immigrants than planned have applied for a work visa within this programme. Nevertheless, it highlights the significant changes in the discourse and strategy of Germany's governing elites concerning the need for immigrants, particularly high skilled ones. This change in the political discourse that positions Germany as a »welcoming country for (high skilled) immigrants« has certainly contributed to the improvement of Germany's image as destination country abroad.

Second, while Germany has retained some sovereignty to decide on the immigration criteria and conditions of non-EU nationals, Germany's national borders – similar to the national borders of every other EU member state – are open to EU citizens without restrictions, thanks to free movement rights

and EU citizenship (with the exception of a period of transition with restricted access to the labour market for citizens from the new EU member states). As will be seen in the next section, Germany has become an attractive destination country for EU citizens from countries with lower wages and poorer working conditions. These internal factors – that is, changes in the political discourse on (high skilled) immigrants and economic growth throughout the EU economic crisis – together with two main external factors have led to a change in the immigration status of Germany: from non-immigration country, Germany is becoming the main destination country for EU immigrants. The first external factor is the EU enlargement to central and eastern Europe. The second external factor is the recent EU financial and economic crisis experienced by southern EU countries, which in turn led to a sudden labour emigration from these countries. In the first part of this study, we will discuss in more detail the rapid changes faced by Germany in recent years regarding the immigration of EU citizens and intra-EU emigration of Germans. Next, we will present the available statistics on the educational level of EU immigrants residing in Germany. Because general national surveys do not enable a precise assessment of the profile of recent EU immigrants according to their educational level due to the low sample size, we will complement the statistical analysis with a case study of a high skilled profession that suffers from labour shortages, namely medical doctors. This case study aims at providing insights into the existence of a brain gain and drain for high skilled professions facing labour shortages. The last part of this chapter analyses the positions of the main political, economic and civil society actors regarding high-qualified EU immigration and the issue of intra-EU brain drain and gain.

2.1 EVOLUTION OF IMMIGRATION AND EMIGRATION FLOWS TO AND FROM GERMANY IN RECENT YEARS

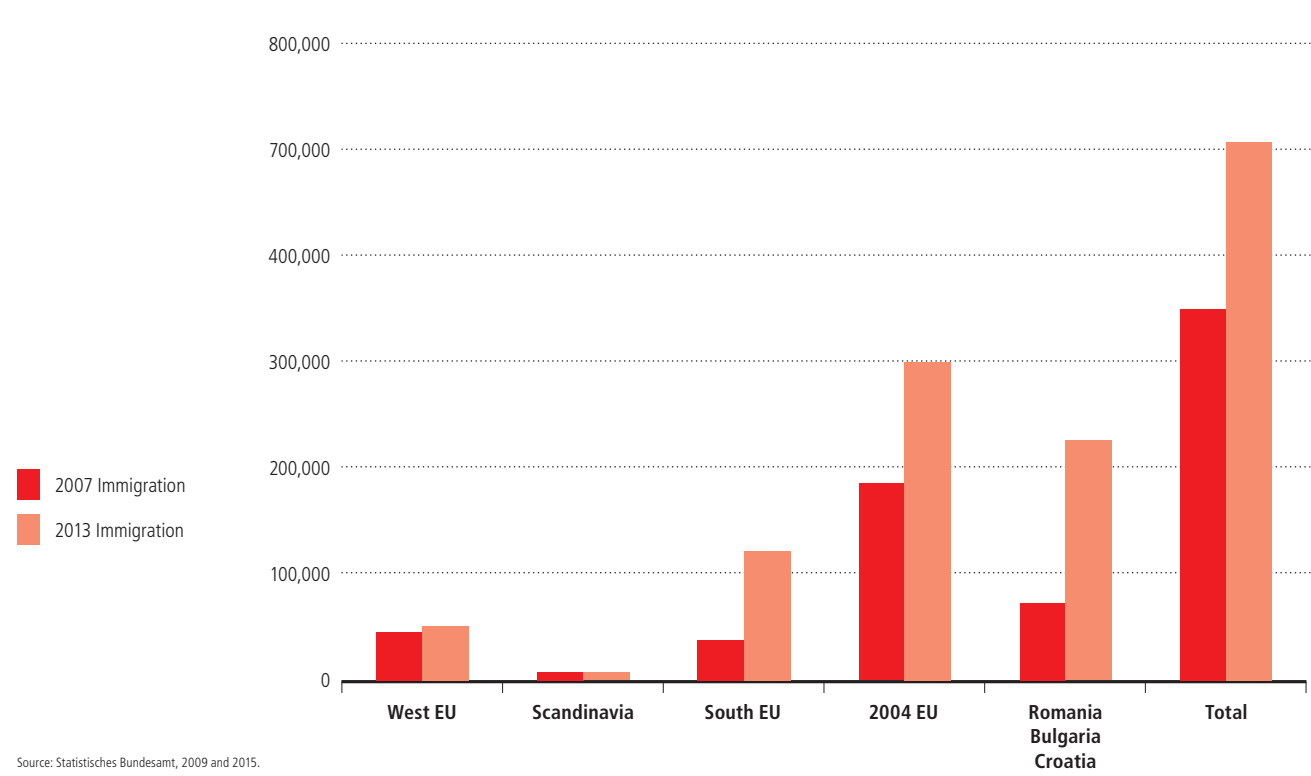
In this section, we will present the evolution of intra-EU migration from and to Germany since 2007. Figure 1 presents EU immigration flows to Germany in 2007 and 2013. These are the most recent statistics available from the German Statistical Federal Office (Statistisches Bundesamt 2009, 2015). In contrast to the Eurostat statistics that measure immigration by counting immigrants who spend at least one year abroad, the statistics provided by the *Statistisches Bundesamt* refer to the number of registrations of non-German citizens in German registration offices. These statistics do not consider a minimum length of stay and might contain several entries for the same person, if the person registered several times during the same year. These varying definitions of immigration explain the different statistics on immigrant flows provided by Eurostat (used in the main study) and the *Statistisches Bundesamt*.

As can be seen, the number of non-German EU citizens who immigrated to Germany doubled in 2013 compared with 2007. Moreover, if we consider the net EU migration rate in Germany – by subtracting the number of non-German citizens who left Germany for another EU country from the number of non-German EU immigrants to Germany – the

difference between non-German EU immigration (from the EU to Germany) and emigration (from Germany to the EU) flows in 2013 were about +300,000 compared with +73,000 in 2007 (statistics not shown). With regard to EU citizens, Germany is a large net receiver country, because the number of non-German EU citizens immigrating largely outperforms the number of non-German EU citizens leaving Germany. Furthermore, the net EU migration rate in 2013 increased by more than four times compared with 2007. EU immigration flow has thus become a highly significant demographic phenomenon in Germany in recent years. This boom in the EU immigrant flow to Germany, however, is not the result of an overall increase of immigrants regardless of region of origin. Indeed (and as can be seen in Figure 1), there are large regional differences in the immigration flow changes between 2007 and 2013. Hence, the immigration flow from western and Scandinavian EU countries remained relatively stable between 2007 and 2013. By contrast, immigration flows from southern, central and eastern EU countries to Germany have grown substantially in recent years (+211 per cent for southern EU countries, +207 per cent for Romania, Bulgaria and Croatia and +60 per cent for the EU member states that acceded in 2004). While the increase in immigration from southern EU countries more than doubled between 2007 and 2013, immigration from central and eastern EU countries remains the most important in absolute terms. This huge increase in EU immigration flow between 2007 and 2013 is due mainly to two recent developments within the EU. The first is the financial and economic crisis that severely hit some southern EU countries from 2007 onwards. The economic crisis in turn has led to a growing unemployment rate that has affected in particular the younger labour force in these countries (Eurostat 2015a). Unfavourable labour market conditions, such as high unemployment rates, constitute high push emigration factors (factors that motivate someone to leave their country of origin). By contrast, the German labour market and economy remained relatively unaffected by the EU financial and economic crisis: Germany is the only OECD country whose unemployment rate among both the immigrant and non-immigrant population fell from 2008 to 2012 (Liebig 2013), making the German labour market attractive to EU workers seeking to improve their career prospects.

Germany has become a popular destination for labour migration within the EU, attracting the largest number of non-national EU citizens in 2012 (OECD 2014: 23). Moreover, besides the United Kingdom, Germany is the second most likely destination country within the EU for southern European immigrants: in 2011 Germany received 28 per cent of the immigration flow from southern Europe, while 32 per cent of these new immigrants entered the United Kingdom (Liebig 2013). The second recent development was the opening of the German labour market in 2011 to workers from the 2004 new EU member states. The 2004 EU enlargement to central and eastern EU countries did not automatically give citizens from the new member states full access to the EU labour market. Indeed, with the exception of a few EU countries (the United Kingdom, Ireland and Sweden) all other EU member states – including Germany – applied transitional measures to restrict the right of freedom of movement for workers. The declared justification for these restrictions was

Figure 1
EU immigration flows to Germany, by region of origin, 2007 and 2013 (excluding German citizens)

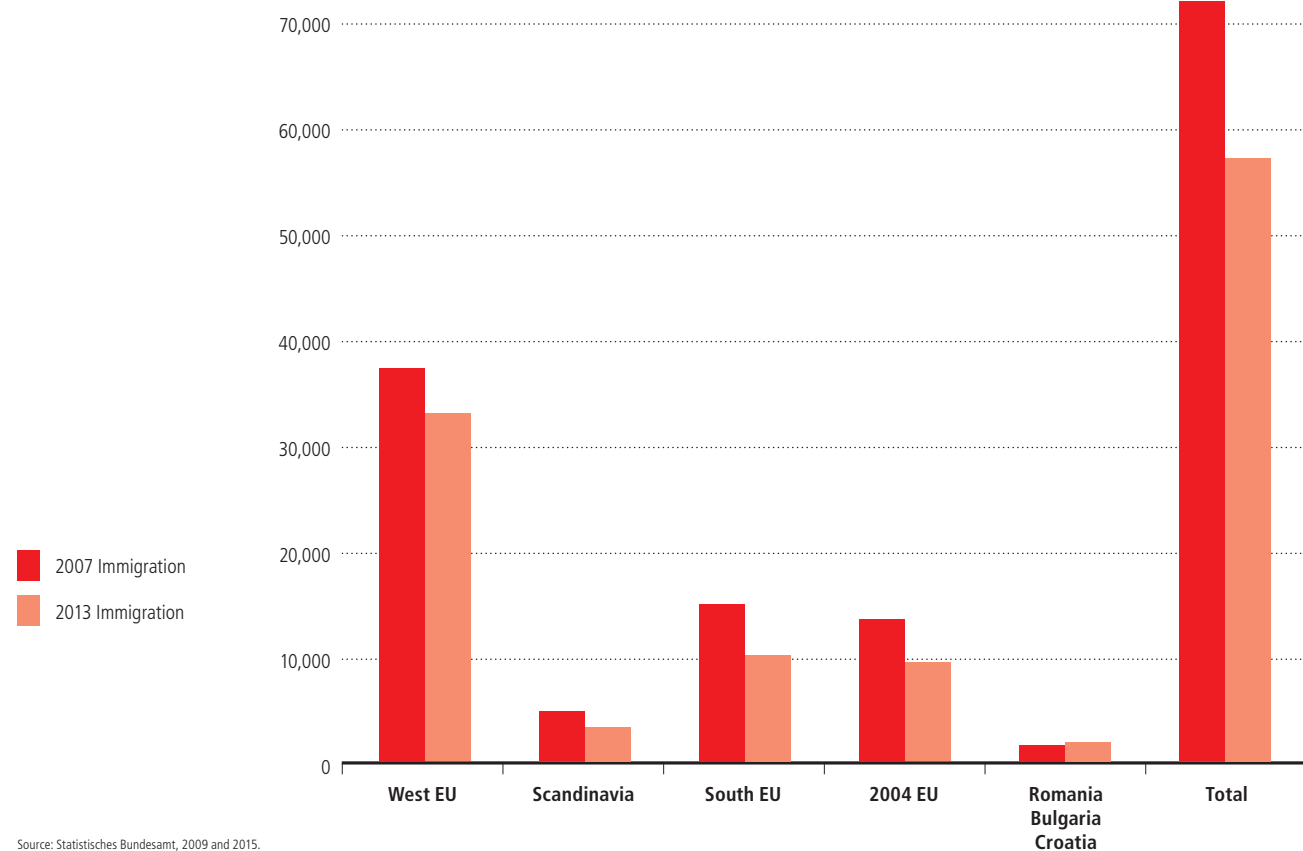


protection of the national labour market and welfare regimes and prevention of wage dumping. Germany and Austria were the last EU countries to grant full freedom of movement to workers from the 2004 EU new member states in 2011. Even though Germany had already been facing large immigration flows from the 2004 EU member states during the application of the restrictions on labour market access, removing these restrictions has led to a significant increase in the number of immigrants from central and eastern EU countries from 2011 onwards. Similarly, immigration flows from Bulgaria, Romania and Croatia to Germany increased between 2007 and 2013 despite the restrictions on access to the German labour market that applied to these newest EU member states. Workers from the 2007 new EU member states (Bulgaria and Romania) were granted freedom of movement in 2014, while access restrictions to the German labour market still apply to Croatian citizens.

The second graph presents the emigration flow of German citizens to the different EU regions of destination during the same period. Again, these statistics provided by the *Statistisches Bundesamt* refer to the number of notices of departure for a third country given by German citizens to the German registry office within a year. The total emigration flow slightly decreased between 2007 and 2013. Emigration flow to southern and Scandinavian EU countries decreased the most (decrease of 32 per cent in 2013 compared with 2007). The number of German citizens who emigrated from Germany to another EU member state is almost ten times smaller than the number of non-German EU citizens who immigrated to Germany in 2013. As already

mentioned, the German Federal Statistical Office does not provide statistics on emigration and immigration flows by level of education. Because these official statistics do not enable the assessment of highly qualified migration flows, a more fine-grained analysis of the salience of a brain drain and brain gain phenomenon in Germany with these official statistics is not feasible. A 2015 quantitative survey among German emigrants and re-migrants (that is, Germans who emigrated and then returned to Germany), however, provides some evidence against the idea of an overall brain drain in Germany (SVR-Forschungsbereich, Bundesinstitut für Bevölkerungsforschung and Universität Duisburg-Essen 2015). While this survey is not representative of the entire German emigrant and re-migrant population, the International Mobile Study highlights two interesting socio-demographic characteristics of the surveyed emigrants and re-migrants: 77.8 per cent of the surveyed German emigrants and 80.3 per cent of the surveyed re-migrants are highly qualified (SVR-Forschungsbereich et al. 2015: 21). In 2013, 57,090 Germans emigrated from Germany to another EU member state and 52,923 Germans who emigrated to an EU member state returned to Germany (Statistisches Bundesamt 2015). The fact that the emigration flow from Germany is not much higher than the re-migration flow to Germany and that the proportion of German emigrants with a tertiary degree is similar to the proportion of German re-migrants with a tertiary degree suggests that Germany is currently not facing an overall brain drain.

Figure 2
EU emigration flow of German citizens, by regions of destination, 2007 and 2013



2.2 STOCK OF EU IMMIGRANTS WITH TERTIARY EDUCATION

2.2.1 GENERAL OVERVIEW

In contrast to the previous section, which presented current mobility from and to Germany, in this section we will focus on the stock of non-German EU citizens in Germany (total population of non-German EU citizens residing in Germany). Because the number of non-German EU immigrants to Germany has boomed in recent years, it is essential to differentiate between the successive EU immigration waves and earlier ones in assessing a brain gain: the socio-demographic profiles of citizens from an EU region who recently immigrated to Germany is very likely to differ sharply from the socio-demographic profiles of citizens from the same regions who immigrated to Germany decades ago.

Indeed, Germany already experienced large immigration waves from some current EU countries before their accession to the EU. At the end of the 1950s and during the 1960s, Germany recruited a large number of workers to help rebuild post-war Germany and to cover its labour shortages in agriculture, as well as in manufacturing and mining. These immigrants – the so-called »Gastarbeiter« (guest workers) – came from southern EU countries (Italy, Greece, Spain, Portugal and former the Yugoslavia), as well as from other Mediterranean countries (mainly Turkey). The EU citizens who

immigrated to Germany during the previous largest labour immigration wave of the 1950s and 1960s were mainly unskilled manual workers. A recent study of the socio-economic profiles of EU citizens in Germany shows that 1.6 per cent of Portuguese citizens, 2.1 per cent of Italians, 4.7 per cent of Greeks, and 7.6 per cent of Spaniards who were employed between 1995 and 2010 in Germany were highly qualified (Bernhard and Bernhard 2014). This highlights how very small the proportion of highly qualified immigrants from southern EU countries, who immigrated to Germany before the current economic crisis, was. By contrast, the current wave of southern EU citizens immigrating to Germany is probably characterised by a high rate of highly qualified citizens: the unemployment rates of highly qualified citizens has increased by at least 50 per cent in most southern EU countries since the beginning of the economic crisis (Eurostat 2015b), which represents a decisive push migration factor. Moreover, a high share of the Central and Eastern EU citizens who immigrated to Germany since EU enlargement are highly qualified (Steinhardt 2009). In order to assess the extent to which Germany is currently benefitting from an intra-EU brain gain, it is therefore essential to differentiate the EU citizens who immigrated in the past few years from those who have been residing in Germany for longer.

The analysis provided in this section thus focuses on the socio-demographic profile of EU citizens who immigrated during the current EU migration wave. This focus, in turn,

Table 1
Proportion of high-qualified EU citizens who immigrated to Germany in the past 4 years (%)

	German citizens	Citizens from EU15 who immigrated in the past 4 years	Citizens from new member states who immigrated in the past 4 years
Highly qualified	23.32	23.05	22.22
Non-highly qualified	76.68	76.95	77.78
Total	100 (N: 389,398)	100 (N: 2,470)	100 (N:1,466)

Source: EU-LFS 2012, authors' calculations.

also implies the scarcity of available data: even if Germany is currently facing a very large EU immigration wave, EU citizens who immigrated to Germany in the past five years remain a marginal group in the overall German population. The German socio-economic survey with the largest sample (Mikrozensus) does not contain large enough subsamples of highly qualified EU citizens who immigrated in recent years to enable an analysis of brain gain by country of origin (see Statistisches Bundesamt 2014). Nevertheless, the most recent available data from the EU Labour Force Survey shed light on the percentage of highly qualified EU citizens residing in Germany for the past four years. The data make it possible to differentiate between citizens from the EU15 countries and citizens from countries that joined the EU after 2004. As can be seen in Table 1, the proportion of EU citizens with a tertiary degree who immigrated to Germany during the past four years is similar to the proportion of Germans with a tertiary degree. Moreover, citizens from central and eastern European EU countries (the new member states) are almost as well qualified as citizens from the EU15. These results suggest that the newly arrived immigrants from both the old and new EU member states are similar to the German population with regard to their qualification level.

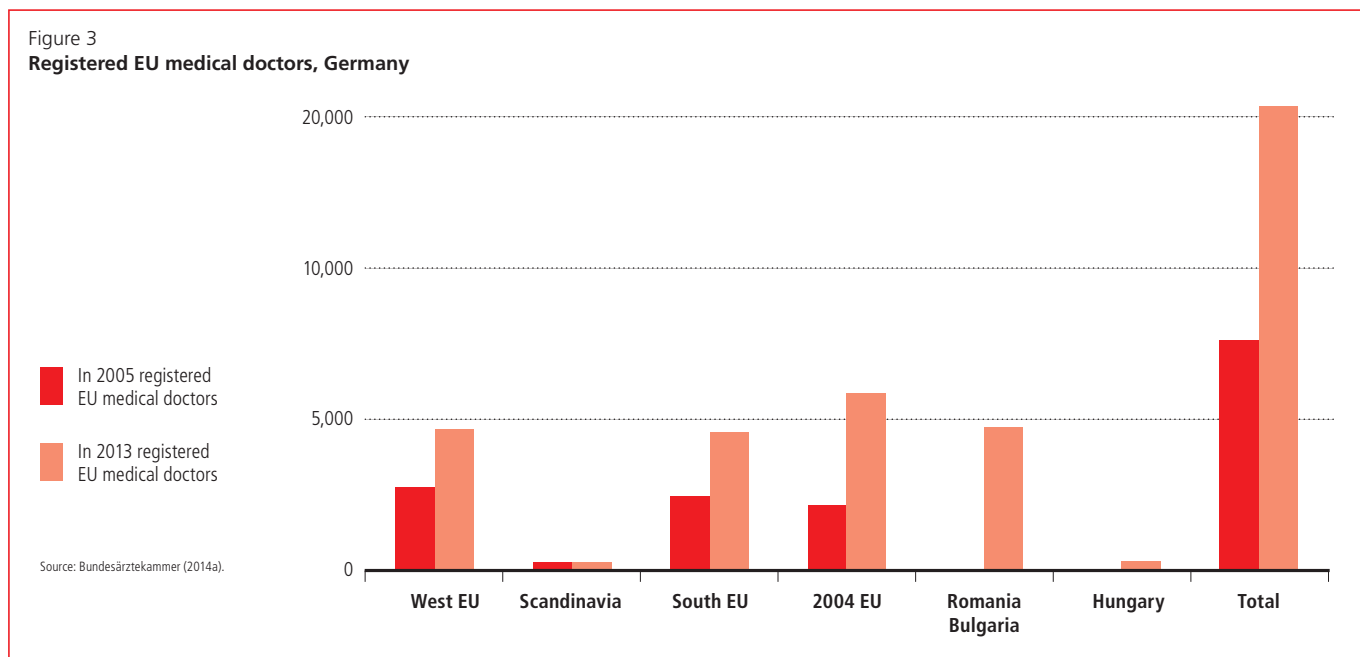
2.2.2 CASE STUDY: MEDICAL DOCTORS AS IDEAL-TYPE PROFESSION FOR BRAIN DRAIN

As described in the previous section, general socio-economic surveys such as the EU Labour Force Survey can provide only a very imprecise assessment of the presence of an intra-EU brain gain in Germany because of sample size issues for this specific population. In addition to this broad overview of the qualification level of EU immigrants in Germany, case studies on highly skilled professions that suffer from labour shortages can provide complementary insights into a potential intra-EU brain gain and drain in Germany. The highly skilled professions characterised by the most acute labour shortages in Europe are engineers, information and communication technology specialists and medical doctors (van der Ende, Walsh and Ziminiene 2014). Among these professions, the Federal Chamber of Medical Doctors possesses accurate and exhaustive statistics on the registered medical doctors practicing in Germany, along with their respective citizenship.

Based on the statistics provided by the Federal Chamber of Medical Doctors (*Bundesärztekammer*), Figure 3 presents the number of medical doctors with non-German EU citi-

zenship who were registered with the Chamber in 2005 and 2013. As can be seen, about 20,000 medical doctors with non-German EU citizenship were registered in 2013 (*Bundesärztekammer 2014a*). While the number of medical doctors with non-German EU citizenship in 2013 makes up only 4.3 per cent of all registered medical doctors in Germany, it nevertheless increased by 170 per cent in 2013 compared with 2005. Moreover, the number of medical doctors from each EU region increased substantially during this period, with the exception of medical doctors from Scandinavian EU countries. The most important increase can be observed among medical doctors from the member states that joined the EU in 2004 and 2007, although there has been also been an increase in the number of registered medical doctors with a non-German western and southern EU citizenship. These results show that Germany is managing to attract a growing number of non-German EU medical doctors. Moreover, central and eastern EU countries are overrepresented in the countries of origin of non-German EU medical doctors. This gives some insights into a currently increasing brain gain regarding the medical profession that might lead to a growing shortage of medical doctors – or brain drain – in the central and eastern EU countries. This brain gain for the medical profession is not the only side of the story. Indeed, Germany is also facing an emigration of German medical doctors: in 2013 about 1,900 German medical doctors left Germany. This emigration flow has remained stable since 2007, while the immigration flows of EU and non-EU medical doctors have increased by about 260 per cent in the same period (with 3,345 non-German medical doctors immigrating to Germany in 2013). Thus, only from 2011 onwards has the immigration flow of non-German medical doctors outperformed the emigration flow of German medical doctors. The main destination countries for German medical doctors who left Germany in 2013 were Switzerland, followed by Austria and the United States (*Bundesärztekammer 2014b*). Hence, among the three main emigration countries for German medical doctors, only one is an EU member state. Moreover, Switzerland and the United States are likely to be among the most popular migration destinations of German medical doctors because of their more attractive working and wage conditions, which represent strong pull migration factors.

This case study highlights the complexity of assessing the extent to which Germany is facing a brain gain or a brain drain for highly skilled professions characterised by labour shortages. In the case of the medical profession, the statistics show a steady increase in medical doctors from the new EU



member states practicing in Germany. The wage and working conditions differential between Germany and central and eastern European EU countries, together with the proximity of Germany to the home countries, are likely to constitute the main explanatory factors for this brain gain. These factors are, however, likely to be also the main determinants explaining the brain drain of German medical doctors: Switzerland is by far the most important destination country for German medical doctors who emigrate. This also illustrates the chain reaction that can result from brain drain: German medical doctors who immigrate to countries offering better wage and working conditions (such as Switzerland) thereby increase the labour shortage in Germany. Germany, in turn, fills in this labour shortage by attracting medical doctors from neighbouring countries because it has better wage and working conditions than those in the countries of origin. Lastly, it also illustrates the complexity of assessing the presence of a brain drain or brain gain within a country: if one only considers the share of non-German EU medical doctors, one will conclude that Germany is facing a brain gain for this profession. By contrast, if one includes emigration of Germans and immigration of non-German EU immigrants, the status of Germany as a brain gain country for the medical profession is becoming uncertain.

2.3 POSITIONS OF THE MAIN POLITICAL, ECONOMIC AND CIVIL SOCIETY ACTORS WITH REGARD TO INTRA-EU BRAIN GAIN AND DRAIN

The last section of this report presents the positions of the main German political, economic and civil society actors on intra-EU brain gain and drain. More precisely, the analysis focuses on the main political parties, the largest trade unions, the main economic and industry associations, as well as the current federal government. For each actor, this section

summarises their most recent positions on highly qualified EU immigrants in Germany, as well as on the potential consequences of an emigration wave of high-qualified workers for the sending countries. Whenever actors did not have a specific position towards high-qualified EU immigrants, we broadened the scope of the analysis and also considered their positions toward non-EU high-qualified immigration.

2.3.1 POLITICAL PARTIES

This overview of the political parties' positions is based on party manifestos for the last elections in Germany, for the European Parliament in 2014. Starting with the left-oriented parties, the 2014 EU manifestos of The Greens (Bündnis 90/Die Grünen 2014) and The Left (Die Linke 2014) do not contain any specific positions with regard to Germany's need for (EU and non-EU) high-qualified immigrants. Rather, both parties call for the facilitation of immigration in general and strengthening of the rights of immigrants and EU citizens taking advantage of free movement of labour. Consequently, they do not specifically mention the effects of such large waves of high-qualified emigration for the sending countries. Rather, they require a strengthening of the social dimension of the EU and a decrease of poverty and social inequality in the economically weakened countries without specifying the issue of a brain drain for these sending countries. Lastly, facilitating the recognition of qualifications is considered a central requirement for worker mobility within the EU by The Greens (Bündnis 90/Die Grünen 2014: 63).

By contrast, the SPD favours high-qualified immigration to Germany in order to cope with the skilled labour shortage. The SPD also states that immigration is important for all EU member states, including the EU countries confronted with large emigration flows of high-qualified workers to Germany. Immigration is thus considered a solution to the brain drain faced by EU sending countries. The SPD also requires better

working conditions and the introduction of a Europe-wide minimum wage to fight the exploitation of immigrants. They also call for the stronger involvement of Germany and the EU in the (non-EU) sending countries (for example, in the fight against poverty) to combat the causes of emigration through development aid programmes (SPD 2014: 13).

Turning to the centre and centre-right parties, the CDU, like the SPD, demands high-qualified immigration in order to cope with skilled labour shortages. However, in their manifesto they emphasise Germany's need for high-qualified immigration to a much greater extent than the SPD. According to the CDU, qualified and highly motivated individuals from other countries should come to Germany for the sake of the German welfare system and economy (CDU 2014: 25). The CDU states that measures such as the recognition of degrees, the Blue Card for qualified immigrants and the strengthening of the »welcoming culture« are appropriate and important for coping with the growing skilled labour shortage in Germany. Furthermore, the CDU is the only political party to specify sectors in which skilled migration is particularly important: according to them, Germany and Europe have a particular responsibility to compete for skilled labour in medicine and care because of the on-going demographic changes (CDU 2014: 55). While the CDU strongly emphasises Germany's need for skilled immigrants, they do not specifically discuss the consequences of large skilled labour emigration waves for the sending countries. Rather, they state that the common EU labour market is a chance for those who need to leave their home countries to seek a job. Furthermore, they want to improve the mediation between labour and demand within the EU (CDU 2014: 24). Lastly, they require an improvement in the living conditions in the sending countries in order to avoid emigration due to poverty.

Turning now to the Bavarian sister of the CDU: the manifesto of the CSU for the last EU parliamentary elections does not mention a skilled labour shortage in Germany or the need of skilled immigration to Germany. Furthermore, they do not discuss any consequences of brain drain for the sending countries (CSU 2014).

In contrast to the CSU, the Alternative for Germany (AfD) party recognises the need for qualified immigration in order to cope with the care needs of the ageing population and the lack of skilled labour. Furthermore, the AfD proposes in its manifesto concrete measures for regulating non-EU labour: the regulation of non-EU labour migration should be fixed and based on the current need in accordance with a points system similar to the Canadian one (AfD 2014: 16). The AfD does not discuss any consequences for the sending countries resulting from brain drain: they state that labour market policies and social policies should remain the competence of nation-states.

Lastly, the liberal FDP considers qualified immigration essential for Germany to remain competitive in the face of demographic change (FDP 2014: 26–27): qualified immigration should help the German economy and welfare system to remain stable. The FDP mentions the Blue Card's unattractiveness because of its temporary nature and the high bureaucracy burden entailed by applying for it. They call for the Europe-wide introduction of a transparent points system similar to the Canadian one: according to the FDP, the

EU should remain competitive and become more attractive to non-EU qualified workers (FDP 2014: 27). More specifically, regarding intra-EU mobility, they stipulate simplification of the recognition of foreign qualifications in order to facilitate EU workers' mobility (FDP 2014: 18). With regard to the sending countries and in a similar vein to the CDU, the FDP states that labour force mobility should be facilitated in order to redress unemployment (FDP 2014: 18).

2.3.2 TRADE UNIONS AND BUSINESS AND INDUSTRY ASSOCIATIONS

Our analysis of trade union positions towards (EU) qualified immigration is based on the two largest German trade unions, the Deutscher Gewerkschaftsbund (DGB) (the largest umbrella federation of trade unions) and the Deutscher Beamtenbund (the trade union of the public services). In 2012, the DGB published a position document on the draft of the EU directive on high-qualified immigration. In this document, the DGB demands measures to increase EU and non-EU qualified immigration in order to cope with demographic changes. They ask for a simplification of the requirements and the application process for the Blue Card and of the conditions for extending residence permits. Furthermore, they call for the introduction of a points system for skilled immigration (Deutscher Gewerkschaftsbund 2012: 4). Lastly, they propose to grant non-EU immigrants holding a longer residence permit the same rights as EU citizens and to facilitate family reunification for non-EU immigrants (Deutscher Gewerkschaftsbund 2012: 4). Besides the support for more EU and non-EU qualified immigration to Germany, the DGB is also concerned with the consequences of large qualified emigration within the EU. In 2014, they organised a conference entitled »Designing fair workers' free movement« in which they invited colleagues from countries facing large qualified emigration, such as Spain, Poland, Romania and Bulgaria (»Arbeitnehmerfreizügigkeit gerecht gestalten«, Deutscher Gewerkschaftsbund 2014). At this conference, the DGB stated that they support the right of free movement. However, they also argue for solutions to ensure that Europeans are not constrained to emigrate. According to the DGB, solving the economic crisis in these countries requires both skilled labour and economic measures to stimulate economic growth.

The trade union for the public services also favours qualified immigration to fill the foreseeable skilled labour shortage in the German public service (Deutscher Beamtenbund 2014).

Finally, the overview of the positions of the main business and industrial associations is based on three major actors: (i) the umbrella organisation for German employers' associations (BDA, Bundesvereinigung der Deutschen Arbeitgeberverbände, 2014b); (ii) the Federation of German Industries (BDI); and (iii) the German Chamber of Industry and Trade (DIHK). First, the BDA calls for qualified labour immigration in order to cope with the skilled labour shortage in Germany. They ask for further implementation of a »welcoming culture« at all levels and for the removal of bureaucratic obstacles in order to facilitate the immigration of qualified workers. They support the EU Blue Card and prioritisation

of the applications of immigrants with qualifications that correspond to professions with labour shortages. With regard to potential consequences for the EU sending countries, the BDA states that emigration can help to reduce unemployment in these sending countries without necessarily leading to a brain drain. Furthermore, they share the opinion that the use of workers' free movement rights leads to a »geographical win-win situation« for all EU citizens: free movement rights provide a chance particularly for citizens of countries facing poor labour market conditions to improve their career prospects in another EU member state. By working in EU regions facing skilled labour shortages, these citizens in turn make an economic and social contribution (Bundesvereinigung der Deutschen Arbeitgeberverbände 2014a: 9). Finally, the BDI, the DIHK and also the ZdH (Zentralverband des deutschen Handwerks – the German Confederation of Skilled Crafts 2015) are in favour of more labour immigration to Germany in order to cope with the predicted demographic change and to ensure prosperity and economic growth in the future. While the DIHK calls for an easing of the Blue Card requirements in order to cope with the qualified labour shortage (Maas 2014), the BDI supports the introduction of an immigration points system similar to the Canadian one (Bundesverband der Deutschen Industrie e.V. 2014). Lastly, they both state that Germany is an immigration country and argue for an improvement of the welcoming culture. For instance, the DIHK and ZdH recently declared that »openness and tolerance are indispensable conditions for a peaceful coexistence and make Germany an attractive country for living and working« (Deutscher Industrie- und Handelskammertag and Zentralverband des deutschen Handwerks 2015: 1; authors' translation).

2.3.3 CURRENT FEDERAL GOVERNMENT

The current federal government is a coalition of the two most successful political parties in the 2013 federal elections: the CDU/CSU and the SPD. We will summarise the policies on high-qualified immigrants that the government planned to implement during its period in office. This overview is based on the coalition agreement signed in November 2013 (Bundesregierung 2013). First, in order to make Germany more attractive to skilled immigrants, the government plans to assess and improve the current policies on high-qualified immigration and labour market integration, for example, with regard to the Blue Card and the recognition of foreign credentials and degrees (Bundesregierung 2013: 28). Second, the government intends to strengthen the welcoming culture in order to increase social cohesion within Germany, as well as the attractiveness of Germany as immigration country (Bundesregierung 2013: 75). For instance, the welcoming culture in German administration should be increased by introducing training for the administrative staff in charge of the immigrant population. Furthermore, the coalition wants to promote diversity in the society and the economy in general. The coalition agreement does not mention any policies targeting the consequences of highly skilled emigration for the sending countries.

2.4 CONCLUSION

The analyses presented in this chapter provide evidence of Germany's newly acquired status as the country benefiting the most from intra-EU immigration, which, in turn, it is reasonable to characterise as intra-EU brain gain. Indeed, the intra-EU immigration flow to Germany doubled between 2007 and 2013, which resulted in a net intra-EU (non-German) migration flow of +300,000 for 2013. This increase in immigration flow is due mainly to a sharp increase in the number of citizens from southern, central and eastern EU countries who immigrated to Germany: EU enlargement and the current economic crisis that mainly hit southern EU countries are the main factors behind this large increase in intra-EU immigration. By contrast, the number of Germans who emigrated from Germany to another EU member state is almost as large as the number of emigrated Germans who returned to Germany in 2013. Thus, Germany is facing a large intra-EU immigration flow but almost no significant net intra-EU emigration flow. With regard to the qualifications of the EU immigrants residing in Germany, the available statistics show that among all EU immigrants to Germany in the past five years, the proportion of highly qualified workers has been as high as the proportion of highly qualified workers among native Germans. As discussed in this chapter, however, it is difficult to present accurate statistics on the qualification levels of the recently immigrated EU population. This current intra-EU immigration wave – originating mainly from southern, central and eastern EU countries – nevertheless seems to be characterised of an overall high rate of high-qualified citizens: the unemployment rates of high-qualified citizens has risen by at least 50 per cent in most southern EU countries since the beginning of the economic crisis (Eurostat 2015b) and a high proportion of the central and eastern EU citizens who have immigrated to Germany since EU enlargement are highly qualified (Steinhardt 2009).

However, the case study on the medical profession presented in this report sheds light on the complexity of a comprehensive assessment of brain drain and gain. Indeed, such general conclusions based on the qualification level of the overall stock of recently immigrated EU citizens do not necessarily apply to every highly skilled profession facing a labour shortage. In this chapter, we have assessed the extent to which Germany benefits from an intra-EU brain gain for one of the three highly skilled professions characterised by the most acute labour shortages in Europe, namely medical doctors. The number of non-German EU medical doctors practicing in Germany has more than doubled since 2005, which points to an intra-EU brain gain for this profession. However, the status of Germany as brain gain country for this profession is becoming increasingly uncertain once we also consider German medical doctors leaving Germany: the number of non-German medical doctors registering with the German Chamber of Medical Doctors has outperformed the number of German medical doctors leaving Germany only since 2011. This case study's finding also has more general implications: statistics on high-qualified immigration flows should be analysed together with the correlated statistics on high-qualified emigration flows in order to assess the importance of brain gain or brain drain in a given country.

Moreover, this case study highlights the importance of taking into account not only EU, but also non-EU immigration and emigration in order to accurately assess the issue of a brain drain and gain for a single country. Besides, this differentiation in the regions of origin and destination, the evolution over time in high-qualified immigration and emigration flows also need to be considered, because trends in these flows have shown strong variations in Germany over the past few years. Lastly, this case study also highlights the importance of investigating the issue of brain drain and gain not only by looking at aggregate statistics of the qualified EU population, but also by assessing the presence of brain drain and gain in more detail, sector by sector, as well as highly skilled profession by highly skilled profession. Such a detailed analysis by sector and profession goes beyond the scope of this chapter. Moreover, they require very precise and reliable statistics which are either unavailable or difficult to gather.

The last part of this chapter has summarised the current positions of key actors in German society on intra-EU brain drain and gain. All in all, a wide range of political parties, as well as the main trade unions, and business and industry associations acknowledge the need for qualified immigration for Germany in order to cope with the predicted demographic changes. Indeed, the only political parties that did not mention this issue in their manifestos for the 2014 EU parliament elections are the CSU, The Left and The Greens. In contrast to the CSU, which does not argue for more immigration at all, the most left-wing oriented parties – The Left and The Greens – call for a general facilitation of immigration and an overall improvement of immigrants' rights. The other key actors analysed in this chapter all favour more qualified immigration to Germany. Moreover, they all consider the EU Blue Card in positive terms, even if some improvements are requested by some actors (for example, less bureaucracy). Furthermore, most of the actors whose positions have been analysed in this chapter support the strengthening of a welcoming culture in Germany. While the need for more qualified (EU and non-EU) immigration to Germany is generally acknowledged, none of the actors we looked at, with the exception of the DGB (the largest trade union umbrella organisation) raised the issue of the consequences of (EU) high-qualified emigration (to Germany) for the sending countries. Instead, some actors mention the importance of strengthening the fight against poverty in order to prevent emigration in the first place. Lastly, some actors specifically linked the poor economic situation of some EU countries with an increase in emigration flows. However, instead of raising the issue of a potential brain drain for these sending countries, they consider the right of free movement as a chance for individuals suffering from unemployment in their origin country: accordingly, this right enables them to find a job in another EU region where their labour is in demand. Thus, with the exception of the DGB, most key actors in German society support the increase of qualified immigration to Germany but do not acknowledge the potential emerging economic imbalances for the (EU and non-EU) sending countries facing brain drain from which Germany might become a major beneficiary. This issue of new economic imbalances for the major sending countries should, however, be jointly addressed alongside Germany's need for more qualified immi-

gration: workers' free movement rights and the construction of a European labour market can only benefit all EU member states when the issue of qualified immigration and skilled labour demands is no longer assessed exclusively through a national lens but also in an EU perspective.

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3

UNITED KINGDOM: RECENT MIGRATION SUGGESTS A SUBSTANTIAL BRAIN GAIN

Pawel Paluchowski and Francisco Marco-Serrano, Crystal Gazer Ltd

3.1 INTRODUCTION: REVIEW OF THE LITERATURE

A decision to migrate is not always easy. We shall view the motives and reasons that drive such a decision-making process as neither good nor bad on their own merits, but rather as a series of incentives generated by the environment or, in certain cases, »nudged« by environmental conditions (for example, government policies).

For instance, as Eurofound (2014) suggests with regard to youth employment, a high proportion of those who change jobs can be experiencing upward job mobility and making decisions voluntarily, with no negative connotations. In fact, this type of worker is likely to engage in »job-shopping«, sampling different jobs to find the right fit.

Another factor is shifts in labour market needs. The skill set of a given region and or cohort of workers in a certain labour market form the supply side and it is not imbalances on the demographic side that usually provoke a mismatch – for example, a baby-boom or an increase in life expectancy – but the changing nature of demand for particular skill sets. This can lead to a disconnection between domestic labour flows and economic needs, which may require the sourcing of an immigrant labour force. Not surprisingly, a Eurobarometer report from 2011, *Awareness of Home Affairs* (Eurobarometer 76.4), revealed that 42 per cent of Europeans thought »the EU should encourage labour migration from non-EU countries to help tackle demographic challenges and labour shortages« (although only 33 per cent in the United Kingdom agreed). Therefore, the results from the December 2014 wave (Standard Eurobarometer 80) are alarming, because a staggering 18 per cent of the European population consider immigration an important national issue, indeed the third most important after unemployment and the economic situation. In the United Kingdom, it has become a paramount public concern, with a 38 per cent of the population mentioning it as an important national issue.

During the first decade of this century, 70 per cent of the growth in the European labour force derived from immigration, while the share of the tertiary educated increased by 50 per cent in the same period (OECD/European Union

2014). EU27 immigrants are more likely to have a tertiary diploma than those from third countries. Internal migration in Europe has been characterised by an increasing share of highly qualified migrants.

Because migration policies have become more selective, so has the proportion of highly educated immigrants likely to have to underuse their skills and competences, obtaining lower returns in the process. This contradicts the basic model in terms of which migration flows are explained, within the framework of which one would expect migrants to move to regions with higher expected returns. However, over-qualification is a fact. Furthermore, it is not only the individuals concerned who are obtaining less economic returns from their education and knowledge, but the host society overall.

To the already mentioned problems of (i) under-usage of the full capacities of the migrant labour force and (ii) the tensions in the domestic population regarding increased migration, we have to add (iii) the problems that arise in the countries of origin of the diaspora due to the loss of talent and skill sets.

According to Agunias and Newland (2012), the value of diasporas is much more than the 400 billion US dollars or so that they sent home in remittances in 2010 if we took into account their transferrable skills, knowledge and networks, which are such an important part of the knowledge-based economy. Indeed, the very term »diaspora« refers to ties to the country of origin, in contrast to migrants who lose their connections after a generation. It is in this sense that the authors stress the importance of national programmes designed to attract talent back home, so-called »brain circulation«. Furthermore, the authors point out the importance of cooperation with destination countries. They cite the United Kingdom as an example: the offices of the UK Department for International Development (DFID) are encouraged to consult diaspora groups in formulating country assistance plans. DFID recruits workers for the Senior Executive Service from diaspora members who then fill senior positions in the governments of post-conflict countries. Thanks to a programme funded by the DFID in March 2008, the NGO Voluntary Service Overseas (VSO) helped people from diaspora communities to work as volunteers in their countries of origin.

3.1.1 AN EXPLANATORY MODEL OF BRAIN DRAIN/GAIN

A more contemporary approach to migratory processes considers brain drain as the outflow of qualified labour, with reference to both source and destination country (Hartmann and Langthaler 2009). In this case, countries compete for talented workers that leave their countries of origin for a variety of reasons, including personal, professional and environmental. These push/pull forces can be analysed and categorised in an effort to make it easier for the source countries, which suffer from brain drain, to try to attract their diaspora back. On the other hand, the source countries, enjoying a »brain gain«, are likely to make efforts to further enhance incentives to qualified immigration.

Apart from the environmental aspects, which can be assessed by the macroeconomic monitoring of the regions, Dustmann et al. (2011) explain the individual motives for migration based on human capital investment. This is important because it highlights that migratory flows are due to decisions based on »capital accumulation«: individuals move where human capital can be acquired more efficiently. The authors bring up the issue of »brain circulation« and the incentives that have to be put in place for such »return« to happen. In this way, apart from learning and skills accumulation, other reasons for return are identified, such as consumption preferences, retirement and purchasing power differences. Finally, while some arguments are given to extend the possibilities of the model, it is pointed out that possible positive externalities may exist in both brain drain and brain gain flows.

3.1.2 POLICY-MAKING IN THE AGE OF BRAIN DRAIN

Apparently, on the verge of economic recovery, it seems pressing consider the processes that have led people throughout the European Union to move around it and beyond. However, even today high unemployment rates afflict several EU regions. The situation is particularly severe with regard to young people. Indeed, according to Eurofound (2014), young people are traditionally more affected by unemployment during crises and are more exposed to changes in the environment.

Furthermore, the north/south divide – some may argue that there is primarily an east/west divide – still holds, with unemployment rates as high as 26.2 per cent in Greece (Eurostat 2014 – ILO estimate), 25.1 per cent in Spain and 15.4 per cent in Portugal, while the United Kingdom averages 7.2 per cent and Germany 5.2 per cent. In terms of youth unemployment, Spain is worst afflicted at 53.2 per cent, followed by Greece at 52.4 per cent, while the United Kingdom remains at 16.9 per cent and Germany around 7.7 per cent.

The EU countries are aware that a »brain drain« exists and have put in place machinery to ameliorate its negative effects. It is important to note the migration flows conceptualised as a »brain drain« apply not only to Europe but also to the United States, Canada and Australia, among other countries. In this framework, it is not surprising that a plethora of policies aimed at reducing the brain drain – or to increase the brain gain – have emerged in Europe. Giannoccolo (2005) has categorised such policies in seven groups: immigration poli-

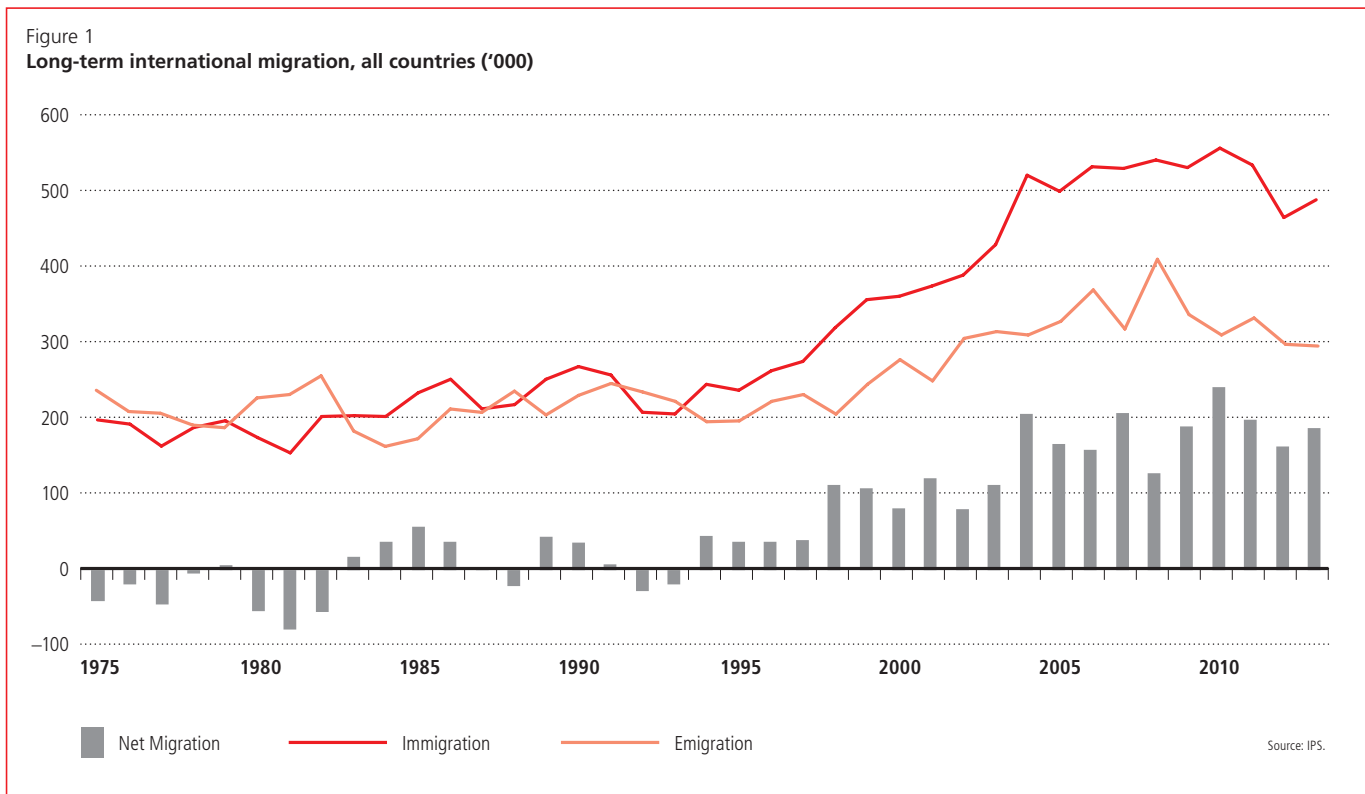
cies, incentives to researchers and relatives, grants and scholarships, tax and wages, investment in research, marketing and recruitment, and studies and analysis of the immigration policies of other countries.

At the same time, it is necessary to establish mechanisms of cooperation, such as the »EU Blue Card« directive, adopted in 2009 to attract talent and highly skilled workers. In the United Kingdom, the number of residence permits issued to non-EU students was above 247,000 (2011), while the country opted out of existing Directives concerning researchers. It is EU policy to increase R&D investment to 3 per cent of GDP (European Commission 2002). This should had been seen as an opportunity to raise the profile of careers in science and technology, becoming an incentive for change in education, training and mobility conditions in Europe to improve the region's attractiveness in comparison with competing areas. However, Hartmann and Langthaler (2009) suggest that measures like this one may provoke further brain drain from developing countries as there are no firm statements and measures to ensure this will not happen due to the Directive. Besides, the European Commission has been aware of the situation and the concepts of »circular migration« and »mobility partnerships« were introduced to be incorporated in public policies that benefit both destination and source countries. Recent events indicate that measures are urgently needed, such as the influx of Zambian doctors and nurses to the UK health service (Velde and Grimm 2005).

At national level, several countries – in particular southern European ones – which became a net emigration focus, or »brain drain« areas, have rushed to establish policies to reverse outflows and incentivise inflows. Milio et al. (2012) look at the case of Italy, conceptualised as a diaspora, but also at its apparent inability to attract talent to the country, afflicted by a series of ineffective and uncoordinated policies. On the other side, the British and Swiss cases are presented as examples of policies with proven success in curbing the brain drain. In the case of the United Kingdom, a fund was launched in 2000 to attract young foreign scientists and the return of British researchers (one reason given for the increase in university fees since 2009 is increased research funding). Outflows did not stop but the United Kingdom has been successfully replacing them with foreign talent (brain gain), a phenomenon known as »brain circulation«.

At European level, in December 2012 the European Commission proposed a Youth Employment Package aimed at reducing high levels of youth unemployment and social exclusion among young people (Eurofound 2014). These measures are supposed to guarantee employment, education, apprenticeships or training to the under 25s within four months of leaving school or becoming unemployed. This initiative is based on the idea of youth transition, especially with regard to the effects of unemployment on mobility – both social and geographical – which is strongly related to the brain drain/brain gain phenomenon.

Even civil society has started to react, for example, the NGO Europatriates, whose stated mission is to provide young Europeans with the feeling that »Europe is doing something for them and that Europe is helping them«. A six-step programme has been articulated (Europatriates, n.d.), which is inspired by the Youth Employment Package and the concept



of »expatriate«. The programme proposes to (i) generate a personal development plan, (ii) fund apprenticeships via the European Investment Bank (EIB), (iii) set up an employment »radar system« (a big data-based tool designed to search for job opportunities), (iv) obtain financing for SMEs that hire young unemployed people after a trial period, (5) create networked infrastructure capable of managing the whole process and (6) provide training for short and temporary deployments.

3.1.3 »MIGRANT, THE UK NEEDS YOU!«

What is unquestionable is that there is a real labour shortage in the United Kingdom. The Migration Advisory Committee (MAC) – an independent, non-statutory, non-time limited and non-departmental public body that advises the government on migration issues – identified that only 3 per cent of the total annual inflow of non-EU work migrants has accounted for shortages, which is a route for obtaining a Tier 2 visa (skilled workers with a job offer in the United Kingdom). In its report (MAC 2015), several roles in health care, overhead power lines and digital technology are identified as suffering from a labour shortage.

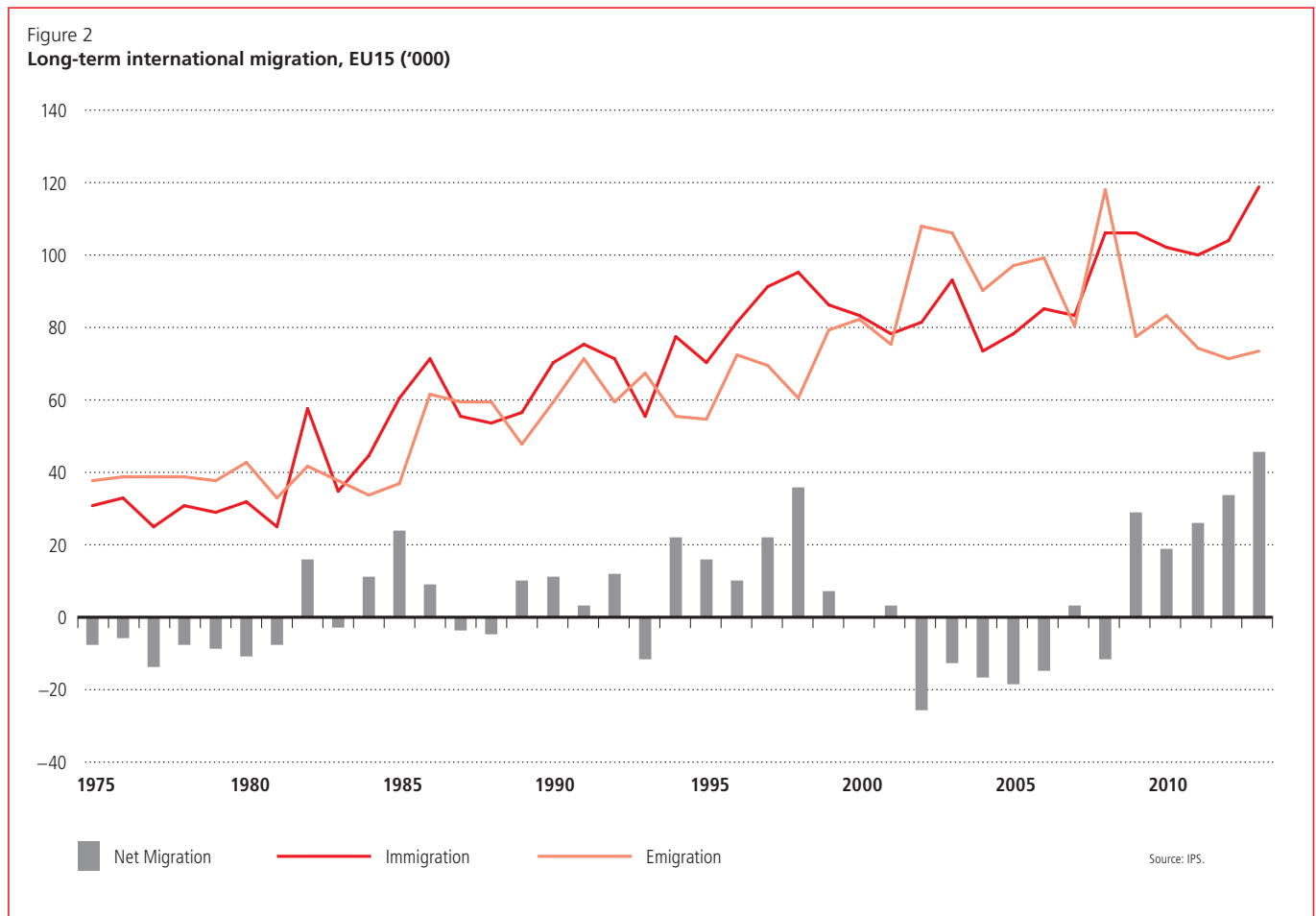
According to MAC (2015), »net migration of EU migrants to the UK was modest until the expansion of the EU in 2004, rising to a peak of 127,000 in 2007. Although it fell sharply with the onset of the financial crisis in 2008, by the end of 2013 it had almost returned to the 2007 level«. As for emigration, it »doubled from around 50,000 in the late 1990s to around 100,000 in 2006/07. It has since declined again to 57,000 in 2013«. But these figures concern overall migrants, not taking the »brain drain/gain factor« into account.

3.2 UK BRAIN GAIN AND BRAIN DRAIN – DESCRIPTIVE ANALYSIS

There is no single authoritative source, publication or even manager of migration data in the United Kingdom. The choice of data set will therefore depend largely on the particular research question. Another issue with UK data is their limited scope and, at times, reliability. In addition, not all data are equally available and defined for the four UK countries of England, Wales, Scotland and Northern Ireland. Sourcing reliable data becomes increasingly difficult with regard to detailed personal characteristics, such as origin, birthplace, education or region.

Brain gain or drain refers to the movement between countries of highly educated or skilled workers. The present study uses job category and highest education level as indicators. The two data sets used are the International Passenger Survey (IPS) and the UK Labour Force Survey (LFS). The IPS is a voluntary survey of passengers travelling to and from the United Kingdom. The survey is interested mainly in long-term migration, which is defined as an intended stay of at least 12 months. This is consistent with the UN definition of migration. The data set is also the sole basis for estimating UK emigration. One of the main limitations of the IPS is its lack of comprehensiveness, as it excludes migration between the Republic of Ireland and Northern Ireland, as well as – largely – refugees and asylum seekers. Furthermore, the sample is relatively small, so that detailed stratification may result in large margins of error.

The IPS is the basis for long-term migration numbers. As can be seen in Figure 1, net migration to the United Kingdom was relatively net neutral until the end of the 1990s. Since the beginning of the century, however, the United Kingdom



has experienced an increased net inflow of migrants. While annual immigration has more than doubled from about 200,000 migrants between 1975 and 1995 to over 500,000 in more recent years, this has been partly offset by higher emigration numbers, which indicates streams of migrants into the countries of origin.

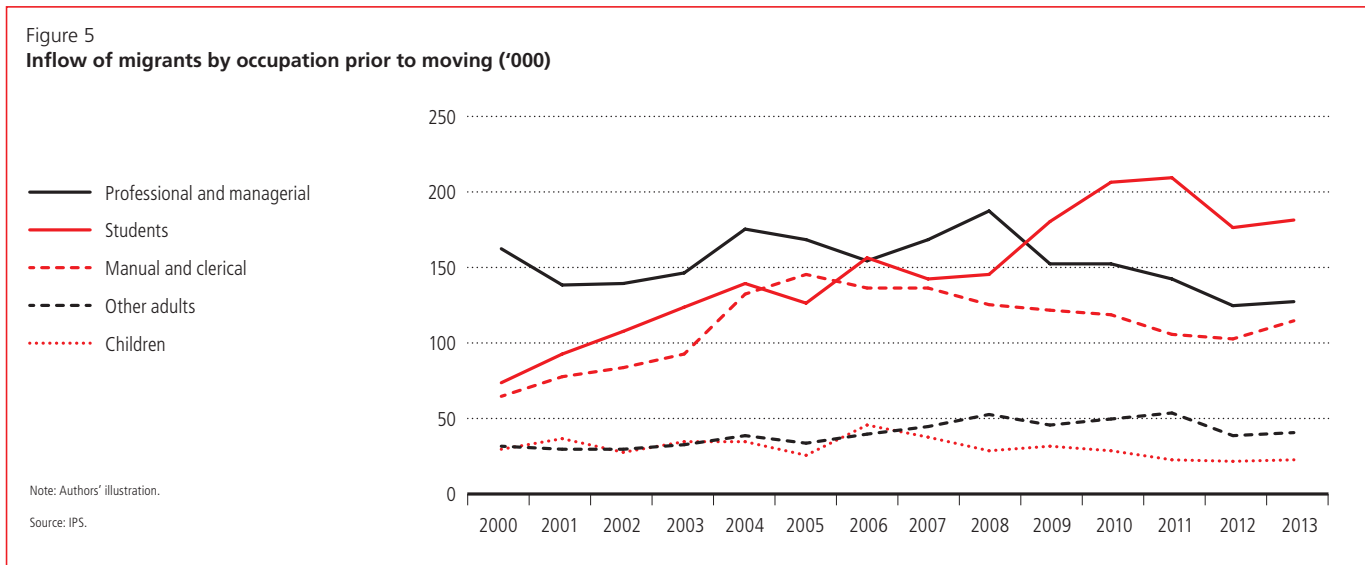
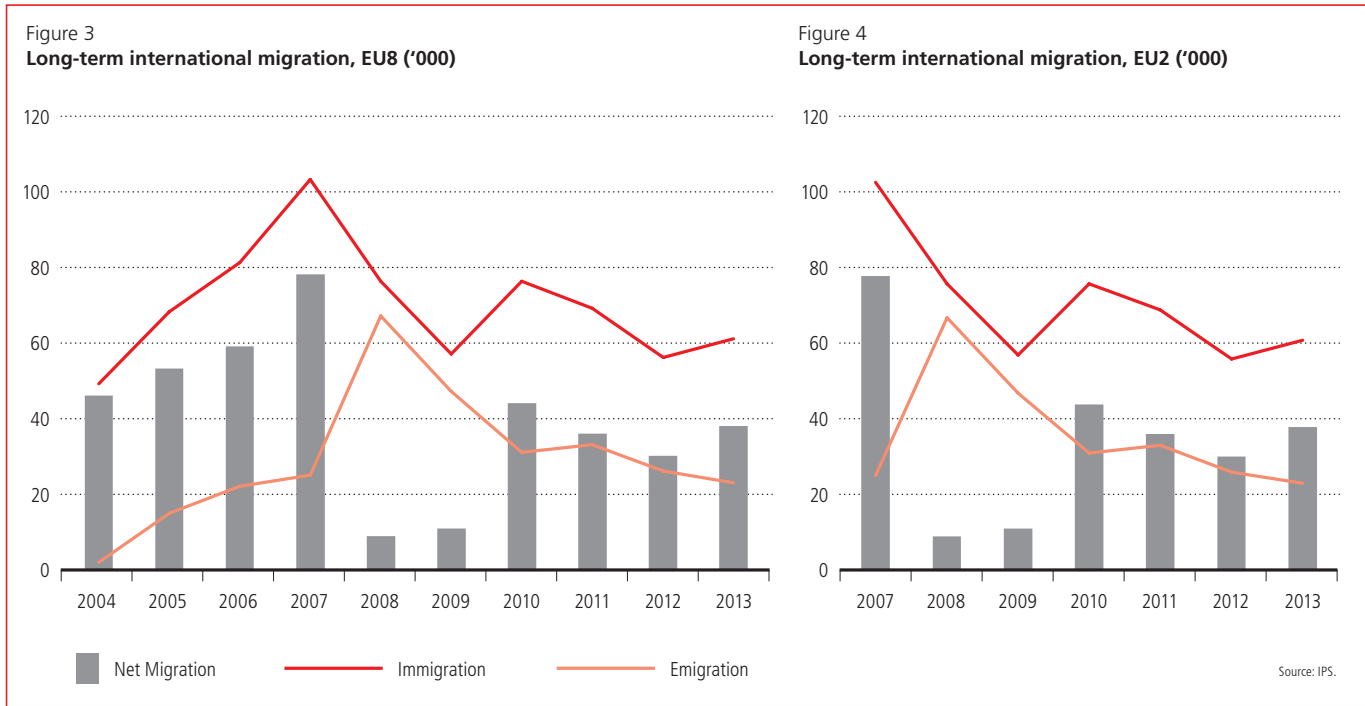
Migration between the United Kingdom and other EU15 countries has increased steadily since 1975, as Figure 2 illustrates. Migration and immigration were closely matched, with overall net migration steady. Since the recession, net migration has been positive, partly reflecting the higher influx of workers from southern European countries deeply affected by the recession and debt crisis.

Given the close proximity to other EU15 countries, with their large population, the migration numbers are fairly low. One of the most profound changes in UK mobility patterns was the accession of the EU8 countries of central and eastern Europe. When the EU8 nations entered the European Union in 2004, the United Kingdom lifted its entry restrictions for the new members. Until 2011, EU8 and EU2 (Romania and Bulgaria) citizens were required to register in the Worker Registration Scheme to enter the United Kingdom. Because other countries, such as Germany – which was previously a popular destination country for central and eastern Europeans – maintained barriers to entry, migration flows were effectively redirected towards the United Kingdom. This redirection has had a lasting effect and the number of EU8 citizens – in particular from Poland – living in the United

Kingdom has increased dramatically. The accession countries all have a communist past and have much lower average wages and higher unemployment rates, creating a strong migration incentive. In addition to the economic factors, EU accession offered the possibility of free movement for the first time. Figure 3 shows migration estimates from the EU8 to the United Kingdom. However, the numbers underestimate the true extent of mobility. In 2004, the influx is shown to be about 50,000, but National Insurance number allocations suggest immigration of about 120,000. This discrepancy is likely to be due to migrants' not stating their long-term mobility intentions.

The year 2007 saw another round of accessions with Romania and Bulgaria (the EU2) becoming part of the EU. For EU2 nationals, transitional restrictions were enforced and remained in place until 2013. The lifting of the restrictions explains the spike of migration from Romania and Bulgaria in 2013. However, the United Kingdom is not expected to be the main destination country for EU2 migrants, who had a strong preference for southern European countries prior to the recession.

The IPS provides data on citizenship and usual occupation prior to migration. The occupation groups are »professional and managerial«, »manual and clerical«, »students«, »other adults« and »children«. Migrants with higher skills and education are likely to be contained in the categories »professional and managerial« and »students«. The relative size of these groups within the immigration flows indicates



the total size of brain gain in the United Kingdom. The data can be further broken down into the citizenship groups British, EU15, EU8, EU2 and non-EU. The analysis is replicated for emigration, which gives an indication of brain drain experienced, as well as the countries benefitting from it. A limitation of the analysis is that it cannot eliminate so-called »brain circulation«. A highly skilled immigrant to the United Kingdom may initially be captured as brain drain, but immigration flows usually generate counter-migration flows of individuals migrating back to their country of origin. Such counter-migration differs fundamentally from emigration, but a repeated cross-sectional design is not able to identify return-migrants as it does not trace individuals over time. Hence, if a highly skilled migrant returns to their country of origin, this would be counted as contributing to a UK brain drain.

Figure 5 illustrates the inflow of all migrants grouped by occupational category. The low number of children moving is not surprising as a large portion of mobility involves people of working age. The figure also clearly demonstrates that the two leading immigration categories are »professional and managerial« and »students«. There is no obvious trend in the number of professionals and managers moving to the United Kingdom, however, while the number of students has clearly increased. The United Kingdom has among the highest shares of foreign students, who contribute strongly to the academic sector as well as to the economy. It is difficult to establish clearly whether students can be counted as brain gain or brain drain. Students constitute a brain drain if, on graduation, they remain in the country and work in a skilled profession. The United Kingdom previously encouraged the labour market integration of foreign UK graduates by providing easy access to work visas following completion of study. On one

Figure 6
Inflow of migrants who were students prior to moving and citizenship ('000)

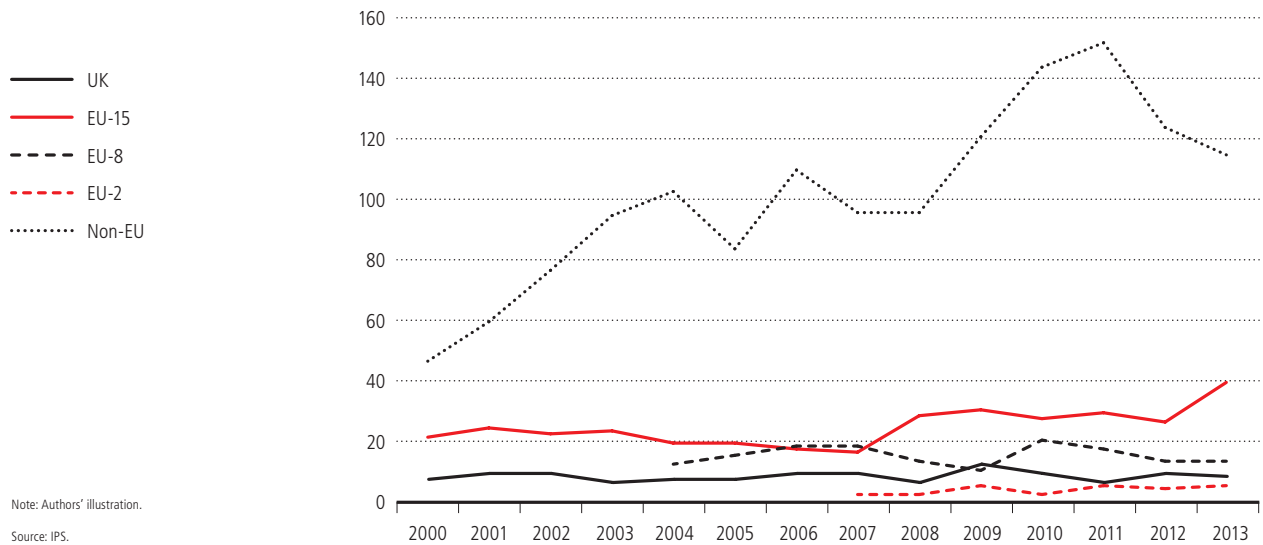
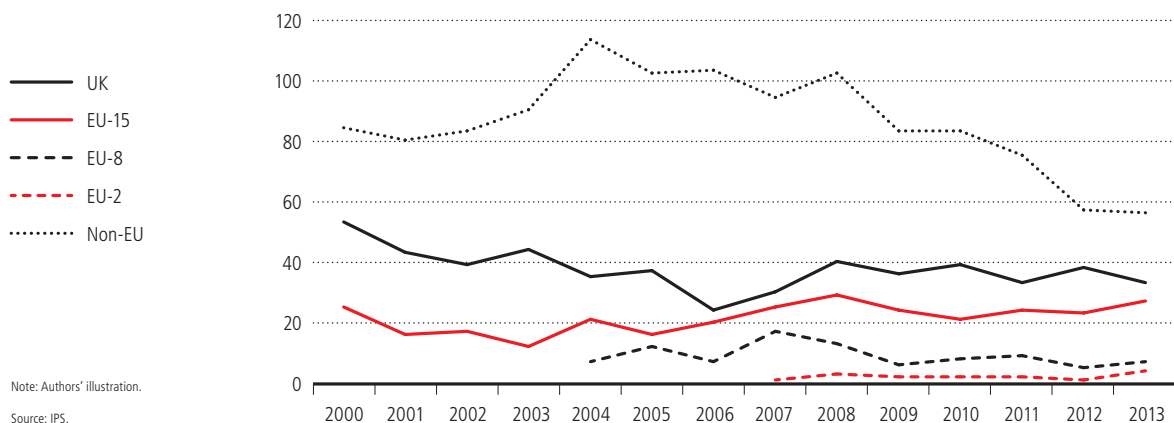


Figure 7
Immigrants who were in managerial or professional positions prior to moving and citizenship ('000)



hand, the United Kingdom offers a 12-month visa extension to students who are finishing their doctoral degrees to find work in the United Kingdom. On the other hand, obtaining a Tier 2 General Visa requires students to find a sponsor and meet a minimum salary requirement, which can be a substantial barrier to staying.

While there was a slight increase in the number of students from EU15 countries, European nationals contribute little to the overall number of foreign students. Quantities from the EU2 and EU8 are very low, which indicates that these national groups migrate mainly for work. The increase in foreign student immigration was driven largely by non-European students, in particular from China.

Figure 7 highlights that non-EU nationals are the largest contributors to brain gain with regard to highly skilled professionals. The second largest group are UK nationals who are returning to the United Kingdom. Some of the UK citizens

may have obtained their UK citizenship outside the country, such as the children of UK expatriates. This group is closely followed by EU15 nationals. Overall, NMS citizens contribute little to the overall brain gain from highly skilled professionals.

Figure 8 depicts the inflows of workers who were in manual jobs prior to immigration. A noticeable trend is the substantial decrease in workers from non-EU countries. The then coalition government (2010–May 2015, now succeeded by a majority Conservative government) of Conservatives and Liberal Democrats pledged to reduce immigration numbers. As they cannot limit EU mobility, the only option was to enforce stricter rules for non-EU citizens. Initially, there were plans to implement a work visa for low-skilled workers entering sectors with a labour shortage. However, this type of visa has never been enforced due to the large inflow of manual workers from the NMS. EU8 countries are the second largest group in the category and – relative to its total migration

Figure 8
Inflow of migrants who were in manual positions prior to moving and citizenship ('000)

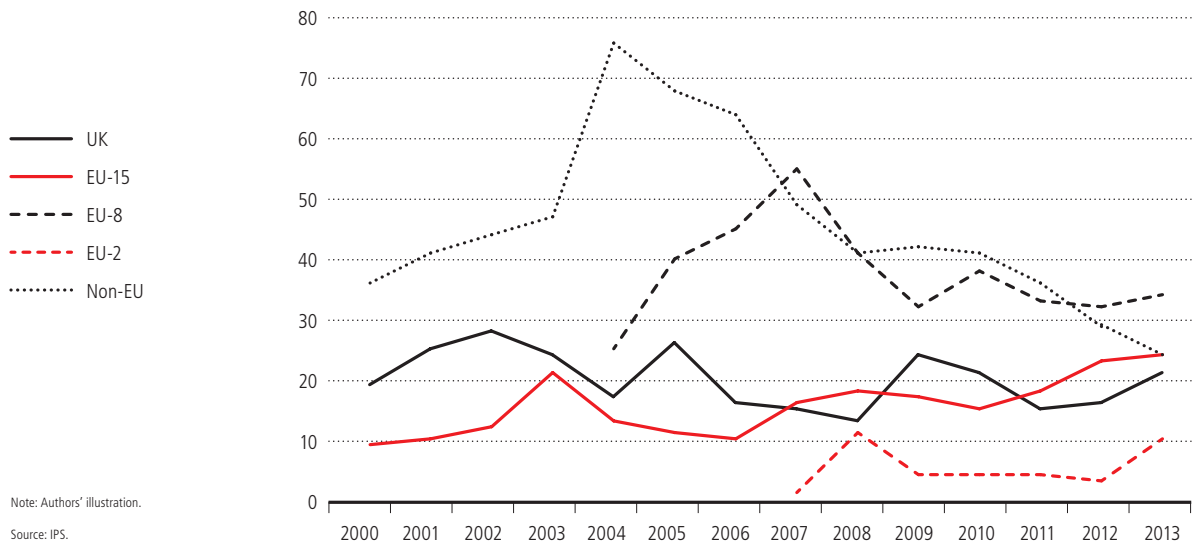
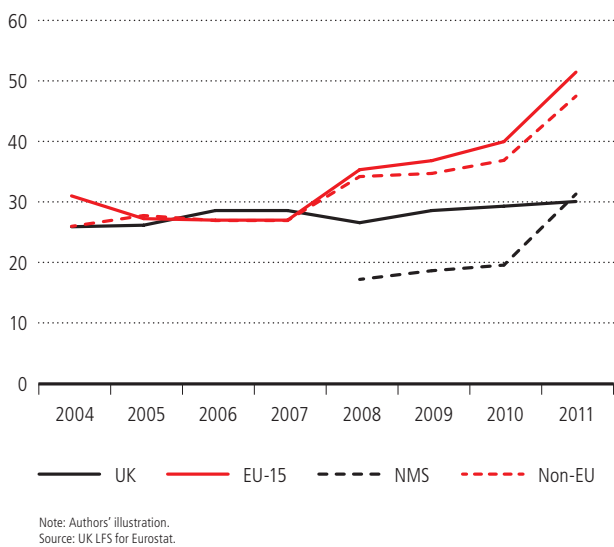


Figure 9
Share of highly educated migrants by place of birth (%)



The LFS data indicate that NMS migrants have lower shares of highly educated persons than individuals born in the United Kingdom. However, the 2011 data show a spike in the share of highly educated NMS citizens, which may owe largely to a readjustment in the sampling weights based on the 2011 census. This suggests that shares of highly educated NMS immigrants may actually be higher in previous years as well. The highly educated shares of EU and non-EU born have increased markedly since 2008 and exceed that of the UK-born.

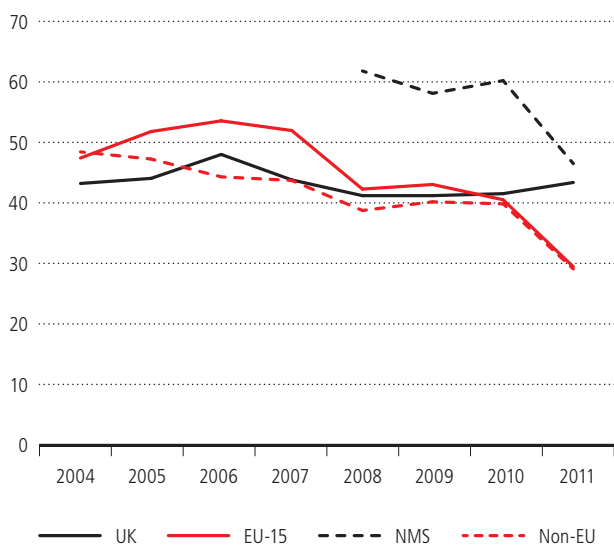
While NMS migrants exhibited lower than native shares of highly educated people, they far exceed the shares of medium high educated (see Figure 10). Furthermore, workers born in the NMS exhibit much lower shares of individuals with a low education (Figure 11). Workers born in the EU exhibit the lowest shares of low education. The native born workforce, on the other hand, exhibits the highest share of low educated. These statistics indicate that foreign workers add substantially to the workforce's education level in the United Kingdom.

The issue with regard to the analysis of shares of the workforce is that only net effects can be observed. Emigration and immigration cannot be untangled. Moreover, citizenship acquisition and the effect of younger cohorts entering and older ones leaving working age are likely to have a distorting effect. For 2007, 2010 and 2011, the LFS also recorded country of residence one year prior to the interview. This provides a better overview of the educational profiles of migration streams. However, the sample size is much smaller and less reliable than for stocks. Aggregating the data for the three waves can provide a more reliable picture. The resulting Figure 12 illustrates the educational profile of recent migrants to the United Kingdom with regard to their region of origin. The chart demonstrates that recent non-EU migrants exhibit the highest educational profile. This may be the result of

numbers – the inflow of manual labourers from the EU2 is substantial. Many migrants from the NMS countries work in agriculture and the hospitality industry.

The LFS data can be a useful to complement the analysis based on IPS data. The UK LFS contains data on medium, high and low educational and skills level of individuals based on the ISCED scale. The figures can be cross-tabulated with coarse nationality groups that distinguish nationals, EU15 nationals (from 2007: EU27 nationals) and other foreigners. All data have been weighted with the provided sampling weights.

Figure 10
Share of migrants with medium high education by place of birth (%)



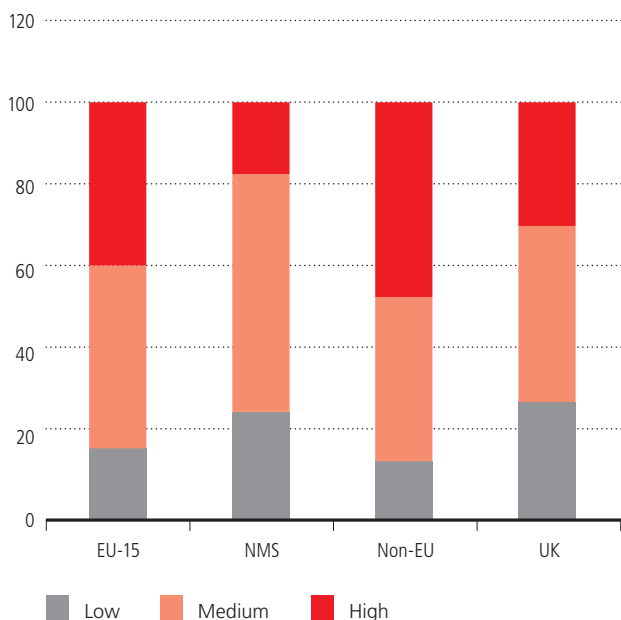
Note: Authors' illustration.
Source: UK LFS for Eurostat.

Figure 11
Share of migrants with low education by place of birth (%)



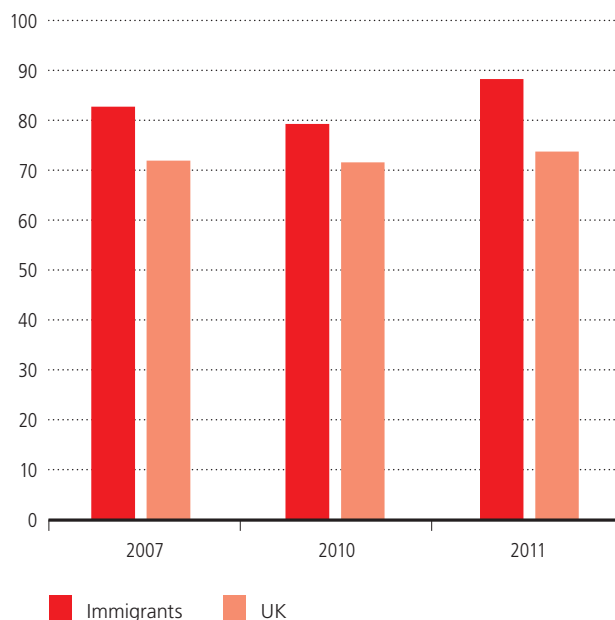
Note: Authors' illustration.
Source: UK LFS for Eurostat.

Figure 12
Educational profiles of natives and migrants by country of previous residence



Note: Authors' illustration.
Source: UK LFS for Eurostat.

Figure 13
Shares of natives and immigrants with high and medium high educational levels (%)



Note: Authors' illustration.
Source: UK LFS for Eurostat.

restrictive entry criteria for non-EU citizens. EU15 migrants have a similarly strong educational profile. By analogy with the analysis of the stock of foreign workers, the recent inflow of NMS migrants displayed a relatively low share of highly educated individuals but also a low share of workers with low educational levels. In comparison, the UK born profile

has by far the highest share of workers with low educational attainment.

Generally, the United Kingdom has recently experienced a brain gain from immigration as the share of high and medium skilled immigrants is higher than that of the native population. The difference was about 10 percentage points in the years 2007, 2010 and 2011, as Figure 13 documents. The

Figure 14
Outflow of migrants according to occupation prior to moving ('000)

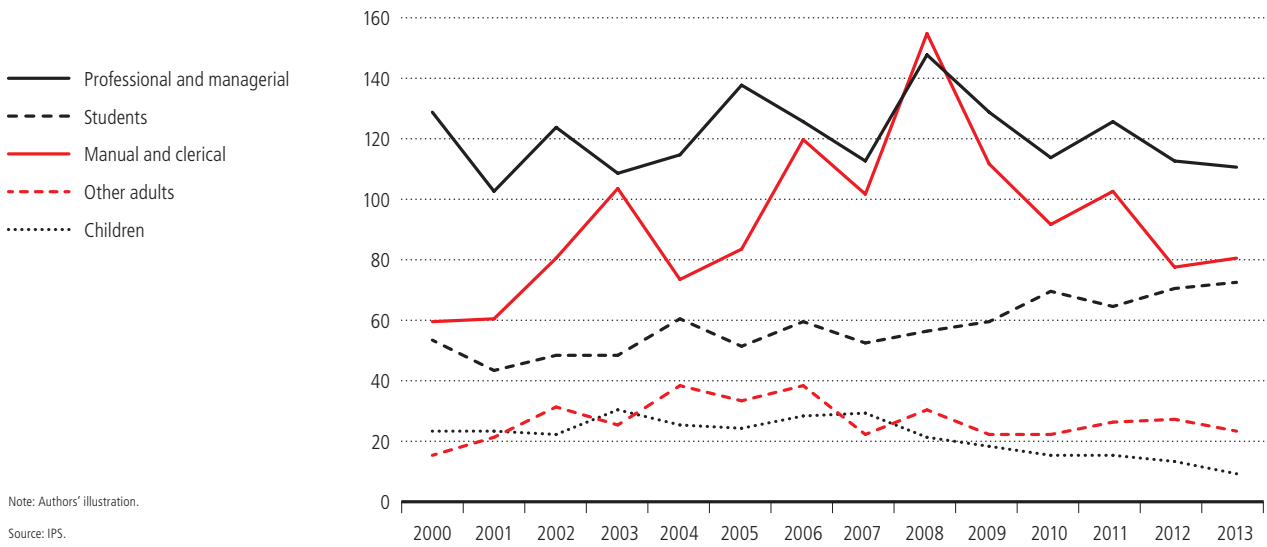
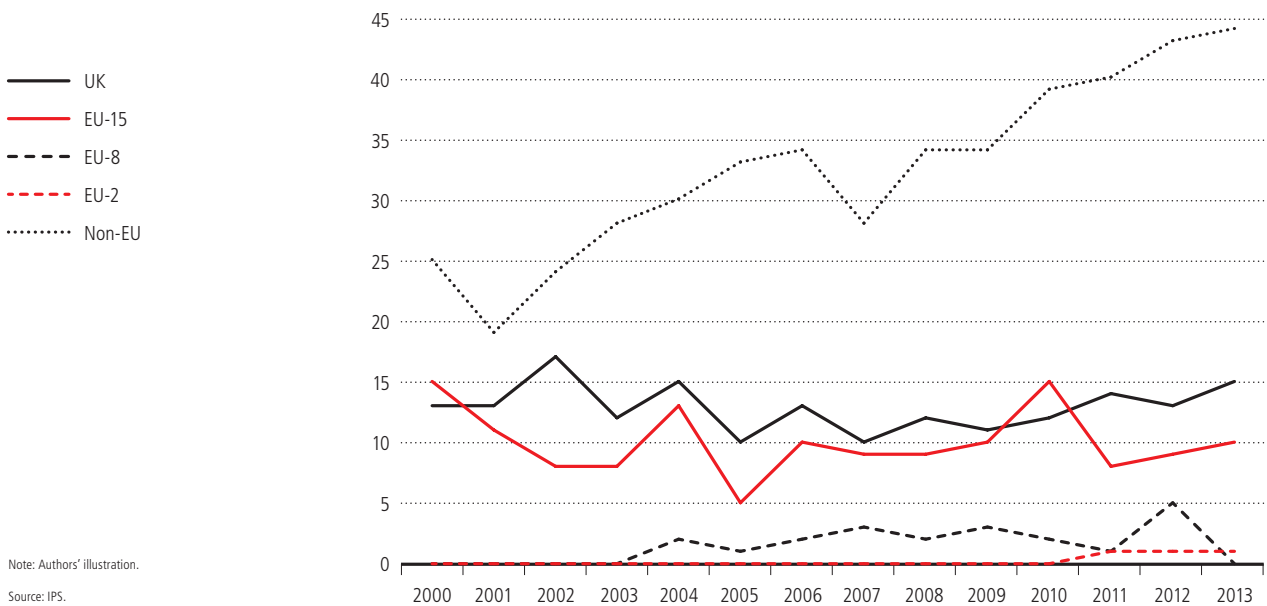


Figure 15
Emigrants who were students prior to moving and citizenship ('000)



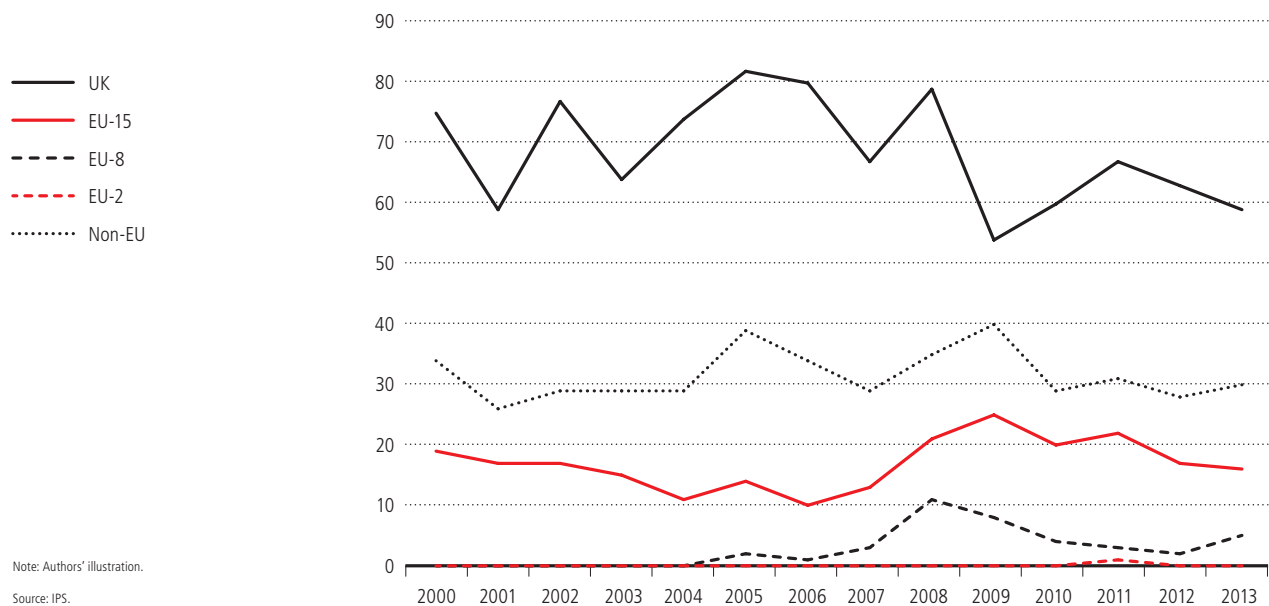
results highlight the fact that the United Kingdom has been successful in attracting highly educated and skilled workers. It also documents that, although it is unable to select migrants from the EU, the migration streams have exhibited a stronger skills and educational profile. With regard to immigration from the NMS, the share of highly skilled immigrants has been lower than that of the United Kingdom but also low skilled workers were much less prevalent.

Unfortunately, there are no data sources that can reliably estimate the brain drain from the United Kingdom as indicated by education level. LFS data can indicate a change in the educational profile of the UK-born over time, but that would not necessarily reflect emigration; it could be the result

of cohort movement. IPS data can, however, indicate the outflow of UK citizens according to their usual occupation. Emigration of managers and professionals as well as that of manual workers are the largest categories. The outflow of professionals and managers may not be primarily brain drain but return migration. When comparing outflow with the inflow (see Figure 5), the United Kingdom still experiences a net gain.

Figure 15 plots the outmigration of students by nationality. Outflow of non-EU students has increased significantly, but is in line with the higher immigration of non-EU students and indicates remigration. Student emigration is otherwise notably low as compared with inflows.

Figure 16

Emigrants who were in managerial and professional positions prior to moving and citizenship ('000)

The emigration of managers and professionals was largest in absolute terms for UK citizens. In 2011, about 12 per cent of the population were foreign born. Thus, in relative numbers, the outflow of UK citizens is relatively small. Generally, brain drain appears to be moderate and without any intriguing geographical patterns. It can be assumed that the bulk of emigrants return to their home countries. Apart from a slight recession spike, no obvious trends can be identified for non-UK citizens. Therefore, the largest losses would be to non-EU countries. In particular old commonwealth countries, such as Australia and Canada, as well as the United States have a significant pull for UK talent. This corresponds to classic notions of brain drain. On the other hand, there is also substantial return movement to new Commonwealth countries and the NMS. This type of migration of highly skilled workers is more like brain circulation as it involves previously immigrated talent that benefited the United Kingdom.

3.3 CONCLUDING REMARKS

The United Kingdom is seen externally as a net »receiver of brains«, as well as a country that is capable of managing its beneficial position with regard to talent flows so as not to take excessive advantage by abusing its dominant position to attract and retain talent from emerging countries. In fact, the United Kingdom has developed many initiatives that promote or enhance »brain circulation« to developing economies.

3.3.1 CARRY ON »FAIR PLAY« POLICIES ON »BRAIN CIRCULATION«

While the highest proportion of highly skilled immigrants is from non-EU countries, the trend has been diminishing. However, this may respond more to restrictive immigration policies

than to goodwill with regard to »brain circulation«. Further analysis should be carried out to split the figures between non-EU countries and identify »brain gain« from emerging economies. Certainly, these policies would carry more benefits than the »warm glow« of having behaved properly and the positive externalities of re-emigration will affect the United Kingdom, too. Skilled individuals who return to their home countries have established links with the United Kingdom that may be beneficial for business and culture.

3.3.2 IMPROVE POST-EDUCATIONAL »BRAIN GAIN« POLICIES

The non-European student population is the most important in terms of inflow of migrants for study reasons. Once these students graduate, they might decide to stay in the country if the regulations allow it. Obviously, this will be allowed if they qualify for a Tier 2 (General) visa or a Tier 1 (Graduate Entrepreneur) visa, which they could obtain without having to leave the country, or a Tier 5 temporary worker visa, which obliges the graduate to leave the country in order to apply for it. Regardless of the situation, it seems a waste of resources having managed to attract a »brain« to treat it as a »new brain«.

Although the numbers still put the United Kingdom in a net situation, the trend in terms of non-EU students is increasing, as is that of emigration (outflow). Using a marketing metaphor, businesses know that retaining a customer is cheaper than acquiring a new one. This certainly applies to the retention of foreigners who graduated in the United Kingdom. To obtain a position in a labour market, it is essential not only to have the required academic and technical skills but to be aware of the culture. Social and professional networks should also facilitate successful labour market integration. Overall, foreign students who graduated will have

acquired knowledge of social norms as well as established links that will give them an advantage over graduates from abroad. New analysis should be carried out in order to assess the type of graduates (UK higher education level) and the subject, in line with similar reviews already carried out by the MAC (Tier 1 Investor or Tier 1 Entrepreneur).

At the same time, even though emigration in this collective is fairly low, data should be collected to assess the »brain drain« of national graduates. At the moment, despite a substantial increase in student fees to £9,000 per year, the outflow of UK students to other EU countries offering much lower fees has been limited. This, however, may change in the future in particular if there are further substantial changes to the student loan system. The MAC analyses shortages not only in their own right, but also the rate of self-sufficiency and in the past has even proposed to incentivise the fulfilment of certain roles by national citizens through feeding the UK higher education system.

3.3.3 IDENTIFICATION OF OVER-QUALIFIED INDIVIDUALS

The share of highly educated immigrants has increased for both EU and non-EU nationals. While the points-based system should deter overqualification of non-EU migrants (low qualification jobs occupied by highly skilled individuals), there is still the risk that EU nationals take lower skilled jobs than expected, especially given that non-EU migrants have a strong educational profile and EU15 migrants have a similar one, but are not bound to the tier system. The NMS migrants have a lower educational profile in comparison with these. However, NMS citizens are also very likely to engage in downskilling. Lower skilled jobs in the United Kingdom may still pay better than positions in the NMS with a more highly skilled profile. Often, downskilling is accepted for a limited time and individuals eventually strive to find their way in the labour market and move upwards to match their skill set. In this case, downskilling would be a successful adaptation strategy that still generates brain gain in the end. However, excessive and widespread downskilling may be seen as allocative inefficiency and hence should be tackled. This, at the same time, would call for further collaboration between EU countries beyond the free movement of persons and a common human capital investment policy that would leverage overall EU human capital accumulation.

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4

POLAND: LARGE MIGRATION OUTFLOWS AND SKILL-MISMATCH

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INTRODUCTION

For centuries now Poland has been a country of emigration. But even in comparison with previous massive waves of migration, often involving hundreds of thousands of Polish citizens, the year 2004 and accession to the European Union represents a turning point in Polish mobility trends. As an outcome of both push and pull factors the scale and dynamics of international migration from Poland have increased immensely – in fact, in the context of central and eastern Europe, the scale of migration from Poland is comparable only with the migration propensity of Romanians. In 2007 (peak year) the stock of Polish citizens living abroad temporarily was estimated at around 2.3 million (6.6 per cent of the total population) and has remained at a relatively high level despite the Europe-wide economic crisis.

Migration is selective. Traditionally, the mobility of persons well-endowed with human capital has played an important role in Polish migration. Similarly, the selective nature of post-accession migration, described above, manifests itself above all in the overrepresentation of highly educated people, often lacking previous experience in the Polish labour market, which to a large extent reflects structural mismatches on the Polish labour market.

The second half of the twentieth century saw an increase in an attention paid to the migration of skilled persons. Initially, the term »brain drain« was used with reference to the mobility of British engineers and scientists to the United States, which in the opinion of British researchers reached alarming proportions at the end of the 1950s. Soon, however, this term came to describe the emigration of highly skilled migrants from less developed countries, too. This process was seen as extremely negative, undermining the economic prospects of developing countries and contributing to their continued imprisonment in poverty. In the 1970s, when studies of brain drain flowered, this term started to be used as a general description of the migration of people with a higher education (Bhagwati and Hamada 1974). This approach, however, was questioned in the last decades of the twentieth century as new approaches took a more positive stance towards the outflow of people well-endowed with human capital.

Against this background, one aim of the present report is to address the issue of the international mobility of well-educated Poles, specifically to assess possible explanatory factors and to look at the risks and challenges related to highly skilled migration from the perspective of the sending country.

The structure of the chapter is as follows. Section 1 summarises theoretical and empirical perspectives on highly skilled mobility (brain drain/brain gain debate). Section 2 looks at migration from Poland in the post-accession period with an emphasis on the mobility of well-educated people. Section 3 attempts to assess the underlying factors and possible consequences of observed migratory streams.

4.1 THEORETICAL AND EMPIRICAL BACKGROUND

Before going into detail we need, first, to define the term »highly skilled« (or »well educated«) as used in this report and, second, to comment on recent theoretical discussions of the issue. With regard to definition, the common practice is to identify skilled individuals with highly educated workers. This is mainly because it is very hard to gather reliable information on »on-the-job« experience or training; moreover, it is extremely tricky to assess the unobservable factors responsible for migration or labour market performance (for example, innate ability). As a consequence, most practical approaches are similar to the one proposed by the OECD (2002), whose definition of highly skilled workers includes workers that have completed tertiary education and workers that did not complete tertiary education but are employed in occupations in which such a qualification is usually required. For pragmatic reasons, in this report we will refer to the first part of this definition of skilled workers based on years of formal education, particularly because it is consistent with the approach to this issue taken in Poland, where highly skilled persons are defined as university graduates who has also acquired at least an MA (5–6 level in the ISCED classification).

The second controversy in recent debates on the mobility of the highly skilled concerns the notion of »brain drain« and its theoretical repercussions. The mobility of highly educated people potentially generates effects that surface

in the medium and long term and may affect the stock of human capital in the migrants' country of origin, including its potential. The term most commonly used to describe this phenomenon is »brain drain«, but the meaning of this term is far from obvious. It is derived from an approach developed in the 1960s and 1970s, which focused on the negative effects of the outflow of highly educated people, including the lost fiscal outlay on the education of (future) migrants or lost productivity (Grubel and Scott 1966; Bhagwati and Hamada 1974). This »traditional approach« was predominantly pessimistic and sought solutions to stop the outflow of well-educated people from less developed countries.

However, in the 1990s a new approach sprang up that substantially modified previous paradigms. The so-called *new economics of brain drain* rests on the pretty obvious assumption that migration may be seen through probabilistic lenses (migration as a probabilistic event); that is, the members of a given population may exercise the option, but they are not compelled to. In simple terms, it is assumed that the migration option is available but that its probability is usually lower than 1. If we also assume that in specific circumstances the possibility of going abroad may induce people to invest more in human capital (expecting a higher return from human capital utilised/employed abroad), paradoxically, even large-scale migration of highly educated people may lead to an increase in the human resource capital in the country of origin. This phenomenon is dubbed in the literature *brain gain*, or *beneficial brain drain* (Stark 2005; Mountford 1997; Beine et al. 2001) and clearly exemplifies the »modern approach« to the mobility of highly skilled people.

One of the most convincing theoretical models that explains the possible effects of highly skilled mobility has been proposed by Beine *et al.* (2001). The model assumes that those who migrate are mostly educated and if so, that migration chances depend strongly on education (in the basic model not on real abilities or competencies; in other words, there is no self-selection based on unobservable characteristics). Furthermore, it is assumed that human capital is transferable and there are higher returns to human capital abroad than in the country of origin. If so, from the theoretical model it follows that the share of well-educated people in a given society will depend on migration prospects and economic growth will depend on the share of well-educated people (in a positive way) and migration (negatively). Following this line of reasoning, it is possible to distinguish two effects related to short- and long-term outcomes of the migration process under consideration. First, there is a traditional »drain effect« (ex post or static effect) related simply to the outflow of human capital. Second, there is a novel effect – »brain effect« (ex-ante or dynamic effect) attributable to the increase in human capital stock as an outcome of migration prospects, with a critical role of incentives to learn. Finally, *beneficial brain drain (BBD) emerges when the brain effect dominates*, which remains a purely empirical issue.

Even if the brain gain theories are appealing, the findings of empirical studies looking at the impacts of highly skilled mobility are far from unambiguous. This is mainly due to the complex transmission mechanism between migration prospects and incentives to learn and to the time dimension of the story (ex-ante and ex-post effects).

Several studies have assessed the brain drain/brain gain issue at the macro level. Docquier and Rapoport (2008) used a cross-section of 127 developing countries and found that migration prospects positively and significantly impact the stock of human capital. Beine et al. (2008) attempted to assess the short-run net effects of brain drain. According to their analysis, brain drain has decreased the level of human capital in around 53 per cent of countries in the sample and those were mainly small and medium sized countries with extremely high rates of highly skilled emigration (over 50 per cent). The evidence of brain gain (or beneficial brain drain) was found in countries with well-educated emigration rates of around 20 per cent. In a recent paper, Beine et al. (2011) used panel data to show that the emigration of skilled persons exerts a positive impact on human capital formation (based on panel data analysis). Similar to previously quoted studies the overall effect depends strongly on the size of a country and the highly skilled emigration rate.

To understand better the mechanisms underlying the relationship between highly skilled mobility and human capital formation it is necessary, however, to refer to micro level studies. Kangasniemi, Winters and Commander (2007) analysed a cohort of Indian doctors who were practicing abroad, finding that around 30 per cent of the doctors surveyed reported that the prospects of migration affected their level of effort during their studies (clear sign of migration-driven incentives to obtain more human capital). Commander et al. (2008) assessed the IT sector in India, pointing to positive externalities related to well-educated mobility (this sector is commonly presented as a virtuous circle of migration and development). Lucas (2004) confirmed the close links between migration prospects and educational choices by young Filipino students. Last but not least, Gibson and McKenzie (2010) designed a large-scale survey among the best students and their teachers in four less developed countries (Ghana, Micronesia, Papua New Guinea and Tonga) and New Zealand. They found that the proportion of students who made a particular effort with regard to their education due to the prospect of migrating abroad varied from 8 per cent in the case of New Zealand to over 30 per cent in the case of Ghana. At the same time, between 6 and 35 per cent of teachers reported that they taught different things as a result of expectations that some students will go abroad. This kind of outcome strongly supports the brain gain hypothesis. On the other hand, a growing number of papers emphasise other effects. McKenzie and Rapoport (2008) suggested that, paradoxically, a *reduction* in educational attainment in the areas characterised by higher emigration rates is possible as a consequence of very low (or even zero) returns to human capital in the destination countries. This effect is commonly termed »brain waste« (Mattoo et al. 2005; Kaczmarczyk and Okólski 2008). On the other hand, discussing the short-term effects of post-accession migration, Kaczmarczyk and Okólski (2008) challenged the concept of brain drain and suggested the term »brain overflow«, instead (see below). All in all, recent empirical evidence tends to suggest that the scope for a *beneficial brain drain* is diminishing substantially (Egger and Felbermayr 2007).

Following this line of reasoning and considering the controversies attached to the term »brain drain«, while referring

to the latter we will not attempt to assess the impacts of the phenomena but refer only to the selectivity of migration (statistical overrepresentation of well-educated people among migrants); this will be the object of Section 2. In fact, our assessment of the phenomena goes far beyond the traditional economic literature on that issue: positive selection of migrants with regard to education might be a worrisome sign, but it may also be matched by a substantial increase in educational investments determined by the migration prospect itself, a critical factor that simple descriptive statistics on skill composition fail to disclose. Possible outcomes of migration will be discussed in Section 3.

4.2 MOBILITY OF WELL-EDUCATED POLES

Traditionally, the emigration of people well-endowed with human capital has played an important role in Poles' mobility. In the Communist period there were two »brain drains« in Poland. First, in the period 1968–1971, when approximately 13,000 Polish citizens of Jewish nationality were expelled; second, in the 1980s, when a large emigration wave followed the introduction of martial law: according to estimates, almost 700,000 emigrants left Poland between 1981 and 1988, 15 per cent of whom had a higher degree and a further 31 per cent had completed secondary school (Sakson 2002). More importantly, at that time the share of people holding a university degree in the total population was 7 per cent, which meant that well-educated emigrants were considerably overrepresented in relation to the population of Poland as a whole. According to the terminology adopted this can be described as a »brain drain«.

The empirical evidence shows that the educational structure of migrants changed during the socio-economic transition. According to the official data, since 1990 the share of people with the lowest level of education has been increasing, while the share of people with the highest level of educational attainment has been decreasing. On the eve of economic transition, in 1988, the percentage of those with a university degree among migrants was 9 per cent (those with only a primary education was 37 per cent), whereas in 2003 the figures were 4 per cent and 55 per cent, respectively. Similar results were provided by studies conducted both in Poland and in the receiving countries (Kaczmarczyk 2005). Most studies document that people with low cultural qualifications – they do not speak a foreign language, find it difficult to cope with the institutional environment of the destination country and tend to take low-qualified work – had the highest migration propensity (in the Polish literature people engaging in this type of migration are commonly referred to »incomplete migrants«, Kaczmarczyk et al. 2011).

As stated in Introduction since 2004 there has been a dramatic increase in the scale of migration from Poland. The 2002 population census indicated that around 0.8 million permanent residents of Poland (1.8 per cent of the total population) were living abroad, with Germany, the United States and southern European countries (Italy, Spain) as the main destination countries. The first post-accession years saw a spectacular increase in the scale and dynamics of the international mobility of Poles, which in the regional context could

be compared only with the migration propensity of Romanians. The stock of Polish citizens living abroad temporarily increased from around 1 million in 2004 to over 2.3 million (6.6 per cent of the total population) in 2007 (peak year) and remained at a relatively high level despite the Europe-wide economic crisis. The most recent data for the end of 2013 yield a figure of 2.2 million Polish citizens residing abroad (CSO 2014). Contrary to previous flows, »new« migrants from Poland tend to be male, strongly work-oriented, young, relatively well-educated and temporary. The majority of them have targeted Anglophone countries (with the United Kingdom the main destination in the post-accession period), although Polish migrants are present in most EU countries (Kaczmarczyk and Okólski 2008).

Migration from Poland, though different in structural terms, follows a similar logic to previous decades. It is driven by differences in economic conditions and employment opportunities, networks and social ties, as well as institutional changes (for example, the introduction or relaxation of transitional arrangements). First of all, due to its transitory, transnational and temporary patterns, recent migration from Poland (as well as from other CEE countries) is labelled »liquid« or »fluid« migration (Engbersen et al. 2010; Grabowska and Okólski 2009).

Looking at the structural characteristics of recent Polish migrants, they seem, first of all, to be much better educated than before. As shown by the EU LFS data, recent Polish migrants are relatively well-educated; almost 20 per cent of them having a university degree (as compared with 15 per cent in the pre-accession period, see Table 1). This applies particularly to female migrants, 27 per cent of whom were highly-skilled. The most numerous group is migrants with a vocational education, but there is a clear overrepresentation of persons with a tertiary education (Brücker et al. 2009).

There is no doubt that emigration after EU accession was characterised by selectivity and overrepresentation of young people and university graduates compared with the general population. According to Grabowska-Lusińska and Okólski (2008), in the first post-accession years (2004–2006) persons aged 20–29 years of age accounted for approximately 55 per cent of mobile persons, while people with higher education constituted around 16.3 per cent of the total stock of migrants. Census data from 2011 indicate that among emigrants residing abroad for more than three months persons aged 20–29 years of age accounted for 31.4 per cent, while those with higher education accounted for 22.8 per cent. Meanwhile, according to the 2011 Census, in the total population these categories represented 18.6 per cent and 19 per cent, respectively (CSO 2013). Thus, with regard to post-accession migration from Poland we can clearly speak about a brain drain in the sense used in this report.

This picture is consistent with situation in most of the new member states. Figure 1 presents the percentage shares of people with a tertiary education in the resident population and migrant population, respectively. It also takes into consideration the fact that the age structure of migrants and of the sending population usually differ (category: age adjusted). It follows that positive selection with regard to human capital is common in central and eastern Europe, with Poland a prominent example.

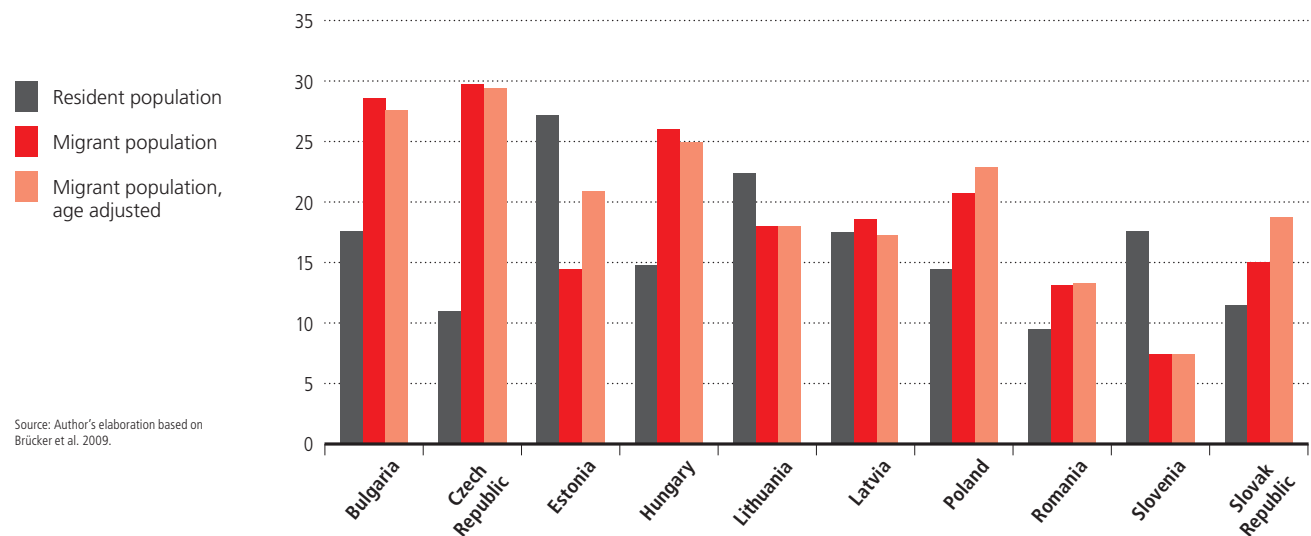
Table 1
Education structure of Polish pre- and post-accession (first post-accession phase) migrants by gender (%)

Level of education	Pre-accession ¹			Post-accession ²		
	Total	Men	Women	Total	Men	Women
University degree ³	14.7	12.0	18.3	19.8	15.6	27.0
Secondary	14.0	7.1	23.1	14.2	8.8	23.8
Secondary vocational	26.1	26.0	26.3	28.1	29.8	25.1
Vocational	34.8	45.4	20.9	30.9	39.2	16.2
Primary	9.9	9.3	10.9	7.0	6.6	7.8
Unfinished	0.4	0.2	0.5	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

- 1 Persons aged 15 or over who were abroad for at least two months in the period 1999–2003.
- 2 Persons aged 15 or over who were abroad for at least two months in the period 1 May 2004–31 December 2006.
- 3 Including BA, MA and PhD degrees.

Source: Brücker et al. 2009.

Figure 1
Percentage of persons with tertiary education in the native and migrant populations in the new member states, 2006



Source: Author's elaboration based on Brücker et al. 2009.

Interestingly, there is nothing like a common pattern of migration from Poland and other new member states. EU LFS data portray a fairly complex picture with regard to migration selection (see Figure 2). While in some countries (particularly Germany) there are no clear differences between the education structures of pre- and post-accession migrants, in others (particularly the United Kingdom and Ireland) there was a significant increase in the share of well-educated migrants.

While there is a clear overrepresentation of the highly skilled among all migrants from Poland, this picture is even clearer in case of the United Kingdom, while countries such as Germany, Spain and Italy attract relatively less educated Polish citizens. This feature is clearly supported by the most recent EU LFS data, which show, first, that Polish migrants

are, on average, very well educated and, second, that there are large differences between the United Kingdom and Germany as the most important destination countries (Figure 3).

Moreover, those differences are fairly persistent over time. As shown in Figure 3, there is a constant difference between the shares of well-educated Polish migrants residing in the United Kingdom and in Germany over the period 2008–2013. This means that the opening up of the German labour market to Polish citizens (May 2011) has not influenced the structure of incoming migrants from Poland in a significant way.

Against this background, the case of Polish migrants in the United Kingdom seems extremely interesting. As shown by Kaczmarczyk and Tyrowicz (2015), in the British labour market all immigrant groups are better educated than natives

Figure 2
Percentage of university graduates* among the new member state (left) and Polish (right) nationals residing in selected EU15 countries, 2004 and 2014**

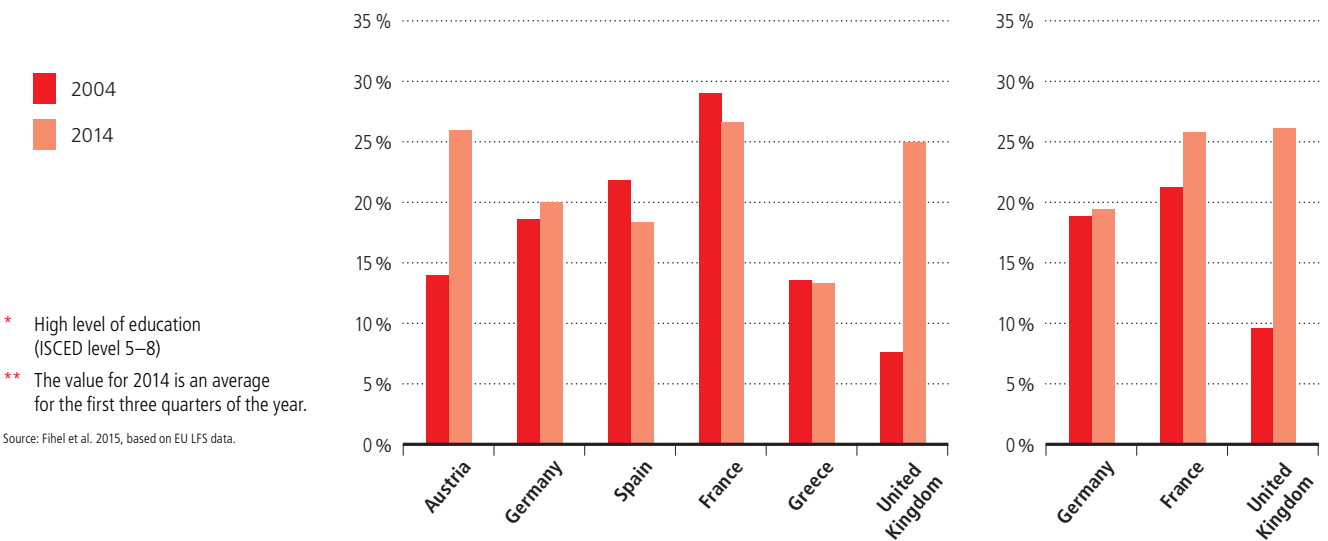
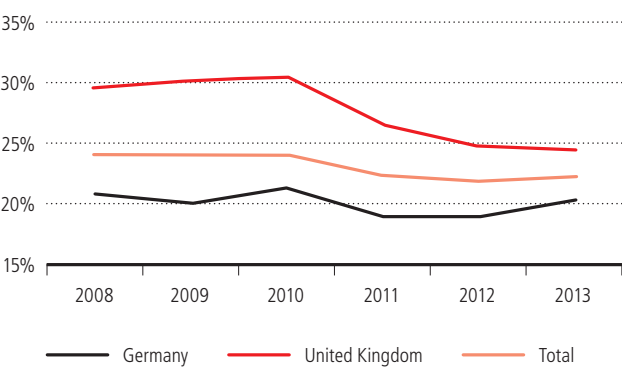


Figure 3
Share of well-educated migrants among Poles residing in the United Kingdom and Germany, percentage of total, 2008–2013



(this refers particularly to tertiary education). The same holds true for new member state immigrants and Polish citizens staying in the United Kingdom – in the latter case almost 32 per cent of persons with a tertiary education compared with 21 per cent in the case of natives (this share is higher than shown above because the sample encompasses the period 2004–2009). Additionally, Polish migrants in the United Kingdom are better educated than their counterparts active on the Polish labour market. Unfortunately, this educational superiority does not translate into occupational position and wages. Clearly, as shown in the case of the British labour market, the upper part of the occupational ladder tends to be dominated by natives, while the occupations of immigrants are skewed towards the lower end of the distribution. The majority of Polish migrants are employed in basic occupations (compared with over 50 per cent in the Polish labour market) and earn much lower wages than their British counterparts.

This observation is consistent with recent studies (Dustmann et al. 2010; Fihel et al. 2008) that suggest that Polish migrants abroad are employed in positions far below their skills (severe over-education). Furthermore, as Kaczmarczyk and Tyrowicz (2015) argue, the rate of return to education of Polish well-educated migrants choosing the United Kingdom as their destination was among the lowest on the British labour market and, additionally, lower abroad than in the domestic labour market. This signifies that the outflow of skilled workers from Poland has the characteristics of »brain waste«, which undermines the theoretical rationale for increased human capital formation (see Section 1). Moreover, the available data suggest that the phenomenon depicted above is attributable not only to the United Kingdom, but represents a Europe-wide story (Figure 4). Even if considering the relatively broad category of professionals, the shares of new member state migrants employed in EU15 countries as professionals are relatively low (particularly compared with the average level of education of NMS migrants).

One of the most controversial issues in the global public debate is the migration of medical professionals. This is above all a consequence of the permanent demand for this type of migrant in highly developed states, due mainly to unfavourable demographic trends and labour market fluctuations. Furthermore, this represents a typical example of intangible services where the human capital flow cannot be easily substituted with mobility of goods and services. In effect, potential immigrants may expect highly beneficial financial and social conditions, integration support and, at least in several receiving countries, simplified immigration procedures. Strong pull factors are likely to substantially inflate migratory potential among medical professionals from the new member states.

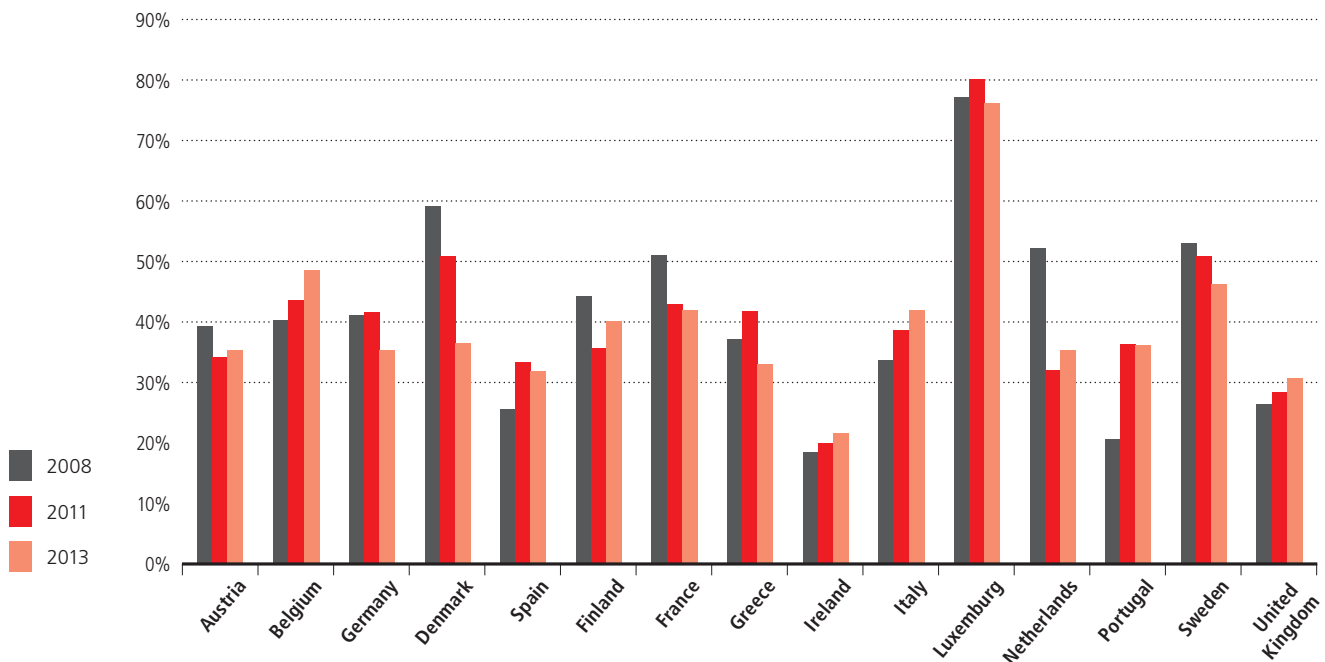
Unfortunately, there are no reliable data on the mobility of medical professionals from Poland. However, some indication of the scale of potential migration of medical professionals can be provided by the issuing of certificates

Table 2
Occupational structure of the British and Polish labour markets (%)

Occupation	British labour market								Polish labour market
	Natives	EU14+EEA migrants	A8 migrants	Polish migrants	African migrants	American migrants	Asian migrants	Other migrants	Natives
High	28.9	39.0	7.9	7.1	25.6	22.4	27.6	24.3	21.0
Skilled	14.4	16.5	4.4	3.7	17.2	13.0	14.1	17.3	10.7
Low skilled	22.8	15.1	20.2	20.9	12.0	15.5	13.4	16.2	18.2
Basic	33.8	29.5	67.5	68.2	45.1	49.1	45.0	42.2	50.1
N	779,540	14,240	12,755	1,119	7,421	2,230	12,589	1,139	100, 749

Source: Kaczmarczyk and Tyrowicz 2015.

Figure 4
Share of professionals* among all employed NMS migrants in EU15 countries, 2008, 2011 and 2013



* NACE codes from K to U (employed in finance, business services, public administration, education, health).

Source: Fihel et al. 2015, based on EU LFS data.

confirming qualifications and professional experience required by employers in western European states. In the most active period of post-accession migration (up to the end of 2007) the number of certificates issued – 6,724 – amounted to 5.7 per cent of the total number of medical doctors in Poland. With regard to semi-skilled medical staff, around 9,300 certificates were issued to nurses and midwives, which amounts to 0.3 per cent of this professional group in Poland. These numbers should not be presented as a proxy of the real scale of the outflow – anecdotal evidence shows that a large part of those who obtained certificates never migrated.

Therefore, the number of issued certificates should rather be regarded as an upper limit and a (heavily inflated) estimate of the number of migrating Polish doctors. This is confirmed by the results of a study carried out by the Centre of Migration Research, which shows that the mobility of Polish medical personnel is very high, but the outflow abroad represents only a small fraction of them: in fact, much more important is the outflow to other sectors of the Polish economy (especially the pharmaceutical sector) and flows between the public and private sectors (WIAD 2012).

Nonetheless, from the data presented it follows that the migration of Polish medical professionals, although marked, is not so large as to pose a threat to the Polish health-care system in the short term. This threat is not that significant because, in the experts' opinion, the Polish education system »produces« medical professionals at a rate still higher than their potential outflow to other states. In fact, to some extent the migration of medical specialists may be viewed as a brain *overflow* rather than brain drain, which is particularly true in the case of young professionals trapped in the »feudal« organisational structures of the Polish medical profession, with limited chances of promotion. Nevertheless, the outflow of medical doctors appears very painful in the case of certain specialisations. This applies in particular to anaesthesiology (in which the percentage of potential migrants was almost 16 per cent), chest surgery (12.8 per cent), plastic surgery (14.7 per cent) and radiology (7.7 per cent). The outflow problem has a considerable impact on specialties in the most difficult position in terms of income in the Polish labour market (anaesthesiologists, radiologists) or for which there is high demand in foreign labour markets (plastic surgeons). Moreover, a temporary or permanent imbalance in local and regional labour markets is likely to occur (or has already occurred) (Kaczmarczyk and Okólski 2005; Kaczmarczyk 2008; Ministry of Health data).

4.3 EXPLANATORY FACTORS AND POSSIBLE IMPACTS

The first aim of this section is to examine factors that might explain the phenomenon of brain drain, defined as the over-representation of the well-educated among migrants, and second, to discuss briefly the possible outcomes (also in the context of the brain drain/brain gain debate). As shown in Section 2, one of the most important structural features of the recent migration of Poles is the positive selection of migrants with regard to education.

4.3.1 POLISH LABOUR MARKET BEFORE 2004

To understand the phenomenon of post-accession migration, which has been dominated by the relatively young and well-educated, it is important briefly to describe the situation on the Polish labour market before 2004, and in particular the position of young people. The beginning of the socio-economic transition in Poland was associated with dramatic changes in the Polish labour market. One of the most important consequences of these changes is the relatively large group of »victims of transformation«, mainly older workers and those formerly employed in heavy industry. Nonetheless, there are also beneficiaries, primarily people with tertiary education. The point is that in the centrally planned economy, as imposed in the post-war period, the wage system was relatively flat, which partially reflected the official ideology of social justice. As a consequence, wage disparities between qualified workers (professionals, white-collar workers) and ordinary manual workers were relatively small. However, with the advent of the »free market«, suddenly the

value of higher education increased significantly. In purely labour terms, Polish data show that university graduates were able to gain a wage premium of around 40 per cent compared with persons with only a secondary education. Thus, higher education started to represent a ticket to a successful career. Simultaneously, policymakers aware of the risks associated with the economic transition and the decline of heavy industry began to promote higher education at the expense of vocational education. A particularly important factor in this regard was the education reform introduced in 1999 (Brzozowski et al. 2014).

As a consequence, since the early transition period the significance of qualifications has increased dramatically in Poland. Between 1970 and 2001 the share of university graduates among the Polish population increased from 2 per cent to 12 per cent. At the end of the 1990s, the number of students was 2.6 times higher than in 1990. Data show that the net enrolment rate increased from around 9.8 per cent in the academic year 1990/1991 to 40.8 per cent in 2010. As an outcome, the share of people aged 25–64 attaining tertiary qualifications also increased significantly between 1997 and 2010, amounting to 7.2 per cent annually (twice as high as the OECD average for this period) (Herbst et al. 2014).

Thus, if we take into consideration that a higher propensity to migrate is typically a feature of relatively young persons (aged 18 to 35), the recent increase in highly skilled migration could to a large extent be attributable to a general improvement in human capital (see Figure 5). In this context the increase in the share of relatively well-educated migrants should be perceived as a natural consequence of educational developments in Poland.

4.3.2 EMPLOYABILITY OF YOUNG AND WELL-EDUCATED PEOPLE

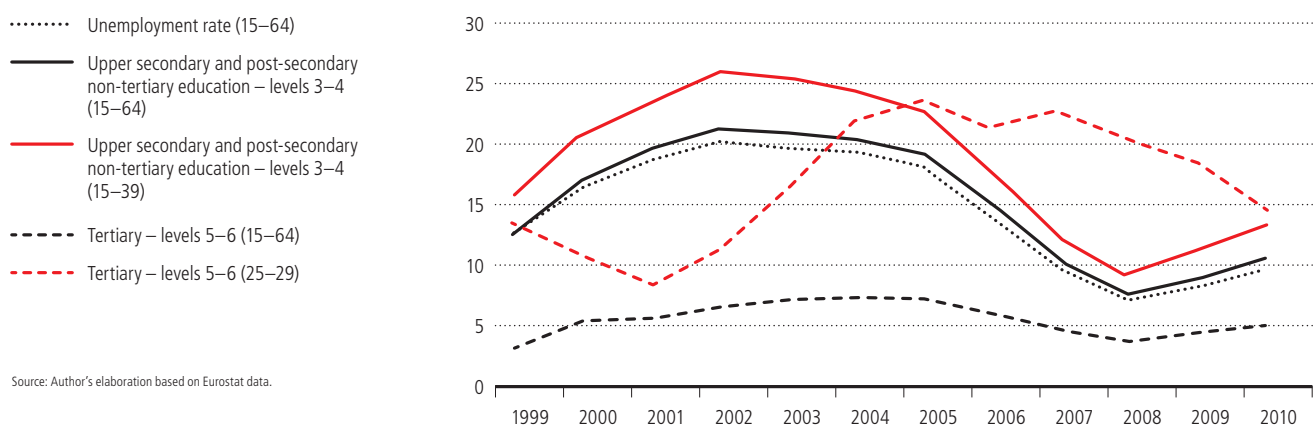
The employability of young and well-educated people is an issue in the Polish labour market. The evidence suggests that an increase in the accessibility and universality of higher education in Poland can be considered one of the major achievements of socio-economic transformation, but it also has a number of negative aspects. The most important of these is a decline in the quality of education and the »overproduction« of graduates in the humanities and social sciences. In addition, a growing issue was an (in)ability to create enough jobs for white-collar workers. The mismatch in the labour market between sectors requiring top quality human capital and the growing supply of graduates has deteriorated substantially. In particular, this phenomenon appears to be significant at regional level, with the eastern part of Poland the most prominent example. Thus, international migration has become essentially a way of relieving the surplus in the domestic labour market, to a large extent involving employees with higher education and high professional aspirations (Brzozowski et al. 2014).

Thus, the high propensity to migrate among well-educated Poles is partly attributable to the low absorptive capacities of the Polish labour market. In fact, the development of the labour market has been much slower than the development of the education sector described above. As a

Figure 5
Share of persons with a tertiary education in the total population (%)



Figure 6
Unemployment rate in Poland, 1999-2010 (%)



consequence, since the late 1990s we have observed a very difficult situation for (well-educated) young persons in the labour market (see Figure 6). Very high unemployment rates experienced by people aged 25-29 with tertiary education can be seen as one of the most important migration push factors after 2004.

However, an outflow of persons with tertiary education who are facing serious problems on the Polish labour market can thus be described as brain overflow rather than brain drain. This process does not have to be negative for the Polish economy: those who leave stand a better chance of finding work and accumulating money that they will have at their disposal at home later on (if they return). Additional benefits may result from gaining professional and cultural experience (see Kaczmarczyk and Okólski 2008).

All the above mentioned factors are accompanied by still severe wage gaps and differences in standards of living be-

tween Poland and the most important destination countries. It goes without saying that wage gaps remain one of the major drivers of migration, although their importance should not be exaggerated (Kaczmarczyk and Tyrowicz 2015).

4.3.3 DRAIN OR GAIN?

But what have been the consequences for the Polish labour market of the outflow of people with tertiary education? While there have certainly been negative effects for the Polish labour market (*brain drain hypothesis*), there are also potential positive effects in the future (*brain gain hypothesis*; see also the »crowding out« hypothesis below). As shown above, the drain effect is questionable in the Polish case because there is a relatively large pool of well-educated persons but insufficient employment opportunities. The issue of possible

brain *gain* is far more controversial and difficult to tackle in methodological terms. Apparently, as shown above, Poland's education system has undergone massive changes since the early 1990s, primarily in terms of a boom in tertiary education. The question from our point of view concerns the extent to which these changes are attributable to the prospect of migration (particularly in the post-accession period).

A large number of studies on Polish migration address this issue and look primarily at the assumptions of the beneficial brain drain model (Beine et al. 2001). As described in Section 1, the model assumes, first, that human capital is transferable and second, that there are higher returns to human capital abroad. Both assumptions seem controversial in the Polish case. Kaczmarczyk (2008) provided an analysis based on statistical data to show serious maladjustment between the skills and qualifications of migrants and the job positions they have attained with regard to professional development. The suggestion was to focus more on the phenomenon commonly dubbed *brain waste*. Kaczmarczyk and Tyrowicz (2015) focus on one particular case: Polish migrants with a university degree working in the United Kingdom. The objects of the analysis are the plausibility of the usual premises concerning the underlying reasons for labour mobility (absolute and relative differences in pay) and the likelihood that a so-called *beneficial brain drain* is taking place. The evidence shows that, while the Polish migrants working in Britain are very well educated (well above the average in the Polish labour market), their employment profile is very different: around 70 per cent of Polish migrants in Britain perform only simple, mainly manual activities, which fall far short of their qualifications. Moreover, looking at BAEL and UK LFS data (2004–2011) and employing methods that enable us to control for self-selection (*Propensity Score Matching*, among others), it has been proved that (i) in the United Kingdom highly educated Polish migrants receive wages that are close to their Polish »statistical twins« and (ii) the return rate from human capital is very low for Polish migrants with a degree, probably even lower than in the Polish labour market. This apparent paradox may be explained at various levels, starting from the imperfect transferability of human capital, which is strongly conditioned by linguistic skills, through to migration strategies, which do not necessarily require that one find a job in line with one's qualifications. Regardless of this, the case described and the analyses conducted by Kaczmarczyk and Tyrowicz (2015) challenge the possibility that there is any significant positive brain effect. The abovementioned *brain waste* – which is what appears to be happening here – suggests that one take a more cautious approach to the potential benefits of such mobility.

4.3.4 LONG-TERM AND SHORT-TERM EFFECTS

Another strand of studies on Polish migration emphasises the importance of long-term effects at the expense of the short-term impacts of post-accession migration. The issue is that, according to the premises of neoclassical economics, migration phenomena are neutral against the labour market in the long run. This means that changes caused by outflows or inflows of workers will be internalised due to »structural

transformations«, as well as »adjustments« of labour–capital relations (see, among others, Brücker et al. 2009). This approach, however, ignores *the demographic changes and structural transformations* that may result from migration and whose significance may far greater than the simple economic effects described thus far. With regard to this issue, Kaczmarczyk and Okólski (2008) introduced the *crowding-out migration* hypothesis as an attempt to understand countries experiencing systemic transformations and coping with serious structural difficulties in their labour markets. The concept explicitly goes back to the idea formulated in the 1990s by Layard and others (1994) that one of the major conditions of accelerating modernisation in southern European countries in the aftermath of the Second World War was a massive outflow of human resources. This outflow led to a sort of »crowding out« in labour markets, which, along with the implementation of various labour market policies, brought about measurable improvements.

In this context, the hypothesis is that, in the long run, recent migration from Poland may lead to significant structural changes at the level of the spatial allocation of labour resources, and, in this sense, they do have a certain modernising potential, if modernisation is understood to mean the transformation of regions currently characterised to a substantial extent by a »natural« or partly natural economy (an economy in which no surplus is produced), as well as labour surpluses that cannot be absorbed by other regions that are more capable of joining the competitive global economy.

This situation is to a large extent analogous to that of southern European countries in the 1960s, which, just like Poland prior to 1 May 2004, were characterised by labour surpluses. The political situation in Poland had long meant that Polish workers seeking employment beyond national borders had little chance of realising their aim. Polish accession to the EU and the resulting mass labour mobility have for the first time in Polish history created the basis for, on one hand, the outflow of labour surpluses – as in the case of settlement migration – and, on the other hand, the reallocation of labour resources in the domestic labour market (as in the case of temporary migration and return migration) (Kaczmarczyk and Okólski 2008).

The mechanism described above ought not to be treated as something ultimate or categorical in nature. Migration may pave the way for structural changes, but does not create them. The outflow of surplus labour abroad only clears the ground for implementing public policies whose aim should be to improve the efficiency of the labour market, primarily at the local and regional levels.

However, some other authors do not share this relatively optimistic vision of recent Polish migration. Iglicka (2009), for example, proposed an alternative approach, namely the »migration loop trap« hypothesis. The author suggests that young post-accession migrants from Poland were unable to realise their professional and social aspirations in Poland and thus were forced to move abroad. However, even there they have trouble getting jobs in line with their qualifications, not to mention well-paid and satisfying ones. These people often decide to migrate back home, especially during an economic downturn in the destination country (especially Ireland and the United Kingdom). However, because they have taken

long-term jobs below their (usually higher) qualifications they often have trouble re-integrating in the domestic labour market. Thus, they are caught in a kind of »migration loop trap«: the vast majority of young Poles returning to their country see no prospects and intend to go abroad again. They become »doubly marginalised«, with no chance of satisfying work at home, but condemned to work below their qualifications abroad (Iglicka 2009).

As already mentioned, the context in which Polish migrants decided to leave after 2004, as well as the socio-economic situation in the host countries provides substantial arguments in favour of the »migration loop trap« hypothesis. In the case of the United Kingdom, in 2006 there were around 1.1 million workers with a higher education more than the number of jobs available that required such skills. On the other hand, there was a significant disparity between low-skilled workers and jobs not requiring qualifications (4.9 million). This meant that the UK labour market has a high proportion of undemanding and low paid positions, which entails an »education surplus«, with many workers with a higher education working below their qualifications (Brzozowski et al. 2014).

The point is, however, that working below one's skill level does not necessarily entail brain waste and depreciation of human capital. Research conducted among return migrants in one important migrant-sending region in Poland indicates that of those who left in the years 2004–2011 and who had a university degree, up to 55 per cent declared that they worked abroad below their qualifications. However, when their experience was analysed it was found that only 21.5 per cent of university graduates had been working full-time before they left; in other words, the vast majority of emigrants with a university degree from the province of Silesia were young people without experience in the domestic labour market. Thus it is hardly surprising that their first jobs did not match their formal education. More importantly, migrants returning to Silesia found themselves relatively well placed in the labour market: at the time of the study (2011) up to 53 per cent of them were working full-time and over three-quarters had a paid job (77 per cent of all returnees). Only 12 per cent of returnees with a higher education were unemployed. There is some evidence for the »migration loop trap« hypothesis – around 40 per cent of respondents declared a readiness to emigrate again in the next 12 months – but at this stage of research it is still not possible to establish one of the two alternative hypotheses presented above unequivocally.

CONCLUSIONS

No assessment of migration can be unambiguous. As we have seen, in Poland the picture is far more complex than is commonly presented in the media, particularly with regard to the mobility of well-educated people.

For a country with relatively large stock of well-educated labour, an outflow of the highly educated does not have to be harmful. In fact, in such an environment migration may have relatively low opportunity costs (in the short term) and – paradoxically – can lead to better allocation of labour on the domestic labour market in the long term (see Kaczmarczyk and Okólski 2008). The Polish case shows that what really matters is how human capital is utilised abroad.

Despite the relatively high level (in some cases, as in the United Kingdom and Ireland, even very high) of human capital involved, migrating Poles rarely find positions characterised by seniority or high pay. On the contrary, the common pattern of employment abroad involves serious over-education and skill mismatches. This situation is only partially attributable to (low) quality of education, a lack of transferability of skills (for example, due to low language skills) or migrant networks (employment in certain migrant niches). Rather, empirical research points to the importance of the structure of demand for foreign labour, which is strongly concentrated at the low-skilled end. It shows that, contrary to official rhetoric, western European economies desperately need low skilled workers to fill niches in their labour markets and such workers are far more important than highly skilled migrants.

The key issue here is that employment below one's skill level can have very serious long-term consequences:

- (i) it leads to inefficient utilisation of human capital (across the EU), a phenomenon commonly known as brain waste;
- (ii) it creates little incentive to invest in human capital (which is important in the context of brain gain – see above);
- (iii) it may (negatively) affect the future integration prospects of resident immigrants; and
- (iv) it remains an open question what the long-term impact of the mobility of highly qualified labour will be on the Polish economy and society.

The two alternative hypotheses presented here are strongly conditional on future labour market developments in Poland and structural conditions in the host country.

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5

HUNGARY: LABOUR MOBILITY AND SOCIAL EUROPE

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Summary

- Hungary's proportion of labour migrants per capita is currently one of the lowest in the 2004 accession group of new member states, but it has been increasing exponentially since the 2011 opening of the (near) neighbouring labour markets of Austria and Germany.
- There are three major destination labour markets: Germany, Austria and the United Kingdom. Outward labour migrants are younger and more educated than the overall labour force within Hungary. This has not disrupted the domestic labour market in a major way so far, except with regard to the medical profession in certain geographical areas and professions.
- A sustainable solution to the issue of labour migration from east to west should not involve rolling back the *acquis communautaire* on the free movement of labour. Instead, it should concentrate on implementing the agenda of a Social Europe, which has remained at the rhetorical level so far. Guaranteeing decent living standards in central and eastern European member states would go a long way towards diminishing the push factors of outward migration. If citizens of these countries felt that they had future prospects they would be much less likely to seek their fortune in western European countries. This would include a hard *acquis* on social policy, Europe-wide minimum wages and Rehn-Meidner-type sectoral collective agreements.

5.1 BRAIN GAIN

»Brain gain« is defined in this chapter as intra-European Union (EU) labour migration towards Hungary from other EU member states. Inward labour migration to Hungary is currently negligible both by international comparison and in contrast to outward labour migration. At the end of 2013 (the latest figures available), 51,002 EU citizens were registered as working in Hungary, according to the central statistical office. This compares with a total labour market of 3.9 million.

This is true of all major macro-regions of the EU (the new member states, southern Europe, Scandinavia and western and central Europe). In the decades following the political and economic transition in 1989 inward labour migration from neighbouring countries was significant, but this has petered out. The main source at the time was ethnic Hungarian speakers from Romania, Slovakia and other neighbouring countries, in search of the relatively better work prospects and living standards in Hungary. These migrants were mostly of low educational background. Hárs reported in 2003 that 64.9 per cent of migrants from Romania had general school qualifications or lower, as did 38.7 per cent of migrants from Slovakia. They were employed mainly in auxiliary jobs, ranging from harvesting through home care to construction. Most of these source countries, however, have since become EU member states, which allows them to migrate to seek work in other, more affluent EU member states. This is especially important in the case of Romania, where even citizens whose mother tongue is Hungarian speak good or excellent Romanian. Since Romanian is linguistically very close to Italian and Spanish, understandably the labour markets of these southern European member states became major targets for labour migration by Romanian citizens. This was already so before Romania joined the EU, even though the free movement of labour did not apply to that country back then. The labour markets of these economies were superior to the Hungarian one both in terms of job prospects and income levels, which made Hungary increasingly secondary in importance, even for Hungarian speakers from neighbouring countries. Frequently, knowledge of a third language – English or German – has allowed citizens of Romania or Slovakia to take advantage of labour migration to the United Kingdom, Ireland, Germany,

Austria or Switzerland in a similar manner. In the case of ethnic Hungarians from Slovakia, knowledge of Slovak has allowed them to participate in the Czech labour market in similar way, given that Slovak and Czech are mutually comprehensible.

In addition, the labour markets of Slovakia and Romania have both seen considerable improvements over the years, with wage levels in Slovakia actually overtaking those in Hungary. This has reduced incentives among ethnic Hungarians from Slovakia to seek employment in Hungary, with particular local exceptions, such as the local area of the auto-making centre of Győr in Hungary, which borders on southern Slovak regions with an overwhelmingly ethnic Hungarian population. Most of these migrants commute from the other side of the border and are engaged in low end production.

At the end of 2013 34,000 Romanian and 9,000 Slovak citizens were registered as working in Hungary. There were also 1,500 Poles. On Hungary's accession to the EU in 2004 the picture was very similar, with 32,000 Romanians and 7,000 Slovaks (Central Statistical Office).

The other distinct group of foreign workers in Hungary is related to the strongly foreign direct investment-based character of the Hungarian economy. The country serves as a low end production base for multinational enterprises, most of the local managers of which originate from the mother company of the investor. This phenomenon constitutes a relatively large expat community of mid and top level managers, mostly from the countries that are the major investors in Hungary: predominantly German (1,481 citizens), but also British (905), French (650), Austrian (n.d.), US American, Italian (551), and Dutch (247). This expat community, although highly educated, does not constitute a meaningful brain gain for Hungary, as they are mostly engaged in managerial functions at the head of their respective investments. Although dating back to 2003, Hárs finds that some 67.4 per cent of this expat community from the old EU15 had qualifications from a higher educational institution. This is unlikely to have changed significantly.

There are clearly identifiable reasons for the notable absence of a large foreign labour community in Hungary. Predominant among these is the isolated nature of the Hungarian language, which is only related to Finnish and Estonian within the EU. The substantial difficulty of mastering the local language makes it very difficult for migrant labour to target Hungary.

It is also significant that Hungary has continued to have one of the lowest employment rates in the EU, which means that there is a scarcity of jobs even for local citizens. Hungary also has very low wage levels: only, Latvia, Lithuania, Bulgaria and Romania have lower wage levels in the EU.

Much of central and eastern Europe is characterised by low foreign labour participation, with Slovakia and Poland posting figures that are even lower than the roughly 2 per cent of the labour force for Hungary. It can therefore be stated that Hungary is representative of the wider region of new member states, with the possible exceptions of the Czech Republic, Slovenia and Croatia, which have a higher foreign participation rate. These three countries have recent historical ties to other EU and non-EU states, and have attracted migrant labour from countries with which, until re-

cently, they had formed a common unit and strong linguistic commonality (such as Slovaks in the case of the Czech Republic). In contrast to the region of the new member states, southern, western and northern Europe is generally characterisable by labour participation rates ranging between 5 and 10 per cent, with Austria, Switzerland and Luxembourg posting even higher figures.

5.2 BRAIN DRAIN

5.2.1 OUTWARD MIGRANT POPULATION IN GENERAL

Research on labour migration repeatedly stresses that data on labour migration are relatively unreliable. This is due to the poor harmonisation and coordination between the European Commission and the member states in the collection of data. There is no objective reason why this should be so. Employees are registered in social security databases in each EU member state, which would technically enable any member state to report up to date aggregate data on foreign employees on an up-to-date basis, enabling breakdowns according to country of origin, age, and many other dimensions.

Current statistics on labour migration should therefore be regarded as methodologically sound estimates rather than as exact figures.

According to aggregate data, about 350,000 Hungarian citizens reside outside Hungary on a permanent basis; 280,000 of them live within the European Union, about 190,000 of whom were of employable age. This constituted about 5.3 per cent of the overall Hungarian population in 2013, which is a low number by regional comparison. Among neighbouring EU countries the corresponding figure in the same year was 6.1 per cent for Austria, 6.5 per cent for Slovakia, 7.7 per cent for Slovenia and 16.6 per cent for Romania. (Neighbouring non-EU countries posted even higher numbers: Ukraine 12.3 per cent, Serbia 18.4 per cent). EU countries further afield, such as Bulgaria (18.9 per cent), Poland (8.5 per cent) or Lithuania (16 per cent) also posted much higher numbers. Only the Czech Republic shows a lower migrant ratio, at around 4 per cent.

Although the stock of Hungarian guest workers is low by international comparison, along with the southern crisis countries of Spain, Greece and Portugal, Hungary has been the fourth country from which there was a rapid increase in the number of outward labour migration between 2010 and 2013, a 78 per cent increase.

There are no strong trends with regard to the gender of Hungarians living outside Hungary. There is an equal distribution of males and females in the group, much like in the domestic population.

Outward labour migration demonstrates very clear trends according to age, however. There is a slight overrepresentation of people in their twenties in this group: 25 per cent as opposed to 17 per cent within Hungary. There is a very large overrepresentation of people in their thirties: 38 per cent as opposed to 21 per cent domestically – that is, almost double. Therefore, and not surprisingly, there is a definite age dimension to outward labour mobility (SEEMIG project).

Similarly, we can observe very clear trends according to level of education as well. People at the lowest levels of education are very strongly underrepresented. Citizens with less than a general school level of education constitute 24 per cent domestically, while among outward migrants they make up only 6 per cent. There is a very marked overrepresentation of people with higher qualifications in the outward migrant population: while they make up 32 per cent of the outward migrant population, they account for only 18 per cent domestically.

As far as EU destination countries are concerned, the United Kingdom dominated the picture after 2004, being one of the first EU member states to open up its borders to the free movement of labour from the east. Since the 2011 opening of their labour markets, however, Germany and Austria have overtaken the United Kingdom as a destination of Hungarian labour migrants. In the case of Austria there is also a significant degree of cross-border labour commuting, some of which is not registered.

Apart from these three major destinations, the Netherlands is worth mentioning as a destination country, accounting for 4 per cent of Hungarian intra-EU labour migrants. There are also small communities in Belgium, Denmark, Spain, Finland, Ireland, Italy, Norway and Sweden within the EU. (Outside the EU the United States is the biggest destination, but Switzerland, Australia, Canada and Israel are worth mentioning.)

83 per cent of Hungarians abroad are working; 3 per cent are enrolled in education; and 4 per cent remain at home.

The overall migrant population of Hungary preserves a very strong living link with the motherland. Only 14 per cent have not visited Hungary in the past year and 25 per cent of them regularly transfer money back to relatives in Hungary. However, only about 10 per cent of them plan to return to Hungary, while about 25 per cent are determined not to return.

5.2.2 GERMANY

Despite the relatively recent opening of its labour market, the largest outward migrant group from Hungary is now working in Germany. This is explainable by geographical and cultural proximity, as well as the size of the country. In addition, German is the second most widely spoken language in Hungary after English.

There are a number of clear characteristics of Hungarian migrant labour in Germany. There is a clear overrepresentation of skilled workers, people with vocational qualifications, who constitute 37 per cent, as opposed to 25 per cent domestically. Not surprisingly, there is a marked gender dimension: there is a marked two-thirds dominance of males in the Hungarian migrant labour community in Germany.

Migrants with higher educational degrees make up 23 per cent of this community, as opposed to 18 per cent domestically and 32 per cent of the total Hungarian labour migrant community outside of Hungary.

The average age of this community is 39 years of age, similar to the total external Hungarian work force; 42 per cent are unmarried and 39 per cent regularly transfer money back to relatives to Hungary.

Table 1
Hungarians employed in Germany ('000)

2010	2011	2012	2013	2014
17	19	33	49	65

Source: German Federal Employment Agency, May 2014.

5.2.3 AUSTRIA

According to the Austrian Statistical Service, some 60,000 Hungarians had a social security registration number, up from 15,000 in 2007. The Hungarian Labour Market Survey found 43,000 of them working; about 35,000 of them reside in Austria, according to Austrian statistics, the rest are likely to commute daily from north-western Hungary.

The Hungarian migrant community in Austria shows an even more marked bias towards the vocational level of education, at 41 per cent. There is an interesting incoherence in cross-border data: while Hungarian surveys show a large male dominance, mirror statistics in Austria, based on registration, indicate the opposite. This might be explainable by a substantial degree of unregistered Hungarian male labour in Austria in certain male-dominated industries.

The average age of Hungarian migrants to Austria (37 years of age) does not diverge from the total Hungarian external labour force; 52 per cent are unmarried and 32 per cent regularly transfer money back to Hungary.

5.2.4 GREAT BRITAIN

Some 24,700 Hungarian citizens are registered in the United Kingdom by the Department of Work and Pensions. We do not know exactly how many of them really work, as the United Kingdom does not publish such stock numbers. The Hungarian Labour Force Survey found about 9,000 Hungarians actively working in the United Kingdom.

The demographic characteristics of Hungarian migrants to the United Kingdom differ from those in Germany and Austria. On one hand, they are significantly younger, with an average age of 33, and on average they were only 29 when they first migrated. Most of them (73 per cent) are unmarried.

Their education levels are also very different. There is a significant overrepresentation of migrant labour with a degree from higher education (36 per cent), as opposed to 18 per cent inside Hungary. At 43 per cent, migrants with secondary school qualifications are also overrepresented, especially in contrast to their 32 per cent presence domestically. Only 6 per cent have low levels of qualification. Only 18 per cent of them regularly transfer money back to relatives in Hungary.

The gender distribution of this group is balanced.

5.3 REASONS FOR OUTWARD LABOUR MIGRATION

There are a number of reasons for the surge in outward migration from Hungary.

- **ADMINISTRATIVE.** Before Hungary's 2004 accession to the European Union there was almost no Hungarian diaspora. Accession meant the opening up of certain labour markets within the EU. For linguistic reasons this mainly meant the United Kingdom, where a Hungarian labour migrant community quickly built up. The geographically and culturally closest target countries – Austria and Germany – remained closed. With the opening up of these two labour markets in 2011 we see a very clear surge in outward labour migration.
- **CULTURAL, LINGUISTIC AND GEOGRAPHICAL.** According to regularly conducted EU surveys, the general linguistic competencies of the Hungarian population are the lowest of all EU member states. Among those who do speak foreign languages, English is the most popular, with 20 per cent of the population claiming to speak it, followed by German, at 18 per cent. This greatly reduces the destination countries of Hungarian migrant labour. The United Kingdom as a global cultural hub, along with the English language, serves as an obvious focal point. The geographical and cultural proximity of Austria and Germany make these »frontline states« obvious destination countries as well. In the case of Austria there is the additional advantage of being able to travel home for the weekend by car or train, although in the age of low cost air travel this is not impossible from elsewhere either. The geographical proximity of Vienna to the Hungarian border also offers an opportunity for daily commuting from a residence on the Hungarian side, which enables people to combine lower costs with higher income.
- **EMPLOYMENT OPPORTUNITIES.** Hungary has one of the lowest employment levels in the EU. The employment rate oscillated in the 60–63 per cent range between 2007 and 2013. Only the southern European crisis countries had lower employment rates within the EU, along with Croatia. On this basis it is the relatively low migration potential of the Hungarian labour force that requires an explanation. In contrast, the destination labour markets exhibit much better employment opportunities. The employment rate of Germany was 74–78 per cent in this period, that of Austria 73–75 per cent, and that of the United Kingdom 74–75 per cent. All these destination labour markets are among the best performers in terms of significantly better employment opportunities than the EU28 average of around 69 per cent. The same can be said about employment opportunities for young people. Hungary had higher youth unemployment rates than the EU average in this period, both Germany and Austria significantly lower, while the United Kingdom was around the EU28 average.
- **LIVING STANDARDS.** A very significant push factor is the non-convergence of living standards. Although both the European Commission and new member state governments herald eastern enlargement as a success story, often referring to GDP, this is not reflected in living standards. One good indicator of this is Eurostat's individual consumption statistic, expressed in euros per inhabitant. Hungary's per capita consumption gap with Austria was 14,400 euros in 2007, which grew to 18,200 euros by 2013. In the same period the relative price levels of the two countries remained virtually unchanged at 1:2. Thus Hungarians experienced a widening gap in their living standards vis-à-vis their neighbours. With Germany the same gap widened from 13,300 euros to 16,900 euros in the same period, once again with a constant price ratio, and with Germany's price levels constantly falling below Austria's. These examples illustrate the realistic perception of divergence rather than convergence in the Hungarian population with regard to the western European »frontline« states, which serves as a major push for labour migration.
- **POLITICS, EDUCATIONAL AND SOCIAL POLICY.** There are some more subjective factors at play as well, which are not so easy to quantify. Hungary is a highly overpoliticised and severely polarised society, in which the majority of the population who voted for the opposition or have not found any political party to vote for are often worried by the unilateralism of the right-wing government. Coupled with international and EU criticism of Hungary's domestic and foreign policy, this leads to an often voiced desire to exit this overpoliticised and antagonistic social environment in search of a more moderate, peaceful and cooperative alternative. It is also worth mentioning that since university fees were reintroduced in Hungary, many families take into account of the fact that both Germany and Austria offer free higher education. For those planning to work long term in another country, it is also significant that the Hungarian social security system has effectively been eliminated in the past decade, whereas the western European alternatives offer very generous social assistance. Many countries even encourage inward labour migration by offering assistance for initial job seeking and integration, Germany being a case in point.

5.4 IMPACT OF OUTWARD LABOUR MIGRATION ON THE HUNGARIAN ECONOMY

Outward labour migration has not yet caused a serious crisis in Hungary's labour market overall. Because we can assume that the most dynamic part of the population has chosen to migrate, it is plausible to believe that complaints from entrepreneurs across sectors about the declining quality rather than about the quantity of the labour supply are well founded. This phenomenon is due partially to the declining performance of the education system itself (demonstrated by the fall in Hungary's 2012 PISA results), but the outward labour migration of dynamic and young employees is likely to have been a contributing factor.

One sector that is often reported to be experiencing bottlenecks due to outward migration is the medical profession. Like most other European countries, Hungary already had a shortage of both doctors and nurses. In the years following the 2004 accession, some 400–650 doctors left Hungary annually, although there was also an inflow of around 80 doctors per year. Most doctors leaving are in their thirties, followed by those in their forties, causing a gradual ageing of the medical profession. According to surveys, some 65 per cent of doctors are contemplating leaving. Naturally, not all such intentions are followed up, but the ratio is nevertheless disturbing. A shortage of doctors is already causing disruptions in less privileged geographical areas, as well as in certain medical specialisations (GPs, radiologists, anaesthesiologists, pathologists). Given that the outflow can be characterised as young and with good linguistic competence, it also has a qualitative as well as a quantitative negative impact, not only on the provision of health, but also on the renewal of medical practices and training.

The training of doctors is of course very expensive and if they are eventually employed outside the country, the net effect is a massive loss of public funds. The conservative Hungarian government has responded by compelling medical students to work in Hungary for a number of years after graduation. This was naturally resisted by students and is likely to have the counterproductive effect of deterring some potential students from the medical profession.

A long-term, sustainable solution would to resolve the push factors that lead to the outward migration of doctors and nurses. The pull factors will be very hard to resolve, as, for economic reasons, medical wage levels in western European countries are certain to remain considerably higher for a long time. At the moment, medical wages in northern and western Europe are six to twelve times as high as in Hungary, depending on destination and specialisation. Recruitment firms carry out intensive campaigns to facilitate the migration flow, thus the flow of relevant information is smooth and abundant. These differences are likely to persist. A lot could be done, however, to dampen the effects of the push factors. Medical wages that provide a respectable living standard domestically could do a lot to mitigate the attractiveness of western European wages and could induce doctors and nurses in particular to geographical areas and specialisations that are experiencing shortages. However, there are other difficulties. Doctors and nurses complain about being overworked without pay on a regular basis, which does not happen to their colleagues who have taken up work in western and northern European hospitals, where working conditions are more regulated. Also, migrant doctors report that medical interventions are legally required to be collectively deliberated, reducing the risk of compensation claims later. The practice is the opposite in Hungary, which increases the stress level of those working in the medical profession. It is also crucially important that the Hungarian health system is chronically underfunded. Many hospitals are de facto in bankruptcy. This results in substandard physical infrastructure, medical instruments and materials, as well as food and physical space for patients. The crisis is especially pressing in the ambulatory care system. Newspaper reports about patients being forced to bring their own medicine and

food are commonplace. The reason is a shortage of funds, because the Hungarian budget is known to be severely short of revenues (due to the lowering of income taxes, low wealth taxes, inefficient tax collection, corruption and so on), while spending lavishly on things that are much less important than the health care system.

5.5 HOW TO MITIGATE THE EFFECTS?

Labour emigration from central and eastern Europe has gathered pace in recent years because, despite the optimistic assessment of eastern enlargement by the EU, the region has not experienced much success on the level of the welfare of ordinary citizens. A quarter of a century has passed since the political and economic transition commenced in 1989. In a similar time period countries such as South Korea or Singapore developed from impoverished Third World countries to affluent ones. Twenty-five years after total annihilation at the end of the Second World War, Germany had already gone through its Economic Miracle, and was one of the richest countries in western Europe again. A single decade into its Celtic Tiger miracle, wages in Ireland overtook British wages. Compared with these real economic convergences, the catch up of central and eastern Europe is questionable.

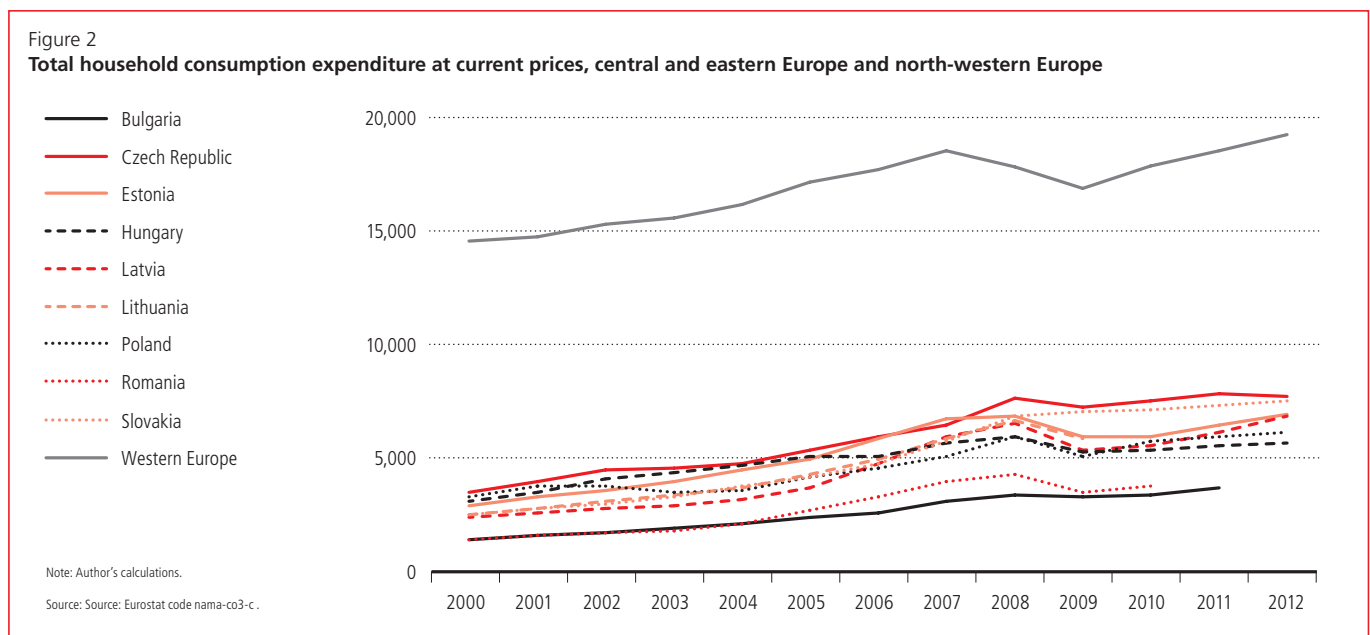
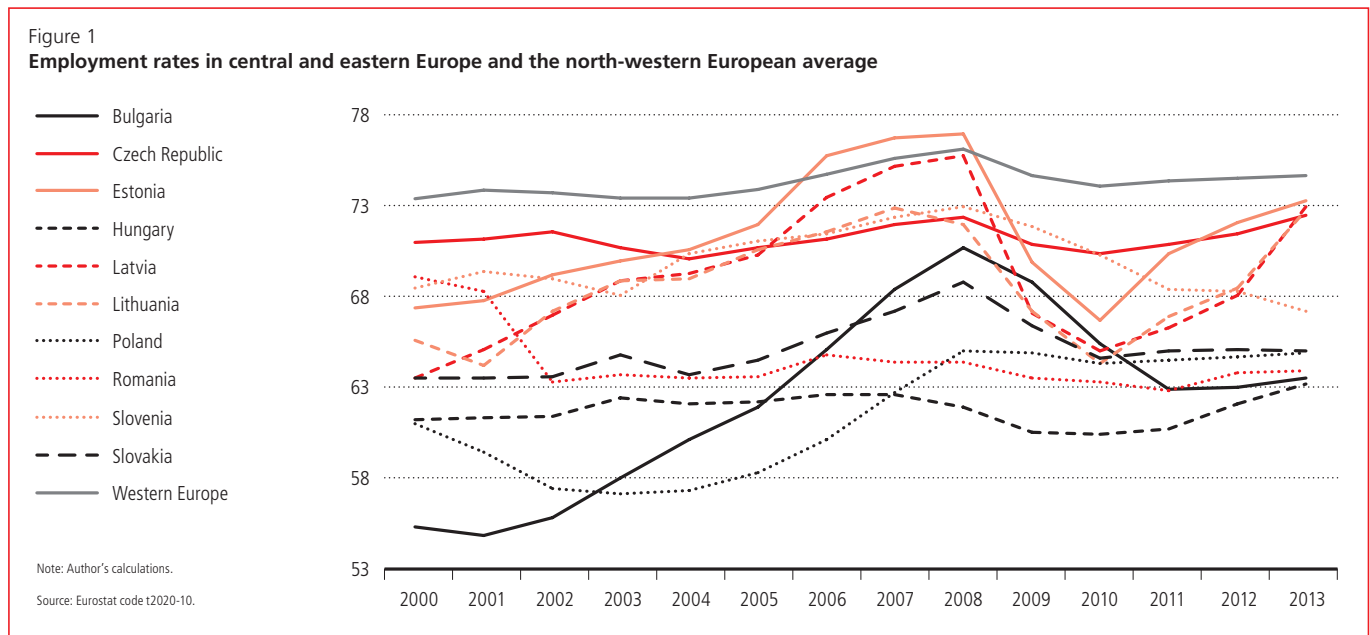
Optimism about the economic convergence of central and eastern Europe is based mainly on the fact that GDP per in the region has converged with western Europe, while in some countries (Slovenia and the Czech Republic) it has overtaken some countries in southern Europe (Greece and Portugal). While this is correct, GDP per capita is not a very good measure of real living standards and economic prospects on the level of individuals.

One major determining factor is the level of employment. It is important to stress that, despite the convergence of GDP per capita levels, employment levels throughout central and eastern Europe remain well below western European¹ levels.

A similarly pessimistic view is obtained from looking at the level of individual consumption, the Eurostat indicator that is probably closest to a practically experienced living standard for individuals.

The chart shows clearly that, despite convergence of output, there has been no convergence in individual consumption. In fact, except for the single case of Slovakia, the gap between western and eastern European consumption levels has increased rather than decreased. As we have already indicated, a quarter of a century in other parts of the world proved to be enough time for unquestionable convergence of living standards. The fact that such a convergence has not taken place in central and eastern Europe explains the socio-economic pessimism of the citizens of this region, expressed in terms of a low birth rate, negligible inward migration and strengthening outward migration.

¹ Austria, Belgium, Denmark, France, Germany, Ireland, Netherlands, Norway, the United Kingdom, Sweden and Switzerland are simplified in this study as 'western Europe'. The EU28 average is an inadequate benchmark, because it includes the Southern European crisis countries.

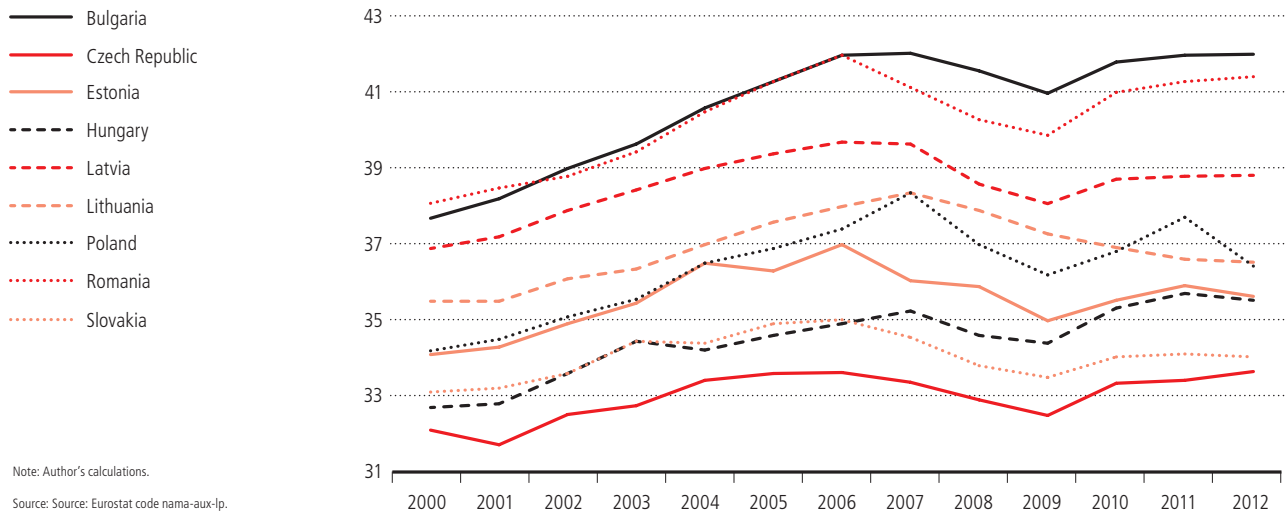


While the nominal income levels of the region have not converged with the West, price levels certainly have. Even the official Eurostat data for individual consumption price levels place the region at around 50–60 per cent of the EU average, as opposed to around 105–115 per cent for western Europe. This in itself demonstrates that price level convergence has been markedly faster than income level convergence. However, we must mention that Eurostat's price level indicators are distorted by the fact that they include the price levels of education and health care. This is highly problematic, especially since free health care and education are essentially available in every EU member state. Thus what price levels in these two sectors measure are partly the wage levels of employees in these sectors: extremely low for the CEE region, high for Western Europe. The data set in Eurostat indicates that essentially for every other price level category

(food, energy, transport, clothes, household appliances) the real price levels in central and eastern Europe, as experienced by citizens, are at around 80 per cent of EU average. This compares with around 105 per cent for western Europe. Thus the price levels in the two macro regions are much closer than the overall consumption level price index of Eurostat indicates.

An additional issue related to income levels is that the statutory minimum wage level in central and eastern Europe is so low that in a social sense it is meaningless. At around 2 euros, the minimum wage levels in the Visegrad region are so low that they are considerably below the living wage in these countries. This means that more than a million Hungarian employees, for instance, are working for a wage that is below the living wage. The minimum wage levels in the Balkans and Baltics regions are often even lower. In western

Figure 3
The productivity gap between central and eastern European economies and western European economies (euros per hour worked)



Europe wages below a living wage are almost completely absent. At around 8.5 to 15 euros, statutory minimum wages and sectoral wage floors are four to seven times as high as they are in the Visegrad region, and even higher in comparison with the Balkans. Thus not only is there an enormous pull factor, but we must also take into account that the low end of the wage scale in Eastern Europe constitutes an unsustainable standard of living, characterised by a constant degradation of physical and mental health, as well as an absence of security. Low minimum wages, as well as low wages in general, are a consequence of extremely weak trade union power in the region. Evidence for this is given by the fact that in twelve countries in northern, western and southern Europe, collective agreements cover more than 80 per cent of all employees. In these countries the average wage share of GDP is 67 per cent. In the Visegrad OECD states (Estonia, Poland, Czech Republic, Slovakia and Hungary) collective agreements only cover around a third of all employees and the average wage share is only 57 per cent.

The most worrying aspect for the future of central and eastern Europe, however, is that the main underlying factors of economic convergence are characterised by unsustainable trends. The key economic indicator for economic convergence is productivity. Taking a closer look at this indicator we find divergence rather than convergence.

The fact that the productivity levels of these countries is not converging but diverging vis-à-vis western Europe is a cause for serious concern. Because it is productivity that enables the convergence of standards of living, there are deep underlying structural reasons why the economic model of the central and eastern European region has not achieved the same rapid convergence as other catch-up regions of the global economy.

The varieties of capitalism (see Hall and Soskice 2001, Schonfield 1965, Schmidt 2002, Amable 2003) research programme in economics has identified the various models of capitalism in our global economy, such as the Anglo-Saxon model, the Scandinavian model, the Continental model and

the Mediterranean model. These models are all to be found in various regions of the European Union. In addition, there is the Far Eastern development state model in Asia. The post-Communist economies of central and eastern Europe² fit into none of these categories, however. They have come to be known as FDI-Dependent Competition States (Cerny 1997; Nölke and Vliegenthart 2009) in the literature. These economies rely on the attraction of foreign investments for development policy. In order to compete for these external resources, they engage in extreme wage moderation, a race to the bottom in terms of taxation and deliberately weaken trade union rights. The state itself carries out almost no public policies, as is the custom in western Europe. Social policy, wage policy, employment policy, regional development, research and development are all expected to be the result of inward investment.

It is clear from comparative data that these expectations are unrealistic. The countries of central and eastern Europe have positioned themselves at the low productivity, low wage end of global production chains (Gereffi et al. 2010 and 1994). In the absence of public policy, the unrealistic expectations of FDI-based convergence have proved to be a dead end. Not only have economic prospects declined, but the region has never developed a strong enough middle class to maintain a vibrant democracy and transparency in public finances. As a consequence, the region is viewed by those contemplating leaving – as well as those who have already done so – as characterised by declining democratic standards and rampant corruption.

The low employment rates, low living standards and negative prospects for convergence have all contributed to an increasing push factor for outward migration from the region. As a consequence, resentment has grown considera-

² But not the former Yugoslav republics of Slovenia and Croatia. The former is closer to the continental model, the latter to the Mediterranean one.

Table 2
Number of Hungarians working in other EU states ('000)

	2000	2004	2010	2011	2012	2013	2014 Q I-III
A	5,308	7,549	18,231	23,475	29,342	42,760	42,253
DE	2,349	4,492	11,383	14,210	24,866	29,288	28,567
UK	680	978	8,349	8,867	9,235	8,866	6,875
Other EU	1,746	6,373	9,689	12,608	13,222	11,486	13,317
Non-EU	n.a.	n.a.	3,714	4,787	5,601	5,581	6,015
Total	10,083	19,392	51,366	63,947	82,266	97,981	97,127

Source: Hungarian Labour Force Survey.

bly in the recipient countries, as evidenced by political forces calling for limiting or even rolling back the free movement of labour in Europe. It is hard to deny that this resentment is based on realistic assessments. Economists might attempt to convince western European citizens that the overall impact of eastern European labour migrants might be positive for their economy as a whole, but this will not change the situation on the ground. Individual citizens will be correct to assume that labour migrants are taking their jobs, lowering their wages and using benefits on a local level. This becomes especially acute in the case of an economic downturn. We must face the fact that the current labour market challenge of eastern European labour migrants on western European labour markets is the consequence of the fact that eastern European EU enlargement was carried out without setting minimum social standards. This resulted in the eastern periphery's lowering the standards of western European welfare states by constructing an economic model based on social dumping.

The sustainable answer, however, is not to be found in rolling back the free movement of labour, but rather in guaranteeing reasonable prospects for those who are contemplating leaving central and eastern Europe. If these EU citizens had favourable medium-term prospects of an improvement in their living standards, even the considerable pull factors of Western affluence would not have a strong effect. Like everyone else, the majority of eastern Europeans would prefer to find their livelihood where they were born and where they grew up, where their friends and family live, and where they have established social networks and cultural roots.

Unfortunately, the European Union as it stands today is incapable of asserting these prospects in eastern Europe (Pogátsa 2015). Its external conditionality in terms of political and social rights was very strong while the CEE region was in the process of accession. Since they have become member states, however, citizens have found that for all the talk of Social Europe, sustainability, transparency, competitiveness and political democracy, the European Union has hard competencies only in the areas of trade policy, competition policy and monetary policy, which all boils down to institutionalised austerity. Its external conditionalities in key areas are significantly weaker than what would be needed to influence eastern European political elites, and best practices within the framework of the open method of coordination raise

no interest in the East, where the FDI-dependent economic model remains dominant.

The long-term, sustainable solution to the issue of increasing labour migration out of eastern European member states is the elimination of the current eastern European economic model, based on social dumping. In order to achieve this, the European Union must legislate a hard *acquis* in the following crucial areas:

- (i) a meaningful European minimum wage;
- (ii) strong trade union rights, including sectoral wage negotiations in accordance with the Rehn-Meidner model, as well as high collective agreement coverage; and
- (iii) minimum benchmarks for investment in human capital, including per capita spending on education, research and development.

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6

LATVIA: PERMANENT DEPARTURE

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6.1 SCALE OF EMIGRATION FROM LATVIA

According to data from the Central Statistical Bureau of Latvia, from 2000 until 2014 around 332,000 people emigrated from Latvia, while 94,000 immigrated. Net migration has thus left Latvia with a deficit of 248,000 people, which corresponds to more than 12 per cent of the Latvian population.

Emigration was considerable even before Latvia joined the European Union (EU) in 2004, but after accession, as we shall show, the destination countries and patterns of emigration changed.

6.2 WHO EMIGRATES?

According to seminal research by Hazans (2011) on recent Latvian emigration, its patterns have changed. There were three emigration waves between 2000 and 2004. The first wave of around 50,000 people took place in 2000–2003; it had wide geographic dispersion and was dominated by highly educated and entrepreneurial people. The second wave happened after Latvia's accession to the EU, involved 70,000 people and was concentrated on Ireland, the United Kingdom and Sweden. This wave had a larger share of people with lower educational attainment, as the costs of emigration had diminished substantially compared with the pre-accession period. The third wave was linked to the economic crisis in

Latvia in 2008–2010 and high unemployment (above 30 per cent among low-skilled workers in 2009). Today, emigration continues, albeit at a much lower rate than in 2008 and 2009. In contrast to earlier emigrations, the emigrants of 2008 and later years have been dominated by highly skilled workers, have a manifest tendency to leave Latvia forever and depart together with their families (Hazans 2011).

Given this scale of emigration, Latvia's economic development is under serious risk.

6.3 COMPOSITION OF EMIGRANTS

A substantial part of those who have emigrated from Latvia are people under the age of 35. In fact, three-quarters were under 35 years of age at the point of departure.

According to the Labour Force Survey, 19 per cent of Latvians employed abroad have a tertiary education and 12 per cent only a basic education; 69 per cent – the majority – have a secondary education. According to Hazans (2013), each successive wave of emigration had a different share of people with a tertiary education, although in all waves it was above 20 per cent. Thus, in the 2000–2003 wave it was 32 per cent, in 2004–2008 21.5 per cent and in 2009–2010 27 per cent. Altogether, on average, in 2000–2010 24.2 of emigrants had a tertiary education.

Table 1
International long-term emigration by country group, Latvia (number of people)

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
TOTAL	20,167	17,643	17,019	15,463	27,045	38,208	39,651	30,311	25,163	22,561
EU28	11,898	12,993	11,604	9,790	19,154	29,283	30,417	23,810	19,087	16,503
EU15	11,025	12,408	11,029	9,244	18,250	27,757	28,609	23,025	18,395	15,655
EU candidate countries	18	27	14	18	64	68	81	19	30	55
EFTA	498	536	422	529	1,047	1,393	1,406	2,191	1,741	1,396
other countries	7,753	4,087	4,979	5,126	6,780	7,464	7,747	4,291	4,305	4,607
CIS	5,930	2,860	3,948	4,018	5,083	5,224	4,911	3,758	3,698	3,741

Table 2
International long-term immigration by country group, Latvia

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
TOTAL	4,844	6,691	8,212	7,517	4,678	3,731	4,011	10,234	13,303	8,299
EU28	1,926	1,648	2,383	3,433	2,955	1,712	1,524	6,271	7,305	4,794
EU15	984	913	1,528	1,947	1,598	1,119	1,060	5,597	6,232	4,211
EU candidate countries	12	16	11	60	12	41	43	88	87	40
EFTA	58	51	57	95	76	83	51	319	282	295
Other countries	2,848	4,976	5,761	3,929	1,635	1,895	2,393	3,556	5,629	3,170
CIS	2,233	4,294	5,160	3,100	1,211	1,552	1,998	2,876	4,771	2,572

The distribution of highly educated emigrants by destination country is as follows (Hazans 2013): United Kingdom 28 per cent, Ireland 15 per cent, continental Europe 30 per cent and other 36 per cent.

6.4 ECONOMIC IMPACT OF EMIGRATION

At the time of EU accession, the population of Latvia was considerably younger than the average of the old EU member states. However, due to low fertility rate in the 1990s generational replacement has become much slower in Latvia than in many other parts of the EU and, compounded with the emigration of young people, Latvia's population is not only quickly ageing, but also shrinking. From 2004 to 2013 the number of people in Latvia decreased from 2.28 million to 2 million, and projections show that it will diminish further to 1.63 million by 2030 (see Figure 1).

At the regional level, the trends are even more worrisome. The Riga (capital) region comprises more than one-third of Latvia's population and has been a traditional destination for young people from other parts of the country. Consequently, because of external and internal migration and demographic decline, between 2004 and 2013 the number of people decreased by 18 per cent in Latgale region, 15 per cent in Vidzeme region and 14 per cent in Kurzeme region. At the same time, the old age dependency ratio became much higher in these regions, and there are already a few counties in which retired people comprise one-third of the population.

Potential emigration from Latvia remains very high. Although gradually diminishing, the gap in income levels between Latvia and the EU15 countries remains considerable. Thus, in 2014 the minimum statutory wage in Latvia was 360 euros, while in the EU15 it was around 1,400 euros. Moreover, almost every Latvian household has a family member or a friend abroad, which makes departure much easier for those who have stayed at home, as family members and friends can help them to find an appropriate job abroad. Hazans (2011) describes this as an effective migrant network which will continue to exert its influence for years to come (see Figure 2).

6.5 POLICY RESPONSE

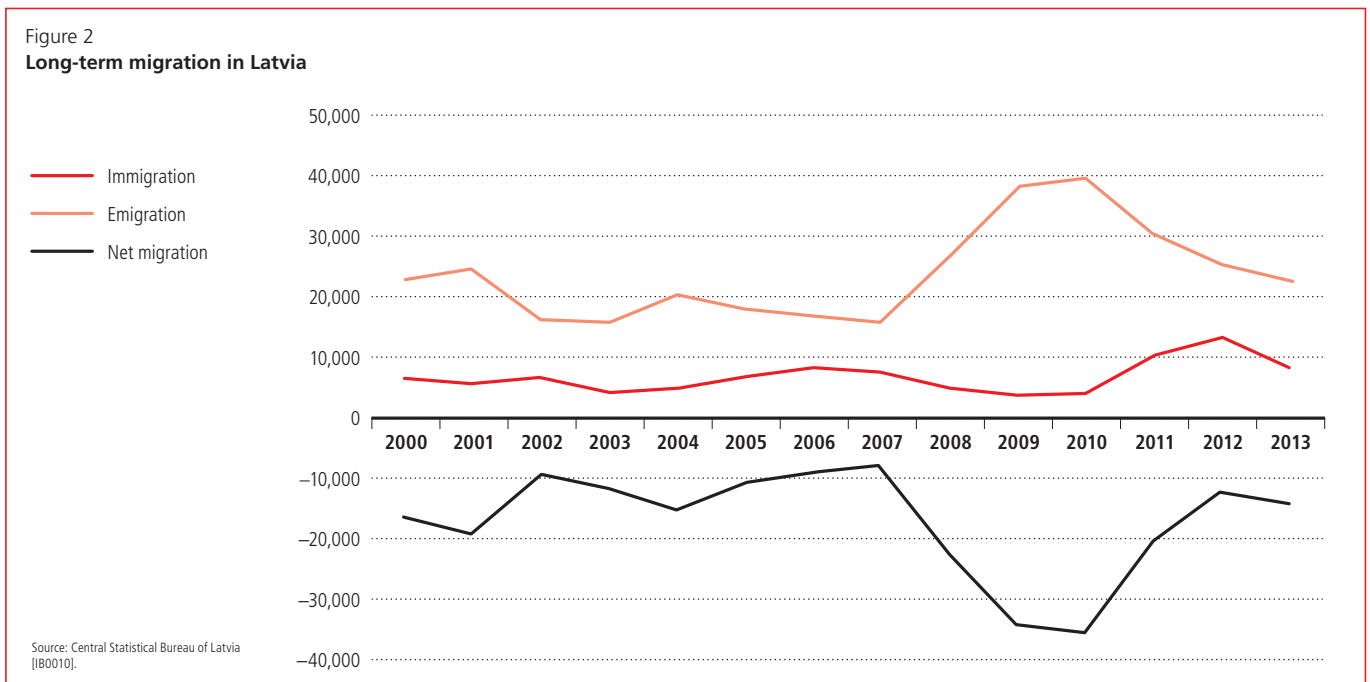
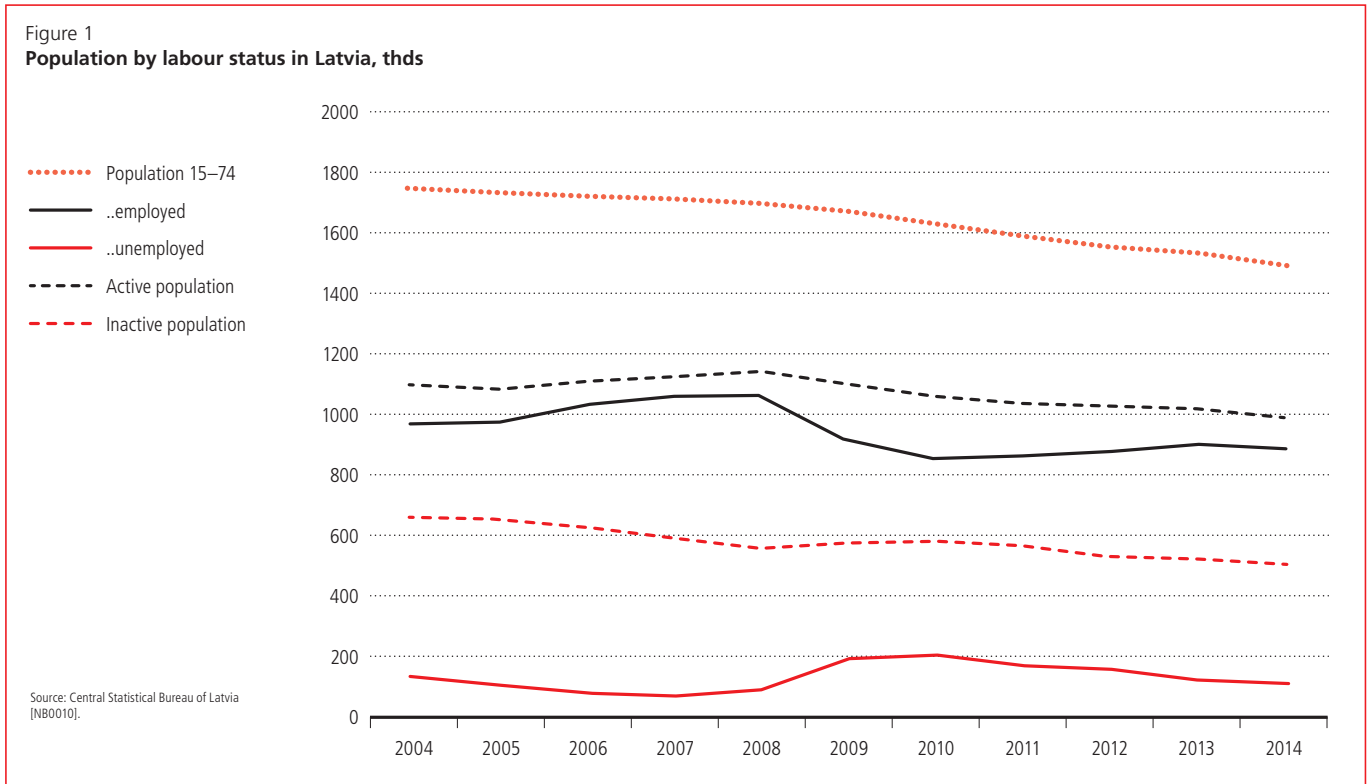
The Latvian government has become more attentive to the problem of outmigration and eventual shortages of labour since the 2011 national census. In response to the shocking figures on emigration and demographic decline revealed by the census (see the section on statistics in this chapter), the government prioritised strengthening the capacity of the public administration to communicate with émigrés and support to Latvian diaspora communities abroad. Moreover, the government has supported the establishment of the Centre for Diaspora and Migration Research at the University of Latvia, which opened in 2014. The government has also commissioned a wide-ranging scientific project entitled »Latvian émigré communities: national identity, transnational relations and diaspora policy«. ³ In the course of this project, which started in January 2014 and is ongoing, 14,068 people of Latvian descent were interviewed in 118 countries. Its aim is to provide comprehensive and generalisable data on Latvian emigrant communities.

6.6 IMMIGRATION TO LATVIA

Immigration to Latvia is increasing, roughly in accordance with the EU average of 0.4 per cent of population, although it does not match emigration from Latvia. However, a large proportion of those who immigrate are repatriating Latvian nationals or third-country nationals. Thus, in 2012, out of 13,303 immigrants 7,305 arrived from EU28 countries (6,232 from EU15) and 5,629 from non-European countries (see Table 2). Yet, according to Eurostat data, ⁴ out of 13,303 arrivals Latvian nationals accounted for 9,637 or 72 per cent. Third-country nationals numbered 3,127 or 23.5 per cent, while EU15 countries accounted for a mere 223 or just 1.7 per cent. What is more, supposedly the majority of non-Latvian immigrants to Latvia from EU28 were from neighbouring Lithuania and Estonia.

³ For more details see <http://www.slideshare.net/lufsi/latvijas-emigrantu-kopienas-pirmo-ptjuma-rezulttu-apkopojums>.

⁴ See Eurostat data table »Immigration by five year age group, sex and citizenship [migr-imm1ctz]«.



Latvia’s government has adopted a restrictive immigration policy for nationals from third countries. Only highly educated or skilled may receive a work permit. Before permission is granted, a domestic market test lasting one month is carried out for the vacancy.

6.7 IMPACT OF MIGRATION ON THE LABOUR MARKET, SKILLS FORMATION AND EQUALITY IN LATVIA

Latvia's economic fortunes since EU accession have been very unstable. During the first four years – from 2004 to 2007 – Latvia's economy boomed, growing close to 30 per cent in nominal terms shortly before the crash. This boom was fuelled by foreign capital inflows, while emigration and foreign labour remittances were a significant factor adding to the growing internal and external economic imbalance. During the boom years, unemployment fell to 5.3 per cent, a record low for Latvia. Later, from 2008 to 2010, Latvia suffered a dramatic economic slump. The global financial crash of 2008 had extremely nasty repercussions for Latvia. The bubble burst, turning Latvia from a growth champion into a nosediving Icarus. In the course of two years, between the third quarter of 2008 and 2010 – from peak to trough – Latvia lost 28 per cent of its economy, representing the deepest crash ever experienced by a developed economy during peace time. Consequently, unemployment soared, reaching its apogee at 21.3 per cent in the first quarter of 2010. Unemployment was particularly high among males aged 15–24, at 41 per cent. Without emigration, the economic hardship would have been even more severe. Emigration acted as a safety valve for many who had lost their job and income, but had debts or difficulty sustaining their family.

Hazans (2011) notes that a substantial majority of those who left Latvia before and after the crisis were employed before departure, 87 per cent and 84 per cent, respectively. In later years, for example, 2011, this rate dropped to 52 per cent (Hazans 2013). This observation confirms the assumption that wage differences matter more than employment difficulties when people take the decision on departure. The good news is that the departure of economically active people opened up employment opportunities for people who were inactive, thus fostering labour participation.

The educational attainment of the Latvian population has been increasing despite emigration. This development seems to confirm the hypothesis on emigration's positive impact on the educational attainment of those who stay behind, which is explained by the simple fact that the chances of getting a better paid job abroad motivate people to advance their education. Thus, according to statistics, the share of Latvians with upper secondary or tertiary education attainment increased from 75.9 per cent in 2000 to 83.4 per cent in 2013 among 15–64 year olds, while the share of those with higher education increased from 15 per cent to 27 per cent in the same period. The number of students enrolled in higher educational institutions increased between 2000 and 2007. During and since the crisis, however, enrolment has been declining.

Hazans reports that a high proportion of Latvian emigrants are working in jobs below the level of their qualifications and skills. In fact, among low-skilled emigrants this is very frequent, close to 80 per cent, but even in the case of medium-skilled emigrants it is around 50 per cent and among the high-skilled 40 per cent. These findings broadly match the results of the ongoing Latvian emigrants research project (Mieriņa 2015).

Latvia's Ministry of the Economy (Ekonomikas Ministrija 2015) assesses that, in order to sustain economic growth of around 4–5 per cent a year, Latvia will have to find extra 27,600 labour (3.2 per cent of total labour demand in 2014) by 2020. The areas in which most extra labour demand will come are processing industry, trade and commercial services. The Ministry does not see problems with labour supply/demand mismatch, as according to its calculations labour supply will exceed labour demand by 6.5 per cent in 2020 and by 5.8 per cent in 2030. The shrinking population would be compensated through substantial return migration and higher labour participation. At the same time, the Ministry points to the development of substantial labour/skills imbalances. First, there will be shortage of high- and medium-skilled labour (30,900 and 6,900 persons, respectively, by 2020) and excess low-skilled labour (10,200 by 2020). Second, by 2020, there will be 20,000 excess high-skill specialists in the humanities and social studies, but shortages of engineers, IT specialists and scientists of about the same magnitude. The Ministry also finds that too large a proportion of young people in Latvia have no specific profession or are low-skilled, which is worrisome as demand for such labour will substantially diminish, in fact, by ¼ by 2030.

Unfortunately, in the case of Latvia, emigration has not contributed much to greater equality of income between different groups of society.⁵ Initially, between 2004 and 2008, the GINI coefficient fell from 51.2 to 47.2, indicating an improvement in income equality. However, during the crisis the improvement withered away and the GINI jumped to 52.3 in 2011. Henceforth, the situation has improved slightly, as the GINI gradually fell to 50.3 in 2014. In fact, Latvia, along with Bulgaria, Greece and Romania are the most unequal countries in the EU, with the income level of the richest quintile exceeding that of the poorest quintile by more than seven times.

Immigration to Latvia has been very low so far, a mere 0.4 per cent of the population. Among these immigrants a considerable majority are Latvian nationals returning home from western countries. As far as the employment prospects of returnees are concerned, Hazans (2011) reports that the employment rate among them is much higher (around 66 per cent) than among the Latvian population without foreign experience. Likewise, the share of business people and self-employed is higher among returnees than among the Latvian population without foreign experience (6 and 4 per cent, respectively).

⁵ Theoretically, emigration can lead to more equal distribution of income if those who emigrate are low-skilled, as their departure pushes up wages for those low-skilled and, at the same time, puts downward pressure on the wages of those high-skilled staying behind. Plus, earnings abroad increase the household budget of departing low-skilled people.

The preliminary data of the research project »Latvian émigrés' communities: national identity, transnational relations and diaspora policy«, point to following patterns:

- Latvian emigrants, on average, appeared to be more satisfied with life than people in Latvia and in their destination countries.
- Before departure, around 80 per cent had experienced some sort of financial difficulties and around 45 per cent were under severe financial stress.
- Close to 70 per cent of Latvian emigrants in 2014 were employed or self-employed during the first year of their stay abroad,
- On average, 39 per cent of Latvian emigrants had a job abroad that matched their skills. This rate was higher among the emigrants with tertiary education, at 57 per cent. Compared with their last employment in Latvia, 24 per cent had a job at a lower skill level, while 7 per cent had a job with a higher skill level.
- 7 per cent of émigrés had increased their skill level while living abroad.
- Most Latvian emigrants had kept close ties with Latvia: 40 per cent have real property in Latvia and another 40 per cent admit that they could buy some in the future. Moreover, 25 per cent of émigrés think that they could establish business links with Latvia after a while.
- 18 per cent of émigrés surveyed had divided residence between Latvia and their destination country, and 24 per cent felt that they did not belong to a particular place, but felt like citizens of the world.
- Of those who have emigrated, only 6 per cent planned to return to Latvia within six months; 12 per cent thought that they would return in five years and another 14 per cent after retirement; 40 per cent admitted that they would consider returning, while 30 per cent declared that they would never return.
- Those who planned to return tended to be under 30 years or males with low skills, or with a job for which they were overqualified, or used to live in the countryside or a small town before departure, or had left family in Latvia.
- Friends, relatives and home sickness were the most frequent motives for return.
- On the other hand, the lack of appropriate work in Latvia, the low level of social security and the shortage of professional opportunities were the most frequently cited obstacles to returning to Latvia.

6.8 IMPACT ON LATVIA'S ECONOMIC GROWTH AND TECHNOLOGICAL DEVELOPMENT

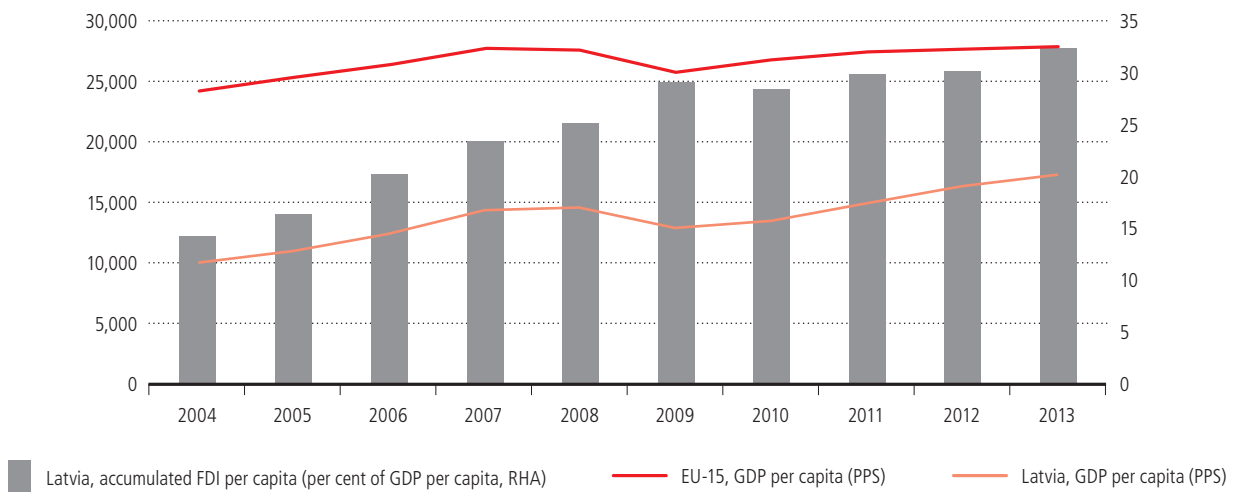
Emigration was a catalyst of the overheating of Latvia's economy in 2004–2007. During the crisis of 2008–2010, by contrast, emigration acted as a safety valve both for the population and the government. For individuals it offered them a chance to sustain their income despite the deep economic slump in Latvia. For the government, emigration eased popular tensions and helped to avoid a major revolt against the political elite; it also helped to save money on unemployment and other social benefits, thus reducing pressure on the already heavily stressed fiscal situation. Moreover, remittances from those working abroad were considerable and boosted aggregate demand during the slump: the Bank of Latvia puts the total amount of these remittances at between 2 and 3 per cent of Latvia's GDP. No specific measures, however, have been taken to channel these remittances into the productive sectors of Latvia's economy and one can assume that a large part of this money is spent on consumption and that the government benefits mainly through higher VAT receipts.

Awareness of the risks stemming from emigration is not equally shared among Latvian economists and views differ on emigration's impact on Latvia's future economic development. For example, according to Hazans (2013) and other academic researchers, emigration has reached levels that »pose a threat to the reproduction of the Latvian population, the country's economic development and the sustainability of its social security system«. Meantime, monetary economists from the Bank of Latvia claim (Melihovs 2014) that net migration will be irrelevant for Latvia's population dynamics in the medium term, as emigration will recede as Latvia's economy improves and incomes converge with the more developed EU member states. Likewise, as already reported in this article, also the specialists of the Ministry of Economy do not see emigration as a burden to labour market future expansion.

It seems that the economists of Latvia's governmental sector underestimate the risks of shrinking population and market. The literature on migration underlines that »the migratory process should be analyzed as a long-term social process with its own dynamics« (Carrera et al. 2015). Migration will not succumb so easily to the dynamics of economic development. Indeed, »largely permanent departure of the younger and more educated workers may indeed be costly for those who stay« (Blanchard 2013), as emigration entails loss of resources invested in raising and educating these people. The Latvian Ministry of Economy predicts that the demographic burden will rise by 21 per cent by 2030, from 550 to 665 per 1,000 employed persons.

All in all, Latvia's economy is suffering from emigration which has caused a considerable shrinkage of the labour force, and labour remittances can only partially compensate the negative impact on growth, finds Hazans (2013). According to Holland et al. (2011), based on numbers of emigrants until 2009, Latvia will lose 3.3 per cent of its growth potential because of emigration. GDP per capita will also diminish, by

Figure 3
FDI and GDP in Latvia, per capita



Source: Eurostat [nama-gdp-cl], [bop-ext-intpos]

0.7 per cent.⁶ Hazans (2013) is even more pessimistic, and estimates that the impact has been greater if one takes into account the scale, age and educational level of people departing from Latvia; he puts the impact at -9 per cent.

Latvia's future technological advancement is difficult to assess. Will Latvia be able to converge with the more developed EU member states or is it doomed to permanent convergence? Indeed, emigration, which shrinks the population and hence domestic demand and labour force, in combination with demographic decline discourages investment, both foreign and domestic. Moreover, today, at least hypothetically, it is much cheaper to move people to the west than to build a new factory in the east. The statistics indicate that in Latvia gross capital formation fluctuated around 23 per cent of GDP between 2011 and 2014 (IMF 2014). As far as foreign direct investment is concerned, the inflows are diminishing, from 5.2 per cent in 2011 to 1.5 per cent of GDP in 2014. Meanwhile, the stock of foreign direct investment increased from 45 per cent of GDP in 2010 to 49.9 per cent in 2014 (Latvijas Banka 2014). Latvia became a member state of the euro zone in 2014; FDI inflows were seen as one of the attractions of euro adoption by the Latvian public. However, these expectations have not yet materialised. Certainly, Latvia's proximity to Russia, the Ukrainian conflict and sanctions against Russia may have reduced investors' propensity to invest in the country. At the same time, the lack of business opportunities due to a shrinking domestic market also has played a role (see Figure 3)

In this situation technological advancement becomes crucial. In order to survive, businesses in Latvia will have to adjust to higher labour costs through innovation and productivity enhancement measures. There are already some good signs.

The share of people with tertiary education and employed in science and technology is increasing among the economically active population in Latvia, reaching 18.7 per cent (compared with 23.7 per cent in Lithuania and 20.8 per cent in Estonia). Also, the share of high-tech exports is growing, from 4.6 per cent of total exports in 2007 to 8 per cent in 2013. However, the number of patents has been decreasing since 2008 and stood at 13.83 patents per million people in 2012, which is low (the corresponding EU28 reference was 226.09 patents in 2012). It is quite possible that the economic volatility inherent in small economies discourages companies from investing in research and development activities in these countries, and causes them to outsource new product development to centres of excellence abroad (Kattel 2010). If this is true, it will not be possible to resolve this problem at domestic level. Instead, action will have to be taken at the EU level, ensuring a fair division of research work across all EU member states.

⁶ According to Holland et al., other countries destined to lose substantially from emigration are Latvia's neighbours Lithuania (-6 per cent) and Estonia (-3.0 per cent).

7

SPAIN: LABOUR MARKET MOBILITY AS SAFETY VALVE?

Berta Moreno-Torres Sánchez, Relance Consultores

Summary

- This chapter presents an analysis of recent migration flows in Spain with the aim of estimating the flow of highly qualified workers in general and in the European Union in particular (intra-EU). The study is based upon information gathered by the Spanish National Institute of Statistics (mainly, Migration Statistics and the Labour Force Survey).
- The estimated data suggest that Spain has become a net provider of highly qualified working age people to other EU countries. Indeed, the net balance between highly qualified intra-EU immigration and emigration flows became negative in 2009 and has increased markedly in the following years (the net balance in 2013 was 124 per cent above the 2009 figure). By 2013, intra-EU highly qualified emigration flows exceeded the corresponding immigration by 35,186 people. Although the rise of non-Spanish EU citizens moving abroad largely explains the net loss of highly qualified EU people in Spain, emigration of Spanish born people from Spain (mainly to the United Kingdom, France and Germany) is gaining increasing relevance in explaining the negative net balance.
- From a national perspective, it can be argued that emigration of highly qualified Spanish nationals (born in Spain), though increasing, is not massive in absolute or relative terms. But fears of an emerging brain drain cannot be ignored, especially if unemployment conditions do not improve in the near future; network effects between Spanish emigrants are starting to function and emigration is tending to become permanent.

7.1 INTRODUCTION

During the last expansionary period of the Spanish economy (1996–2006), the country attracted huge immigration flows, while emigration was negligible. This pattern changed shortly after the beginning of the recent economic crisis. The unemployment crisis in Spain is particularly severe and persistent (the unemployment rate peaked at 26.9 per cent in 2013, but unemployment has hit young people, at over 55 per cent, and immigrants, at around 40 per cent, even harder). In such an economic context, since 2009 migration inflows have sharply fallen, while emigration is rising. All in all, Spain seems to be in transition from massive immigration to large-scale emigration.

Although the high level of emigration is due mainly to foreigners resident in Spain who are leaving the country, migration flows of Spaniards have accelerated in recent years. Moreover, their distribution is biased towards young people and more educated people. The new emigration pattern has caught the attention of the media, which is warning of an emerging brain drain in Spain. However, the extent to which emigration in Spain may be categorised as a brain drain is questionable.

Against this background, in this chapter we investigate empirically the importance of migration flows of highly qualified people in Spain, thus providing evidence of brain gain/brain drain processes. The analysis is developed in an EU perspective. Accordingly, data on migration flows – both in general and concerning highly qualified people – will be presented separately for the EU (inflows and outflows of EU nationals versus non-EU citizens).

The chapter is organised as follows. First, I describe the data sources used to measure migration and highly qualified migration flows. Second, I present an overview of the recent history of international migration in Spain, which makes it easier to understand more recent events. Next, I focus on recent migration flows (2008 until 2014 H1) of the highly qualified working age population in order to draw conclusions about brain gain/brain drain in Spain. The last section presents an overview of the main Spanish agents' positions with regard to current migratory trends and reviews the potential economic and social effects of such trends.

7.2 METHODOLOGICAL REMARKS

Following the general framework proposed by Professor Teney, highly qualified immigrants/emigrants will be operationalised as immigrants/emigrants with a tertiary degree. Moreover, it would be ideal to assess brain drain and gain considering both the stock and the flows of highly qualified migrants, thus providing a complete picture of a possible brain drain or gain process.

The statistical data available for analysing Spanish stocks and flows of highly qualified people are reviewed below. There are severe data limitations on determining the educational level of migrants precisely, particularly with regard to Spanish emigrants. As a consequence, a key challenge of this investigation is to estimate the number of migrants with a tertiary degree.

As far the stock of immigrants living in Spain is concerned, the Municipal Registers (Continuous Municipal Register Statistics) of the National Institute of Statistics (INE) provide annual data on the population of Spaniards and foreigners residing in Spain. Moreover, considerable detail is provided on the country of origin of foreigners in Spain, thus allowing us to be precise about the level of intra-EU immigration (overall and by EU member state).

In turn, the Labour Force Survey (LFS) of the National Institute of Statistics can be used to estimate the percentage of immigrants with a tertiary degree (highly skilled). However, due to sample limitations, details by country/region of origin are scarce. Indeed, this source reports the number/percentage of EU citizens (Spanish excluded) that have a tertiary education, without further details with regard to member state.

Regarding the stock of Spanish nationals living abroad, the National Institute of Statistics gathers information based on registers of Spanish consulates and embassies. The resulting statistics (Register of Spanish Citizens living Abroad, PERE in Spanish), with data available since 2009, present information on the country of birth and country of destination, among others, but no data are reported on the educational level of Spanish emigrants.

Moreover, it is likely that PERE underestimates the number of Spaniards living abroad, because it is related mainly to voting rights and therefore does not include Spanish citizens who do not want to vote in Spanish elections and decide not to register. This poses a major objection to the use of this source for analysing a potential brain drain or gain process, because conclusions could be dramatically biased by an underestimation of the emigrant stock.

The possibilities for estimating rigorously the stock of highly qualified Spanish emigrants are hindered by the lack of socio-economic data on emigrants, a drawback often mentioned in the literature (Gonzalez 2013). The Labour Force Survey allows us to approximate the educational level of recent Spanish emigrants, but these data cannot be used to infer the educational level of »historical« emigrants (many of whom left the country in the 1960s and 1970s).

All in all, two major limitations call into question an analysis of the stock of Spanish emigrants who are highly qualified. First, the statistics providing information on the total number of Spaniards resident abroad may be underestimated. Second, robust statistical data necessary to make a reasonable

estimate of the percentage of highly qualified Spaniards living abroad are lacking.

On the other hand, until recently the only source for analysing immigration and emigration annual flows was the Residential Variation Statistics (in Spanish, Estadística de Variaciones Residenciales) gathered by the INE, available since 2002. More recently, the INE has created Migration Statistics (in Spanish, Estadística de Migraciones), based upon the Residential Variation Statistics. The new Migration Statistics gathered by the INE provide data about international immigration and emigration flows since 2008 (2014 H1 represent the latest available data). The results are disaggregated by age, sex, nationality, country of origin and destiny. This new statistic, which complies with Regulation (EC) No 862/2007 of the European Parliament on Community statistics on migration and international protection, will be used in this chapter to describe migration flows.

In the absence of more precise statistical information, the Labour Force Survey will be employed to estimate the immigration and emigration annual flows of working age (aged 15–64, captured by the Migration Statistics) highly qualified people (with a tertiary degree):

- Immigrants. Education level is taken from the LFS, using information on individuals who resided abroad one year previously in each particular year and have a tertiary degree (differentiating between Spaniards born in Spain, Spaniards born abroad and foreigners – from Europe, America, Asia and Africa).
- Emigrants. In this case, the percentage of recent (within a year) highly qualified emigrants is estimated using information on household members who are temporarily working abroad. Due to sample limitations, these data can be obtained only for Spanish emigrants (born in Spain and abroad). In the absence of better information sources we use as a proxy the educational level attained by the stock of immigrants resident in Spain provided by the LFS.

Bearing in mind data availability and limitations, the inflows and outflows of highly educated people (aged 15–64, with a tertiary degree), between 2008 and 2013 will be analysed to assess brain gain and drain in Spain. As we have explained, data on total flows are taken from the Migration Statistics, while the LFS helps us to estimate the percentage of highly educated migrants.

Due to the severe limitations of data on the stock of Spanish emigrants, with regard to both the number of emigrants and their educational level, we have opted to restrict the analysis to migrant flows. Nevertheless, we consider that this is not a relevant drawback to addressing the key issue in this chapter, namely the emergence of a brain gain or brain drain process in recent years. Because emigration flows of Spaniards clearly began to increase by 2010, an analysis of flows since 2008 may be extremely useful in order to assess whether a trend may be detected towards gaining or losing highly qualified citizens.

Table 1
Spanish population by nationality

	Spaniards	Foreigners	Total population	% Foreigners/ Total population
1996	39,127,079	542,314	39,669,393	1.4%
2007	40,681,183	4,519,554	45,200,737	10.0%
2008	40,889,060	5,268,762	46,157,822	11.4%
2009	41,097,136	5,648,671	46,745,807	12.1%
2010	41,273,297	5,747,734	47,021,031	12.2%
2011	41,439,006	5,751,487	47,190,493	12.2%
2012	41,529,063	5,736,258	47,265,321	12.1%
2013	41,583,545	5,546,238	47,129,783	11.8%
2014	41,747,854	5,023,487	46,771,341	10.7%

Source: INE (Municipal Register). Population as of 1 January.

Table 2
Foreign people living in Spain, by nationality

Number of people	1998	2007	2008	2009	2010	2011	2012	2013	2014
EU MS	289,335	1,710,166	2,104,424	2,274,978	2,351,939	2,397,014	2,445,242	2,360,978	2,056,903
Rest	347,750	2,809,388	3,164,338	3,373,693	3,395,795	3,354,473	3,291,016	3,185,260	2,966,584
Total	637,085	4,519,554	5,268,762	5,648,671	5,747,734	5,751,487	5,736,258	5,546,238	5,023,487
% over total foreigners	1998	2007	2008	2009	2010	2011	2012	2013	2014
EU MS	45.4%	37.8%	39.9%	40.3%	40.9%	41.7%	42.6%	42.6%	40.9%
Rest	54.6%	62.2%	60.1%	59.7%	59.1%	58.3%	57.4%	57.4%	59.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% over total Spanish population	1998	2007	2008	2009	2010	2011	2012	2013	2014
EU MS	0.7%	3.8%	4.6%	4.9%	5.0%	5.1%	5.2%	5.0%	4.4%
Rest	0.9%	6.2%	6.9%	7.2%	7.2%	7.1%	7.0%	6.8%	6.3%
Total	1.6%	10.0%	11.4%	12.1%	12.2%	12.2%	12.1%	11.8%	10.7%

Notes. For the sake of comparability, EU includes always the 28 MS present after Croatia integration in 2013.

* Source: INE (Municipal Register) and own elaboration

7.3 RECENT TRENDS IN SPANISH MIGRATION⁷

Recent migration history in Spain can be divided into two phases. The first started in the mid-1990s and ended around 2010. In this period Spain received many people from all over the world. Integration in the European Community and the new welfare state that was being built fostered these large immigration flows (Cachon 2012), in a climate of economic and employment expansion. Furthermore, the adhesion of central and eastern European countries to the European Union had a particular impact on immigration flows from

certain new member states, notably Romania and Bulgaria. By contrast, migration outflows were negligible in the period 2000–2005, but started to increase in 2006.⁸

These immigration flows led to a significant change in the composition of the Spanish population. According to the Municipal Registers, foreign people multiplied tenfold between 1996 (542,314) and 2010 (5.7 million). The share of foreign population increased sharply: foreign citizens living in Spain represented 1.4 per cent and 12.2 per cent of total Spanish population in 1996 and 2010, respectively (Table 1).

The second stage started in 2010. In a context conditioned by the severe economic crisis and the unemployment crisis, the foreign population first stagnated (2010–2012) and then started to decline in 2013. In 2010, the foreign

⁷ Due to the severe limitations of the Register of Spanish Citizens Living Abroad (PERE), the data provided about the stock of Spanish people living outside Spain are not reported. However, the final part of the section shows data about recent migration in Spain (Spanish and foreigners).

⁸ According to the Residential Variation Statistics, annual emigration flows amount to 26,889 people on average in 2002–2005.

population reached a peak of 5.7 million people, followed by a reduction (728,000 foreigners left between 2010 and 2014) that became more severe in 2014 (522,751 foreign residents fewer than the previous year). Relative to total population, foreigners accounted for 10.7 per cent of Spanish population in 2014 (1.5 percentage points less than in 2011).

Concerning EU migration, the entry of (non-Spanish) EU citizens to Spain was substantial in the expansionary period of the Spanish economy and maintained positive growth till 2012 (although it was moderate in 2009–2012 compared with the pre-crisis period). In 2012, a maximum level of 2.4 million EU citizens resident in Spain was attained (42.6 per cent of total foreigners and 5.2 per cent of Spanish population), a figure that had multiplied tenfold since 1998:

- Foreign EU citizens mainly came from Central and Eastern Europe, in particular from Romania (897,203 persons, 36.7 per cent of total non-national EU citizens in Spain) and Bulgaria (76,411, 7.2 per cent). It should be emphasised that inflows from these two countries have experienced the largest increases in absolute and relative terms since 1998 (with few exceptions), evidencing the impact of access to EU labour markets.
- Western European citizens also accounted for a significant share of non-national EU citizens in Spain by 2012, in particular German and British people. According to the Municipal Registers, 397,892 and 196,878 citizens from the United Kingdom and Germany, respectively, were living in Spain in 2012 (16.3 per cent and 8.1 per cent of total EU immigrants). Although the number of citizens from these two countries has significantly increased since 1998 in absolute terms (+322,292 citizens from the United Kingdom and +136,383 from Germany), the relative variation is significantly low compared with other EU countries. This highlights the fact that western European citizens have a longer tradition of residence in Spain, mainly due to the popularity of the country as a retirement destination.
- Southern Europeans from Italy and Portugal also had a noticeable presence in Spain's population by 2012. Possibly due to the geographic and cultural proximity, Portuguese people have traditionally accounted for a substantial share of EU immigrants. In 1997, there were 35,960 Portuguese in Spain (12.4 per cent of total EU immigrants), rising to 138,682 in 2012 (5.7 per cent). As far as the Italian population is concerned, its presence was relatively low in 1997 (19,287 citizens), but it increased sharply in the following years. By 2012, there were 191,901 Italian citizens living in Spain (7.8 per cent of total EU immigrants).

After achieving a peak in 2012, the number of non-national EU citizens resident in Spain decreased substantially, especially in 2014. In particular, this population group experienced a reduction of 388,339 people between 2012 and 2014 (–15.9 per cent). This recent pattern of declining EU population in Spain is general among all member states (with few exceptions that are irrelevant in absolute terms). By group of countries, some interesting patterns can be discerned:

- Western European countries with a high presence in the pre-crisis period registered the highest reductions after 2012, both in absolute and relative terms. The amount of UK people decreased by 97,606 between 2012 and 2014 (–24.5 per cent). The fall in the number of German residents is also noticeable (56,367 Germans, 24.5 per cent of the stock of these residents in 2012).
- The number of non-national citizens from central and eastern Europe, in particular from Romania and Bulgaria, also marks a noticeable decrease in absolute terms, but the relative reduction is considerably lower than that of western Europe residents. The number of Romanian residents in Spain decreased by 100,149 between 2012 and 2014 (–11.2 per cent), while 24,832 Bulgarians left (–14.1 per cent).
- As far as southern European residents are concerned, the decline in the number of Portuguese is remarkable in both absolute (28,974 between 2012 and 2014) and relative terms (–20.9 per cent). Italian residents have also left Spain, but to a comparably lower extent compared with Portuguese people or EU citizens in general (the number of Italian residents decreased by 5.7 per cent between 2012 and 2014).

Although the report's focus is intra-EU migration, it is necessary to review the figures on non-EU migration in order to provide a complete picture of migration in Spain. To begin with, it should be emphasised that the majority of immigrants – around 57 per cent – come from outside the EU. Such immigrants numbered 347,750 in 1998 and their number grew enormously in the following years. By 2010, the peak level of this population group was attained, with 3.3 million non-EU citizens in Spain (59 per cent of total immigrants). Since that year there has been a gradual but significant reduction in the number of non-EU immigrants, falling to 1 million (2010–2014).

Non-EU migration is highly concentrated by nationality. In 2010, Moroccans accounted for 22.2 per cent of the total (754,080) and South American nationals for as much as 45.1 per cent (1.5 million). Moroccan immigration maintained an increasing (but moderate) trend until 2014 when, for the first time, a reduction in this population group was registered (–17,775 people). By contrast, the number of South Americans resident in Spain has fallen substantially since 2009, when the number was 1.59 million, to 0.9 million in 2015. In other words, by 2015 the number of South American immigrants had decreased by roughly 600,000 citizens in relation to 2009.

The main conclusions about intra-EU immigration that emerge from the data can be summarised as follows:

- Intra-EU citizens resident in Spain do not represent the majority of foreigners in the country. On average, EU immigrants accounted for 40 per cent of total foreigners in Spain (2007–2014).
- The presence of EU citizens in Spain grew substantially in the period of economic growth. In 2012, a peak of 2.4 million EU residents was attained, up tenfold on 1998. EU residents came mainly from central and eastern European countries (in 2012, 36 per cent and 7 per cent

Table 3
Annual flows of immigrants and emigrants in Spain, by nationality

Immigration flows	2008	2009	2010	2011	2012	2013	2014-H1 (provl)
Spanish citizens	31,701	27,596	30,418	35,442	31,565	32,422	17,951
Born in Spain	15,670	14,500	13,836	16,602	15,345	15,671	8,700
Born abroad	16,031	13,096	16,582	18,840	16,220	16,751	9,251
Foreigners	567,373	365,369	330,283	335,892	272,484	248,346	138,113
Non Spanish EU MS	168,367	123,998	127,959	128,848	100,320	90,418	52,372
Other nationalities	399,006	241,371	202,324	207,044	172,164	157,928	85,741
Total	599,074	392,965	360,701	371,334	304,049	280,768	156,064
Emigration flows	2008	2009	2010	2011	2012	2013	2014-H1 (provl)
Spanish citizens	33,505	35,990	40,157	55,472	57,267	73,329	42,685
Born in Spain	25,479	26,352	29,220	40,184	38,778	48,136	27,026
Born abroad	8,026	9,638	10,937	15,288	18,489	25,193	15,659
Foreigners	254,927	344,128	363,221	353,562	389,339	458,974	163,808
Other EU MS	88,202	130,228	135,534	106,768	134,952	164,153	57,799
Other nationalities	166,725	213,900	227,687	246,794	254,387	294,821	106,009
Total	288,432	380,118	403,379	409,034	446,606	532,303	206,492
Immigration-Emigration	2008	2009	2010	2011	2012	2013	2014-H1 (provl)
Spanish citizens	-1,804	-8,394	-9,739	-20,030	-25,702	-40,907	-24,734
Born in Spain	-9,809	-11,852	-15,384	-23,582	-23,433	-32,465	-18,326
Born abroad	8,005	3,458	5,645	3,552	-2,269	-8,442	-6,408
Foreigners	312,446	21,241	-32,938	-17,670	-116,855	-210,628	-25,695
Other EU MS	80,165	-6,230	-7,575	22,080	-34,632	-73,735	-5,427
Other nationalities	232,281	27,471	-25,363	-39,750	-82,223	-136,893	-20,268
Total	310,642	12,847	-42,678	-37,700	-142,557	-251,535	-50,428

Source: Migration Statistics (INE) and own elaboration

of total EU immigrants come from Romania and Bulgaria, respectively) and western Europe (UK residents accounted for 16.3 per cent of total EU residents in 2012, Germany for 8.1 per cent). Southern EU immigrants from Portugal and Italy also account for a significant share of EU citizens living in Spain (5.7 per cent and 7.8 per cent in 2012, respectively).

- Between 2012 and 2014, the number of EU citizens resident in Spain decreased by 15.9 per cent (-388,339 EU immigrants). Although the reductions in the number of Romanian and Bulgarian nationals are marked, in relative terms German and UK citizens account for the largest decreases (-24 per cent between 2012 and 2014).

7.3.1 ANNUAL INFLOWS AND OUTFLOWS

The new migration statistics gathered by the National Institute of Statistics allow us to perform a global analysis of immigration and emigration flows since 2008, complementing the analysis of the stock of immigrants based upon Municipal Registers. The data reported in Table 3 highlight interesting stylised facts about recent migration trends and the EU aspect of migration flows.

To begin with, the data eloquently illustrate the decline in immigration inflows. The annual decrease was sharp in 2009 (392,965 new immigrants, 34 per cent below the figure recorded in 2008). In the following years, immigration flows continued to fall annually (except in 2011). In 2013, inflows amounted to 280,768 citizens (53 per cent less than the figure recorded in 2008).

The inflow of Spanish citizens, who can be considered returned migrants in the case of the Spanish-born, is relatively small compared with the total (around 30,000 new entries each year) and does not change substantially in the period under consideration. In fact, the observed reduction in immigration is caused by the decrease of inflows from EU countries (excluding Spain) and, notably, from non-European countries. As far as non-Spanish EU migration flows are concerned, these fell from 168,367 in 2008 to 90,418 in 2013 (-46.3 per cent). Non-EU immigration inflows decreased even more, falling from 399,000 in 2008 to 157,928 in 2013 (-60.4 per cent).

On the other hand, emigration flows jumped from 288,432 citizens in 2008 to 532,303 in 2013 (+84 per cent). No doubt, these increasing outflows are explained largely by the gradual rise in emigration of non-Spanish EU citizens (86 per cent in 2013 compared with 2008) and non-EU citizens

(76 per cent); the former represent 55.4 per cent of total exits in 2013, while 30.8 per cent are due to emigration of non-EU residents.

However, emigration of Spanish citizens plays some role in explaining the evolution of total outflows, the annual flow of Spaniards who leave the country having increased from 33,505 citizens in 2008 (11.6 per cent of total emigration) to 73,329 in 2013 (13.8 per cent of total emigration). This represents an increase of 118.9 per cent between 2008 and 2013, well above that of foreigners.

All in all, the data on outflows tend to support the claim that the emigration of Spanish nationals is gaining new relevance, due to the severity and length of the economic crisis. Admittedly, part of this emigration flow is due to Spanish nationals born abroad (29 per cent on average), which may reflect return migration of citizens that have acquired Spanish nationality. But exits of Spanish nationals born in Spain have clearly increased, from 25,479 in 2008 to 48,136 in 2013, thus supporting the claim that there is a new emigration trend of Spaniards in response to the economic crisis. The fact that a significant share of Spanish born emigrants are young people aged 15–29 years of age (21.4 per cent of total flows from 2008 to 2014, H1⁹) or people aged 30–44 (36 per cent) has further created alarm (attributed to the lack of work prospects in the Spanish economy).

The net balance (difference between immigration and emigration flows) illustrates the changing pattern of migration in Spain, from immigration to emigration. In 2008, Spain could be still described as a country of large-scale immigration, because net inflows (immigration minus emigration) were equal to 310,642 (6.7 net entries per 1,000 Spanish people). By 2010, net entry became negative, highlighting the predominance of emigration over immigration flows. The negative balance has increased substantially in the past few years: by 2013, net inflows amounted to –251,535 (5.3 persons per 1,000 Spanish people left the country).

The negative net balance registered by non-EU citizens 2010 is a major reason for the new dominance of immigration over emigration flows in Spain: by 2013, net inflows of this population group were equal to –136,893 (54 per cent of total net inflow). But migration movements of both non-Spanish EU citizens and Spanish citizens have also increased in importance to explain the evolution of net inflows in recent years:

- The net inflow of non-Spanish EU citizens has been negative since 2008 (an exception being 2011). In 2013, the balance between immigration and emigration flows of such citizens was –73,735, accounting for 29 per cent of the global net balance.
- Spanish nationals (born in Spain) net inflow was already negative by 2008, with a dramatic increase in the following years. In 2013, the net migration balance of Spanish nationals born in Spain was equal to –32,465, 3.3 times the one registered in 2008. Relative to the total balance, Spanish nationals born in Spain accounted for 13 per cent in 2013

⁹ This share rises to 28 per cent of total emigration to EU member states.

7.4 HIGHLY QUALIFIED MIGRATION FLOWS

In this section we focus on Spanish migration flows of highly qualified migrants, which enables us to investigate any brain gain or drain process. For this purpose, we estimate migration flows of working age population (15–64)¹⁰ with a tertiary degree, using data from the Migration Statistics and the Labour Force Survey. As we emphasised in the methodological section, data limitations on level of education oblige us to analyse the figures obtained with caution, especially those regarding foreign emigrants.

Following the conceptual framework proposed by Professor Teney:

- Intra-EU immigration flow relates, in the Spanish case, to the population (15–64) of non-Spanish EU citizens who immigrated in Spain in a given year. Accordingly, total immigration is broken down into three categories: intra-EU immigration, Spanish immigration (of Spanish nationals born in Spain) and non-EU immigration (including Spanish nationals born abroad).
- Intra-EU emigration flow refers to EU citizens who migrated to other EU member states in a given year (including Spanish born citizens who migrated to an EU country). Total flows include outflows of non-EU citizens and of Spanish nationals born abroad who move to a non-EU country.

7.4.1 INFLOWS

In order to analyse inflows of highly qualified immigrants, we present information about the percentage of new immigrants¹¹ with a tertiary degree. According to the data reported in Figure 1, the percentage of highly qualified new intra-EU immigrants is equal to 20.8 per cent of the total group in 2008–2012, a percentage below the one recorded by non-EU immigrants (23.7 per cent, 2.9 percentage points above).

This relatively low presence of intra-EU highly qualified new immigrants is largely explained by the relevance of flows from central and eastern European countries (previously reported) with low skills. Actually, the education level of total EU immigrants resident in Spain has decreased substantially in recent years (41 per cent had a tertiary degree in 2005, 29 per cent in 2012), which can be attributed to the increasing presence of new member state immigrants (with low education levels compared with immigrants from the EU15).¹²

¹⁰ It is worth mentioning that working age population (aged 15–64) accounts for the vast majority of inflows and outflows of migrants (presented in the previous section). Regarding immigrants, the working age group accounts for 80 per cent of non-Spanish EU inflows, 66 per cent of Spanish inflows and 80 per cent of non-EU inflows (average 2008–2014).

¹¹ Recent immigrants are individuals who resided abroad one year ago in each particular year, according to LFS data.

¹² See, for instance, Gonzalez et al (2013).

Table 4
Immigration flows of highly qualified people (aged 15–64)

Number	2008	2009	2010	2011	2012	2013	2014-H1
Intra-EU immigration	28,659	21,133	21,766	21,872	16,603	14,721	8,738
Spanish born in Spain	6,939	6,231	5,936	7,102	6,575	6,662	3,687
Intra EU + Spanish born	35,598	27,364	27,702	28,974	23,178	21,383	12,425
Other immigration	72,085	44,830	40,218	43,094	36,520	34,347	18,741
Total	100,744	65,963	61,984	64,967	53,123	49,068	27,479
% total	2008	2009	2010	2011	2012	2013	2014-H1
Intra-EU immigration	28%	32%	35%	34%	31%	30%	32%
Spanish born in Spain	6.9%	9.4%	9.6%	10.9%	12.4%	13.6%	13.4%
Intra EU + Spanish born	35%	41%	45%	45%	44%	44%	45%
Other immigration	72%	68%	65%	66%	69%	70%	68%
Total	100%	100%	100%	100%	100%	100%	100%
Number/population (1000)	2008	2009	2010	2011	2012	2013	2014-H1
Intra-EU immigration	0.6	0.5	0.5	0.5	0.4	0.3	0.2
Spanish born in Spain	0.2	0.1	0.1	0.2	0.1	0.1	0.1
Intra EU + Spanish born	0.8	0.6	0.6	0.6	0.5	0.5	0.3
Other immigration	1.6	1.0	0.9	0.9	0.8	0.7	0.4
Total	2.2	1.4	1.3	1.4	1.1	1.0	0.6

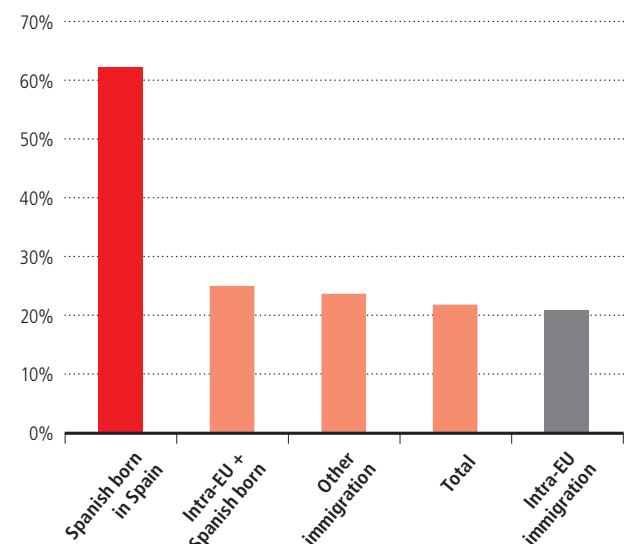
* Source: INE (Migration Statistics, LFS) and own elaboration

The education level of Spanish recent immigrants is very high compared with intra-EU immigrants or non-EU immigrants. Indeed, 62 per cent of Spanish recent immigrants have a tertiary degree, a figure well above the 20.8 per cent registered among intra-EU immigration (non-Spanish EU nationals) and other non-EU immigrants (23.7 per cent). Given the severe difficulties faced by the Spanish labour market, it is not surprising that those who return are mainly highly educated, thus enjoying a better prospect of accessing the Spanish labour market.

As far as the annual inflows of highly qualified people (aged 15–64) are concerned, the decrease experienced since 2008 is remarkable, with the exception of flows of Spanish nationals born in Spain, that remained roughly constant (Table 4). Total immigration flows (intra-EU and other) amounted to roughly 100,000 citizens in 2008, a figure that had halved by 2013 (49,068). In terms of total population, the inflow of highly qualified immigrants was equivalent to one person per 1,000 Spanish people in 2013 (2.2 in 2008).

In turn, the annual flow of highly qualified intra-EU immigrants fell from 28,659 citizens in 2008 to 14,721 in 2013 (–48 per cent). This reduction was slightly lower than the one registered by non-EU immigration flows (–52 per cent in 2013 flows compared with 2008). As a consequence, the share of intra-EU highly qualified immigration (with respect to the total) increased slightly (from 28 per cent in 2008 to 30 per cent in 2013, achieving a peak of 35 per cent in 2010). In terms of total population, the inflows of highly qualified EU immigrants halved between 2008 (0.6 new EU HQ citizens per 1,000 Spanish people) and 2013 (0.3).

Figure 4
Percentage of recent immigrants with a tertiary degree (average 2008–2012)



Source: LFS data reported by Izquierdo et al (2015), Migration Statistics (INE) and own elaboration.

Highly qualified immigration of Spanish nationals born in Spain (return migration) is low with regard to total flows. The annual inflow of this group remained fairly constant in the period under consideration. On average, around 6,500 highly qualified Spaniards returned to the country between 2008 and 2013. Due to the decrease in non-Spanish immigrants, the relative importance of Spanish nationals born in Spain with regard to total inflows on highly qualified immigrants has risen (6.9 per cent in 2008 to 13.6 per cent in 2013).

It is of considerable relevance within the framework of this report is to analyse the educational level of intra-EU immigrants, compared with highly qualified intra-EU immigrants, by country or region of origin. Unfortunately, the available data do not provide detailed information about EU immigrants by educational level.¹³ We could only provide an approximation by analysing inflows by country of people aged 15–65, but such an approach would be highly questionable because it ignores possible differences in the educational level of migrants from each member state.

SUMMARY

- Inflows of Spanish nationals born in Spain are dominated by highly qualified people (62 per cent of total Spanish recent emigrants). The educational level of recent EU immigrants is markedly low (20.8 per cent have a tertiary degree), possibly as a consequence of the high proportion of immigrants from EU member states with low qualifications (compared with the EU15).
- Intra-EU highly qualified immigration flows account for 31 per cent of total flows (average 2008–2013) and Spanish born immigrants represent 10 per cent.
- The annual flow of highly qualified intra-EU immigrants fell by 48 per cent between 2008 (28,659 new EU citizens) and 2013 (14,721). The reduction is slightly lower than that of non-EU immigration flows (–52 per cent).
- The annual inflow of highly qualified Spanish (born in Spain) immigrants changed little in the period under consideration. On average, around 6,500 highly qualified Spaniards returned to the country between 2008 and 2013.

7.4.2 OUTFLOWS

Due to severe data limitations, the analysis of emigrants' educational level is more difficult than in the case of immigrants. Data about the educational level of Spanish nationals born in the country or abroad who recently decided to emigrate¹⁴

may be approximated using the LFS. The data employed¹⁵ suggest that in recent years (2008–2012) Spanish emigration has been dominated by highly qualified workers. Around 55.3 per cent of Spanish born in Spain emigrants have a tertiary degree, indicating that the better qualified are more likely to leave the country. On the other hand, 38 per cent of Spanish nationals born abroad who emigrate have a tertiary degree.

Concerning the educational level of non-Spanish emigrants, in the absence of better information sources we use as a proxy the educational level attained by the stock of immigrants resident in Spain provided by the LFS. By 2014, the percentage of EU citizens resident in Spain with a tertiary degree was 31 per cent, a figure that will help us to determine the annual flows of highly qualified EU emigrants. In turn, the percentage of foreign residents in Spain with a tertiary degree was 49 per cent among non-EU European citizens, 18 per cent among South American citizens and 10 per cent among people from other countries. These figures will be used to approximate the annual exits of these groups. The main criticism that can be made of such an approximation is that it assumes that the emigration decisions of foreigners living in Spain are not influenced by their educational level, an assumption that is not supported by the group of Spanish born emigrants (mostly highly educated). Hence, data on the emigration of highly qualified foreigners (EU and other countries) possibly underestimate the exits of highly qualified non-Spanish EU citizens.¹⁶

Without ignoring the limitations imposed by data availability, analysing the estimated annual emigration flows of highly qualified people, presented in Table 5, highlights several interesting stylised facts.

To begin with, in a general climate of increasing emigration flows, the exit of highly qualified citizens (Spanish and foreigners) has intensified since 2008. The number of highly qualified emigrants aged 15–64 was 62,579 in 2008. After several years of increasing outflows, a peak was achieved in 2013: 114,331 highly qualified citizens left Spain. The increase in annual outflows between 2008 and 2013 is marked in both absolute (+51,752) and relative terms (82 per cent).

Intra-EU emigration of highly qualified people, which by definition excludes emigration of Spanish nationals born abroad and Spanish nationals who migrate to non-EU countries, has followed the general increasing trend pointed out above. The annual flow of intra-EU highly qualified emigrants amounted to 56,569 citizens in 2013, a figure well above the one recorded in 2008 (31,448). The increase in annual outflows between 2008 and 2013 was 80 per cent, slightly lower than that of total emigration of highly qualified people (82 per cent). Accordingly, the participation of intra-EU highly qualified emigration flows has fallen to some extent (50.3 per cent and 49.5 per cent of total HQ emigration was intra-European, in 2008 and 2013, respectively).

Concerning the nationality of intra-EU highly qualified emigrants, Spanish nationals (born in Spain) account for a

¹³ Even using LFS information on the stock of immigrants, data on education are provided for the EU (excluding Spain) without additional details by EU member state or groups of member states.

¹⁴ Using information from household members who are temporarily working abroad, on the hypothesis that when Spanish nationals decide to emigrate, the head of the household normally moves first and is subsequently followed by the rest of the family.

¹⁵ Reported by Izquierdo et al. (2015).

¹⁶ Underestimation would be present if outflows were biased towards more educated people, as happens with Spanish people born in Spain.

Table 5
Outflows of highly qualified people (aged 15–64)

Number	2008	2009	2010	2011	2012	2013	2014-H1
Intra-EU emigration	31,448	43,030	44,294	40,557	47,004	56,569	22,384
Spanish born in Spain	5,179	5,114	5,789	8,190	7,515	9,113	5,305
Other EU citizens	26,269	37,917	38,504	32,367	39,489	47,456	17,079
Other emigration	31,131	38,078	40,775	45,802	47,875	57,762	24,021
Spanish born in Spain	5,072	4,895	5,507	7,832	6,978	8,631	4,845
Other citizens	26,059	33,183	35,267	37,970	40,897	49,131	19,176
Total	62,579	81,109	85,068	86,359	94,879	114,331	46,405
% total emigration	2008	2009	2010	2011	2012	2013	2014-H1
Intra-EU emigration	50.3%	53.1%	52.1%	47.0%	49.5%	49.5%	48.2%
Spanish born in Spain	8.3%	6.3%	6.8%	9.5%	7.9%	8.0%	11.4%
Other EU citizens	42.0%	46.7%	45.3%	37.5%	41.6%	41.5%	36.8%
Other emigration	49.7%	46.9%	47.9%	53.0%	50.5%	50.5%	51.8%
Spanish born in Spain	8.1%	6.0%	6.5%	9.1%	7.4%	7.5%	10.4%
Other citizens	41.6%	40.9%	41.5%	44.0%	43.1%	43.0%	41.3%
Total	100%	100%	100%	100%	100%	100%	100%
Number/population (1000)	2008	2009	2010	2011	2012	2013	2014-H1
Intra-EU emigration	0.7	0.9	0.9	0.9	1.0	1.2	0.5
Spanish born in Spain	0.1	0.1	0.1	0.2	0.2	0.2	0.1
Other EU citizens	0.6	0.8	0.8	0.7	0.8	1.0	0.4
Other emigration	0.7	0.8	0.9	1.0	1.0	1.2	0.5
Spanish born in Spain	0.1	0.1	0.1	0.2	0.1	0.2	0.1
Other citizens	0.6	0.7	0.8	0.8	0.9	1.0	0.4
Total	1.4	1.7	1.8	1.8	2.0	2.4	1.0

* Source: INE (Migration Statistics, LFS) and own elaboration.

minor part of these outflows. In 2008, it is estimated that 5,179 highly qualified Spaniards migrated to other EU countries (19.7 per cent of total intra-EU emigration). These flows experienced a marked increase after 2010, achieving a peak in 2013. In that year, 9,113 highly qualified Spaniards moved to another EU country (+76 per cent compared with 2008).

Outflows of Spanish nationals born in Spain (aged 15–64) to EU countries are highly concentrated by country of destiny. The United Kingdom has been the EU country preferred by Spanish emigrants (30.6 per cent of total migration to the EU from 2008 to 2014 H1), followed by France (20 per cent) and Germany (19.4 per cent). This may capture, to some extent, the destiny of the subgroup of highly educated Spanish new emigrants (55 per cent of the total), mainly to western and central European countries.

As far as non-Spanish EU citizens are concerned, outflows started to rise in 2009. By 2013, 47,456 highly educated EU citizens (excluding Spaniards) had left Spain (84 per cent of total intra-EU emigration). The increase in annual flows of this population group was 80.7 per cent between 2008 and 2013, 4 percentage points above that registered by Spaniards.

SUMMARY

- Intra-EU emigration flows represent around 50 per cent of total inflows of highly qualified people in Spain.
- Between 2008 and 2013, the flow of intra-EU emigration increased by 80 per cent. In 2013, it is estimated that more than 55,000 highly qualified Europeans moved out of Spain.
- The total number of Spanish nationals born in Spain that moved abroad (to other EU member states or other parts of the world) increased by 73 per cent between 2008 and 2013. By 2013, around 17,000 highly qualified Spaniards had emigrated (52 per cent moved to other EU countries).

Table 6
Net balance of highly qualified intra-EU migration flows (people aged 15–64)

Number	2008	2009	2010	2011	2012	2013	2014-H1
Intra-EU immigration	35,598	27,364	27,702	28,974	23,178	21,383	12,425
Spanish born in Spain	6,939	6,231	5,936	7,102	6,575	6,662	3,687
Other EU citizens	28,659	21,133	21,766	21,872	16,603	14,721	8,738
Intra-EU emigration	31,448	43,030	44,294	40,557	47,004	56,569	22,384
Spanish born in Spain	5,179	5,114	5,789	8,190	7,515	9,113	5,305
Other EU citizens	26,269	37,917	38,504	32,367	39,489	47,456	17,079
Immigration-Emigration	4,150	-15,666	-16,592	-11,583	-23,826	-35,186	-9,959
Spanish born in Spain	1,760	1,118	146	-1,088	-940	-2,451	-1,618
Other EU citizens	2,390	-16,783	-16,738	-10,494	-22,886	-32,735	-8,341

* Source: INE and own elaboration

7.4.3 NET BALANCE¹⁷

The net balance between intra-EU immigration and emigration of highly qualified people in Spain has become negative and shows an upward trend (Table 6). In 2008, net intra-EU inflows (immigration minus emigration) amounted to 4,150; in other words, Spain received more educated EU citizens (including Spanish nationals born in Spain) than it lost to other EU countries. However, the net balance has been negative since 2009 (-15,666), tending to increase in subsequent years (except for 2011). In 2013, the negative net balance peaked at -35,186.

No doubt, the emergence of a rising negative net balance of highly qualified migrants is explained mainly by the evolution of inflows and outflows of non-Spanish EU citizens. This group accounts for the bulk of intra-EU immigration and emigration in Spain. Accordingly, the fall in immigration flows of these EU citizens, together with increasing exits, is crucial in explaining the negative balance of intra-EU migration in Spain. In 2013, the net balance of highly qualified EU citizens, excluding Spanish nationals, was -32,735 (93 per cent of total net balance).

As far as highly qualified Spaniards (born in Spain) are concerned, it must be stressed that the entry of Spaniards from other EU countries was larger than the corresponding departures until 2010. The balance between intra-EU immigration and emigration of highly qualified Spaniards was negative from 2011 due to the increase in emigration (because immigration tended to remain fairly constant in the period under consideration). The net balance amounted to -1,088 in 2011 and reached a peak of -2,451 in 2013 (after falling in 2012).

In conclusion, the data suggest that Spain is now providing highly qualified people to other EU labour markets in greater measure than it is receiving them. The upward trend in emigration of non-Spanish EU citizens to other EU coun-

tries largely explains the loss of highly qualified EU citizens in Spain. But highly qualified Spaniards (born in Spain) have also started to move to other EU countries, in greater measure than other Spaniards are returning. This means that, since 2011, Spain has been a net contributor of highly qualified working age people to the EU.

From a national perspective, it is worth taking into consideration all migration flows (intra-EU and non-EU) of highly qualified Spaniards (born in Spain) in order to draw conclusions about a potential brain gain or drain process.¹⁸ The data reported in Table 7 show, as already pointed out, that immigration flows of highly qualified Spanish nationals were roughly constant between 2008 and 2013 (around 6,500 highly qualified Spanish nationals aged 15–64 return each year). Contrarily, emigration flows tend to rise year on year, achieving a maximum in 2013 (17,744 exits, 51.4 per cent to EU countries). The net balance between emigration and immigration is negative during the period under consideration, but it multiplied by a factor of 3.3 between 2008 (-3,312) and 2013 (-11,082). Moreover, this increasing negative net balance is also likely to have been a feature in 2014, provided that flows recorded in the first half of the year remained constant in the second half. On that assumption, the net balance in 2014 would yield a figure close to -13,000.

The conclusion that can be derived from these data is that few Spanish nationals with a tertiary degree have left the country, in absolute and relative terms. An aggregation of outflows between 2008 and 2013 yields a figure of 89,967 highly qualified Spanish emigrants, which represents 0.9 per cent of the total population. In a context of a profound unemployment crisis, such exits may be considered mainly as labour mobility, serving as an absorption mechanism for asymmetric shocks in the euro zone.

However, there seems to be reason for concern about the emergence of a brain drain. To begin with, the estimated outflows of highly qualified Spanish nationals born in Spain have

¹⁷ For the sake of comparability of inflows and outflows with a national perspective, in this section intra-EU immigration includes immigration of Spanish people born in Spain (from other EU countries).

¹⁸ The phenomenon of a brain drain can be related to the total number of highly educated people who leave the country, irrespective of the destination of these emigrants.

Table 7

Annual migration flows of highly qualified Spaniards (born in Spain)

Number	2008	2009	2010	2011	2012	2013	2014-H1
Immigration	6,939	6,231	5,936	7,102	6,575	6,662	3,687
Emigration	10,251	10,009	11,297	16,023	14,494	17,744	10,150
Net balance	-3,312	-3,778	-5,361	-8,921	-7,918	-11,082	-6,463

* Source: INE and own elaboration

risen sharply in the past few years (73 per cent between 2008 and 2013). Unless economic recovery and labour market conditions significantly improve in the short run, these flows could intensify and become permanent. Research by the Bank of Spain (2015) has found, large-scale emigration could occur if employment conditions do not improve and network effects among Spanish emigrants start to operate. All in all, we cannot ignore the possibility of a significant brain drain in Spain in the coming years.

Moreover, qualitative information about highly qualified Spanish emigrants moving abroad – reported in the next section – highlights that, beyond the aggregate data, Spain has been losing top level professionals in recent years. These exits, explained by the lack of opportunities in Spain, threaten the current and future prospects of strategic sectors of the economy.

7.5 IMPLICATIONS

Even though labour mobility in Spain is certainly not a new phenomenon, the nature of Spanish migration flows has caught public attention in Spain and academia since 2011. The existence of a brain drain is often pointed out, although there is no consensus about its precise meaning (whether the exit of leading scientists, the emigration of young people with a tertiary degree provide or the departure of talented people in general) and its magnitude.

Concern about a brain drain in Spain was initially confined to academia. The progressive reduction of spending on education and research since 2009 led to the emigration of world-class Spanish scientists. The press has reported on this and on the reasons given by scientists, that is, the lack of government support for R&D. To mention a few cases,¹⁹ Oscar Main, a neuroscientist at the CSIC (national research council) and Juan Carlos Izpisua (world leading researcher in stem cells) abandoned Spain in 2014, alleging a lack of resources for R&D.

Moreover, scientists' platforms such as »Decent Research« (Investigación Digna²⁰) and the Spanish Scientific Societies Confederation (COSCE,²¹ in Spanish), denounce the damage

being caused by the cutbacks imposed on the R&D sector. The universities have also mobilised to inform people about the consequences of the »brain exodus« for the Spanish economy and society. In December 2012, 50 university rectors joined to warn the government that, if budget cuts in education continue, »the damage to public R&D will be irreversible (...) leaving thousands of young researchers without professional prospects and seriously weakening the future of the Spanish economy« (Morel 2013).

Concerns about a brain drain have spread beyond academic circles. The high unemployment rate that particularly affects young people in Spain and the bleak economic prospects, together with anecdotal evidence about forced emigration, have created a certain social alarm about the emigration of highly qualified Spanish youngsters. It must be stressed that statistical data do not support the existence of a massive outflow of highly qualified young people, because net outflows, though negative, are moderate in absolute terms. However, the severity of the Spanish crisis, the lack of confidence in a significant recovery and the most recent data on global flows of Spanish emigrants (that have risen markedly in absolute and relative terms), are possibly contributing to an increasing social concern about a brain drain in Spain (often understood as emigration of young people with a university degree).

In opposition to these views, the Spanish government (held by the centre-right PP party since November 2011) holds that Spain is witnessing labour mobility, not a brain drain. In October 2010, Minister of Education Jose Ignacio Wert claimed that the movement of highly educated young people abroad should not be called a »brain drain«. Moreover, the Minister argued that a desire on the part of young people to leave the country to improve their professional prospects cannot be viewed negatively. UPyD, a minority political party of the centre oriented, demanded clarification of the Minister's declaration in Parliament. In this framework, the government emphasised the idea of mobility, arguing that it is the large number of highly qualified Spanish young people and the popularity of mobility programmes among graduates (Erasmus programme), not only the economic situation, that are promoting job seeking abroad. This view was also stressed by the General Director of the Youth Institute, a government institution, in August 2014.

As far as scientific migration is concerned, the Spanish government also claims that it reflects mobility. In December 2014, in a radio interview, the Minister of Education claimed that there was confusion between international labour mobil-

¹⁹ Reported by *El País* (12 February 2014).

²⁰ <http://www.investigaciondigna.es>.

²¹ <http://www.cosce.org>.

ity and brain drain. The Minister also pointed out that figures on outflows of talented researchers (educated in Spain) are overestimated, alleging that in the past five years only 13 researchers have left the CSIC (an institution with several thousand workers).

However, other government sectors tend to admit that there is a brain drain in the scientific sphere, though it is necessary to assess its magnitude. This line was supported by the Secretary of State for Research, Development and Innovation, Mrs Carmen Vela. In September 2013, the Secretary of State declared that the Government was aware of the difficulties that Spain would suffer if it were not possible to control the loss of talent.

Another key institution, the Bank of Spain, has presented recent research about the new migration flows in Spain that highlight the possibility of an emerging brain drain. The research, conducted by Izquierdo, Jimeno and Lacuesta, was published in a Monthly Bulletin (9/2014) and a Working Paper (1503/2015). The authors point out that the relatively low exit rate of Spaniards born in Spain can only be attributed to the non-existence of so-called »network effects« for Spanish emigrants. However, these could »develop quite rapidly and independently of future unemployment developments«. Taking into consideration that Spanish and foreign recent migrants tend to be well educated, it is possible that a significant brain drain is under way (if network effects come into force and outflows become permanent).

As far as the social partners are concerned, the trade unions have focused mainly on the labour market crisis, increasing poverty and the worsening economic and social conditions.²² Emigration flows are not yet viewed with excessive concern, but it is argued that how the aforementioned phenomena develop will be key to whether new workers' emigration accelerates and the possibilities of return. Trade unions have joined several initiatives to denounce the situation of »exiled workers« and are critical of government policies that, in their view, are fostering emigration (in general and also of qualified workers).

Employers' associations admit that the emigration of young people, particularly of young qualified people, may have a negative impact on competitiveness in the long run. However, it is also considered that this emigration is unavoidable due to the lack of employment opportunities in Spain.²³

A final issue that must be analysed is the social and economic implications of the new migration patterns in Spain. No doubt, the effects of migration flows will depend largely on future events, in particular, the magnitude of flows and the propensity of outflows to become permanent. Hence, both a short-term view (recent migration) and a long-term perspective are needed to assess the implications of migratory events.

To begin with, Spanish emigration in the past few years can be considered mainly a labour mobility phenomenon explained by high unemployment and progressive deterioro-

ration of economic and social conditions. The net balance between immigration and emigration has become negative, but most of it is explained by the departure of foreign citizens (EU and non-EU). As far as Spanish nationals are concerned, a new emigration pattern has emerged, with higher emigration than immigration flows. However, the net loss of Spanish population in general, and of the highly qualified in particular, is still limited in absolute and relative terms.

It is difficult to maintain that recent emigration may be causing a labour shortage, either of qualified or unqualified workers, because the unemployment level is still substantial. Thus emigration does not seem to be causing competitive losses at the aggregate level.

This admitted, we cannot ignore the prevalence of certain negative economic impacts in particular sectors. The Spanish science sector has been challenged in the past few years by large budget cuts and the departure of world-leading scientists. The impact on the economy of such scientists leaving the country due to the lack of possibilities to continue their research in the country is huge, because it erodes the scientific base.

Moreover, the recent emigration flows may, in the near future, cause specific shortages in the Spanish labour market, in areas such as education and medicine.²⁴ Although the precise number of professionals who have moved abroad cannot be known, evidence based on Spaniards registered to have their qualifications recognised in other EU member states – numbering more than 18,000 since 2004, according to Eurostat – suggests that the number of secondary school teachers, nurses and doctors who may have left the country is not negligible.

In the long term, the economic and social consequences of persistent and increasing emigration flows would be dramatic. As Izquierdo et al. (2015) have pointed out, we cannot ignore the possibility of emigration flows significantly higher than those experienced in recent years. The possibility of new network effects among Spanish emigrants, together with weak and sluggish labour market conditions, could exacerbate emigration flows of Spaniards, both qualified and less qualified.

In such a scenario of large-scale migration, a chain of negative economic and social effects comes into play. To begin with, labour is an essential input for production and growth. Hence, persistent negative migration flows would negatively affect the potential output of the Spanish economy. Moreover, this impact on potential output and growth would be more acute if migrants were positively selected on education (as has happened with Spaniards in recent years). A significant brain drain would seriously affect output potential because economic growth and competitiveness depend, increasingly, on intangible assets, innovation, knowledge diffusion and application.

Other costs of large-scale and permanent migration concern public investment in education, lost when professionals leave the country in order to pursue their careers abroad. In this case, Spain would not only lose specialists (causing possi-

²² See, for instance, the report published by Fundacion 1 de Mayo (2013) set up by CCOO (one of the major Spanish trade unions).

²³ See, for instance, the interview with the President of CEOE (Spanish Employers' Confederation) published by Actualidad Docente (April 2014).

²⁴ Such shortages have already been documented in central and eastern Europe (Ionescu 2014).

bly labour shortages in specific fields), but also the resources spent on education and training.

Last but not least, the fiscal impact of large-scale emigration would be significant, especially if young people predominate in (permanent) emigration. Spain is facing an ageing population²⁵ that would worsen if young people were to leave the country. This would increase the dependency ratio, thus augmenting the fiscal pressure on taxpayers to maintain pensions. Moreover, if potential output shrinks, the public debt burden will be harder to bear. In general, when a person emigrates, the country of origin loses both the investment made in his education and the future fiscal income that he could have generated. In sum, the fiscal outlook would worsen.

No doubt, these negative effects could be offset, at least in part, by the positive effects of emigration. According to the literature, these include remittance flows, the build-up of scientific networks or return migration. More research is needed to assess the relevance of positive impacts in a country such as Spain because, as stressed by Izquierdo et al. (2015), such impacts have only been detected for developing countries.

Bearing in mind the knock-on effects of large-scale net emigration in Spain in the long run, different in nature and scope to labour mobility, it seems advisable to adopt measures to avoid it. In this sense, it is of the utmost importance to foster economic recovery and the prospects of the Spanish economy. Even though economic prospects have improved considerably and some macroeconomic improvement has been detected, unemployment is still a dramatic problem for Spanish society (80 per cent consider it as the main problem in Spain, according to the CIS barometer published in April 2015). This highlights the need to maximise efforts directed to reducing unemployment, but also to improving labour market conditions (wages, working time, precarious jobs and so on), which have worsened during the crisis.

Apart from combating unemployment and promoting better employment conditions, Spain should put into effect measures to favour emigrant returns, especially concerning labour market regulation.

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²⁵ According to INE projections, the population aged 65 years of age or over will account for 37.8 per cent of the total Spanish population in 2049 (compared with 16.9 per cent in 1996 and 20.3 per cent in 2012).

8

PORTUGAL: DID THE CRISIS AGGRAVATE BRAIN DRAIN?

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INTRODUCTION²⁶

In this chapter we shall analyse quantitative information on the recent evolution of outflows of Portuguese workers to other EU countries and inflows of foreign EU labour into Portugal, addressing in particular the mobility of highly skilled workers. Although the »crisis period« – 2007/2008–2014, is central to the analysis, the unavailability and structure of data seriously limit evolutionary and comparative analysis within this period; EU Labour Force Survey data are not very useful for the study of migrant flows involving Portugal, as we will see in the next section. We thus had to use alternative data sources and to adapt the period of analysis, taking as a reference 2000/2001 and 2010/2011 when using census data and, alternatively, 2007/2008–2013 with regard to information from other sources (data for 2014 were not obtainable).

Within these limitations, we shall focus on the following:

- Brain gain: the recent evolution of intra-EU highly qualified immigrants living in Portugal compared with the total stock of intra-EU immigrants living there, as well as the proportion of intra-EU highly qualified immigrants living in Portugal compared with the total stock of highly qualified immigrants in the country (EU and non-EU immigrants with a tertiary degree);
- Brain drain: the proportion of highly qualified Portuguese citizens currently working in another EU member state compared with the total of intra-EU highly qualified immigrants by EU macro-region²⁷ and the proportion of highly

qualified Portuguese citizens currently working in another EU member state compared with the overall proportion of Portuguese nationals currently working in another EU country by EU macro-region.

- Having considered the aforementioned elements about recent stocks and inflows of highly skilled EU workers in Portugal and stocks and inflows of highly skilled Portuguese workers in other EU member-states, we will discuss the economic and social impacts of this process in Portugal, framing it in terms of the overall debate »brain drain« versus »brain circulation« within the EU proposed by Teney (2014).

The chapter is organised in five sections. Section 1 addresses conceptual and data issues with the purpose of defining the basic criteria used to identify the populations that are the objects of analysis, namely immigrants, foreigners and highly skilled persons. In addition it discusses the limits on analysis and comparability that result from the type of data sources we are using. Section 2 provides a short synopsis of recent (2008–2013) immigration and emigration with regard to Portugal²⁸ with the purpose of presenting the scenario in which highly skilled migratory movements take place. These are addressed in Sections 3 (Brain Gain) and 4 (Brain Drain). Finally, Section 5, which is simultaneously an integrated analysis and a »concluding remark«, focuses on the impact of highly skilled migratory movements on Portugal and the brain gain–brain drain debate.

²⁶ The data used in this project and the ideas expressed in the chapter were developed in the context of project *REMIGR – PTDC/IATP-DEM/5152/2012*.

²⁷ These macro-regions, designated »regions« in the Terms of Reference, are: i) the new member states of 2004 (NMS1)- [Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia]; ii) new member states after 2004 (NMS2) – [Bulgaria, Romania and Croatia] – iii) southern European member states (SEMS)[Portugal, Spain, Italy, Greece]; iv) Scandinavian member states (ScMS) [Denmark, Sweden, Finland] and v) western and central European member states (WCEMS) [France, Germany, United Kingdom, Ireland, Austria, Belgium, Netherlands and Luxembourg].

²⁸ Because the goal of this section is to provide a simplified general overview of Portugal and its contemporary international migration, it was decided to simplify the data organisation and therefore it only considers 27 member states and the groups of countries used in the brain gain and brain drain analysis developed in Sections 3 and 4 are not adhered to.

8.1 CONCEPTS, SOURCES AND DATA PROBLEMS

Although the concept of »immigrant« seems relatively easy to define, migration scholars are well aware of the operational limits of this term (Boyle, Halfacree and Robinson 1999; Koser 2007). Without entering into a discussion about the time limits that separate »simple movements« from migration (for the United Nations, a minimum of three months abroad, for instance) or temporary from long-term migration (Rosa, Seabra and Santos 2004), the question relevant for understanding the data we are using concerns the difference between foreigners and foreign-born. The principles used in Teney's study follow the tradition of the majority of EU countries and refer to foreigners. As this is the category used in most analyses devoted to the economic – namely labour market – and demographic features of immigration to Portugal²⁹ (Rosa, Seabra and Santos 2004; Malheiros and Esteves 2013), being also the key organiser of the information gathered by key providers such as the Foreigners and Borders Office or the GEE³⁰/Ministry of Employment, it was not a problem to adopt it in the brain gain section.

However, as far as the brain drain section is concerned, data sources were clearly more limited. Actually, to obtain systematic information about Portuguese workers – and particularly highly skilled Portuguese workers – in other EU member-states proved very difficult. To use the EU Labour Force Survey was not an option, not only because the sample of Portuguese people is not large enough in the majority of countries, but also because we were not able to obtain – through specific requests – data for the samples of Portuguese abroad. The alternative was to use DIOC (Database on Immigrants in OECD countries) information, selecting the data for Portuguese abroad, namely those with education levels corresponding to ISCED 5 and ISCED 6 (first and second stages of tertiary education). This OECD data are based on national census data (2000/2001 and 2010/2011 in the present case) and counts foreign-born people and not foreign nationals. Therefore, this information is not directly comparable with the data on immigrant workers in Portugal that use nationality and not place of birth as criteria. Because the alternative was a complete lack of data about Portuguese skilled migration by countries of destination, we decided to use the DIOC data.

In short, whereas for labour migration to Portugal we use data on foreigners, for labour migration by Portuguese we use data on people born in Portugal. Comparisons between the two movements are thus not possible. However, we can identify evolutionary elements for each of the movements and make comparisons between groups of countries, both for

arrivals in the case of immigration and for destinations in the case of Portuguese departures.

An additional problem associated with identifying international migrants (both immigrants and Portuguese emigrants) relevant to the present analysis relies in the specific free circulation conditions within the European Union (Teney 2014). In fact, although some administrative registration tends to occur, the free circulation right given to EU citizens abolished the need for permits and visas and frequently people do not register in the administrative systems of destination countries (for example, social security, local registers) in the initial period of migration or if the period of stay is perceived as likely to be short. Therefore, this imposes limits on how far the number of EU foreigners registered in several administrative sources reflects reality and leads to a more extensive use of both sample data and census-based information.

The second thing that could pose some difficulty was the definition of »highly skilled«. Generally, the easiest and most generalised way of establishing that somebody is highly skilled consists in verifying whether they have a tertiary education diploma. This was the criterion used for all data treated in this chapter, although they come from different sources. In the case of data on foreigner workers in Portugal, in both census and GEE/Ministry of Employment data highly skilled workers correspond to people aged 15 or more who have completed at least a three-year university course. Concerning Portuguese people abroad, the DIOC database uses equivalent categories of ISCED, namely levels 5 and 6 that correspond to people with first and second stages of higher education. Despite this apparent harmonisation of categories, we must be aware that national education systems and classification education levels have differences and reclassification by international organisations, such as the UN or the OECD, is frequently not linear or direct.³¹

In addition to the conceptual issues, other limitations on information comparability rely in the collection systems that lie behind the databases that we have used in our analysis. For instance, although census data for 2011 and GEE/Ministry of Employment data for the same year correspond apparently to the same population of highly skilled EU foreigners, the first source totals around 20,000 people and the latter only 6,000. This difference shows that the first database is more encompassing than the second one because it incorporates non-working highly educated foreigners, such as students and retired people. Furthermore, the universal application of the census takes in more workers than the Employee registers of the Ministry of Employment that exclude workers from the Autonomous Regions of Madeira and Azores and do not include employees on public administration contracts. Nevertheless, this last source is a continuous register that provides comparable yearly information about workers. Therefore, we have decided to use both data sources – with some caution – because they complement each other.

²⁹ It is worth mentioning that several thematic research projects on cultural and social issues related to immigration (for example, integration processes, material culture, housing, immigrants descendants), as well as specific studies about some immigrant groups (for example, ethnic Indians, people from Portuguese-speaking African countries) adopt a criteria that is not based in nationality but on ethnicity or even place of birth (Baganha and Góis 1998/1999).

³⁰ GEE stands for *Gabinete de Estratégia e Estudos* do Ministério da Economia (Office for Strategy and Research of the Ministry of Economy)

³¹ On this see, for instance, the OECD notes on the methodology behind the construction of DIOC databases in the education variable.

8.2 RECENT INTERNATIONAL MIGRATORY MOVEMENTS INVOLVING PORTUGAL – A SYNTHESIS

Immigration inflows to Portugal experienced rapid and intensive growth between the late 1990s and the early 2000s, which raised the foreign population of the country from 178,000 people (1998) to approximately 350,000 in 2001 and almost 450,000 in 2004. This increase of 152 per cent in six years, concentrated particularly in the period 2000–2002, has raised the foreign population to around 4.2 per cent of total residents and between 5.5 and 6 per cent of the working population. The net migration of the 1990s was clearly positive (approximately +400,000 people in the inter-census period of 1991–2001), resulting from a progressive growth in the inflow of foreigners that reached an estimated maximum in 2001 or 2002 (Peixoto 2007; Malheiros 2012) and a relatively low emigration outflow, estimated below 25,000 people per year, especially after 1997. Throughout this period, the Portuguese economy experienced economic growth supported by expanding foreign and internal investment, largely targeting non-tradable sectors, such as construction and public works, retail and real estate. Free circulation of workers and EU funding also contributed to the economic dynamics of this period, which was also marked by privatisation, deregulation of the financial sector and availability of cheap credit, often provided by financial agents from other EU countries (Abreu et al. 2013). In this context, labour force needs increased substantially, leading to rapid growth of foreigner inflows, which encompassed not only the usual groups of Portuguese-speaking countries in Africa (the PALOP) but in particular new groups of workers from Brazil and central and eastern Europe, namely Romania, Ukraine and Moldova. Compared with the immigration inflows of the 1980s and early 1990s, post-1997 immigration incorporated a lower proportion of workers able to integrate in highly skilled labour market segments, even if several of those from Brazil and especially central and eastern Europe were often highly qualified. The usual mismatch between skills possessed and skills required for the jobs filled by immigrants in Portugal has been identified, leading to a discussion in Portuguese society about »immigrants' skill waste« (Oliveira and Fonseca 2013; Oliveira and Gomes 2014; Góis and Marques 2014). For this reason, some measures were taken, especially in the first half of the 2000s, such as an effort to facilitate the recognition of some foreign degrees or the implementation of specific updating and adjustment programmes targeting foreign medical doctors. The latter, after a period of study in Portuguese medical schools, had to take an exam and, if successful, obtain professional recognition from the Portuguese Doctors Guild.

After 2003–2004, the Portuguese economy started to show signs of slowing down. Average GDP growth declined below 1 per cent between 2002 and 2008 and unemployment started to rise, reaching 9.5 per cent in 2009, according to the data of the Portuguese National Statistics Institute (INE). In fact, the unsustainable economic model based on a limited internal market, cheap credit and expansion of non-tradable sectors, often with speculative elements, became exhausted in this period. After 2008, the exposure of the small and dependent Portuguese economy, which was

already contracting due to the crisis on international markets, generalised the domestic economic crisis. This expressed itself in every possible dimension, not just financial and economic, but also social, with generalised wage cuts and a rapid and very intensive increase in unemployment. The predatory pressure of international financial markets on the weak economies of the European periphery, followed by the »austerity« policy adopted by the Portuguese government and negotiated in the Memorandum of Understanding (MoU) signed with the »Troika« (IMF, ECB and European Commission) combined with the factors that unleashed the crisis to usher in recession and an explosion in unemployment that climbed to over 16 per cent at the beginning of 2013. As a consequence, Portugal's period as a »country of immigration« with net migration went into reverse in just a few years.

Analysis of the evolution of foreigner stocks and inflows (EU and non-EU) in the period 2008/2009–2013 shows an overall decline in both aggregates. While the global foreigner stock fell from more than 454,000 people in 2009 to just above 400,000 in 2013, the relative decline in inflows is more significant: from around 61,500 people in 2009 to just over 33,000 in 2013, which represents a reduction of almost 50 per cent (Table 1).

This reduction was particularly intense in the groups of non-EU foreigners that were major contributors in the late 1990s–early 2000s immigration wave to Portugal, namely Brazilians, Ukrainians and Moldavians. Concerning foreigners from the post-2007 new EU member states, namely Bulgarians and especially Romanians (the largest EU national group in Portugal), the reduction only becomes visible after 2010/2011 (Table 1).

Nevertheless, it is worth mentioning that, despite the reduction of the stock observed after 2011, the proportion of EU27 foreigners in the global stock of foreigners settling in Portugal kept increasing between 2009 and 2013. In general terms, the same pattern can be identified in the evolution of the inflow (Table 1), but the growth of the proportion of EU27 foreigners is less clear here and an interruption in the dominant trend can be seen in 2011 and 2012. All things considered, in addition to growth in Asian migration to Portugal, the relative weight of EU27 immigration seems to be increasing, an evolution contrary to the significant absolute and relative decline of the Brazilian and the non-EU central and eastern European immigration.

The other change that occurred in international migration involving Portugal after 2010 corresponds to the rapid and very intensive increase in emigration (Table 2). If the emigration figures estimated by INE point to slightly over 20,000 long-term departures in the middle of the first decade of the twenty-first century, which even declined in the first years of the crisis (Pires et al. 2014), after 2010 there was an explosion and the number of annual long-term departures jumped to more than 50,000 in 2012 and 2013, on top of which there was an average of almost 72,000 temporary emigrants. EU27 countries remain dominant destinations in this period, with a relatively stable value slightly over 60 per cent of the total. Other European countries, such as Switzerland, as well as a few overseas destinations (for example, Angola) have also become significant places for Portuguese emigration.

Table 1

Evolution of the stock and first issues of residence permits of foreigners in Portugal, 2009–13

	Stock								First issues of residence permits							
	2009		2011		2013		Variation (%)		2009		2011		2013		Variation (%)	
	N	%	N	%	N	%	2009/11	2011/13	N	%	N	%	N	%	2009/11	2011/13
Europe – total	176,561	38.9	177,614	40.7	159,172	39.7	0.6	-10.4	22,763	37.0	16,359	36.1	12,918	38.9	-28.1	-21.0
EU27	94,157	20.7	107,971	24.7	100,502	25.0	14.7	-6.9	17,971	29.2	12,813	28.2	10,646	32.0	-28.7	-16.9
United Kingdom	16,373	3.6	17,675	4.0	16,477	4.1	8.0	-6.8	2,154	3.5	1,692	3.7	1,402	4.2	-21.4	-17.1
Spain	8,060	1.8	9,310	2.1	9,541	2.4	15.5	2.5	1,465	2.4	1,533	3.4	1,474	4.4	4.6	-3.8
Germany	8,614	1.9	9,054	2.1	8,581	2.1	5.1	-5.2	1,096	1.8	802	1.8	761	2.3	-26.8	-5.1
France	4,883	1.1	5,293	1.2	5,268	1.3	8.4	-0.5	718	1.2	666	1.5	703	2.1	-7.2	5.6
The Netherlands	4,577	1.0	4,862	1.1	4,994	1.2	6.2	2.7	540	0.9	432	1.0	475	1.4	-20.0	10.0
Italy	4,499	1.0	5,338	1.2	5,121	1.3	18.6	-4.1	1,016	1.7	810	1.8	814	2.4	-20.3	0.5
Bulgaria	7,202	1.6	8,606	2.0	7,553	1.9	19.5	-12.2	1,519	2.5	973	2.1	839	2.5	-35.9	-13.8
Romania	32,457	7.1	39,312	9.0	34,204	8.5	21.1	-13.0	8,111	13.2	4,582	10.1	2,665	8.0	-43.5	-41.8
Eastern Europe	80,659	17.8	67,687	15.5	56,674	14.1	-16.1	-16.3	4,418	7.2	3,054	6.7	1,824	5.5	-30.9	-40.3
Ukraine	52,293	11.5	48,022	11.0	41,091	10.2	-8.2	-14.4	2,362	3.8	1,761	3.9	1,075	3.2	-25.4	-39.0
Moldova	20,773	4.6	13,586	3.1	9,971	2.5	-34.6	-26.6	1,533	2.5	863	1.9	299	0.9	-43.7	-65.4
Russia	6,132	1.4	4,878	1.1	4,432	1.1	-20.5	-9.1	396	0.6	324	0.7	332	1.0	-18.2	2.5
Africa – total	121,852	26.8	105,325	24.1	101,958	25.4	-13.6	-3.2	9,912	16.1	10,488	23.1	7,311	22.0	5.8	-30.3
PALOP	113,159	24.9	97,516	22.3	93,577	23.3	-13.8	-4.0	8,977	14.6	9,344	20.6	6,435	19.4	4.1	-31.1
Angola	26,557	5.8	21,563	4.9	20,177	5.0	-18.8	-6.4	1,543	2.5	1,369	3.0	1,477	4.4	-11.3	7.9
Cape Verde	48,845	10.8	43,920	10.1	42,401	10.6	-10.1	-3.5	4,575	7.4	4,610	10.2	2,738	8.2	0.8	-40.6
Guinea-Bissau	22,945	5.1	18,487	4.2	17,846	4.4	-19.4	-3.5	1,485	2.4	1,744	3.8	1,235	3.7	17.4	-29.2
Mozambique	3,328	0.7	3,028	0.7	2,849	0.7	-9.0	-5.9	321	0.5	299	0.7	223	0.7	-6.9	-25.4
S.Tomé and Príncipe	11,484	2.5	10,518	2.4	10,304	2.6	-8.4	-2.0	1,053	1.7	1,322	2.9	762	2.3	25.5	-42.4
Latin America – total	122,168	26.9	117,363	26.9	98,107	24.4	-3.9	-16.4	23,813	38.8	13,599	30.0	7,214	21.7	-42.9	-47.0
Brazil	116,220	25.6	111,445	25.5	92,120	23.0	-4.1	-17.3	23,138	37.7	12,896	28.4	6,680	20.1	-44.3	-48.2
North America – total	2,994	0.7	3,054	0.7	3,516	0.9	2.0	15.1	378	0.6	392	0.9	373	1.1	3.7	-4.8
Asia – total	30,277	6.7	33,156	7.6	38,236	9.5	9.5	15.3	4,574	7.4	4,529	10.0	5,429	16.3	-1.0	19.9
China	14,396	3.2	16,785	3.8	18,637	4.6	16.6	11.0	1,947	3.2	1,507	3.3	1,863	5.6	-22.6	23.6
India	5,782	1.3	5,384	1.2	6,022	1.5	-6.9	11.8	976	1.6	1,107	2.4	970	2.9	13.4	-12.4
Pakistan	2,698	0.6	2,474	0.6	2,628	0.7	-8.3	6.2	342	0.6	312	0.7	403	1.2	-8.8	29.2
Bangladesh	1,346	0.3	1,149	0.3	1,733	0.4	-14.6	50.8	218	0.4	332	0.7	518	1.6	52.3	56.0
Nepal	685	0.2	1,145	0.3	2,588	0.6	67.2	126.0	157	0.3	365	0.8	847	2.5	132.5	132.1
TOTAL	454,191	100	436,822	100	401,320	100	-3.8	-8.1	61,445	100	45,369	100	33,246	100	-26.2	-26.7

Source: SEF, Relatório de Imigração Fronteiras e Asilo, 2009, 2010, 2011 and 2012; INE, Statistical Yearbook, 2009, 2010, 2011, 2012 and 2013 (unpublished data).

Table 2

Estimates of Portuguese emigration, 2008–2013

	Long-term	Temporary	Total	Portuguese nationals		EU(27) destinations	
				Absolute	%	Absolute	%
2008	20,357	---	---	18,372	90.2	15,581	76.5
2009	16,899	---	---	14,138	83.7	10,891	64.4
2010	23,760	---	---	21,796	91.7	14,838	62.4
2011	43,998	56,980	100,978	94,476	93.6	60,796	60.2
2012	51,958	69,460	121,418	116,926	96.3	76,197	62.8
2013	53,786	74,322	128,108	123,265	96.2	78,081	61.0

Source: INE (2013) – Demographic Yearbook.

Having taken into consideration the recent economic evolution of Portugal and its relationship with international migration flows, four issues relevant within the framework of the present report should be underlined:

- (i) emigration from Portugal has increased substantially in the past four or five years;
- (ii) as a consequence of the reduction in inflows and the substantial increase in outflows, net migration became negative in 2011, after almost 20 years of positive values;
- (iv) EU27 destinations are dominant for Portuguese emigrants;
- (iv) the proportion of EU27 immigration to Portugal seems to be growing, even if absolute values do not display a similar trend (despite some oscillation, stock and inflow for 2013 are below those registered in 2010/2011).

8.3 BRAIN GAIN

According to the 2011 Census, approximately 25 per cent of the EU28³² foreigners living in Portugal were highly educated, a value that clearly exceeded the proportion of highly skilled persons in the non-EU28 and the total foreigner population above 15 years old (respectively less than 12 and 15 per cent).³³ If EU28 foreigners made up only 24 per cent of the total foreign population over 15 years of age registered in the 2011 Census, they represented slightly more than 40 per cent of the highly educated.

The particular relevance of highly skilled foreigners from EU countries in Portugal was already identified in research carried out in the 1990s and early 2000s (Peixoto 2000; Baganha, Ferrão and Malheiros 2002) that associated it largely with transfers occurring within the framework of personnel circulation within transnational corporations and also to specific labour market opportunities in sectors that were expanding and modernising in Portugal in the 1980s and early 1990s, such as health care, information technology and marketing. In fact, in the late 1980s and early 1990s relative growth in the number of highly skilled foreigners was higher than the growth of semi- and low-skilled foreign workers (Baganha, Ferrão and Malheiros 2002). During the immigration boom between the late 1990s and the mid-2000s, immigration of highly educated people continued, but the labour market incorporation processes privileged low-skilled segments, as already mentioned (Oliveira and Gomes 2014).

As far as EU28 foreigners are concerned, a breakdown by nationalities shows that the highest proportions of highly skilled migrants are to be found in Scandinavian, southern European and particular national groups (Poles, Czech,

Hungarians) coming from countries that joined the EU in 2004.

However, the largest EU foreign national groups that, with the exception of Spain, come from western and central Europe (United Kingdom, France and Germany) and post-2004 new member states (Romania and Bulgaria), have lower proportions of highly educated people. In the former group, the high percentage of older people with lower levels of education, especially in the case of the British (Table 3), contributes to the global reduction of the proportion of highly skilled people. In addition, among »foreigners« from countries such as France, Luxembourg and even Germany, the effect of a counter-wave associated with Portuguese emigration (for example, spouses or children born abroad who do not have or have not declared Portuguese citizenship), characterised by a large proportion of people with low or medium-level education, may lead to a reduction in the number of highly skilled people (Table 3).

In the case of Bulgarians and, particularly, Romanians – major protagonists in the Portuguese immigration boom of the turn of the twentieth century – the proportions of highly educated people are the lowest of all foreign EU national groups, although they do correspond with the profile of labour migration that was dominant in this migratory wave.

All things considered, the proportion of people with tertiary education among EU28 foreigners aged 15 years of age or over registered in the Portuguese Census was almost 25 per cent (Table 3), a percentage only slightly higher than the one presented by Eurostat for the proportion of people with tertiary education in EU27 member states in 2010, 22.7 per cent (Herman 2012). Concerning the major countries of origin, the percentages of highly educated immigrants in Portugal were higher among Germans and Spaniards, but lower among British, French, Bulgarians and Romanians (comparing Table 3 data with the Eurostat data used in Herman 2012).

In order to have some diachronic data for the evolution of highly educated EU foreigners in Portugal, particularly in the 2007–2013 period, we have used information gathered in the Employee Board registers of the Ministry of Employment. According to these data, the number of highly skilled EU28 workers was increasing throughout the period under analysis, contrary to the curve of highly educated workers from third countries (Table 4). In fact, in 2013 highly educated foreign workers from the EU28 represented almost half the foreign highly skilled workers registered in Portugal.

If we compare the evolution of highly educated workers with non-highly educated ones for non-EU28 foreigners, EU28 foreigners and Portuguese, we see that the only two clear positive trends correspond to highly educated people belonging to the latter two groups (Table 4). There is an increase in the overall proportion of highly educated people, resulting from the combined effect of the absolute increase in this group of workers (only the number of non-EU highly skilled workers fell in this period) and the substantial decline among low and medium educated workers (a reduction of more than 0.5 million in the case of Portuguese people and 35,000 with regard to non-EU foreigners, a relative decline of over 30 per cent). These elements enable us to draw four basic conclusions:

³² Because Croatia has been a member of the EU since 2013, we have decided to consider the EU28 instead of the usual EU27, including this country in the macro-regional group »New member states post-2004«, together with Bulgaria and Romania. Nevertheless, it is important to say that immigration from Croatia to Portugal and emigration from Portugal to Croatia amounts statistically to only a few dozen people and is therefore statistically irrelevant.

³³ Respectively 20,178 highly skilled within the 82,163 EU28 population with 15 years or more and only 30,073 within the 262,394 individuals from the non-EU28 population (source: Census 2011).

Table 3

Proportion of intra-EU highly qualified immigrants compared with the total stock of intra-EU immigrants living in Portugal, by country (2011 Census)

Member states	Total			15+			15–64			65+		
	Higher Education	Total	%	Higher education	Total	%	Higher Education	Total	%	Higher Education	Total	%
Germany	2,503	9,238	27.1	2,503	8,164	30.7	2,017	6,449	31.3	486	1,715	28.3
Austria	175	426	41.1	175	379	46.2	152	311	48.9	23	68	33.8
Belgium	707	2,016	35.1	707	1,771	39.9	590	1,436	41.1	117	335	34.9
France	2,725	14,360	19	2,725	12,481	21.8	2,497	11,233	22.2	228	1,248	18.3
Ireland	390	1,358	28.7	390	1,183	33.0	308	899	34.3	82	284	28.9
Luxembourg	51	447	11.4	51	317	16.1	46	289	15.9	5	28	17.9
Netherlands	1,274	3,748	34	1,274	3,371	37.8	1,010	2,599	38.9	264	772	34.2
United Kingdom	3,602	15,774	22.8	3,602	14,206	25.4	2,803	10,052	27.9	799	4,154	19.2
Western and central MS	11,427	47,367	24.1	11,427	41,872	27.3	9,423	33,268	28.3	2,004	8,604	23.3
Denmark	166	379	43.8	166	350	47.4	130	262	49.6	36	88	40.9
Finland	136	308	44.2	136	284	47.9	102	199	51.3	34	85	40
Sweden	246	603	40.8	246	548	44.9	186	391	47.6	60	157	38.2
Scandinavian MS	548	1,290	42.5	548	1,182	46.4	418	852	49.1	130	330	39.4
Spain	3,372	10,486	32.2	3,372	8,939	37.7	3,149	7,178	43.9	223	1,761	12.7
Greece	100	188	53.2	100	172	58.1	96	163	58.9	4	9	44.4
Italy	1,405	3,443	40.8	1,405	3,068	45.8	1,308	2,695	48.5	97	373	26
Southern MS	4,877	14,117	34.5	4,877	12,179	40.0	4,553	10,036	45.4	324	2,143	15.1
Cyprus	8	15	53.3	8	11	72.7	8	11	72.7	0	0	
Slovakia	38	97	39.2	38	88	43.2	38	88	43.2	0	0	
Slovenia	20	51	39.2	20	46	43.5	19	45	42.2	1	1	100
Estonia	34	117	29.1	34	102	33.3	32	94	34	2	8	25
Hungary	135	342	39.5	135	295	45.8	133	285	46.7	2	10	20
Latvia	57	192	29.7	57	168	33.9	57	167	34.1	0	1	0
Lithuania	73	357	20.4	73	318	23.0	72	311	23.2	1	7	14.3
Malta	7	30	23.3	7	24	29.2	7	21	33.3	0	3	0
Poland	457	803	56.9	457	735	62.2	446	712	62.6	11	23	47.8
Czech Republic	95	187	50.8	95	172	55.2	92	164	56.1	3	8	37.5
New MS 2004	924	2,191	42.2	924	1,959	47.2	904	1,898	47.6	20	61	32.8
Bulgaria	397	5,177	7.7	397	4,513	8.8	388	4,486	8.6	9	27	33.3
Croatia	30	80	37.5	30	78	38.5	29	74	39.2	1	4	25
Romania	1,967	24,356	8.1	1,967	20,380	9.7	1,962	20,300	9.7	5	80	6.3
New MS post-2004	2,394	29,613	8.1	2,394	24,971	9.6	2,379	24,860	9.6	15	111	13.5
Total	20,170	94,578	21.3	20,170	82,163	24.5	17,677	70,914	24.9	2,493	11,249	22.2

Source: INE, Census 2011.

- (i) overall, there was a substantial contraction in the Portuguese labour market over the crisis period;
- (ii) in relative terms, non-EU foreign workers were the group that suffered the strongest negative impact associated with the economic and financial crisis;
- (iii) the workforce overall experienced an upskilling process during the crisis years, despite the overall reduction in the number of workers; and
- (iv) Portuguese and particularly EU28 highly educated workers display a continuous growth in this period, which may reflect a strengthening of capital-intensive tasks and the benefits of intra-EU circulation.

However, these conclusions require closer scrutiny because the simple increase in the number of highly educated workers may simply reflect a structural increase in education levels overall (as took place in Portugal) and does not necessarily mean that all highly skilled personnel are performing highly skilled tasks. In addition, to draw conclusions about circulation, we have to balance entries and departures, as Teney (2012) points out.

Despite the generalised increase in the proportion of highly skilled workers from all countries of origin (Table 5 and Figure 1), the analysis of EU28 foreigners by countries and groups of countries shows some interesting contrasts. The

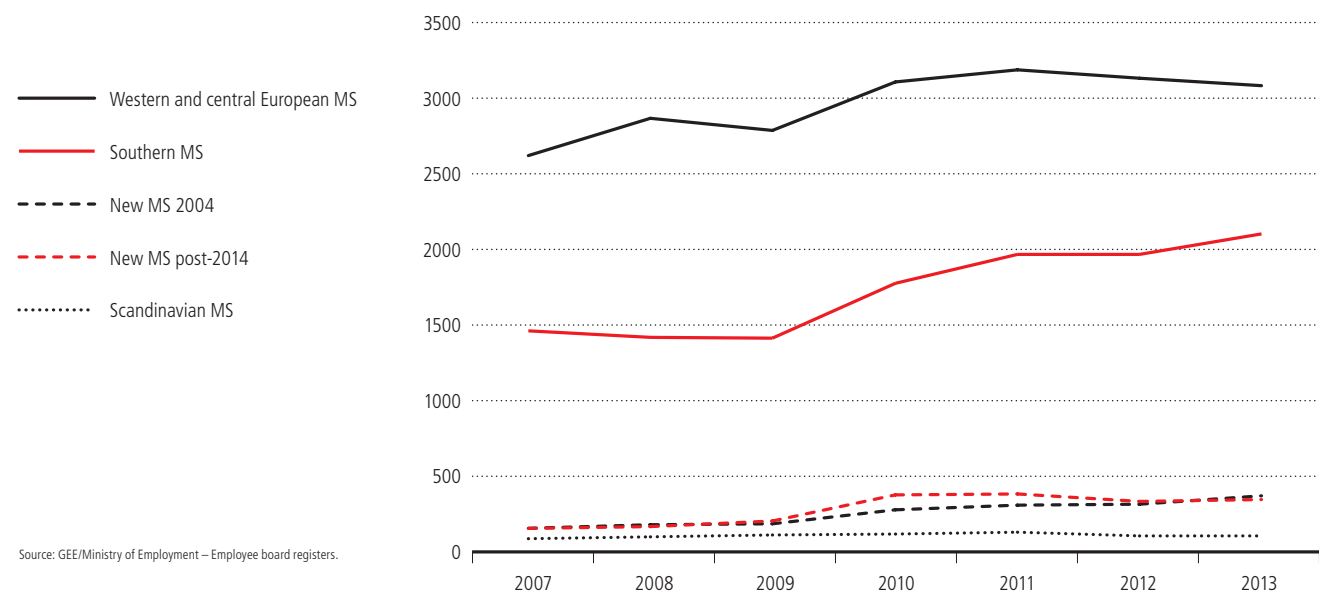
Table 4
Evolution of intra-EU and third country registered highly qualified workers (foreigners) compared with the total stock of EU and non-EU registered workers (foreigners) and Portuguese workers 2007–2013

Workers		2007	2008	2009	2010	2011	2012	2013
EU	Higher education	4,497	4,758	4,723	5,681	5,998	5,875	6,029
	No higher education	15,063	15,207	17,488	19,168	19,406	17,505	17,790
	Total	19,560	19,965	22,211	24,849	25,404	23,380	23,819
	%	23.0	23.8	21.3	22.9	23.6	25.1	25.3
Non-EU	Higher education	7,048	7,669	7,388	7,322	7,343	6,642	6,463
	No higher education	115,537	125,942	110,999	112,133	103,978	85,319	79,892
	Total	122,585	133,611	118,387	119,455	111,321	91,961	86,355
	%	5.7	5.7	6.2	6.1	6.6	7.2	7.5
Higher Education EU/Higher Education foreigners (%)		39.0	38.3	39.0	43.7	45.0	46.9	48.3
Portuguese	Higher education	390,684	429,122	438,254	424,259	440,456	442,089	456,234
	No higher education	2,538,510	2,530,485	2,398,237	2,200,246	2,150,437	1,995,994	1,982,564
	Total	2,929,194	2,959,607	2,836,491	2,624,505	2,590,893	2,438,083	2,438,798
	%	13.3	14.5	15.5	16.2	17.0	18.1	18.7

Note: This table does not incorporate workers from the Autonomous Regions of Madeira and Azores.

Source: GEE/Ministry of Employment – Employee board registers.

Figure 1
Evolution of EU registered workers (highly skilled) by groups of countries of origin, 2007–2013



Source: GEE/Ministry of Employment – Employee board registers.

proportion of highly skilled people is very high among Scandinavians and people coming from western and central EU countries, in line with the significant levels of tertiary education registered in these countries. However, the highest proportions of workers with a tertiary education are registered by foreigners from the southern states of the EU (more than 50 per cent in 2013 in the cases of Greece and Italy). Apparently, Portugal is attracting a limited but increasing number of highly skilled people from other southern European countries with Latin languages, especially Spain (the major source among all the countries analysed) and Italy (the fifth country

of origin, but the one of the five that experienced the highest growth in the number of highly educated workers between 2007 and 2013). In fact, compared with the Scandinavian and the western and central member states, the growth in the number of highly skilled personnel arriving in Portugal from the southern EU countries between 2007 and 2013 is much higher. An issue for future examination is the development of a limited but growing subsystem of circulation of highly skilled workers between southern European countries.

Concerning the two groups of central and eastern European EU member states, their situations are distinct,

Table 5
Evolution of the EU registered workers (highly skilled and total) between 2007 and 2013

Member States	2007			2008			2009			2010			2011			2012			2013				
	Higher Educ.	Total	%	Higher Educ.	Total	%	Higher Educ.	Total	%	Higher Educ.	Total	%	Higher Educ.	Total	%	Higher Educ.	Total	%	Higher Educ.	Total	%		
Western and central MS	Germany	653	2,062	31.7	737	2,163	34.1	824	4,440	18.6	697	1,846	37.8	702	1,761	39.9	675	1,653	40.8	681	1,692	40.2	
	Austria	60	347	17.3	60	343	17.5	50	253	19.8	41	115	35.7	36	108	33.3	43	100	43.0	41	95	43.2	
	Belgium	149	325	45.8	152	332	45.8	152	321	47.4	171	328	52.1	166	352	47.2	165	314	52.5	169	348	48.6	
	France	838	2,784	30.1	930	2,883	32.3	840	2,629	32.0	1,071	3,058	35.0	1,133	3,094	36.6	1,089	2,803	38.9	1,062	2,849	37.3	
	Ireland	55	148	37.2	55	157	35.0	49	133	36.8	57	167	34.1	59	158	37.3	66	151	43.7	61	154	39.6	
	Luxembourg	11	62	17.7	14	61	23.0	22	66	33.3	18	70	25.7	14	63	22.2	14	61	23.0	14	52	26.9	
	Netherlands	186	539	34.5	189	535	35.3	183	539	34.0	213	693	30.7	216	744	29.0	215	648	33.2	221	727	30.4	
	United Kingdom	674	1,855	36.3	737	1,905	38.7	672	1,654	40.6	845	2,067	40.9	870	2,037	42.7	870	1,971	44.1	842	1,930	43.6	
	Total	2,626	8,122	32.3	2,874	8,379	34.3	2,792	10,035	27.8	3,113	8,344	37.3	3,196	8,317	38.4	3,137	7,701	40.7	3,091	7,847	39.4	
	Scandinavian MS	Denmark	24	80	30.0	30	80	37.5	25	72	34.7	34	73	46.6	35	76	46.1	29	63	46.0	31	79	39.2
		Finland	20	51	39.2	24	54	44.4	32	65	49.2	20	42	47.6	19	45	42.2	19	34	55.9	18	48	37.5
		Sweden	46	129	35.7	51	128	39.8	57	125	45.6	66	123	53.7	78	139	56.1	62	117	53.0	57	122	46.7
Total		90	260	34.6	105	262	40.1	114	262	43.5	120	238	50.4	132	260	50.8	110	214	51.4	106	249	42.6	
Spain		1,205	2,692	44.8	1,148	2,626	43.7	1,109	2,452	45.2	1,379	3,064	45.0	1,493	3,327	44.9	1,465	2,972	49.3	1,524	3,225	47.3	
Greece		11	41	26.8	21	46	45.7	20	43	46.5	30	52	57.7	40	64	62.5	35	57	61.4	40	65	61.5	
Southern MS	Italy	248	669	37.1	255	695	36.7	289	715	40.4	373	830	44.9	439	925	47.5	473	956	49.5	543	1,074	50.6	
	Total	1,464	3,402	43.0	1,424	3,367	42.3	1,418	3,210	44.2	1,782	3,946	45.2	1,972	4,316	45.7	1,973	3,985	49.5	2,107	4,364	48.3	
	New MS 2004	Cyprus	2	7	28.6	2	6	33.3	1	8	12.5	3	6	50.0	4	5	80.0	4	5	80.0	4	5	80.0
		Slovakia	11	86	12.8	12	31	38.7	16	38	42.1	11	67	16.4	11	54	20.4	9	62	14.5	12	46	26.1
		Slovenia	4	22	18.2	7	27	25.9	2	14	14.3	6	17	35.3	6	20	30.0	10	19	52.6	8	19	42.1
		Estonia	4	20	20.0	4	18	22.2	3	18	16.7	6	49	12.2	5	26	19.2	4	36	11.1	9	36	25.0
		Hungary	20	57	35.1	28	71	39.4	34	80	42.5	42	88	47.7	46	96	47.9	47	97	48.5	53	100	53.0
		Latvia	9	57	15.8	8	45	17.8	7	56	12.5	17	74	23.0	20	64	31.3	25	67	37.3	29	71	40.8
		Lithuania	9	142	6.3	11	140	7.9	11	126	8.7	24	149	16.1	27	139	19.4	25	137	18.2	29	132	22.0
		Malta	1	10	10.0	1	7	14.3	0	9	0.0	1	13	7.7	2	6	33.3	0	4	0.0	1	5	20.0
Poland		86	575	15.0	96	251	38.2	102	278	36.7	149	412	36.2	167	403	41.4	169	350	48.3	196	457	42.9	
Czech Republic		13	133	9.8	15	49	30.6	14	57	24.6	24	78	30.8	24	71	33.8	26	78	33.3	33	77	42.9	
Total	159	1,109	14.3	184	645	28.5	190	684	27.8	283	953	29.7	312	884	35.3	319	855	37.3	374	948	39.5		
New MS post-2004	Bulgaria	0	0		0	0		17	575	3.0	95	2,158	4.4	89	2,180	4.1	79	2,274	3.5	98	2,222	4.4	
	Croatia	0	0		0	0		0	0		9	43	20.9	10	43	23.3	8	31	25.8	9	33	27.3	
	Romania	158	6,667	2.4	171	7,312	2.3	192	7,445	2.6	279	9,167	3.0	287	9,404	3.1	249	8,320	3.0	244	8,156	3.0	
	Total	158	6,667	2.4	171	7,312	2.3	209	8,020	2.6	383	11,368	3.4	386	11,627	3.3	336	10,625	3.2	351	10,411	3.4	

Note: This table does not include workers from the Autonomous Regions of Madeira and Azores.

Source: GEF/Ministry of Employment – Employee board registers.

although in both cases the increase in the number of highly skilled immigrants in Portugal – which is limited and only exceeds the figure for the Scandinavian countries – more than doubled between 2007 and 2013 (Table 5 and Figure 1). As far as the new member states that joined the EU in 2004 are concerned, the volume of workers is very low (less than 1,000 in 2013) and even slightly declined in the crisis period. However, the number of highly educated people rose twofold between 2007 and 2013, representing in the latter year almost 40 per cent of the total (it was less than 15 per cent in 2007), a value equivalent to the one observed for the group of western and central European member states. Finally, the intra-EU migration to Portugal of Bulgarians and Romanians (Table 5) has a profile that differs from all the other groups analysed: although a high volume of immigrant labour came from these countries (which increased until 2010/2011), the proportion of workers with tertiary education is very low (less than 3.5 per cent, despite the increase observed since 2007).

8.4 BRAIN DRAIN

As far as brain drain is concerned, the number of highly skilled people among Portuguese emigrants in EU countries increased substantially during the first decade of the twenty-first century (Table 6). Unfortunately, due to the data limitations explained in previous sections, we are unable to establish the annual outflows of Portuguese emigrants by skill levels for the various destination countries in the EU. Additionally, because the available stock data by skill levels correspond to the Censuses (2000 and 2010–2011) we totally miss the subsequent trend observed during the austerity period of the economic and financial crisis (2011–2014).

Due to the very limited information, even compared with data on inflows to Portugal, we decided to keep some elements for 2000 in order to introduce a diachronic dimension to the picture. Furthermore, if we consider that the economic situation in Portugal started to worsen in 2003–2004, the use of data for the beginning and the end of this decade already includes part of the crisis period.

Getting back to the data on the stocks of highly educated Portuguese in EU countries in 2000 and 2010–11 in the major macro-regional destinations (western and central European member states and southern European member states) the volume more than doubles in the first case (jumping from about 5 per cent of total Portuguese emigrants to 10 per cent) and almost triples in the latter, due to the increase in emigration to Spain (a major destination until the 2008 crisis – Pires et al. 2014). Even in secondary EU destinations (Scandinavian countries and the limited outflows to central and eastern Europe), a growth in the stocks of highly skilled Portuguese can also be observed in the period of analysis, even if its proportions are more modest. Nevertheless, the proportion of highly educated emigrants in total stocks of Portuguese emigrants is much higher in these »secondary destinations« than in the major EU macro-regional desti-

nations³⁴ where the volume of low skilled – that includes a substantial proportion of low skilled migrants of the pre-2000 migration waves – is more significant.

An exceptional destination country with regard to Portuguese emigration in this period (which continued in the crisis years – OECD) is the United Kingdom, which registers a 5.5 times increase in highly skilled workers, a group that represents almost 40 per cent of total Portuguese emigrants (the highest proportion of all countries with stocks over 100 highly skilled Portuguese in 2010–2011).

Taking this evolution into consideration, it is reasonable to describe emigration from Portugal to the other EU member states as a brain drain, as implied by a number of authors (Peixoto 2007) for previous periods. Considering that the resident population of Portugal with a tertiary education increased 1.8 times in the period 2001–2011 between the two most recent censuses, the evidence of a generalised doubling or trebling of the stocks of highly skilled Portuguese in EU destinations in the same period are a sign of brain drain. More recent data point to an acceleration of this process, even though some refuse to classify it as brain drain (Pires et al. 2014). In fact, the lack of annual information on the outflows of highly skilled people, as well as the duration of their stays abroad justifies caution in assuming that the process is a brain drain. In addition, it is essential to establish the balance between highly skilled outflows and inflows in order to draw conclusions on this issue. We shall return to this in the final section.

The proportion of Portuguese highly skilled emigrants in the total number of EU highly skilled foreigners living in individual countries is very low, with the exception of a few countries in which the Portuguese are a major immigrant group, particularly France and Luxembourg (Table 6). Also in countries that became major destinations for Portuguese outflows later on (for example, Spain and the United Kingdom), the proportion of highly skilled workers tends to be slightly higher than in the majority of EU destinations. Therefore, we may conclude that seems to be a relationship between the total volume of Portuguese migrants and the proportion of highly skilled Portuguese in the overall EU stock: the countries with the highest stocks of Portuguese emigrants are the countries where the proportions of highly skilled Portuguese in the totals of highly skilled EU foreigners are higher.

Furthermore, there has been a general increase in the proportion of Portuguese highly skilled migrants in the stocks of EU highly skilled foreigners in the various destination countries. In principle, this reflects the structural increase in the education level of Portuguese people presented in the previous section, which is leading to a change in the profile of the most recent emigrants, who are more urban and more qualified, many possessing university degrees. Nevertheless, if we consider that other important suppliers of intra-EU migrant workers, such as Bulgaria and Poland, display relatively high levels of tertiary education (Herman 2012), maybe

³⁴ The same situation can be observed for the Portuguese in Switzerland, a non-EU destination very relevant for Portuguese emigration. It is remarkable that the volume of highly skilled Portuguese in Switzerland grew almost fivefold between 2000 and 2010, but its proportion in the total volume of Portuguese emigrants in the latter year was only 6 per cent.

Table 6

Proportion of highly qualified Portuguese currently working in another EU member state compared with the overall proportion of Portuguese currently working in that EU member state, and the total intra-EU highly qualified immigrants by region, 2000 and 2010–2011

Member states	2000						2010–11				
	Portuguese population			Higher Education intra-EU			Portuguese population			Higher Education intra-EU	
	Higher Ed.	Total	%	Total	% of Port.	Higher Ed.	Total	%	Total	% of Port.	
Western and central MS	France	23,436	567,700	4.1	269,716	8.7	38,211	588,223	6.5	406,380	9.4
	Netherlands	–	2,178	–	58,297	–	1,093	9,398	11.6	100,730	1.1
	Germany	–	67,720	–	–	–	7,920	100,167	7.9	667,468	1.2
	United Kingdom	5,502	32,263	17.1	355,308	1.5	30,309	79,199	38.3	961,368	3.2
	Ireland	171	537	31.8	84,825	0.2	679	1,939	35.0	144,572	0.5
	Belgium	1,566	19,870	7.9	98,410	1.6	1,765	26,358	6.7	98,312	1.8
	Luxembourg	688	38,398	1.8	19,723	3.5	1,870	56,450	3.3	33,555	5.6
	Austria	102	873	11.7	50,030	0.2	–	–	–	63,377	–
	Total	31,363*	658,768*	4.8	–	–	72,834*	752,169*	9.7	–	–
Scandinavian MS	Denmark	153	634	24.1	23,830	0.6	221	1,138	19.4	32,490	0.7
	Sweden	365	2,275	16.0	76,810	0.5	735	2,850	25.8	107,220	0.7
	Finland	30	155	19.4	7,460	0.4	74	327	22.6	14,399	0.5
	Total	548	3,064	17.9	108,100	0.5	1,030	4,315	23.9	154,109	0.7
Southern MS	Italy	528	3,868	13.7	72,780	0.7	841	4,835	17.4	112,519	0.7
	Greece	53	279	19.0	49,359	0.1	92	313	29.4	69,389	0.1
	Spain	3,980	53,420	7.5	130,520	3.0	11,835	91,620	12.9	365,360	3.2
	Total	4,561	57,567	7.9	252,659	1.8	12,768	96,768	13.2	547,268	2.3
New MS 2004	Malta	–	–	–	–	–	–	–	–	–	–
	Cyprus	–	–	–	–	–	–	–	–	–	–
	Estonia	–	–	–	–	–	18	23	78.3	2,329	0.8
	Latvia	–	–	–	–	–	–	–	–	–	–
	Lithuania	–	–	–	–	–	–	–	–	–	–
	Poland	9	33	27.3	10,941	0.1	65	92	70.7	13,705	0.5
	Czech Republic	14	28	50.0	7,109	0.2	98	361	27.1	10,555	0.9
	Slovakia	1	4	25.0	2,313	0.0	9	22	40.9	3,824	0.2
	Hungary	9	24	37.5	5,806	0.2	84	242	34.7	13,215	0.6
	Slovenia	–	–	–	–	–	10	20	50.0	3,549	0.3
Total	–	–	–	–	–	–	–	–	–	–	
New MS post-2004	Romania	–	–	–	–	–	–	–	–	–	–
	Bulgaria	–	–	–	–	–	–	–	–	–	–
	Croatia	–	–	–	–	–	–	–	–	–	–
	Total	–	–	–	–	–	–	–	–	–	–
Switzerland	1,917	94,200	2.0	170,438	1.1	9,255	152,630	6.1	307,992	3.0	

* These totals do not include Netherlands, Germany and Austria.

Note 1: Data for Germany (Portuguese Emigration Observatory). Note 2: It refers to foreign born.

Source: DIOC 2000 and DIOC 2010–2011.

the increase in the proportion of highly qualified Portuguese emigrants is not just the result of the structural increase in education levels but also the consequence of a possible brain drain process that is associated with limited job and career opportunities for young skilled Portuguese in their home country.

8.5 FROM BRAIN WASTE TO BRAIN DRAIN? SOME PRELIMINARY CONCLUDING RE- MARKS ABOUT PORTUGAL

Since the first decade of the twentieth century, highly skilled migration has intensified more than migration overall and has acquired more complexity, which is visible in the circulation of highly educated people that now involves more countries and diverse forms of mobility (Docquier and Marfouk 2006; Luchilo 2011). Within spaces of free labour circulation, such as the European Union, policies and the nature of migration – also of highly skilled migration – change as restrictions are lifted and labour circulation comes to be regarded as a factor facilitating regional development and economic growth (Teney 2015). In fact, Teney mentions, in addition to the general principle of free circulation, the EU authorities have been working for decades on institutionalised higher education mobility, implementing measures to promote the circulation of tertiary students and young professionals in European space (for example, through programmes such as Erasmus or Leonardo da Vinci).

If in the 1960s and 1970s the analysis of highly skilled migration was largely in the perspective of brain drain (the systematic migration of highly educated professionals trained in less developed countries and regions to more developed ones, considered to be a negative transfer of human capital), since the 1990s an understanding of the complex and polycentric nature of this type of migration has led to the development of alternative approaches (Luchilo 2011). The best example is the »brain gain« perspective, which takes the migration of highly skilled workers from less to more developed regions as an opportunity, in the form of monetary remittances and non-monetary gains, such as acquisition of experience abroad and development of bridging social capital. Those advocating this approach frame it in terms of the economic and geopolitical changes that have occurred in the past 30 years (globalisation, emergence of countries of the Global South) and also in the world migration panorama, where circulation and temporary migration are gaining momentum and the old divide between countries of origin and countries of destination is blurring. Nevertheless, as Meyer, Kaplan and Charun (2001) state, the complexity and polycentric nature of this type of migration are not really »multidirectional movements«: less developed regions apparently continue to be »losers« in this process, while more advanced and competitive countries are still the »winners«. Thus brain drain may still be a reasonable description, if recontextualised and combined with other approaches and possibly applied more to sub-national logics (migratory exchanges between regions, at national and global level) than to national perspectives.

Finally, a concept that often complements the brain gain approach is brain waste, a term used to describe the loss of investment (in education and training) and the waste of individual skills and talent when countries and regions of origin cannot offer jobs compatible with their young people's qualifications acquired in schools and universities. Brain waste also characterises the de-skilling process faced by many migrants in destination countries, where circumstances (lack of information, corporate protectionism, irregularity, non-recognition

of diplomas, institutional racism and other things) lead people to take jobs below their competences. While this is more frequent during the initial migration stage when migrants are adapting to the new context, in some cases this process of downward professional mobility continues.

With regard to Portugal, after a decade discussing the brain waste associated with its incapacity to use all the skills of the immigration wave of the late 1990s and early 2000s – particularly from central and eastern Europe, according to the opinions expressed at the time – the issue of brain drain has come back on the social, academic and political agenda. For instance, at a recent event about the state of science and the conditions of scientific work in Portugal,³⁵ several participants mentioned the incapacity of universities and research units to retain young Portuguese scholars and underlined the systematic emigration (without alternative) of these people in the recent years. In fact, the event's concluding document states (section 4) that the countries of southern Europe need to attract and retain researchers for the purpose of advancing research, a key condition for reducing regional imbalances and promoting economic growth.

Another example is the recently approved Portuguese *Strategic Plan for Migration*,³⁶ which for the first time includes measures on immigrants and emigrants. In addition to a set of strategies aimed at attracting Portuguese people who have left the country, the last measure (number 102) specifically targets young highly-skilled emigrants.

These two examples are intended to illustrate, on one hand, the return of the brain drain perspective to Portuguese society and academia, and on the other hand the government's intention to transform Portuguese emigration, and particularly highly skilled emigration, into migration circulation. In fact, this perspective has emerged only recently, at the end of the present government's term of office, because in its first years in power (2011–2012), the public statements of cabinet members generally promoted emigration as the good alternative to the lack of opportunities and unemployment in Portugal.³⁷

But returning to the key topic of this chapter, what does the information about highly skilled migration (entries and departures) in Portugal during the crisis period tell us? Is there a brain drain in the direction of other EU member states?

First, we must remember here that the limitations of the available data and also the tentative nature of this chapter justify prudence concerning the conclusions and require further research. Having said that, the data show some evidence

³⁵ Encontro de Cientistas – 2015. June 2nd, Instituto de Ciências Sociais da Universidade de Lisboa. *Documento de Conclusões Finais*.

³⁶ The Strategic Plan for Migration 2015–2020 (*Plano Estratégico para as Migrações 2015–2020*) was approved by the Cabinet on 20 March 2015 and presented to the Portuguese Parliament.

³⁷ For instance, in October 2011 the State Secretary of Youth, Miguel Mestre, stated publicly: »If people are unemployed they should leave their comfort zone and go beyond Portuguese borders«. Two months later, the prime minister, discussing unemployment among teachers, said they could find several opportunities in Brazil and Angola, a country that was also apparently eager to get Portuguese professionals in IT, telecom, health care and the environment.

of a brain drain, a process that has been aggravated during the crisis period. Although the Portuguese Census of 2011 (which we have used to identify the stock of highly skilled EU citizens) and DIOC-OECD data (used to obtain information about the stock of Portuguese workers in other EU countries in 2000 and 2010/11) are not fully comparable and do not include the most acute years of the crisis, they show a clear imbalance between the stocks of highly qualified EU citizens in Portugal and the stock of highly skilled Portuguese in other EU countries: the latter exceeds the former several times over. In addition, the growth registered in the stocks of Portuguese in the 2000–2010/11 period is substantial in several major EU destinations (the values double or even treble in several countries), with the United Kingdom playing the role of a central magnet in this process. It is important to stress that the relative increases in the stocks of highly educated Portuguese in most of the relevant EU destinations were higher than the relative growth of highly educated people registered in the Portuguese Census between 2001 and 2011. This is another fact pointing to a possible brain drain, possibly at an early stage, which needs to be confirmed by more recent data.

Concerning the stock of highly skilled EU foreigners in Portugal, the data show high proportions (frequently over 30 or 40 per cent) of highly educated people in groups from all countries, with the exception of Luxembourg, Bulgaria and Romania, a major source of unskilled labour, despite the regression observed in recent years. The trends observed between 2007 and 2013 point to both a growth in the foreign labour force of highly skilled EU citizens and also an increase in their proportion in total EU foreign workers. In fact, almost half the foreign workers registered in Portugal in 2013 came from EU member states, which may be interpreted as a consequence of the initiatives stimulating free circulation that favour EU skilled workers. Curiously, this also represents a sort of compensation within the crisis, if we consider that in 2008 (a reference year for the crisis) the total number of registered highly educated foreign workers was almost the same as in 2013, although the composition had undergone an important change: the non-EU highly educated labour force had fallen by approximately 1,200 and EU highly skilled workers had increased by just over 1,250.

Because the data are not robust enough to enable us to fully understand the phenomena (we do not have information about length of stay, for instance), the volumes of highly skilled immigrants coming from EU are relatively low and we do not know whether the trend will last in a post-crisis context it is too early to talk about brain circulation involving EU foreign skilled workers passing through the Portuguese labour market. Having said that, it is worth mentioning that the largest contribution to the growth of EU skilled foreigners in Portugal in the 2008–2013 period comes from southern European countries, namely Italy and Spain, that were also strongly affected by the financial crisis and (in particular) austerity policy.

Concerning Portugal's current situation with regard to EU internal migration, the hypothesis that emerges from our analysis and should be explored with fresh and more robust data is that a kind of dual system of internal EU migration is developing: on one hand, a process that has the contours of a brain drain and is leading young highly skilled Portuguese

to western and central European and to a lesser extent to Scandinavian countries in increasing numbers and for longer periods (the United Kingdom and particularly London constitute a paradigmatic example of this process); and on the other hand, a smaller system (or sub-system) of highly skilled circulation that involves southern European EU member states, namely those with a Latin language and culture (Italy, Spain and Portugal), where young people in precarious circumstances shop for job opportunities.

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9

CONCLUSION

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9.1 SUMMARY OF THE COUNTRY STUDIES

This Chapter reviews some empirical findings on the presence of an intra-EU brain drain and gain from the country studies. I will focus on a few exemplary cases to shed light on the complexity of assessing the existence of a brain drain or gain within a country. Indeed, based on cross-national comparative data such as the one presented in the Introduction, it could be concluded that some countries – for example, southern European countries or CEE countries – suffer from an intra-EU brain drain, while others (for example, western European countries) have benefited from brain gain. However, a closer inspection of the national contexts provided in the country studies highlights the extent to which such a diagnosis is complicated and should take country specificities into account, instead of focussing on macro-level data. This Chapter does not attempt to provide an exhaustive overview on the situation presented in each country study. Rather, I will focus on the situation of a few countries that illustrate the extent to which the categorisation of a member state as a brain drain or a brain gain country becomes blurred once the country specificities are taken into account.

As discussed in the Introduction, southern European countries have been hit particularly hard by the recent economic crisis, which has led to a rising emigration wave. Within the southern European context, Spain represents a very interesting case for the study of intra-EU immigration, for two reasons. First, Spain has witnessed a rapid shift in its migration status: as a result of the economic crisis, it abruptly changed from net immigration to net emigration country. Second, while the overall high emigration rates in Spain currently could be interpreted as an indication of a current brain drain of Spaniards, looking at the citizenship of the emigrants mitigates such a conclusion: these large emigration rates are due mainly to the departure of non-national EU and non-EU citizens from Spain, as shown by Moreno-Torres Sánchez (2015) in her country study. In what follows, these two singularities of the Spanish case will be discussed in more detail.

Between the mid-1990s and 2010, thanks to high economic prosperity and employment growth, Spain was attracting large EU and non-EU immigration flows. Moreover, during this period after EU enlargement, Spain witnessed significant

immigration flows from several CEE countries (particularly Romania and Bulgaria). According to the statistics provided by Moreno-Torres Sánchez (2015: 7), the stock of immigrants in Spain multiplied by 10 between 1996 (stock of 542,314 immigrants, which represents 1.4 per cent of total population) and 2010 (stock of 5.7 million immigrants or 12.2 per cent of total population). This increase concerns the stock of both EU non-national citizens and of non-EU citizens.³⁸ Regarding the composition of the non-national EU population residing in Spain, the main countries of origin are Romania (Romanian citizens represented 36.7 per cent of the total non-national EU immigrant population by 2012) and Bulgaria (Bulgarian citizens composed 7.2 per cent of the total non-national EU immigrant population by 2012) (Moreno-Torres Sánchez 2015: 8). Furthermore, there is also a large stock of western Europeans, particularly from the United Kingdom and Germany (respectively, 16.3 per cent and 8.1 per cent of the total EU immigrant population in 2012). One of the explanations for this large non-national western European population residing in Spain is the popularity of Spain as a retirement destination. Moreover, the EU immigrant stock in Spain is also partly composed of citizens from other southern European countries, such as Portugal and Italy (respectively, 5.7 per cent and 7.8 per cent of the total EU immigrant population in 2012). With respect to qualifications, Moreno-Torres Sánchez (2015) reports that 20.8 per cent of the non-national EU citizens who immigrated to Spain between 2008 and 2012 have a tertiary degree, a lower percentage than that of highly qualified non-EU citizens who immigrated to Spain during the same period (23.7 per cent). According to Moreno-Torres Sánchez (2015), this relatively low proportion of highly qualified citizens among non-national EU immigrants is due to the high number of EU immigrants originating from CEE countries.

³⁸ The stock of EU non-national immigrants in Spain increased from 289,335 in 1998 (which represents 0.7 per cent of total population) to 2,351,939 in 2010 (which represents 5.0 per cent of total population). The stock of non-EU citizens in Spain increased from 347,750 (0.9 per cent of total population) in 1998 to 3,395,795 in 2010 (7.2 per cent of total population) (Moreno-Torres Sánchez 2015: 8).

By 2010, due to the severe economic crisis, Spain ceased to be a net immigration country and started to become a net emigration one. In 2013, 532,303 residents of Spain emigrated (compared with 288,432 emigrants in 2008, which represents an increase of +84 per cent), while 280,768 people immigrated to Spain in the same year (compared with 599,074 people who immigrated to Spain in 2008, a decrease of –53 per cent) (Moreno–Torres Sánchez 2015: 11). The subtraction of emigration and immigration flows within a year provides the net migration rate. If the net migration rate is positive, this implies that the number of immigrants outperforms the number of emigrants, which in turn means an increase in the total population of a country. By contrast, a negative net migration rate means that the number of emigrants is higher than the number of immigrants within a year, that is, that the country has experienced a loss in the total number of its residents because of migration. Comparing this net migration rate of the years before and after the economic crisis clearly highlights the changing migration status of Spain: in 2008, the net migration rate was +310,642 (which represents 6.7 net entries per 1,000 Spanish inhabitants), while in 2013 the net migration rate was –251,535 (that is, 5.3 persons per 1,000 inhabitants left Spain in 2013) (Moreno–Torres Sánchez 2015: 11–12). The recent rapid increase of emigration flow in Spain gives some insight into the importance of economic factors in emigration decisions (for example, economic and labour market downturns).

According to Moreno-Torres Sánchez (2015) and despite these high negative net migration rates, Spain is nevertheless currently not suffering from a brain drain of its citizens. Indeed, the large emigration flows since the beginning of the economic crisis are due mainly to departures of non-national EU and non-EU immigrants: out of the 532,303 citizens who left Spain in 2013, 55.4 per cent were non-EU citizens, 30.8 per cent were non-national EU citizens and only 13.8 per cent of them were Spaniards (which corresponds to 73,329 Spaniards who emigrated in 2013). The large emigration flow of non-Spanish citizens resulted in a decrease in the immigration stock: between 2010 and 2014 the stock of immigrants in Spain decreased by –728,000 (–295,036 non-national EU citizens and –429,211 non-EU citizens) (Moreno-Torres Sánchez 2015). Lastly, and based on the Labour Force Survey data, Moreno-Torres Sánchez (2015: 15) estimates that 55.3 per cent of the Spaniards who emigrated between 2008 and 2012 hold a tertiary degree. Thus, according to her study, while the number of Spaniards who emigrated in recent years remains relatively low, Spanish emigration is characterised by a high proportion of highly qualified citizens.

In contrast to the relatively recent increase in emigration flows from southern European countries, the central and eastern European new member states started to experience substantial emigration rates to older EU member states as soon as they joined the EU. Furthermore, the proportion of emigrants from CEE countries with a tertiary degree is higher than the overall proportion of CEE citizens holding a tertiary degree. The Hungarian case, reported on by Pogátsa (2015), illustrates this trend well: about 5.3 per cent of the overall population of Hungary resided in another EU member state in 2013. In addition, Hungarians who live in another EU

member state tend to be younger and more highly educated than the Hungarian population on average (Pogátsa 2015). Such a situation can be an indication of an intra-EU brain drain affecting CEE countries. However, the Polish case shows convincingly that a closer inspection of the national context in which these emigration waves take place requires a more nuanced evaluation of the country situation. Emigration flows in Poland radically increased during the post-accession years: in 2002 about 800,000 Poles resided abroad, which represents 1.8 per cent of the total Polish population (the main destination countries being Germany, the United States and southern European countries). By contrast, the stock of Polish citizens residing abroad reached 2.3 million persons in the peak year of 2007 (6.6 per cent of the total Polish population) and remains relatively high despite the recent economic crisis that hit several EU countries. Among the CEE countries, only Romania faced an increase in emigration flows on a similar scale to Poland (Kaczmarczyk 2015: 5). Post-accession emigration in Poland is characterised by selectivity – emigrants tend to be more highly educated than the total population – and an overrepresentation of younger citizens: the 2011 census data indicate that 31.4 per cent of the emigrants residing abroad for more than three months are between 20 and 29 years old (compared with 18.6 per cent of 20–29 years old within the overall Polish population) and that 22.8 per cent of the emigrants hold a tertiary degree (compared with 19 per cent of the total Polish population who have a tertiary degree) (CSO 2013, cited in Kaczmarczyk 2015: 6). Similar to most other CEE countries, a significant overrepresentation of highly qualified citizens among Polish emigrants could indicate a brain drain in accordance with the theoretical framework presented in the first part of this study. Furthermore, the severe wage gap between Poland and the destination countries is one of the essential traditional migration push factors.

However, the detailed study by Kaczmarczyk (2015) shows convincingly that diagnosing the presence of brain drain in a country should not be reduced to detecting an overrepresentation of highly educated among emigrants. Instead, Kaczmarczyk (2015) points to several internal and external factors that blur the categorisation of Poland as a brain drain country. First, the external factors refer to the labour market integration of highly qualified Polish immigrants: even if the emigrant population tends to be highly educated, a large share of Polish immigrants have low-skilled jobs abroad. According to a recent study by Kaczmarczyk, the rate of return to education among highly educated Poles working in the United Kingdom was the lowest in the British labour market, even lower than the return to education in the Polish labour market (Kaczmarczyk and Tyrowicz 2015, cited in Kaczmarczyk 2015). According to Kaczmarczyk (2015: 14), this situation challenges the existence of a significant positive »brain effect« in the case of Polish immigrants in the United Kingdom. The high prevalence of overeducation among Polish immigrants working in other EU member states indicates the presence of »brain waste« affecting highly qualified Polish immigrants. Brain waste refers to a situation in which highly qualified immigrants fail to find jobs matching their qualifications and continue to work in jobs for which they are overeducated, even after a period of adaptation and

transition in the receiving country labour market. Besides the direct waste of skills resulting from overeducation among immigrants, such a job/skills mismatch might jeopardise the migration benefits for immigrants once they return to their country of origin: highly qualified citizens who take low paid jobs abroad are not likely to be valued positively in the domestic labour market. Having occupied long-term low-skilled jobs abroad can indeed hinder the successful reintegration in the domestic labour market of highly qualified Poles once they return to Poland: this can lead to a »double marginalisation«, an inability to find a job corresponding to one's qualifications and satisfying career aspirations, not only abroad but also in the domestic labour market. This very inability to find satisfying employment in Poland could become a new push factor and result into new emigration plans (Iglicka 2009, cited in Kaczmarczyk 2015: 16).

Besides brain waste among Polish immigrants in the labour markets of the destination countries, the specificities of the Polish labour market further hinder the straightforward categorisation of Poland as a brain drain country. The labour market changed dramatically with the socio-economic transition in Poland. With a centrally planned economy, the wage system during the post-war period in Poland was constrained to be relatively flat: wage differences between high and low qualified workers remained comparatively small. The introduction of the free market led to a sudden and substantial increase in the value of higher education. As a consequence, the number of university graduates in Poland has boomed since the early transition period: between 1997 and 2010 the share of the working population with a tertiary degree in Poland increased annually by 7.2 per cent (twice as high as the OECD average). An increase in the proportion of highly educated people among the emigrant population could thus just reflect educational development in Poland, namely the boom in university enrolment among the younger generation of Poles since the transition (Kaczmarczyk 2015: 11).

Furthermore, and in contrast to the rapid change in the education system since the transition, the Polish labour market has not evolved rapidly enough to absorb the increasing number of young Poles with a tertiary education. This situation created a growing mismatch on the domestic labour market between the only slowly increasing demand for highly qualified labour and the rapidly increasing supply of graduates: since 2004, the unemployment rate of Poles between 25 and 29 years old with a tertiary degree has been particularly high, which represents an essential push migration factor (Kaczmarczyk 2015: 12). In such circumstances, international emigration turned out to be one way of relieving the domestic labour market of its surplus of highly qualified workers (Brzozowski et al. 2014, cited in Kaczmarczyk 2015: 12). Kaczmarczyk concludes that »an outflow of persons with tertiary education who often face serious problems on the Polish labour market can thus be described as brain overflow and not brain drain« (2015: 13). All in all, the diagnosis of a brain drain in Poland is questionable given the large pool of highly educated workers and the persistent oversupply of labour, including highly qualified labour (Kaczmarczyk 2015: 13). In the Polish case, the high emigration flow of highly qualified workers has made it possible to reduce the workforce surplus in the domestic labour market, which in turn makes room for

improving labour allocation, primarily at local and regional levels (Kaczmarczyk 2015: 15).

The case of highly qualified emigration from Latvia also shows the necessity of considering the national context before concluding that a brain drain exists. Between 2000 and 2014, Latvia lost 12 per cent of its population due to high net emigration rates. The high proportion of Latvians who emigrated also implies an efficient network effect that facilitates further emigration: almost every Latvian household has a family member or a close acquaintance already residing abroad, which makes the realisation of emigration plans and intentions much easier (Hazans 2011, cited in Austers 2015). Austers (2015) distinguishes two emigration waves since Latvia joined the EU. The first took place after EU accession in 2004, lasted until the beginning of the economic crisis and was characterised by a relatively large share of low qualified citizens, who emigrated to Ireland, the United Kingdom and Sweden (the EU countries that opened their labour markets to new EU citizens without a transition period). The second wave in 2008–2010, started with the economic crisis that hit Latvia severely and was characterised by a large number of young highly qualified citizens who left Latvia with their families have no intention of returning (Hazans 2011, cited in Austers 2015). According to Austers (2015), the economic downturn faced by Latvia between 2008 and 2010 would have been much more severe without this second large emigration wave.

The last region covered by the country studies is western Europe. The United Kingdom and Germany constitute the two major immigration countries among western European member states: throughout the recent economic crisis, both the United Kingdom and Germany remained attractive destinations for citizens from countries deeply affected by the recession and debt crisis (such as southern European countries), as indicated by the positive net migration rates in both Germany and the United Kingdom in recent years (Paluchowski and Marco-Serrano 2015; Teney and Siemsen 2015). A closer look at the evolution of the patterns of EU immigration flows to these two countries sheds light on the effects of national policies in regulating immigration flows. The United Kingdom was one of three EU countries that opened their labour markets to CEE citizens immediately after the 2004 enlargement. By contrast, Germany, together with Austria was the last country to remove labour market restrictions on citizens from the 2004 new member states (in 2011). Comparing the immigration flow of citizens from CEE to Germany and the United Kingdom since enlargement points to the effect of this transition measure on these two popular destination countries (for a detailed analysis, see Palmer and Pytlíková 2015). Indeed, the United Kingdom faced a boom of immigration from the CEE countries from 2004 to 2007 (2007 being the peak of this immigration wave). Since 2007, the immigration flow of CEE citizens has, however, continuously decreased in the United Kingdom (Paluchowski and Marco-Serrano 2015): this decrease is probably due to the fact that emigration from CEE countries was redirected to other EU countries that had meanwhile removed their labour market restrictions. By contrast, immigration flows from CEE countries to Germany has increased continuously since Germany opened its labour market to new EU citizens.

The almost constantly positive net EU migration rate in recent years gives a hint about the potential brain gain faced by these two countries.³⁹

However, the situation of the medical profession presented in the German study sheds light on the complexity of assessing the existence of brain drain and gain. Indeed, diagnosing the existence of a brain gain based on aggregate statistics of recently immigrated EU citizens does not necessarily apply to every sector of activity or profession. The medical profession is relevant because this profession is among the three highly skilled professions characterised by the most acute labour shortages in Europe (van der Ende, Walsh and Ziminiene 2014). The case study on this profession presented by Teney and Siemsen (2015) shows that the number of non-German EU medical doctors practicing in Germany has more than doubled since 2005, which points to an intra-EU brain gain for this profession. However, the brain gain status of Germany for this profession is becoming uncertain once German medical doctors leaving Germany are also taken into account: the number of non-German medical doctors registered with the German medical doctor chamber has outperformed the number of German medical doctors leaving Germany only since 2011. In the case of the medical profession, the statistics show a steady increase in the number of medical doctors from the new EU member states practicing in Germany. The wage and working conditions differential between Germany and CEE countries and the proximity of Germany to the home countries are likely to constitute the main explanatory factors for this brain gain. These factors are, however, likely also to be the main determinants explaining the brain drain of German medical doctors: Switzerland is by far the most important destination country for German medical doctors who emigrate. This also illustrates the chain reaction that can result from brain drain: German medical doctors who immigrate to countries offering better wage and working conditions (such as Switzerland) increase the labour shortage in Germany. Germany, in turn, fills in this labour shortage by attracting medical doctors from neighbouring countries by offering higher wages and better working conditions than the immigrants' countries of origin.

9.1.1 ECONOMIC, SOCIAL AND POLITICAL IMPLICATIONS

This section is composed of two parts. First, I will briefly introduce some potential social and economic implications of a severe brain drain, as discussed in the literature. Furthermore, I will illustrate them with a few examples from the country studies. As already mentioned, the existence of an intra-EU brain drain or brain gain is particularly difficult to assess due to the complexity of the phenomenon and the lack of accurate and reliable data. Thus, the attempt to exactly assess the social and economic implications of an intra-EU brain drain for a specific country is hazardous. Furthermore, it is beyond

the scope of this study to provide a comprehensive overview of the economic and social implications of brain drain. In the second part, I will present the positions of some key national and EU political, economic and societal actors on intra-EU highly qualified labour migration.

ECONOMIC AND SOCIAL IMPLICATIONS

From an economic perspective, a lack of sufficiently skilled labour due to highly qualified emigration is likely to damage the productivity and growth of the sending countries: highly qualified workers are the driving force of innovation and improvement in knowledge and technology (Chiswick 2005). The exact cost of brain drain depends on the sectoral composition of highly qualified emigration, especially if the professions most affected by brain drain influence the operations of others (such as health care professionals or engineers) (Beine et al. 2008). In the case of Spain, a potential brain drain as result of the severe economic crisis has so far been salient mainly for the scientific community. The Spanish media have been reporting on the emigration of world-class Spanish scientists since 2009 as result of the cuts in the education and research budget. In 2012, 50 university rectors warned the government against further budget cuts in education, claiming that »the damage to public R&D will be irreversible (...) leaving thousands of young researchers without professional prospects and seriously weakening the future of the Spanish economy« (Morel 2013, cited in Moreno-Torres Sánchez 2015: 20). Furthermore, for the sending country high emigration rates of highly qualified citizens mean the loss of its investment in education, as well as national tax revenues. Brain drain can nevertheless have a positive effect on the overall national educational level by leading to an increase in the proportion of citizens who invest in human capital (Beine et al. 2008): the prospect of being able to immigrate more easily and to access well-paid jobs abroad might provide an additional incentive to pursue a tertiary degree. Such an implication has been highlighted by Austers (2015) for the Latvian case: the share of the Latvian population between 15 and 64 years old with at least an upper secondary qualification increased from 75.9 per cent in 2000 to 83.4 per cent in 2013 despite the high emigration rates among highly qualified Latvians (Austers 2015: 4).

Sending countries might further benefit from highly qualified emigration through remittances or transnational networks (Chiswick 2005). Remittances exert a positive effect not only for individual households but also for the national economy. For instance, Austers (2015: 7) reports that remittances in Latvia helped to mitigate the economic crisis by boosting demand and consumption: according to the Bank of Latvia's estimates, the total amount of remittances represents between 2 and 3 per cent of Latvia's GDP. Furthermore, return migration might imply knowledge transfer for the sending country: highly qualified citizens with migration experience might show higher productivity than highly qualified citizens who have never emigrated (Gibson and McKenzie 2012). Latvian citizens who returned to Latvia indeed show higher employment rates than the overall population (Hazans 2011, cited in Austers 2015).

³⁹ Due to data limitation and lack of comparability in the statistics reported in both country studies, a comparison of the share of highly qualified EU immigrants in Germany and the UK is not feasible.

Turning now to the social implications, brain drain can result in or aggravate demographic imbalances. Because emigrants tend to belong to the younger generation, large emigration flows might reinforce population ageing. For instance, Austers (2015) highlights the dramatic ageing and shrinkage of the Latvian population as a consequence of the large emigration flows of the younger generation: the total population in Latvia decreased from 2.28 million in 2004 to 2.00 million in 2013, with an estimated population of 1.63 million in 2030 (Austers 2015: 4). These dramatic changes do not affect all regions of Latvia equally: the capital region of Latvia is more strongly affected by these ageing and shrinkage trends of its population because Riga is traditionally a region that attracts younger Latvians (Austers 2015: 4). Regional disparities need to be taken into account when investigating the effects of high emigration flows of highly qualified citizens on the economy and society. The second potentially important social implication of large highly qualified emigration concerns the likelihood of the emergence of a brain drain chain reaction, as mentioned in the German study with regard to medical doctors (Teney and Siemsen 2015). Indeed, when experiencing acute and persistent highly skilled labour shortages due to emigration flows, countries are likely to have to attract highly qualified labour from lower-income non-EU countries. This, in turn, will create a brain drain chain reaction: the EU's most prosperous countries will attract »brains« from the EU's less prosperous countries, which will then need to make up for their national skill labour shortages and will attract highly qualified workers from less prosperous non-EU countries. This, in turn, will lead to an increase in the diversification of the country's ethnic composition.

POLITICAL IMPLICATIONS

The analysis of Teney and Siemsen (2015) sheds light on the consensual positions of a selection of German actors representing a broad spectrum of business and economic associations, trade unions and political parties in Germany: with few exceptions, most key societal actors in Germany support increasing qualified immigration to Germany in order to cope with predicted demographic changes and to ensure growth and welfare in the long run. However, the largest trade union (DGB) is the only actor highlighted by Teney and Siemsen (2015) that has so far acknowledged the potential emerging economic imbalances for the (EU and non-EU) sending countries facing brain drain from which Germany might become a major beneficiary.

By contrast, the Spanish government, headed by the moderate right-wing PP party since 2011, has so far interpreted the large current emigration of highly qualified workers in terms of labour mobility rather than in terms of brain drain: according to the government, the high mobility rate among young Spaniards is due to the popularity of mobility programmes such as the Erasmus exchange programme (Moreno–Torres Sánchez 2015: 21). Another key Spanish actor is the Bank of Spain, which recently published a study in which Spaniards' current low emigration rate is explained by a lack of network effects between already emigrated Spaniards and Spaniards with emigration desires. The study

stresses that such network effects could quickly appear if the economic downturn persists, which could lead to a significant brain drain (Bank of Spain 2014, cited in Moreno–Torres Sánchez 2015: 21). The Spanish employers' confederation CEOE admitted in an interview the potential long-term negative impact on competitiveness of high emigration flows of young highly qualified Spaniards. It nevertheless considers the increase in emigration as unavoidable, given the lack of employment opportunities in Spain (Actualidad Docente 2014, cited in Moreno–Torres Sánchez 2015: 22). The last key actor mentioned in the Spanish study is the trade unions: so far, they have focused on the labour market crisis, the growing poverty and the worsening of the social and economic conditions (Fundación 1 de Mayo 2013, cited in Moreno–Torres Sánchez 2015: 21). Moreover, the trade unions are calling for improvements in the economic and labour market situation in order to avoid the acceleration of labour emigration flows and to enable the return of Spanish emigrants.

In contrast to Spain, the CEE country studies highlight the significant attention paid by national governments to the issue of brain drain: national political actors from CEE countries have implemented a number of policies aimed at mitigating brain drain risks. For instance, the Latvian government wants to improve the public administration's communication with Latvian emigrants and to support the Latvian diaspora (Austers 2015: 11). Furthermore, the Latvian government supported the opening of the Centre for Diaspora and Migration Research at the University of Latvia in 2014 and commissioned a large academic project on Latvian emigrant communities (Austers 2015: 11). Other policies focus on specific sectors or a particular target population. For example, the conservative Hungarian government has implemented a policy that forces Hungarian medical doctors who graduate from a Hungarian university to work in Hungary for several years. This policy is aimed at moderating the large emigration wave of medical doctors (Pogátsa 2015).

Comparing the positions and policies of actors reported in the country studies underlines the role of national contexts in explaining inter-country differences in positions on intra-EU highly qualified mobility: the positions of political, economic and societal actors strongly reflect national interests on this issue. This clearly shows the difficulties involved in tackling this EU issue with adequate policies when the national perspective is so strong: national interests regarding intra-EU brain drain diverge sharply, depending on the status of the country as net emigration or immigration country. In the context of conflicting national interests between EU member states, the EU is obviously the appropriate political entity to tackle issues that have a clear European scope: the political *raison d'être* of this supranational political regime defends the interests of EU citizens above the national interests of the member states. It is therefore highly relevant to look at the positions of the main EU-level actors on intra-EU brain drain in order to shed light on the kind of policies or answers they propose to this issue. This is the focus of this last empirical part: I will briefly introduce some recent positions on intra-EU highly qualified mobility among the largest European political groups represented in the European Parliament, the European Commission, the main economic lobbyists and European trade unions.

I will start this brief overview by summarising the positions of the largest European political groups (political groups with at least 50 seats in the European Parliament), as published in the manifestos of their main affiliated parties at the 2014 European parliamentary elections. In a nutshell, the largest political groups and their affiliated parties acknowledge in their manifestos the freedom of movement as a right and a founding principle of the EU. Furthermore, the 2014 manifestos of the main parties affiliated with the major political groups – with the exception of the Greens/European Free Alliance group – do not mention any potential intra-EU brain drain. In addition, some of them, such as the European People's Party (2014) and the Alliance of Liberals and Democrats for Europe (2014), consider mobility as an absolute right that benefits people, businesses and the economy. Hence, the European People's Party states, for instance, that »pan-European movement of qualified people helps businesses to recruit those they seek, and in some countries is the only solution to skills and labour shortages« (European People's Party 2014: 10). Thus, the European Green Party is the only major European party to specifically mention potential brain drain when calling for the building of a Social Europe: »Social balance across Europe must address the threat of a brain-drain – especially of young people – away from crisis-stricken regions and the exploitation of migrant workers, while respecting the fundamental right to free movement« (European Green Party 2014: 14–15).

Next, the European Commission, in its recent communications, seems to consider labour mobility mainly as an economic instrument to boost prosperity within the economic and monetary union. For instance, in a communication to the European Parliament and Council on the social dimension of the economic and monetary union, the Commission stresses the need to remove barriers to enhancing EU labour mobility, which is considered by the Commission as too low: »To ensure a fast match between labour demand and supply across Europe and to maximise employment potential, it is particularly important to improve people's ability to move for work within and beyond their national borders« (European Commission 2013: 9). In a similar vein, the European Council in the directive on »the conditions of entry and residence of third-country nationals for the purposes of highly qualified employment« encouraged policies aimed at fostering the mobility of highly qualified EU citizens, particularly those from the member states that joined the EU in 2004 and 2007 (Council of the European Union 2009: 1).

Considering highly qualified labour mobility as an instrument to enhance the economic and monetary union is also in line with the perspective of the Confederation of European Business (the former European Confederation of National Employers), which is recognised as a social partner at the EU level. Indeed, in a position document on the future of Social Europe, it argues that »mobility is a key component of the single market and is important for prosperity: it helps to optimise the job opportunities available across the EU and EEA and to address mismatches between labour supply and demand« (Business Europe 2014: 12). Furthermore, it considers the current level of intra-EU mobility as too low and argues that »the political climate in individual member states can result in attempts to limit mobility when it is really nec-

essary to meet labour market needs« (Business Europe 2014: 12). It therefore calls for an increase in political acceptance of mobility, which includes, for instance, improvements in the coordination of national social security systems (Business Europe 2014: 12).

In contrast to these positions that fail to acknowledge any downside of (highly qualified) labour mobility, the largest European trade union federation, the European Trade Union Confederation (ETUC), has in recent years repeatedly warned against a potential brain drain within the EU. For instance, in its current strategy and action plan, the ETUC considers labour mobility within the EU as one of the fundamental freedoms, but argues that such mobility should take place under fair conditions to ensure that it becomes accepted as an opportunity and not a threat (European Trade Union Confederation 2011: 58). Furthermore, in a position document the ETUC acknowledges the contribution of mobility to the employment prospects of European citizens, but insists that mobility should remain voluntary and take place within a framework of respect for labour rights and application of the principle of equal treatment (European Trade Union Confederation 2013a: 2). Indeed, according to the ETUC, the current economic crisis that has hit several EU countries very hard has led to a situation of *forced* mobility rather than the desired freedom of movement (European Trade Union Confederation 2013b: 1). Furthermore, the paper argues that mobility will not solve Europe's economic and social crisis and contradicts the Commission's view that mobility can act as an adjustment mechanism, enabling the economic and monetary union to respond to asymmetric shocks (European Trade Union Confederation 2013a: 2). Rather, it calls for a European long-term recovery plan that »would lead to a better integrated European union...[This] would be beneficial for all countries, and be an act of solidarity with countries in difficulty; it is based on democracy, stability and cohesiveness« (European Trade Union Confederation 2013b: 2). According to the document, »austerity« policies that cut public spending have led in many cases to emigration and to a brain drain (European Trade Union Confederation 2013b: 5). The ETUC acknowledges that brain drain has a severe impact on the economy, fiscal revenue, public and other services, as well as on the social fabric of countries in difficulties. Consequently, it calls for more investment to foster job creation, develop high quality and accessible public services and generally improve living standards, particularly in areas of high unemployment (European Trade Union Confederation 2013a: 3).

This brief examination of a number of positions of the main EU actors on (highly qualified) labour mobility in the EU sheds light on a line of conflict with regard to this issue between left-oriented actors (such as the ETUC and the European Green Party), on one hand, and actors that consider labour mobility above all as instrument for enhancing the economic and monetary union, on the other hand (for example, the European Commission and Business Europe). Furthermore, the selected ETUC positions briefly presented in this study highlight the importance of actors operating at the EU level in the interest of all European workers and citizens in addressing the downsides of European integration and proposing EU-wide solutions to mitigate them.

9.2 FINAL REMARKS

The aim of this study is to introduce the concept of intra-EU brain drain and gain and to provide first insights into its emergence and possible development. I have defined intra-EU brain drain as the intra-EU transfer of human capital, which applies mainly to the permanent migration of highly educated individuals from less to more prosperous countries and results in growing skilled labour shortages in the sending countries. As mentioned, intra-EU brain drain is particularly difficult to assess empirically because of its complexity and the lack of comparable data across countries. Therefore, the findings presented in this study provide only a first approximation of the extent to which European mobility of highly qualified workers can be characterised as an intra-EU brain drain. I will conclude this study by summarising the main findings discussed in the empirical part.

With regard to emigration flows, Poland, followed by Spain and Romania are the countries with the largest intra-EU emigration flows in 2012 in absolute terms. However, relative to the overall population, intra-EU emigration flows are largest in Luxembourg, followed by Lithuania, Ireland, Latvia, Greece and Romania. Thus, the countries with the highest relative intra-EU emigration flows are all countries with small populations. A similar conclusion can be drawn from the relationship between total population and immigration flows: small western European countries (such as Luxembourg, Belgium and Austria), as well as Malta and Cyprus, are the EU countries that, in 2012, faced the largest intra-EU immigration flows relative to their total population. In absolute terms, however, Germany, followed by the United Kingdom, were the main destinations for intra-EU immigrants in 2012. Analysis of a cross-national comparative survey (the EU Labour Force Survey) makes it possible to provide estimates of the stocks of highly qualified EU immigrants in 11 EU countries. According to these estimates, the population of immigrants originating from EU15 countries tends, on average, to be much more highly educated than the national population and the group of non-EU immigrants. In contrast to the EU15 immigrant population, the proportion of highly educated people among immigrants from the new EU member states is lower and shows wider variation between the 11 analysed destination countries: southern European countries are composed of a very low proportion of highly qualified immigrants from new EU member states, while the other destination countries have attracted a much larger proportion of highly qualified immigrants from the new EU member states.

The detailed description of the national contexts in which highly qualified immigration and emigration within the EU take place provided by the country studies illustrates the extent to which the categorisation of a member state as brain drain or brain gain country becomes blurred once a country's specificities are taken into account. For instance, while the overall high emigration rates in Spain could be interpreted as indicating a current brain drain of Spaniards, the citizenship of emigrants mitigates such a conclusion: the large emigration flows faced by Spain since the beginning of the economic crisis are due mainly to the departure of non-national EU and non-EU immigrants from Spain (Moreno-Torres Sánchez 2015). Poland constitutes another example that

illustrates the importance of taking national specificities into account when assessing the presence of a brain drain. Indeed, Kaczmarczyk (2015) considers the diagnosis of a brain drain in Poland questionable given the large pool of highly educated workers and the persistent oversupply of labour, including highly qualified labour: the high emigration flow of highly qualified workers in Poland has rather reduced the workforce surplus on the domestic labour market.

Besides the importance of considering the national context to assess the presence of a brain drain, I have also discussed some potential implications for the countries facing large emigration flows of highly qualified workers. With regard to the economic implications, the lack of sufficient skilled labour due to highly qualified emigration is likely to damage the productivity and growth of the sending countries. In addition, the emigration of highly qualified citizens might imply lost investment in education and skills and national tax revenues for the sending countries. Large highly qualified emigration flows can nevertheless have a positive effect on the overall national educational level by leading to an increase in the proportion of citizens who invest in human capital, as shown in the Latvian study (Austers 2015). Furthermore, sending countries might further benefit from highly qualified emigration through remittances, transnational networks or knowledge transfer. The main social implication of large highly qualified emigration flows concerns the emergence or aggravation of demographic imbalances, such as reinforcement of a population's ageing or shrinkage. In addition, large highly qualified emigration flows might lead to the emergence of a brain drain *chain*, as mentioned in the German study with regard to medical doctors (Teney and Siemsen 2015).

The remaining implications discussed in this study concern the reactions and answers of political and societal stakeholders on the issue of intra-EU brain drain. The overview of the positions of political, economic and societal actors provided by the country studies shed light on the important role of national interests in explaining the diverging reactions and positions of political and societal actors on this issue. This, in turn, points to the difficulties of tackling this EU issue with adequate policies, while at the same time trying to maintain a national perspective. In addition, the magnitude of intra-EU brain drain is one of the consequences of European integration and the creation of a European labour market. Intra-EU brain drain thus represents a new EU challenge that needs to be addressed at the EU level. In the context of conflicting national interests between EU member states, the EU is indeed the appropriate political entity to address such issues, that have a clear European scope and result from European integration. Key political, economic and societal actors in both net sending and receiving countries therefore need to consider not only their national interests but also the interests of the EU in order to develop coherent and efficient EU-wide policies to tackle the potential implications of an intra-EU brain drain. Furthermore, the construction of a common European labour market also requires the empowerment of civil society actors in the EU, such as European trade unions that defend the interests of EU workers and citizens, regardless of their nationalities. The short description of the major EU actors' positions on intra-EU brain drain has shown

the importance of actors' operating at EU level – such as the ETUC – in the interest of all European workers and citizens when looking at the downsides of European integration and proposing EU-wide solutions to mitigate them.

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