



Study on the movement of skilled labour

Final report

Written by ICF
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Executive Summary

This study describes the trends, drivers and policy responses in relation to brain flow in Europe between 2004 and 2016. The corresponding main themes that have been explored are; the main flows of skilled labour; understanding this movement of skilled workers by looking at push and pull factors; how movement of skilled labour is addressed.

Identifying the main flows of labour

The main findings from the analysis of stocks and flows of EU movers can be summarised as follows:

- **Data indicates that skilled (or educated), in particular high skilled / educated, EU movers account for a small part of the European labour market**, when measured in terms of their actual share of the employed population. Just over 1.6% of the total EU employed population are medium skilled EU movers; just under 1.4% are high skilled EU movers. Low skilled EU movers make up around 0.9% of employed individuals across EU labour markets.
- **There has been a significant increase in the share of high skilled EU movers**; the proportion of high skilled EU movers amongst the employed population in the EU almost tripled between 2004 and 2016 to a total of 3.6 million in 2016. In 2016, the share of medium and high skilled movers from other EU countries as a proportion of all employees was highest in Cyprus (around 10%), Ireland (around 9%), Austria (around 7.5%), the UK (just over 6%) and Belgium (6%).
- **EU movers are not equally spread across Member States and regions** and subsequently the benefits of EU movement have not been shared equally. The analysis outlined in the report distinguishes between four groups of Member States:
 - Destination countries: Member States with a relatively high proportion of residents within its borders who have citizenship of another EU-28 Member State, but do not have a high proportion of its own citizens living in other EU-28 Member States. These countries are destination countries of EU movers (Belgium, Austria, UK, Germany, Spain, Denmark, Sweden and the Netherlands);
 - Outgoing countries: Member States with a low proportion of residents within its borders who have citizenships of another EU-28 Member State and a high proportion of its own citizens living in another EU-28 Member State. These countries are outgoing countries of EU movers (Poland, Slovakia, Estonia, Bulgaria, Croatia, Latvia, Portugal, Lithuania and Romania).
 - Destination and outgoing countries – strong: Member States with a high proportion of residents within its borders who have citizenships of another EU-28 Member State and have a high proportion of its own citizens living in another EU-28 Member State relatively speaking. These countries are both destination and outgoing countries of EU movers (Ireland and Luxembourg);
 - Destination and outgoing - weak: Member States with a low proportion of residents within its borders who have citizenships of another EU-28 Member State and a low proportion of its own citizens living in another EU-28 Member State. Relatively speaking, these countries are neither destination nor outgoing countries of EU movers (France, Czech Republic, Finland, Greece, Slovenia and Hungary), at least in relative terms; Italy is on the border between the first and third group.

- **Skilled EU movers are relatively young, with most being of prime working age.** Looking at all EU movers, some Member States (predominantly EU13¹) have a higher proportion of men and others (predominantly from the south of Europe) have a higher proportion of women.
- **Medium skilled EU movers, on average, have higher employment rates than native born counterparts and high skilled EU movers, on average, have lower employment rates than native counterparts, although overall employment rates among high skilled individuals (both native and movers) are higher than among medium skilled individuals.** Employed medium skilled EU movers are slightly more likely to be male than female whereas employed high skilled EU movers show an even balance between men and women. This is in line with the broader EU population of these skill levels.
- **Increasingly, skilled EU movers reside in their host country for longer.** 6-12 years ago, most employed skilled EU movers resided in the country for fewer than 10 years. Now, almost half reside for more than 10 years.
- **Available data indicates an element of skills loss and/or underemployment amongst skilled EU movers.** A considerable proportion of work in elementary occupations (in particular medium skilled EU movers). Across most countries, a higher proportion of foreign-born, first-generation movers indicate they are more overqualified for their job than the native population. However, the highest number of high skilled EU movers can be found amongst the professional and managerial categories. Difficulties in obtaining recognition and validation of qualifications gained abroad plays a role in movers' inability to obtain jobs that are more commensurate with their qualifications. Individuals proficient in the language of the host country are less likely to suffer from 'brain waste'.
- There is no clear evidence that student or researcher mobility has a significant impact, although **in countries where the labour market situation is favourable, stay rates amongst students and researchers are relatively high.**

Understanding the movement of skilled labour

Various push and pull factors influence EU movers' decisions to move to another Member State:

- **Economic conditions are a key motivation for movers.** Economic conditions such as a high level of GDP per capita, economic growth, purchasing power and efficient labour market policies constitute pull factors. These factors are present in most destination countries and absent in most outgoing countries. Indeed, the geographically varied impact of the economic crisis and great recession impacted on the decisions of movers / potential movers. Overall, the effect caused divergence between Member States and regions and groups of workers, for example increasing unemployment and exacerbating income gaps between workers with different skill levels.
- **EU movers make comparative judgements of working conditions between origin and potential destination countries.** Most destination countries offer better working and living conditions compared to most outgoing countries. This measured by working hours or satisfaction with public services as well as confidence in institutions.
- **Perceptions of movers of the relative quality of institutions and the confidence that they have in institutions influences mover choices.** The

¹ Belgium (BE), Croatia (HR), Denmark (DK), France (FR), Germany (DE), Greece (EL), Ireland (IE), Italy (IT), Luxembourg (LU), Netherlands (NL), Portugal (PT), Spain (ES) and United Kingdom (UK)

quality of and confidence in institutions is thought to influence the choice for moving and is associated with well-performing economies and societies. This is seen as a dynamic process with a self-reinforcing mechanism that good institutions contribute to economic growth, and economic growth has a positive effect on institutions success in attracting high skilled labour. Most of the policies influencing skilled EU-movers careers are thought to be mainly at the national rather than regional level. This could explain why some EU skilled movers seek work in another Member State rather than moving to a dynamic region in their own country.

- **Proximity and linguistic similarities are important factors in decision making.** Many citizens of EU-28 countries living in another EU-28 country, live in countries that are either linguistically or geographically close to the country of their citizenship.

It is likely that EU skilled movers have high expectation in terms of how their careers will progress and also in terms of quality of life. Most of these are mainly affected by national rather than regional settings, regulation or policies. This might explain why some EU skilled movers move to other countries rather than regions in their own countries, albeit language, distance or relocation costs act as barriers.

A high rate of EU movers remain working in the Member State in which they attended university. Some destination countries show that, amongst high skilled movers, studying abroad may be a strategy to enter into the labour market. Such movers can gain more visibility and develop social and professional networks in order to compete with natives. In this way, education and training abroad can foster labour mobility and pull skilled labour. It is also the case that, where destination countries' labour markets offer greater opportunities suited to EU movers, the likelihood of return migration is reduced.

Addressing the movement of skilled labour

This study identified few coordinated approaches towards EU skilled movers.

- **Many policies and measures to address skilled migration are small scale.** Policies predominantly exist at the local or regional level with little evidence of links to national strategic agendas. There is also little consideration of how policy towards attracting EU skilled movers operates in parallel with policy toward TCNs that are, by necessity, more formalised and regulated as such migrants do not benefit from free movement.
- Despite evidence of skill shortages in many professions key to economic prosperity and social wellbeing, **there is concerted policy activity for the (re)attraction and retention of skilled movers, and much reflection on how this can benefit regional and national economies.**
- Whilst several local and regional-relevant policies have been identified, the **information on their impact is limited**, which makes it difficult to assess their effectiveness. Increased stakeholder dialogue in this policy area should include how to share information on outcomes and impacts more widely.
- The policy review highlighted that policy development in this area will require **consideration of a wide range of concerns including spill-over effects and influence from national policies at different administrative levels** e.g. regional and cross-border policies). Subsequently, policy development requires engagement with a significant number of stakeholders with potentially divergent motivations.

1 Introduction

In May 2017 DG Employment, Social Affairs and Inclusion appointed ICF to undertake a study on the movement of skilled labour under specific Service Order No. VT/2017/006. The study was commissioned under Framework Contract No VC/2012/024.

The study aims to provide a solid evidence base on the movement of skilled labour and present examples of actions undertaken by Member States / regions to address it. The goal is for the work to feed into the peer exchanges between Member States, which will be organised by the Commission following the completion of the study.

The issues covered by the study and the specific research questions are presented in Table 1 below:

Table 1. Research Questions

Research theme	Research question
Identifying the main flows of skilled labour	What are the characteristics and patterns of the movement of skilled workers? The study should look at the EU as a whole, the affected Member States / regions, sectors, occupations, the level, the type (professional or academic orientation) and the area of education, gender and age groups, purpose e.g. study, work and type of migration e.g. long-term / seasonal / return.
	What citizenship do the movers have?
	Does student/researcher mobility affect the movement of skilled labour?
	Is there evidence of skills loss/depreciation caused by intra-EU mobility, e.g. in cases when highly skilled individuals move to another Member State to work in lower skilled jobs? Is such an effect only temporary, lasting for the period of time needed to adjust to the new context, e.g. language learning?
Understanding the movement of skilled workers	What are the key push and pull factors (e.g. geography of quality jobs availability, labour market profiles, salary, working conditions, the size of diaspora communities, systemic factors influencing mobility etc.) for the movement of skilled labour?
	Why people move abroad and not to a national dynamic economic region?
	How much increase in wages is necessary to motivate mobility into a job for which one is overqualified?
	Are there other factors that drive the movement of skilled labour?
	Does education and training influence skilled labour flows: what proportions of people who study or train abroad stay on to work there (stay rates) and who are these people (stay profiles)?
	Mobility of skilled people also brings benefits; annual return flows are very important. What are the necessary conditions to maximise the benefit of return moves?
	What are the effects of the skills movement on the outgoing and destination Member States?
	Does outflow of skilled workers from one Member State/region entail inflow of skilled labour from another Member State/region or third country/region? Under which conditions does this occur?

Research theme	Research question
Addressing the movement of skilled labour	<p>What actions are the affected Member States / regions taking to address skills lost due to the movement of skilled workers, in particular:</p> <ul style="list-style-type: none">– with regard to promoting return migration or– with regard to replacement inflows from other Member States / regions or third countries/regions (investment in economy, labour market and regulatory reform)? <p>Is there evidence of the effectiveness of these actions?</p> <hr/> <p>Which Member States/regions have managed the ‘turnaround’ and how did they do it e.g. ‘skills partnerships’ structured training and employment arrangements between outgoing and destination regions thereby minimising the effects of brain flow?</p> <hr/> <p>Does increasing the attractiveness of higher-education systems in Central and Eastern Europe contribute to some extent to reducing brain flow, and more generally, what the absence of attractive higher-education systems may mean for brain flow?</p>

1.1.1 Study timeline and reporting

The study was commissioned in May 2017 and finalised in May 2018. The key activities involved in delivery of the research to answer the research questions are:

- Desk research on intra-EU movement of skilled workers, including:
 - literature and policy review;
 - addressing the problem of the availability, accuracy, differentiation and comparability of data;
 - clarifying the terminology used and proposing an operational definition of brain flow for the purposes of the study;
- Data collection and analysis, e.g. Eurostat data on intra-EU mobility;
- Mapping of actions taken by EU Member States/regions to address the movement of skilled workers;
- Producing the final report and a PowerPoint presentation
- Disseminating the findings in an event to be organised by the European Commission.

In July 2017, ICF produced a draft inception report which provided the Commission with a detailed methodology for the study and agreed the key data sources to be used in the analysis. This involved both qualitative and quantitative data; much of the latter involving requests to Eurostat to access microdata and special data extractions. The report was refined and resubmitted taking into account the comments received from the Commission.

A progress report was submitted in October 2017 and was amended following a meeting with the Commission in November 2017. A draft final report was submitted in March 2018.

The draft final report was discussed at two peer review meetings and a steering group meeting in April 2018 and involved representatives from the European Commission, CEDEFOP, Eurostat, the OECD, the academic community and relevant thinktanks. Following discussions at these meetings, the report was revised and a final report was submitted on 16 May 2018.

1.2 Purpose of this report

This document provides the Commission with a final report which outlines the main findings for each of the study questions and conclusions.

1.2.1 Format of this report

The report is structured in the following way:

- Section 2 describes the evidence base, the data sources used and some methodological considerations. In this section we provide an elaboration of problems encountered during the research and solutions found.
- Section 3 provides findings in relation to the research topics and specific questions. This section uses evidence gathered to outline results of the identification of the main flows of EU skilled movers, questions relating to understanding the movement of skilled workers and policies and practices relating to addressing the movement of skilled labour.
- Section 4 presents draft conclusions.

The study contains the following supporting annexes:

- Annex 1: a more detailed outline of the methodology for the study, expanding on information in Section 2.

2 Work undertaken and evidence base gathered

The work undertaken to deliver this study is described in Annex 1. This section concentrates on a description of the evidence base that has been generated, summarises findings from individual case studies conducted for this study and discusses some of the issues with the evidence used in this report.

2.1 The evidence base included in this report

2.1.1 The quantitative evidence base

As agreed in the inception phase, this study makes use of microdata from surveys held by Eurostat. Specifically, where microdata is used the study is based on data from the EU Labour Force Survey (EU LFS) and EU Survey on Income and Living Conditions (EU SILC), 2004 to 2016. Please note that responsibility for all conclusions drawn from the data lies entirely with the authors. Table 2 outlines the variables initially identified as being of interest for the purpose of this study:

Table 2. Microdata requested

EU LFS	EU SILC	EU LFS 2014 ad hoc module
Annual averages for 2004-2016 for all individual Member States (MS)	Variables included in the module: 'Mean and median income by educational attainment level' [ilc_di08], adding the NUTS 2 region variable [DB040], i.e.:	Variables included in the dataset on self-declared over-qualified employees as a percentage of the total employees:
EU-28 annual averages		- by sex, age, migration status and educational attainment level
REFYEAR (2004-2016)	- gross employee cash or near cash income (PY010G);	and [LANGHOST], and the EU LFS variable [YEARESID]
AGE (5-year age bands)	- company car (PY021G);	
SEX	- gross cash benefits or losses from self-employment (including royalties) (PY050G);	
COUNTRY (each EU 28 MS)	- pensions received from individual private plans (other than those covered under ESSPROS) (PY080G);	
REGION (NUTS2)	- unemployment benefits (PY090G);	
NATIONAL ² (EU national aggregate; national aggregate; non-EU national aggregate)	- old-age benefits (PY100G);	
YEARESID (no. of years resident in country)	- survivor benefits (PY110G);	
ISCO4D (occupation, 1 to 3 digits)	- sickness benefits (PY120G);	
REGIONW (NUTS2)	- disability benefits (PY130G);	
HATLEVEL (low/medium/high aggregate categories)	- education-related allowances (PY140G)	
NACE3D (sector, 2 to 3 digits)	- year of survey (PB010: 2006 to 2016);	
WSTATOR (labour status)	- country (PB020);	
WSTAT1Y (labour status in the previous year)	- year of birth (PB140);	
	- sex PB150);	

² Individual country-level information is not available

- citizenship (PB220A;
PB220B);
highest ISCED level attained
(PE040)
NUTS2 variable (DB040)

Not all of these variables were used; specifically, EU SILC data on median and mean income by NUTS2 level is only available for a few countries. For those countries who do have this data available, most of the estimates at the NUTS2 level are based on too small a sample to yield reliable results. It can therefore not be presented in this study.

The following key points should be noted when reading and interpreting the data in this draft final report: in many cases, the data is not presented by the full detail available as described in Table 2. The group of skilled EU movers is generally quite small. As the data presented later in the study will show, skilled, working EU movers comprise about 3% of the total working population (in 2016). This means that by breaking this population down further by variables - that can include many categories - populations become so small that their estimates are not statistically reliable or even confidential. To make best use of the data, we have therefore used aggregates. For example, only higher level aggregates of occupations are shown (i.e. 1 digit) rather than the more granular 2 and 3-digit categories. Years of residence are aggregated by 'less than 10' and '10 or more years'.

2.1.2 The qualitative evidence base

A review of academic literature and policy documents has been undertaken to inform the qualitative answers to the research questions on the reasons for brain flow, its key characteristics and the impact on outgoing/destination Member States /regions.

The academic literature review has progressed alongside the data review and has identified a large number of relevant publications. Section 3 uses information that has been gathered from the desk review of literature in relation to the specific research questions (Table 1).

2.1.3 Case studies

The study has produced eight case studies (included as annexes to this report), undertaken by national experts with support and guidance from the study's core team. The broad aims of the case studies were to: collect evidence on the policy responses in the Member States to brain flow and; to collect additional more country/context-specific evidence about the challenges and benefits related to brain flow.

The case study themes and key findings are detailed in Table 3 below:

Table 3. Description/theme and key findings of the case studies

Case study title	Geographic focus	Summary of findings
1. Economic growth as the key migration pull factor in Germany (Annex 3)	Germany	<p>Germany is a significant destination country, with a substantial inflow of EU movers who bring significant benefits to Germany, contributing to the German economy and easing the pressure on the social security systems caused by the aging population. In 2016, the activity rate of all EU movers (regardless of skill level) in Germany was 80.1%. This compares to a 79.5% activity rate for natives. Most skilled EU movers in Germany live in Bayern, Baden-Württemberg and, Nordrhein-Westfalen. The Bayern and Baden-Württemberg regions both have relatively high economic growth, with high demand for skilled labour in these regions.</p> <p>Since 2010, Germany has gained substantial popularity amongst skilled European movers. The current immigration flows can be roughly subdivided into two main trends; firstly, Germany receives large numbers of movers from CEE countries (EU8 and EU2). In the past, the immigration from EU2 (Bulgaria and Romania) countries in particular received negative attention, as it was wrongly believed to concern mostly unskilled individuals driven by poverty in their home countries (so called 'Armutsmigration'). Secondly, the economic crisis of 2008 led to a sharp increase of immigrants from affected Southern-European countries, especially from Italy, Greece, and Spain and, to a lesser extent, Portugal.³</p> <p>A major driver for both groups has been the large differences between their country of origin in the wage levels they can achieve and the quality of working conditions, with Germany proving far more attractive.</p> <p>There are a range of barriers to effective labour market participation for movers to Germany. Germany features a range of policy initiatives to overcome these barriers and to facilitate the integration of skilled European movers. Many of these initiatives aim to attract and match skilled movers to employers that suffer from shortages of skilled labour, this is ultimately intended to stimulate economic growth and prosperity. Especially the policy initiatives focused on recognition of foreign qualifications are well received and achieve a positive impact all over Germany.</p>
2. Inflows and outflows into/from Spain (Annex 4)	Spain	<p>Spain receives a significant inflow of EU movers and also a significant outflow; it is estimated that the United Kingdom receive more than half of Spanish citizens establishing in another EU Member State (excluding returnees), followed by Belgium (11%) and the Netherlands (9%).</p> <p>The case study found that a number of developments combined to be key drivers for outward movement in Spain, some of which pre-dates the economic crisis and the great recession but may have been</p>

³ Engler, M. and Weinmann, M. (2015), EU-Migration nach Deutschland: Aktuelle Trends (https://www.ifri.org/sites/default/files/atoms/files/ndc_121_engler_weinmann_de_0.pdf)

Case study title	Geographic focus	Summary of findings
		<p>exacerbated by it; firstly, Spain has amongst the highest levels of poverty and income inequality in the EU; secondly, fiscal consolidation implemented to address the impact of the crisis impacted variously on macroeconomic indicators such as consumption, investment, public expenditures and has experienced long periods of wage moderation as a result of social partner agreements and labour market reforms.</p> <p>Employment opportunities and relative wage levels appear to be key factors for movers; lower unemployment rates in the country of destination, when compared to Spain, appear to be associated with higher flows of movers. Additionally, it is found that regions with higher GDP show the higher outflows of skilled movers. This shows that skilled workers in general have higher propensity to move. Additionally, the case study identified research suggesting that contractual arrangements and other working conditions in the domestic labour market can be an important push factor, together with the perceived precariousness of employment.</p> <p>The case study shows that following increased outward movement during the crisis and great recession, there is a new Spanish diaspora emerging. This may further increase the flow of outward movers as a result of these established networks making outward movement easier. The case study also finds that although there are a number of policy interventions on return migration, policy priority is to improve the labour market outlook as a comprehensive policy to attract and retain skilled labour.</p>
<p>3. Migration from the Baltic states (Annex 5)</p>	<p>Lithuania, Estonia and Latvia</p>	<p>The three Baltic States – Estonia, Latvia and Lithuania – have experienced similarly high emigration rates since their accession to the European Union; however, there are important differences between them in terms of the magnitude of the outflows, their impact and the response measures and policies. Of the three Baltic states, Lithuania experiences the highest loss of population through emigration, both in absolute and relative terms. Emigration from Estonia has steadily increased over the past decade. Latvia has registered a significantly higher number of emigrants than Estonia of which 81% were of Latvian citizenship, 4.4% were recognised non-citizens, and 4% were of Russian citizenship.</p> <p>In order to minimise the costs of migration and maximise its benefits, some key issues should be addressed:</p> <p>None of the three countries has a coherent, strategic approach to attracting either return movers or movers from other countries. More coordination between the various institutions within the specific countries that deal with migration is recommended – migration issues are dealt with by different ministries in all three countries, from the Ministry of Interior, the Ministry of Social Affairs and the Ministry of Economics for immigration, to the Ministry of Foreign Affairs for emigration. Additionally, employers’ reluctance to hire immigrants and their preference for return movers are identified as important issues.</p>

Case study title	Geographic focus	Summary of findings
4. Ireland: from massive emigration to attractive country of destination (Annex 6)	Ireland	<p>The case study highlights that there is an historical tradition of movement of Irish people, both in terms of outward movement from Ireland and return movement to Ireland. Ireland has historically been a net exporter of people. More recent trends however as documented in this case study show that Ireland has become a net importer of people. This case study demonstrates the complex range of push and pull factors on the flow of movers into and out of Ireland – the consequences of economic events / periods of growth and also the result of specific policy decisions taken in Ireland and other EU Member States. The case study shows the following key messages: the strong economic growth of the 1990s to the mid-2000s saw Ireland attract significant inward investment; the decision in 2004 to open the Irish labour market to accession countries was crucial in increasing inward movers; the impact of the economic crisis and the great recession in Ireland was severe; the recovery in the Irish economy resulted in an increase in net migration. Interestingly this, (as with the effect of the crisis and great recession) is attributable to both inward movement and reduced outward movement.</p> <p>There appears to be a strong consensus amongst policy makers in Ireland that the movement of people has a significant benefit to the Irish economy, with the majority being economically active and contributing to the Irish economy and society.</p> <p>For skilled Irish workers, the case study identified that the industrial mix in Ireland may act as a push factor for skilled movers. When compared to the UK, there are relatively fewer opportunities and migration to the USA is an attractive proposition for many skilled Irish workers, given the fact that English is also its first language.</p> <p>A lively issue that may become of significant consequence in the coming months and years are the consequences of Brexit; this may result in return migration to Ireland from the UK. However, as the UK seeks to retain skilled workers, it may be that the policy landscape following Brexit presents unknown challenges for Ireland.</p>
5. Healthcare sector (Annex 7)	East to West migration within the EU	<p>The case study illustrates that the healthcare sector is currently experiencing a high shortage of workers, particularly skilled workers. This shortage is only set to increase in the context of an aging population.</p> <p>Ireland and the UK have the highest proportions of foreign-trained doctors, followed by Sweden and Finland. Available data on nurses shows the UK has the highest proportion of foreign-trained nurses; proportionally more than twice that of Germany who have the second highest rate.</p> <p>Outflows of skilled healthcare professionals from outgoing countries cause short and long-term difficulties in meeting demand for healthcare provision. It exacerbates inequality as resources for the training of these health professionals fails to obtain a return on investment. This means that countries</p>

Case study title	Geographic focus	Summary of findings
		<p>that already experience harsher economic conditions are left with poorer healthcare (as they cannot meet demand), nor do the skilled professionals they trained pay tax or consume (and therefore invest) in the economy of their home country. Shortages are more strongly experienced in rural areas, as skilled professionals tend to move to more urban areas.</p> <p>Wages, working conditions, professional development opportunities and availability of jobs in the home country appear to be the most important push/pull factors in determining the decision to move, Decisions at the individual level will often be influenced by a range of these factors together with personal circumstances such as family considerations.</p> <p>There is very little evidence on strategies to address outflows from outgoing countries. Various healthcare institutions in destination countries employ measures to recruit skilled healthcare professionals from other EU countries; international recruitment agencies specialising in healthcare personnel play a key role in this although the outgoing country is not actively involved. More bilateral cooperation is needed between outgoing and destination countries that includes an explicit aim to stimulate circular mobility.</p> <p>Any future framework addressing these issues or facilitating cooperation should include and provide a role to social partners, other relevant international organisations e.g. the WHO and existing knowledge platforms. These various bodies have amassed a wealth of knowledge on sectoral challenges and existing policies in a national context and have the ability to see the bigger picture. For the same reason, international recruitment agencies could play a role.</p>
<p>6. ICT professionals (Annex 8)</p>	<p>From: Eastern European Countries To: Ireland, United Kingdom (and to a lesser extent, Finland/ Denmark)</p>	<p>There are around 280 000 ICT professional EU movers. This group forms a very small part of the 6.6 million ICT sector workforce in the EU-28. However, the mobility of ICT professionals within EU-28 is rising, especially amongst highly skilled workers. Most ICT workers are male and middle-aged (25-44). They are also concentrated in top destination countries, such as the UK, Germany, Spain, France and Ireland.</p> <p>ICT worker mobility from typically low wage countries, in the Eastern European Member States, to higher wage countries may be driven by large differences in salaries and expected increases in quality of life (COWI 2015). On the other hand, high wage countries experience constant global pressure to minimise costs which may induce companies to outsource or reallocate jobs to minimise cost levels. However, there is a lack of solid empirical research on this aspect.</p> <p>The role of intra-EU movement of workers in the ICT sector is not prominently reflected in policy, academic ICT literature or national ICT sector policies and company initiatives. Rather, the focus is on closing skills gaps via own-staff training, in-company development or recruitment of foreign skilled workers from third countries. The issue of intra-EU movement in the ICT sector has not featured prominently either on the trade union agenda or in the work of ICT sector organisations.</p>

Case study title	Geographic focus	Summary of findings
		<p>The ICT sector is critical to economic growth and requires a highly skilled workforce. It is expected to continue to experience a series of skills shortages and therefore a high level of future demand for IT professionals is likely to remain. The existing measures to attract skilled workers from abroad tend to cover both EU and third-country nationals and are aimed at skilled workers in general, including but not specifically targeting ICT professionals. However, considering the cost of the ICT sector skills gap and the opportunities which increased IT-sector mobility could offer to close these gaps, the potential of migration of ICT workers within the EU to reduce these costs of non-action is not fully exploited. Further policy action could be considered in the following areas: opportunities to promote shorter-term exchanges between companies and individuals in different Member States; possibilities to reverse the gender patterns in the intra-EU ICT migration, in conjunction with overall ICT sector initiatives to improve its gender balance; specific measures related to cross-border mobility of young and older ICT workers deserves.</p>
<p>7. Return migration to Poland (Annex 9)</p>	<p>Poland</p>	<p>The majority of Polish movers are young and relatively well educated i.e. with at least upper secondary education (in comparison to the overall population of Poland, there is an over-representation of people with middle and higher education amongst movers). The case study found that only a small percentage of people leave the country with the intention to stay abroad permanently.</p> <p>The research suggested that the main factors motivating outward movement from Poland were low earnings, unattractive working conditions and lack of job opportunities in their skills-set or sector. The main reason for return movements was found to be family matters and achieving their set goal (mainly income related).</p> <p>Polish movers employed abroad tended to be underemployed, usually performing simple work significantly below their qualifications. Despite this, the case study found significant benefits for individuals from working abroad - improving skills (mainly language skills) whilst working by participating in further training courses. Issues facing returnees included finding employment in Poland that corresponded with their skills and earnings expectations. Adaptation processes after return proceeded better in for persons who, prior to returning to Poland, obtained information about the situation in Poland and the necessary formalities associated with their return (issues associated with tax, healthcare and education of children), and sought employment in Poland whilst still abroad.</p> <p>Based on the analysis of the data obtained and interviews with the experts, a list of recommendations for the central authorities can be formulated: institutions should make every effort to better identify the scale and trends of migration and re-emigration in the area and better understand the needs of the persons considering returning to Poland; policy to encourage return movement needs to address economic drivers for movement rather than restricted returnee incentives; and to improve institutional</p>

Case study title	Geographic focus	Summary of findings
		<p>knowledge and capacity, e.g. labour market institutions' knowledge of returnee needs, services to adapt returnees' children into the Polish education system.</p>
<p>8. Romania and Bulgaria (Annex 10)</p>	<p>Policy responses to movement of citizens to other EU countries</p>	<p>Over 3 million Romanians and more than 1 million Bulgarians currently live and work abroad. More than a decade after joining the EU, the two countries remain its poorest Member States and so, for many natives relocating to Western Europe in pursuit of better study or work opportunities, is still an attractive choice. The movement of labour from Bulgaria and Romania has had serious negative consequences on their domestic economies. For example, International Monetary Fund (IMF) data reports that by 2030, GDP per person in Bulgaria and Romania may be 3-4% lower than it would be without the significant outward movement. Key drivers for movers are higher wages and better working conditions. Research also shows that Bulgarians and Romanians are attracted by the quality of institutions in other countries such as schools and hospitals.</p> <p>Bulgaria and Romania do not have many EU-28 nationals, nor third-country migrants living within their borders. In the case of Bulgaria, migration from third countries seems to be attributable to finding seasonal work and for mostly low skilled labour, despite recent efforts by the government to promote access to the labour market for highly qualified third country nationals.</p> <p>The case study finds that that the current policy measures in Bulgaria and Romania are not sufficiently long-term to address the loss of skilled labour experienced by these countries over the past few decades. Whilst there are some policies aimed at encouraging the return of the highly qualified, this case study finds that there are no active measures for specifically tackling this issue; instead, government action appears to adapt existing wider policies.</p> <p>The case study notes that any successful policy measures should be developed and implemented together with the active participation of employers who are the main stakeholders affected by labour and skills shortages in Bulgaria and Romania. It is unclear, however, to what extent employers are taking a stance on attracting the highly qualified (back) to these countries or if preference is to keep the cost of labour in these countries markedly low.</p>

2.2 Definitions

The population of interest of this study are skilled workers, with citizenship of one of the EU Member States, who have migrated to work in another EU Member State. Throughout the study this population will be termed 'skilled EU movers'. This section will specify some of the key terms used to define this population of interest, notably 'skilled', 'EU movers' and 'workers'. Before these key terms are further discussed, it is important to note that several datasets used in this study only provide information on one of these key terms. For example, immigration, emigration and population data is available by citizenship ('EU movers') but not by skill levels nor do they distinguish whether the EU movers are employed or of working age. What is included is clearly communicated around the presented figures in the title, source and notes. Aside from including different aspects the availability of data, in the various datasets used in this study, begins at different points in time. Where possible, we have presented data from 2004 onwards. Where this is not available, data is used from the earliest year available (after 2004).

The term skilled is used throughout the study and refers to the medium and high skilled population and excludes the low skilled population. In accordance with the International Standard Classification of Education (ISCED), this includes people who attained at least upper secondary education (ISCED Level 3), up to doctoral or equivalent (ISCED Level 8). Table 4 clearly shows the inclusions and exclusions within the term 'skilled worker'⁴:

Table 4. ISCED (aggregate) levels included in the population of interest for this study (skilled workers)

Population interest	of Aggregate category	ISCED level	Description
No	Low education	ISCED 0	Early childhood education ('below primary level' for educational attainment)
No	Low education	ISCED 1	Primary education
No	Low education	ISCED 2	Lower secondary education
Yes	Medium education	ISCED 3	Upper secondary education
Yes	Medium education	ISCED 4	Post-secondary non-tertiary education
Yes	High education	ISCED 5	Short-cycle tertiary education
Yes	High education	ISCED 6	Bachelors or equivalent level
Yes	High education	ISCED 7	Masters or equivalent level
Yes	High education	ISCED 8	Doctoral or equivalent level

Eurostat Statistics Explained, International Standard Classification of Education (ISCED), available from: [http://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_\(ISCED\)](http://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_(ISCED))

ISCED is used throughout the EU and beyond (e.g. by the OECD, UNESCO and the World Bank) as a standardised classification system for educational attainment. It is the best available internationally comparable measures of educational attainment. However, it has some limitations where national education systems differ significantly. For example, the nursing profession is included in the case study for the health sector; in some

⁴ Based on ISCED 2011 version (not ISCED 1997). A comparison between the two is available at [http://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_\(ISCED\)](http://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_(ISCED))

countries nurses are required to qualify at Bachelor level (i.e. ISCED level 6: high education), whereas in other countries nurses qualify at the post-secondary level (i.e. ISCED level 4: medium education).

The other key term comprising our population of interest is the EU mover, used to describe people who have citizenship of one of the EU Member States but are resident in another Member State. Most of our quantitative data (from the EU Labour Force Survey (EU LFS)) refers to EU citizens of one Member State who are resident in another Member State. Citizenship is one way of defining an EU mover. Another way would be the country of birth (foreign-born). The fundamental difference between the two is that citizenship can change, whilst country of birth does not. Both definitions exclude groups that may be of interest because they have/haven't changed their citizenship. When using citizenship to distinguish EU movers, persons who have immigrated to the host country may have acquired the host country's citizenship and will not be acknowledged as an EU mover. Similarly, data by citizenship includes citizens of other countries who have lived in the host country for many years. In the case of country of birth, the data includes people who are citizens of the host country (whilst these would be excluded when using citizenship), regardless of whether they have been so for the majority of their lives or for a shorter time. It is not clear which definition best covers the citizenship that the individual feels most closely associated with, and this will vary from individual to individual. From the onset, this study was set to use citizenship as definition, with a key question being 'What citizenship do movers have?'

Finally, the key term 'worker' was also included in the scope of the study from the onset. Employment status is available in context of the EU LFS, where workers (or: employed) are defined as persons who during the reference week worked for at least one hour for pay or profit or family gain or persons who were not at work during the reference week but had a job or business from which they were temporarily absent.

2.3 Metadata

EU LFS data is stock data and measures the number of people who previously migrated (at any point in time) to a particular country. Collecting (comparable) data on international migration is challenging and our analysis reflects this. Stock data is most readily available as it can be derived from administrative data (e.g. social security registers) as well as population census and surveys, such as the EU LFS. Some limitations to the data to consider are:

- Dual nationality: if a person has dual nationality, the EU LFS uses the host nationality⁵;
- Most of the presented data does not include information on the length of time the EU migrant has been resident, i.e. it does not distinguish between one person who has been resident for over 20 years, and the next who has been resident for a year. Information on this variable is presented, but cannot be applied to all other information as it would make relevant figures too small to be reliable;
- Data dependent upon residency does not effectively capture short or circular mobility, or commuters. Administrative data may not capture this very well as there is no residence, or residency is too short.

Another source of data on migration is flow data. Data on flows available from Eurostat is measured at country level by relevant agencies e.g. the national statistics institutes. This implies that the exact data collection methods will differ between countries to some extent, making comparison difficult. Furthermore, flows can be difficult to capture (whether at the national or international level) for various reasons. For example, the UK Office for National Statistics' (ONS) International Passenger Survey (IPS) asks persons

⁵ EU Labour Force Survey Explanatory notes, available from: <http://ec.europa.eu/eurostat/documents/1978984/6037342/EU-LFS-explanatory-notes-from-2016-onwards.pdf>

moving to the UK about their intentions to stay; those who indicate their intention to stay for at least 12 months are classed as movers. Methodological concerns are that these intentions might not materialise and that it does not capture repeated shorter-term migration, such as the EU migrant who works and lives abroad for 11 months of the year and goes home for one month. The UK measure of flows, as published by Eurostat, uses a host of different measurements to estimate migration flows and the ONS itself is very clear that the IPS is to be used as a complementary measure to provide a flow estimate. This example is simply used to illustrate the challenges involved in providing migration flow estimates.

Whilst these caveats exist and must be taken into account, it should be noted that the EU LFS provides this study with timely and cross-country comparable data. Eurostat data on migration flows provides the most comprehensive source for data on this topic across Europe.

3 Study findings

3.1 Identifying the main flows of labour

3.1.1 What are the characteristics and patterns of the movement of skilled workers?

This section discusses evidence on the characteristics and patterns of movement of skilled workers, primarily using data from national sources and the EU LFS. It firstly discusses evidence around key migration trends. Flow data is not produced systematically for EU movers by skill level, therefore this section presents stock data to describe the stock of skilled workers with EU-28 citizenship resident in another EU Member State. Secondly, demographic characteristics of skilled EU movers are discussed in terms of age, gender, skill level and years of residence in another Member State. Thirdly, the labour market status of skilled EU workers is discussed by looking at employment rates of medium and high skilled EU movers compared to the medium and high skilled native population. Finally, this section explores the sectors and occupations in which skilled EU movers are employed.

3.1.1.1 Evidence of key migration flows

Evidence shows that the number of EU movers has recently increased in almost all countries. The proportion of employed EU movers as a share of all employees has also increased. Most of these EU movers are medium skilled, followed by high skilled EU movers. Low skilled EU movers comprise the smallest proportion. The increase in skilled EU movers has also been higher than that amongst low skilled EU movers. The rest of this section describes these findings in more detail.

Reliable comparable data on migration flows is difficult to obtain, therefore this section uses stock data. Whilst stock data cannot capture all movement, changes in the stock of EU citizens living in other EU countries from year-to-year provides a broad measure of net migration (i.e. inflows – outflows). Figure 1 and Figure 2 present the total stock of 15 to 64-year old citizens resident in EU Member States, who have citizenship of another EU country (i.e. EU movers). For visual clarity, countries are presented in one of two figures dependent on the total volume of EU movers in the country, with a cut-off of 200 000 EU movers so that it splits countries into two legible graphs. There are three bars for each country, presenting the number of EU movers for 2014, 2015 and 2016.⁶ The countries with the highest volumes in 2016 on the left-hand side, and those with the lowest volumes are on the right-hand side. The figures do not take into account skill level or employment status.

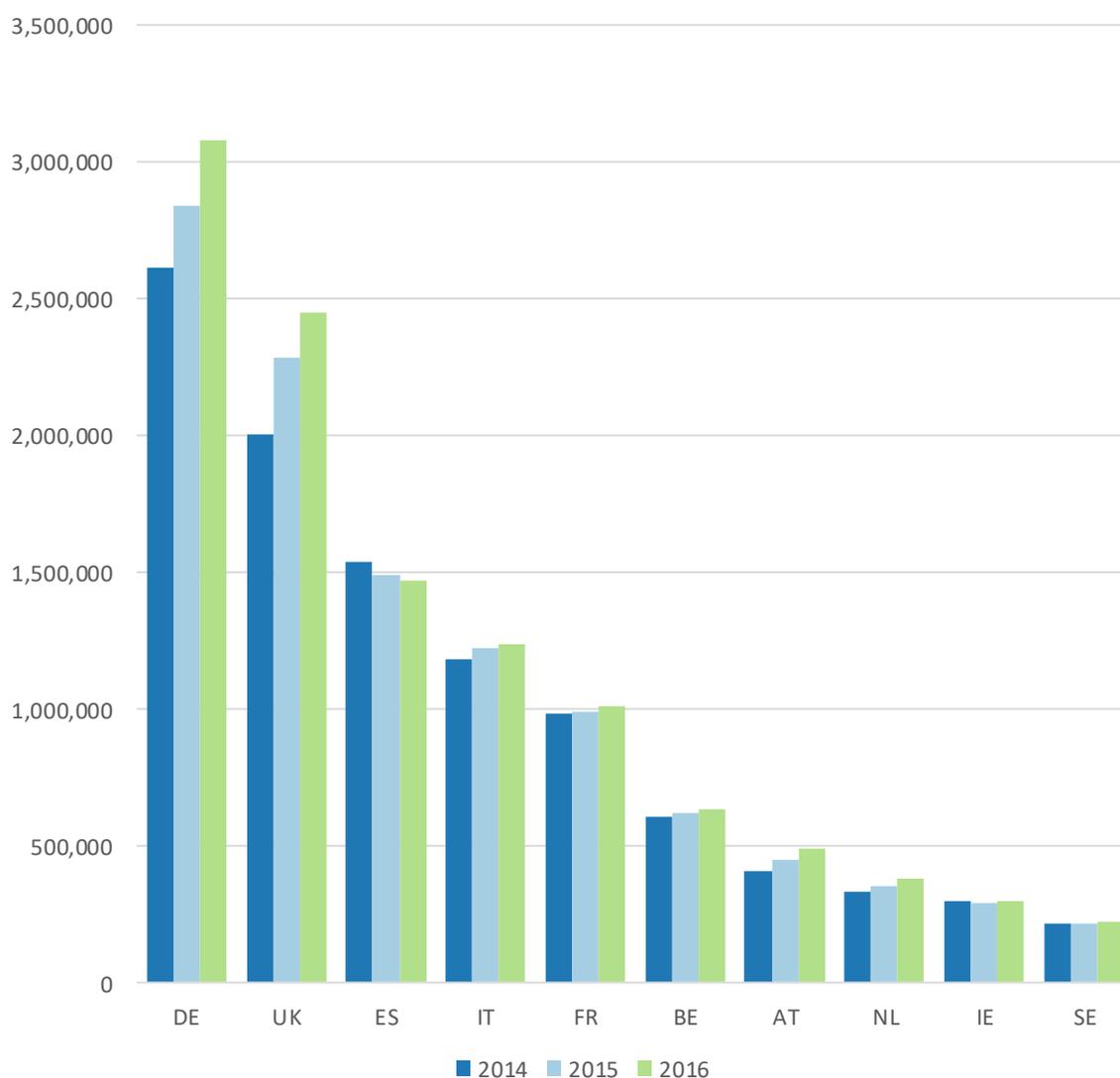
The data shows that the number of EU movers between 2014 and 2016 increased in almost all countries, suggesting increased mobility of EU-28 nationals. In terms of volumes, this is particularly pronounced in the UK and Germany, where both countries saw an increase of almost 500 000 over the three-year period. However, recently published data in the UK indicated that the total number of other EU citizens moving to the UK had fallen significantly in 2017 following the result of the UK referendum on leaving the EU, which was held in June 2016.⁷

⁶ 2015 data is not available for Greece and the Czech Republic.

⁷ ONS Migration Statistics Quarterly Report, February 2018. Available from:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/bulletins/migrationstatisticsquarterlyreport/february2018>

Figure 1. Total number of EU movers in each EU-28 Member State in 2014, 2015 and 2016 (countries with more than 200 000 EU movers). EU movers were residents of the mentioned countries, but originally from another Member State.

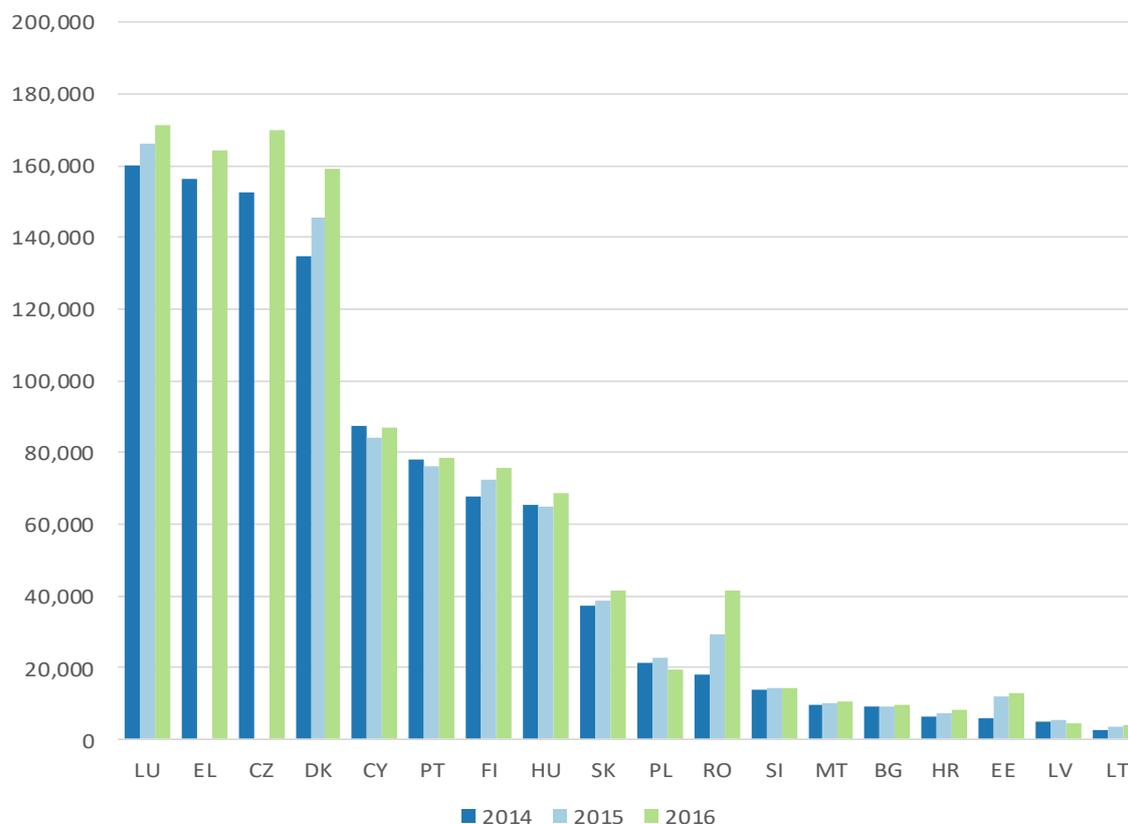


Source: Eurostat data on population on 1 January by age group, sex and citizenship [migr_pop1ctz]

Notes: Data includes ages 15-64. No skills distinction. Information is not available prior to 2014.

In terms of proportions, smaller countries saw the greater increases in the share of EU movers: Romania and Estonia saw the number of EU movers more than double over the three-year period. Few countries saw a decline and those that did, saw only small declines relative to the aforementioned increase. For example, the EU migrant population in Spain declined by 5 % and in Poland by 8 %.

Figure 2. Total number of EU movers in each EU-28 Member States in 2014, 2015 and 2016 (countries with fewer than 200 000 EU movers)



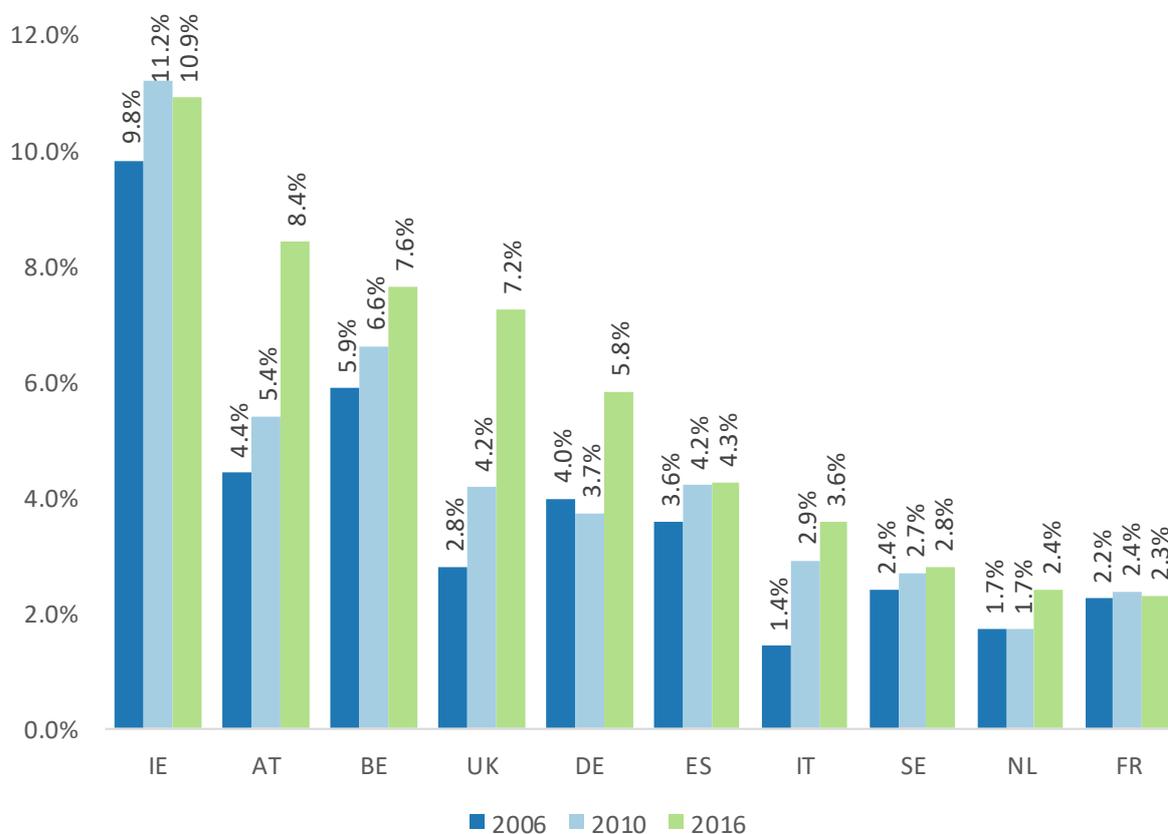
Source: Eurostat data on population on 1 January by age group, sex and citizenship [migr_pop1ctz]

Notes: Data includes ages 15-64. No skills distinction. Information is not available prior to 2014.

The percentage of working EU movers as a proportion of the total employed population (15-64-year olds) also increased over time. Figure 3 and Figure 4 - using the same volume cut-off of 200 000 as per the two previous figures to group countries - shows these proportions for the period of 2006 to 2016. Countries with the highest proportions of EU movers in 2016 on the left-hand side of the graphic and lowest proportions are on the right-hand side. These figures do not take into account skill level. They also exclude Luxembourg, which is an outlier.⁸ For countries with a high number of EU movers (over 200 000), increases in this 10-year period are observed in the UK and Italy in particular. In the UK, the share of EU movers of the total employed population rose from 3 % to 7 %, whereas the increase in Italy was from 1 % to 3.6 %. In countries with fewer than 200 000 EU movers, the most significant increases are observed in Slovenia, Denmark, Finland and the Czech Republic where the proportion of EU movers more than doubled. However, in these countries, it remained at an overall rather low level, ranging from under 1% in Slovenia in 2016 to around 4% in Denmark.

⁸ The country has a very high proportion of EU movers; four times higher than the next highest country. For instance, in 2016, the share of EU movers of the total employed population in Luxembourg was 48.7 %. This is mainly due to the geographical location of the country.

Figure 3. Proportion of employed EU movers of the total employed population in each EU-28 MS in 2006; 2010 and 2016 (countries with more than 200,000 EU movers)

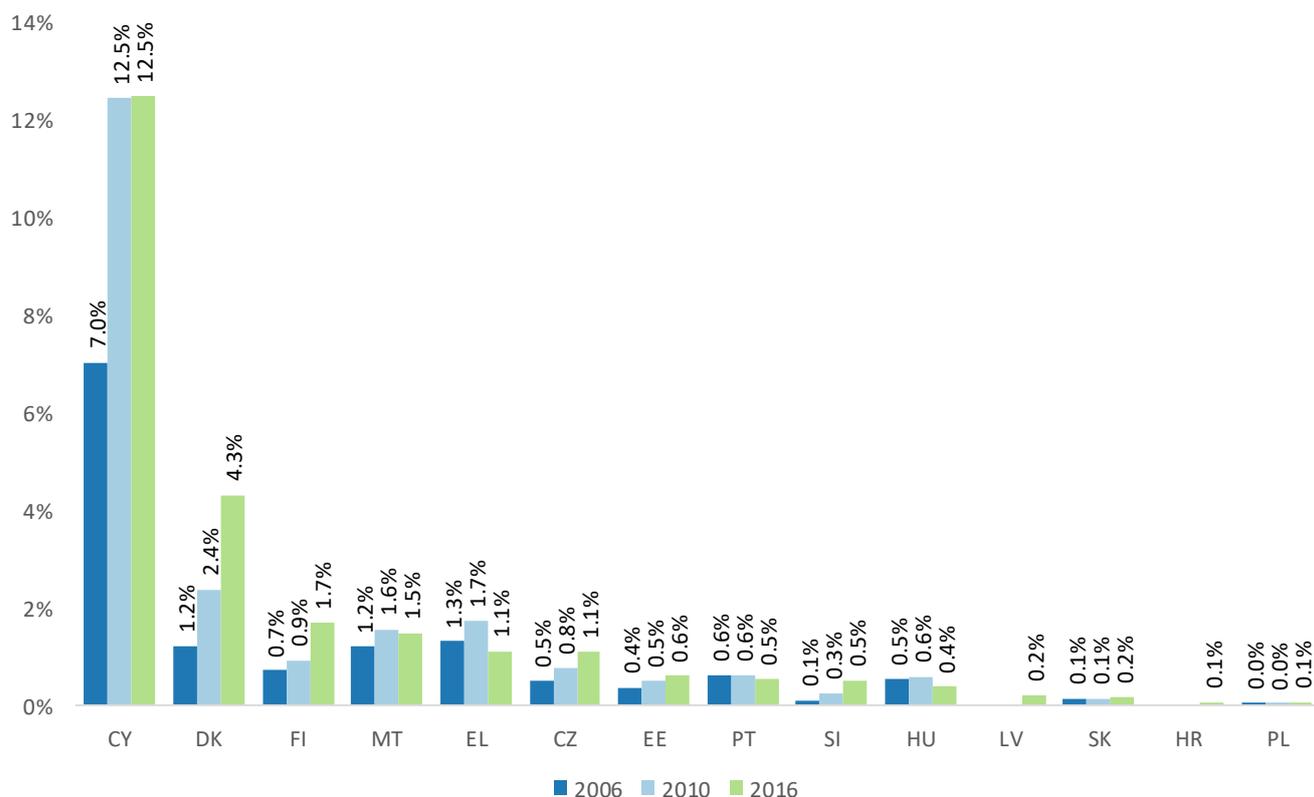


Source: Eurostat data on population by sex, age, citizenship and labour status (1 000) [lfsa_pganws]. ICF calculations.

Notes: Data includes ages 15-64. No skills distinction. Information on citizens from EU-28 countries other than the reporting country (i.e. EU movers) is not available prior to 2004. Data for BG, LT and RO was not available for any of the years. Data for HR and LV was not available for 2006 and 2010. LU has been omitted because it is an outlier. From 2006, to 2010, to 2016, respectively 42.2%, to 44.8%, to 48.7% of its population were EU-28 movers.

Two of the countries with fewer than 200 000 EU movers saw a decrease in the proportion from 2006 to 2016. These are Greece and Hungary, though these decreases are not as significant as the increases experienced by other countries: Hungary saw the largest proportional decline from 0.5 % to 0.4 %. Whilst this is a decrease of 20 %, this should be seen in context of the very small proportion of employed EU movers of the total employed population in Hungary.

Figure 4. Proportion of EU movers in each EU-28 MS in 2006; 2010 and 2016 (countries with fewer than 200,000 EU movers)



Source: Eurostat data on population by sex, age, citizenship and labour status (1 000) [lfsa_pganws]. ICF calculations.

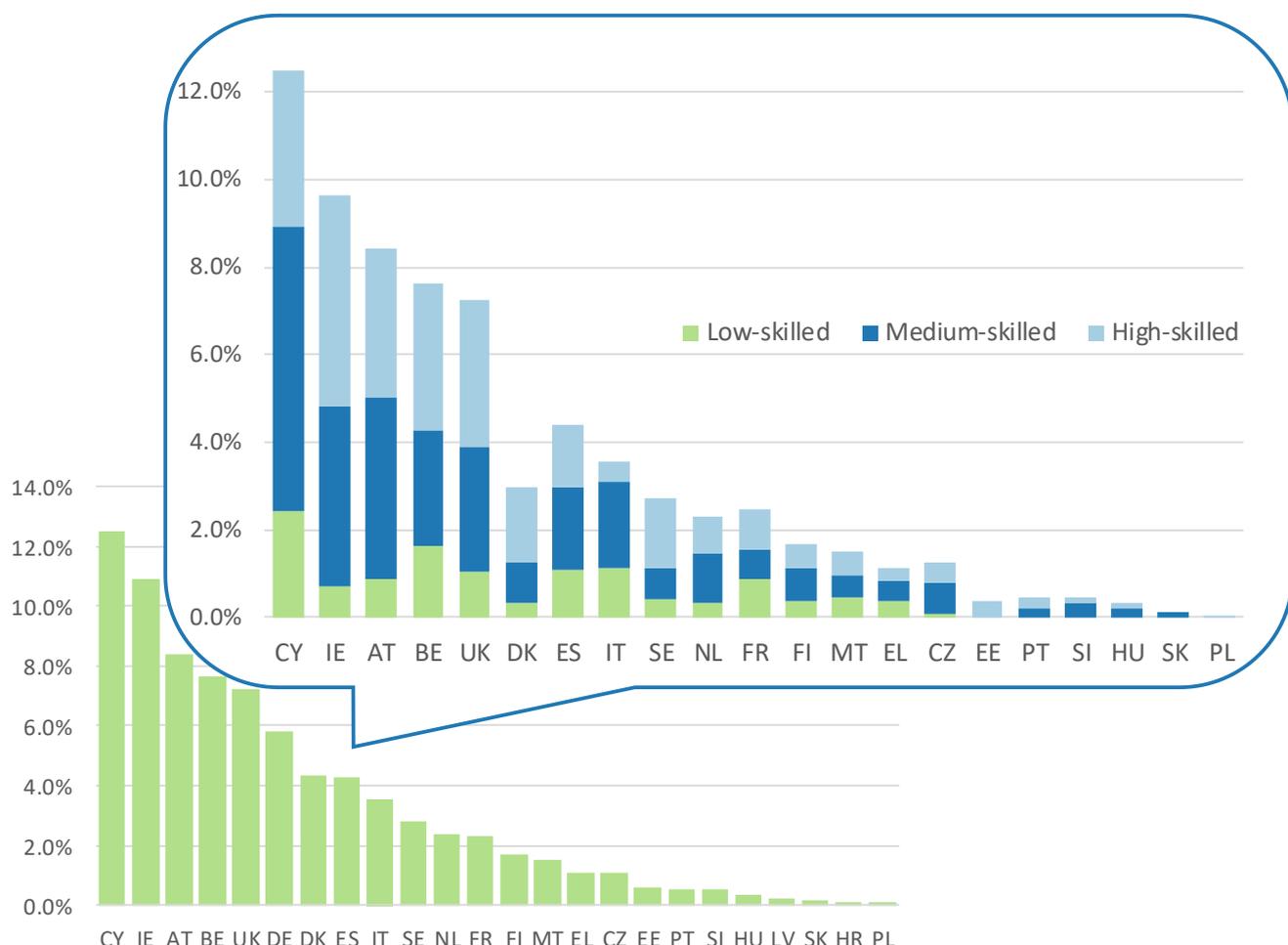
Notes: Data includes ages 15-64. No skills distinction. Information on citizens from EU-28 countries other than the reporting country (i.e. EU movers) is not available prior to 2004. Data for BG, LT and RO was not available for any of the years. Data for HR and LV was not available for 2006 and 2010. LU has been omitted because it is an outlier. From 2006, to 2010, to 2016, respectively 42.2%, to 44.8%, to 48.7% of its population were EU-28 movers.

Figure 5 highlights the proportions of EU movers in 2016, as illustrated in the previous figures. The figure in the text bubble further specifies the population of interest by presenting the percentage of low, medium and high skilled employed EU movers as a proportion of the employed population in a country in 2016. Countries are ordered in the same order as the figure without skills distinction. Note that a skill-level distinction was not available for Germany and Croatia. Luxembourg has been omitted because it is an outlier in terms of the overall share of EU movers in the labour market⁹.

The figure shows a relatively even proportion of medium and high skilled EU movers in these countries, although a few countries clearly have higher proportions of one over the other. Luxembourg, Denmark and Sweden have a higher proportion of high skilled EU movers, whilst Cyprus and Italy have higher proportions of medium skilled EU movers. Low skilled EU movers are not the largest group of EU movers.

⁹ 9.7 % of EU movers in LU were medium skilled, 20.8% were high skilled

Figure 5. Proportion of all EU movers and proportion of skilled EU movers in Member States in 2016 (ordered by Member State with the largest proportion of EU movers)



Source: Eurostat data on population by sex, age, citizenship and labour status [lfsa_pganws], ICF calculations and EU LFS microdata.

Notes: Graph on all EU movers: Data includes ages 15-64. No skills distinction. Data for BG, LT and RO was not available for either graphs. Skills distinction (figure in text box) was not available for DE and HR and only partially for EE, SI, PT, HU, SK and PL. LU has been omitted because it is an outlier (9.7 % of EU movers in LU were medium skilled, 20.8% were high skilled). Figures for SI both medium and high skilled EU movers, PL and EE high skilled EU movers and CZ low skilled EU movers have low reliability. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level).

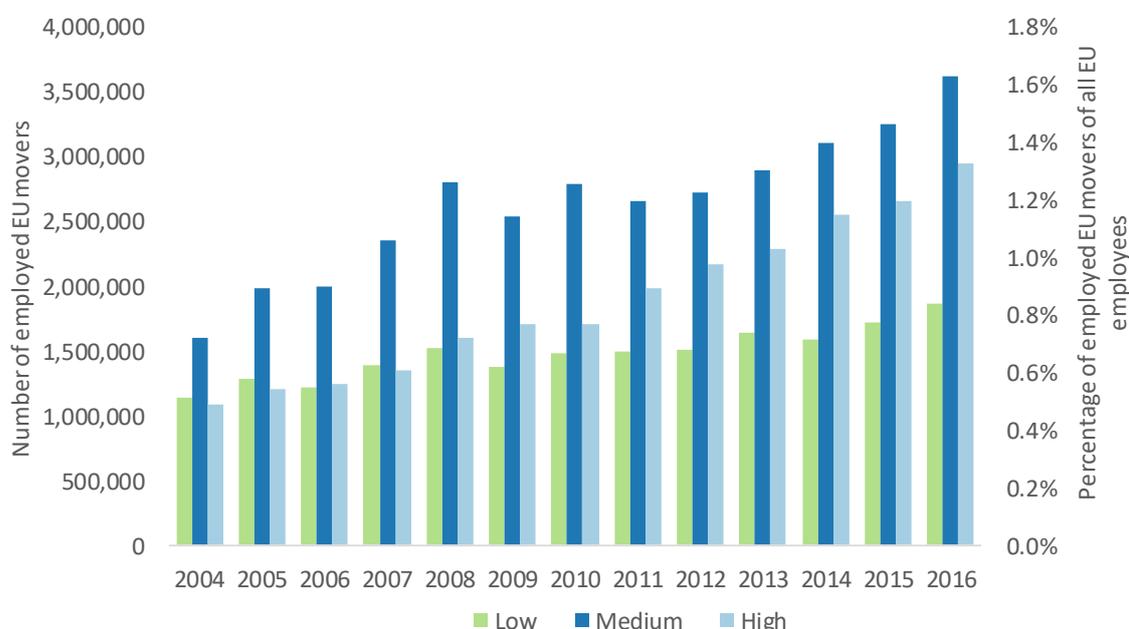
A comparison between the figure on the proportion of EU movers without distinction between skill levels, and the figure showing the proportions of medium and high skilled EU movers shows that skilled people cover most of the EU mover population. For example, in Cyprus 10 % of just over 12 % EU movers are skilled. Generally, high skilled EU movers are overrepresented. In 2016, 26.4 % of the entire 15 to 64-year-old EU-28 population was low skilled, compared to 22.2 % of all EU movers. 45.9 % of the 15 to 64-year-old EU-28 population was medium skilled compared to 42.9 % of all EU movers.

Finally, 27.1 % of the 15 to 64-year-old EU-28 population was high skilled compared to 35 % of all EU movers.¹⁰

Figure 6 further confirms that most EU movers are skilled. It shows the composition of all EU movers in the EU in terms of skill levels from 2004 to 2016 (except Malta; 2004 - 2008). The y-axis on the left shows the total number of employed EU movers and the y-axis on the right shows the percentage of employed EU movers as a proportion of the total EU employed population. It shows that more EU movers are medium skilled than high skilled. This seems in contrast with the findings from the previous figure (Figure 5), which showed an even split. However, Figure 5 does not include data on Bulgaria, Lithuania, Romania, Germany and Croatia so the absence of these countries could explain the discrepancy with the EU-28 aggregate. As Figure 1 has shown, Germany is the country with the highest number of EU movers so the skills composition of EU movers in Germany could have a pronounced effect on the EU-28 aggregate. Data from Eurostat extractions does show that Germany has a higher proportion of employed medium skilled EU movers as a share of the total employed population. In 2016, this was 2.9 % (compared to 1.6 % in Figure 6 below). Its proportion of employed high skilled EU movers is more in line with the data below; 1.5 % in 2016.

Figure 6 also shows an increase in the number of EU movers across all skill levels. From 2004 to 2016 the number of low skilled EU movers increased from just over 1 million to just under 2 million. The number of medium skilled EU movers increased from just over 1.5 million to just over 3.5million, and the number of high skilled EU movers increased from just over 1 million to almost 3 million, meaning the figure for high skilled EU movers almost tripled over the last 12 years. This demonstrates the general finding that EU movers, and in particular skilled EU movers, are playing an ever more significant role in the labour markets of EU Member States. As is demonstrated above however, the significance of this varies by Member State, an aspect that will be discussed in further detail below.

Figure 6. Number of employed low, medium and high skilled EU movers (left) and as a proportion of all employees in the EU-28 (right) from 2004 to 2016



Source: ICF analysis of EU LFS microdata.

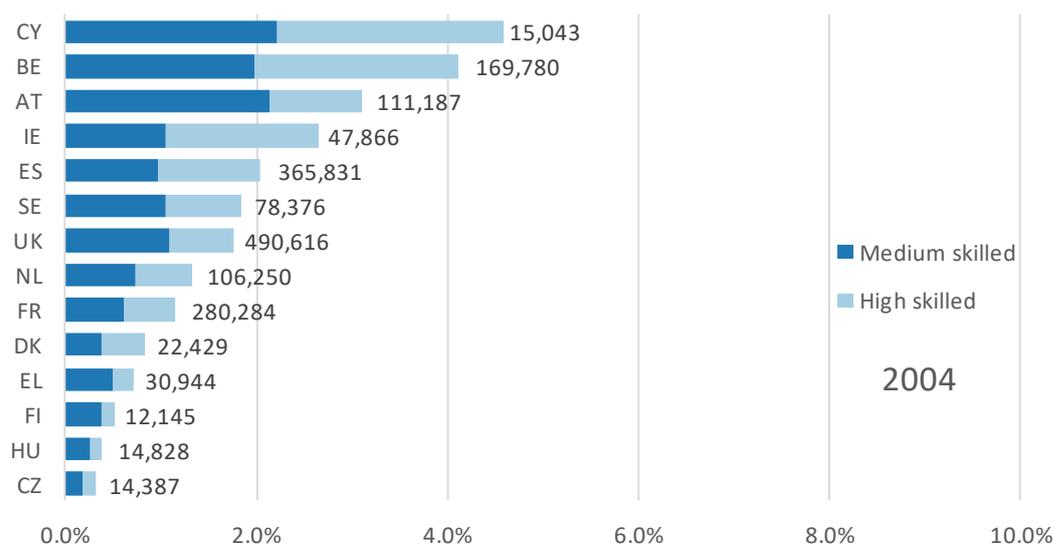
¹⁰ Based on Eurostat data on population by sex, age and educational attainment level (1 000) [lfsa_pgaed].

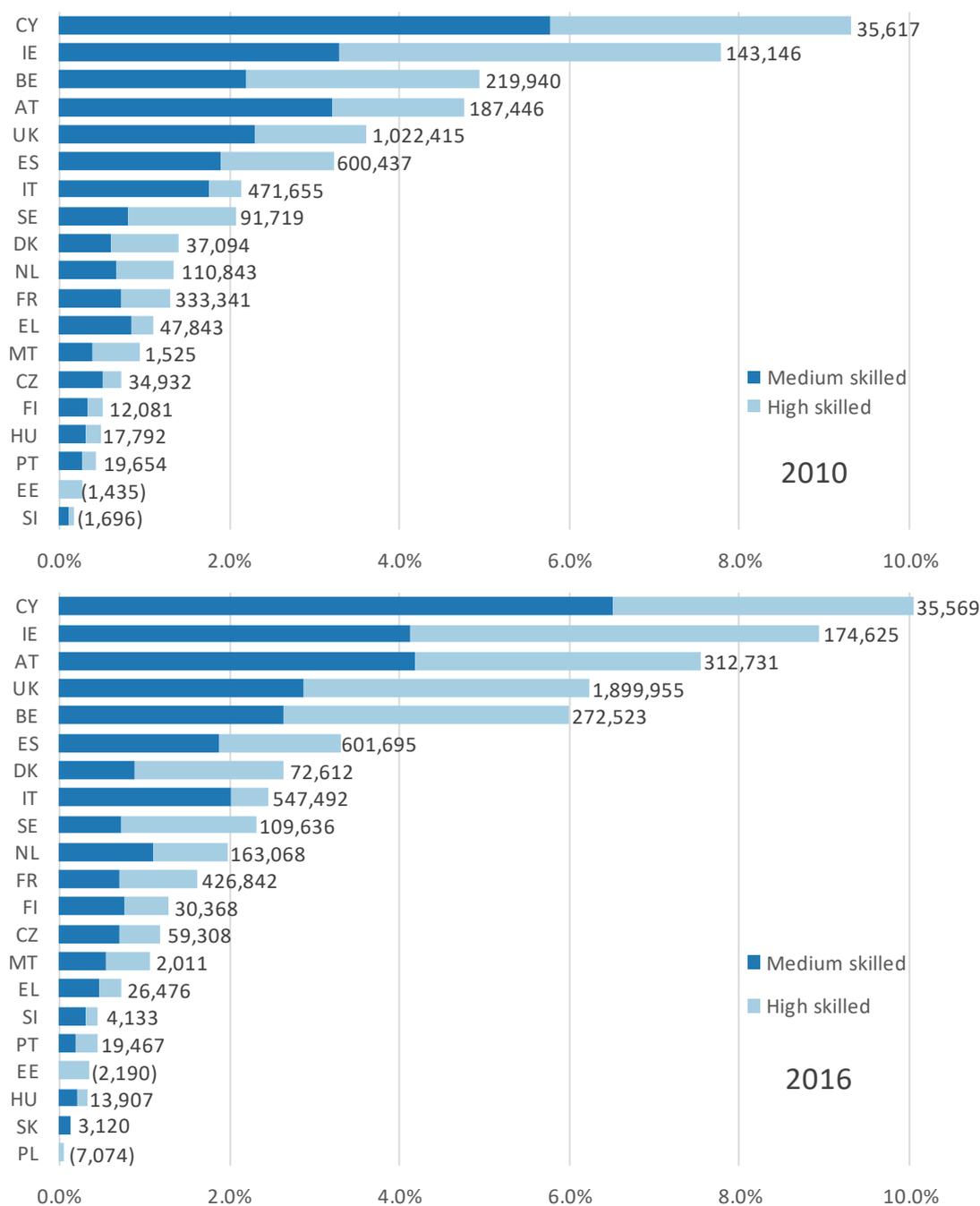
Notes: Data includes ages 15-64. low skilled, corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level). Data for 2004 to 2008 does not include Malta.

Figure 7 shows three graphics; for 2004, 2010 and 2016 respectively. They show the percentages of employed medium and high skilled EU movers as a proportion of all employees for each country for which this data was available. It should be noted that some estimates were very small, notably for 2004 and for new Member States, resulting in some being omitted from these charts in compliance with Eurostat guidelines on reliability. Some of the included estimates have low reliability. These are indicated in the notes below the figure.

The number of skilled EU movers increased between 2004 and 2016. Whilst most countries do not have data available for all three points in time, for those countries that do we can follow them through these three periods. This shows that Cyprus, Ireland and Spain all saw the greatest increase between 2004 and 2010 and that Austria, Denmark, the Netherlands, France and Finland saw the greatest increase between 2010 and 2016. Belgium, the Czech Republic, Sweden and the UK saw a steady increase in both periods. Hungary and Greece both saw an increase in the period from 2004 to 2010, but then experienced a decrease to 2016.

Figure 7. Employed medium and high skilled EU movers as a proportion of all employees by country in 2004, 2010 and 2016 (total value in labels)





Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level). Data for 2004 to 2008 does not include Malta. LU has been excluded. It is an outlier at three times higher proportion than the next country. In LU, in 2004, 1.1 % (2,120) were medium skilled EU movers and 13.1 % (24,568) were high skilled EU movers; in 2010, 13.1% (29,365) were medium skilled EU movers and 19.8% (43,719) were high skilled EU movers; in 2016, 9.7 % (25,411) were medium skilled EU movers and 20.8% (54,286) were high skilled EU movers. The following figures for medium or high skilled figures have low reliability: all estimates for EE, PL and SI, as well as estimates for high skilled EU movers for FI and HU in 2004, medium skilled EU movers for SK in 2004 and MT in 2010. Values displayed in brackets have low reliability.

3.1.1.2 Demographic profile of the migrant population

This section describes the demographic profile of skilled EU movers. Data shows that most medium skilled workers are male (55%), whilst there is an even distribution of male and female high skilled EU movers. Generally, EU13 countries appear to have larger proportions of male EU movers, whilst southern European Member States have more female EU movers, regardless of their skill level. There are no significant differences between the age distribution of medium and high skilled EU movers. However, there are differences when comparing the age distribution of EU movers (regardless of skill level) to the native population. Greater proportions of EU movers are 25 to 44 years of age and there are smaller proportions of EU movers of the youngest (15 to 24) and oldest (55 to 64) age groups. Finally, in the earlier years covered by this study (beginning in 2004) a greater proportion of employed, skilled EU movers were resident for fewer than 10 years whilst in more recent years, the proportion of employed skilled EU movers who were resident for 10 years or longer increased. The rest of this section looks at these characteristics in more detail.

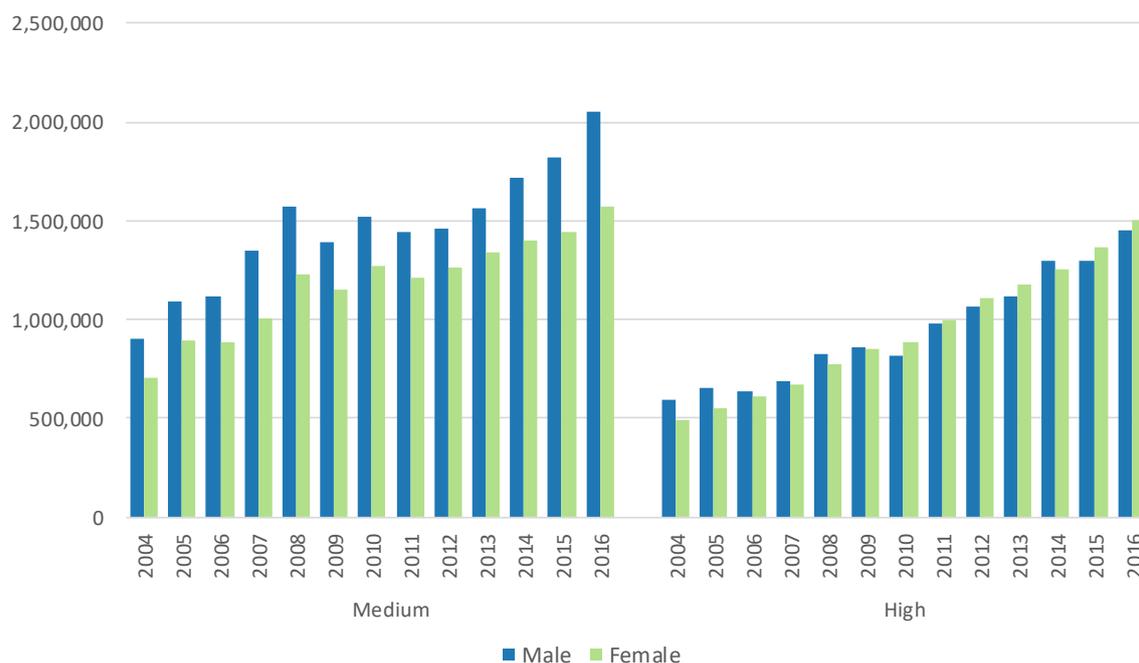
Figure 8 presents the number of employed EU movers across the EU by skill level and sex. Dark blue vertical bars represent male EU movers and the lighter green vertical bars represent female EU movers.

There are more male medium skilled EU movers than female medium skilled EU movers. This difference has remained relatively constant between 2004 and 2016: In 2004, there were about 900,000 male and 700,000 female medium skilled movers. In 2016, there were just over 2 000 000 male and just over 1 500 000 female medium skilled movers. In both years, and consistently in the years in-between, 55 % of medium skilled EU movers were male and 45% were female. This is in line with the total 15 to 64-year-old EU medium skilled employed population: from 2004 to 2016 consistently, 55-56 % of medium skilled employed persons were male and 44-45 % were female.¹¹ For high skilled EU movers, male and female proportions are more even although this has changed over time. In 2004, about 600 000 high skilled EU movers were male and 500 000 were female. In 2016, about 1 450 000 were male and 1 500 000 were female; proportions changed from 45 % of high skilled EU movers being female and 55 % male (similar to medium skilled EU movers), to the proportions being relatively equal, with slightly more female high skilled EU movers (about 51%). It shows that 2010 was the first year in which there were more female than male high skilled EU movers. With the exception of 2014, this trend has persisted up to and including 2016. The increase in female high skilled movers is in line with an increase of females in the 15 to 64-year-old high skilled population overall. In 2004, 47.7 % of all high skilled employed persons in the EU were female; in 2016 this figure was 51.6%.¹²

¹¹ Eurostat data: Population by educational attainment level, sex, age and labour status (1 000) [edat_ifs_9902].

¹² Ibid.

Figure 8. Number of employed medium and high skilled EU movers by sex from 2004 to 2016



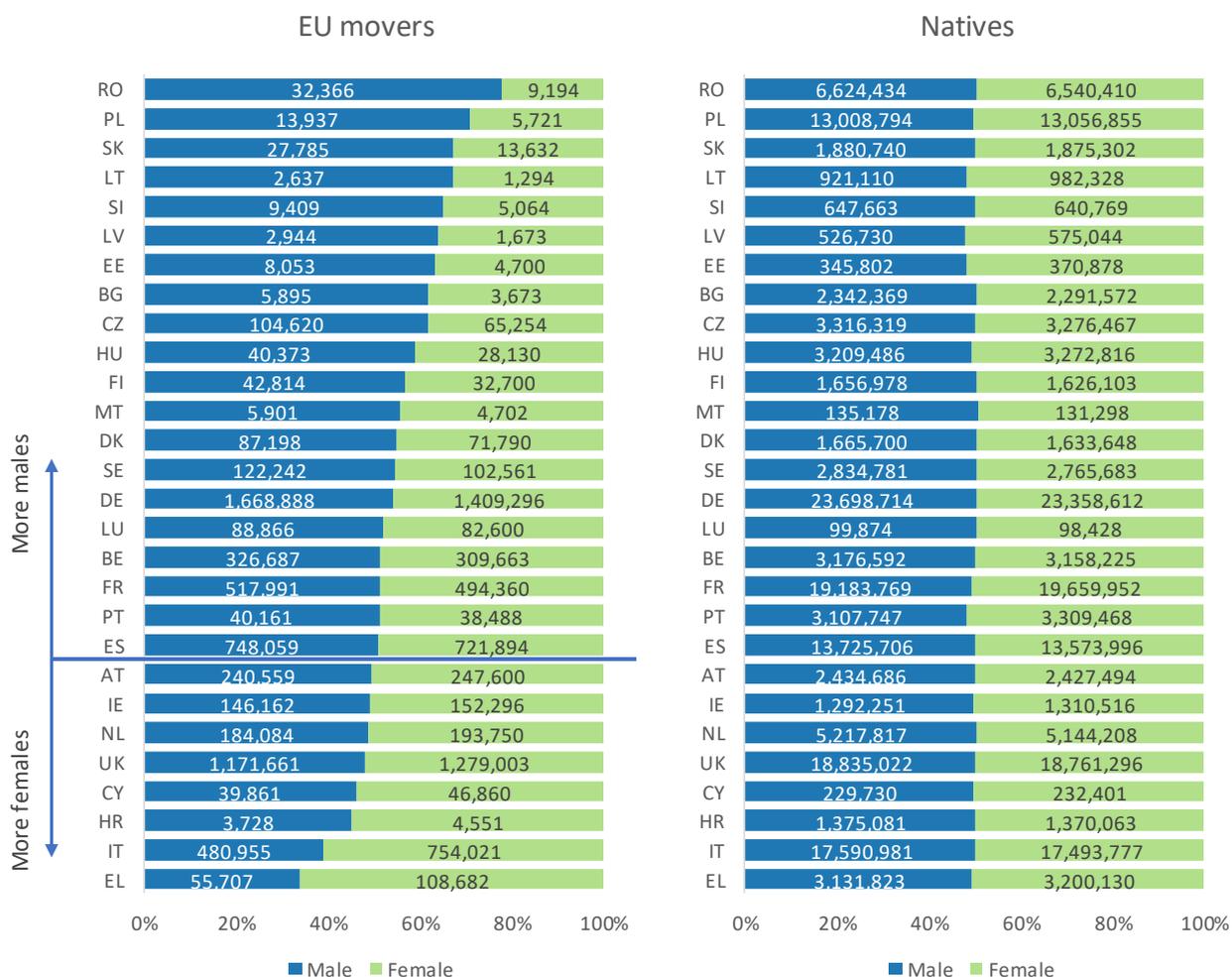
Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level). Data for 2004 to 2008 does not include Malta.

Figure 9 compares the proportion of male and female EU movers with that of the native population, regardless of working status or skill level. The working and skilled EU mover population is too small at the country level to enable a reliable and comprehensive overview. The graphic on the left-hand side of Figure 9 presents information for EU movers (i.e. residents of the country with EU-28 citizenship other than that of the reporting country); the graphic on the right-hand side presents information on the native population (i.e. residents of the country with that reporting country's citizenship). Absolute values are printed in the bars. Both graphics order countries top-down from the country with the highest proportion of male EU movers through to the country with the lowest proportion of male EU movers.

Across all countries, the native population has approximately the same proportion of women and men (i.e. 50:50). This is not the case for EU movers; most Member States host more male than female EU movers. EU13 countries with the exception of Croatia are likely to have larger proportions of male EU movers than female. The largest difference is found for Romania's EU movers which is 78 % male. Many south European EU15 Member States on the other hand have attracted larger proportions of female EU movers, in particular, Italy (61 %) and Greece (66 %). Northern and western European EU15 Member States show more equal proportions of male and female EU movers. Around the cut off line shown in Figure 9 is Spain's EU mover population at 51 % male and Austria's migrant population at 51 % female.

Figure 9. Proportion and number of EU movers by sex in each EU-28 Member State in 2004, 2010 and 2016, compared to the native population



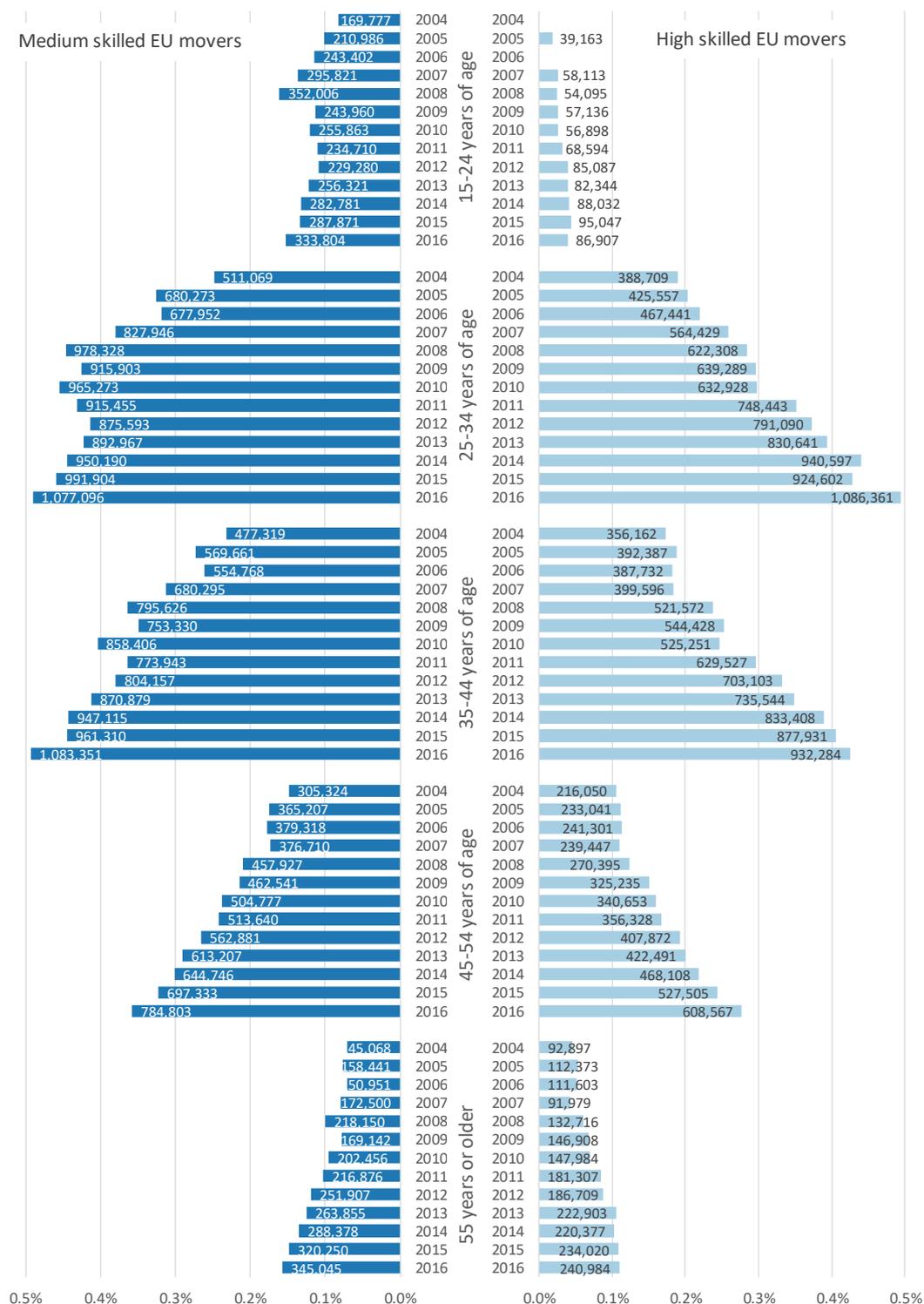
Source: Eurostat data [migr_pop1ctz].

Notes: Data includes ages 15-64. Information on sex is not available for years prior to 2016. No skills or working status distinction.

Figure 10 shows the percentage of employed medium and high skilled EU movers across the EU by age group as a proportion of the total employed EU population, for 2004 to 2016. Ten-year age groups are printed in the middle along the y-axis and each show rates for 2004 to 2016. The x-axis shows the proportion of EU movers. The numbers printed inside the dark and light blue bars are respectively the number of medium and high skilled EU movers of that age group in that year.

The figure shows that, taking into account there are more medium than high skilled EU movers, the distribution amongst age groups between medium and high skilled workers is roughly similar. The prime working age population (i.e. 25-44) has significantly greater representation than other age groups. Young (15 to 24-year-old) high skilled EU movers are somewhat underrepresented compared to their medium skilled peers, but this is to be expected considering pathways to obtain ISCED Levels 5-8 generally take longer to complete.

Figure 10. Number and proportion of employed medium and high skilled EU movers by age groups of all employees in the EU-28 from 2004 to 2016



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level). Data for 2004 to 2008 does not include Malta. Figures for high skilled 15-24-year olds in 2004 and 2006 are unreliable and are therefore not presented.

Figure 11 presents a dashboard that compares the percentage of EU movers and native age groups as a proportion of the total 15 to 64-year-old EU mover population and the total native 15 to 64-year-old population for each EU Member State respectively. The numerator here is the number of people (either EU movers or natives) of a particular age group in a country, and the denominator is the total number of 15 to 64-year olds (either EU movers or natives) in a country. As data is not available prior to 2016, this is the only year presented here. Columns are grouped by age group and firstly present the percentage EU movers of a particular age group as a proportion of the total EU migrant population in that country. Directly to the right of this first column is the percentage of natives of that age group, as a proportion of the total native population. To provide a quick visual of whether these proportions are similar, the icon to the right of these two percentages indicates whether the proportion of EU movers is smaller than the proportion of natives (a red downward pointing arrow), whether it is similar (a yellow dash) or greater than the proportion of natives (a green upward pointing arrow).

Generally, Figure 11 shows that greater proportions of EU movers are 25 to 44 years of age compared to the native population. There are smaller proportions of EU movers of the youngest (15 to 24) and oldest (55 to 64) age groups, compared to the native population. There is no clear difference between the proportions of EU movers and natives in the 45 to 54-year-old age group. There are a few exceptions: in Bulgaria, EU movers are more likely to be older than natives and, in Estonia, there is a relatively high proportion of young (15 to 24-year-old) EU movers compared to natives. These are both countries with small populations of EU movers.

Figure 11. Total number of EU movers in each EU-28 Member State in 2016 by age group compared to natives

	15-24		25-34		35-44		45-54		55-64	
	EU movers	Natives								
BE	13%	19% ▼	24%	19% ▲	24%	20%	23%	22%	16%	21% ▼
BG	7%	15% ▼	15%	21% ▼	22%	23%	27%	21%	29%	21% ▲
CZ	6%	15% ▼	31%	20% ▲	31%	25%	19%	20%	13%	20% ▼
DK	19%	20%	36%	17% ▲	23%	20%	15%	23%	8%	20% ▼
DE	15%	16%	26%	18% ▲	26%	17%	20%	26%	13%	22% ▼
EE	23%	17% ▲	27%	23%	21%	21%	17%	20%	11%	18% ▼
IE	12%	18% ▼	38%	19% ▲	26%	23%	15%	22%	8%	18% ▼
EL	14%	16%	19%	18%	28%	23%	22%	23%	17%	20%
ES	11%	15%	25%	17% ▲	29%	25%	21%	24%	14%	19% ▼
FR	12%	19% ▼	18%	19%	22%	20%	26%	22%	21%	20%
HR	8%	17% ▼	17%	20%	28%	20%	21%	21%	26%	22%
IT	11%	15%	27%	16% ▲	30%	22%	21%	25%	10%	21% ▼
CY	20%	20%	31%	22% ▲	24%	19%	16%	20%	10%	19% ▼
LV	8%	17% ▼	22%	23%	27%	21%	28%	20%	15%	18%
LT	11%	19% ▼	32%	20% ▲	25%	19%	17%	22%	13%	20% ▼
LU	14%	21% ▼	23%	20%	27%	17%	22%	22%	13%	20% ▼
HU	16%	17%	32%	19% ▲	22%	24%	16%	19%	14%	21% ▼
MT	13%	18%	28%	21% ▲	21%	20%	19%	19%	19%	21%
NL	17%	19%	33%	18% ▲	25%	19%	17%	24%	9%	21% ▼
AT	15%	17%	29%	18% ▲	26%	19%	19%	25%	11%	20% ▼
PL	10%	17% ▼	35%	23% ▲	28%	22%	14%	18%	13%	21% ▼
PT	13%	16%	25%	17% ▲	25%	23%	20%	23%	17%	21%
RO	12%	16%	25%	20%	24%	23%	23%	20%	16%	20%
SI	7%	15% ▼	22%	19%	28%	22%	26%	22%	18%	22%
SK	7%	17% ▼	26%	22%	29%	23%	23%	19%	16%	19%
FI	10%	19% ▼	30%	19% ▲	28%	19%	20%	21%	12%	22% ▼
SE	12%	19% ▼	30%	20% ▲	27%	20%	19%	22%	14%	19% ▼
UK	15%	20% ▼	39%	19% ▲	27%	19%	13%	23%	7%	19% ▼

Legend:

- ▼ Smaller proportion of EU movers in this age group compared to natives (more than 5 percentage points difference)
- ▬ Similar proportion of EU movers in this age group compared to natives (difference of between 5 percentage points more and fewer)
- ▲ Greater proportion of EU movers in this age group compared to natives (more than 5 percentage points difference)

Source: Eurostat data [migr_pop1ctz]

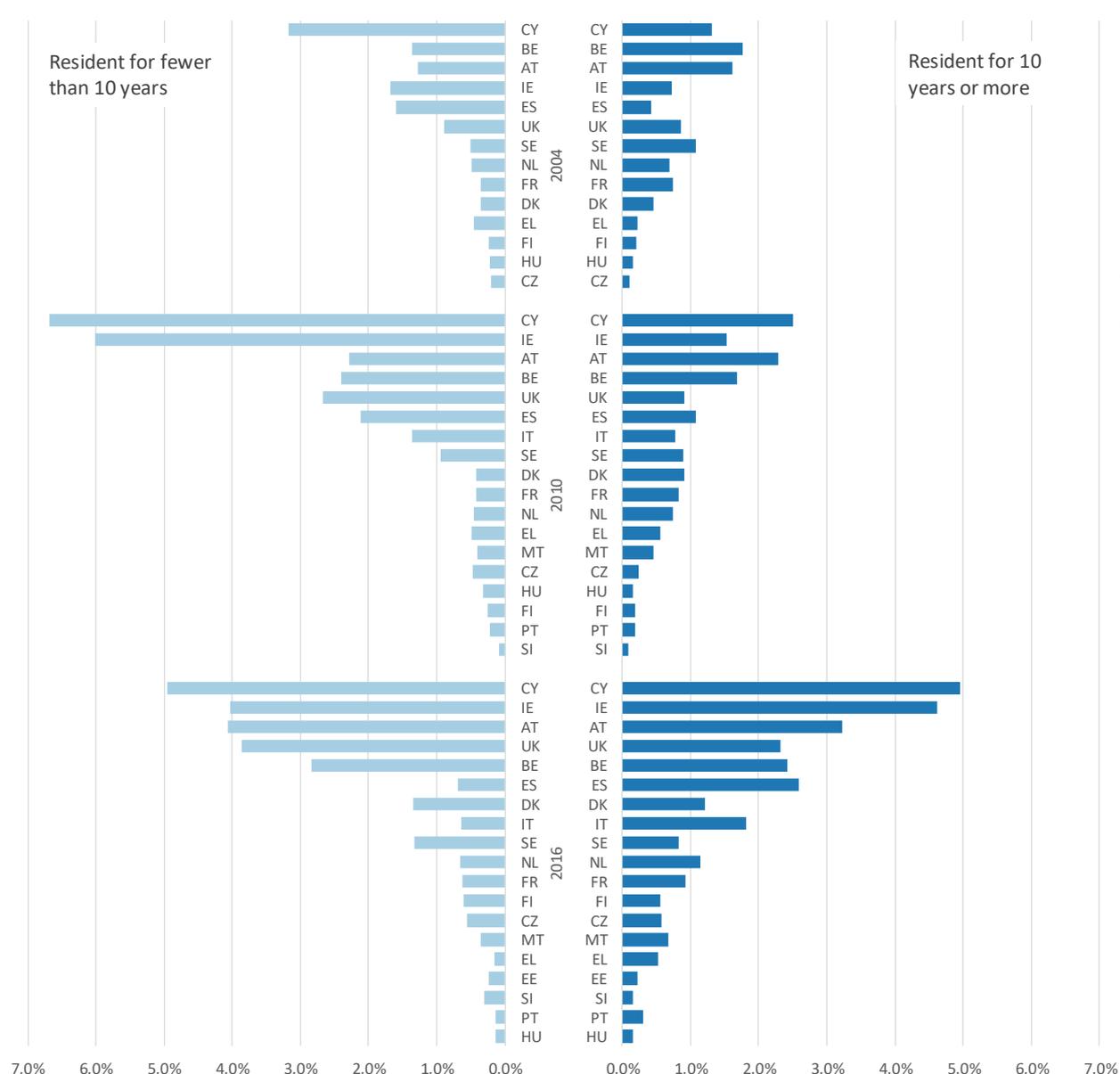
Notes: Data includes ages 15-64. Information on age is not available for years prior to 2016. No skills distinction.

Figure 12 provides information on the length of residency of EU skilled movers for countries where this data was available in 2004, 2010 and 2016. Whilst the estimates presented here include skilled EU movers only, a further distinction between medium and high skilled EU movers is not made as this leads to very small estimates that are unreliable. Some estimates included still have low reliability. These are indicated in the notes below the figure. The bars are firstly grouped by year and are then ordered top-down by country with the highest percentage of working skilled EU movers (as a proportion of the employed population) through to the lowest.

It shows that in earlier years (2004, 2010), there were more employed, skilled EU movers that were resident for fewer than 10 years. This is particularly true for Cyprus and Ireland. However, over time the proportion of employed skilled EU movers who were resident for 10 years or longer has increased. In 2016 the proportions of employed and skilled EU movers who are resident for fewer than 10 years and those resident for 10 years or more are not too dissimilar. This is particularly the case for both Cyprus and Ireland, which indicates that many of those skilled EU movers observed in the 'resident for fewer than 10 years' category in 2004 and 2010, stayed in these countries. This is not as pronounced in other countries, which indicates a higher turnover, although the proportions of employed, skilled EU movers who are resident for 10 years or longer increased across the board.

Whilst data on Bulgaria is not available from the EU Labour Force Survey, a recent country review found that higher skilled Bulgarians are more likely to stay abroad for longer; Bulgarian movers who obtained up to ISCED 3/4 ((upper) secondary/post-secondary non-tertiary education) and ISCED 5A/5B (first stage of tertiary education – bachelor and master) most often stayed abroad for 5 to 10 years (37 % and 32 % respectively). Those with a qualification equal to ISCED 6 (second stage of tertiary education – PhD) lived abroad for 10 to 20 years (MLS, 2017).

Figure 12. Employed skilled EU movers as a proportion of all workers in each Member State, broken down by years of residence (fewer than 10 years, 10 years or more) in 2004, 2010 and 2016



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Skilled includes 'Medium skilled' (corresponding to ISCED 3-4 (i.e. upper secondary)) and 'High skilled' (corresponding to ISCED 5-8 (i.e. third level)). Data for 2004 to 2008 does not include Malta.

The following countries were excluded because their estimates were unreliable: BG, HR, LT, LV, RO, SK for all years; IT and SI for 2004; EE and PL for 2004 and 2010; PT (more than 10 years) in 2004; PL (more than 10 years) in 2016.

LU was excluded as it can be treated as an outlier with more than three times the value of the next country (22 % in 2004 (11.3 % fewer than 10 years, 11.0% more than 10 years); 30.1 % in 2010 (13.6% fewer than 10 years, 16.6 % more than 10 years) and; 28.3 % in 2016 (15.0 % fewer than 10 years; 13.3 % more than 10 years). The following estimates for countries have low reliability: MT and SI in 2010; EE, MT (fewer than 10 years), PL (fewer than 10 years) and SI in 2016.

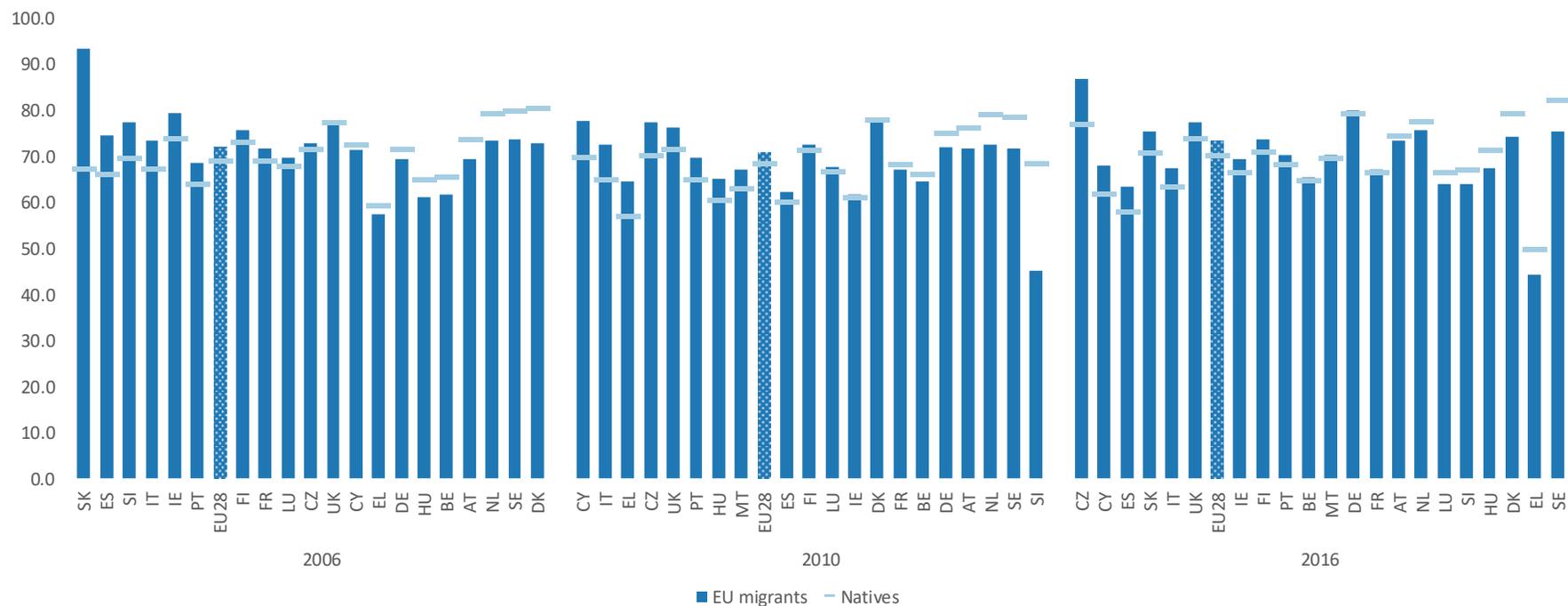
3.1.1.3 Labour market status of movers

Data presented in this section shows that high skilled EU movers have lower employment rates than the high skilled native population. In 2010, more countries had higher employment rates for skilled EU movers who were resident for a shorter period of time (1-9 years) than skilled EU movers who were resident for a longer time (10 years or more). In 2016, this trend reversed. EU movers, regardless of their skill level, have lower long-term unemployment rates. However, the gap for male EU movers compared to natives (i.e. male EU movers have lower long-term unemployment rates) is larger than for females. For female EU movers, long-term unemployment rates are similar to their native peers, or are higher. Data on long-term unemployment rates by age group suffers from gaps in availability. Data that is available shows that long-term unemployment rates are higher for older EU movers compared to their native peers in both 2010 and 2016. In 2016, this is also applicable in some countries for the youngest age groups (15-24). The rest of this section looks more closely at EU movers' employment and long-term unemployment rates.

The evidence presented in Figure 13 and Figure 14 illustrates the employment situation for respectively medium and high skilled EU movers compared to their native medium and high skilled counterparts. Countries are first grouped by year (2006,2010,2016) and are then ordered left-to-right by countries with higher employment rates for EU movers (compared to the native populations) to lowest employment rates for EU movers (compared to the native population). The vertical bars represent the EU migrant rates and the horizontal dash represents the native rate. Data prior to 2006 was not available for EU movers, hence using Year 2006 rather than 2004. It tells two different stories for medium and high skilled EU movers. Medium skilled EU movers in the first figure, on average have higher employment rates than natives. This remains unchanged from 2006 to 2016, although at the country level there are some changes; Greece and Hungary both had higher employment rates for medium skilled natives in than medium skilled EU movers in 2006. This reversed in 2010 before both countries returned to lower rates for EU movers than natives. It is also noteworthy that some EU15 countries have consistently lower employment rates for medium skilled EU movers as opposed to medium skilled natives. In 2006, 2010 and 2016 this was the case for Austria, Belgium, Germany, Denmark, the Netherlands and Sweden.

Whilst generally medium skilled EU movers have higher employment rates than their native counterparts, high skilled EU movers generally have lower employment rates than the high skilled native population (albeit for both groups they are at a high level). This has been the case for each of the three years presented here. However, the employment rate for both high skilled EU movers and natives have increased from 2010 to 2016: for EU movers more so than for natives. For high skilled EU movers, the EU-28 average changed from 77.4 % in 2010 to 81.3 % 2016 (3.9 percentage points) and for high skilled natives this changed from 83.0 % in 2010 to 83.4% in 2016 (0.4 percentage points). Southern European countries (Greece, Spain, Italy, Malta, Cyprus, and Portugal) show a consistent gap in employment rates between high skilled EU movers and the native high skilled population, with higher rates for the native population. For most southern European countries, this gap increased further in 2010 before narrowing in 2016. However, the gap is still greater than in 2006. One exception is Italy, which saw the gap decrease in 2010 before widening again in 2016. This likely reflects the ongoing high unemployment rates in these countries.

Figure 13. Employment rates for medium skilled EU movers compared to employment rates for medium skilled natives in 2006, 2010 and 2016



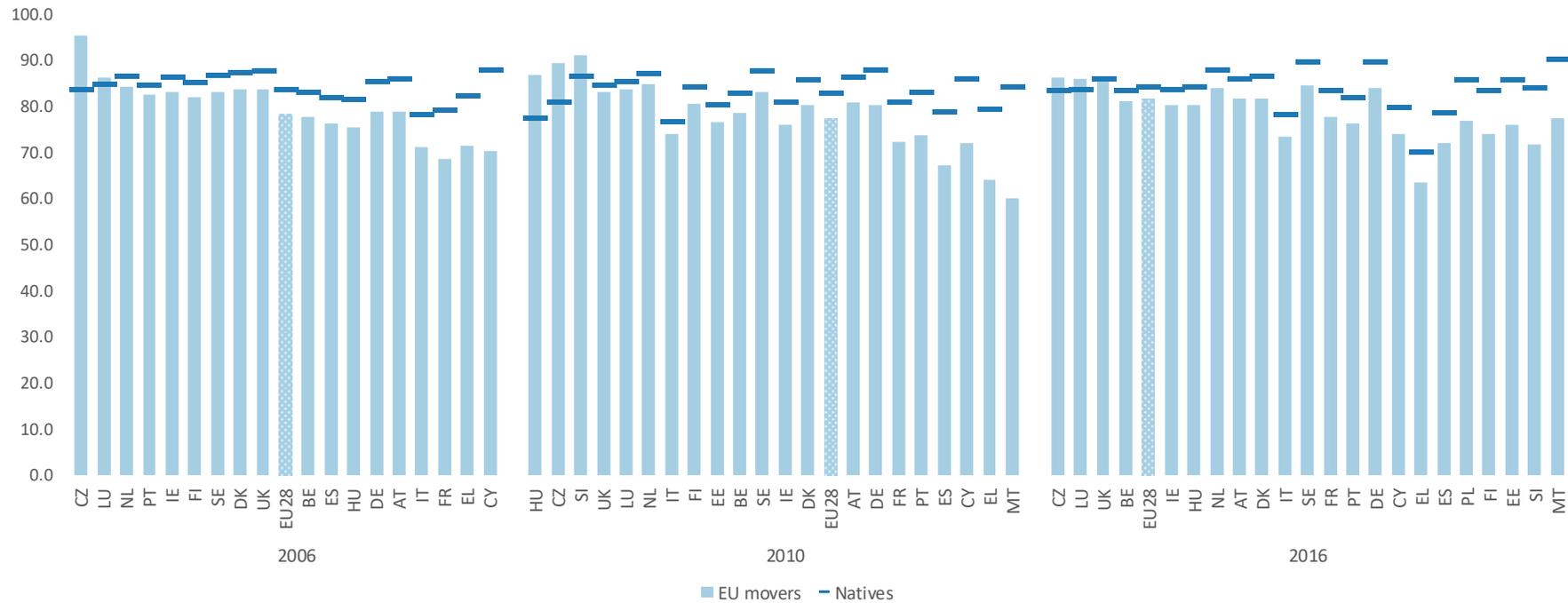
Source: Employment rates by sex, age, educational attainment level and citizenship [lfsa_ergaedn].

Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary).

The following countries were excluded because their estimates were unreliable or otherwise not available: BG, EE, HR, LT, LV, PL, RO for all years; MT for 2006; SK in 2010.

The following country estimates low reliability: SK (2006), MT (2010) and SI (all years).

Figure 14. Employment rates for high skilled EU movers compared to employment rates for high skilled natives in 2006, 2010 and 2016



Source: Employment rates by sex, age, educational attainment level and citizenship [lfsa_ergaedn].

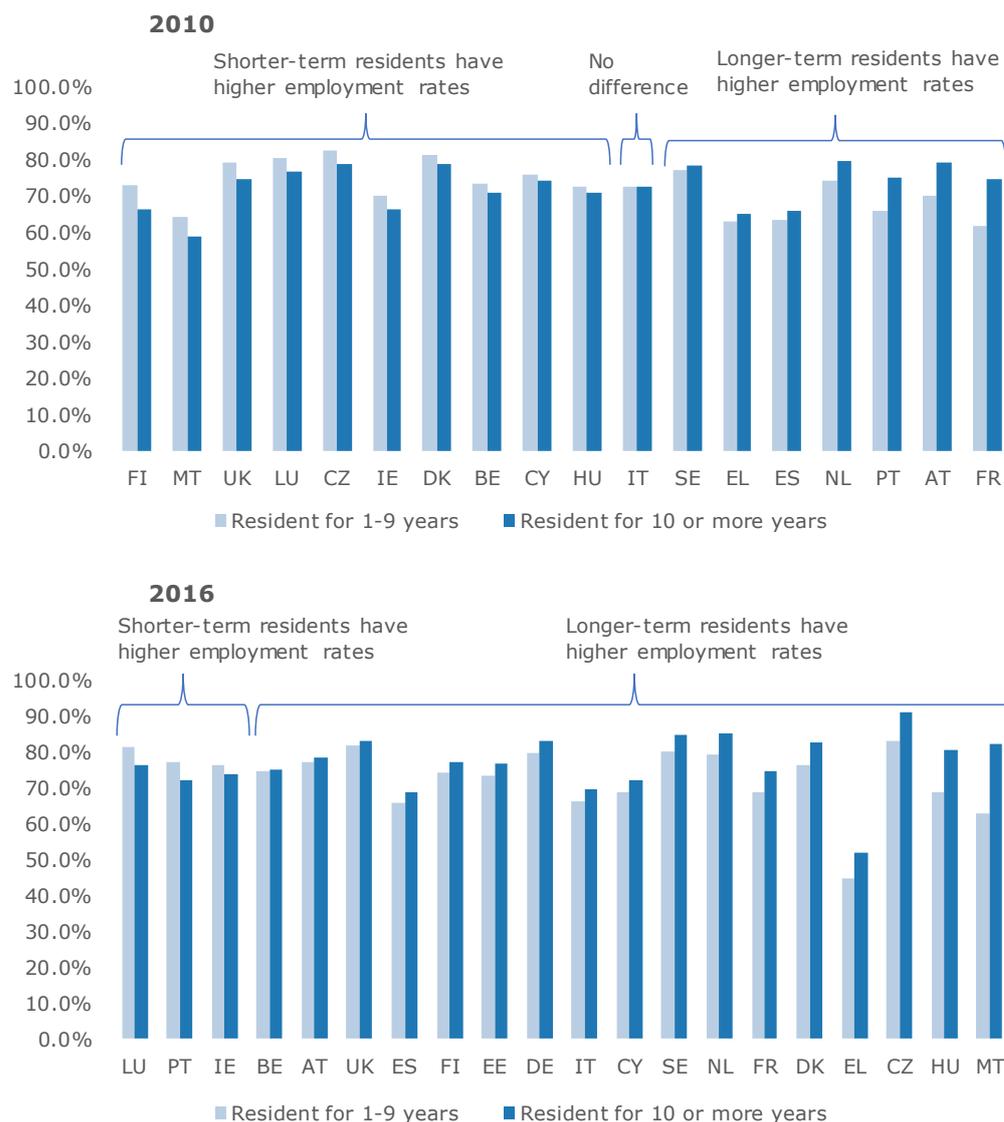
Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary).

The following countries were excluded because their estimates were unreliable or otherwise not available: BG, HR, LT, LV, RO, SK for all years; EE, MT, PL, SI for 2006; PL in 2010.

The following country estimates low reliability: SI and EE (2010); PL, EE, SI (2016)

Figure 15 looks at employment rates of EU movers by their years of residence, distinguishing between EU movers who have been resident for 1 to 9 years, and those who have been resident for more than 10 years. Only data for 2010 and 2016 is shown as populations for 2006 were too small and were therefore unreliable. For the same reason, medium and high skilled EU movers have been aggregated. Figure 15 shows that, in 2010 in most countries, employment rates of shorter-term EU movers (resident for 1-9 years) were higher than for longer-term EU movers (resident for 10 years or more). The opposite is the case in 2016; in most countries, longer-term EU movers have higher employment rates. Only in a few countries, do shorter-term EU movers have higher employment rates (Luxembourg, Portugal and Ireland).

Figure 15. Employment rates for skilled EU movers by years of residence (shorter-term: 1-9 years and longer-term: 10 or more years), 2010 and 2016



Source: ICF analysis of EU LFS microdata.

Data includes ages 15-64. Skilled includes medium skilled, corresponding to ISCED 3-4 (i.e. upper secondary) and high skilled, corresponding to ISCED 5-8 (i.e. third level). Countries had estimates with too low reliability and have been omitted. Data for MT (2010) and EE (2016) have low reliability.

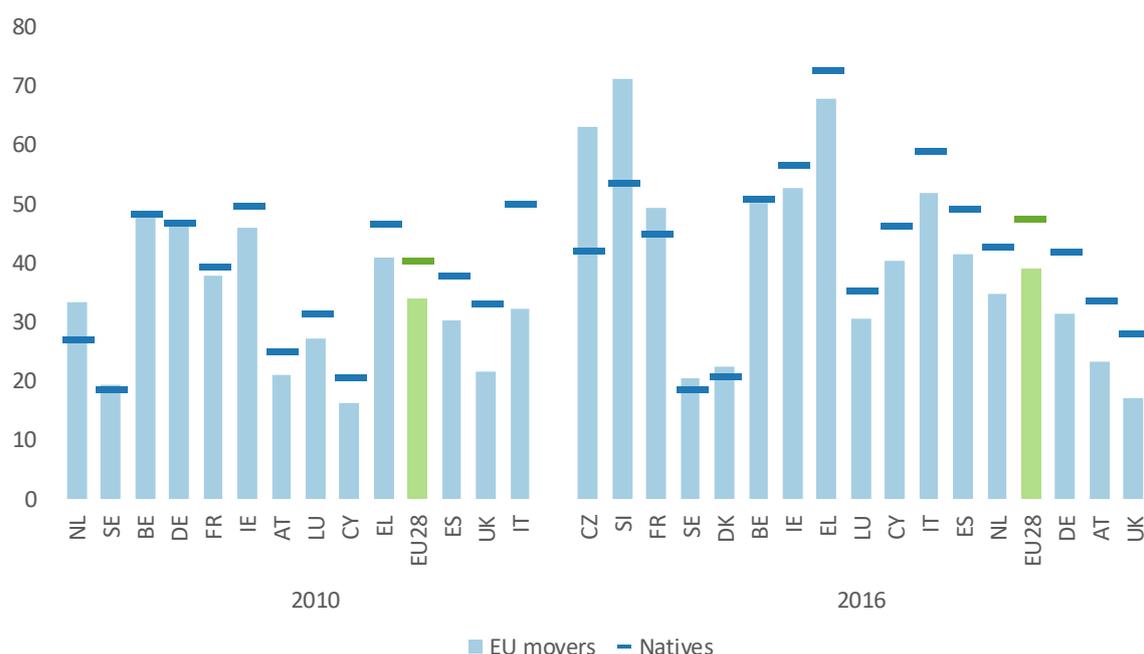
We would expect longer-term residents to have higher employment rates (as they have had more time to integrate in the host country labour market), and this was indeed

observed in 2016. However, this was not the case in 2010. One possible explanation for observing the reverse in 2010 is that, following the start of the crisis in 2009, longer-term residents – like natives – were more likely to lose their job and stay in the country, bringing down the employment rate. They would be more likely to stay because their longer residence meant they were more rooted, e.g. have a family, house or other ties to the country. Shorter-term residents, on the other hand, were less rooted and may have only remained in the host country if they retained their employment. They may have returned home if no job was available, which does not increase the pool of unemployed people in the host country. Similarly, new movers (included within the shorter-term residents) would be less likely to move to another country if there were not any jobs available.

Figure 16 presents long-term unemployment (LTU) rates as a proportion of total unemployment. The left-hand side of the figure presents data for 2010 and the right-hand side for 2016. The vertical bars represent the rate for EU movers, whereas the horizontal stripe represents the rate for natives. This allows a clear illustration of the gaps between long-term unemployment rates between EU movers and natives. The data for each year is ordered to first show the country with higher LTU rates for EU movers, to the country with higher LTU rates for natives. Information on LTU rates as a proportion of total unemployment by citizenship is not available prior to 2006 hence 2004 is not presented in the graph and is not available for some countries. The figure does not provide information on LTU rates of natives or EU movers by skill level. Figure 16 allows us to note the prevalence of the long-term unemployed amongst the unemployed, which is particularly important in terms of activation of EU movers, also in context of the native population.

Firstly, there has been an increase in long-term unemployment rates as a proportion of total unemployment for both natives and EU movers, with natives having higher LTU rates than EU movers. In 2010, the only exception to this were the Netherlands and Sweden. In 2016, the exceptions were the Czech Republic, Slovenia, France, Sweden and Denmark. Notably, the Netherlands had the greatest discrepancy between EU movers and natives (EU movers having a higher LTU rate), but in 2016 they were one of the countries with the largest discrepancies, natives having higher LTU rates. In Sweden in both 2010 and 2016, EU movers had higher LTU rates, but the discrepancy between EU movers and natives was not significant. Two EU13 countries (the Czech Republic and Slovenia), for which data was not available in 2010, are shown in 2016 to have the largest discrepancy in LTU rates between EU movers and natives (with EU movers having higher LTU rates). The UK consistently sees lower LTU rates for EU movers than for natives.

Figure 16. Long-term unemployment rates as a proportion of total unemployment for EU movers and natives in each EU-28 MS in 2010 and 2016



Source: Eurostat data on long-term unemployment (12 months or more) as a percentage of total unemployment, by sex, age and citizenship (%) [lfsa_upgan]

Notes: Data includes ages 15-64. Information on age for EU movers is not available for years prior to 2006. No skills distinction. The following reporting countries structurally have information missing and have been omitted: BG, EE, HR, LV, LT, HU, MT, PL, PT, RO, SK, and FI. Additionally, DK, CZ and SI are not available for 2010.

Figure 17 and Figure 18 show long-term unemployment rates as a proportion of total unemployment for EU movers and natives by sex, for both 2010 and 2016. The horizontal bars represent EU migrant long-term unemployment rates (as a percentage of total unemployment) and the vertical stripes in a darker colour presents this rate for natives. The countries are ranked in increasing order by the sum of the rates for both male and female EU movers. This places countries with information for only male or female towards the top of the graph. This is the case for the Netherlands and Greece in 2010, and for Denmark, Sweden and the Czech Republic in 2016. The reason that these estimates are missing is that they have been removed due to their low reliability. Information on long-term unemployment rates as a proportion of total unemployment by citizenship is not available prior to 2006, hence 2004 is not presented in the graph. Data is missing for some countries – see notes under the figure. The figure below does not provide information on unemployment rates (whether of natives or EU movers) by skill level. Information on long-term unemployment rates as a proportion of total unemployment by citizenship is not available prior to 2006, hence 2004 is not presented in the graph. Data is missing for some countries – see notes under the figure. The figure below does not provide information on unemployment rates (whether of natives or EU movers) by skill level.

Overall, gaps between EU movers and natives are wider for males, with native males having higher LTU rates than male EU movers. For countries that experience higher LTU rates for EU movers than for natives LTU rates (as presented in Figure 16), data in Figure 17 and Figure 18 suggest this is due to female EU movers having higher LTU rates compared to their native peers. For example, data for Sweden, which had higher LTU rates for EU movers than natives, seems to suggest that most of this can be

explained by higher LTU rates for female EU movers. The exceptions (i.e. female EU movers perform better than their native peers and male EU movers) are some southern European countries (only in 2016): Belgium, Italy, Greece and Cyprus.

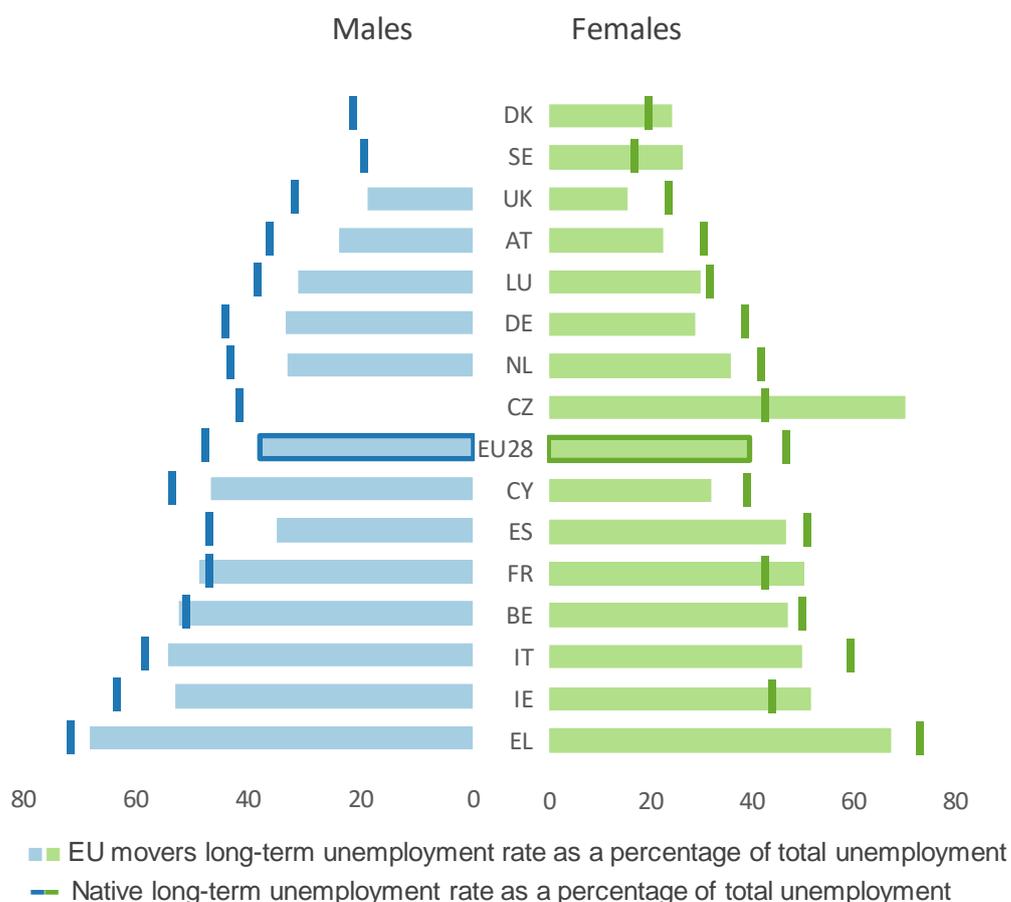
Figure 17. Long-term unemployment rates as a proportion of total unemployment for EU movers by sex in each EU-28 MS in 2010 compared to natives



Source: Eurostat data on long-term unemployment (12 months or more) as a percentage of the total unemployment, by sex, age and citizenship (%) [lfsa_upgan]

Notes: Data includes ages 15-64. Information on age for EU movers is not available for years prior to 2006. No skills distinction. The following countries have no data available for 2010: AT, BG, CY, CZ, DK, EE, HR, LV, LT, HU, MT, PL, PT, RO, SI, SK, FI. Data for NL and EL (males) has been removed (too low reliability). Data for LU and SE EU movers (male and female), FR and UK EU movers (males) and NL EU movers (females) has low reliability.

Figure 18. Long-term unemployment rates as a proportion of total unemployment for EU movers by sex in each EU-28 MS in 2016 compared to natives



Source: Eurostat data on long-term unemployment (12 months or more) as a percentage of the total unemployment, by sex, age and citizenship (%) [Ifsa_upgan]

Notes: Data includes ages 15-64. Information on age for EU movers is not available for years prior to 2006. No skills distinction. The following countries have no data available for 2016: BG, EE, HR, LV, LT, HU, MT, PL, PT, RO, SI, SK, and FI. Data for DK, SE and CZ EU movers (males) has been removed (too low reliability). Data for AT and UK EU movers (male and female), EL and NL EU movers (male) and CZ, CY and SE EU movers (female) has low reliability.

The dashboard in Figure 19 presents long-term unemployment rates as a proportion of total unemployment for EU movers and natives by 5-year age groups, first for 2010 and then for 2016. Only a few countries had any available data on this. Each column compares the rate for EU movers and natives. Where there is data for both EU movers and natives, this is evaluated in a third column (as per the legend) indicating whether a smaller proportion of EU movers were longer-term unemployed than natives (5 percentage points or more difference indicated by a red downwards arrow), whether a larger proportion of EU movers were longer-term unemployed than natives (5 percentage points or more difference indicated by a green upwards arrow), or whether the difference fell between 5 percentage points less or more (yellow horizontal stripe). Information on LTU rates as a proportion of total unemployment by citizenship is not available prior to 2006, hence 2004 is not presented in the graph and is not available for all countries: missing countries are noted below the figure. The figure below does not provide information on LTU rates (whether of natives or EU movers) by skill level.

Figure 19. Long-term unemployment rates as a proportion of total unemployment for EU movers in 2010 by age group compared to natives

	15 to 19 years		20 to 24 years		25 to 29 years		30 to 34 years		35 to 39 years	
	EU movers	Natives								
EU28	21.6	20.0	25.7	32.2	29.4	36.1	31.2	40.5	29.1	42.5
Belgium	:	16.1	:	34.3	40.5	45.1	:	46.0	42.5	54.3
Czech Republic	:	25.8	:	33.3	:	37.2	:	34.9	:	45.6
Germany	:	21.4	:	28.2	:	36.8	38.5	44.1	32.4	46.5
Ireland	:	27.0	:	48.2	39.8	50.7	44.1	50.5	47.5	49.4
Greece	:	25.7	:	36.6	:	45.1	:	49.3	:	49.1
Spain	18.8	23.7	25.3	31.0	31.4	31.6	31.2	35.2	26.2	38.1
France	:	24.8	:	31.5	:	33.4	:	37.5	:	39.5
Italy	:	31.8	38.2	49.2	35.4	46.6	33.4	49.5	30.5	51.7
Cyprus	:	:	:	19.9	:	18.7	:	:	:	:
United Kingdom	:	19.2	:	28.8	:	33.8	22.2	40.1	:	39.1

	40 to 44 years		45 to 49 years		50 to 54 years		55 to 59 years		60 to 64 years	
	EU movers	Natives								
EU28	35.6	44.1	39.8	46.9	45.6	50.0	50.3	53.6	65.4	53.8
Belgium	52.0	52.7	52.5	54.8	72.0	68.6	:	79.5	:	84.1
Czech Republic	:	53.7	:	53.6	:	45.1	:	40.3	:	36.2
Germany	42.8	48.0	54.5	54.0	60.3	58.5	67.3	61.9	73.8	58.5
Ireland	55.5	49.8	54.8	54.1	:	59.0	:	52.3	:	61.0
Greece	:	52.2	:	49.2	:	50.3	:	50.1	:	58.1
Spain	29.3	38.6	32.2	41.9	37.5	47.3	45.3	54.7	66.4	57.4
France	:	44.5	:	49.7	:	50.5	:	55.4	:	60.9
Italy	29.1	51.9	33.0	54.4	:	54.0	:	61.7	:	59.0
Cyprus	:	:	:	:	:	:	:	:	:	:
United Kingdom	:	38.7	:	39.7	:	39.9	:	41.2	:	44.4

Legend:

- ▼ Smaller proportion of EU movers in this age group compared to natives (more than 5 percentage points difference)
- ▬ Similar proportion of EU movers in this age group compared to natives (difference of between 5 percentage points more and fewer)
- ▲ Greater proportion of EU movers in this age group compared to natives (more than 5 percentage points difference)

Figure 20. Long-term unemployment rates as a proportion of total unemployment for EU movers in 2016 by age group compared to natives

	15 to 19 years		20 to 24 years		25 to 29 years		30 to 34 years		35 to 39 years	
	EU movers	Natives								
EU28	18.2	17.8	26.4	34.2	27.9	41.0	33.1	46.6	39.0	50.2
Belgium	:	:	:	34.2	38.3	46.5	:	50.9	56.5	54.3
Czech Republic	:	16.9	:	26.3	68.8	32.2	:	39.7	:	41.6
Germany	:	18.5	:	23.9	:	29.7	:	37.6	35.4	40.8
Ireland	:	20.5	:	42.7	:	53.4	54.8	54.8	:	59.2
Greece	:	39.2	:	55.4	:	66.8	66.4	70.0	:	73.7
Spain	22.3	20.1	29.9	30.9	29.9	38.0	38.9	43.4	37.1	46.0
France	:	23.7	:	30.5	:	36.2	:	45.7	:	47.2
Italy	46.6	38.1	57.1	55.4	41.1	54.4	45.1	59.8	52.8	62.1
Cyprus	:	:	:	20.5	:	39.2	:	46.3	:	58.3
Luxembourg	:	11.3	:	22.8	:	27.5	:	29.1	:	37.2
United Kingdom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	40 to 44 years		45 to 49 years		50 to 54 years		55 to 59 years		60 to 64 years	
	EU movers	Natives								
EU28	42.2	53.2	47.9	55.4	50.5	57.1	60.2	62.9	65.3	62.9
Belgium	56.6	51.7	45.9	61.5	59.5	58.4	83.2	76.0	:	82.2
Czech Republic	:	48.5	:	48.3	:	57.6	:	55.2	:	51.5
Germany	29.5	48.0	35.9	46.9	46.5	51.7	:	58.5	64.8	57.2
Ireland	:	58.4	:	68.5	:	70.4	:	72.6	:	79.4
Greece	88.7	78.0	:	79.3	66.0	79.5	:	81.6	:	83.3
Spain	42.9	52.5	52.6	56.0	49.9	58.5	70.5	68.4	68.3	72.1
France	:	48.8	56.8	53.9	:	59.1	74.8	65.6	:	70.8
Italy	55.8	62.6	62.4	63.6	53.9	60.2	48.4	66.1	:	65.0
Cyprus	:	59.5	:	56.8	:	58.7	:	68.4	:	75.1
Luxembourg	:	30.2	:	34.7	:	40.4	:	44.8	:	41.9
United Kingdom	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Legend:

- ▼ Smaller proportion of EU movers in this age group compared to natives (more than 5 percentage points difference)
- ▬ Similar proportion of EU movers in this age group compared to natives (difference of between 5 percentage points more and fewer)
- ▲ Greater proportion of EU movers in this age group compared to natives (more than 5 percentage points difference)

Source: Eurostat data on long-term unemployment (12 months or more) as a percentage of the total unemployment by sex, age and citizenship (%) [Ifsa_upgan]

Notes: Data includes ages 15-64. Information on age for EU movers is not available for years prior to 2006. No skills distinction. The following reporting countries structurally have information missing and have been omitted: BG, DK, EE, HR, LU, LV, LT, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE

Where data is available, the dashboard in 2010 suggests that EU movers of younger age groups generally have lower LTU rates than the native population of the same age group. As they get older, in particularly in their 60s, EU movers show higher LTU rates than natives of the same age. In 2016, prime-working age EU movers continue to have lower LTU rates than their native peers, but the picture is less uniform in the younger (15 to 24 years old) and older (55 to 64 years old) age group. Whilst there is not a lot of data available (e.g. data on LTU rates for 60 to 64-year-old EU movers is only available for three countries), data seems to suggest that EU movers in these younger and older age groups have LTU rates that are higher than, or are more similar to, their native peers.

3.1.1.4 Occupational profile of movers

Data in this section shows that the highest proportion of skilled EU movers are employed in 'Manufacturing', 'Wholesale and retail trade; repair of motor vehicles and motorcycles', and 'Accommodation and food service activities'. A large proportion of medium skilled EU movers also work in construction. A large proportion of high skilled EU movers work in 'Human health and social work activities', 'Professional, scientific and technical activities' and 'Education'. In terms of occupations, the group with the highest proportion of skilled EU movers, particularly those medium skilled, is elementary occupations. Elementary occupations have also seen the largest increase in the proportion of skilled EU movers over the last 12 years. This is an indicator for potential skills depreciation and is further addressed in Section 3.1.4. The rest of this section will describe data on EU movers by sector in more detail.

The dashboard presented in Figure 21 looks at the sectors in which medium and high skilled EU movers work in across the EU. It does this for 2010 and 2016¹³. Each row in the dashboard corresponds to a sector. The first column containing figures presents the percentage of medium skilled EU movers in this sector as a proportion of all medium skilled EU movers. This is provided for 2010 and 2016 respectively. The same information is then provided for high skilled EU movers. After the proportions for medium and high skilled EU movers, an arrow indicates whether this has increased, decreased or remained the same from 2010 to 2016. The cut off for this set is 1 percentage point (1 percentage point or less is a decrease; 1 percentage point or more is an increase). The final group of columns provides first the total percentage of skilled (medium and high) EU movers working in that sector as a proportion of all skilled EU movers in 2016 and the actual number of EU movers working in the sector in 2016 is provided. Sectors in the dashboard are ordered to show the sectors in which most skilled EU movers work at the top.

The dashboard firstly shows that between 2010 and 2016, there have not been any significant changes in the proportion of skilled EU movers working in particular sectors. A larger proportion of medium skilled EU movers worked in Manufacturing in 2016 compared to 2010 (+1.4 percentage points), whilst smaller proportions worked in Accommodation and food service activities (-1.0 percentage points) and Construction (-1.4 percentage points). Other increases are mainly observed for high skilled: the proportion of high skilled EU movers working in Accommodation and food service activities and in Transportation and storage increased (+1.5 percentage points), as did the proportion of high skilled EU movers working in Construction (+1.4 percentage points), and the proportion of high skilled EU movers working in Professional, scientific and technical activities (+1.0 percentage points). The proportion of high skilled workers in Education, Human health and social work activities and in Manufacturing declined (by -2.0, -1.3 and -1.1 percentage points respectively).

A recent thematic country review into migration to the EU from Croatia confirms that a significant amount of high skilled workers in the Human health and social work activities

¹³ Figures for 2004 are not presented as the NACE classification changed in the intervening years.

sector work in other EU countries. It states that “according to the Croatian Association of Physicians until the end of 2016 525 medical doctors left Croatia and more than 1 200 doctors have received EU certification needed for work in EU countries (mostly UK, Germany, Ireland, Austria and Sweden)” (MLS, 2017). The Romanian thematic review also highlights the health sector as a sector from which Romanians move to other European countries, especially the UK, France and Germany.

The ICT sector is another important sector for EU movers, particularly for high skilled EU movers: in 2016 it ranked sixth in terms of sectors with the largest proportions of high skilled EU movers. Further analysis shows that the proportion of high skilled EU movers in employment has doubled from constituting 0.6 % of the overall ICT sector workforce in 2008 to 3 % in 2016; it is one of the sectors with the highest proportion of high skilled EU movers of all its skilled workforce, only after ‘Activities of extraterritorial organisations and bodies’. The majority of these workers are male and of prime working age. The Croatian thematic review highlights this as another sector of interest, from which Croatians move to work in other countries. However, the author also points out that “ICT professionals are not organised or regulated by a single organisation, [therefore] it is much more difficult to estimate the size of migration in this sector. Moreover, ICT often revolves around project work (which can be organised in multiple locations and/or as distance work), so the boundaries between professionals who work in Croatia and/or abroad may be blurred” (MLS, 2017). The Romanian thematic review also highlights that the ICT sector is a sector from which Romanians move to other European countries, especially the UK, France and Germany. Italy is another country with a high demand. The UK, Germany and Italy collectively account for almost 60 % of all ICT vacancies in Europe.

Figure 21. Proportion of skilled EU movers by sectors of work, 2010 and 2016

Sector	Medium skilled			High skilled			Total skilled (2016)	
	2010	2016		2010	2016		%	#
Manufacturing	15.8%	17.2%	↑	13.0%	11.9%	↓	14.8%	974,494
Wholesale and retail trade; repair of motor vehicles and motorcycles	12.9%	13.2%	→	9.0%	9.5%	→	11.5%	759,350
Accommodation and food service activities	13.2%	12.2%	↓	5.2%	6.7%	↑	9.7%	640,032
Human health and social work activities	7.1%	8.1%	→	12.3%	11.0%	↓	9.4%	615,553
Construction	14.2%	12.7%	↓	3.6%	5.0%	↑	9.3%	609,703
Professional, scientific and technical activities	2.7%	2.1%	→	11.0%	12.0%	↑	6.6%	432,780
Administrative and support service activities	6.9%	7.4%	→	4.0%	4.4%	→	6.1%	399,245
Education	2.0%	1.8%	→	12.7%	10.6%	↓	5.8%	380,512
Transportation and storage	6.3%	6.8%	→	2.7%	4.2%	↑	5.6%	369,279
Information and communication	2.3%	1.6%	→	6.9%	6.7%	→	3.9%	258,753
Activities of households as employers, undifferentiated goods- and services	5.6%	5.1%	→	(1.7%)	1.6%	→	3.6%	233,765
Financial and insurance activities	1.5%	(1.1%)	→	5.0%	4.7%	→	2.7%	178,416
Other service activities	2.7%	2.5%	→	(2.3%)	1.9%	→	2.2%	147,787
Arts, entertainment and recreation	1.6%	1.5%	→	3.2%	2.7%	→	2.0%	132,479
Agriculture, forestry and fishing	2.1%	3.0%	→	(0.7%)	(0.7%)	→	1.9%	128,024
Public administration and defence, compulsory social security	(1.3%)	(1.1%)	→	(2.0%)	2.0%	→	1.5%	99,193
Activities of extraterritorial organisations and bodies	:	:	:	2.4%	1.5%	→	0.8%	50,220
Real estate activities	(0.4%)	(0.7%)	→	(1.1%)	(0.8%)	→	0.8%	49,858
Water supply, sewerage, waste management and remediation activities	(0.4%)	(0.7%)	→	:	:	:	(0.5%)	(35,877)

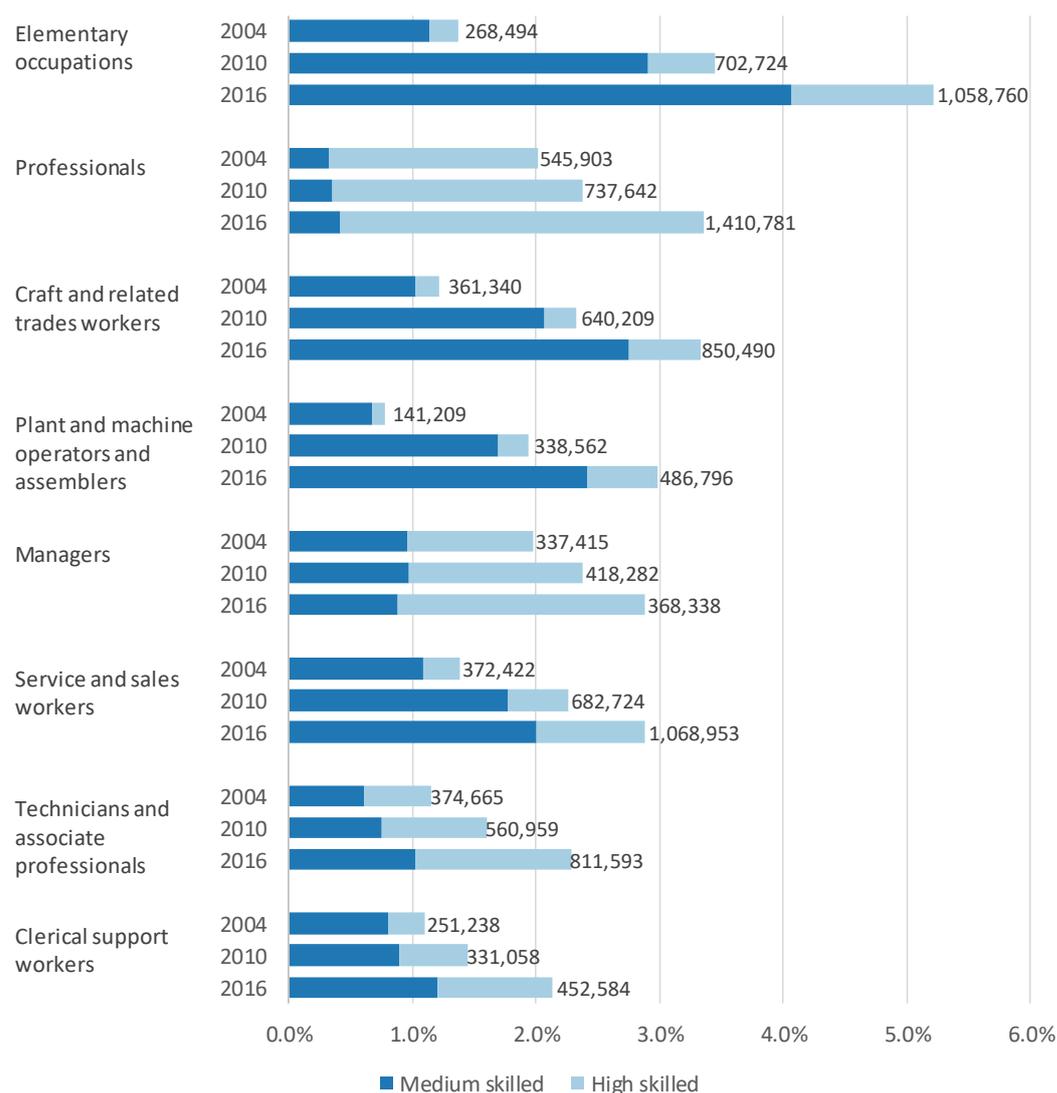
- ↑ Increase of more than 1 percentage point in the proportion of EU movers working in this sector between 2010 and 2016
- Fewer than ± 1 percentage points change in the proportion of EU movers working in this sector between 2010 and 2016
- ↓ Decrease of more than 1 percentage point in the proportion of EU movers working in this sector between 2010 and 2016

Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Skilled includes medium skilled, corresponding to ISCED 3-4 (i.e. upper secondary) and high skilled, corresponding to ISCED 5-8 (i.e. third level). Columns do not add up to 100% due to non-response and omission of sectors for which data is unreliable (i.e. Electricity, gas, steam and air conditioning supply; Mining and quarrying). Values in brackets have low reliability. Values indicated as ':' are unreliable and have been omitted.

Aside from information on the sectors in which skilled EU movers work, information is also available on the occupations in which they work. Figure 22 provides information on the percentage of skilled EU movers working in particular occupational groups as a proportion of all employees in the EU in that occupation. The figure is ordered by the occupational group with the highest proportion of skilled EU movers at the top, through to the group with the lowest proportion of skilled EU movers at the bottom. The figure excludes skilled agricultural, forestry and fishery workers and armed forces occupations as data for these occupations is largely unreliable.

Figure 22. Number and proportions of skilled EU movers in occupations across the EU in 2004, 2010 and 2016



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Skilled includes medium skilled, corresponding to ISCED 3-4 (i.e. upper secondary) and high skilled, corresponding to ISCED 5-8 (i.e. third level). Data for 2004 to 2008 does not include Malta. 2004 estimate for high skilled plant and machine operators and assemblers has low reliability.

Figure 22 shows that proportions of EU movers have increased for all occupational groups. The occupational group with the highest proportion of skilled EU movers,

particularly those medium skilled, is elementary occupations.¹⁴ This group of occupations has also seen the largest increase in the proportion of skilled EU movers over the last 12 years.¹⁵ This is an indicator for potential skills depreciation. Elemental occupations are generally performed by employees with lower skill levels. Skilled individuals in elementary occupations do not exercise or apply the medium or high level skills they possess. This is further elaborated in Section 3.1.4 in answering the question “Is there evidence of skills loss/depreciation caused by intra-EU mobility?”

The occupational group with the second highest proportion of skilled EU movers is that of professionals.¹⁶ This is particularly the case for high skilled EU movers and is another category that has seen a large increase, with absolute numbers almost tripling over the last 12 years. High skilled EU movers are also more likely than medium skilled EU movers to be managers. It is noteworthy that the total share of EU movers who are managers increased, despite the absolute number of managers decreasing; in 2010, about 420 000 skilled EU movers were managers, equivalent to almost 2.5 % of all managers in the EU. In 2016, almost 370 000 skilled EU movers were managers. Whilst this is a decline in absolute terms, this represented an increase of 0.5 % in terms of the proportion of skilled EU movers in that occupation. The proportion of skilled EU movers (in particular medium skilled) is also relatively high and increased for both craft and related trade workers, and plant and machine operators and assemblers.

3.1.1.5 Summary of key messages

- The number of EU movers increased in almost all countries between 2014 and 2016. The proportion of working EU movers also increased.
- Most skilled EU movers are medium skilled, closely followed by high skilled EU movers. Low skilled EU movers comprise a lower proportion of all EU movers. The increase in skilled EU movers has been higher than that amongst low skilled EU movers. Compared to the skill levels of the overall population, high skilled individuals are most likely to move.
- Across the EU-28 Member States, most medium skilled workers are male (55%), whilst there is an even distribution of male and female high skilled EU movers which is reflective of the population as a whole. Without reference to skill level, EU13 countries appear to have larger proportions of male EU movers, whilst southern European Member States receive more female EU movers.
- The age distribution between medium and high skilled EU movers is similar; there are roughly the same proportions of high and medium -skilled EU movers in a given age group. Compared to the native population, greater proportions of EU movers are 25 to 44 years of age and there are smaller proportions of EU movers of the youngest (15 to 24) and oldest (55 to 64) age groups.
- In the earlier years covered by this study, employed skilled EU movers were more likely to be resident for fewer than 10 years. However, over time the proportion of employed skilled EU movers who were resident for 10 years or more increased.

¹⁴ Elementary occupations are occupations that consist of simple and routine tasks requiring use of hand-held tools and often some physical effort (More information on the ILO website: <http://www.ilo.org/public/english/bureau/stat/isco/isco08.htm>).

¹⁵ Disregarding ‘Armed forced occupations’ which is in absolute terms the smallest category. The next smallest category has over 10 times more observations.

¹⁶ Professional occupations entail increasing existing knowledge, applying scientific or artistic concepts and theories, teaching about the foregoing in a systematic manner, or engaging in any combination of these three activities (More information on the ILO website: <http://www.ilo.org/public/english/bureau/stat/isco/isco08.htm>)

- Medium skilled EU movers on average have higher employment rates than natives. However, some EU15 countries have consistently lower employment rates for medium skilled EU movers as opposed to medium skilled natives.
- High skilled EU movers generally have lower employment rates than the high skilled native population. This has been the case for each of the three years presented here.
- EU movers (regardless of skill level) have lower LTU rates (as a percentage of all unemployment), but LTU rates have increased across the board. The gap for EU movers compared to natives is larger for males than for females. LTU rates for female EU movers are more similar to or higher than their native peers. Long-term unemployment rates are higher for older EU movers compared to their native peers. In 2016, this was the case for the youngest age groups (15-24) in some countries.
- The highest proportion of skilled EU movers are found employed in 'Manufacturing', 'Wholesale and retail trade; repair of motor vehicles and motorcycles', and 'Accommodation and food service activities'. A large proportion of medium skilled EU movers also work in construction. A large proportion of high skilled EU movers work in 'Human health and social work activities', 'Professional, scientific and technical activities' and 'Education'.
- The occupational group with the highest proportion of skilled EU movers, particularly medium skilled, is found in elementary occupations. This occupation has also seen the largest increase in the proportion of skilled EU movers over the last 12 years. This is an indicator for potential skills depreciation.

3.1.2 What citizenship do the movers have?

Available data used in this section does not distinguish by skill level. The data shows that the top three countries with the highest net positive migration (from the EU and third countries) between 2013 and 2016 were those with the largest population sizes (Germany, the largest; followed by the United Kingdom and then Italy). The top three countries with the highest net negative migration were Spain, Romania and Poland, having the 5th, 6th and 7th largest populations respectively. When looking at in/outflows as a proportion of the country's population size, those with the smallest populations stand out (Malta, Cyprus and Luxembourg), as well as Ireland. Countries that experienced annual inflows above 1% of their population were Austria, Sweden, Germany, Denmark and Belgium. Lithuania experienced comparatively large outflows equal to 1.5% of its population size. The broad citizenship group comprising the largest part of people leaving or arriving into the country (i.e. reporting country, EU citizenship, non-EU citizenship) varies by country. For most countries, the largest group of emigrants are its own citizens. For immigration, this picture is more varied. Trends in total in- and outflows to and from the same country may be explained by in/outflows from these different citizenship groups.

Many citizens of EU-28 countries living in another EU-28 country, live in countries that are either linguistically or geographically close to the country of their citizenship. However, country size and economy are also clearly attractive to EU movers. This is more so the case for EU13 and some South European Member States. EU movers from these countries mostly live in Germany and the UK. Using data on the proportion of Member States' residents who have another EU-28 citizenship and the proportion of their citizens who reside in another Member State (as a proportion of all their citizens resident in the EU-28), this section shows that relatively:

- Belgium, Austria, UK, Germany, Spain, Denmark, Sweden and the Netherlands are destination countries;
- Ireland and Luxembourg are outgoing and destination countries;

- France, Czech Republic, Finland, Greece, Slovenia and Hungary are (relative to other Member States) neither outgoing nor destination countries;
- Poland, Slovakia, Estonia, Bulgaria, Croatia, Latvia, Portugal, Lithuania and Romania are outgoing countries.

The rest of this section will describe the citizenship of movers in more detail. Firstly, by looking at recent trends in immigration and emigration for all EU-28 Member States. This provides a picture of which countries experience greater in/outbound flows (i.e. immigration and emigration). Comprehensive data by broad citizenship groups is available for 2013 to 2016. This looks at data on country population by citizenship to determine which countries have a large number of other EU citizens living in their border (i.e. destination countries), and which countries have a large number of their citizens living in other EU Member States. As magnitude is always a function of the size of the country, this will be analysed in context of population size. Crucially, none of the datasets presented here take into consideration skill level and labour status.

Table 5 summarises high level data on average annual flows in and out of EU-28 Member States between 2013 and 2016, regardless of citizenship. It is ordered by Member States with the highest positive net migration down to the highest negative net migration. The top three countries with the highest net positive migration also have the largest population size (Germany, United Kingdom and Italy). A similar relationship holds true for countries with the highest negative net migration. The top three countries with the highest net negative migration are Spain, Romania and Poland, having the 5th, 7th and 6th largest populations respectively. When looking at in/outflows as a proportion of the country's population size, those with the smallest populations stand out: Malta experienced inflows equal to 3.4 % of its population and outflows equal to 1.5% of its population; for Luxembourg inflows were equal to 4 % of its population size and outflows were equal to 2.2 % and; for Cyprus inflows were equal to 1.6 % of its population size and outflows were equal to 2.4%. Ireland, which is not quite as small as the aforementioned Member States, also experienced relatively high flows in both directions: inflows were equal to 1.6 % of its population size and outflows were equal to 1.5 %. Other countries that, on average between 2013 to 2016, experienced annual inflows that were higher than 1% of their population were Austria (1.5 %), Sweden (1.4 %), Germany (1.3 %), Denmark (1.2 %) and Belgium (1.1 %). One country other than Cyprus, Luxembourg and Malta experienced annual outflows higher than 1% of its population: Lithuania experienced outflows equal to 1.5 % of its population size.

Table 5. Average population, immigration, emigration and net migration between 2013 and 2016 (regardless of citizenship)

	Average population	Average immigration	Average emigration	Average net migration	Net migration (% of population)
DE	81 166 108	1 037 827	366 118	671 708	0.8 %
UK	64 628 543	594 621	318 911	275 710	0.4 %
IT	60 482 265	291 497	141 521	149 976	0.2 %
SE	9 699 782	135 014	50 915	84 099	0.9 %
AT	8 561 261	128 490	57 170	71 320	0.8 %
FR	66 182 337	355 368	288 576	66 792	0.1 %
NL	16 872 178	157 714	112 333	45 381	0.3 %
BE	11 216 801	128 391	94 874	33 517	0.3 %
DK	5 649 207	70 394	46 254	24 140	0.4 %
FI	5 459 251	31 775	15 942	15 833	0.3 %

HU	9 868 055	51 378	40 005	11 373	0.1 %
LU	556 482	22 530	12 030	10 501	1.9 %
CZ	10 530 166	38 427	29 728	8 699	0.1 %
MT	435 510	14 835	6 321	8 514	2.0 %
IE	4 662 886	76 259	69 221	7 038	0.2 %
SK	5 418 597	6 297	3 521	2 776	0.1 %
SI	2 061 742	14 940	14 551	389	0.0 %
EE	1 316 702	9 562	9 543	19	0.0 %
BG	7 221 553	22 912	27,111	-4 199	-0.1 %
CY	854 801	13 734	20 335	-6 601	-0.8 %
LV	1 995 087	9 122	20 568	-11 446	-0.6 %
HR	4 231 234	11 677	25 552	-13 875	-0.3 %
LT	2 931 299	22 149	42 576	-20 427	-0.7 %
PT	10 407 686	24 223	45 502	-21 279	-0.2 %
EL	10 893 047	74 568	109 946	-35 378	-0.3 %
PL	38 013 304	217 259	260 006	-42 747	-0.1 %
RO	19 899 587	139 983	184 231	-44 248	-0.2 %
ES	46 532 438	335 772	400 983	-65 212	-0.1 %

Sources: Eurostat data 'Population on 1 January by age group, sex and citizenship [migr_pop1ctz]' (Population column); 'Immigration by age group, sex and citizenship [migr_imm1ctz]' (Immigration column); 'Emigration by age group, sex and citizenship [migr_emi1ctz]' (Emigration column). Net migration is calculated as immigration minus emigration. The data does not distinguish between skill level, age, sex, labour status or citizenship, i.e. it includes citizens of the reporting country, other EU countries and third countries.

Case studies into the Baltic countries and Bulgaria and Romania validate this. The Baltics case study highlights the difference between Latvia and Lithuania on the one hand, and Estonia on the other. Data from the respective national statistical offices show that in 2016, 10 700 persons immigrated to Estonia, compared to 8 300 to Latvia and 20 200 to Lithuania. At the same time, 5 400 people emigrated from Estonia, 20 600 from Latvia and 50 300 from Lithuania. The magnitude of emigration is significantly larger for Lithuania, whilst Estonia experiences a positive net migration rate. Case study evidence on Romania and Bulgaria shows that over 3 million Romanians and more than 1 million Bulgarians currently live and work abroad. Although emigration has affected both the high and low skilled, Bulgaria and Romania have some of the highest rates of active, highly educated citizens that have left the country within the past ten years. In 2016, the Bulgarian Academy of Sciences (BAS) estimated that in five to ten years Bulgaria will have lost some 400 000 qualified movers – which is significant for a workforce of about 2 million – and larger Romania is likely to suffer from an even higher loss of (skilled) labour.

Table 6 provides more information on the trend in immigration and emigration between 2013 and 2016, and on broad citizenship groups. The table presents immigration and emigration data from Eurostat for the following broad citizenship groups: EU-28 (except

reporting country); reporting country (each Member State), and; Non-EU countries. Data in absolute numbers is shown for 2013 and 2016, with trend bars for each year 2013 - 2016 for each Member State. This table provides an understanding of the relative scale of flows to and from EU Member States. Further analysis of the data shown in Table 6 is provided beneath it.

Table 6. Immigration and emigration between 2013 and 2016 by broad citizenship group

	EU28						Reporting country						Non-EU28 countries nor reporting country					
	Immigration			Emigration			Immigration			Emigration			Immigration			Emigration		
	2013	2016	Trend	2013	2016	Trend	2013	2016	Trend	2013	2016	Trend	2013	2016	Trend	2013	2016	Trend
Belgium	63,930	58,855	■ ■ ■ ■	37,131	38,091	■ ■ ■ ■	14,549	17,615	■ ■ ■ ■	32,980	30,691	■ ■ ■ ■	41,443	46,502	■ ■ ■ ■	32,400	23,461	■ ■ ■ ■
Bulgaria	1,626	1,310	■ ■ ■ ■	1,216	752	■ ■ ■ ■	4,682	9,254	■ ■ ■ ■	16,036	25,795	■ ■ ■ ■	11,984	10,610	■ ■ ■ ■	2,401	3,924	■ ■ ■ ■
Czech Republic	14,018	29,647	■ ■ ■ ■	2,147	6,909	■ ■ ■ ■	5,326	4,533	■ ■ ■ ■	9,267	6,376	■ ■ ■ ■	10,780	29,902	■ ■ ■ ■	14,480	25,579	■ ■ ■ ■
Denmark	21,301	24,969	■ ■ ■ ■	15,334	19,913	■ ■ ■ ■	18,970	19,742	■ ■ ■ ■	13,572	15,273	■ ■ ■ ■	19,624	28,559	■ ■ ■ ■	14,389	17,408	■ ■ ■ ■
Germany	354,003	403,555	■ ■ ■ ■	87,792	157,769	■ ■ ■ ■	83,229	110,537	■ ■ ■ ■	104,245	225,337	■ ■ ■ ■	252,122	507,034	■ ■ ■ ■	66,670	148,886	■ ■ ■ ■
Estonia	147	3,511	■ ■ ■ ■	87	2,455	■ ■ ■ ■	2,472	7,129	■ ■ ■ ■	6,414	9,141	■ ■ ■ ■	1,490	4,182	■ ■ ■ ■	238	2,195	■ ■ ■ ■
Ireland	23,848	28,892	■ ■ ■ ■	20,327	18,806	■ ■ ■ ■	22,567	28,014	■ ■ ■ ■	45,826	30,817	■ ■ ■ ■	18,344	27,161	■ ■ ■ ■	10,227	12,334	■ ■ ■ ■
Greece	14,986	16,623	■ ■ ■ ■	12,375	20,910	■ ■ ■ ■	26,644	30,747	■ ■ ■ ■	62,089	54,752	■ ■ ■ ■	16,313	69,497	■ ■ ■ ■	42,630	30,873	■ ■ ■ ■
Spain	90,421	116,314	■ ■ ■ ■	164,154	120,132	■ ■ ■ ■	32,422	62,573	■ ■ ■ ■	73,329	89,825	■ ■ ■ ■	157,823	235,632	■ ■ ■ ■	294,795	117,352	■ ■ ■ ■
France	90,748	82,732	■ ■ ■ ■	16,787	21,686	■ ■ ■ ■	120,644	137,227	■ ■ ■ ■	201,443	260,237	■ ■ ■ ■	127,360	158,156	■ ■ ■ ■	21,583	27,882	■ ■ ■ ■
Croatia	1,843	2,212	■ ■ ■ ■	708	593	■ ■ ■ ■	5,085	7,733	■ ■ ■ ■	13,394	34,815	■ ■ ■ ■	3,440	4,035	■ ■ ■ ■	1,078	1,016	■ ■ ■ ■
Italy	77,483	62,693	■ ■ ■ ■	19,035	20,136	■ ■ ■ ■	28,433	37,894	■ ■ ■ ■	82,095	114,512	■ ■ ■ ■	201,536	200,217	■ ■ ■ ■	24,604	22,411	■ ■ ■ ■
Cyprus	6,665	7,354	■ ■ ■ ■	8,745	3,598	■ ■ ■ ■	1,534	3,557	■ ■ ■ ■	3,579	2,117	■ ■ ■ ■	4,842	6,480	■ ■ ■ ■	12,903	9,177	■ ■ ■ ■
Latvia	909	500	■ ■ ■ ■	476	543	■ ■ ■ ■	4,774	4,897	■ ■ ■ ■	19,150	16,633	■ ■ ■ ■	2,604	2,910	■ ■ ■ ■	2,931	3,397	■ ■ ■ ■
Lithuania	671	751	■ ■ ■ ■	178	140	■ ■ ■ ■	18,975	14,207	■ ■ ■ ■	35,492	46,070	■ ■ ■ ■	2,357	5,175	■ ■ ■ ■	3,111	4,100	■ ■ ■ ■
Luxembourg	15,499	15,962	■ ■ ■ ■	7,096	9,010	■ ■ ■ ■	1,301	1,331	■ ■ ■ ■	1,817	2,106	■ ■ ■ ■	4,234	5,573	■ ■ ■ ■	1,823	2,306	■ ■ ■ ■
Hungary	10,448	10,532	■ ■ ■ ■	10,116	7,168	■ ■ ■ ■	17,718	29,815	■ ■ ■ ■	21,580	29,425	■ ■ ■ ■	10,802	13,261	■ ■ ■ ■	2,990	3,296	■ ■ ■ ■
Malta	4,116	8,975	■ ■ ■ ■	1,566	3,226	■ ■ ■ ■	1,824	1,376	■ ■ ■ ■	1,333	958	■ ■ ■ ■	4,957	6,700	■ ■ ■ ■	1,879	4,119	■ ■ ■ ■
Netherlands	52,161	63,878	■ ■ ■ ■	31,071	33,553	■ ■ ■ ■	36,319	42,522	■ ■ ■ ■	57,090	53,450	■ ■ ■ ■	40,837	76,680	■ ■ ■ ■	24,417	18,250	■ ■ ■ ■
Austria	60,219	64,699	■ ■ ■ ■	24,191	31,364	■ ■ ■ ■	9,237	9,768	■ ■ ■ ■	15,368	15,269	■ ■ ■ ■	32,241	54,472	■ ■ ■ ■	14,423	17,691	■ ■ ■ ■
Poland	29,631	22,786	■ ■ ■ ■	13,930	17,847	■ ■ ■ ■	131,431	105,422	■ ■ ■ ■	226,969	196,384	■ ■ ■ ■	59,035	80,054	■ ■ ■ ■	35,204	22,142	■ ■ ■ ■
Portugal	1,661	7,218	■ ■ ■ ■	972	432	■ ■ ■ ■	12,156	14,862	■ ■ ■ ■	50,835	37,188	■ ■ ■ ■	3,737	7,845	■ ■ ■ ■	1,979	552	■ ■ ■ ■
Romania	1,024	5,630	■ ■ ■ ■	1,375	574	■ ■ ■ ■	138,923	119,560	■ ■ ■ ■	154,374	206,798	■ ■ ■ ■	13,656	12,263	■ ■ ■ ■	5,384	134	■ ■ ■ ■
Slovenia	3,279	3,389	■ ■ ■ ■	2,089	2,213	■ ■ ■ ■	2,250	2,863	■ ■ ■ ■	7,789	8,818	■ ■ ■ ■	8,342	10,371	■ ■ ■ ■	3,506	4,541	■ ■ ■ ■
Slovakia	1,968	2,989	■ ■ ■ ■	22	60	■ ■ ■ ■	2,674	4,076	■ ■ ■ ■	2,732	3,674	■ ■ ■ ■	507	621	■ ■ ■ ■	16	67	■ ■ ■ ■
Finland	10,161	7,072	■ ■ ■ ■	2,215	3,483	■ ■ ■ ■	8,068	7,631	■ ■ ■ ■	9,658	10,603	■ ■ ■ ■	13,183	19,638	■ ■ ■ ■	1,992	2,742	■ ■ ■ ■
Sweden	26,436	30,508	■ ■ ■ ■	12,884	12,441	■ ■ ■ ■	20,484	20,019	■ ■ ■ ■	26,112	22,425	■ ■ ■ ■	64,186	104,384	■ ■ ■ ■	11,560	10,854	■ ■ ■ ■
United Kingdom	201,446	249,393	■ ■ ■ ■	78,064	116,469	■ ■ ■ ■	76,136	74,210	■ ■ ■ ■	133,576	134,009	■ ■ ■ ■	248,464	265,390	■ ■ ■ ■	105,294	89,962	■ ■ ■ ■

Sources: Eurostat data 'Immigration by age group, sex and citizenship [migr_imm1ctz]' (Immigration columns); Emigration by age group, sex and citizenship [migr_emi1ctz] (Emigration columns).

Notes: Breaks in the data occur for the following countries (year of break): Immigration data for the Czech Republic (2013), Estonia and Greece (2015), Germany and Greece (2016); Emigration data for Greece (2014), Estonia (2015) and Germany (2016).

Firstly, the bars show that the trends in immigration and emigration between 2013 and 2016 have not been consistently in the same direction, but rather fluctuate from year to year. Countries that did see a constant increase in immigration over that period of time are Ireland, Greece, Spain, France, Croatia, Malta, the Netherlands, Portugal, Slovakia and Sweden. Only Poland saw a constant decrease in immigration. Countries which saw a constant increase in emigration from 2013 to 2016 are Bulgaria, Denmark, Germany, Croatia, Italy, Luxembourg, Malta, Romania, Slovenia and Finland. Countries that saw a constant decrease in emigration are Ireland, Spain, Cyprus, Poland and Portugal. These findings should be placed in context with those shown from the previous table. For example, Denmark might have seen a constant increase, but it is not a major outgoing country. Romania on the other hand experiences large emigration flows and these are only increasing.

Secondly, it shows that both immigration and emigration (i.e. flow) data is quite volatile. Largely, this is due to breaks in methodology underlying the data (see notes). For example, the number of people immigrating to Estonia in 2016 is four times larger than 2013. Whilst 2014 and 2015 are not shown (to make the table legible), underlying this is a decrease of 5% from 2013 to 2014, an increase of almost 300% from 2014 to 2015 (2015 represents a break year) followed by a decrease of 4% from 2015 to 2016. In a few cases this is not due to breaks. For example, the underlying data on immigration from the Czech Republic shows relatively stable trends, but doubles from 2015 to 2016.

Thirdly, the data shows that the broad citizenship group making up the largest part of people leaving the country or arriving in the country varies by country. For most countries, the largest group of emigrants are its own citizens. However, the size of this group varies: for some countries this constitutes more than 80% of all emigration (Bulgaria, France, Croatia, Latvia, Lithuania) or even more than 95% (Portugal, Romania and Slovakia). Exceptions are Luxembourg, Austria and Denmark, where most emigrants are citizens with other EU-28 nationalities. It is also not the case for the Czech Republic, Spain, Cyprus and Malta where the largest group of emigrants are non-EU citizens. These findings are summarised in Table 7.

Table 7. Largest broad citizenship group emigrating out of EU-28 countries (2013-2016 average)

Mainly by EU-28 (except reporting country) citizens (2013-2016)	Mainly by reporting country (2013-2016)	Mainly by non-EU citizens (2013-2016)
Luxembourg (65.5 %)	Romania (98.1 %)	Czech Republic (58.3%)
Austria (47.1 %)	Slovakia (98.1 %)	Spain (44.3%)
Denmark (36.8 %)	Portugal (96.6%)	Cyprus (61.8%)
	Croatia (94.1 %)	Malta (43.1%)
	Lithuania (89.1 %)	
	France (84.0 %)	
	Latvia (83.6 %)	
	Bulgaria (83.4 %)	
	Estonia (76.4 %)	
	Poland (76.3 %)	
	Hungary (72.0 %)	
	Italy (68.5 %)	
	Finland (65.4 %)	

Slovenia (57.4 %)
Ireland (57.3 %)
Greece (51.9 %)
Netherlands (51.7 %)
Sweden (48.2 %)
United Kingdom (41.4 %)
Germany (37.7 %)

Source: *Emigration by age group, sex and citizenship [migr_emi1ctz]*

The picture for immigration is more varied: for some countries most immigration into its borders is by other EU citizens, for some it is non-EU citizens and others most immigration into its borders are by its own citizens. Table 8 summarises this:

Table 8. *Largest broad citizenship group immigrating to EU-28 countries (2013-2016 average)*

Mainly by EU-28 (except reporting country) citizens (2013-2016)	Mainly by reporting country (2013-2016)	Mainly by non-EU citizens (2013-2016)
Luxembourg (71.6 %)	Romania (88.9 %)	Italy (65.9 %)
Austria (51.0 %)	Lithuania (80.3 %)	Sweden (61.8 %)
Belgium (48.7 %)	Latvia (56.5 %)	Slovenia (61.3 %)
Czech Republic (47.4 %)	Portugal (53.9 %)	Bulgaria (55.9 %)
Malta (45.2 %)	Estonia (53.6 %)	Spain (55.2 %)
Cyprus (43.5 %)	Hungary (52.9 %)	Germany (51.2 %)
Ireland (36.2 %)	Croatia (51.7 %)	Finland (47.7 %)
	Poland (51.7 %)	United Kingdom (45.4 %)
	Slovakia (51.3 %)	France (39.7 %)
	Greece (39.3 %)	Denmark (37.8 %)
		Netherlands (36.8 %)

Source: *Immigration by age group, sex and citizenship [migr_imm1ctz]*

The countries in the first column (mainly by EU-28 citizens) predominantly sees inflows by other EU-28 citizens. Luxembourg has by far the largest proportion of this group. The countries in the second column (mainly by reporting country) predominantly see inflows by their own citizens. Here we find most EU13 countries as well as two south European countries (Portugal and Greece). In particular, for Romania and Lithuania, immigration by their own citizens make up by far the majority of all inflows. Immigration flows into countries in the last column are predominantly by non-EU citizens. This column reflects most of the countries with the highest number of asylum seekers in 2016 (the top 10 EU-28 countries that receive asylum seekers being Germany, Italy, France, Greece, Austria, the UK, Hungary, Sweden, the Netherlands and Bulgaria¹⁷), with the exception of Greece, Austria and Hungary which can be found in other columns. However, not all countries include asylum seekers and refugees in their immigration

¹⁷ Eurostat data: 'Asylum and first-time asylum applicants by citizenship, age and sex Annual aggregated data (rounded)' [migr_asyappctza].

data.¹⁸ To reiterate, this table is based on an average for 2013 to 2016. More intricate year-to-year trends are visible in Table 6. For example, whilst most immigration to Bulgaria has been by non-EU citizens, this has been declining over this period whilst return flows have risen. Case study evidence for Bulgaria adds that return flows are increasing. Over the last three years, about 10,000 people born in Bulgaria have returned every year, more than twice as many compared to 2013 when the number of Bulgarians returning was 4 771. Over the period 2013-2016, a total of 35 000 Bulgarians returned home.

Fourthly, the data shows that overall trends in in/outflows to/from the same country may be explained by in/outflows from these different citizenship groups. This final analysis further illustrates the multifaceted nature of migration. The following country examples all reflect cases where, between 2013 and 2016, in/outflows by a particular broad citizenship group more than doubled.

- As shown before, between 2013 and 2016 the Czech Republic, saw mostly non-EU citizens leave and EU-28 citizens enter its borders. The underlying figures, however, show that the number of EU-28 citizens leaving the Czech Republic more than tripled. The number of non-EU citizens leaving also increased but to a lesser extent. The Czech Republic also saw the number of EU-28 citizens (the largest broad citizenship group) who entered the country almost double. However, the number of non-EU citizens who entered almost tripled. At the same time, the number of returning Czechs slightly decreased.
- For Germany, which has one of the highest inflows in proportion to its population, the picture is one of emigration by its own citizens and immigration of non-EU citizens (correlating with the large inflow of asylum seekers). A closer look at the figures, however, shows that whilst emigration by Germans from Germany is on the rise (more than doubled from 2013 to 2016), emigration by non-EU citizens from Germany is also on the rise and has more than doubled.
- As discussed, immigration (and emigration) figures for Estonia have seen a strong increase. Some of this is explained by a break in the methodology and figures have increased across the board. Looking at figures by broad citizenship group, inspection shows that the highest increase in immigration and emigration is found in immigration and emigration by EU citizens (other than Estonians) from Estonia; in 2013, 147 EU citizens entered the country and in 2016 this was 3 511. Similarly, in 2013, 87 EU citizens left the country whilst in 2016 this was 2 455.
- Greece mainly sees in/outflows by its own citizens. Its outflows are equal to 1.0 % of its population. This is an interesting finding considering the country has such a high refugee inflow. It may be the case that data collection methods underestimate this group. Nevertheless, the data does capture the large increase in non-EU-28 citizens immigrating to its border. The number of non-EU-28 citizens immigrating to Greece more than quadrupled from 2013 to 2016.
- Croatia predominantly sees in/outflows by its own citizens. With both the total number of people immigrating and emigrating, immigration can be predominantly explained by a large increase in immigration by its own citizens (in 2016, the number of Croatians immigrating to Croatia was about two and a half times the number in 2013).
- As previously discussed, Cyprus is one of the small countries which has high in- and outflows as a proportion of its population. From 2013 to 2016 it predominantly experienced emigration by non-EU-28 citizens and immigration by

¹⁸ The following countries exclude asylum seekers who are usual residents for at least 12 months: BE, BG, CZ, DK, IE, HR, CY, LV, LT, HU, MT, PL, RO, SI, SK, FI, SE. Cyprus also excludes refugees who are usual residents for at least 12 months. (Source: http://ec.europa.eu/eurostat/cache/metadata/en/migr_imm_i_esms.htm)

EU citizens. However, this does not show the recent increase of Cypriots returning to Cyprus. Whilst this is still the smallest broad citizenship group making up its immigration (20.5 % in 2016), it has more than doubled in absolute terms from 2013 to 2016.

- Malta, another small country which has high in/outflows as a proportion of its population, also predominantly experienced emigration by non-EU-28 citizens and immigration by EU citizens. In contrast to Cyprus, however, increase in immigration is explained by higher (more than double) numbers of non-EU-28 citizens moving to Malta. The number of emigrants from Malta of EU-28 and non-EU-28 citizens also more than doubled.
- Previous figures have shown that Lithuania has a high outflow as a proportion of its population (1.5 %), most of whom are Lithuanian citizens. The inflows into Lithuania are also mainly by its own citizens. However closer inspection of the data shows that the number of Lithuanian citizens immigrating to Lithuania declined between 2013 and 2016, whilst the number of non-EU citizens more than doubled.
- Portugal also sees in/outflows mostly by its own citizens (on average, as much as 96.6 % of emigration from Portugal between 2013 and 2016 was by Portuguese citizens). However, immigration by EU-28 citizens and non-EU-28 citizens increased significantly over this period of time. The number of EU-28 citizens immigrating to Portugal more than quadrupled and the number of non-EU-28 citizens immigrating to Portugal more than doubled. Whilst in 2013, Portuguese citizens made up 69.2 % of all immigration, EU-28 citizens made up 9.5 % and non-EU citizens made up 21.3 %; in 2016 this was 49.7 %, 24.1 % and 26.2 % Respectively.
- Romania is one of the largest outgoing countries, having the highest negative net migration (as an annual average between 2013 and 2016). Proportionally, emigration from Romania almost constitutes 1% of its population. Romania also has the greatest proportion of its own citizens immigrating back to the country (88.9 %). However, this does not show the recent increase in immigration by EU-28 citizens. The number of citizens from this broad group moving to Romania more than quadrupled (1 024 to 5 630). The numbers are sufficiently small to be quite volatile and proportionally this is still a very small group (from 0.7 % to 4.1 %).
- In/outflows to/from Slovakia are, as a proportion of its population, the lowest in the EU. Both immigration to and emigration from Slovakia represents less than 0.1% of its population. Most of its flows are explained by movement of its own citizens. Indeed, the number of EU-28 citizens and non-EU-28 citizens emigrating has increased, whilst the number of Slovaks leaving has remained relatively stable. That said, the number of EU-28 citizens and non-EU-28 citizens leaving Slovakia is very small.

Analysis so far has used recent immigration and emigration data (from 2013 to 2016). This excludes movers who moved to a country before 2013 and are still resident there. In order to include this information and provide a more comprehensive picture of citizens from EU-28 countries who live in another EU-28 country, Table 9 shows the stock of EU-28 citizenships living in each EU Member State. This analysis is complementary to the above analysis which takes a closer look at the (recent) flows that, over years, accumulate to these stocks. It does not include data on Cyprus and Malta.

Table 9. Population by citizenship (rows: country of residence; columns: country of citizenship), 2017

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR
BE	9 997 952	32 891	3 445	2 761	39 292	1 041	4 124	16 950	62 554	163 703
BG	201	7 017 231	424	103	1 352	57	118	2 203	249	488
CZ	714	12 279	10 067 977	378	21 279	190	768	1 351	1 351	3 730
DK	1 238	9 035	1 603	5 263 783	24 435	1 435	1 878	2 692	6 519	6 528
DE	24 949	256 990	52 817	19 516	73 301 664	6 344	12 674	319 494	151 850	118 331
EE	144	315	188	174	1 414	1 119 146	83	104	475	613
IE	1 378	2 655	5 142	925	13 200	2 294	4 219 499	1 013	12 860	12 659
EL	1 231	78 147	879	725	11 099	110	496	9 958 159	1 011	4 362
ES	33 640	127 389	:	11 687	141 089	:	15 724	:	42 108 403	103 233
FR	104 519	22 440	4 823	5 069	83 894	1 399	10 277	7 944	169 519	62 350 527
HR	166	238	433	48	3 171	41	63	90	138	397
IT	5 624	58 620	5 717	2 024	36 660	1 215	2 839	7 274	23 828	29 281
LV	23	109	23	134	387	704	39	25	85	117
LT	65	99	39	140	556	137	52	50	261	235
LU	20 029	1 487	1 024	1 965	13 092	605	1 762	2 896	6 120	44 284
HU	1 026	715	490	250	18 627	124	550	591	1 586	2 523
NL	31 887	24 106	3 672	3 149	73 277	1 159	5 722	15 257	28 285	22 588
AT	2 325	24 923	12 629	1 207	181 618	518	1 469	5 885	6 884	8 095
PL	609	2 108	1 101	465	6 088	67	304	723	1 172	2 162
PT	2 853	7 019	308	658	10 030	157	1 031	327	11 133	11 293
RO	811	2 324	376	383	5 596	77	267	3 091	2 278	6 297
SI	58	2 853	174	25	925	21	52	46	119	248
SK	460	1 940	13 023	234	3 938	50	236	449	790	1 573
FI	442	2 015	567	734	4 149	51 499	606	1 147	2 583	2 146
SE	1 643	6 257	1 535	35 210	28 687	4 779	2 479	9 174	9 647	7 946
UK	27 060	85 569	52 463	24 034	146 931	11 956	334 470	63 247	169 047	186 657

Study on the movement of skilled labour

	HR	IT	CY	LV	LT	LU	HU	MT	NL
BE	1 999	156 291	493	1 827	2 485	4 364	6 469	465	153 245
BG	62	907	146	104	90	7	142	16	337
CZ	2 855	4 551	115	459	722	27	4 109	29	3 114
DK	1 738	9 036	126	5 164	12 363	56	4 730	68	7 811
DE	314 823	566 772	2 245	31 632	44 658	17 452	180 168	614	134 972
EE	45	835	13	3 179	1 803	4	161	3	264
IE	5 276	12 341	102	20 671	38 279	51	9 431	184	5 149
EL	250	5 155	14 872	310	534	37	770	43	2 718
ES	:	203 830	:	:	17 216	:	:	:	47 325
FR	3 786	211 357	338	2 025	2 971	7 705	6 563	194	36 962
HR	4 105 901	2 254	4	27	53	5	627	2	360
IT	17 698	55 542 417	198	2 862	5 162	238	8 181	717	8 243
LV	8	187	3	1 670 670	3 068	0	28	2	97
LT	36	321	6	948	2 827 787	2	48	4	106
LU	915	21 345	151	675	898	309 170	1 650	272	4 252
HU	1 064	3 353	178	137	216	40	9 646 429	63	2 814
NL	2 414	32 255	519	4 021	5 836	586	13 123	248	16 109 209
AT	73 334	27 290	203	1 428	1 443	932	70 584	79	8 789
PL	287	3 352	34	248	1 202	18	771	15	1 429
PT	222	8 523	29	349	585	166	520	24	6 838
RO	318	14 912	184	133	235	59	4 521	54	1 678
SI	9 230	2 062	6	39	36	2	506	4	176
SK	850	2 563	45	174	150	7	9 799	27	505
FI	419	2 546	67	1 910	1 547	20	1 973	22	1 350
SE	6 221	9 178	296	5 941	12 189	53	6 979	124	10 298
UK	6 793	238 657	16 119	100 146	207 410	690	96 018	7 310	93 952

Study on the movement of skilled labour

	AT	PL	PT	RO	SI	SK	FI	SE	UK
BE	2 784	71 092	45 569	79 772	1 156	6 151	2 819	3 807	22 795
BG	292	1 028	58	604	42	241	68	106	4 020
CZ	3 565	20 313	500	10 450	417	107 447	365	891	6 293
DK	1 418	37 639	2 896	25 295	426	2 688	2 804	15 083	17 556
DE	167 093	725 980	124 753	507 062	27 018	49 631	13 119	17 709	96 499
EE	94	469	173	411	31	132	4 041	641	647
IE	971	127 045	4 845	29 293	304	10 130	1 078	1 862	107 330
EL	1 305	14 561	274	47 891	87	747	533	1 234	15 840
ES	:	65 841	100 931	683 797	:	:	12 220	21 177	293 518
FR	4 739	56 591	564 792	111 566	994	4 260	2 862	7 196	152 887
HR	790	467	65	375	3 898	396	51	284	648
IT	6 186	97 062	6 088	1 168 552	2 506	8 567	1 614	3 059	27 209
LV	27	242	26	71	6	15	87	154	270
LT	28	1 381	84	453	7	56	73	103	233
LU	905	4 304	96 779	4 142	694	858	1 252	1 823	6 111
HU	4 021	2 061	469	24 040	289	9 519	519	977	3 081
NL	4 277	121 422	20 166	16 077	1 154	5 127	3 098	4 406	45 286
AT	7 430 935	60 079	3 419	92 095	17 312	38 094	1 573	2 949	10 368
PL	966	37 756 724	542	1 047	107	981	247	1 159	2 243
PT	757	1 576	9 911 842	30 429	117	207	998	2 633	19 387
RO	1 895	2 365	1 214	19 529 823	68	585	265	1 141	2 344
SI	411	247	53	392	1 951 457	455	32	69	479
SK	2 004	5 604	226	6 271	247	5 365 648	150	308	1 888
FI	517	4 192	658	2 864	149	487	5 259 658	8 040	4 562
SE	3 369	52 454	2 527	15 505	875	1 477	55 754	9 143 204	19 921
UK	29 626	1 015 113	218 300	332 349	4 690	102 838	11 115	43 978	59 718 188

Source: Eurostat 'Population on 1 January by age group, sex and citizenship' [migr_pop1ctz]

These figures can be further analysed by taking as the denominator (the base population) either the EU-28 residents of a Member State (for example reading the row for Belgium; the sum of the row is the total EU-28 citizens resident in Belgium), or the citizens of a Member State resident in the EU (for example, reading the column for Belgium: the sum of the column is the total Belgian citizens living in the 28 EU Member States). The rest of this section will first analyse these figures from these perspectives, answering the questions 'which citizenships are found resident in different Member States?', and 'In which countries do citizens of different citizenships live?' Where available, data will be complemented by case study evidence. The section will end with an analytical visual representation by plotting both perspectives as two intersecting continua which helps us distinguish different (degrees of) outgoing and destination countries.

Member States with large proportions (1% or more) of citizenships of other EU-28 Member States (excluding persons with citizenship of non-EU-28 countries):

- Belgium: Belgium has one of the lowest proportions of citizens with its own citizenship (91.8 %) as a proportion of all EU-28 citizens residing in its borders. Citizenships of other countries that are relatively overrepresented are France (1.5 %), The Netherlands (1.4 %) and Italy (1.4 %). Two of these countries directly border Belgium.
- Czech Republic: Most residents with EU-28 citizenship living in the Czech Republic are indeed Czech (98%), however 1 % of this population are Slovak citizens. Here, there is not only geographical proximity but 25 years ago both countries made up Czechoslovakia.
- Ireland: Ireland is another country with a relatively low proportion of citizens with its own citizenship (90.8 %). Of the 9.2 % of residents with other EU-28 citizenships, 5 % are from 2 countries: 2.3 % are from the UK which is not unexpected considering these countries share a language and history and are geographically close. The other 2.7 % are Polish citizens living in Ireland.
- Italy and Spain: As a proportion of all EU-28 citizens living in these countries, Italy and Spain have a relatively large proportion of Romanian citizens living within their borders: 2.0 % of all EU-28 citizens residing in Italy and 1.6 % of all EU-28 citizens residing in Spain have Romanian citizenship.
- Luxembourg: Residents of Luxembourg who have EU-28 citizenship come from various countries. Residents with Luxembourg citizenship comprise only 56.3 % of all EU-28 residents in Luxembourg. The most represented citizenships of other EU-28 countries are Portugal (17.6 %), France (8.1 %), Italy (3.9 %), Belgium (3.6 %), Germany (2.4 %) and the UK (1.1 %). Most of these countries share linguistic proximity (German and French being two of the countries' three official languages). Portugal and Luxembourg have historical bilateral agreements for guest workers based on a demand for labour in Luxembourg and cultural (mainly religious) similarity, and later agreements on family reunification.¹⁹
- Austria: Austria, as per Belgium and Ireland, has a comparatively low proportion of citizens with its own citizenship (91.9%). 2.2% of EU-28 citizens residing in Austria have German citizenship. This is unsurprising considering the two countries share the same language as well as a border. A further 1.1 % of EU-28 citizens living in Austria have Romanian citizenship.
- Finland: Of all EU-28 citizens resident in Finland, a relatively large proportion of people have their own citizenship (98.2 %). Of the 1.8% of residents from other

¹⁹ Migration Policy Institute, Immigration in Luxembourg: New Challenges for an Old Country: <https://www.migrationpolicy.org/article/immigration-luxembourg-new-challenges-old-country>

EU-28 countries, 1% are from Estonia. The two countries are only separated by the Gulf of Finland.

- The UK: 94.3 % of EU-28 citizens in the UK have UK citizenship. The other 5.7% is spread across citizenships of various EU-28 countries, however Polish citizens are overrepresented and make up 1.6 % of these 5.7 % of EU-28 citizens.

Member States with large proportions (1% or more) of citizens living in other EU-28 Member States:

- Belgium: Whilst most Belgian citizens resident in the EU reside in Belgium (97.4 %), 1.0 % live in France. The two countries have geographical, linguistic and cultural proximity. As shown earlier, this is a two-way flow as French citizens comprise over 1% of all EU citizens in Belgium.
- Bulgaria: Of all Bulgarians living in the EU-28, a relatively large proportion do not live in Bulgaria. Indeed, 9.8 % of Bulgarians in the EU do not live in Bulgaria. Most Bulgarian citizens live in Germany (3.3 %), Spain (1.6 %) and the UK (1.1 %). A recent Bulgarian review into migration states that "16 % of Bulgarians with high educational attainment (ISCED 5A/5B/6 levels) are outside the country" (MLS, 2017). Evidence from the Bulgarian case study adds that about half a million Bulgarians live in other EU Member States, mainly Germany (32 %), Spain (18 %), Greece (11 %), UK (9 %) and Italy (8 %).
- Estonia: A sizable proportion of Estonians live in Finland: in 2017, 4.3 % of Estonians resident in the EU lived in Finland. As mentioned previously, this also shows from the Finnish perspective: 1.8 % of EU citizens resident in Finland are Estonian. Another 1.0 % of EU-based Estonian citizens lived in the UK.
- Ireland: 8.6 % of Irish citizens resident in the EU-28 live in other EU-28 Member States. of the majority of these live in the UK: 7.2 % of the EU-28-based Irish population are resident in the UK. As with France and Belgium, this is also a two-way flow: 2.3 % of EU-28 citizens resident in Ireland are UK citizens.
- Greece: Of all Greek citizens resident in the EU-28, a relatively large proportion live in Germany. Indeed, 3.1 % of all Greek EU-28 citizens live in Germany
- Croatia: 9.9 % of Croatian citizens who are resident in the EU-28 do not live in Croatia. A large proportion live in Germany (6.9 %) and to a lesser extent in Austria (1.6 %).
- Italy: Most Italians resident in the EU-28 live in Italy (97.3 %). However, 1 % live in Germany.
- Latvia and Lithuania: A relatively large proportion of Latvian and Lithuanian citizens living in the EU-28 do not reside in their countries of citizenship; 9.9 % of Latvian and 11.3 % of Lithuanians live in other EU-28 Member States. Most of these citizens are resident in the UK (5.4 % of Latvians who are resident in the EU-28 and 6.5 % of Lithuanians who are resident in the EU-28), Germany (Latvians: 1.7 %; Lithuanians: 1.4 %) and Ireland (Latvians: 1.1 %; Lithuanians: 1.2 %).
- Luxembourg: A relatively large proportion of Luxembourg citizens resident in the EU-28 do not live in Luxembourg: 9.5 % live in other EU-28 Member States, most of which in Germany (5.1 %), France (2.3 %) and Belgium (1.3 %). All these countries have a linguistic overlap and share borders with Luxembourg.
- Hungary: Of all Hungarian citizens resident in the EU-28, most live in Hungary whilst 4.2 % live in other EU-28 countries. However, 1.8 % live in Germany and 1.0 % in the UK.
- Austria: Most Austrians who are resident in the EU-28 live in Austria. 3.1 % live in other EU-28 countries, of whom the majority (2.2 % of the 3.1 %) are resident

in Germany. This is a two-way exchange; as discussed earlier, 2.2 % of EU-28 citizens residing in Austria have German citizenship.

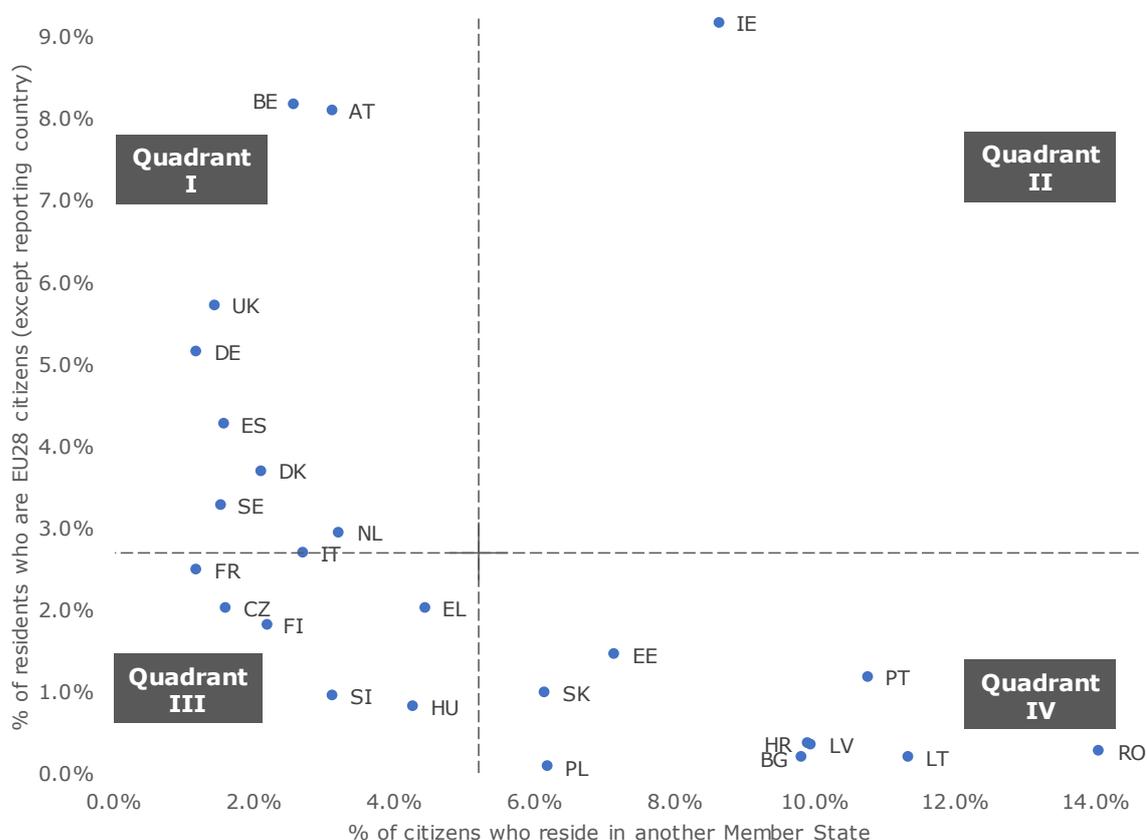
- Poland: Of all Polish citizens resident in the EU-28, 6.2 % live in another EU-28 Member State. Most of these live in either the UK (2.5 % of the 6.2 %) or neighbouring Germany (1.8 % of 6.2 %). A recent country thematic review into Poland highlights that “the estimated number of Poles living abroad at the end of 2015 was 2.38 million ... the majority of [whom] ... were living in the EU Member States, including 720 000 people in the UK and 655 000 in Germany” (MLS, 2017). Case study evidence from Poland shows that at the end of 2016 approximately 2 515 000 Polish citizens remained temporarily abroad (this means an increase by 118 000, i.e. 4.7 %, in comparison to 2015). Well-educated people constituted the largest group of movers. According to the National Census from 2011, every fifth person (22.8 %) had a higher education (women accounting for 63 %), and 40.5 % had secondary education (including; vocational secondary education - 21.4 %; general secondary education - 19 %; post-secondary education - 3.8 %). When comparing the level of education of the group of people leaving the country to the overall population of Poland, an above-average representation of highly qualified persons amongst the movers can be observed. A recent thematic review into migration from Poland (MLS, 2017) points out that high skilled Polish workers are more likely to migrate to the UK, whilst medium skilled Polish workers are more likely to migrate to Germany.
- Portugal: A relatively large proportion of Portuguese citizens residing in the EU-28 live in another country other than Portugal (10.8%). Almost half of these (5.1 %) live in France, which has some linguistic proximity to Portugal, as well as the UK (2.0 %) and Germany (1.1 %).
- Romania: Romania has the highest proportion of its citizens who are resident in the EU-28 living in other countries than Romania (14 %). A particular large proportion live in Italy (5.1 %), Spain (3.0 %), Germany (2.2 %) and the UK (1.5 %). The first two countries share linguistic roots with Romanian. Evidence from the Romanian case study adds that some 3.4 million Romanians currently live and work abroad. The largest Romanian communities today consist of about 1.1 million people in Italy and over 650 000 each in both Spain and Germany. According to the OECD, in 2010-2011, Romania was among stone of the countries which saw the number of movers with higher education increase at a significant rate: 108 % (Goga, & Ilie, 2017).
- Slovenia: Most Slovenians resident in the EU-28 live in Slovenia, yet 1.3 % live in Germany and almost 1.0 % (0.9 %) live in neighbouring Austria.
- Slovakia: Almost 2.0 % (1.9 %) of Slovak citizens resident in the EU-28 reside in the Czech Republic, which can be explained by its recent shared history. This was also evident from the perspective of the Czech Republic, where Slovaks make up 1 % of all EU-28 citizens (including the Czech) living there. Another 1.8 % of Slovaks in the EU-28 live in the UK.
- Finland: Most Fins who are resident in the EU-28 live in Finland, however 1.0 % live in neighbouring Sweden.

Many citizens of EU-28 countries living in another EU-28 country live in countries that are either linguistically or geographically close to the country of their citizenship. However, country size and economy are also clearly attractive to EU movers. This is more so the case for EU13 and some south European Member States. Where citizens from these countries move to other Member States, ignoring reciprocal flows to neighbours, they predominantly are found in Germany and the UK. More than 1 % of all Italian, Romanian, Bulgarian, Greek, Croatian, Latvian, Lithuanian, Hungarian and Portuguese citizens resident in the EU-28 reside in Germany. More than 1 % of Polish, Bulgarian, Latvian, Lithuanian, Hungarian, Portuguese, Romanian and Slovakian citizens

resident in the EU-28 reside in the UK. Whilst these two countries house many citizens from other EU-28 countries, this is a feature of their size as almost none of these citizenships represent more than 1% of the population of Germany and the UK, even when only including EU-28 citizens (i.e. German and UK citizens and other EU-28 citizens but excluding third country nationals). Evidence from the case study into the health sector confirms this picture and finds that many doctors and nurses moving to another EU country are Romanian or from a south European country. Romanian doctors and nurses are one of the largest groups of doctors from another EU country in 7 countries and are making up increasingly large proportions in others. In recent years, the number of Italian doctors and nurses who move to another EU country are increasing. The UK and Germany, which have the largest total numbers of foreign-born doctors, have a high number of Greek doctors, and Portuguese nurses are one of the largest groups of nurses from another country in Spain, France and the UK.

Figure 23 summarises the data by plotting the Member States (excluding Cyprus and Malta as these do not have data, and Luxembourg as it distorts the figure with its very high percentages on these scales) by the percentage of their residents with another EU-28 citizenship (vertical axis, as a proportion of all EU-28 citizens in the country) and the percentage of their citizens who reside in another Member States (as a proportion of all their citizens resident in the EU-28). It allows us to distinguish four categories or quadrants. The quadrants are divided by the average values for the 25 Member States included in the figure: the horizontal border is set at 5.2 % (minimum value is 1.2 % for Germany and France, the maximum value is Romania: 14.0 %) and on the vertical border at 2.7 % (minimum value is 0.1% for Poland and maximum value is Ireland: 9.2 %)). The figure, as all data described in this section, does not provide information on the skill level of these citizens.

Figure 23. outgoing and destination countries in 2017 on a two-dimensional continuum



Source: Eurostat 'Population on 1 January by age group, sex and citizenship' [migr_pop1ctz], ICF calculations and presentation. Data is for 2017. Excludes any citizens living outside the EU. Excludes Luxembourg (9.5% of Luxembourg citizens reside in another Member State; 43.7% of EU-28 residents in Luxembourg do not have Luxembourg citizenship). The figure does not include information on skill levels.

Quadrant I, which includes countries with a relatively high proportion of residents within its borders who have citizenship of another EU-28 Member State, but do not have a high proportion of its own citizens living in other EU-28 Member States. These countries are destination countries of EU movers (Belgium, Austria, UK, Germany, Spain, Denmark, Sweden and the Netherlands);

Quadrant II, which includes countries with a high proportion of residents within its borders who have citizenships of another EU-28 Member State and have a high proportion of its own citizens living in another EU-28 Member State. These countries are both destination and outgoing countries of EU movers (these are Ireland²⁰ and Luxembourg²¹, which falls out of the figure);

Quadrant III, which includes countries with a low proportion of residents within its borders who have citizenships of another EU-28 Member State and a low proportion of its own citizens living in another EU-28 Member State. These countries are neither destination nor outgoing countries of EU movers (France, Czech Republic, Finland, Greece, Slovenia and Hungary);

Quadrant IV, which includes countries with a low proportion of residents within its borders who have citizenships of another EU-28 Member State and a high proportion of its own citizens living in another EU-28 Member State. These countries are outgoing countries of EU movers (Poland, Slovakia, Estonia, Bulgaria, Croatia, Latvia, Portugal, Lithuania and Romania).

Italy is on the border between Quadrant I and III. Indeed, these quadrants should not be seen as clearly delineated categories, but rather on a continuum.

Note that this quadrant does not capture recent movement. For example, Italy and Greece are neither outgoing nor destination countries (although the case of Italy is borderline) and Spain is categorised as a destination country. However, these three countries experienced large increases in outflows between 2013 and 2016. A trend, if continued, could mean that over time we would see these countries shift to Quadrants II or IV (outgoing and destination or outgoing countries).

3.1.2.1 Summary of key messages

- This section has described trends in immigration and emigration for 2013 to 2016. This data does not distinguish by skill level.
- In the observed years (2013 and 2016), the top three countries with the highest net positive migration also large population sizes (Germany, United Kingdom and Italy). Over the years 2013-2016 there have been some shifts in migration flows in relation to the source of immigration and emigration mainly due to global migration trends²². The top three countries with the highest net negative migration are Spain, Romania and Poland, having the 5th, 7th and 6th largest populations respectively.
- When looking at in/outflows as a proportion of the country's population size, those with the smallest populations stand out (Malta, Cyprus and Luxembourg).

²⁰ Without counting Irish living in the UK, it would have been placed in Quadrant I (destination countries)

²¹ Although Luxembourg is excluded from the figure, with 9.5 % of Luxembourgish citizens residing in another Member State and 43.7 % of EU28 residents in Luxembourg do not have Luxembourgish citizenship, it would fall in this category.

²² Although it is important to bear in mind that some countries do not include asylum seekers in their migration data.

Ireland, which is not quite as small as the aforementioned Member States, also experienced relatively high flows in both ways.

- The broad citizenship group making up the largest part of people leaving the country or arriving in the country (i.e. reporting country, EU citizenship, non-EU citizenship) varies by country. For most countries, the largest group of emigrants are its own citizens (this is not the case for the Czech Republic, Denmark, Spain, Cyprus, Luxembourg, Malta and the Netherlands). For immigration, this picture is more varied.
- Many citizens of EU-28 countries living in another EU-28 country, live in countries that are either linguistically or geographically close to the country of their citizenship. However, country size and positive economic and labour market trends are also clearly attractive to EU movers (the latter particularly in the UK). This is more so the case for EU13 and some southern European Member States. EU movers from these countries mostly live in Germany and the UK.
- This section has used data on the proportion of Member States' residents who have another EU-28 citizenship and the proportion of their citizens who reside in another Member State (as a proportion of all their citizens resident in the EU-28). This is not available by skill level. The analysis shows that compared to other EU countries, Belgium, Austria, UK, Germany, Spain, Denmark, Sweden and the Netherlands are destination countries; Ireland and Luxembourg are outgoing and destination countries; France, Czech Republic, Finland, Greece, Slovenia and Hungary are (on average compared to other Member States) neither outgoing nor destination countries; Poland, Slovakia, Estonia, Bulgaria, Croatia, Latvia, Portugal, Lithuania and Romania are outgoing countries.

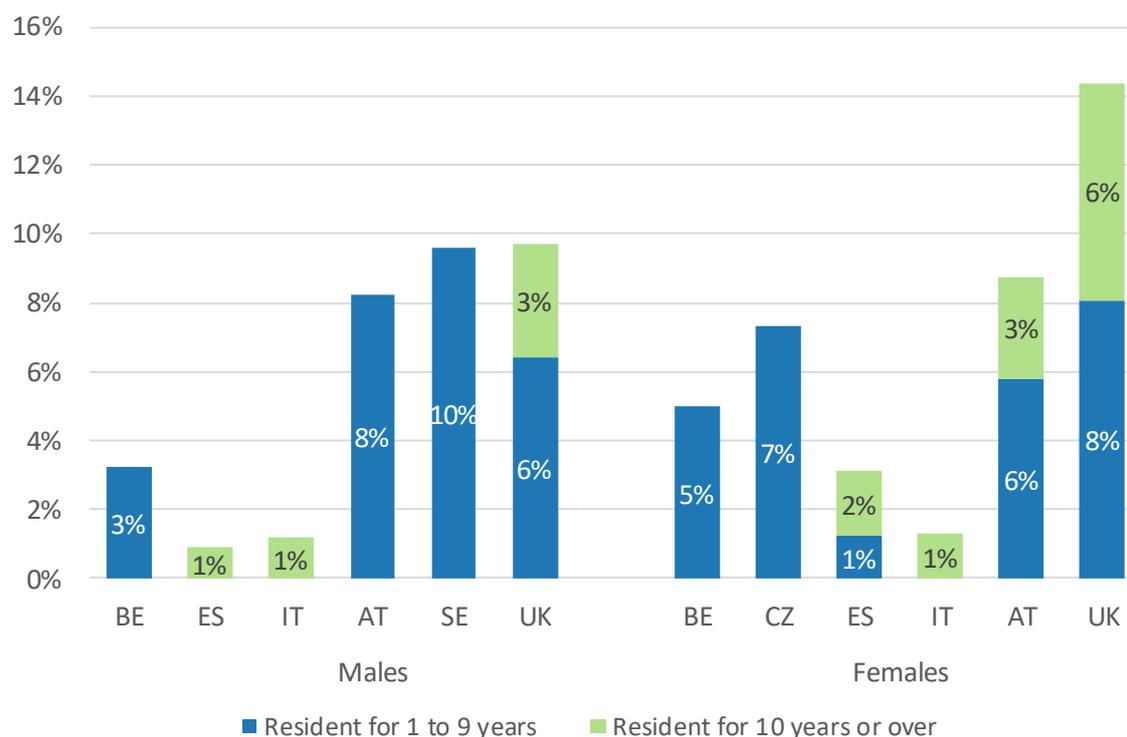
3.1.3 Does student/researcher mobility affect the movement of skilled labour?

Evidence on student or researcher mobility affecting the movement of labour presented in this section does not show a very strong correlation. Students do move abroad to study, but for example in the health sector they do not necessarily stay in the host country.

Students and researchers moving across countries could explain a large amount of the movement of skilled labour. Figure 24 looks at this by using EU LFS ad hoc data on the proportion of first generation EU movers moving for education reasons for the countries for which data is available. There are firstly grouped by responses for males and females, and then ordered alphabetically. The figure also shows the proportion who were resident for fewer than 10 years (dark blue) or 10 years or longer (light green). Data is only available for a few countries.

The limited available data means it is difficult to draw conclusions. The available data suggests more females than males move to other EU countries for education reasons, and they also stay for longer. For example, 9 % of male first-generation EU movers moved to the UK for education reasons of whom 6 % were resident for fewer than 10 years, and the remaining 3 % for 10 years or more. For female first-generation EU movers in the UK, 14 % moved to the UK for education reasons of whom 8 % were resident for fewer than 10 years and 6 % were resident for 10 years or more.

Figure 24. Proportion of first generation EU movers living in the host country for education reasons by sex and duration of stay (fewer than 10 and 10 or more years)

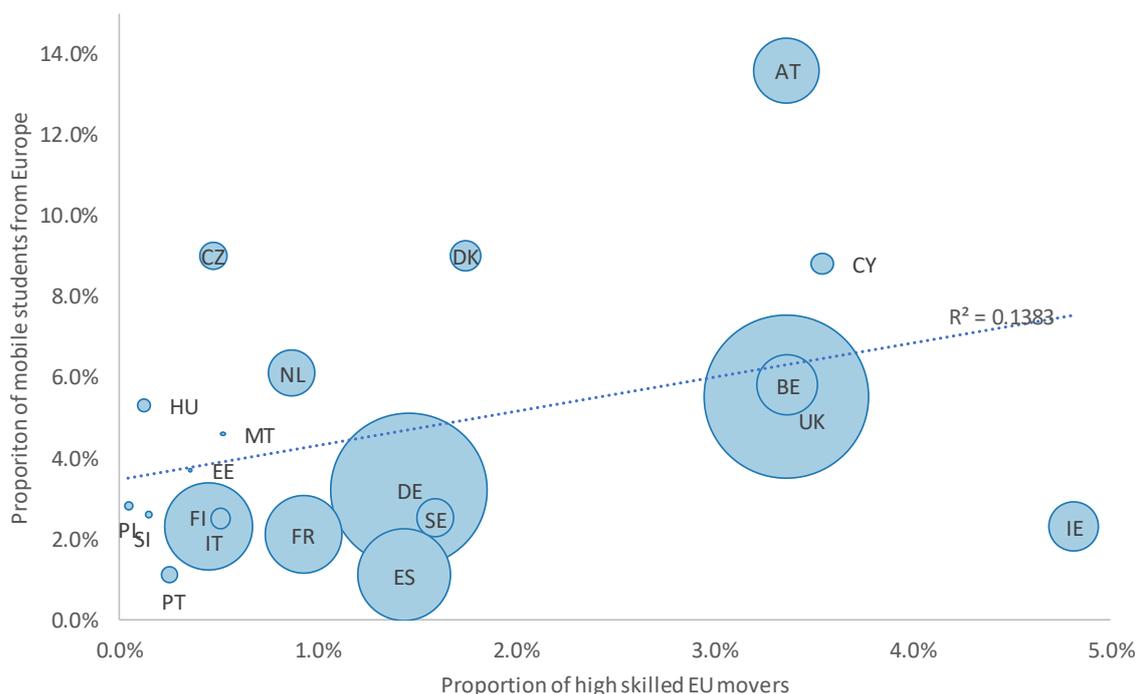


Source: Eurostat ad hoc data on first generation of movers by sex, citizenship, duration and reason for migration [Ifso_14b1dr], ICF calculations.

Notes: No skills distinction.

Figure 25 explores whether there is correlation between a country's proportion of student EU movers from Europe and a country's proportion of high skilled EU movers. For example, it could be the case that a high proportion of student EU movers from Europe is correlated with a high proportion of working EU movers. The figure uses 2016 data or the latest available. The y-axis shows the percentage of student EU movers and the x-axis shows the proportion of skilled EU movers. The size of the bubble represents the volume of EU movers. The figure omits Luxembourg, which is an outlier. This is evident from the R-squared goodness of fit, which indicates how well the model can explain variability of observations around its mean. A high figure (up to 1) indicates the model can explain much of the variability, a low figure (down to 0) indicates it explains very little. The R-squared is high when including Luxembourg, but low when excluding it. This figure suggests that the correlation between the proportion of European students (of all students in a country) and the proportion of employed skilled EU movers (of all employees in a country) are not very strongly correlated.

Figure 25. Correlation between the proportion of student EU movers and the proportion of high skilled EU movers



Source: Eurostat data on the share of mobile students from abroad enrolled by education level, sex and country of origin [educ_uoe_mobs03] and ICF analysis of EU LFS microdata.

Notes: Data on the proportion of EU movers is as a proportion of the working population in 2016. Data on the proportion of mobile students from Europe is for 2016 except for CZ, DE, EE, FR, IT, LU, SI and SK (2015). LU has been omitted as it was an outlier. Omitting LU brings the R-squared down from 0.8408 to 0.1383.

The case study from the health sector illustrates this, showing that many students move to neighbouring countries to study there. For example, students in medicine and nursing move from Germany to Austria, from the Netherlands to Flanders and from France to Wallonia. They do this because the barriers to accessing training in the medical profession in their home country (the outgoing country) are higher than in the destination country, largely due to 'numerus fixus' in the home country: caps or quotas which limit intake into training. Belgium and Austria have both taken measures since, as most of these students are not expected to stay and therefore risk causing gaps in the health workforce of the host.

3.1.3.1 Summary of key messages

There is no clear evidence to suggest that student or researcher mobility affects the movement of skilled labour in a significant way. Students do move abroad but the evidence presented here does not indicate a very strong correlation between a high proportion of European students and a high proportion of skilled EU movers. However, for a discussion on stay rates, please refer to Section 3.2.5 which answers the question 'Does education and training influence skilled labour flows: what proportions of people who study or train abroad stay on to work there (stay rates), and who are these people (stay profiles)?' The indication here is that stay rates in countries with relatively buoyant labour markets are relatively high.

3.1.4 Is there evidence of skills loss/depreciation caused by intra-EU mobility?

Evidence shown in this section and previous sections clearly indicates that there are elements of skills depreciation amongst skilled EU movers. A relatively large proportion work in elementary occupations, and the proportion of skilled EU movers working in elementary occupations is higher than the proportion of skilled natives working in elementary occupations. Across most countries a higher proportion of EU movers indicate they are overqualified for their job than the native population. The section goes on to show that one possible explanation for this is that qualifications are not being recognised by the host system and/or qualifications or skills from economically less developed countries being attributed with inferior status. Another explanation, building on EU LFS 2014 ad hoc data, is that some EU movers do not have a high command of the host language and subsequently they end up in jobs for which they are overqualified.

Exploring the occupational profile of skilled EU movers in Figure 22 showed that a large proportion of skilled EU movers is employed in elementary occupations and that this proportion increased from 2004 to 2016.

The EU LFS can be used to explore the proportion of skilled EU movers who are working in elementary occupations compared to the proportion of skilled natives who are working in elementary occupations. This provides some measure of over-qualification. The estimated number of skilled EU movers in elementary occupations is not reliable for countries with a small number of skilled EU movers and therefore these figures cannot be included. For the same reason, medium and high skilled movers have been grouped together as separate estimates are often not reliable. Across all countries, a higher proportion of skilled EU movers were working in elementary occupations. Figure 26 shows the gap, i.e. the percentage point difference in the proportion of skilled EU movers who are working in elementary occupations compared to the proportion of skilled natives who are working in elementary occupations in 2004, 2010 and 2016. The graph is ordered by country with the highest average gap over the three years through to the country with the lowest average gap. It shows that the greatest gaps are found in southern European countries: in these countries, 13.0 (Spain, 2016) to 31.3 (Greece, 2010) percentage points more skilled EU movers are working in elementary occupations compared to natives. However, all of these countries show a downward trend, i.e. the gap is decreasing and whilst this is not visible directly in the figure, it is not due to a higher proportion of skilled natives working in elementary occupations. A different trend is visible for those countries who, over the three years had no greater gap between the proportion of skilled EU movers and skilled natives working in elementary occupations; Ireland, the UK, Austria, the Netherlands, Denmark, Sweden, Belgium and France all show an increase, i.e. increasingly more skilled EU movers work in elementary occupations compared to natives.

Figure 26. Difference in the proportion of skilled EU movers working in elementary occupations and the proportion of skilled natives working in elementary occupations



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Skilled includes medium skilled, corresponding to ISCED 3-4 (i.e. upper secondary) and high skilled, corresponding to ISCED 5-8 (i.e. third level). Countries had estimates with too low reliability and have been omitted. Data for EL and SE (2004) and LU (2016) has low reliability.

The EU LFS ad hoc module in 2014 devoted questions specifically to (self-declared) over-qualification, asking respondents whether they considered themselves overqualified for their job. The figures below present respondents' answers. Only a few countries are presented, as estimates for most countries were based on a sample too small to be reliable. Figure 27 presents answers for medium skilled employees and Figure 28 for high skilled employees. Countries are ordered left to right from the country with the largest difference between the proportions of natives and EU movers reporting they are overqualified (more EU movers self-report they are overqualified), to the largest reverse difference (more natives self-report they are overqualified).

The figures show that for both medium and high skilled workers, the proportion of self-reported over-qualification amongst EU movers is higher than the proportion for natives. Generally, natives and EU movers in southern European countries report higher rates of over-qualification. Countries with the highest discrepancy (more than 10 percentage points) between natives and EU movers are:

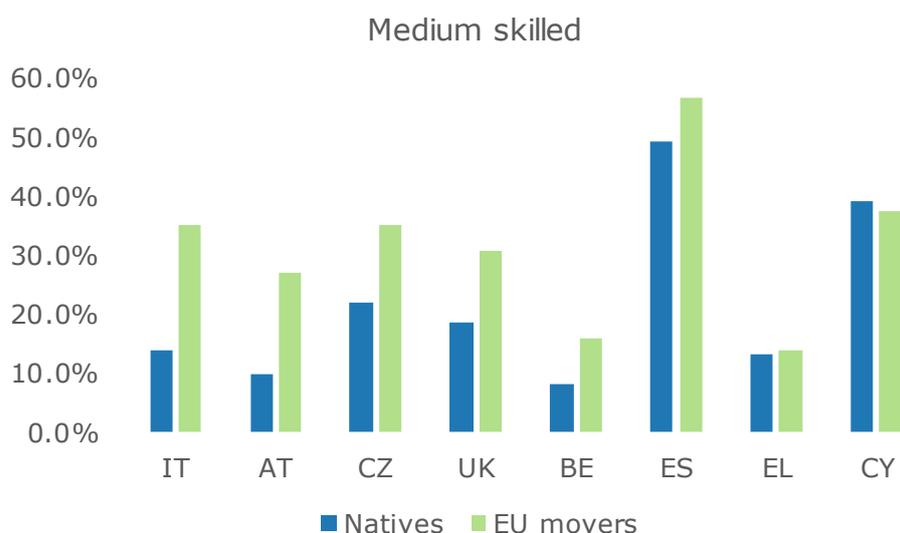
- Medium skilled: Italy (difference of 21.2 percentage points), Austria (difference of 17.0 percentage points, the Czech Republic (difference of 13.4 percentage points) and the UK (difference of 12.2 percentage points)
- High skilled: Greece (difference of 36.5 percentage points), Italy (difference of 25.4 percentage points), Cyprus (difference of 14.8 percentage points) and Austria (difference of 14.6 percentage points).

Italy has the highest or one of the highest difference to natives for both medium and high skilled EU movers. Austria has one of the, albeit, very few, destination countries

covered in this data and also has a relatively high discrepancy between natives and EU movers.

There are a couple of exceptions of countries where natives proportionally more often self-report to be overqualified; Cypriot medium skilled natives have a higher rate of self-reported over-qualification than medium skilled EU movers, and Spanish, Swedish and Czech high skilled natives have a higher rate of self-reported over-qualifications than high skilled EU movers in these countries.

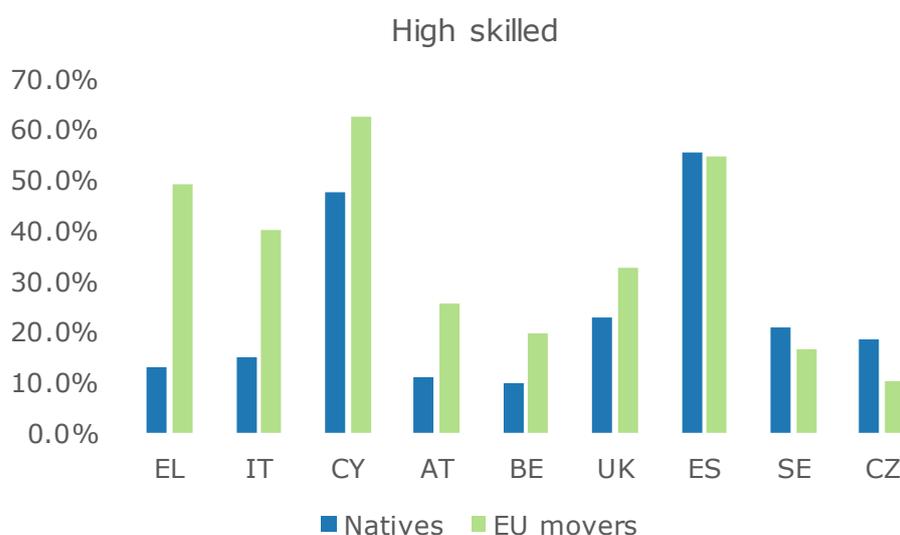
Figure 27. Proportion of self-declared overqualified medium skilled native and EU movers



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary). Countries not included either did not take part in the ad hoc module or their estimates had too low reliability and have been omitted.

Figure 28. Proportion of self-declared overqualified high skilled native and EU movers



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. High skilled corresponds to ISCED 5-8 (i.e. third level). Countries not included either did not take part in the ad hoc module or their estimates had too low reliability and have been omitted. Figures for SE and CZ EU movers have low reliability.

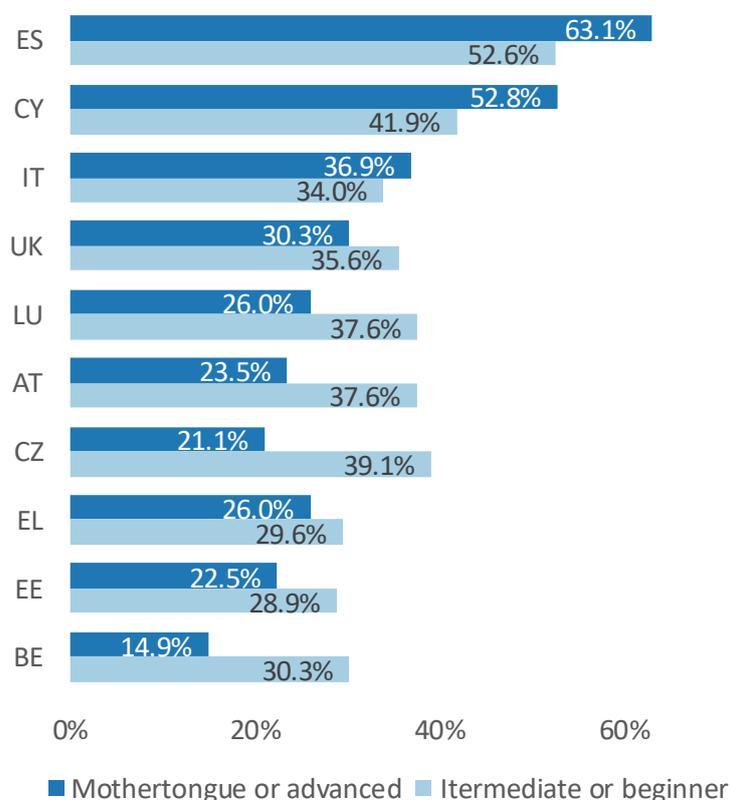
Research by the OECD uses Survey of Adult Skills (PIAAC) data from 2012 to explore migrant skills. It finds that highest educational attainment is not a flawless measure of skills: whilst movers generally have attained higher education than natives, their literacy and numeracy skills amongst (in particular low and medium educated) movers shows high variance in some countries. Literacy skills, which includes proficiency in the host language, in particular are on average lower for movers (regardless of their educational attainment) than natives. The EU LFS 2014 ad hoc module includes data on skill level (low/medium/high educational attainment), whether the person is overqualified for their job (self-reported) and their skill level at the host language.

Figure 29 looks at the number of EU movers who command the host language as their mother tongue or at advanced level, and the number of EU movers who command the host language at the intermediate or beginner level, and for both of these groups provides the proportion who were over-qualified. It was necessary to group intermediate and beginner levels, and mother tongue and advanced level to yield reliable estimates. The data is then sorted to show the country with higher proportions of EU movers who are overqualified at the top, and the lowest at the bottom.

The figure shows that in most countries, more skilled EU movers who command the language at the intermediate or beginner level, are self-reported to be overqualified. Generally, the proportion who report to be overqualified at this level of command of the host language ranges between 30 % and 50 %. Spain and Cyprus have the highest proportion of EU movers who have an intermediate or beginner level command of the language (52.6 % and 41.9 % respectively). They are also countries, together with Italy, that have a higher proportion of skilled EU movers with mother tongue or advanced level command of the language who report to be overqualified, than their intermediate or beginner level peers.

The figure, in line with aforementioned research by the OECD, suggests that a lower command of the host language is likely to be a barrier to being in a job that matches an EU mover's qualification. However, the proportion of native or advanced level speaking EU movers that reports to be overqualified is also high, suggesting that language is only part of the explanation.

Figure 29. Proportion of skilled EU movers who are self-reported to be overqualified for their job by command of the host language, as a share of EU movers with the same level of command



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Skilled includes medium skilled, corresponding to ISCED 3-4 (i.e. upper secondary) and high skilled, corresponding to ISCED 5-8 (i.e. third level). Countries not included either did not take part in the ad hoc module or their estimates had too low reliability and have been omitted. Data for CZ (mother tongue/advanced and intermediate/beginner) and LU (intermediate/beginner) has low reliability

The OECD research highlights other variables that can explain the higher proportions of over-qualification amongst movers (which in the OECD research include third country nationals). These are; age (younger movers are more likely to be overqualified in the UK, but not in Ireland and Spain); duration of stay (recent movers in Germany, France and Sweden are more likely to be overqualified for their job than those movers who have been in the country for longer) and; place of acquisition of highest qualification (persons who obtained their highest qualification outside the host country are more likely to be overqualified).

Souto-Otero and Villalba-Garcia (2015) also highlight foreign qualifications as an important determinant in over-qualification of movers. They argue that movers' qualifications are not recognised either because they do not fit in the host system and are then considered under an 'other' category that fails to capture their skills. This issue is highlighted by an interviewee in the German case study, who points out that the German labour market is highly formalised and relies heavily on certifications. This poses a substantial issue to migrant workers whose certifications are often not fully recognised, thus forcing them into jobs for which they are overqualified.

Another reason highlighted by Souto-Otero and Villalba-Garcia (2015) is that skills coming from economically less developed countries might also be seen as inferior and

do not get the credit due. A recent thematic review into migration from Bulgaria confirms this. The author points out a high proportion of skilled Bulgarian movers end up working in elementary occupations: "Their professional status is indicative of a lower competitiveness in comparison to other movers" (MLS, 2017).

Zaiceva and Zimmermann (2012) point out that skilled individuals in jobs that they are overqualified for prefer to return. This indicates a loss for all stakeholders involved; at the host level the present potential (i.e. skills) are not optimally deployed; at the level of the outgoing country those who return do not have as much skills capital to enrich the host country and; at the individual level the skilled migrant did not gain (as much) return in terms of professional development as would merit their investment of moving abroad.

3.1.4.1 Summary of key messages

Evidence indicates that there are elements of skills loss amongst skilled EU movers. A relatively large proportion of workers in elementary occupations, and across most countries, have a higher proportion of EU movers who are overqualified for their job compared against the native population.

One explanation for this is that qualifications are not being recognised by the host system and/or qualifications or skills from economically less-developed countries being attributed with inferior status. Another explanation is that some EU movers do not have a high command of the host language.

This underutilisation and underemployment of these skills will ultimately lead to skills depreciation.

3.2 Understanding the movement of skilled workers

The previous section analysed the main skilled intra-EU migration flows and their characteristics. In this section, we analyse the available evidence in relation to understanding why and how the skilled migration happens, the key push and pull factors underpinning these migration patterns. Throughout the section, we also identify policy implications from this analysis.

3.2.1 What are the key push and pull factors for the movement of skilled labour?²³

The individual decisions to migrate are complex and influenced by a range of push and pull factors. The key factors shown in Figure 30 are based on the review of evidence in the academic literature and policy research.

²³ The factors affecting return migration are analysed separately in Section 3.3.

Figure 30. Overview of key push and pull skilled migration factors

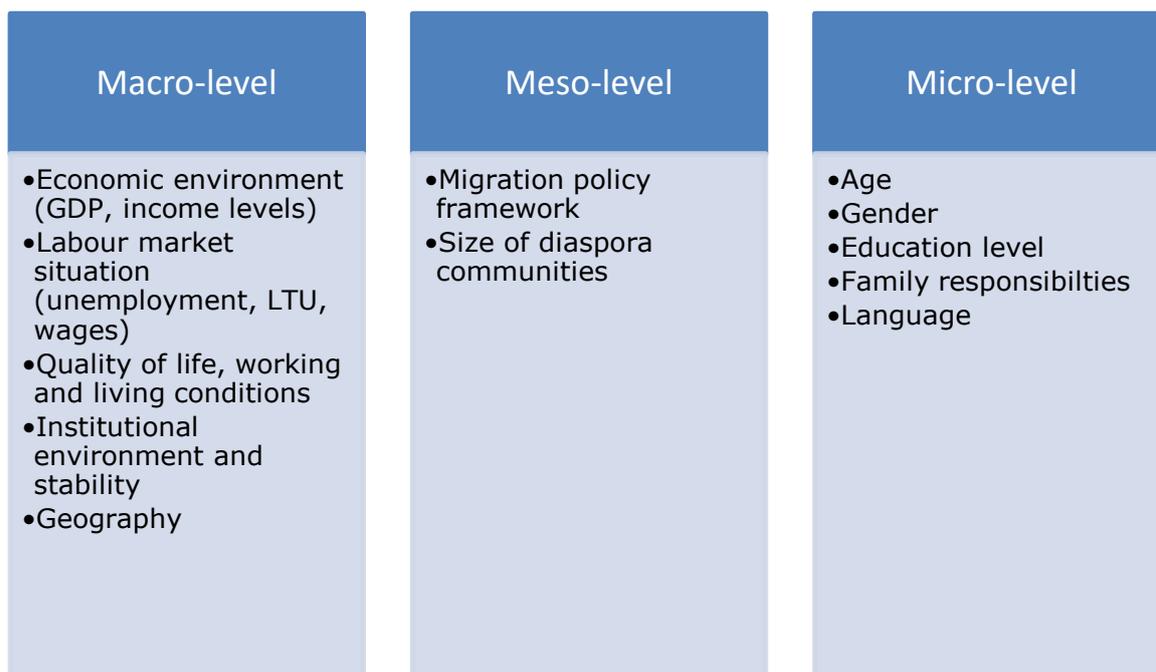


Figure 30 illustrates a complex interplay between the macro, meso and micro factors behind the individual migration decisions of skilled workers. In addition, the individual factors are closely interlinked and do not necessarily operate in isolation (e.g. the economic environment has a strong impact on labour market conditions, or the institutional environment affects the nature of migration policy). The following sections analyse the individual key push and pull factors in turn.

3.2.1.1 The complexity of migration push/pull factors

The literature shows that the individual push/pull factors are difficult to disentangle and assess separately (see Kahanec, K.F. Zimmermann, 2016, Munz 2014, OECD 2012, Saar 2016, 99. Verwiebe, R., Mau, S., Seidel, N., and Kathmann, T. (2010)).

This interplay of different factors can be illustrated with the example of Poland below:

Case study findings: a complex interplay of push/pull factors in Poland

The most important motivations for migration are economic factors. Results of analysed studies devoted to this issue show that the majority of persons migrating abroad hoped to increase their earnings, which would allow them not only to live a more dignified life but also to accumulate savings²⁴. In light of the above-mentioned quantitative and qualitative studies, it seems justified to divide labour movers into three groups:

1. The first and largest group are persons who worked before migrating and migration was dictated by a desire to earn more abroad. They sought a new place of employment abroad on their own.
2. The second group are graduates of secondary and post-secondary schools who are unable to find a job in Poland and decide to migrate to improve employment opportunities. It should be pointed out however that the studies in question concern mainly migrations taking place during the time of economic slowdown, which particularly affected young people without professional experience (see Kozielska 2013).

²⁴ Please see National Census from 2011; Czapiński and Panek 2015; Frelak d Roguska 2008; Bieńkowska et al. 2010; Slany and Ślusarczyk 2013; Szymańska et al. 2012; Iglicka 2010; Gmaj and Małek 2010.

3. The last group are persons who have been delegated by their employer to work in another country (for instance, to a branch of an international corporation) and who return to Poland after their foreign posting is over.

Reasons involving family also influence the decision to migrate. A desire to join the life partner or the rest of the family already living abroad pushes the persons left behind in Poland to migrate. Starting from 2007, this motivation becomes ever more significant whilst economic factors are becoming less important.

Another, but definitely less important factor contributing to the decision to migrate was the desire to improve competencies, especially language skills. Results of in-depth studies show that women were more likely to express this desire (67 % - see Czapiński and Panek 2015).²⁵

3.2.1.2 Macro-level factors

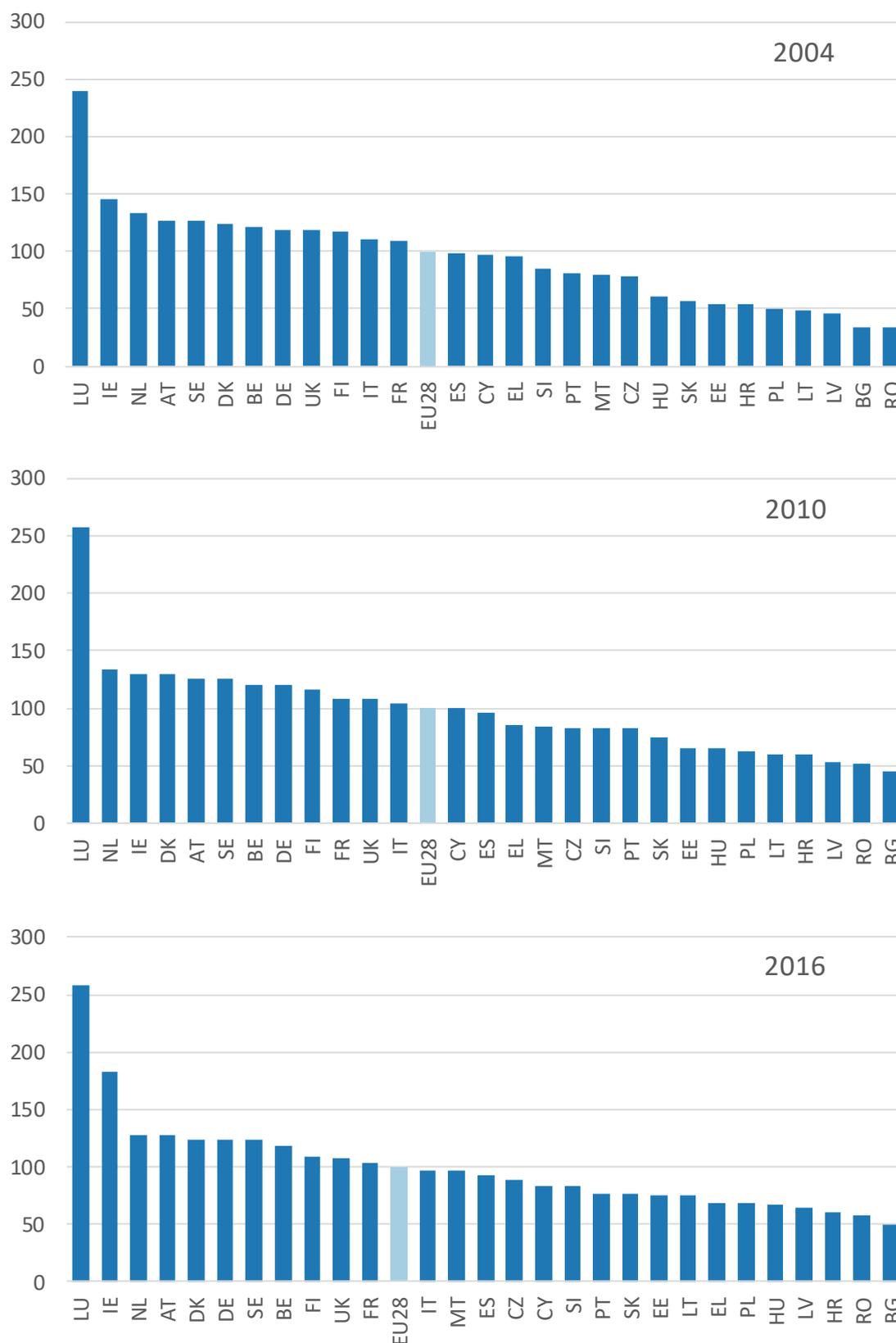
The level of **the economic development** of the country is an important determining factor in skilled migration flows, especially as these are dominated by mobility for work. Low growth, low standard of living, incomes and wages and low economic prospects push skilled movers to leave, and conversely, stable / growing economies with higher standard of living, incomes and wages tend to attract skilled workers.

Statistical data provides evidence to support this relationship. Figure 31 presents the GDP per capita in purchasing power parities (PPPs) as volume indices of real expenditure per capita in PPS in 2004, 2010 and 2016, where the EU-28 represents a 100. Consistently across the years, countries below the EU-28 average are also mostly outgoing countries of intra-EU skilled workers (see Section 3.1), including Romania, Bulgaria, Latvia, Lithuania, and Poland. Conversely, and also consistently across the years, the countries above the EU-28 average have also been the main destination countries of skilled EU movers (see Section 3.1), including the UK, Germany, Ireland. This is indicative that low GDP per capita is an important 'push' factor and conversely those at the top with the higher GDP per capita 'pull' EU movers. High levels of GDP per capita are associated with better living conditions and purchasing power which also is perceived as a pull factor.

The logic of this argument is that higher GDP is associated with higher quality / greater access to education systems, higher quality institutions and a more stable institutional environment and more attractive labour market opportunities.

²⁵ Surveys conducted on samples: 2005-2009 (N=157), 2007-2011 (N=107), 2011-2013 (N=68) and 2013-2015 (N=52) amongst persons who returned from migration.

Figure 31. GDP per capita in PPPs (as volume indices of real expenditure per capita in PPS (EU-28=100)) in 2004, 2010 and 2016



Source: Eurostat data on purchasing power parities (PPPs), price level indices and real expenditures for ESA 2010 aggregates [prc_ppp_ind] (indicator: Volume indices of real expenditure per capita in PPS (EU-28=100)). Each of the figures (for 2004, 2010 and

2016) are ordered from the country with the highest index value (across the years this is Luxembourg, with about 2.5 times the GDP per capita in PPPs compared to the EU-28 benchmark). The figures below show three clusters for 2004, 2010 and 2016: above, at or around the, and below the EU-28 average. Notes: No skills distinction.

The importance of economic conditions has also been prominent in the literature; Atoyan et al (2016), based on the large statistical datasets, found that countries with lower initial levels of per capita income experienced larger net outward migration during the past 25 years. At the same time, western European countries with higher per capita incomes attracted more movers than their less wealthy neighbours. The authors used gravity models to explore the economic push and pull factors behind bilateral migration flows. They found that cyclical factors, such as differences in economic conditions and unemployment gaps - differences in unemployment rates - between destination and outgoing countries, are important in explaining both skilled and unskilled migration patterns.

Similarly, Kahanec and Zimmermann 2016 analysed a post-EU 2004 and 2008 migration dataset and assessed the EU enlargement and labour market opening towards the new EU members to estimate the effects of the EU accession and economic opportunities on east-west intra-EU migration. Applying the 'difference-in-differences' and 'triple differences' empirical modelling framework, they found that east-west migration flows in the EU responded positively to the EU entry and economic opportunities in destination country labour markets. In addition, they also found that the destination country's business cycle was important as the migration patterns responded to it: stronger GDP growth and lower unemployment lead to additional immigration from new Member States.

This global picture can be further illustrated by country examples both from outgoing and destination countries.

The recent emigration of Cypriots involved generally tertiary education graduates who may have secured employment abroad in their country of training or elsewhere. These higher skilled workers were affected because of the collapse of the banking sector which spread immediately to related areas such as finance, business and computer services, accounting, auditing, and actuarial science. The multiplier effects of the adverse shocks to the economy quickly spread to all areas, reducing the demand for skills of all types and levels.²⁶

The impact of the economic crisis has also been demonstrated by the case study research in Bulgaria and Romania undertaken for this study.

Skilled migration and crisis impact in Bulgaria and Romania: evidence from the case studies

The economic and financial crisis struck **Bulgaria** in 2009, as confirmed by several interviewees, when about 4,000 workplaces were shut down. Although some employers opted for reduced working time (in lieu of having to cease operation), many of those who lost their jobs looked for work outside Bulgaria. The situation began to improve in 2014 when these employers again increased working time. However, the national labour market is still recovering from this loss of labour today.

In **Romania**, the economic and financial crisis seems to have hit the country slightly earlier - 2008. One of the interviewed stakeholders reports that the crisis only amplified the already existing situation in Romania. The government sought to implement more liberal labour market policies, giving greater flexibility to employers. This meant that, whereas employment contracts were previously long and stable, part-time working arrangements increased as a result of the change. According to this interviewee, the introduction of more flexible employment contracts contributed

²⁶ European Centre of Expertise (2018).

to the desire amongst some workers to emigrate in search of more stable employment elsewhere.

Case study research undertaken for this study in the Baltic countries also shows the predominance of economic factors driving the migration.

Skilled migration driven by economic opportunities: evidence from the case study in the Baltic countries

A survey (Tarum 2014) found that highly educated Estonians seem less inclined to emigrate than lower educated Estonians (24 % compared to 31 %, respectively). However, they tend to do so for longer periods of time, or even permanently. Economic reasons are important determinants of the Estonian emigration but these differ for different occupations: (i) higher salaries abroad is an important reason for emigration for 80% of the skilled workers, however, only 67 % of office staff and 49 % of specialists/managers consider it as a reason; (ii) unemployment represents an important reason for emigration for 32 % of skilled workers, but only for 13 % of office staff occupations and 14 % of specialists/managers; (iii) lack of job prospects in Estonia is an important reason for emigration for one in three skilled workers, but only for 7 % of office staff and for 23 % of specialists and managers. Most skilled and highly skilled Estonians from the education and healthcare sectors intend to emigrate (30 and 37 % respectively) and expect to find employment abroad in the construction sector (16 %), followed by education (15%) and healthcare and social welfare (12 %) (Tarum 2014).

Highly skilled Latvians are more likely to mention non-economic factors as reasons for emigrating. The same large scale study found that 40 % of the highly educated Latvians abroad left because of economic reasons, however, many also expressed dissatisfaction with the social and political situation in Latvia, saw no perspective in the future of wanted better prospects for their children (LETA 2018; Hazans 2015b, 2015a).

Amongst Lithuanians, a survey found that the most important reasons for emigrating are; better wages (52 % of respondents); inability to find work in Lithuania (24 %); educational purposes (7 %).

Research undertaken on migration factors in other outgoing EU countries also supports this trend. Kahanec and Kurakova (2016) analysed the emigration flows in Slovakia after country's accession to the EU and observed multiple shifts of migrant profiles reflecting shifting economic and social circumstances. When conditions in the main destination countries worsened, migration flows from Slovakia declined and redirected to other destination countries with more favourable labour market opportunities. In particular, migration to Ireland and the UK declined, (both countries were more affected by the crisis), whereas migration increased to lesser-affected labour markets, such as Austria.

Importantly, even in the wealthier EU Member States, the migration of skilled workers is driven by the economic opportunities. For example, in Germany, motives for skilled workers emigrating from Germany to other EU Member States typically concern economic factors rather than social networks. As found by Verwiebe et al. (2010), these motives can be further subdivided into the following push and pull factors, ordered by frequency:

- Push factors
 - Unemployment
 - Low or declining wages
 - Poor working conditions in Germany

- Pull factors
 - Job offers
 - Higher wages
 - Better working conditions

Furthermore, amongst the destination countries, the developments in Ireland illustrate particularly well the responsiveness of skilled migration to the economic cycle.

Evidence from the case study: flows of skilled movers into Ireland in response to the economic cycle

Between 2004 and 2009, the number of high skilled movers to Ireland increased from 29 000 to 87 300. Similarly, the number of medium skilled movers increased over the same period from 18 900 to 71 400. These increases in skilled workers helped to drive economic growth prior to the economic crisis. The sharp decline in medium and high skilled movers in 2009 and 2010 can be understood as a direct consequence of the economic shock of the crisis and contraction in growth and employment witnessed during the great recession.

Between 2010 and 2011, the number of both medium skilled movers and high skilled movers to Ireland began to grow again (b increasing by 1,000 and 300 respectively). Following this return to growth the general trend of increase in migration has remained from both medium and high skilled movers – the number of high skilled movers to Ireland increased by 11 500 between 2010 and 2016.

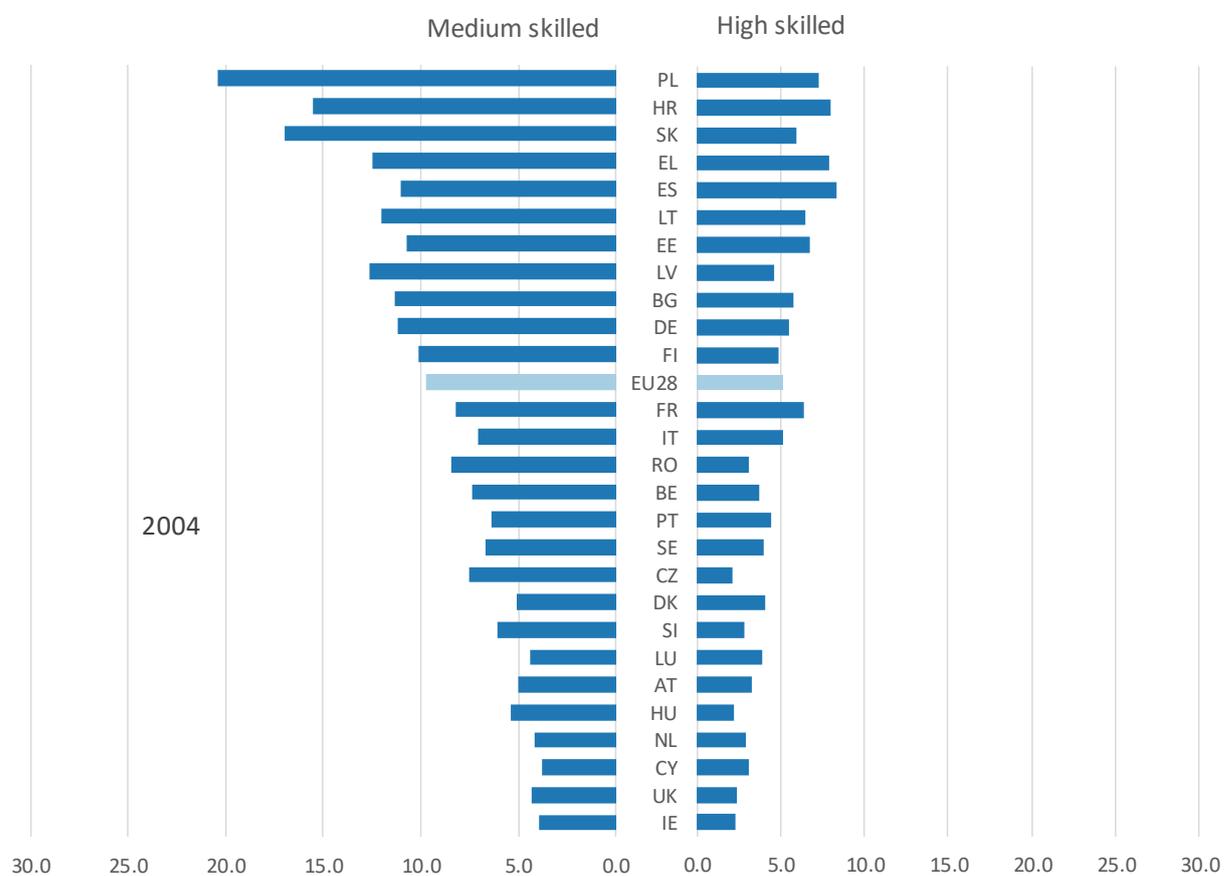
This shows how the rise of the Celtic Tiger from the mid-1990s to the mid-2000s saw rapid economic growth, and this attracted and retained a range of workers to Ireland of all skill levels. Interestingly it was noted that during this period emigration was fairly stable, but immigration increased, leading to an increase in net migration during this period. Of those that continued to leave Ireland during this period, the highest proportions are amongst young people (see motivations of younger movers below). Additionally, the economic crisis / great recession reaffirms the economic environment as a key push/pull factor. During this period there was significant outward migration from Ireland – a return to negative net migration for the first time in twenty years. The Migration Policy Institute Report (2016) highlights the fact that some sectors, construction in particular, felt the brunt of the recession but that wider pay and promotion freezes are also relevant impacts, particularly amongst skilled workers, that acted to increase migration from Ireland. Following this there was a return to economic growth and a return to positive net migration in 2016.

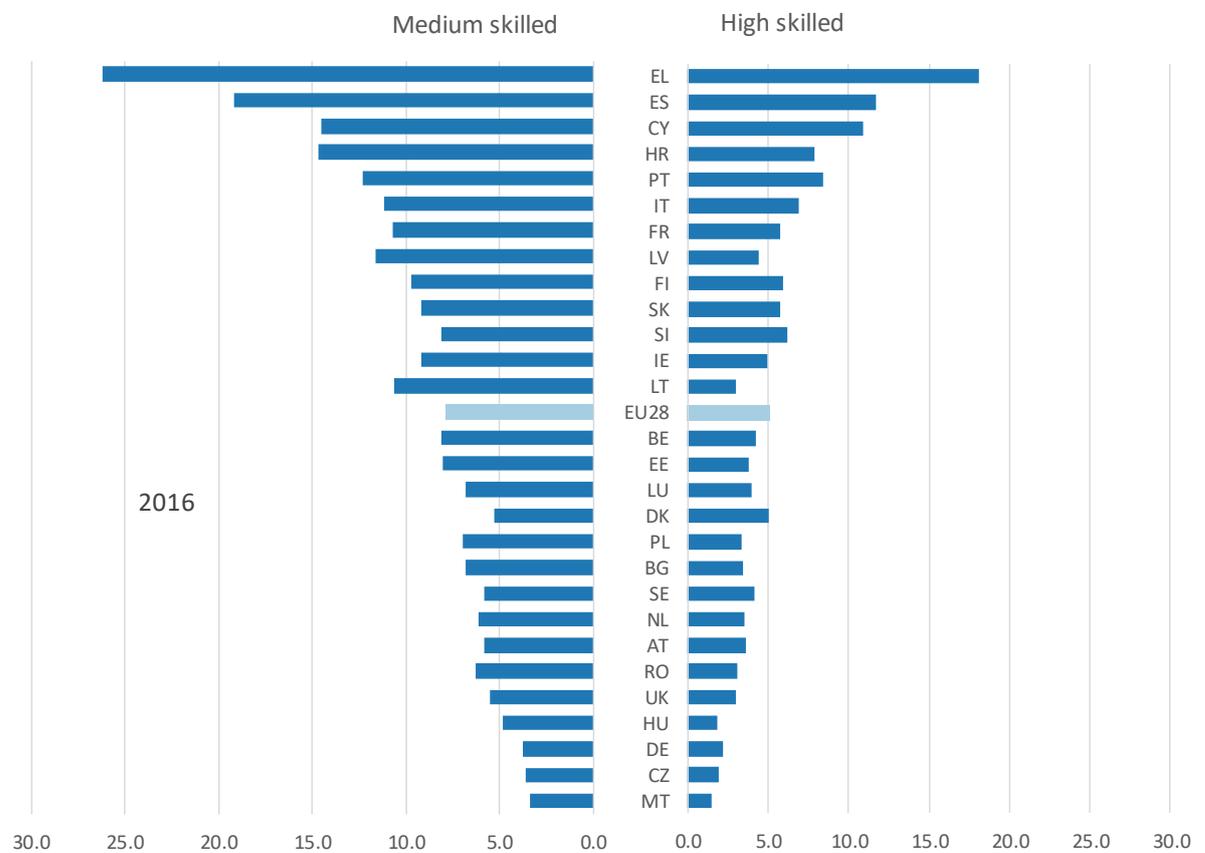
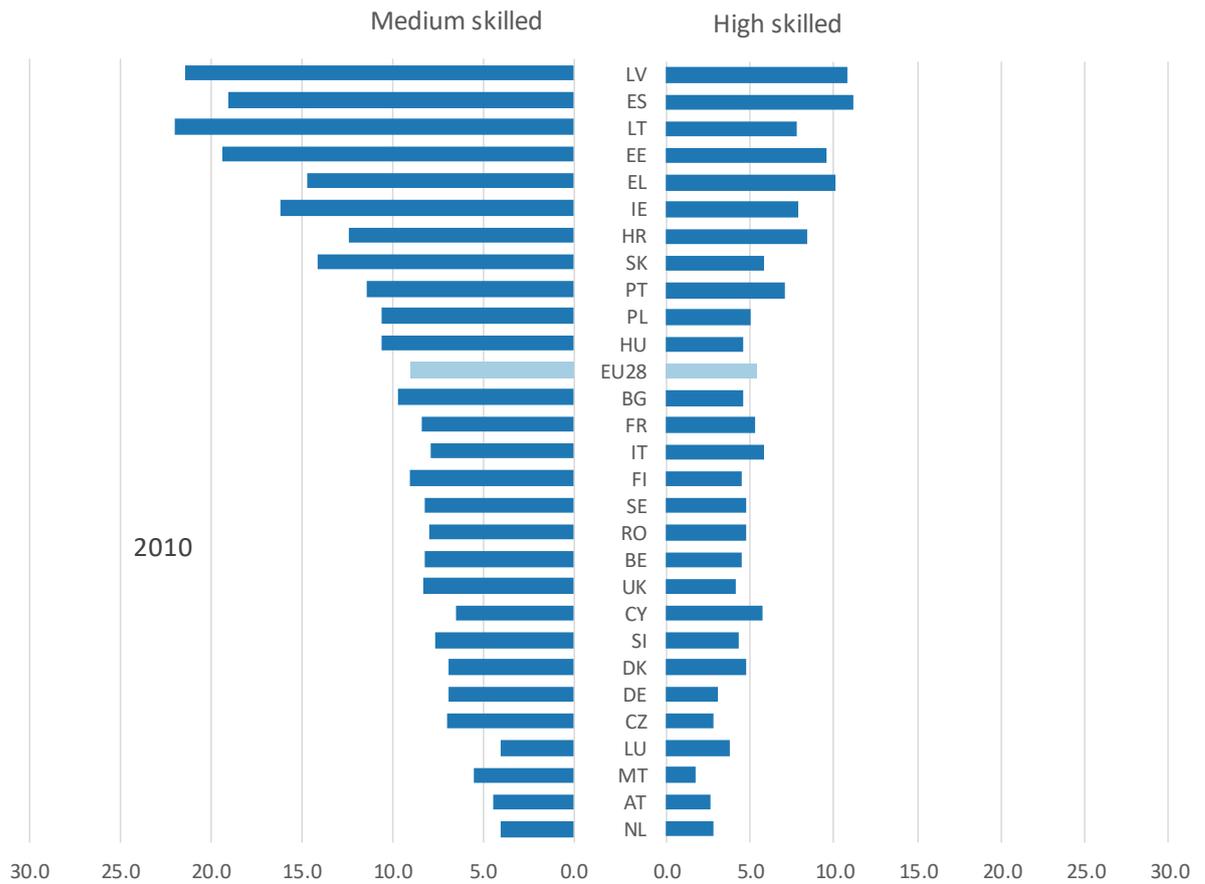
Similarly, skilled movers are influenced by **the labour market situation** in the outgoing and destination countries (which is affected by the economic environment and level of development, as discussed above). High unemployment and long-term unemployment rates, poor labour market prospects and career opportunities, and low wages are an important push factor. Conversely low unemployment, availability of well-paid jobs and high wages serve to attract movers, especially medium and highly skilled. The specific push and pull factors relating to the level of wages are discussed separately in Section 3.2.3 due to their importance in the migration decisions.

In relation to the push / pull factors for unemployment levels, Figure 32 below shows the unemployment rates for the medium and high skilled working age population in 2004, 2010 and 2016 (including both movers and non-movers). The overall trend across years is that countries with the unemployment rates of high and medium skilled above the EU-28 average are also mostly outgoing countries of intra-EU skilled workers (see Section 3.1 which identifies the main flows of skilled labour), including Latvia, Lithuania, and Poland and also some of southern Member States like Greece, Spain and Italy which have seen more recent outflows. Conversely, and also consistently across the years, the countries below the EU-28 average have also been the main destination countries of

skilled EU movers (see Section 3.1), including the UK, Germany, Austria. This is indicative that a high unemployment rate is an important 'push' factor and conversely, those countries with low unemployment rates 'pull' EU movers.

Figure 32. Unemployment rates of the medium and high skilled working age population in 2004, 2010 and 2016





Source: Eurostat data on unemployment rates by sex, age and educational attainment level (%) [lfsa_urgaed]. The countries are ordered top-down (highest rates for both medium and high skilled working age population down to the lowest sum).

Notes: Data includes ages 15-64. Estimates are valid for the entire population of the reporting country (i.e. no distinction by citizenship). Skilled includes 'Medium skilled' (corresponding to ISCED 3-4 (i.e. upper secondary)) and 'High skilled' (corresponding to ISCED 5-8 (i.e. third level))

In addition to the statistical data, there is more evidence from the academic literature and policy research supporting this with the country level data and analysis from some of the key outgoing countries, though the evidence base is not comprehensive

Verwiebe, R., Mau, S., Seidel, N., and Kathmann, T. (2010) undertook in-depth qualitative research with skilled movers from **Germany** in 2007 and found that across 40 interviewees, a typical answer to the question on motives for migrating was: "Basically, I'm unemployed, that's the main thing". Similar statements were made by other interviewees, indicating that unemployment is an important push factor. Indeed, the authors also analysed the unemployment rate and found that in most European countries where German movers intended to go, the unemployment rate was appreciably lower than in Germany, where one in ten of the labour force was out of work. The rate was 4 % in countries such as Norway, Ireland or Switzerland, 5 % in Austria and Denmark and 7 % in Sweden.

Similarly, Személyi, L. and Csanády, M. (2011) undertook two surveys of 120 skilled **Hungarian** movers in 2005 and 2008 and found similar results insofar as the main push factor was low income, but the professional development/career opportunities and the overall political situation in Hungary were also significant motivating factors.

Large-scale emigration in **Lithuania** has also produced evidence to the main push / pull factors. In Lithuania, the main destination countries for movers remained consistently; the United Kingdom, Ireland, Germany and Norway, i.e. countries with considerably higher average standards of living compared to Lithuania and with minimum wages significantly exceeding the minimum wage in Lithuania. For example, the minimum monthly wage in Ireland, Germany or UK stood at about EUR 1 500 in 2016 which was roughly four times higher the minimum monthly wage in Lithuania (EUR 380). According to Sipavičienė and Stankūnienė (2011), the major economic reasons for Lithuanians to move abroad are better employment opportunities, higher salaries (three to four times higher, even when purchasing power is taken into account) and better social security benefits. In the context of the crisis (2009), in addition to macroeconomic factors, new push factors emerged at the microeconomic level, such as the inability to pay back bank loans and other financial commitments (even with a job in Lithuania), mass bankruptcy of small and medium businesses, etc. In addition to economic reasons, other reasons, such as social insecurity, social injustice, unsatisfactory treatment by employers or family-related reasons (e.g. family reunion) also contribute to increasing migration outflows.

Basing on a survey of Lithuanian movers, which was conducted in 2014 and covered 804 respondents, the main reasons for migrating from Lithuania included low wages (52.2 %) and inability to find a job in Lithuania (24.3 %). Other reasons, for instance, leaving for educational purposes or family related reasons were far less frequent. About 7.2 % of the respondents reported having left for educational purposes and 3.9 % of them wanted to try their abilities (Žvalionytė, 2014).

In **Romania**, income, institutional and service differentials are the main push factor of highly skilled migration. Investigating the push/pull aspects of qualified migration, in a survey amongst Romanian Information Technology workers and highly qualified researchers, Ferro found that the main motives for emigration are "the frustration with Romania", disenchantment with the quality of life, career opportunities, expectations and beliefs about the West. The skilled movers are disappointed with the political, administrative and juridical corruption and the lack of fair and transparent occupational

growth and professional perspectives. Highly skilled Romanians move abroad in search of a positive working and social environment. Ferro shows that 62 % agreed that Romania is not a good place for developing a career. Lack of labour rights, low salaries, slow promotion and low prestige are also push factors for the highly skilled movers.

Also, in **Spain**, unemployment and employment opportunities are a key push factor for emigration of qualified workers (European Centre of Expertise, 2018). Unemployment appears to be closely aligned with the migration figures. In 2013, at the worst moment of the crisis, net migration flows from Spain were negative and amounted to 251 531 persons, whilst in 2015, net migration flows were positive again, amounting to 1 761 persons, in line with the economic recovery. The presence of high youth unemployment rates during several years is linked with the phenomenon of brain drain in Spain (Ramos and Royuela 2016; Nelson, 2015). Beyond unemployment, structural precariousness of jobs has been also pointed by Santos Ortega (2013) as the main push factor.

More concretely, the differential rates of unemployment between Spain and destination countries has been pointed out as a key factor (Izquierdo, Jimeno y Lacuesta, 2015). The elasticity of movers to economic conditions (measured through the differences between the GDP per capita of the destination and of the outgoing country) is higher for high skilled movers than for typical movers (Ramos and Royuela, 2016). Moreover, according to this model, the elasticity to economic conditions is higher than it is for the unemployment rates.

Other research has found evidence in relation to the **availability of career opportunities and better labour market prospects** rather than strictly speaking unemployment motivating the highly skilled to emigrate.

Triandafyllidou, A. and Gropas, R. (2014) undertook an e-survey of Greek and Italian highly skilled movers. The responses received suggest that the motivations for leaving are less economic (in the strict sense of the term) and more related to future prospects, opportunities for career and professional development, as well as an overall disillusionment and lack of hope with regard to the overall prospects in their country of origin. In effect, more than half of Greek respondents and approximately 60 % of Italian respondents were employed in the last six months before leaving. This suggests that it was not sheer necessity because of unemployment that prompted the decision to emigrate. The perception of relative deprivation of income and of opportunities comes across in the overwhelming majority of comments and responses to the open-ended questions. The recurring theme is that their home countries offer 'poor opportunities' and 'no future.'

In Italy, a recent survey identified that the main drivers pushing Italians with a doctoral degree abroad are significantly higher wages and better job opportunities (Istat, 2015). Also, the premises and the possibility to carry out state of the art research play a non-negligible role (Monteleone, 2012). Indeed, mobility has paid; the evidence suggests that moving abroad may yield a greater chance of finding a job, especially for highly educated people: one year after the completion of their master courses, 44.5 % of Italians abroad had a stable job, compared to 34.5 % of the graduates remaining in Italy (Almalaurea, 2014).

Research into mobility motivations of young medical students in Ireland (see Gouda et al 2015) was based on a survey of 2 273 medical students in 2012. It showed that the factors most influencing the potential decisions to leave were career opportunities to obtain more senior posts (mentioned by 85% of respondents), working conditions relating to long hours, unrealistic workload, shortages and schedules in Ireland (83 %) and lifestyle (80 %), whereas salary was mentioned by only 65 % of respondents.

The European Centre of Expertise (2018) in Estonia (based on a survey amongst academics) found that for researchers, motivations for mobility clearly differ from the dominant motives amongst the general population to work abroad. The most important motivation for emigration amongst Estonian employees was related to wage. For researchers, wage level was ranked 11th as a motivational factor for international

mobility. The most important motivations for researcher mobility were career building, opportunity to cooperate with leading specialists, better access to funding, research infrastructure.

In Lithuania, evidence shows that the majority (up to 80 %) of movers prior to emigration were in employment (European Centre of Expertise, 2018). This leads us to conclude, that the main reasons for emigration in Lithuania were low wages and poor working conditions rather than an absence of work.

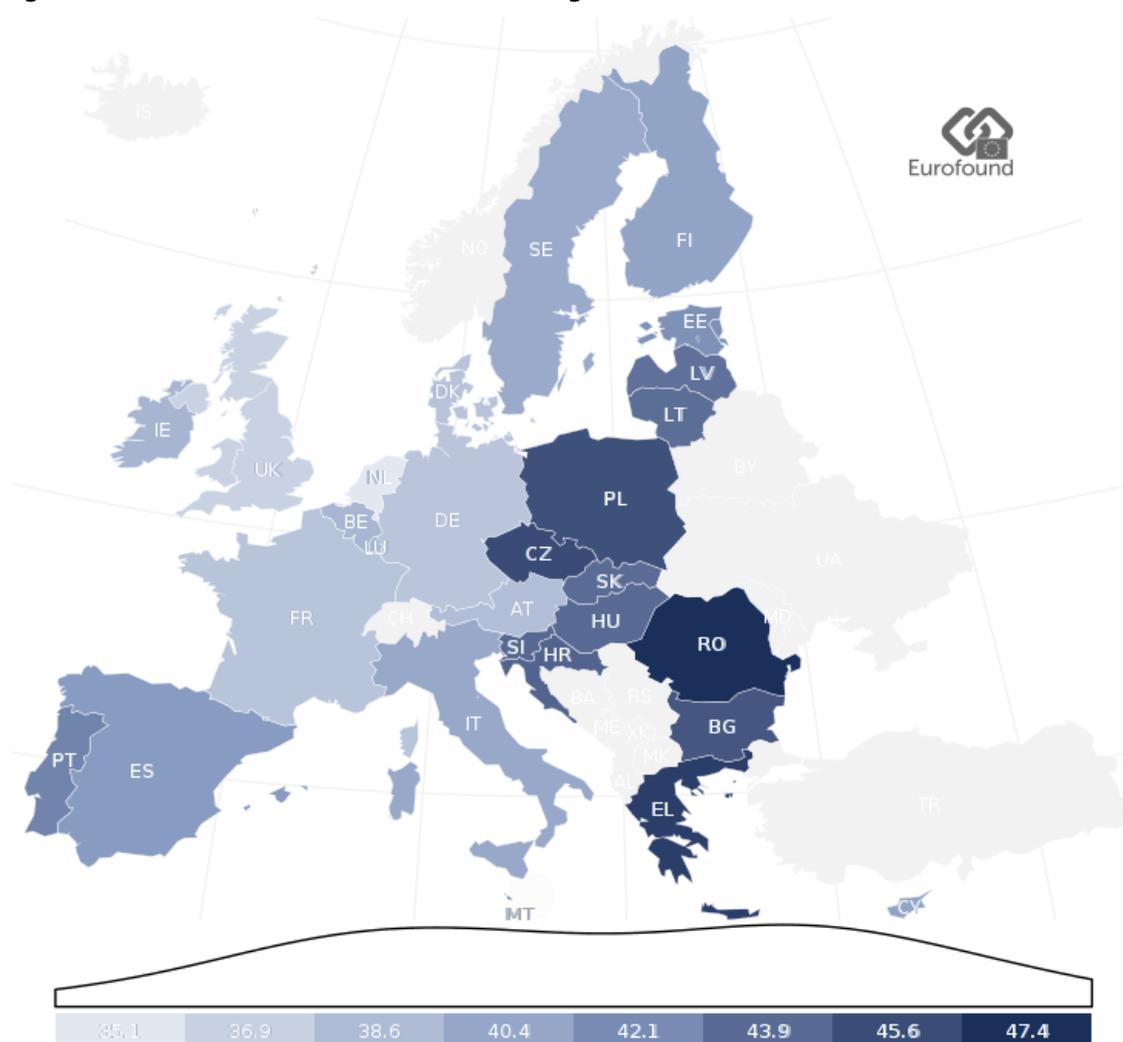
Evidence from Slovakia also confirms that it is not only economic factors that drives worker emigration (European Centre of Expertise, 2018). Unsurprisingly, wage differentials, better career prospects and more job opportunities in destination countries seem to play a crucial role in migration decisions and choices. However, 'soft' determinants such as well-functioning institutions, sense of safety and security, or more generally, a higher quality of life in the host country are important aspects taken into consideration especially by those who work or study abroad and contemplate staying versus returning home (PAS, 2015). Mytna Kurekova (2014) found that precise push factors beyond wage differentials are under investigated.

Similarly, Laura Bartolini, Ruby Gropas & Anna Triandafyllidou (2017) undertook a survey of 6 377 young highly educated Italians, Spaniards, Portuguese and Greeks in 2013. They found that non-economic factors, notably career opportunities, quality of life and future prospects supersede all other considerations in the decision to emigrate for these highly educated southern Europeans. The desire to improve training and career perspectives, to increase employability and derive individual satisfaction from occupation, is mentioned by more than half of the respondents in all countries. The strongest emigration potential appears to lie with those who are dissatisfied with the quality of life and their job prospects at the home country, and who are unwilling to renounce what they think they could/should achieve in terms of life style and overall satisfaction.

Furthermore, factors relating to **quality of life, living and working conditions**, work-life balance and reconciliation of working and private life also play a role in the migration decisions.

Data on the number of working hours worked (Figure 33) indicates that EU skilled movers are also attracted by labour markets that promise a good work-life balance and better quality of life. The countries with the highest number of working hours are Romania, Greece, Czech Republic; those with the lowest are Netherlands, United Kingdom, and Germany. Hence, there is a clear pattern of outgoing countries from the Mediterranean, Central and Eastern European countries reporting the highest number of hours and the opposite effect for Western European and Nordic countries, which are amongst the top destination countries. However, it also needs to be taken into account that the number of working hours is also influenced by the different legislation on maximum working hours, as well as the need to work longer hours to earn a living wage. So, the causal relationship with the decision to migrate is rather complex.

Figure 33. Work-life balance: Total working hours



Source: Eurofound, European Quality of Life Survey 2016. Based on the question(s) Q14, Q16 from the European Quality of Life Survey 2016 by Eurofound, Question: "How many hours do you normally work per week in your main job, including any paid or unpaid overtime? The responses are reported for employed and not employed. A darker colour means higher number of hours. Notes: the figure shows the mean value of the people per country with 'Activity status', 'Employed' when asked 'Total working hours'.

The importance of working conditions in migration decisions can also be illustrated by the case study research undertaken for this study in relation to the migration flow in the health sector.

Case study evidence: Importance of working conditions as a driver in the health sector migration

Working conditions are important push/pull factors in the health sector, including working conditions resulting directly from the work, and perceptions of the medical profession. Chiscop (2013) identifies that physical conditions as well as the image of the profession are push factors for Romanian health professionals. Firstly, Romanian hospitals often have poor and/or out-of-date facilities. Secondly, financial issues exacerbated by corruption and 'thank-you money' provides the profession with a poor image, leading to poor social status for medical practitioners. Poor medical equipment is also mentioned as a push factor in a case study into Lithuania (Padaiga et al, 2014). Ifanti et al (2014) point out that as a result of the recession, many young doctors are

either unemployed or forced to work part-time, which pushes these young doctors to find (full-time) work abroad. Across Europe, austerity measures following the recession put further financial strains on public services, including on health care provision. Stricter financial controls directly translated to the work floor through increased paperwork and increased workloads. Increased workloads and subsequent long shifts at anti-social hours (nights, weekends) are also mentioned by German nurses (Ognyanova et al, 2014) and Irish doctors (Humphries et al, 2014).

Professional development and career advancement are also important aspects that can push health professionals from or pull them to a country. Filippidis (2015) mentions limited funding of biomedical research and contracting health budgets as one of the primary drivers for emigration of young Greek doctors. Similarly, Legidi-Quigley et al (2014) find that the most frequently mentioned motivation in their sample of EU qualified doctors working in the UK was advancing knowledge, either through further study, training or gaining experience. The lack of professional development opportunities is mentioned as a driver for emigration in case studies of various other countries, for example in a study funded by the European Observatory on Health Systems and Policies, encompassing evidence from 17 European countries, such as (but not limited to) Germany, Estonia, Poland and Slovenia. A Eurofound study states that this motivation generally weights heavier for doctors than nurses (Eurofound, 2013).

In Greece, poor workforce planning is a cause of oversupply: there is no thorough planning around the number of medical students being admitted to medical school. As a result, Greece is spending money and resources on training a workforce that they cannot employ. In addition, there is not any planning for the ratio of specialists. Subsequently, whilst the country has an oversupply of specialists (i.e. hospital doctors) and there is a structural shortage of general practitioners, in particular in rural areas (Ifanti et al, 2014). Filippidis (2015) elaborates on the outflow of young doctors in particular; many young Greek doctors go abroad to the UK and Germany. There was an increase of 113 % in the number of Greek graduates in medicine who registered to practice medicine in the UK between 2008 and 2013; the number of Greek doctors in Germany increased from 1 708 to 3 011 from 2008 to 2014. The outflow of young doctors carries a risk in the short term of shortage of junior doctors, and in the longer term, of doctors generally, as young doctors may leave permanently. These risks contain consequences for the quality of care and the return on investment in terms of costs to the Greek state associated with initial training costs for these doctors.

In Italy, as in Greece, there is no adequate link between the intake of medical students into medical school. Whilst Italy has introduced caps on intake, low study and workforce attrition rates, Bertinato et al (2011) suggest it is not correctly aligned with the labour market. An Italian consultant interviewee confirmed that a halt on recruiting specialists is required to allow the older workforce to retire and remove the barrier to younger doctors' progression.

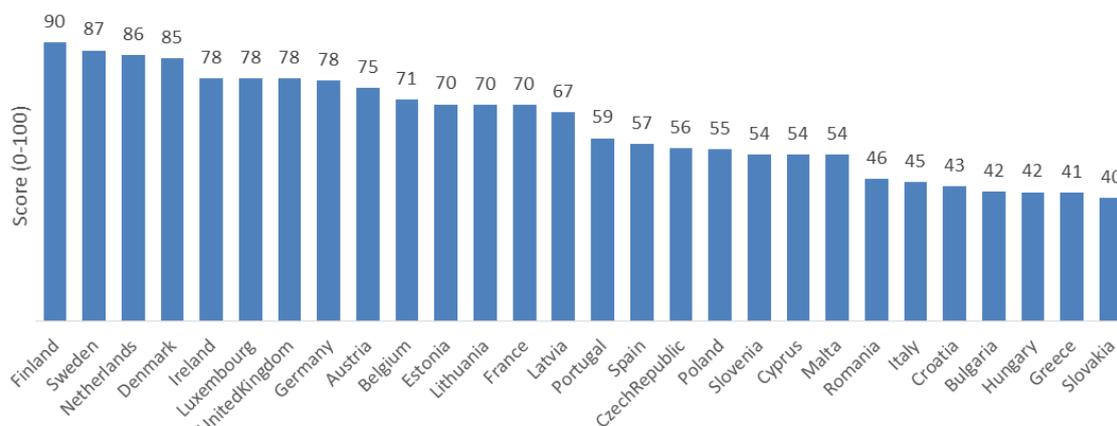
To some extent, the role played by the working conditions in the migration decisions was also identified in the case study research in Ireland. This is noted as a comparative judgement for movers – therefore the extent to which this acts as a factor which motivates people to migrate to Ireland varies considerably depending on working conditions in Member States of origin. Indeed, this factor was often noted to be more relevant to third country nationals rather than EU movers. In the context of EU skilled movers, it is more likely that this may have been a factor in the 1990s rather than in more recent years, given the implementation of EU Directives related to working conditions and health and safety at work, e.g. The Working Time Directive as a guarantor of the basic working conditions.

In addition, the available evidence also suggests that at macrolevel, **the institutional environment**, including aspects such as the trust in government, satisfaction with

public services and low corruption can play a role in the migration decisions. However, this is also correlated with other factors already discussed above, related to the overall performance of the economy, i.e. GDP growth, employment levels, job opportunities and other factors. Hence, institutional environment provides contextual information rather than the evidence of low level of institutional development as a reason to leave.

Figure 34 below ranks countries in decreasing order by the score in the index of economic freedom and people's trust in government integrity. The figure indicates that most outgoing countries rank at the lower end of the spectrum; suggesting that low levels of confidence in government integrity could be a contributory push factor. However, this may also be correlated with other factors related to the overall performing of the economy, such as GDP growth, employment levels, job opportunities and other factors. Hence, the economic freedom index provides contextual information rather than evidence of low level of economic freedom as a reason to leave.

Figure 34. Economic freedom – government integrity



Source: Own elaboration based on the Economic Freedom index prepared by the Heritage Foundation, <http://www.heritage.org/index/>, The index of economic freedom is elaborated on 12 quantitative and qualitative factors, clustered into four broad categories of economic freedom:

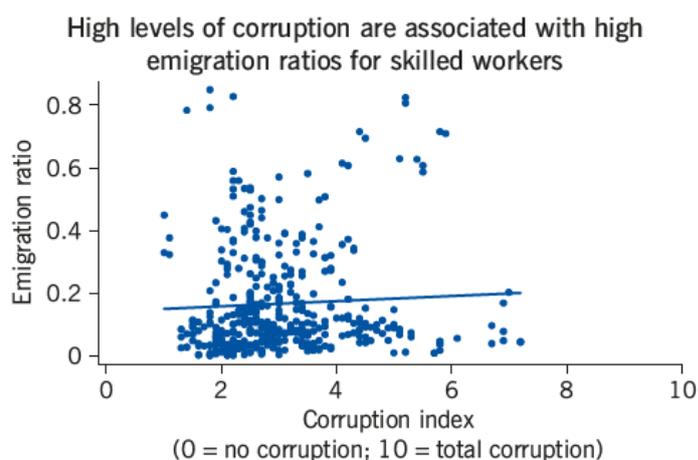
1. Rule of law
2. Government size
3. Regulatory efficiency
4. Open markets

Each of the twelve indicators of economic freedoms within these categories is given a score scaled 0-100. A country's overall score is obtained by calculating the unweighted average of these twelve economic freedoms.

To some extent, this statistical evidence is also reflected in the academic literature and policy research. A recent paper from Cooray et al. (2016) has also found a positive relationship between the high levels of corruption and the migration of skilled workers (see Figure 35).²⁷

²⁷ Cooray, A. and Schneider, F., 2016. Does corruption promote emigration? An empirical examination. Journal of Population Economics, 29(1), pp.293-310. Available at: <https://wol.iza.org/uploads/articles/192/pdfs/does-corruption-promote-emigration.pdf>

Figure 35. The association of corruption with emigration of skilled workers



Source: Cooray et al (2016). Note: this is a sample of 20 OECD countries and other developing countries.

Some research has found little to no relationship between the institutional framework and the migration decisions. Nowotny, K. (2015) used microdata for eleven EU countries and applied a discrete choice model estimated at the NUTS-2 level. The empirical analysis revealed only minor differences in the effects of labour market institutions and tax systems on location decisions by skill level.

A key dimension in the debate about the role of the institutional environment in influencing the intra-EU migration is the **availability and access to the social security systems in the destination countries**. Heated debates about the benefit tourism or welfare migration have dominated the public discussions. The available evidence does not support the importance of this factor in the decisions to migrate.

A study carried out by ICF and Millieu (2013) study found little evidence in the academic literature, statistical data and stakeholder consultations (with 61 national authorities) to suggest that the main motivation of EU citizens to migrate and reside in a different Member State is benefit-related as opposed to work or family-related. This was underpinned by the analysis of available statistical and administrative data at the European and national level which showed that in most countries, EU movers are not more intensive users of welfare than own nationals. Where there were more intensive users, they tended to use only specific types of benefits linked to their socioeconomic circumstances as movers.

Similarly, Giulietti, Guzi, Kahanec, and Zimmermann (2013) analysed data on welfare benefits and migration from a sample of 19 European countries observed over the 1993-2008 period. Their conclusion was that migration flows within the EU are not related to unemployment benefit generosity and the so-called 'welfare migration' debate is misguided and not based on empirical evidence.

Nowotny, K. (2015) used the microdata from eleven EU Member States to study the location decisions of highly skilled movers and also investigated the impact of tax systems and social welfare support on such decisions. The regression analysis results suggested that low skill movers care about short-term support in the target country if they would become unemployed, but not about long-term support in the form of pensions. Highly skilled movers' location choice on the other hand is less dependent on the social security system and may be more determined by the implicit tax price of such welfare provisions, hence the nature of taxation systems.

Dunstmann, C. and Frattini, T (2016) specifically assessed the balance between 'costs' of migration (to the benefit system and public services) and the 'benefits' in terms of tax receipts and other contributions. They found that in the UK, EU movers, who are increasingly high skilled brought a significant net benefit to the UK economy.

Where the generosity of the welfare system does seem to play a role in influencing the migration is in the context of the outgoing countries. Kurekova (2013) analysed the role of welfare systems in shaping emigration patterns in central and Eastern Europe. She found that welfare system policies affecting migration by creating and widening the push factors for potential and actual movers through. This explains why some of the origin countries amongst the new Member States with greater emigration, have lower social spending figures, less extensive unemployment benefit schemes and have labour market mismatches which remained unaddressed.

Finally, at macro-level, the **geography** and geographical proximity plays a role in migration decisions, where migration to neighbouring countries or countries with strong historical ties playing a significant role.

For example, in Estonia, whilst the full set of motivations is considered to be manifold, as the main destination country is Finland, the importance of geographical proximity can be underlined, together with affordable and good commuting opportunities to the home country, low language barriers and the growing size of the Estonian diaspora (European Centre of Expertise, 2018).

3.2.1.3 Meso-level factors

At meso level, the following factors play an important role in the migration decisions.

The **migration policy framework** can serve as an important push/pull factor, also in the context of return migration. Efficient, clear, and multi-dimensional migration policies, backed up by clear financial incentives, easily accessible welcome and integration services and support, cooperation with employers and diaspora communities can make a difference to the skilled migration levels. Due to its importance, the role of the migration policy is discussed in Section 3.3. As will be further highlighted in Section 3.3, it is important to note, that there is a dearth of good monitoring or evaluation data on the impact of many of these policies.

Of particular importance in the context of this study has been the effect of the latest EU enlargement rounds in 2004 and 2008 and gradual removal of restrictions to the labour market access by the old Member States. Studies have shown (see Kahanec and Zimmerman 2016) that granting movers the same employment and residential rights that natives have constitutes an important determinant of international migration. The migration surge shortly after EU accession and labour market opening into the UK, Ireland and Sweden has resulted in the migration flows concentrated into a smaller number of destination countries that has liberalised their labour market access. This is further illustrated with the case study findings in Ireland.

Case study evidence: Policy framework shaping migration flows to Ireland:

The role of internal and external policy decisions is significantly associated with the push and pull of skilled movers. It was noted during the interviews that the significant increase in net migration was observed as a result of the decision in 2004 to open the Irish labour market to accession countries. This largely led to high skilled movers moving to Ireland – latterly followed by their families and dependents (Zaiceva et al., 2008). It is equally crucial that other Member States (with the exception of the UK and Sweden) chose to delay opening up their labour markets to accession countries. This had the effect of enabling Ireland to gain, in the words of one interviewee a “first mover advantage” in the sense that movers moving to Ireland established a diaspora that may have been diluted if other Member States had opened up their labour markets to accession countries in 2004. In particular the question asked in the interviews was whether Ireland’s economic growth would have been as strong without the skilled movers from Poland, Lithuania and Latvia – many of whom it is speculated may have gone to Germany for example rather than Ireland. The potential economic impact of this migration is noted above, in this respect the interviews for the case

study reinforced that first wave movers are often the most capable, higher skill movers, with second-wave migration involving those requiring additional support.

The size and level of organisation in **the diaspora communities** provides a contributory factor in the migration decisions. Traditionally, literature considered that the existence of active diaspora communities abroad serves to attract new movers as they can tap into the diaspora resources, support and advice upon arrival in the destination country and thus facilitate the immediate arrival and subsequent transitions. Such diaspora provides information channels between those who have already migrated and those who are contemplating migration and thus can play a decisive role in the migration decisions. The more movers that are already present in the destination country, the more information is available to prospective movers in the origin country and the more likely they are to make the move. The research has some evidence supporting this push/pull factor.

For example, research in Lithuania showed that a well-developed network of Lithuanian communities in target countries facilitates emigration, amongst other factors (Sipavičienė and Stankūnienė, 2011; TMO, 2011). Polish migration has been facilitated by the fact that Polish diaspora in both countries were already large and they had their own organisations to support the newly arrived movers (Biełkowska et al. 2010). Some of the movers joined their families who emigrated earlier to the UK and Germany. Experiences of Spanish movers also showed that the existence of networks could lower migration costs and increase the success of migration processes (Izquierdo et al., 2015). The primary destination of Croatian movers is Germany (58.4 % in 2016), which is in line with both historical trends and current demand for work in that country. The size of the diaspora and the corresponding personal and professional ties attract new movers from Croatia and help them settle into the new environment. A similar situation can be observed in Austria (6.1 % in 2016), as the second most prominent EU destination of Croatian movers (European Centre of Expertise, 2018). Also, in the case study in Ireland, the size of diaspora communities has also appreciably grown in recent years and has been found to facilitate the migration flows.

Recent evidence on the importance of diaspora communities for skilled movers also shows a different trend; increasingly, skilled workers do not necessarily take into account diaspora communities in their migration decisions.

For example, Triandafyllidou, A. and Gropas, R. (2014) survey of highly skilled movers from southern Europe found that respondents did not mention a connection with any Greeks or Italians living abroad as an important reason for choosing that specific country. This national evidence is also confirmed by a recent OECD report on diasporas (OECD 2015)²⁸, which showed that those who are currently leaving from OECD and EU countries are highly educated in their overwhelming majority and do not follow cultural networks in their choice of destination country.

3.2.1.4 Micro-level factors

At micro level, key individual factors such as age, gender and education level play a key role in influencing the migration decisions of skilled workers.

In terms of **age**, as shown in Section 3.1, younger and prime age workers are much more likely to migrate than older workers. This is also reflected in academic research. For example, Varga, J. (2016) analysed the emigration and attrition of physicians and dentists before and after EU accession (2003 and 2011) with the case of Hungary using the available statistical data. He found that the probability of emigration was larger for the young people. There was an over a seven-fold increase for medical doctors under 31, and over six-fold for physicians and dentists in the 31–40 age bracket. Nevertheless,

²⁸ OECD. 2015. Connecting with Emigrants – A Global Profile of Diasporas 2015. Paris: OECD. <http://www.oecd.org/migration/connecting-with-emigrants-9789264239845-en.html>

the probability of emigration of physicians and dentists even in the 41–50 range quadrupled.

In terms of **gender**, as shown in Section 3.1, skilled intra-EU migration amongst medium skilled workers has a certain gendered pattern, with a predominance of men (amongst high skilled the split has been more or less equal since 2006). This is especially reinforced in the sectors which are already male-dominated, such as the ICT sector (see box below):

Predominantly male migration of skilled workers in the ICT sector

Intra-EU ICT sector mobility has a clear gender dimension with more male ICT workers moving to another EU Member State, compared with women. 72% of all migrant EU ICT workers are male, a proportion which has increased since 2008, whereas the proportion of females has decreased (Eurostat data). This also reflects the overall gendered employment patterns in the ICT sector, not just migrant workers, which tend to be dominated by men. This gendered employment pattern is also especially manifest in the higher skills levels. As a proportion of all workers in the EU ICT sector, there are few gender gaps amongst low skilled movers, and relatively small gaps amongst medium skilled migrants, whereas the gap with males dominating is especially large amongst highly skilled migrant ICT workers. The gaps have also remained relatively stable over the 2008-2016 period.

In relation to **education level**, this important push/pull factor is discussed separately in Section 3.2.6.

Family responsibilities also play a role as shown by some country examples, with migration decisions being based on joining the partner.

In Hungary, single individuals are one and half times more likely to emigrate than their married peers without children; single parents are twice as likely (European Centre of Expertise, 2018). Whilst single parents' likelihood of moving abroad was much lower in the early 2000s compared against married couples, they are now more likely to migrate than before. This might be explained by the worsening living conditions of single parent families. Blaskó and Gödri (2014) estimate that the probability of moving abroad is twice as high for single persons as for married or divorced individuals, which is in line with the above estimations. Blaskó and Gödri (2016) find similar results based on census data.

In Poland, case study findings show that reasons involving family influence the decision to migrate. A desire to join the life partner or the rest of the family already living abroad pushes the persons left behind to migrate. Starting from 2007 this motivation becomes ever more significant whilst economic factors are becoming less important.

Language can also play an important role insofar as the familiarity with the destination country language can help to facilitate the migration.

In Ireland, service and sales workers and professionals collectively employ 63 000 EU movers. Whilst these categories of occupation are rather broad the data presented in the previous table indicate which sectors many of these individual jobs are located within. For example, some of these jobs may be within the retail and accommodation sectors. For such roles it is likely that language skills would be important. This is an issue identified in the interviews for this case study, the fact that Irish employers generally require a good standard of English, although this is a function of the main markets within which such employers operate. Nevertheless, there are policy implications for this for EU movers and also for third-country-national movers. Indeed, for non-English speakers this increasingly means that positions which may be considered to be relatively low skilled for native speakers are, in fact, filled by movers with formal language qualifications, some of which are taken at a medium – high levels.

In Croatia, on the other hand, increasing emigration to Ireland (5.5 % in 2016) indicates a changing structure of emigration; younger people are attracted to an English-speaking country with a favourable labour market situation.

In Poland the case study showed that an additional magnet attracting Poles to the UK was a desire to acquire or improve their language competencies. Learning English as a universal language was an important asset for movers. Studies conducted amongst this community show that a significant majority of Poles participated in intensive language courses concurrently with their work.

3.2.1.5 Summary of key messages

The individual decisions to migrate are influenced by a complex interplay of push and pull factors at macro, meso and micro level.

However, the dominant push/pull factors relate to the macro-level factors of the economic environment and labour market conditions. Countries with high demand for labour, high GDP per capita, high wages and low unemployment tend to attract more skilled movers. Strong economic and labour market performance are thus amongst the important pull factors but are not the sole reasons explaining skilled migration flows, as was already highlighted in Section 3.1. with regard to the available data on key migration flows. Top destination countries show better worklife balance and satisfaction with public services indicating that EU skilled movers expect to be in societies that ensure better working and living conditions. Top outgoing countries are at the opposite of the scale, illustrating that comparatively less attractive working and living conditions may act as push factors. Although the quality of institutions is a key push/pull factor, this is in turn affected by economic growth and other historical and sociological factors. Hence, the dynamic of causality is far more complex.

At meso level, the design or absence of migration policies and the size of diaspora communities can also make a difference in influencing skilled migration flows and indeed the level of successful integration – including the absence of over-qualification – achieved (although it should be noted, as well will be shown in Section 3.3 below, little evidence is available on the actual scale or impact of policies targeted at skilled EU movers). Finally, individual-level factors such as age, gender and education level are also an important influence on the decisions of skilled workers to migrate as skilled movers are more likely to be prime age workers (as demonstrated by the data presented in Section 3.1), medium or highly skilled and in the case of medium skilled workers, somewhat more likely to be male.

This complexity means that there are no simple recipes for policy makers in the outgoing and destination countries, who are looking to develop skilled migration policies. This implies that migration policies need to be multi-dimensional, responsive to the changes in the external economic and labour market environment and designed appropriately taking into account the various push and pull factors at play which also might differ in a particular national situation/regional situation.

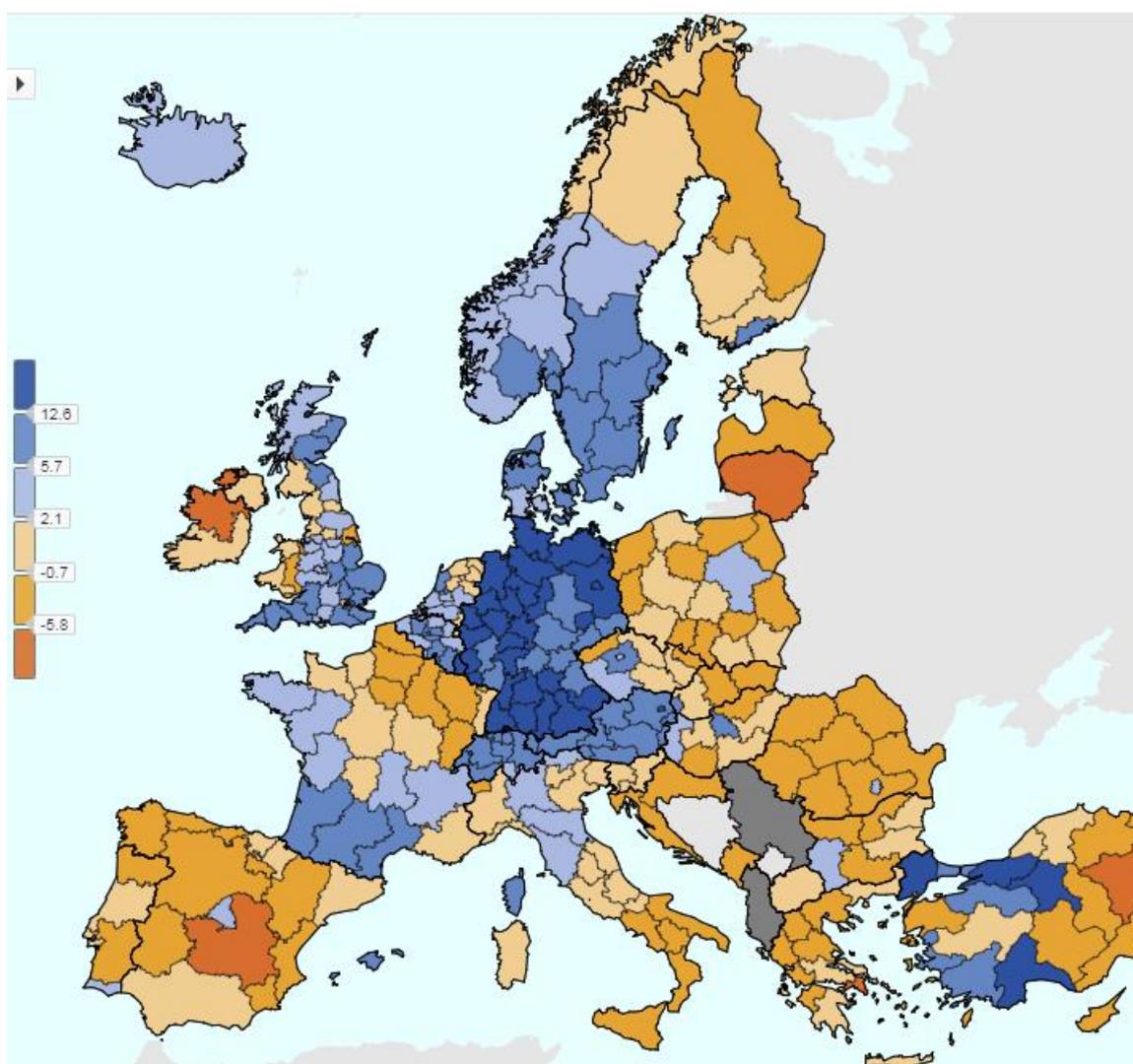
3.2.2 Why do people move abroad and not to a national dynamic economic region?

The push and pull factors discussed in the previous section provide a discussion of the key macro, meso and micro-level factors that influence migration decisions. This illustrates the sometimes complex mixture of relative judgements that are made. This question demands more specific examination of the evidence related to push and pull factors in order to understand how this impacts on the regional dimension of skilled migration. As such this section will not repeat the arguments made above but rather will seek to reflect specific regional dimensions and additional evidence regarding regional aspects of macro, meso, and micro factors. The section begins with outlining some features of regional development in Europe before a discussion of evidence relating to regional push and pull factors.

At macro level, it is important to understand that the central issue of this question - the substantial differences between European regions is a significant factor, indeed the issue of regional disparities is increasingly a focus for policy makers. The analysis below illustrates two important macro developments which are arguably both a cause and consequence of migration.

The first map in Figure 36) below, presents population change in 2015 in terms of net migration plus statistical adjustment. Areas in the lightest shade of orange represent areas that have not seen more emigration or immigration. Blue areas are areas with more immigration (i.e. destination areas), the darker blues represent higher volumes. The darkest blue colour represents a positive net migration of 12 600. Orange areas represent areas with more emigration (i.e. outgoing areas), the darker the orange represents higher volumes. The colour legend on the left-hand side provides more information.

Figure 36. Population change – Crude rate of net migration plus statistical adjustment by NUTS 2 level, 2015



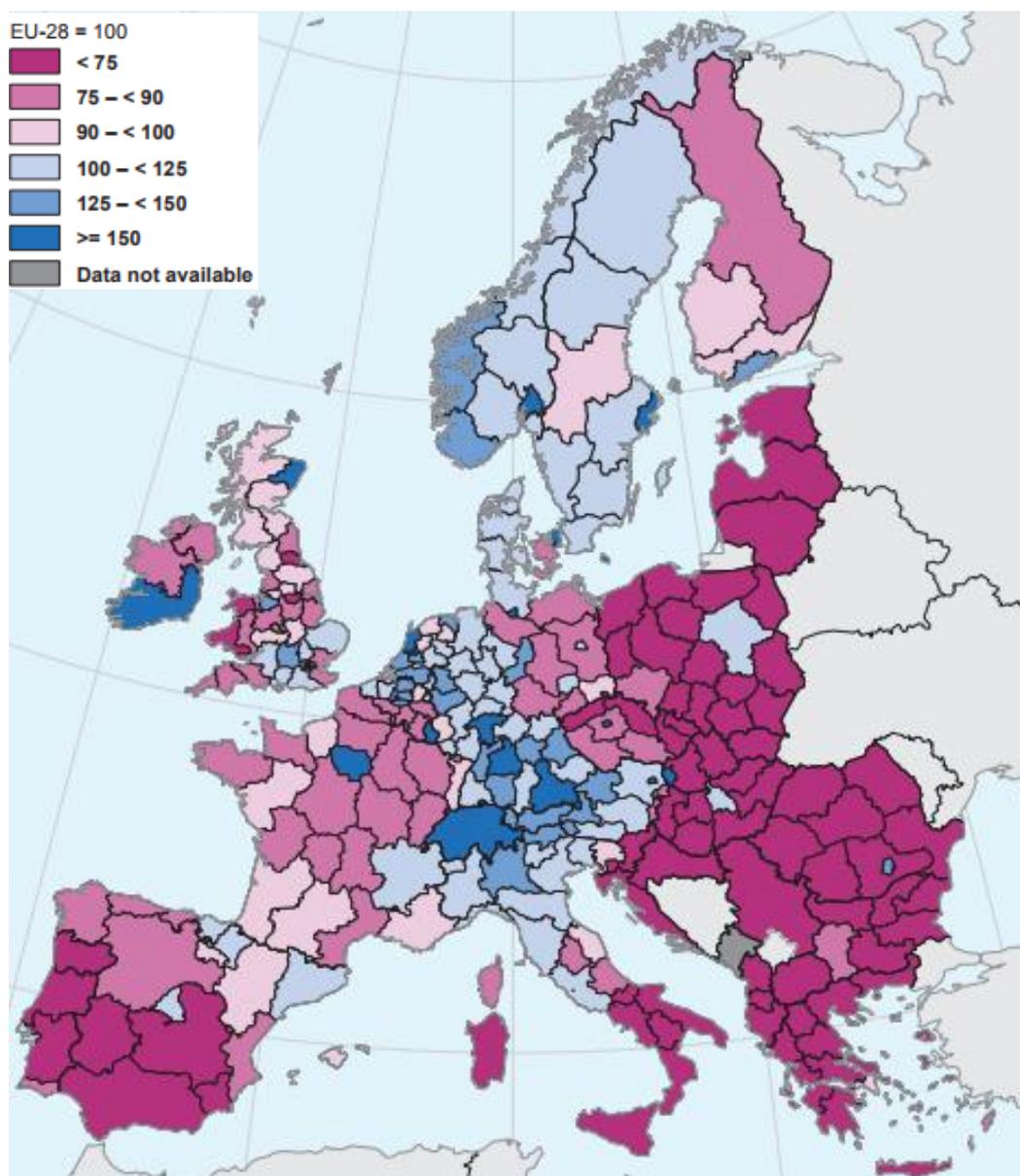
Source: Eurostat [demo_r_gind3].

Notes: EU-28, Portugal, Romania, the United Kingdom and Albania: estimates. Ireland and France: provisional. Serbia: national data. Figures are in thousands

The map below (Figure 37) shows GDP in PPS in relation to the EU-28 average by NUTS2 regions in 2015 (IE: 2014). Dark red regions represent a low GDP per inhabitant, whereas a lighter colour shows more proximity to the EU-28 average (a light pink colour being slightly under it, and a light blue colour slightly over it). A dark blue colour indicates the region has a higher GDP per inhabitant.

The map clearly shows that within countries there are indeed more dynamic and less dynamic regions. Higher GDP per inhabitant is expected to act as a pull factor, and conversely, lower GDP as a push factor. However, these maps cannot explain why, for example, a high skilled migrant leaves Puglia (a region with GDP per capita below that of the EU average) in southern Italy to immigrate to London (a region with higher GDP per capita than the EU average) instead of Veneto (with GDP per capita above EU average) in northern Italy (bearing in mind that such internal migration flows also take place but we cannot accurately quantify such flows).

Figure 37. GDP per inhabitant in PPS in relation to the EU-28 average, by NUTS 2 regions, 2015



Source: Eurostat, nama_10r_2gdp, nama_10_pc.

Notes: Note: Ireland, Norway and Albania: 2014. Switzerland and Serbia: national data. Switzerland: provisional.

We must look beyond pure economic indicators when seeking to explain the choice between inter-(EU) country versus intra-country migration (we cannot quantify the scale of inter/intra EU Member State migration).

Kahanec et al (2014) undertook a study which sought to examine the impact of EU enlargement on the movement of workers. The study compares the effect of EU accession and economic opportunities on migration. It was found that there was a strong association between migration flows and economic performance (high levels of GDP and low unemployment rates). The study found that it was not necessarily any negative impacts in the country of origin, but rather it was the economic conditions in the destination country (or region) which was the key reason for migration.

This is relevant to this research question as it reaffirms that particular contextual reasons in specific regions (and potentially the fit with individuals' skills profiles) may have the most significant impact on migration patterns. However, the study does support the fact that geographical proximity and language similarity is a key factor in migration destination decisions.

It is therefore impossible to provide a detailed answer to the question and determine what potential movers would do in any specific context for the very fact that it is context which is key to individual migration decisions. It is therefore interesting to consider this issue from the point of view of different Member States and various groups of individuals. A blend of policy and academic literature is useful in this respect.

A study undertaken by Verwiebe et al (2010) sought to identify and explain some of the reasons why medium skilled Germans chose to migrate to other European countries. This study is interesting in relation to the present question because, as is shown in Figure 37 above, some of the most prosperous regions of Europe are located in Germany, though it should be noted that the study did not specifically concentrate research on poorer Germany regions (interviewees were based in Schleswig-Holstein, Hamburg, Bremen, Lower Saxony, Berlin). The study found that it is contextual factors relating to individual situations and comparative judgements made by individuals regarding their prospects for improvement in other Member States (based on criteria that they themselves establish).

One important factor in this respect was whether or not interviewees were employed, with a high number of those choosing to emigrate doing so to improve prospects of finding work. The fact that they chose to move to another EU Member State rather than another German region was because at that point the unemployment rate was lower in those places than other German regions. Additionally, the study found that the perception of less age discrimination in other countries was also found to be an important reason behind movers leaving Germany for another EU Member State, a factor that they understood would not be remedied through moving to another region in Germany.

Migration to another Member State is also understood to be attractive to workers in employment seeking to either earn more or to gain a greater degree of job security. Increasing job security and escaping temporary or casual work was particularly identified in the Verwiebe et al (2010) study. In this respect such matters are usually governed through framework legislation determined nationally, it is therefore more likely that workers could improve their situation through migration to another Member State rather than a more prosperous region.

Evidence that such factors are important over and above economic growth, as an overall pull factor in retaining and attracting skilled workers, was found in the recent Labour Market Policy Thematic Review (European Centre of Expertise, 2018). In relation to Croatia the evidence box below provides a useful illustration:

The Croatian economy started to recover from late 2014 onwards and economic growth intensified in 2016 and 2017 what increased demand for the workers on the labour market. This was particularly observable in sectors which went through a strong expansion (e.g. tourism), as well as in labour-intensive sectors that suffered from the lack of workforce especially (e.g. construction and partially in agriculture). As explained above, many previous seasonal workers (especially those based in continental parts of Croatia) in tourism, construction and agriculture opted to move and seek jobs elsewhere in the EU. This affected both skilled and non-skilled work.

On the other hand, Croatian employers did not react to such labour market conditions by offering significantly higher wages, more job security or improvements in working conditions. On the contrary, after labour law flexibilisation through 2013 and 2014 working conditions there has been a strong increase in temporary employment contracts in Croatia. According to Eurostat, temporary employment in Croatia as a

percentage of the total number of employees increased from 13.3% in 2012 to 20.3 % in 2015, which placed Croatia amongst EU leaders for temporary employment growth during this period. It seemed a rational reaction for many young workers, who faced difficulty finding appropriate and reasonably secure employment in Croatia, to seek similar but better paid jobs in Germany, Austria, Ireland and other EU countries.

The evidence above does not suggest that economic growth is unimportant. Indeed, a Eurofound study which focused on understanding the impact of return migration (2012) supports the finding that it is economic conditions which are the main factor taken into account by workers when making decisions; this highlights the fact that this factor is a push-pull issue.

However, along with the factors above, the understanding of economic conditions requires further, more detailed information. Verwiebe et al (2010) identified that whilst income maximisation is a key issue for both employed and unemployed movers, the calculation also includes consideration of costs they are likely to incur. The cost of vital services may be determined nationally – or at least exhibit little regional variation - (and greater degrees of variation across different Member States) were found to be important in the decision to migrate to another Member State rather than to another, more prosperous, region within the origin Member State. This includes a wide range of item costs, for example, the cost of utilities and the cost of education for young people were found to be contributory factors in the decision of movers from Germany moving to another Member State.

In relation to the costs of migration the case studies research undertaken for this project identified that in Romania, some policies are in place intended to facilitate mobility to regions with greater employment opportunities. For individuals taking up specific jobs more than 50km from their home, financial supports for relocation are available. No data was provided on how many individuals take this up but it is an indication of activity to retain workers.

These last factors further demonstrate the complexity of such decisions because it noted by Verwiebe et al (2010) that movers from Germany often explained migration drivers were for them often a combination of factors. For example, their age combined with their partner's circumstances; their age combined with their understanding of their prospects in a particular sector; their age combined with gender in certain sectors.

Additionally, where movers make broad judgements regarding their perception that there is a better working atmosphere in another country, this is understood to be a contributory factor in the decision to migrate to another EU Member State rather than to another region. In the case of the Verwiebe et al study (2010), workers made particular mention of deteriorating working conditions in Germany.

Overall, the decision to move to another Member State rather than another region in their own country remains an economic opportunity-cost calculation. However, the key determinant in deciding to move to another Member State would appear to be where the key concerns of potential movers relate to factors determined by national level differences.

3.2.2.1 Summary of key messages

A key challenge in answering this question is the absence of systematic comparable data regarding the number of individuals moving from less to more economically dynamic regions in a given Member State. The available studies on this issue indicate that a significant number of individuals do indeed migrate to economically more affluent regions in the same country. For those who prefer to migrate outside their own country, the reasons are varied as discussed elsewhere in this section. In these cases, there can be underlying concerns or motivations which cannot be addressed by seeking employment in the same country. This can be linked to negative economic trends

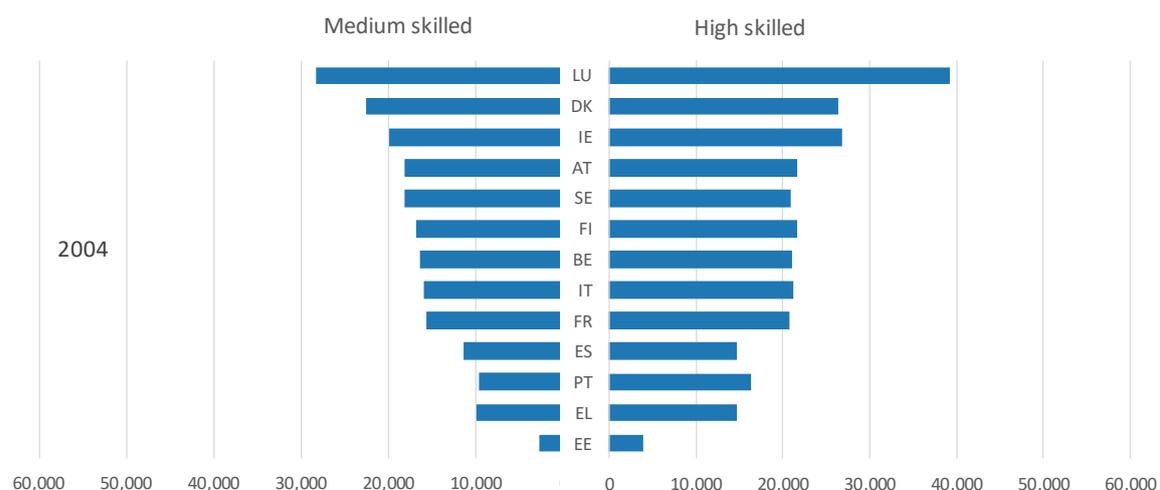
affected the whole country; more attractive employment opportunities or wages in other countries; concerns regarding working conditions or the institutional framework which affect the whole country and cannot be addressed by moving to a more dynamic region in the same country, amongst other things.

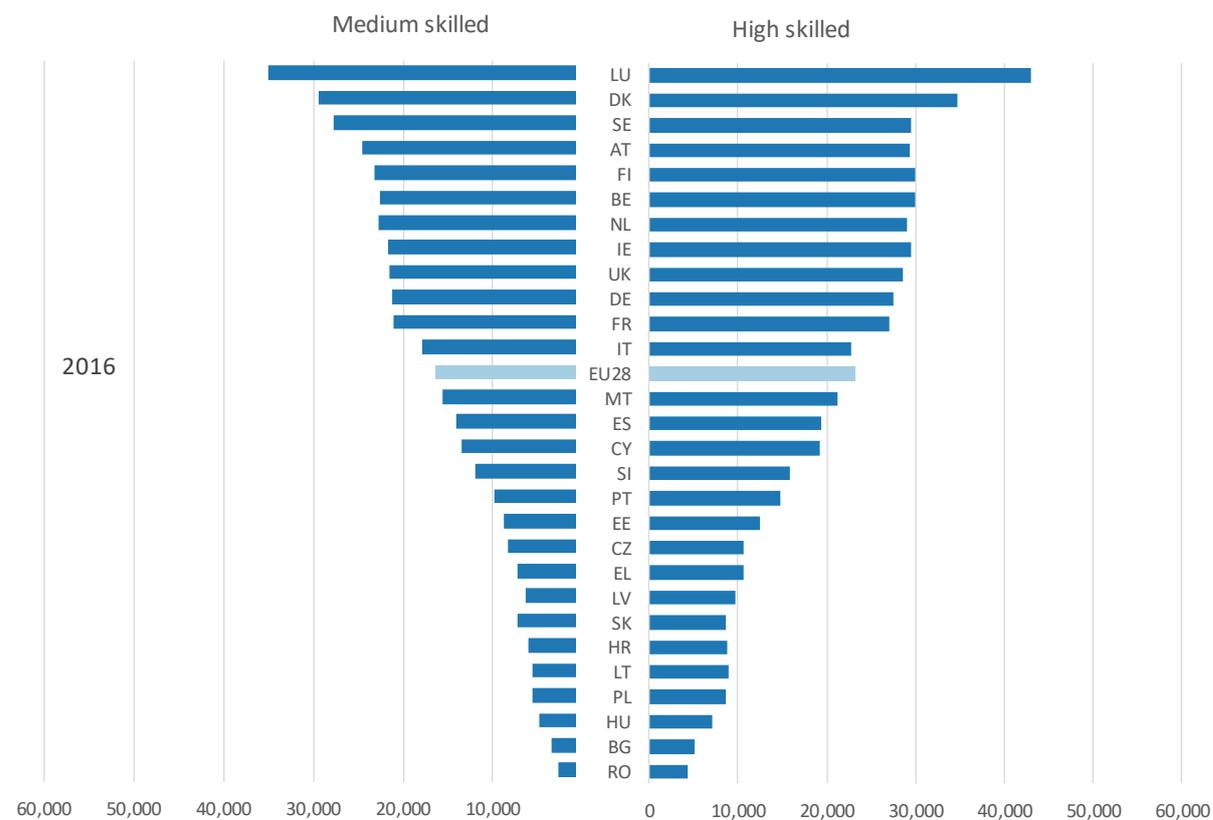
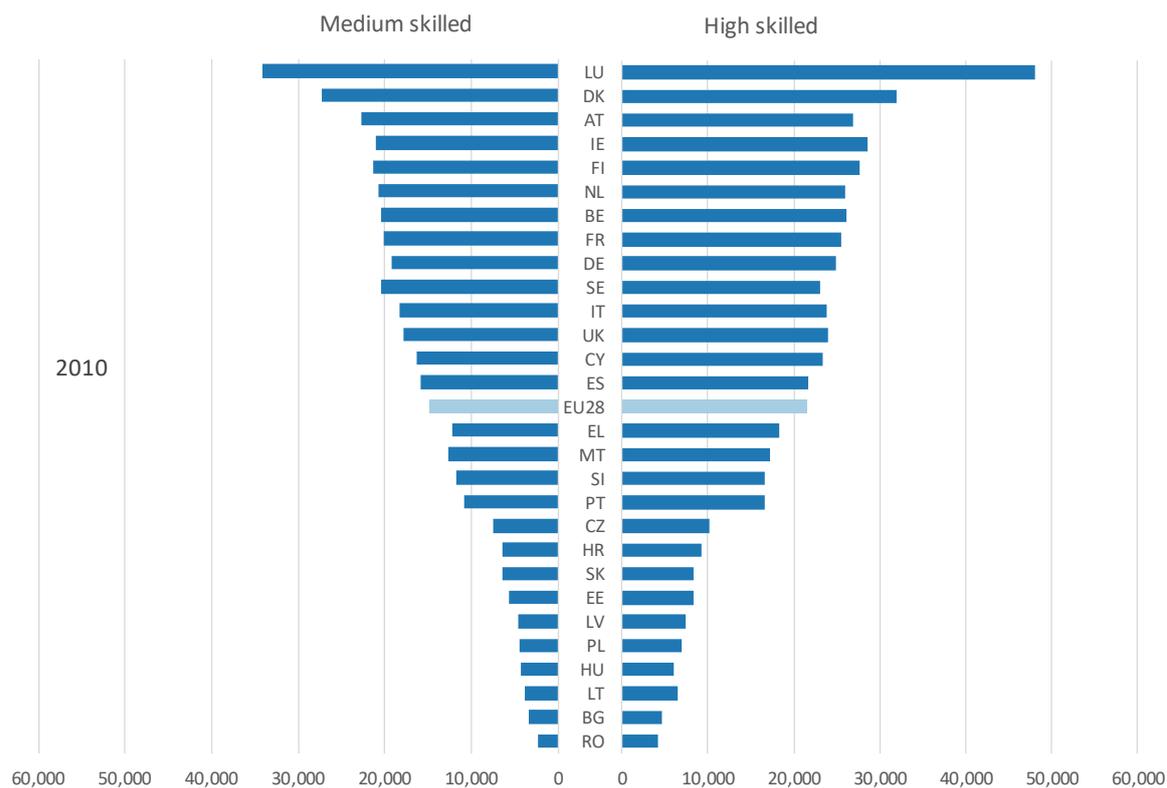
3.2.3 How much increase in wages is necessary to motivate mobility into a job for which one is overqualified?

In order to answer this question a range of sources are presented; firstly, we outline the key differences between income levels in Member States, presenting available data for medium and high skilled residents. This is useful because it sets the context in terms of the wage differential between Member States. Following this we discuss the available evidence on the degree to which wages motivate mobility and some of the estimates that have been established to quantify the required wage premium motivating mobility.

Figure 38 below shows the median income for medium and high skilled population for each Member State, without reference to citizenship. The figures below indicate that in 2004, within countries, education had a positive effect on earnings. The distances between countries in income are explained by the differences between countries in the level of national economic development according to the GDP per capita of each country. Most of the outgoing countries were at the bottom of the sample whilst the outgoing countries are at the top. The sample of countries increased for 2010 and 2016. The figures for 2010 and 2016 indicated a considerable contraction in the mean income for those countries at the bottom compared to 2004.

Figure 38. Median income by educational attainment level per Member State in 2004, 2010 and 2016





Source : Eurostat EU-SILC Survey [ilc_di08]

Notes: Data includes ages 18-64. Limited information available for countries in 2004. Skilled includes 'Medium skilled' (corresponding to ISCED 3-4 (i.e. upper secondary)) and 'High skilled' (corresponding to ISCED 5-8 (i.e. third level)).

In seeking to understand the extent to which these issues motivate mobility and the required wage premium to motivate mobility, the literature review has identified some interesting evidence relevant to this study question, although it does not provide specific data or comprehensive coverage of all EU Member States. It is also noted that the issue of mobility concerns both outward and return migration, with such decisions also impacted by the multitude of factors discussed above.

It is worth reflecting that the economic crisis acted to depress or constrain wages across Europe. As such, wage differentials did not change in significant ways enabling statistical analysis which would lead to a meaningful understanding of the necessary wage premium to motivate mobility. Indeed, as is noted in a number of studies, such as Koehler et al (2010), Eurofound (2012), there was no mass migration of returnees back to countries that had witnessed previous mass outward migration during the crisis. Zaiceva & Zimmermann (2013) note that emigration rates from the destination countries did not 'rocket' as movers have adopted a 'wait-and-see' strategy. As such, the analysis presented for this question is not comprehensive but does discuss available evidence.

A study by Martin and Radu, conducted in 2009, used a range of data to undertake an analysis of return migration to eastern Europe during the period 2002-2007 (specifically for Poland, Hungary, Latvia, Lithuania and Romania), and in 2006 (for Czech Republic, Hungary, Latvia, Poland, Romania and Slovakia). The study was not specifically targeted at high skilled movers but the authors note that the majority of returnees were in fact medium or high skilled. Their findings are therefore relevant to this research question (albeit presenting a pre-crisis understanding). This study found that the returnees were predominantly male, young, unmarried and with a medium or high level of education. In terms of the wage premium for returnees, this was estimated to range from 10 % to 30 %.

A more recent analysis by Guzi et al (2015) undertook an analysis of EU LFS microdata and EU SILC datasets to determine the extent to which there was a relationship between wages and migration. The study found that in the EU-15 countries, non-nationals were more responsive to labour shortages than the native population. Additionally, it was also found that the recession did not have a significant impact on this finding. These findings support the notion that wages are a motivating factor for movers because the study also found that immigrants were more responsive to labour shortages than natives in welfare-generous social-democratic welfare states compared to more frugal, liberal welfare states.

Interestingly there is some evidence of a gender dimension to the wage premium for returnees. Hazans (2008) undertook a specific analysis of the situation of returnees in Latvia. The author found that there was indeed a significant earnings premium for returnees in Latvia after having accounted for demographic characteristics, human capital and experience abroad, which is larger for men than women (more than 20 % versus 6 %). He also shows that this earnings premium is caused by foreign work experience.

Czaika and Parsons (2017) undertook some analysis of policies aimed at attracting high skilled workers (mostly related to attracting workers that require specific work permits) in ten OECD countries (Australia, Canada, Israel, New Zealand, the United States, Switzerland, the United Kingdom, Norway and Sweden and the Republic of Korea). Overall this study found that points-based systems were most effective in attracting high skilled movers. Of direct interest to this research question however is the study finding that a rising skill premium - understood as the difference between high skilled wages in origin and destination countries - increases the flow of high skilled movers. Specifically, they calculate that an increase in wages of 10 % is associated with an increase in high skilled immigration flows of between 7 % and 11 %, the study also found that that diaspora plays a role in facilitating migration; a 10 % increase in the size of the bilateral migrant community is associated with an increase in high skilled flows of more than 1 % along the same migrant corridor.

It must be noted however that these studies did not directly engage with returnees to assess the degree to which such premiums were motivating factors in their return. Interestingly Hazans (2008) also found that, on average, returnees less likely than natives that had not migrated to become employees but rather demonstrated greater propensity to switch to self-employment.

Additionally, on the issue of return migration Zaiceva & Zimmermann (2013) undertook a study of return migration during the crisis. They found that during the crisis there was some heterogeneity across countries: with emigration slowed down in Poland and Romania, and return and circular moves increased, emigration has increased and return migration diminished in Latvia, whilst the impact of the crisis was minor in Hungary. Regarding characteristics, they found that returnees were middle-aged (under 45), single, male and employed in low skilled jobs abroad, including those with higher education, thus suggesting that overqualified individuals prefer to come back, and pointing towards the potential danger of brain-waste. They found that many movers are underemployed abroad. As such their return has wider societal benefits for their country of origin and also particular benefits for them as they are more likely to be employed and paid at a level that is commensurate to their level of skill and experience.

Varga, J. (2016) analysed the emigration and attrition of physicians and dentists in Hungary before and after EU accession (2003 and 2011). He found that relative labour income exercised a significant effect on the emigration decisions of young medical doctors, namely those under 31 years old, as was also the case for the 31-40-year-olds. In these age groups, it was found that the lower the relative income of the medical doctor, the greater the probability of emigration. In relation to retaining workers, he also found labour income to be a decisive factor in migration decisions. The study estimates that a 1 % increase in relative labour income (income compared to the national average) decreased the probability of emigration by 6 %.

Further to this, evidence gathered in the case study on the health sector conducted for this study provided insight into the importance of wages in decisions to move. This is outlined in the box below:

Evidence of wages as a push-pull factor in the health sector

Wages are an important push or pull factor for any worker. Health professionals move from countries where wage differentials exist with other countries. For example, Chiscop (2013) notes that in Romania an estimated 10 % of all physicians have left for western Europe since 2007, "...where they can earn salaries that are 10-times higher and work in more dynamic, competitive environments." Wages in the Romanian health sector are not only low compared to their western European counterparts, but also compared to other public-sector jobs in Romania. Varga (2016) notes that pay for medical doctors in Hungary declined during the recession. Graduate medical doctors in particular are paid less than graduates from comparable studies but who work in industry. In particular, young doctors experience low pay as they are not able to top their low base pay with the same levels of 'thank-you money' (used in many central and eastern European) as their seniors.

On the other hand, increasing salaries can be a reason to return; in a response to concerns on the outflow of healthcare professionals, several new Member States increased the salary of their health professionals. In Estonia and Poland, this increase coincided with a fall in the number of health professionals applying for recognition of their qualification to work abroad (Kautsch & Czabanowska, 2011; Saar & Habicht, 2011).

Further evidence in relation to the medical profession in Hungary shows that there is evidence that expected wage gains do not always transpire as movers expect (European Centre of Expertise, 2018). It was noted that a study of doctors from Hungary working

abroad by Hárs & Simon, (2016) found that their wage gains were double what they would have been paid in Hungary. However, the study also stated that doctors in Hungary had expected the wage gain to be six times that offered in Hungary. This is interesting in the context of the data presented above, raising the possibility that the actual wage premium evidence presented above is not necessarily what it takes to motivate workers to move abroad but rather they are motivated by expectations of greater premiums. This report identified the fact that there is significant underemployment of skilled movers – this finding may provide further evidence of this phenomenon.

3.2.3.1 Summary of key messages

- Wage levels clearly have an impact on migration decisions, with most of the outgoing countries having wages below the EU median, whilst most in most of the destination countries wages are higher.
- Estimates on the required wage premium for migration vary (and are not directly comparable):
 - It is estimated that an increase in wages of 10 % is associated with an increase in high skilled immigration flows of between 7 % and 11 %²⁹;
 - It is estimated that the wage premium for returnees was estimated to range from 10 % to 30 %³⁰. Further research found that in Latvia there was a wage premium for returnees that was larger for men than women (more than 20 % for males compared to 6 % for females)³¹;
- In terms of preventing migration, it is estimated that a 1% increase in salary (relative to the national average) decreased the likelihood of emigration by 6%³²;
- There is clearly a significant level of variation between sectors – in Hungary doctors were paid twice the salary than they would have been paid at home (although some had expected six times the salary).

3.2.4 Are there other factors that drive the movement of skilled labour?

Apart from all of the factors discussed above, Nowotny (2015) raises the issue that high skilled individuals tend to show a particular interest in participating in the political process; access to citizenship of their destination country is therefore important to them. Highly skilled movers are therefore more attracted by countries which offer favourable conditions concerning political participation and access to nationality than low skilled movers. The same study points to the size of the migrant network making certain regions more attractive to movers from the same country.

Family reasons are also often quoted as drivers for migration. This relates both to the desire to improve the overall financial position of the family and quality of life, as well as to join other family members already living abroad.

3.2.4.1 Summary of key messages

Other factors such as active citizenship opportunities (disenchantment with public institutions or political processes at home) and family reasons are also important factors influencing migration. Better opportunities to engage in public life and less (perceived) corruption in the new country are particularly important motivations for high skilled movers.

²⁹ Czaika and Parsons (2017).

³⁰ Martin and Radu (2009).

³¹ Hazans (2008).

³² Varga, J. (2016).

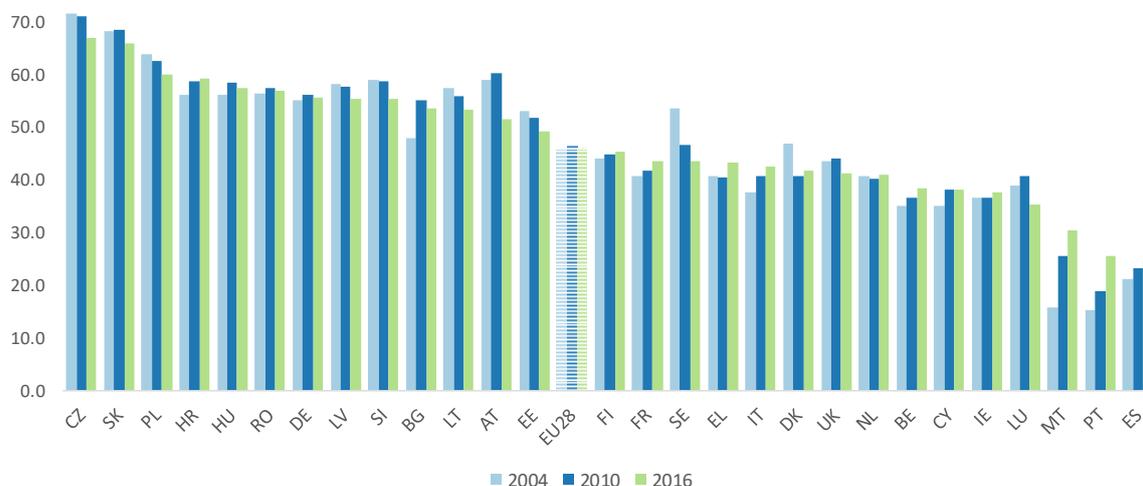
3.2.5 Does education and training influence skilled labour flows: what proportions of people who study or train abroad stay on to work there (stay rates), and who are these people (stay profiles)?

Figure 39 and Figure 40 below present education attainment amongst the population focusing respectively on upper-secondary and post-secondary non-tertiary education attainment (i.e. ISCED Levels 3 and 4 aggregated in to medium skill level) and tertiary education (i.e. ISCED Levels 5-8, aggregated to high skill level) for each EU-28 Member State in 2004, 2010 and 2016.

These figures show that most of the outgoing countries have seen a sustained increase in educational attainment rates, in particular in tertiary education. However, this is also the case for destination countries such as the United Kingdom, Germany and Belgium. There is no clear association between being outgoing / destination country and the trend of attainment rates. For the high skilled, several outgoing countries from both the south and central-east of Europe are below the EU average but some, such as Latvia and Lithuania, are above the average for both upper secondary and tertiary attainment rates.

Nevertheless, the fact that outgoing countries had a positive trend in attainment level could support the explanation that investment in human capital enables those with higher skills to move abroad, although it does not guarantee that they will be rewarded with higher pay (should that be their motivation). What can be stated is that it appears education is an enabler of migration. To some extent, education can be a push factor if this raise people expectations of career prospects.

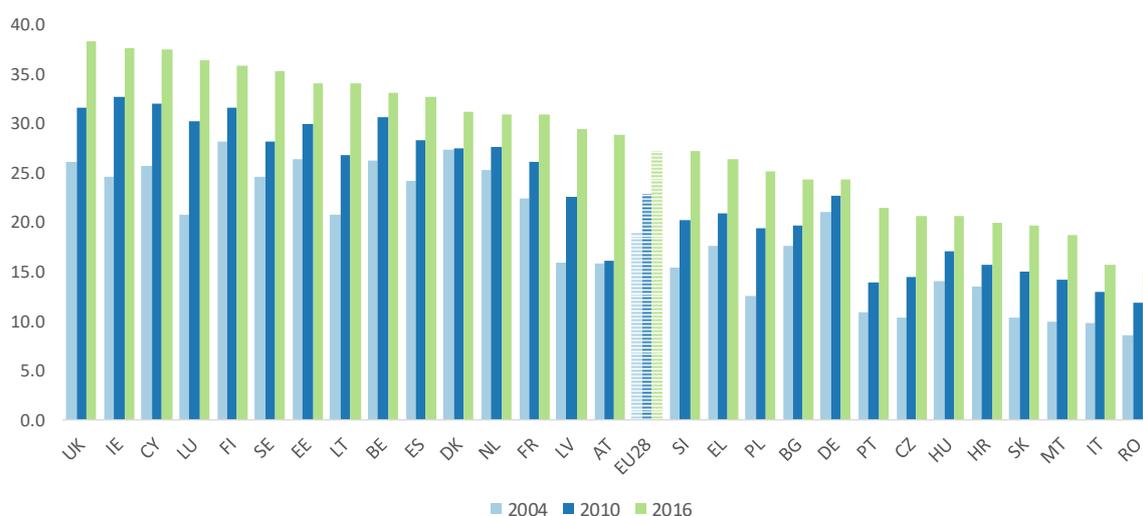
Figure 39. Upper secondary and post-secondary non-tertiary education (Levels 3 and 4) attainment rates in 2004, 2010 and 2016



Source: Population by educational attainment level, sex, age and country of birth (%) [edat_ifs_9912]

Notes: Data includes ages 15 to 64.

Figure 40. Tertiary education (Levels 5-8) attainment rates in 2004, 2010 and 2016



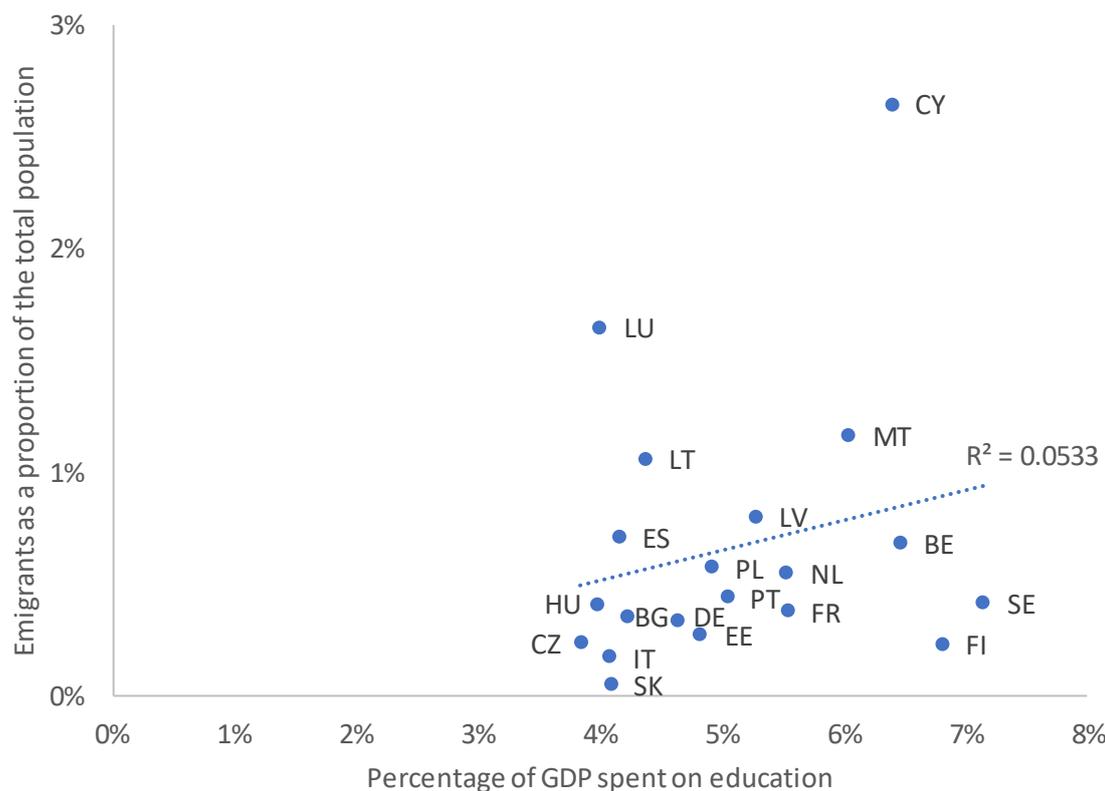
Source: Population by educational attainment level, sex, age and country of birth (%) [edat_ifs_9912]

Notes: Data includes ages 15 to 64.

Figure 41 below is a scattergram; the x-axis shows the correlation between education spend (expressed as the percentage of GDP spent on education) and, on the y-axis, emigration (as a proportion of the total population, to provide a more standardised measure of emigration that takes into account population size). The dotted line is a trend line and the R^2 value provides information on how well the variables along the x- and y-axis explain variation around the mean, ranging from 0 to 1. Each dot in the scattergram represents a country in 2014 (except for FR, for which emigration data is for 2013, and EE and HU (expenditure data is for 2012 and 2013 respectively). Emigration as a proportion of the total population is calculated by dividing the number of reported 15 to 64-year-old movers from a country by that country's total population.

Although the direction of the correlation is positive -which means it does appear that, as Member States increase expenditure on education (as a share of GDP), outward migration is likely to increase - the correlation between these two variables is not strong, as shown by the R^2 far below 0.5. Both the direction and strength of the correlation might also be affected by Luxembourg and Cyprus, which are outliers. However, the graph shows some cluster of countries with those Scandinavian and northern European countries with low emigration rates and high levels of expenditures in education as a share of GDP. Most outgoing countries are below the line, with both low public investment in human capital and high emigration rates. It is important to note that this figure does not include private expenditure on education which change the picture to some extent.

Figure 41. Correlation between the percentage of GDP spent on education and emigration as a proportion of the total population



Source: Eurostat data on public expenditure on education by education level and programme orientation - as % of GDP [educ_uoe_fine06] and; Emigration by age group, sex and citizenship [migr_emi1ctz] and; Population on 1 January - total (Population on 1 January - total).

Notes: Data is for 2014 except for FR (emigration data is for 2013), EE (expenditure data is for 2012) and HU (expenditure data is for 2013). Emigration as a proportion of the total population is calculated by dividing [migr_emi1ctz] estimates (emigration by 15-64-year olds) by the total population (i.e. all ages) on 1 January [demo_gind].

Figure 42-Figure 44 below, show analysis of an extrapolation from EU LFS microdata. This shows the weighted numbers of respondents to the EU LFS who were EU-28 citizens with a different citizenship than the country of residence (i.e. EU mover), had lived in the host country for more than a year and were a student the year before the reference year. They are indicated as 'stayers'. In addition to this, information is provided on the proportion of these stayers who are working ('working stayers'). It must be noted that the number of respondents with these characteristics are so small that reliability of estimates can be problematic to the extent that some countries had to be excluded from the presentation. Other included estimates have low reliability and should be interpreted with caution. Another possible limitation of these figures is that whilst respondents indicated their status in the previous year was that of a student, we have no information on the length of study. The results are presented in three figures, in which countries are grouped by the number of these stayers. Grouping together countries of similar scale visually provides a clearer picture. Within these groupings, countries are ordered alphabetically. Estimates for some years were not reliable and had to be omitted, hence some years in the series are missing for particular countries. The light blue vertical bars represent the number of stayers. A patterned vertical bar indicates that this estimate has low reliability. The dark blue horizontal stripes intersecting with the vertical bars

indicate the number of these stayers who were employed (the proportion is also provided in the figure). If this horizontal stripe is light-coloured and dark lined, it indicates that this estimate has low reliability.

The figures suggest that individuals completing tertiary education in another Member State are likely to stay, particularly in countries with dynamic labour markets. The United Kingdom, Netherlands and Sweden, for instance show rates of staying movers, who have finished their studies, of around 40 % or higher, albeit the reliability of some of the data is poor. In some cases, national-level data is available to triangulate this. For example, the UK ONS Survey of Graduating International Students shows that in 2017 half of EU international respondents were planning to stay in the UK (8.7 % had already obtained a job in the UK, 25.5 % were planning to look for a job in the UK and 13.7 % were planning to continue their studies in the UK).³³ The experience does appear to vary by sector though. The box below outlined evidence identified as part of the case studies undertaken for this research:

Education, training and migration flows in the health sector

One qualitative study on the motivations and experience of health professionals who migrate to the United Kingdom finds that most interviewees did not have immediate plans to return to their country of origin (Young et al, 2014). However, these interviewees had been in the country for a long time at the time of the interview. Generally, interviewees in this study moved to fulfil a specific goal, such as training, but then remained in the country.

Whilst there is general mobility of medical students (specifically to neighbouring countries), they are less likely to stay in a host country following graduation. This poses a particular issue for the health workforce planning for countries that see high inflows of medical students. This is the case for Belgium which sees high inflows of Dutch and French students who are bypassing the cap on intakes of medical schools in their own countries, as well as the cap that applies to Belgian students of medical and health-related studies. In Wallonia, a 30 % quota was introduced for non-resident students enrolling on particular medical and paramedical courses. Safuta and Baeten (2011) point out that the high inflow of foreign students must have a significant impact on the education budget, and that this must have played a role in the introduction of these quotas. There is a similar concern for Austria which experiences a high inflow of German medical students (Glinos et al, 2011). In response to these concerns, Austria implemented quotas to ensure that 75 % of available places at Austrian universities were filled by Austrians (Offermanns et al, 2011).

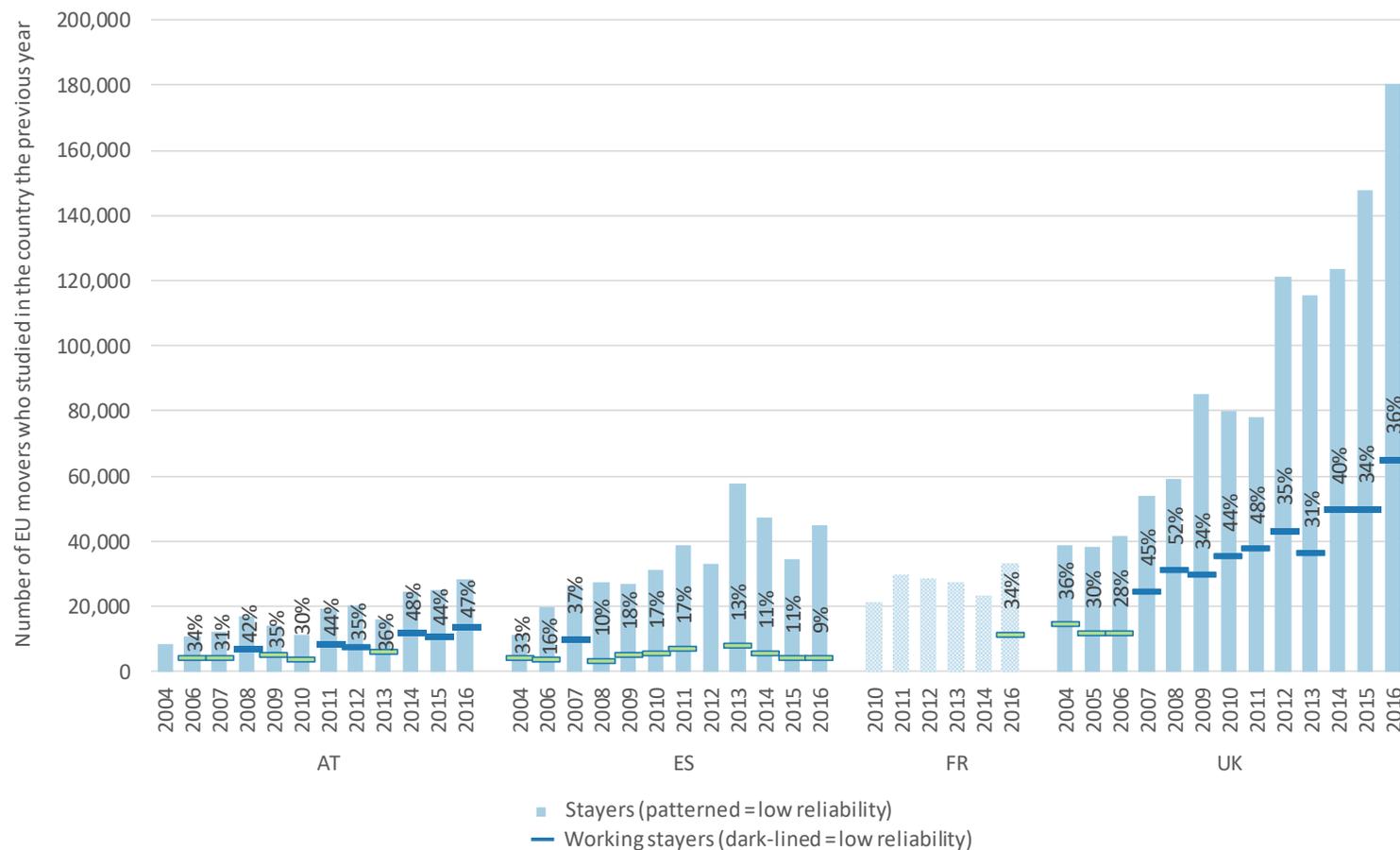
A recent report, from the Dutch KNAW (Koninklijke Nederlandse Akademie van Wetenschappen; Royal Dutch Academy of Science), into the attractiveness of the Netherlands as a country for academic research, finds that over recent years it has been a country of brain circulation -every year, as many researchers enter the country as leave it. Researchers enter the country predominantly from Italy and Germany, whereas researchers leaving the country move to Germany, the UK and the United States. According to the report, the availability of Dutch and European research grants enables this circular mobility of researchers. The report also finds an effect on labour mobility. For example, over 90 % of laureates of the NWO's Talent Scheme (Nederlandse Organisatie voor Wetenschappelijk Onderzoek: Dutch Organisation for Scientific Research) stay to work in the country. The study also explores push and pull factors for these EU mover researchers through interviews. It finds that the most important factor is availability of research funding and 'intellectual freedom' to spend this budget. Other

³³ ONS data available from:

<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/surveyofgraduatinginternationalstudentsuk>

factors mentioned as keeping or 'pulling' researchers to the Netherlands are "general quality of research, research infrastructure, NWO's Talent Scheme, worklife balance, and the quality of primary and secondary education" (KNAW, 2017). The study also explores push factors in the Netherlands and finds that important factors are the lack of budgets "for curiosity-driven research [...], diversity to pursue a wide range of research and the overall amount of long-term funding that is available" (KNAW, 2017).

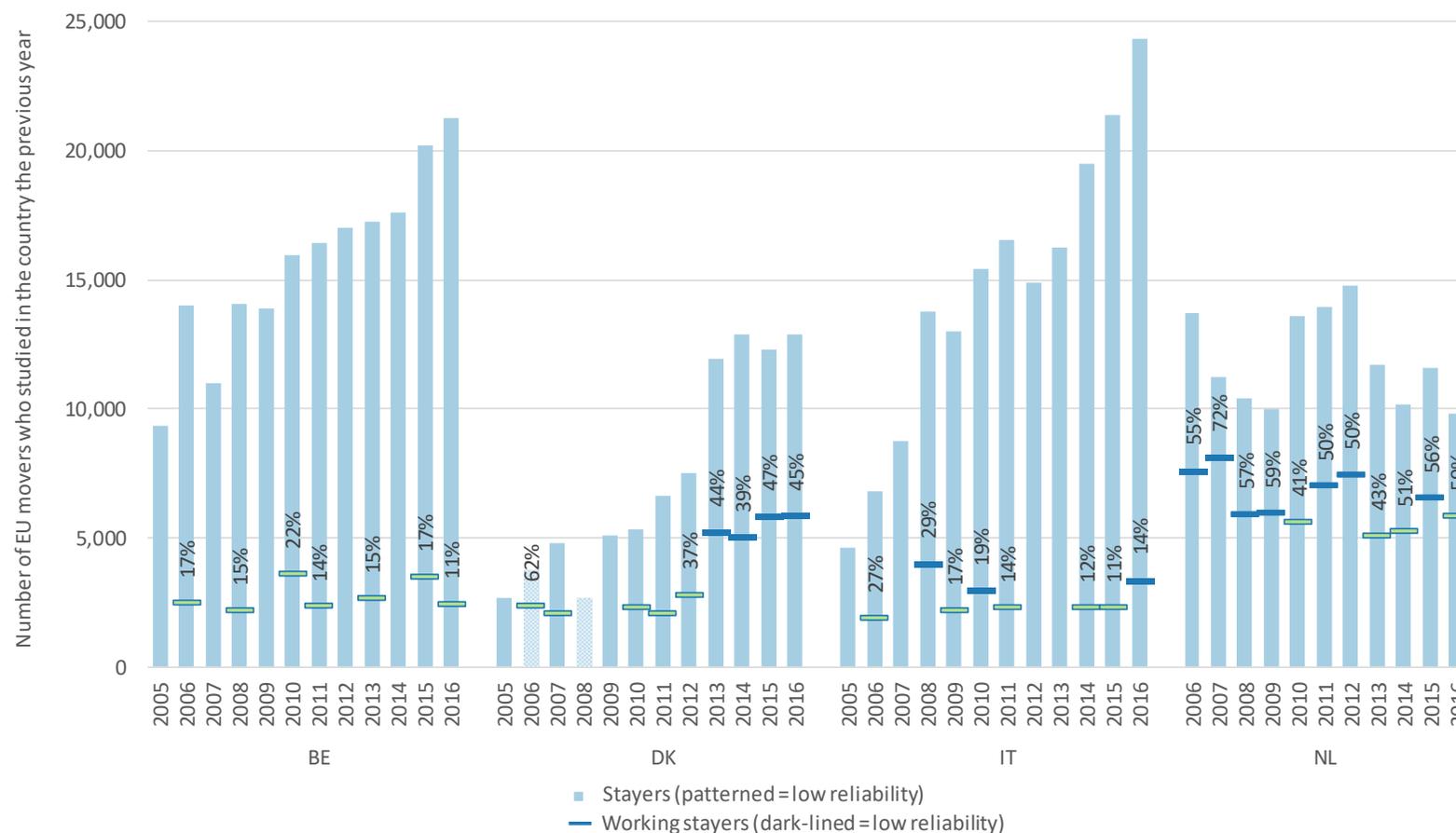
Figure 42. Number of EU movers who studied in the country the previous year and stayed there, and the proportion who are employed (countries with more than 25 000 EU migrant students who stayed in the host country within a year of graduating)



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary). High skilled corresponds to ISCED 5-8 (i.e. third level)). Data for 2004 to 2008 does not include Malta. Figures omit data points that were unreliable. Dot-patterned vertical bars and light horizontal bars that are dark-lined indicate low reliability

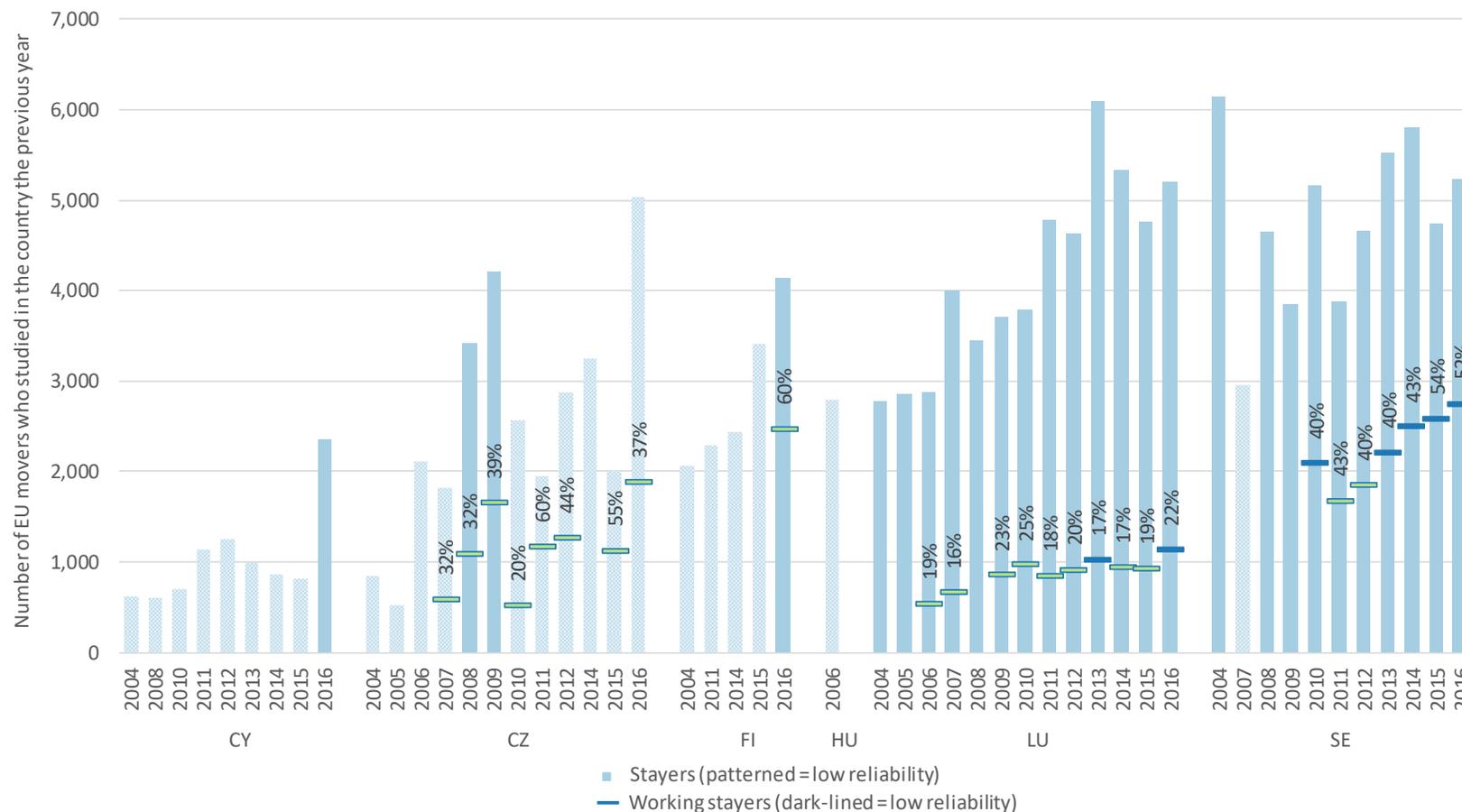
Figure 43. Number of EU movers who studied in the country the previous year and stayed there, and the proportion who are employed (Countries with 7,000 to 25,000 EU migrant students who stayed in the host country within a year of graduating)



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary). High skilled corresponds to ISCED 5-8 (i.e. third level). Data for 2004 to 2008 does not include Malta. Figures omit data points that were unreliable. Dot-patterned vertical bars and light horizontal bars that are dark-lined indicate low reliability.

Figure 44. Number of EU movers who studied in the country the previous year and stayed there, and the proportion who are employed (countries with fewer than 7,000 EU migrant students who stayed in the host country within a year of graduating)



Source: ICF analysis of EU LFS microdata.

Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary). High skilled corresponds to ISCED 5-8 (i.e. third level)). Data for 2004 to 2008 does not include Malta. Figures omit data points that were unreliable. Dot-patterned vertical bars and light horizontal bars that are dark-lined indicate low reliability.

Longitudinal analysis of stay rates and working stay rates from Nuffic, the Dutch organisation for internationalisation in education, measures (working) stay rates of three cohorts (2007, 2008 and 2009) of graduates at four different moments in time; one, two and three years after graduating. It shows that across cohorts, 62-68 % of students from the European Economic Area stay in the Netherlands one year after graduation ('stay rate') and 25-29% are working ('working stay rate'). The stay rate declines three years after graduating, although the working stay rate increases (to 40-47 % of the cohort with working stay rates of 26-31 %). The stay rate continues to decline until the last measured point seven years after graduation, at which point 30% remain in the country with a working stay rate of 23 % (Nuffic, 2016).

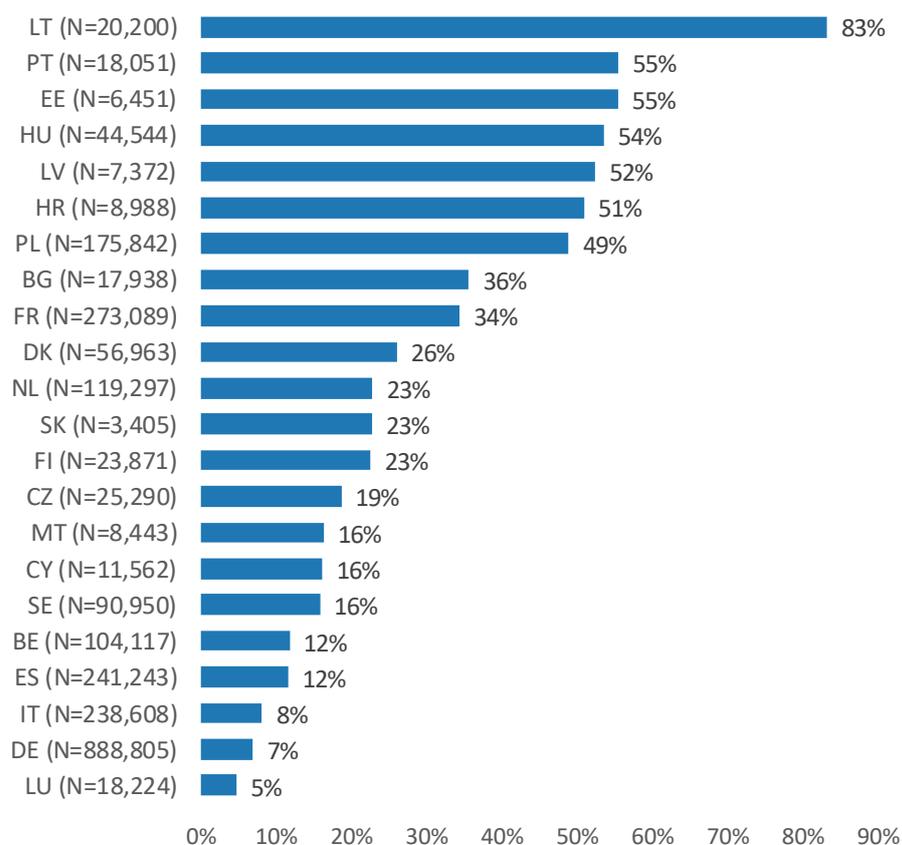
3.2.5.1 Summary of key messages

- The association between public expenditure in education as percentage of GDP and emigration is weak, which suggest that other factors impacting upon emigration rates are more instructive. Having said that, gaining a degree in higher education in a destination country leads to relatively higher stay and working stay rates, particularly where the labour market situation is favourable.

3.2.6 Mobility of skilled people also brings benefits. Annual return flows are very important. What are the necessary conditions to maximise the benefit of return moves?

The next figure (Figure 45) presents the proportion of movers coming into a country who have the citizenship of that country, i.e. returnees. The figure is an average based on the number of movers and their broad category of citizenship for three years (2013, 2014 and 2015), excluding movers whose citizenship is stateless or unknown. The underlying data to this figure does not distinguish skill level. Also, some countries are missing as data was not available.

Figure 45. Average proportion of movers with citizenship of the reporting country for 2013-2015



Source: Eurostat data on immigration by age group, sex and citizenship [migr_imm1ctz]

Notes: Numbers in brackets are the average yearly intake (average across 2013 to 2015). Data includes ages 15-64. No information is available prior to 2013. No skills distinction. The following reporting countries structurally have information missing and have been omitted: IE, EL, AT, RO, SI, UK

The figure above (Figure 45) shows which countries have experienced the most significant rates of return inflow between 2013 and 2015. This shows greatest shares of Lithuanian, Portuguese, Estonian, Latvian, Croatian, and Polish returnees within the overall flow of movers to those Member States. Indeed, outgoing countries appear to have the highest shares of return movers. This is perhaps not surprising given the high outflows of natives from those countries.

The wider evidence base provides some of the key issues which determine return flows. An understanding of this issue must be placed within the overall discussion of push and pull factors that are discussed previously in this section.

In terms of understanding the conditions which act to motivate returns to countries of origin, it is interesting to reflect that the evidence available does not immediately identify economic conditions as the key factor in migration decisions. For example, a Eurofound study on EU labour mobility (2012) found that, in Poland, those that had migrated from Poland to other parts of the EU were most likely to wait for the end of the crisis, perhaps accepting lower wages and/or working part time, or making use of the available benefits when becoming unemployed. The study also found that, in the case of Romanian movers, a waiting strategy was used. Though it is noted that higher eventual incomes were a significant factor in the decision not to return to country of

origin. Evidence from the Bulgarian case study echoes this. It cites evidence that the number of Bulgarians returning home is increasing in recent years, which is linked to high economic growth, increasing employment, and a reducing income gap and standard of living between Bulgaria and Western European countries.

Zaiceva & Zimmermann (2013) note that return migration is usually beneficial for the home countries, as returnees bring new skills and competences, increase the overall human capital, and enhance productivity and employment. Such 'brain-gain' or 'brain circulation' counteracts the negative 'brain-drain' effects of the emigration of highly skilled individuals. This is expected to generate positive effects for the country of origin's labour market and overall growth prospects, including indirectly the 'incentive' effect -raising the average schooling of stayers in the home country. Outgoing countries also benefit from remittances, particularly from temporary movers who plan to return. Finally, through network effects return (and repeat) migration may enhance trade and investment with host countries, especially in the case of skilled migration. A key implication is that migration policies are extremely important, and the less restrictive they are the more likely movers are to engage in return and circular mobility (Constant and Zimmermann, 2011)

It is also the case that policy has a significant part to play in establishing legal and practical tools which guarantee the rights and status of movers (regardless of whether they are outward or return movers, but this is clearly important in the case of movers that were motivated to migrate due to such factors). Cassarino, 2008 identifies this as a key issue in the context of European freedom of movement and its extension to more countries through EU expansion. Significantly however, other policy and legal tools are important; for example, Member State implementation of EU worker directives, mutual recognition of qualifications through publicity for equivalence frameworks and softer measures such as cultural exchange activities are important in improving understanding and linkages between Member States. This is important for smoothing transitions and increasing the potential flow of circular mobility (Verwiebe et al, 2010)

Klein-Hitpaß, K. (2016) provides an example of the potential wider impact that return movers can have; the author considers that for Poland, high skilled return movers initiated an institutional change by transferring organisational knowledge. This process fostered the transformation of the Polish economic system from a socialist planned economy to a democratic market economy. The empirical results show that high skilled return movers bring new knowledge and institutional changes to a given regional context and by doing so are able to contribute to a knowledge-based regional development.

Additional evidence from the case study of Poland conducted for this study found that, interviews showed a greater majority of re-movers indicate that work abroad allowed them to develop soft skills. These skills made them more entrepreneurial, independent, sure of their capabilities and allowed them to gain confidence in their own strength (Gmaj, Małek 2010, Kozielska 2013). This potential can be utilised by persons returning from abroad for use in the labour market as well as in their social life.

Results of studies show that entrepreneurship of individuals returning to their own country measured by their inclination to start their own businesses is high. Amongst the returning persons with higher education the percentage of entrepreneurs is significantly higher than amongst persons with lower attainment in education. Regional studies conducted in śląskie province also indicate a large entrepreneurial potential amongst the returning movers. Every fourth person returning to this province declared that it has an idea for starting a business (Szymańska et al. 2012).

The Labour Market Policy Thematic Review identified the importance of modern media in maintaining connections between movers and their country of origin in Italy (European Centre of Expertise, 2018). In the case of Italian movers, it was argued that, when compared to previous generations (e.g. those of the Italian Gastarbeiter in Germany during the 1950s, which recorded a 90 % return rate), Italian movers seem

nowadays more likely to stay abroad. One reason seems to be the ease with which they can stay in touch with their family and friends, using new media, and improved physical transport links which promote the possibility to return to visit more often. Interestingly, the Eurofound study on return migration (Eurofound 2012) found that the way in which movers process and interpret economic, social and political factors in their country of origin, and the extent to which these factors act to influence workers abroad, is facilitated and influenced by the availability of reliable information, increasingly accessed through media and social networks. This again is something which has clear implications for policy makers.

3.2.6.1 Summary of key messages

- The return of skilled labour can bring organisational change and innovation and represents an alternative way of importing knowledge.
- The necessary conditions for return migration cannot be understood in isolation from the push and pull factors identified earlier in this report.
- A range of context specific judgements are made by potential return movers, this includes economic considerations (including job vacancies and relative wage levels) but also framework conditions such as legal protections.
- Access to information and maintaining contact with relatives and friends in countries of origin is important in maintaining a connection and promoting the possibility to return.

3.2.7 What are the effects of the skills movement, on the outgoing and destination Member States?

The literature review provides some interesting evidence which can be discussed in relation to this research question. When discussing the impact of skilled migration there has been widespread use of the term 'brain drain' which emphasises perceived negative effects of skilled migration for outgoing countries and benefits to destination countries. More specifically this is understood as a loss of resources for outgoing states and therefore as both a consequence and a cause of underdevelopment. Iravani (2011) defines brain drain or human capital flight as "a large emigration of individuals with technical skills or knowledge, normally due to conflict, lack of opportunity, political instability or health risks." This definition characterises the wide range of issues involved and highlights the difficulty in measuring the concept and the effects on outgoing and destination countries.

For outgoing countries, one of the key impacts, and indeed one of the most relevant impacts in terms of EU skilled migration, is a loss of human capital. In this respect Albano (2012) identifies that, from an economic perspective, "brain drain occurs when highly skilled migration reduces the growth rate of human capital of individuals who remain in the country of origin, creating a permanent reduction in the level of income per capita in the country of emigration whose amplitude is proportional to population that migrates: the population that remains consists of individuals less skilled and thus accumulate less human capital than those who emigrated."

As such brain drain, has been characterised as a negative economic cost for outgoing countries, since movers usually take with them the value of their training – usually funded by the government (Ienciu & Ienciu, 2015). Beine, Docquier, and Rapoport (2008) characterise brain drain as the international transfer of resources in the form of human capital which mainly applies to the migration of relatively highly educated individuals from less developed to more developed countries. As such, brain drain has mainly been characterised as detrimental for the country of origin since in the absence of migration the source country would have had a more skilled workforce, and per capita output and national welfare would be higher.

As noted above, there are negative connotations to the term 'brain drain'. Zapata-Barrero et al. (2012) note that social scientists, and in particular, economists begun

challenging this paradigm in the 1990s, stressing also the benefits of skilled migration for outgoing countries, through remittances, the role of diasporas in the economic and political development of origin and host countries, the return (or 'circular') mobility, and the positive consequences of emigration options for the education and training prospects of populations in the regions of departure. This led to the emergence of the notions of 'brain gain' and 'brain circulation / brain flow'.

This has direct interest to this study in relation to the high skilled workers. As identified by Hatipoglu & Sadikoglu (2013) the migration of skilled workers can be associated with some positive effects which may actually compensate the assumed negative effect of the loss of skilled workers. The authors provide an interesting definition of the notion of *brain drain with brain gain*. They note that when an economy is open to migration, workers may have greater incentives for skill acquisition since they have the possibility to migrate to a country where the possible returns to skills are higher. As a result, the proportion of skilled workers in the source country may increase. Provided that not all of the skilled workers migrate, the average skill level of the population left in this economy might increase compared to a state where there is no possibility to migrate. Thus, migration of skilled workers would induce a positive effect on the remaining population.

The fluid nature of migration actually challenges the phenomenon of brain drain through the notion of return migration. Albano (2012) notes that, taking a global perspective, about 30.0 % of those who emigrated return to their country, on average, 15 years from the date of emigration – with about 56.3 % of return movers being high qualified. Indeed, recent statistical analysis by Hatipoglu, & Sadikoglu (2013) found that there is evidence that return migration (along with the human capital augmentation that it brings) does increase the probability of an increase in the average level of human capital and welfare in the home country.

Given these factors, the issue of how outgoing countries and destination countries are impacted by skilled migration may be dependent upon over what time period analysis is taking place and can also be highly sector specific. What can be determined however is that there are undoubtedly negative short-term effects for some Member States and/or particular regions – and conversely benefits for destination Member States and regions in the form of human capital loss / gain as a result of skilled migration. The legacy of skilled migration may not always be wholly negative if one accepts the argument that the possibility of migration through free movement of people raises the overall quality of education and educational institutions.

Kahanec and Guzi (2016) undertook analysis of the extent to which EU labour markets were helped to adjust during the Great Recession by the flow of immigrants. This analysis is interesting because it illustrates that movers are generally more flexible and responsive to labour demand than natives. There are many possible reasons for this but it is important to note that this is a benefit for destination countries, especially at time of economic difficulty – providing greater resilience and enabling post-recession growth. Groups of movers from newer Member States were found to be most fluid during the great recession, with fluidity decreasing with the time spent as resident in destination country.

Further evidence on the complexity of the impacts on outgoing and destination countries is evident if one takes the example of a region. In this study the evidence gathered through the case study of the Baltics is instructive; the box below summarises findings which relate to this study question.

Evidence from the Baltics

The prevalence of working and reproductive-aged individuals from the Baltic countries has significantly reduced the supply of labour and is likely to contribute to the demographic decline the countries are experiencing. It is already estimated that

emigration has caused a decrease in the economic growth in Latvia and Lithuania of 0.6-0.9 % percentage points (Atoyan et al. 2016). In Latvia, the emigration of the highly skilled, in particular, is already hampering growth in certain sectors, like information and communication, where companies experience difficulties in meeting the demand for labour (Ministry of Culture, University of Latvia 2017).

Emigration has lowered growth and slowed income convergence - in 2012, the cumulative real GDP growth would have been 7% percentage points higher for Estonia, 4 percentage points higher for Latvia and 2 percentage points higher for Lithuania in the absence of emigration during 1995–2012 (Atoyan et al. 2016).

The negative effect of emigration, however, can be at least partly neutralised through the inflow of remittances and foreign investments. In 2016 alone, financial transfers to Lithuania from private persons living abroad amounted to 1,156 million Euros, the equivalent of 3% of the country's GDP³⁴ (European Migration Network 2017). In Estonia, remittances in 2016 represented 2.1% of GDP, whilst in Latvia 4.4% (World Bank Indicators).

In EE emigration seems to be contributing mainly to the shortage of healthcare professionals. Overtime work combined with relatively low wages are the main reasons for which Estonian healthcare professional emigrate. Moreover, due to language similarities with Finland, it is quite easy for Estonians to find employment in the healthcare sector there (Interviewee #3). It is estimated that approximately 200 nurses and about 3% of medical doctors leave Estonia every year to work abroad (CEDEFOP 2016). The emigration of skilled labour – although less significant than in the neighbouring Latvia and Lithuania – combined with a declining working-age population and emerging skill shortages, have contributed to an upward trend in wages and will keep wage pressures high in the future (OECD 2017a).

The significant emigration rate that Latvia has experienced in recent years, particularly of young Latvians, has contributed to skill and labour shortages, which in turn have driven wages to grow (OECD 2017b).

Most skill shortages are in the STEM fields, where an estimated 20 000 vacancies are forecasted not to be filled in the near future (Interviewee #4). The situation is particularly concerning in the healthcare and ICT sectors, both professions that are in high demand in Latvia and abroad. Particularly in the healthcare sector, countries such as Sweden are actively recruiting doctors from Latvia, who decide to leave for the better paid jobs abroad (Interviewee #2). The situation is similar for IT professionals, which have a set of skills easily transferable across countries, making it easier to emigrate. This represents a problem, as Latvia is already experiencing shortages in these occupations and sectors, and because these professionals are the most likely to emigrate and the least likely to return.

Part of the explanation for the insufficiently skilled labour is the large emigrant outflows of recent years - the number of high skilled Lithuanian workers that have emigrated to OECD countries in the decade prior to 2011 constitutes more than 8 % of the country's domestic tertiary educated population (OECD 2016a). The significant emigration of the high skilled has created a shortage of talent for the country's research community and for research and development activities within enterprises (European Commission 2017b; OECD 2016a).

Additionally, the case studies identified some examples of negative effects, e.g. in Poland, where migration can lead to depopulation of certain regions of the country. This applies, in particular, to rural areas where mainly elderly people stay behind. These processes were observed, in particular, in provinces with the largest migration scale

³⁴ By comparison, 1 100 million Euros from the state budget were designated for social security in the same year (idem)

(see Szymańska et al. 2012, Moj 2015, Budyta-Budzyńska 2017). As Brzozowski and Kaczmarczyk (2014) point out, in case of certain regions (Opolskie, Podkarpackie, Świętokrzyskie provinces), 'migration losses' of persons of economically productive age is estimated to be 25-35%.

By contrast even amongst destination countries such as Germany, the case study found that there was evidence that policy makers require more economic movers. For example, in the second quarter of 2017, 78 830 engineering vacancies remained unfilled across Germany. This constitutes a 13 % increase in comparison to the previous year. The main driver of this development is the exceedingly high demand of civil engineers. This shortage of high skilled workers in construction work effects public construction and renovation projects disproportionately. Municipalities had to postpone or halt existing building projects due to the shortage of engineers. This shortage may lead to an increase in pay for those with skills in demand.

Indeed, increased pay as an effect of skilled migration is an effect for some professions in Poland. The case study evidence found that, those requiring high qualifications, such as physicians. Their outflow from the Polish labour market, associated with various factors – not only migration – as mentioned earlier, leads to an increase in the pay pressure related to this profession group. This has also been noticed by the central authorities who, after recent protests of the medical residents (Autumn 2017), adopted a programme of successive pay raises of physicians in the upcoming years.

A frequently cited benefit for outgoing countries is remittance value. In this respect, the Labour Market Policy Thematic Review (European Centre of Expertise, 2018) produced some interesting data on the benefits for outgoing countries in the form of remittances. For example:

- It was stated that, according to the Bulgarian National Bank data for 2013, the transfers from abroad (compensation of employees and worker remittances) amounted to EUR 1.186 billion in 2007 and to EUR 1.127 billion in 2012 - as a share of GDP this was 3.9 % and 2.8 % respectively.
- In 2014, Estonians sent back home EUR 358 per every Estonian resident, whilst in Latvia and Lithuania the remittances have increased and are now higher than in Estonia (World Bank, 2016).
- Nelson (2015) states that most of the Spanish movers (high skilled) interviewed in her research mentioned that they send a portion of their earnings back home to support their families and friends. Between 2010 and 2015, net remittances decreased from EUR 5 799 million (USD 6 961 million) to EUR 4 645 million (USD 5 577 million) (a net increase of EUR 1 182 million (\$ 1 384 million)). This figure equates to around 0.1 % of Spanish GDP, so its macroeconomic impact would be moderate.
- According to the Croatian National Bank (2017) data, remittances have been growing since 2013 and reached EUR 280 million in 2016.
- In absolute numbers this means that EUR 300 million (USD 280 million) was sent to Hungary in 2000, which grew sixteen-fold by 2014, reaching almost USD 4 500 million. Between 2009 and 2014 remittances almost doubled, from 1.5 % to 3.0 % of the GDP. Germany is the main outgoing country with almost 25 % of the total remittances, followed by the US, Canada, the UK and Austria.
- Lithuania is amongst the top six recipients of personal remittances in the EU. According to the Bank of Lithuania, income from employment and personal remittances from abroad amounted to EUR 1237.7 million or 3.3 % of GDP in 2015
- In Poland, between 2003 and 2007, the level of remittances relative to GDP tripled. After the economic crisis the inflow of remittances gradually fell to around

1.4 % of GDP annually which is more than double the level observed before the accession

3.2.7.1 Summary of key messages

Effects on outgoing countries:

- On the positive side, outgoing countries receive important inflows of remittances, although there is some evidence that the level of remittances reduces with period of stay in the destination country. Furthermore, there is research to suggest that high skilled individuals remit less than medium and low skilled individuals (though this may be because families could be more likely to move with high skilled individuals or because their own families at home are already better off).
- Migration both with a Member State and to other EU and third country has had particularly significant impacts on the de-population of structurally weak rural areas.
- Human capital may be reduced in outgoing countries when the remaining population has a lower skills composition compared to those who leave. For a number of countries this has meant that investments in education and training have supported labour market and economic development in other EU Member States.
- In some outgoing countries, outward migration has served to reduce the level of unemployment – and associated spending – particularly during the crisis, although no clear quantitative evidence is available in relation to this.
- The free movement of people acts as incentive for individuals and the state to invest in higher education. It is also the case that return movers bring back significant human capital and knowledge to foster entrepreneurship and innovation.

Effects on destination countries:

- Destination countries benefits from skills and knowledge for which they have not funded.
- These countries can use skilled movers to address skills shortages.
- Some integration challenges can arise which can lead to over-capacity amongst movers and inadequate labour market integration.

Effects on both outgoing and destination countries:

- High skilled labour market mobility improves the efficiency of the EU labour market.
- Research is challenging the notion of outgoing countries given the increasingly importance of returnee flows which would point to a circular movement of knowledge and skills, although this is more significant in some countries than in others which have primarily remained outgoing countries.

3.2.8 Does outflow of skilled workers from one Member State/region entail inflow of skilled labour from another Member State/region or third country/region? Under which conditions does this occur?

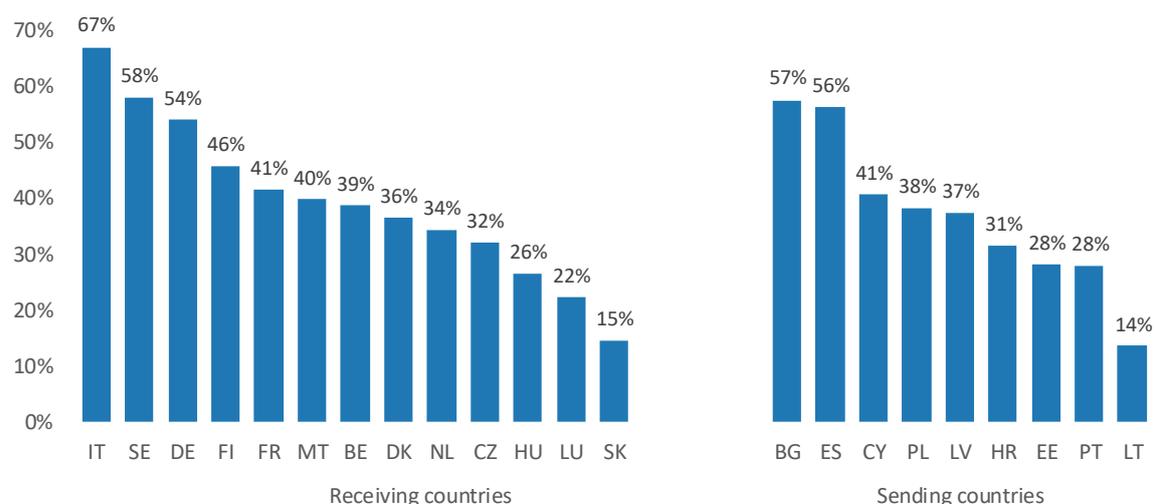
There is little evidence that the outward movement of skilled workers from one Member State is accompanied by systematic inward movement of skilled labour from another Member State. Indeed, there is no logical reason that this should occur – assuming that the reasons for outward migration of skilled labour prevailed and were equally relevant for most skilled workers.

The question of whether or not there is a replacement inflow from third countries can be considered using data on population change. Figure 46 below shows the proportion of movers coming into a country who have non-EU-28 nationality for destination and outgoing countries. The figure is an average based on the number of movers and their broad category of citizenship for three years (2013, 2014 and 2015), excluding movers

whose citizenship is stateless or unknown. Note that the data in this figure does not include skill level as this distinction is not available. Countries are firstly grouped by receiving and sending status (in this report referred to as 'destination' and 'outgoing' countries). This status is assigned based on whether net immigration was on average (over the same 2013-2015 period) positive (destination countries) or negative (outgoing countries).

Whilst most of the outgoing countries below show high proportions of non-EU nationals as a share of total immigration, these are also at the borders of the EU territory, except for Portugal, which due to language receives considerable inflows of movers from its former colonies such as Brazil for example. Hence, this pattern does not necessarily confirm that the skills asset lost to the EU are substituted by non-EU movers.

Figure 46. Average proportion of non-EU nationals as a share of total immigration for 2013 to 2015



Source: Eurostat data on population change - Demographic balance and crude rates at national level [demo_gind] (Net migration plus statistical adjustment) and Immigration by age group, sex and citizenship [migr_imm1ctz]. ICF calculations.

Notes: For the following destination countries, no information was available on the number of non-EU movers: IE, AT, SI, UK. For the following outgoing countries, no information was available on the number of non-EU movers: EL, RO.

In terms of substitution of labour outflows with non-EU movers, Croatian employers have developed a proactive strategy in the tourism and construction sectors in anticipation of labour shortages and have asking the government to increase the quotas for foreign workers. The Croatian government responded by increasing quotas for foreign workers from around 2 300 in 2016 to more than 7 000 in 2017, with a further increase for the construction sector approved in July 2017 (an additional 2 000 workers). Moreover, ICT companies are becoming increasingly active in attracting employees from abroad, in particular from neighbouring countries of south east Europe to whom they can offer higher salaries. (MLP, 2017).

Additionally, in the case of Poland, the case study conducted for this study found that a group that is entering the gap created, amongst other things, as a result of foreign migration of Poles. The demographic structure of the movers from Ukraine and the nature of work performed by them in Poland are very similar to those observed in the group of people leaving Poland (see Chmielewska et al. 2016). Despite that Ukrainian migrations currently take on a form of relatively short cyclical trips, in case of a potential deterioration of the political and economic situation in Ukraine, they can change into permanent stays.

Again, the inflows of non-EU movers to an EU country are particularly influenced by the fact that these countries are at the border of the EU territory and have well established networks and agreements.

3.2.8.1 Summary of key messages

- Outward flows of skilled movers from outgoing countries are generally not replaced by inward flows from other EU Member States. In terms of replacement labour, this typically is supplied from the native workforce or through return migration.
- Top outgoing countries show high proportion of non-EU movers on total movers, but at the same time, these are at the border of the EU territory with long-lasting relations with non-EU countries at the border.
- There is some evidence of the substitution of EU labour by non-EU labour, particularly in central and eastern European countries.

3.3 Addressing the movement of skilled labour

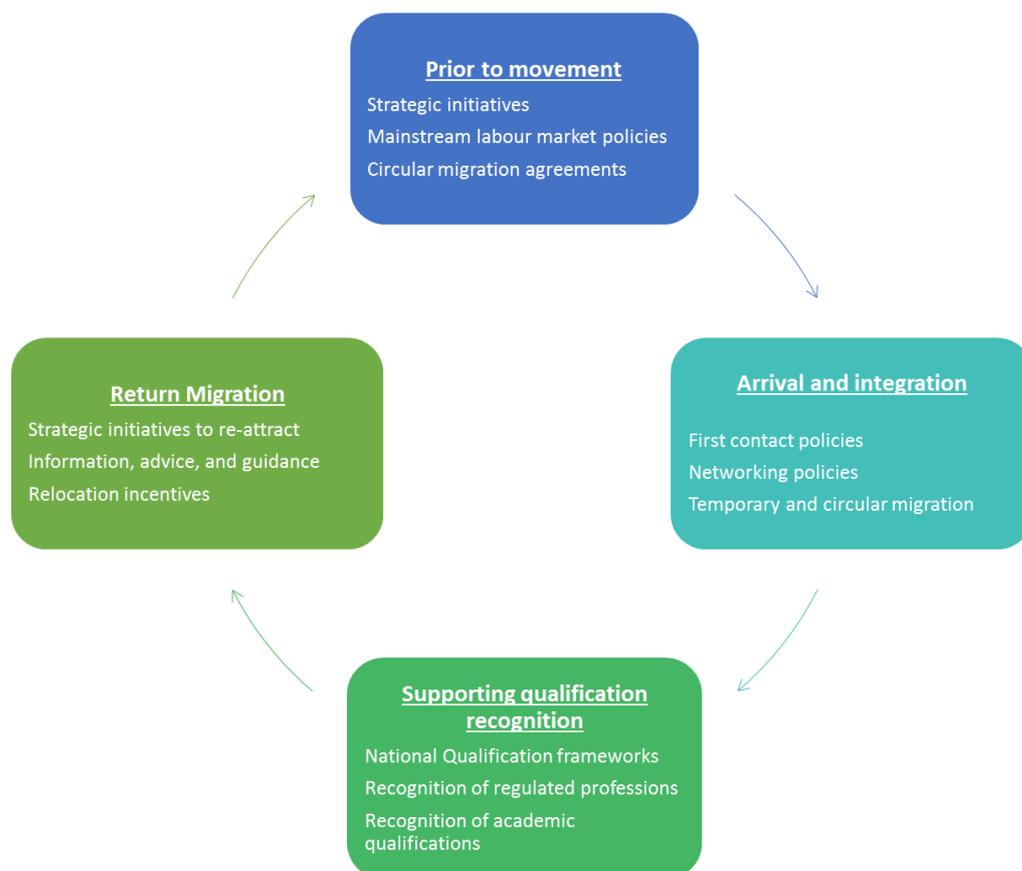
3.3.1 What actions are the affected Member States / regions taking to address the skills lost due to the movement of skilled workers, in particular? With regard to promoting return migration or with regard to replacement inflows from other Member States / regions or third countries/regions (investment in economy, labour market and regulatory reform)? Is there evidence of the effectiveness of these actions?

3.3.1.1 Categorising policies related to brain flow

In order to answer the research question, this section presents a range of available evidence on policies which address the flow of skilled movers, highlighting and discussing these policies in the context of the data presented in the previous sections of this report.

The initiatives presented below cover a wide range of spatial dimensions, from transnational, national, to regional and local, and include activities or a wide range of stakeholders. In order to understand the range of possible policies and measures relevant to movers the section is structured using categories policies based around the idea of policy intervention that may be provided at various stages of potential movement. The section uses this structure to describe policies and practices and also to determine the extent to which there is provision throughout this 'mover journey'. This is illustrated in Figure 47 below and explained overleaf. It should be noted that this presents an 'ideal type' of a categorisation of such measures, a number of which do not exist – or only exist to a limited extent – in practice.

Figure 47. Categories of possible policies at different stages of a 'mover journey'



The categories used are:

- **Policies and practices relevant prior to moving:** this includes consideration of place-based strategic approaches to attracting and retaining movers, and more specific, individually based services available pre-departure in outgoing countries. The purpose of this type of support may be to help prepare individuals for medium term circular movement. At the individual level this may include measures to assist with mover understanding of comparability of necessary qualifications. At Member State, regional, or institutional level this may involve specific agreements to support and formalise the recruitment of skilled workers which cover some of these aspects.
- **Policies and practices to support arrival, integration and networks:** this includes support provided upon arrival, for example integration measures such as inductions into the culture of the new country. For individuals this also includes policies to assess skill needs which may be linked with broader national industrial strategy, as well as further steps to ensure the recognition of qualifications. For nationals abroad, this also includes policies which seek to maintain links with networks in their country of origin, with the aim of supporting return or for increasing their prospects of success abroad.
- **Policies and practices to support qualification recognition:** this involves availability of services to individuals at the time of leaving the host countries which ensure recognition of qualifications gained abroad and transfer of higher education credits. Additionally, the availability of tools that register experience gained and matching policies linked with wider regulation and industrial/sectoral strategies.
- **Policies and practices to support return migration:** such support involves recognising supporting returners as part of activities undertaken in strategic labour market and economic development planning. This may also involve approaches designed to facilitate family unification and prevention of human capital loss which might be experienced if spouses are inactive for a period.

The process of categorising actions related to brain flow

The exercise of analysing policies and practices which relate to skilled movers is problematic, government initiatives aimed at boosting economic and labour market performance, as well as working conditions etc. might all generally be perceived as measures which make a significant contribution to encouraging the attraction and/or retention of skilled workers. Indeed, many such issues are discussed in the previous research questions related to understanding the movement of skilled workers. However, such general measures are obviously not covered here, as this would substantially expand the remit of the study.

The sections that follow to answer this research question use categories to understand various forms of policy activity, this is not intended as a policy inventory which comprehensively covers all policies in EU Member States. This provides an understanding of the range of activities, spatial coverage, and stakeholder involvement in policies and practices that are most relevant for EU movers. This analysis can be used as the basis for future policy discussion and formation. As such, there are some caveats that should be understood when considering this section:

- It is sometimes difficult to identify particular policy approaches that are specific to EU skilled movers. Many of the policies and practices identified below are applicable (and delivered) to both EU movers and third country nationals. It is also the case that some of the measures described below are also relevant for internal migration, i.e. to promote retention of potential movers in less developed regions.
- The policy types used below are not always distinct from one another, some established policies and practices contain more than one of the types of actions described below, with some being more concentrated on one activity.

- The scope and scale of activities is not necessarily comparable – for example in terms of scope an information campaign may be relatively low cost to establish and wide in geographic coverage, by contrast a specific programme or relocation incentives may be higher cost and targeted to specific geographies / sectors.
- Information presented in the sub-sections below has been collected from a range of sources (academic literature, policy papers, and from case studies conducted for this study). As a result, the detail provided varies depending on what is available, as noted above though what is intended through this exercise is to present categories of policies rather than an inventory of all policies and practices and their individual features.
- This section does not provide an evaluation of the impact of measures. Such data/info are generally not available or are limited to small scale evaluations of individual initiatives which makes it difficult to assess impact.

3.3.1.2 Policies and practices relevant prior to movement

This section outlines policies which are relevant for *potential* movers. The rationale for such policies are that the functioning of free movement may be inhibited by movers not having access to information required to make decisions. Such information may result in a decision to either move (including where to move to) or not to move at all. As such these policies include place-based strategic approaches to attracting and retaining movers, and more specific, individually based services available pre-departure in outgoing countries.

Strategic initiatives to retain specific groups of workers are widely used as part of labour market planning, this would appear to be the case in both countries that have witnessed significant outward movement and countries that have received the most significant in-flows of movers.

In terms of retention policy, there are interesting examples of specific initiatives in countries that have witnessed significant losses of skilled movers, as demonstrated in the data analysis in this report. For example, the *Development Strategy for the Opole Voivodeship* in Poland is a regional strategy which aims to address depopulation in the region by promoting a range of economic possibilities, including enterprise, employment and quality of life advantages of the region. Similarly, the *Youth in Lodz* initiative aims to decrease professional mobility of young inhabitants of Lodz by supporting students of higher education institutions, as well as vocational schools in acquiring additional skills and professional experience. Activities are wide ranging and include: internships portal, scholarship programme, free professional training and competitions for young entrepreneurs.

There are also other, smaller-scale initiatives such as the *Municipal Retention Policy* in Hungary which provide information on labour market opportunities for local citizens (though these not targeted at individuals with specific skill levels). These initiatives all share an overall aim to retain workers currently resident and also reintegrate returners to specific regions and localities.

Such initiatives are not restricted to Member States that have witnessed significant outflows of skilled workers; there are examples of specific initiatives which show the importance of group of people in regional economic and labour market strategy.

In relation to younger people, *The JuKaM*, Central German Carrier Network aims to facilitate the long-term retention of young professionals through promoting the region, publicising job opportunities and the range of careers available. The *Perspectives for Youth initiative* undertakes a range of activities with an overall aim of increasing the retention of young skilled workers. The focus of activities is on promoting a regional bond through encouraging youngsters and young adults to become involved in actual projects as a way of doing something to help their local region and the people living

there. A focus of this collaborative action in eastern Germany is to reduce migration to western regions of the country.

Two initiatives aimed to reduce academic staff emigrating in their respective Member States. In Latvia *My own little corner* (Savs kaktiņš, savs zemes stūrītiņš), is funded by the European Social Fund (ESF). Its objective is to attract highly skilled academic staff. According to a Eurofound report, it supported four to five people to return to Latvia by offering them work opportunities and an adequate salary (Eurofound, 2012). *Unity through Knowledge Fund*, in Croatia, is a fund set up with the help of the World Bank. The aim of the fund is to harness cooperation in research between Croatian researchers in Croatia and those abroad, as well as to encourage researchers living abroad to return and through this 'unite' the scientific and professional potential in Croatia as well as its diaspora. This fund was set up in 2007 and is still ongoing, although it is now run by the Croatian Science Foundation (MLP, 2017).

The customisation of existing labour market practices is relevant prior to movement as they aim to ensure that mainstream or existing initiatives are used where possible to both retain potential movers and to re-attract movers to address labour market issues, particularly through the involvement of national institutions like the Public Employment Service in facilitating the match between skilled individuals and employers. It is hard to undertake a comprehensive review of the extent to which mainstream labour market policy is harnessed toward skilled movers, hence few examples are discussed in this section, and this is not necessarily reflective of the widespread use of such tools.

This includes a range of specific interventions such as those targeted toward young people in Italy and Lithuania. These initiatives aim to encourage young people to start their own business. Whilst such initiatives are part of mainstream provision, an element in these policies addresses the need to raise aspirations and reinforce the possibility that they can undertake such activities in their home regions, as such there is a focus on retention of skilled persons. Additionally, in Italy, the *Youth Entrepreneurship Project* promotes connections between young people and employers in the region in an effort to reduce outward migration of skilled workers from the region.

In the Czech Republic the *Scholarship in Usti* regional initiative offers scholarships to selected college students that are considered strategically important for future economic development. The scholarship is provided one year longer than the duration of the standard length of the chosen study programme. Students commit to starting a business or being employed in the region after completion of their studies. A similar form of provision is the *Markusovszky programme* that was instituted to address the negative consequences of skilled migration in the health sector in Hungary, specifically in relation to trainee doctors. The programme provides a financial subsidy for applicants that are then obliged to practice in Hungary for at least ten years after entering the programme.

Circular migration or mobility schemes are also relevant at this stage of the mover journey. Such schemes are not common, despite the fact that they would appear to be a useful tool – particularly for those Member States that are demonstrated in the data analysis above to be significant outgoing countries. Circular mobility schemes are advocated not just in the case of skilled workers; they currently constitute a popular policy orientation to address all types of labour migration (Castles, 2006). In the words of the UN Secretary-General, "Under such programmes, movers benefit from having a legal status and countries of origin gain from remittances and the eventual return of movers, provided the experience they gain abroad can be put to productive use at home. Destination countries secure the workers they need and may enhance the positive effects of migration by allowing movers to stay long enough to accumulate savings." (UN, 2006, p. 18).

There are examples of such schemes involving countries outside of the EU. A formal arrangement between Czech Republic and Georgia was set up to enable Georgian organisations to encouraging returnees and potential movers in Georgia to take part in

the development of their native country and likewise Czech organisations could operate in Georgia. This initiative involved information, advice and guidance to potential movers / returnees. The Solidarity Net programme is administered through Caritas Austria (a Christian charity). The aim is to improve reintegration assistance in Ukraine for those wishing to return following migration. This is done through information, advice and guidance provided at the through the Focal Point Ukraine located at Caritas Austria.

3.3.1.3 Policies and practices to support arrival, integration and networks

Approaches to support recent movers are relevant because they offer the potential to assist people that have moved abroad with information, advice, and guidance on how to effectively integrate themselves into their new surroundings. Upon arrival, this can consist of integration measures, including inductions into the culture of the new country and also specific labour market assistance to assess skill needs and matching, possibly linking this with broader national industrial strategy.

First contact and integration policies are one such type of policies which promote integration. Such policies are most common for third country nationals in order to acclimatise them to new surroundings, typically this is provided formally through state run programmes or a range of systematic information. Far more common for skilled movers are informal supports which are provided through businesses, employers, friends and family that are already in the destination country rather than through state-provided services.

The distinction between third country nationals and skilled movers in this respect is that skilled movers are often more capable of accessing support from wider networks than low skilled workers and are often provided with greater support by employers (employer investment in skilled movers i.e. salary, relocation incentives). The result is that there is a low level of policy provision in this area for skilled EU movers, though there is little indication in the data analysis to suggest that this contributes toward flows of movers that are evident in the data.

Networking policies: additionally, following movement to a new Member State, policies to support nationals abroad to maintain their links with the home country can form part of this stage of the migrant journey. Ultimately, the aim of such measures is to maintain the possibility that movers may easily return to their country of origin or perhaps also improve their prospects of being successful abroad. Some of the initiatives outlined in other sections of this answer contain elements of this practice. The package of supports offered in Ireland provide a useful illustration of the way in which support can maintain useful personal and professional networks.

Global Irish is a policy aimed at the Irish diaspora with the goal of encouraging highly skilled Irish movers to return. The policy seeks to achieve this by connecting the diaspora abroad with job opportunities at home, as well as reducing logistical hurdles related to moving back to Ireland (MLP, 2017). Another project, *Safe Home* is an interesting example of an information campaign to provide information for older return movers to Ireland. This includes a range of tailored information that may be useful to them (such as advice and information on the logistics of returning, labour market information, housing information and assistance with applications for housing for applicants over 57) – though not specifically tailored to any particular skill level.

The data analysis discussed previously in this report showed how Ireland has a long tradition of movement, both as a country of origin and, more recently, as a destination country. It is interesting that the range of policy approaches in Ireland has evolved to reflect this reality (rather than seeking to reverse such flows) and is based on the principles of providing assistance to those most in need, and through providing information to promote better decision making.

Schemes of temporary, circular or seasonal mobility: are often specific schemes set up in certain sectors (e.g. agriculture). Some of these policy approaches that favour circular, temporary, or seasonal migration are regularly criticised for primarily serving

employers' needs whilst ignoring the interests of EU movers working and not being supportive of their rights (Wickramasekara, 2011). They relate more to low skilled workers than higher skilled workers do.

3.3.1.4 Policies and practices to support qualification recognition

This section outlines some of the issues and policy initiatives in relation to national qualification frameworks, recognition of regulated professions and recognition of academic qualifications.

Following movement abroad, qualification recognition is an important issue for skilled workers. For movers returning to their country of origin such provision would ensure that, upon leaving the host countries, services are in place to ensure recognition of qualifications gained abroad and is transfer of higher education credits offered. An additional issue is that of experience. For movers, a level playing field would potentially provide that tools were available in order to register experience gained; potentially also linking with wider regulation and industrial/sectoral strategies.

Key to the understanding of mutual recognition and the development of comparable qualifications frameworks are two key principles a) freedom of movement and b) education remains a national competence. In order to facilitate freedom of movement whilst respecting the principle of subsidiarity with regard to education system, a number of policy approaches have been developed over the years to facilitate the greater comparability of qualifications and mutual recognition of qualifications and diplomas.

Development of National Qualification Frameworks

Comparability of qualifications is key to freedom of movement of students and workers in the European Union. In an effort to enhance the comparability of diverse qualifications frameworks across the European Union, in 2008, a European Qualifications Framework (EQF³⁵) was developed aimed at becoming a common reference point for comparing qualifications across national and institutional boundaries and thus increasing overall transparency, comparability and portability of qualifications between EU Member States (and the other 11 countries cooperating in the EQF). The most recent report from CEDEFOP on the development of National Qualifications Frameworks shows that over the last 10 years, the number of countries having developed a formal NQF increased from three prior to the adoption of the EQF to all 39 countries participating in the EQF having developed or being in the process of developing NQF by 2017.

Table 10 below shows the level of development of the NQF in the EU Member States with their stage of development, number of levels and the date they were linked to the EQF to provide an overview of status of development with regard to the greater comparability of qualifications. This demonstrates that whilst most Member States have NQFs in place, the vast majority of which are linked to the EQF, in some countries these remain under development or are not yet fully operational.

Fully developed and operational systems are in place in 18 countries (AT, BE [fl], CZ, DE, DK, EE, FI, FR, IE, LT, LU, LV, MT, NL, PT, SE, SI, UK); a further 8 countries are characterised as being at an early operational stage (BE [de], CY, EL, HR, HU, PL, RO, SK); two countries have formally adopted systems (BG, IT) and in one country the system is in an advanced development stage (ES).

³⁵ European Parliament; Council of the European Union (2008). Recommendation of the European Parliament and of the Council of 23 April 2008 on the establishment of the European qualifications framework for lifelong learning. *Official Journal of the European Union*, C 111, 6.5.2008, pp. 1-7. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:111:0001:0007:EN:PDF>

Table 10. Details of Member State National Qualifications Frameworks

Country	Number of levels	Status of development	NQF linked to EQF
AT	Eight	Operational	2012
BE	Eight	Operational (FI), Formally adopted (Fr); Early operational (De)	2011 (FI, update 2014), 2013 (fr)
BG	Eight and a preparatory level	Formally adopted	2013
CY	Eight with sub-levels	Early operational stage	2017
CZ	Eight	Operational	2011
DE	Eight	Operational	2012
DK	Eight	Operational	2011
EE	Eight	Operational	2011 (update 2016)
EL	Eight	Early operational stage	2015
ES	Eight proposed	Advanced development stage	-
FI	Eight	Operational	2017
FR	Five	Operational	2010
HR	Eight with sub-levels	Early operational stage	2012
HU	Eight	Early operational stage	2015
IE	Ten	Operational	2009
IT	Eight	Formally adopted	2013
LT	Eight	Operational	2011
LU	Eight	Operational	2012
LV	Eight	Operational	2011
MT	Eight	Operational	2009 (2012 and 2016 update)
NL	Eight with sub-levels	Operational	2011
PL	Eight	Early operational	2013
PT	Eight	Operational	2011
RO	Eight	Early operational stage	2018
SE	Eight	Operational	2016
SI	Ten	Operational	2013
SK	Eight	Early operational	2017
K	Eight plus entry levels (England and Wales, Twelve (Scotland)	Operational	2010

Source: Adapted from Cedefop; Overview of National Qualifications Framework Developments in Europe 2017

Recognition of regulated professions

The recognition of professional qualifications is laid down in Directive 2005/36/EC³⁶. The Directive applies to regulated professions (with the exception of certain professions for which specific regulations apply). A database of regulated professions is available³⁷ which concerns professions for which an individual is obliged to demonstrate the achievement of certain qualifications to exercise the profession. Within this system, there are different routes:

- Automatic recognition for some professions (e.g. medical doctors, nurses, architects);
- A general system which requires the comparison of qualifications;
- Recognition based on professional experience (for example in crafts areas).

Specific rules apply depending on whether a profession is recognised in one country but not another. As this is based on an EU Directive, the rules are implemented in each Member State, although the details and processes of implementation can vary. In 2015/2016 a process was carried out to review the regulated professions at the national level with the goal of simplification where possible, with action plans being adopted in all Member States³⁸.

No formal evaluation of the quality or efficiency of different recognition systems is available.

Recognition of academic qualification

There is no automatic EU-wide recognition of academic diplomas. Therefore, in order to pursue further study in another country, individuals have to pursue a national procedure through the ENIC/ NARIC system (<http://www.enic-naric.net>) to have their academic degree or diploma recognised in another EU country. The ENIC Network (European Network of National Information Centres on academic recognition and mobility) was established by the Council of Europe and UNESCO to implement the Lisbon Recognition Convention. National ENIC centres provide information on the recognition of foreign diplomas, degrees and other qualifications; education systems in the home country as well as other countries; and opportunities for studying abroad, including practical advice. The ENIC centres co-operate closely with NARIC centres (National Academic Recognition Information Centres). The NARIC network was established in 1984 based on an initiative of the European Commission and aims at improving the academic recognition of diplomas and periods of study in different EU Member States, the EEA and Turkey. All member countries have designated national centres aimed at promoting the mobility of students, teachers and researchers by providing advice and recognition. It must be noted that in most countries, higher education institutions are autonomous and make their own decisions on admissions and exemptions based on previous study. Therefore, most NARIC centres do not make decisions on recognition but offer information and guidance.

The ENIC/NARIC website offers information and guidance to students, education institutions and employers regarding the recognition of qualifications.

³⁶ Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications; see <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32005L0036>

³⁷ <http://ec.europa.eu/growth/tools-databases/regprof/index.cfm?newlang=en>

³⁸ https://ec.europa.eu/growth/single-market/services/free-movement-professionals/transparency-mutual-recognition_en

Overall, with regard to systems for recognition of qualifications or diplomas, it could be argued that in countries where more requests for such recognition are submitted, processes run more smoothly as there is more experience of running such comparisons and processes. However, this can only be the case when sufficient resources are available to deal with the required documentation. No formal evaluation of the quality or efficiency of different recognition systems is available.

3.3.1.5 Policies and practices to support return migration

Strategic initiatives to re-attract specific groups of workers: these initiatives place returnees within a wider strategic approach to strengthening the labour market and economy. These initiatives appear to have accompanied significant return flows to some Member States, though a lack of available impact data means that it cannot be said to what extent they were a cause of return migration (and how they compare with other push and pull factors discussed previously in this report).

Typically, these initiatives involve targeting particular groups of people or required skills. In Poland, the *Pößneck returns* strategy is an example of a wide-ranging strategic approach that aims to both prevent migration by raising the profile of economic and labour market opportunities and to facilitate return migration through strategic investment, which aims to regenerate the city centre and specific business sites and premises. Additionally, the initiative has links to the University of Jena, with accommodation for students provided in Pößneck.

The '*Opolskie voivodship – here I stay*' ('Opolskie – tutaj zostaję'), in Poland, began in 2008 and was set up by the local government of the Opolskie voivodship and the Regional Labour Office in Opole. The programme aimed at increasing work and educational opportunities and targeted its activities at people who were working abroad with the aim of them returning to the region. The programme in particular targeted graduates, the unemployed and Polish who were staying and working abroad (predominantly in the UK, Germany and the Netherlands) (Kaczmarczyk and Lesińska, 2013).

A large-scale initiative covering six European countries is the programme *Guidance and Counselling for Movers and Returnees*. The project involved partners from six European countries (Yeminee Ltd. – Slovakia, Regents College – UK, Masaryk Institute of Advanced Studies – Czech Republic, Stichting Vice Versa – The Netherlands, Public Employment Service – Cyprus, and Orientum – Greece) and was carried out between 2009- 2011. The main objective of the project was to disseminate experiences and to collect best practices about movers and returnees³⁹

Project *Retour in Hungary* is an organisation that "has been dealing with return movers from 2003, primarily through assisting the movers in finding a job and re-integrating them into the Hungarian scientific and skilled worker community but also by involving themselves in some social research and conference activities in the matter" (Személyi and Csanády, 2011).

The *Economic Migration Regulation Strategy* (2007) and subsequent *Plan of the Implementation of Economic Migration Regulation Strategy Measures* (2007-2008) and the following *Lithuanian Migration Policy Guidelines* (2015) were all broader migration strategies of the Lithuanian government. Whilst these strategies targeted migration as whole, specific objectives were formulated around return migration. However, it is not clear which specific targeted measures in this regard have been implemented so far, although the Labour Market Policy Thematic Review does highlight the Guidelines (the latest strategy) emphasising the need for a 'one-stop-shop' at which (prospective) returnees can find information facilitating their return (European Centre of Expertise,

³⁹ The project established a knowledge sharing platform to disseminate the results: <https://sites.google.com/site/onlinelibraryformigrants/>

2018). Such a 'one-stop-shop' - a Migration Information Centre - is currently operating from the International Organisation for Migration office in Vilnius and is called 'I choose Lithuania'. The website (<http://renkuosilietuva.lt/eng/>) provides information on topics such as jobs (including help with job search), social security, health care, education and language courses (MLP, 2017).

The *SROP Albert Szent-Györgyi Repatriation Scholarship*, in Hungary, aims to address very specific skills issues by encouraging the return of Hungarian researchers in the areas of natural, technical and life sciences, as well as mathematics. The initiative provides funding for research centres and research groups for more experienced researchers. Additionally, in Hungary, Momentum is another grant to re-attract skilled labour (Boros and Hegedűs, 2016). The same programme, according to Eurofound (2012), "aims to retain scientists in Hungary or to attract them back from abroad in a 'reverse brain drain'. In Hungary, a quality research infrastructure is initiated, with 100+ research projects received funding prior to 2015 (European Centre of Expertise, 2018).

Similarly sector specific is the *ReturntoPoland.pl*, which was initiated by the Polish branch of HAYES (an international company specialising in human resources), in 2008. The programme operated in cooperation with the Polish-British Chamber of Commerce and the Polish Ministry of Labour and Social Policy. It aimed to address shortages of skilled workers on the Polish labour market by targeting Polish nationals working abroad, in particular in the IT, banking and finance sectors. HAYES provided participants with information and training activities both whilst still in the host country as well as back in Poland (Kaczmarczyk and Lesińska, 2013).

Such initiatives are not confined to eastern European Member States, they have also been deployed in Member States that are shown to be significant in destination countries as per the data analysis outlined in this report. Indeed, the examples in Germany also provide evidence that intra-Member State migration flows may be the target of return migration policies.

In Germany, in the Mecklenburg-Western Pomerania Region, the *mv4you Agency* operates and is funded at regional level in order to communicate with movers in order to support return migration to the region. The main activities are provision of information about job vacancies and training possibilities. The website of the mv4you Agency provides a forum for employers in the region to market themselves to potential employees and also to outline complementary services for potential employees. A similar approach is taken in the *PFIFF - Portal for interested and flexible professionals Saxony-Anhalt* which provides an information platform and market place for companies and skilled workers, along with networking activities aimed at attracting skilled workers to Saxony-Anhalt. Also, in Germany the *At home in Brandenburg* initiative provides a similar set of services. Additionally, 'Migration and returning to Uckermark' anti-migration project (which provides a range of information from the perspective of returned movers). This approach is interesting – the initiatives also include significant use of social media in order to target information to a wide range of users in different formats (and in ways that younger potential movers are most likely to access information).

Information, advice and guidance on returning: there are a range of initiatives, including online platforms, which support potential returnees to make more informed decisions regarding potential movement back to countries of origin. For example, the Movers from Saxony, *Come Back* initiative provides an online platform which provide labour market information, including available positions for potential movers (and also those considering returning to the region). A range of other information such as quality of life, economic, housing, social life is also provided.

The *Slovensko Calling* project aims to connect Slovaks living in foreign countries with the Slovakian labour market, raising their prospects of returning through providing information on possible career options and dealing with reintegration issues. Another similar outreach initiative is the *Service for Overseas and Repatriated Cypriots* which

provides information through a website and published material that aims to support Cypriots that wish to return to Cyprus for work.

In Poland the '*Have you got a Plan to return?*' initiative, consists of information and promotion activities to Polish citizens who are considering a return or have already returned, to help them re-integrate into the country. This programme was set up in 2008 by the Polish Government. "Activities undertaken included a release of a guide-book or manual for returnees ('A Returner') and the launch of an official website of the programme (www.powroty.gov.pl)" (Kaczmarczyk and Lesińska, 2013). The programme's website has since become part of the Polish PES webpage.

Guide for Coming back (Guía de Retorno), in Spain, is a guide for Spanish citizens who are living abroad and who are considering returning or have just returned to Spain. The guide is provided by the Spanish Ministry of Employment and Social Security and provides general information on resettling in Spain. (MLP ES, 2017).

The *Training in Portugal* initiative promotes and facilitates the professional integration of young Portuguese citizens and those of Portuguese descent living abroad. It is not specifically targeted at a particular skill level but is relevant as it is an example of an outreach programme which operates in other Member States.

As is the case with other initiatives outlined above there no comprehensive impact evidence upon which to base conclusions of the effectiveness of these measures. In the case of the examples above the policies perhaps can be seen as supportive of the significant outflows and return flows that are demonstrate in the data analysis shown in this report.

Specific incentives for returners: this includes for instance offers of financial or other benefits and wider support /re-integration packages to assist with the return migration of workers that have previously emigrated. In this respect, there is evidence supporting the rationale for such interventions which demonstrates that very successful skilled workers are likely to return as entrepreneurs to their home country (Dustmann and Kirchkamp, 2002).

Such initiatives are a feature of some of the targeted information provision initiatives discussed above. For example, in Germany the *mv4you Agency* and *PFIFF* – (portal for interested and flexible professionals Saxony-Anhalt) provides information on a range of wider support that may be required for returnees, such as kindergartens and schools.

The *Boomerang-Lausitz* and the *Revenio Hartz Region* activities have a specific and explicit focus on facilitating return migration through securing positions for returnees with potential employers. They also provide support services that assist returnees with accessing housing and childcare as well as providing other information about the region as required for potential returnees.

Additionally, recruitment in the country of origin is undertaken. For example, the Romanian administration and other state and private organisations facilitate the migration of highly skilled movers. On their website there is information about job opportunities - especially in western countries - and information about the documents needed for converting their degrees. On the Romanian College of Physicians' website, a video with a high ranked UK politician reassured Romanian medical staff that despite Brexit, they are needed and welcomed in the UK.

The *Lucani Abroad* initiative in the Basilicata region in Italy is an example of a proactive policy which seeks to identify and make contact with Italian movers in other Member States and assess whether they wish to be supported to return to the region. This is done through payment of contributions toward costs incurred for the return and labour market policy support required to assist with integration into the labour market.

In Italy the *Return Information Desk* operates in the Veneto region. The main objective is to offer beneficiaries support by way of identifying and planning a productive return path towards their country of origin (which includes third country nationals). The Return

Information Desk operates through a collaboration between a number of public and private organisations. This initiative is mainly aimed at third country nationals and not generally concerned with skilled movers.

Come Home Youth, in Hungary, specifically targeted young Hungarians working in the United Kingdom and encouraged them to return by means of several tools: a website, telephone hotline, information campaign, counselling, training, job brokerage and also housing assistance. The programme was, however, closed in 2016 due to the low number of applicants (MLP, 2017)

Examples of a sector-specific programme is the *grant scheme supporting the return of experts from abroad* scheme run by the Slovakian Ministry of Education which seeks to encourage high skilled Slovakian experts living abroad to work in the public sector in Slovakia. The grants are intended to help cover the costs associated with a move back to Slovakia. The level of the grant depends on the seniority of the expert. Returned experts may apply for an additional grant 'for the development of an adequate workplace' (MLP, 2017).

Two initiatives in Poland have a re-attraction focus; *Become your own boss – stay in Poland*, was started by the Warsaw Municipality together with the Higher School of Finance and Management in Warsaw. The aim of the programme was to encourage those living abroad, or those who had already come back, to establish a business in the Mazowieckie region. It offered participants training, after which the participants drafted business plans, and were provided with financial aid to help grants cover the costs in the first half year of running the business (Kaczmarczyk and Lesińska, 2013). Also, in Poland, *To return and what next?* ('Wrócić i co dalej') was set up in 2007 by the Local Labour Office and Agency of Regional Development in Biłgoraj, together with local NGOs. The aim of the programme is to provide training and assistance to entrepreneurs who would like to start their own business locally (Kaczmarczyk and Lesińska, 2013).

3.3.1.6 Policies under development

Finally, there is clearly a (renewed) focus and interest in policies aimed at retaining or encouraging the return of skilled movers in Spain, Portugal, Romania and Slovakia, which are currently in the process of developing and/or implementing several strategies and concrete policies (European Centre of Expertise, 2018):

Policies currently under development

The Labour Market Policy Thematic Review (European Centre of Expertise, 2018) identified a number of strategies and concrete policies that are currently under development

Spain:

- 'Strategy of Support to movers and their Return to Madrid Region 2017-2020' (Estrategia de Apoyo a la Emigración y al Retorno Comunidad de Madrid 2017-20), in development by the regional Government of Madrid, will provide returnees with information, 'promote integration, employability, social and labour insertion, health and improve the knowledge and research about emigration and the situation of returned persons' (MLP, 2017).
- 'Plan for Return of Talent' (Plan de Retorno Del Talento) is a local initiative currently being developed by the Valladolid City Council. The plan is a component of the Local Employment Plan and aims at facilitating the return and inclusion in the labour market of skilled individuals who have personal links with the city of Valladolid. It entails economic support for returnees who start-up new businesses, support for research and development institutions, support for companies and entrepreneurs that hire foreign qualified professionals in particular sectors. Finally, it includes financial support to cover costs associated with a return to Spain, for example, travel costs, temporary housing costs and language courses for dependants or spouses.

Portugal:

- Under the 'Strategic Plan for Migration 2015-2020', the Portuguese government aims to strengthen ties with its Diaspora and provide support to (prospective) returnees. 'Whilst the specifics are still unclear, areas slated for action include attracting foreign students to Portuguese universities, especially from former colonies; bringing in young scientists to work on national research projects; and mobilising Portuguese emigrant entrepreneurs to invest in Portugal' (Justino 2016, 21). Portugal also has instated a High Commissioner of Migration, who created the Support Office for Emigrant Return. This office is tasked with the monitoring of the initiatives' implementation that fit under the strategy. They consist of a host of different programmes. Some are reiterations of previous programmes (for example, 'Mentor Programme for Movers', the 'VEM Contest – Valuing Emigrant Entrepreneurship', and the 'Empowerment of Emigrant Entrepreneurs' (MLP, 2017, quoting Alto Comissariado para as Migrações 2016). Others are new programmes such as the '50/50 Contest' which aims to stimulate investment with a social and local impact, 'Raise Your Business', for entrepreneurial movers abroad who want to replicate their business back in Portugal, 'Migrant Entrepreneur Support Office', which supports both movers and movers, the 'Diaspora Investor Support Office' which is run in coordination with the embassies and consulates, the 'Emigrant Support Office', which is a partnership between the Ministry of Foreign Affairs, the Directorate General of Consular Affairs and Portuguese Communities, and local councils, located in diverse cities of the country (MLP, 2017, quoting Alto Comissariado para as Migrações 2016; Ministério dos Negócios Estrangeiros 2016).

Romania:

- Under the new 'Diaspora Start-up Programme', the Romanian Ministry of European Funds and the Department of Policies for Relations with Romanians Everywhere (part of the Ministry of Foreign Affairs), prospective Romanian returnees will be able to apply for European funds up to EUR 40 000 to start their own business in Romania. The programme is delivered by various service providers, who will support several entrepreneurial returnees in setting up their own businesses for up to EUR 5 million per provider (MLP, 2017).

Slovakia:

- Slovakia is working on a new project that will encourage Slovak nationals working abroad to return, in particular those who will be affected by Brexit. No further details are currently known other than that it is being developed by various parties: the state-run Slovak Investment and Trade Development Agency (SARIO), the Labour and Foreign Affairs Ministries, and private companies (MLP, 2017).

3.3.1.7 Summary of key messages

There is a significant degree of policy activity related to EU movers, with a high number of policies introduced. However, many of the initiatives discussed are relatively small-scale and regional, rather than national. This does not mean that such matters are not of national concern; indeed, a significant amount of Member State strategy is concerned with skills – both addressing the supply and demand. Further the issue of migration forms a significant part of Member State's national policy and political discourse. In terms of explicit national policy for skilled migration, much of this is most explicitly demonstrated through policy toward third country nationals rather than explicit measures toward EU skilled movers.

Indeed, the Labour Market Policy Thematic Review illustrates that there is significant ongoing work to develop new policy initiatives to address negative impacts of skilled migration and instead to maximise the benefits of brain flow (European Centre of Expertise, 2018).

A wide range of tools have been developed in order to address the movement of skilled labour. Such policies can be identified at various stages of the mover journey; prior to movement; arrival and integration; support for qualification and recognition; return migration.

It should be noted that much of the policies and practices identified for this study are policies which seek to retain skilled natives and/or re-attract those that have previously moved. As such much of the policy landscape reflects the competition that exists for skilled workers between regions and Member States.

There are a wide range of activities and measures used in policies discussed above. This indicates the importance of skilled movers in labour market and economic development policy. As such there are a wide range of stakeholders active in these policies.

Despite this wide range of activity and large number of stakeholders, there is limited information available in order to make a judgement regarding the form and scope of collaboration in delivering these measures. Nevertheless, what can be concluded is that collaborative activities take place within specific regions, between national and regional organisations, and also between NGOs operating in different countries, with the spatial focus varying in the examples presented.

The range of stakeholders that are involved and different territorial foci reflects the fact that coordinated action is required across a number of policy domains (broadly within the domains of business, people, and place), for example:

- Labour market policy toward current employees and unemployed persons (as part of retention) and toward potential in-movers / return movers;
- Sector-specific information gathering and appropriate policies and practices, including skills forecasts / strategies;
- Consideration of the quality of wider framework conditions, such as childcare and schooling are understood to be relevant and important for retention and attraction;
- Investment in the public realm, such as promoting places and renewal / establishment of modern business sites and premises;
- Communication of each of these factors in ways that reach the intended audiences. For example, this may involve reach out into different Member States or to specific target groups within a particular region.

The examples of activity in eastern Germany indicate that intra-Member State skilled migration is also a particular issue in some countries. Indeed, this is a factor that is not unique to Germany with regional disparities highlighted in Section 2 of this report playing a significant role in migration decisions for individuals and policy considerations for governments.

3.3.2 Which Member States/regions have managed the 'turnaround' and how did they do it (e.g. "skills partnerships" - structured training and employment arrangements between outgoing and destination regions thereby minimising the effects of brain flow)?

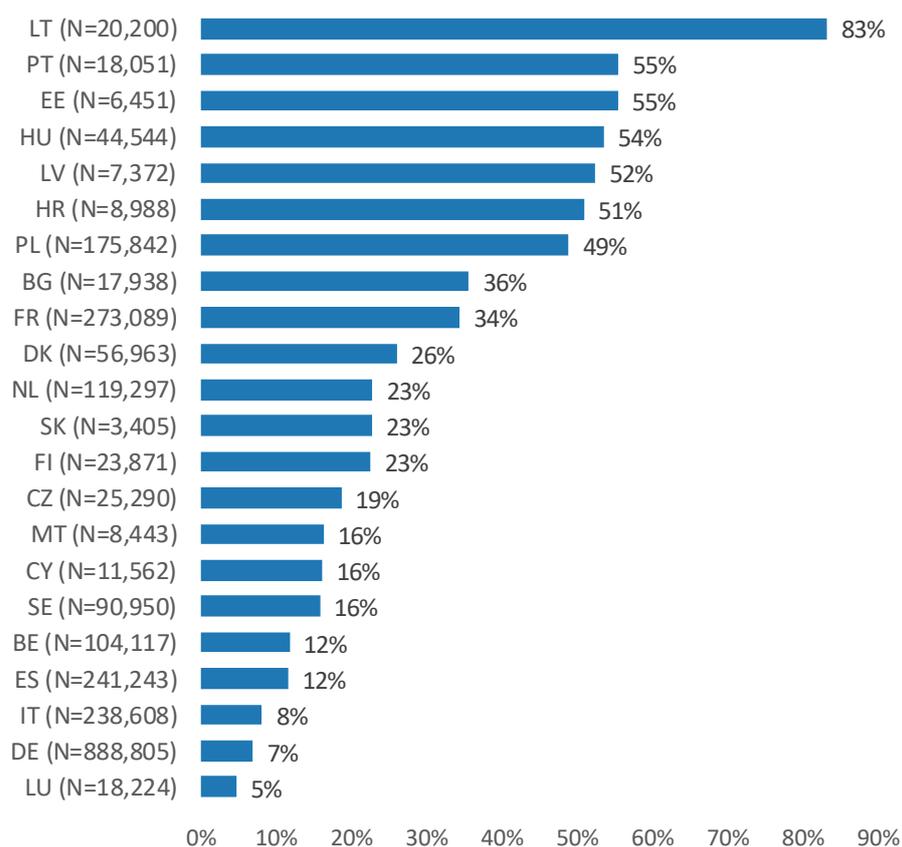
This question seeks to understand to what extent Member States or regions have minimised negative consequences of the outward mobility of skilled workers and maximised the potential of brain flow. The evidence presented first seeks to provide an

understanding from available data of the extent to which flows of migration of EU movers have changed over time.

Figure 48 presents the proportion of movers coming into a country who have the citizenship of that country, i.e. returnees. The figure is an average based on the number of movers and their broad category of citizenship for three years (2013, 2014 and 2015), excluding movers whose citizenship is stateless or unknown. The reporting countries i.e. countries that receive movers, are printed on the y-axis, with the average yearly number of movers in brackets. The proportion of those movers who have the citizenship of the reporting country, as represented by the horizontal bar, is printed on the x-axis. Countries are then ordered top-down from the highest proportion of returnees down to the lowest proportion of returnees. Note that the underlying data to this figure does not distinguish skill levels, and some countries are missing as no data was available.

This shows the significant return flows to Lithuania, Portugal, Estonia, Hungary, Latvia, Croatia, Poland, and Bulgaria, and France – for each of these countries return movers constituted more than 25 % of movers from 2013 to 2015. By contrast return movers to Luxembourg, Germany, and Italy constituted less than 10 % of migration to those countries.

Figure 48. Average proportion of movers with citizenship of the reporting country for 2013-2015



Source: Eurostat data on immigration by age group, sex and citizenship [migr_imm1ctz]

Notes: Numbers in brackets are the average yearly intake (average across 2013 to 2015). Data includes ages 15-64. No information is available prior to 2013. No skills distinction. The following reporting countries structurally have information missing and have been omitted: IE, EL, AT, RO, SI, UK

3.3.2.1 Summary of key messages

This data shows some interesting findings, which to some extent reinforces the fact that strong economies, with economic growth and employment opportunities are attractive to EU movers. This is reflected in the fact that a number of countries were consistently net importers of skilled labour between 2006, 2010, and 2016 (for example, Belgium, Czech Republic, Denmark, Germany, Spain, France, Italy, Cyprus, Luxembourg, Austria, Finland, Sweden, and the UK).

Additionally, the data illustrates that between 2013 and 2015 more than half of the movers to Lithuania, Portugal, Estonia, Hungary, Latvia, and Croatia were natives of those countries. On the one hand these data perhaps show that these Member States attract a low number of movers from other EU Member States. However, it may be an indication that some of the policy initiatives in these Member States are encouraging return movement.

The issue of how effective policy is in comparison to other push and pull factors is difficult to understand in the absence of flow data that links individuals to specific policies to which they have been exposed or to programmes in which they have participated. Beyond the range of push and pull factors described earlier in this study (specifically Section 3.2) it is impossible to say that any one specific action has had more of an impact than another.

3.3.3 Does increasing the attractiveness of higher education systems in central and Eastern Europe contribute to some extent to reducing brain flow, and more generally what the absence of attractive higher education systems may mean for brain flow?

In a study from 2004, Horvat (2004) highlights the importance of investment in higher education in South Eastern post-communist European countries for these countries to catch up (or transition) and retain and/or regain their skilled labour. However, the literature illustrates that there are a wide range of reasons why high skilled individuals choose to migrate. Improved economic prospects are an important driver. This may be achieved through different routes, one of which is participation in formal higher education. Other factors such as failing governance, corruption, lack of freedom to speak one's mind and the absence of promotions based on merit, are all identified as reasons for skilled workers to seek better opportunities elsewhere (Horvat, Sethi, Olesen (1998)). Gaillard (2001) argues that once fundamental conditions are met there are other pull factors which also act to influence migration decisions. For example, noting that a dynamic scientific and industrial community is required in the country of origin to be able to create a network connecting its elite with the diaspora, and subsequently be able to utilise the professional resource that the diaspora offers.

Recent reviews confirm that researchers are primarily attracted by higher education systems that are well developed:

- The recent Estonian Labour Market Policy Thematic Review (European Centre of Expertise, 2018) mentions a national concern regarding "Estonian researchers emigrating to universities with better infrastructure and funding opportunities and then not returning" (MLP, 2017), however the extent to which this has been the case was not assessed. The review does mention a survey that shows, in line with Horvat's article, that for Estonian researchers, non-economic reasons for mobility were more important: "For researchers, wage level is ranked eleventh as a motivational factor for international mobility. The most important motivations for researcher mobility are career building, opportunity to cooperate with leading specialists, better access to funding, research infrastructure" (MLP, 2017).
- A survey on drivers of Italians with doctoral degrees finds similar results. Whilst they did rank higher wages and better job opportunities highly, they point to 'the possibility to carry out state of the art research' (MLP, 2017).

- The Slovakian Labour Market Policy Thematic Review (European Centre of Expertise, 2018) indicates that improving the quality of education would lead to better prospects in the labour market (including higher wages), and this would attract young Slovakian high skilled workers back to the country (MLP, 2017).
- Both the Slovakian and Romanian Labour Market Policy Thematic Reviews (European Centre of Expertise, 2018) call directly for a reform (Slovakian Review, referring to social partners) and increase in investment (Romanian Review) in the higher education system. A better higher education system “would save costs which could be utilised to hire more people and offer higher wages as well as draw back Slovaks from abroad” (MLP, 2017). The Romanian Review points out similar concerns. Romania has the lower level of expenditure on education as a percentage of its GDP and low PISA scores. This negatively impacts the quality of the future labour force (MLP, 2017). An underprepared labour force is likely to have an effect on the future competitiveness of Romania and therefore its future growth.

3.3.3.1 Summary of key messages

The academic literature and policy review illustrate that higher education is clearly an important part of the mix in determining the possibilities available for those considering migration.

Investment in higher education has the potential to raise the overall qualification level of the native population. This may result in some natives using their level of education to secure employment abroad. However, it is unlikely that every higher qualified native will decide to move abroad. Thus, the idea of brain drain with brain gain is interesting in this respect.

Regardless of the validity of this argument it is important to state that a lack of higher education provision is likely to result in outward brain flow. Though it should be noted that there is a long tradition in moving to study abroad. This is not only motivated by a perceived lack of suitable higher education in countries of origin but is also motivated by a desire to travel and for new personal experiences.

However, there are a wide range of reasons why individuals choose to migrate; this may be achieved through different routes, one of which is participation in formal higher education. It is interesting to consider that some of the evidence identifies that improving the quality of higher education institutions appears to be a significant factor in determining whether or not younger movers will return to outgoing countries.

4 Conclusions and Recommendations

The freedom of movement of goods, people, services and capital between Member States is fundamental to the European Union. Of greatest significance for this study is the free movement of workers, enshrined in Article 45 of the Treaty on the Functioning of the European Union. The free movement of workers provides an opportunity for brain flow, with ease of worker movement meeting the demand and aspirations of individual movers, as well as demand by employers for labour or skills which they otherwise struggle to obtain. The study examined this issue and the extent to which brain flow has occurred, including ways in which there has been an uneven distribution of benefits of labour mobility between Member States. This study used a wide range of evidence⁴⁰ to examine the distinct patterns of movement of workers between Member States, examining the varied characteristics of this movement, set within the context of post-2004 accession and the expansion of free movement followed by the economic crisis and great recession. The study seeks to explain some of the most important drivers, or push and pull factors, which combine to influence labour mobility. The way in which policy makers have responded to this has also been examined, with some recommendations for future initiatives identified. The main conclusions in relation to these elements of the study are outlined below.

4.1 The scale and nature of brain flow in the EU

In seeking to understand the movement of skilled labour academic researchers and labour market policy makers have frequently used the term *Brain Drain* which emphasises perceived negative effects of skilled migration, understood as a loss of resources for outgoing states and therefore as both a consequence and a cause of underdevelopment. However social scientists, and in particular, economists began challenging this paradigm in the 1990s, stressing the benefits of skilled migration for outgoing countries. Such benefits are in the form of, for example, remittances, the role of diasporas in the economic and political development of origin and host countries, return (or 'circular') mobility, the relief to the outgoing countries welfare expenditure (through unemployment benefits, social assistance, and active labour market policies (ALMPs)), and the positive consequences of emigration options for the education and training prospects of populations in the regions of departure. This led to the emergence of the notions of *brain gain* and *brain circulation* or *brain flow*. These debates are often highly sensitive to the geographical and temporal focus of study.

This study investigates the degree and nature of brain flow in Europe between 2004 and 2016. In terms of the overall scale of movement of skilled workers the following key points emerge:

- **There has been a significant increase in the share of high skilled EU movers;** the proportion of high skilled EU movers amongst the employed population in the EU almost tripled between 2004 and 2016 to a total of 3.6 million in 2016.
- **EU enlargement influenced the flow of EU movers.** The influence of these factors varied by Member State, region, and sector. Accession in 2004 led to a rapid expansion of movement, though with a gradual geographical expansion due to the different timelines adopted in different Member States regarding the full opening up of their labour markets. The gradual nature of the opening up of EU labour markets to accession countries means that it is not easy to understand from this analysis why EU movers choose to move to certain Member States. Had all Member States opened up their labour markets at the same time, it would have been easier to understand the key push and pull factors at work. Although

⁴⁰ Including LFS microdata, academic research, and policy reports. Additional research was undertaken through case studies of Germany; Spain; Ireland; Poland; Bulgaria and Romania; the Baltic States; the ICT sector; and, the health sector.

labour market opening do not explain all of the patterns of EU movement, migration flows were (initially) largely influenced by the timetables for labour market opening. Subsequently, factors such as existing mover communities in countries with early labour market opening are likely to have had some impact on movement decision after full labour market opening.

The economic crisis and great recession influenced the decisions made by EU movers, though such decisions were still fundamentally taken using the same comparative judgements as pre-crisis mover decisions. We can discern that different strategies were adopted by EU movers, or potential movers. Firstly, an increase in EU movers as a reaction to the reduction in labour market opportunities (particularly from affected southern-European countries, especially from **Italy, Greece, Cyprus, and Spain** and to a lesser extent **Portugal**). This appears to have resulted in increased movement to, for example, **Germany**. Secondly, a wait-and-see strategy adopted by some EU movers that wanted to understand the impact of the crisis. This seems to have been the case in **Ireland** where many EU movers from Eastern Europe that had taken advantage of Ireland opening its labour market in 2004 chose to wait and see whether the situation would improve rather than returning home.

- **Skilled EU movers are, on average, younger.** Compared to the native employed population, proportionally more skilled EU movers are aged between 25 and 44 years old. Looking at all EU movers, some Member States (predominantly EU13) have a higher proportion of men and others (predominantly from the South of Europe) have a higher proportion of women.
- On the specific question of the impact of student or researcher mobility upon the movement of skilled labour, there is no clear evidence that this has a significant impact, although **in countries where the labour market situation is favourable, stay rates amongst students and researchers are relatively high.**
- Between the years 2004 and 2016, the number and share of employed medium and high skilled EU movers as a proportion of employees increased in most Member States. In some countries an increase can be found at all observed points in time (2004, 2010 and 2016), whereas in others, the increase has not been steady.
- **The data confirms that skilled, and in particular high skilled movers, are playing an increasing role in the labour markets of the EU**, although their share of the employed population overall remains low (just over 1.6 % medium skilled movers and just under 1.4 % for high skilled movers. Low skilled EU movers make up around 0.9% of employed individuals across EU labour markets).
- **Medium skilled EU movers, on average, have higher employment rates than their native-born counterparts. High skilled EU movers, on average, have lower employment rates than native counterparts (although overall the employment rate of the high skilled is higher).** Employed medium skilled EU movers are slightly more likely to be male than female whereas employed high skilled EU movers show an even balance between men and women. Analysis also shows that 6-12 years ago most employed skilled EU movers resided in the country for fewer than 10 years, more recently the proportion of those remaining for 10 years or more has increased to be roughly similar to the amount of employed skilled EU movers residing for fewer than 10 years.
- **By categorising Member States as outgoing and destination countries, it is evident that the benefits of EU movement have not been shared**

equally. The analysis outlined in the report distinguishes between four groups of Member States⁴¹:

- **Receivers:** Member States with a relatively high proportion of residents within its borders who have citizenship of another EU-28 Member State, but do not have a high proportion of its own citizens living in other EU-28 Member States. These countries are destination countries of EU movers. These countries are destination countries of EU movers (**Belgium, Austria, UK, Germany, Spain, Denmark, Sweden and the Netherlands**);
 - **Senders:** Member States with a low proportion of residents within its borders who have citizenships of another EU-28 Member State and a high proportion of its own citizens living in another EU-28 Member State. These countries are outgoing countries of EU movers (**Poland, Slovakia, Estonia, Bulgaria, Croatia, Latvia, Portugal, Lithuania and Romania**).
 - **Receivers and senders – strong:** Member States with a high proportion of residents within its borders who have citizenships of another EU-28 Member State and have a high proportion of its own citizens living in another EU-28 Member State. These countries are both destination and outgoing countries of EU movers (**Ireland and Luxembourg**);
 - **Receivers and senders - weak:** Member States with a low proportion of residents within its borders who have citizenships of another EU-28 Member State and a low proportion of its own citizens living in another EU-28 Member State. Relatively speaking, these countries are neither destination nor outgoing countries of EU movers (**France, Czech Republic, Finland, Greece, Slovenia and Hungary**); Italy is on the border between the first and third group.
- **Available data points to an element of skills loss and / or underemployment amongst skilled EU movers.** Whilst, the highest number of high skilled EU movers can be found amongst the professional and managerial categories, a sizeable proportion of skilled EU movers work in elementary occupations. Indeed across most countries a higher proportion of foreign-born first-generation movers indicate that they are more overqualified for their job than the native population. Another important issue is linguistic difficulties, with individuals proficient in the language of the host country less likely to suffer from 'brain waste'
 - **Skilled EU movers face issues in terms of recognition of their skills, qualifications, and experience.** Evidence from the literature and from surveys with movers indicates that difficulties in obtaining recognition and validation of qualifications gained abroad can result in an inability to obtain jobs which are more commensurate with their qualifications.

4.2 The key drivers of brain flow

The study investigated the push and pull factors which impact on decisions to move to another Member State. It was found that a complex series of comparative judgements made by potential movers must be understood. These factors have important implications for policy makers and further research into this topic.

- **Economic conditions are a key motivation for movers.** Economic conditions such as a high level of GDP per capita, economic growth, purchasing power and efficient labour market policies constitute pull factors. These factors are present in most destination countries and absent in most outgoing countries. Indeed, in

⁴¹ These distinctions are made by plotting all EU28 Member States (excluding Cyprus and Malta, for which data are not available), and Luxembourg as the values for this Member State distort the figure). Data used are the percentage of Member State residents who have another EU-28 citizenship and the percentage of their citizens who reside in another Member State. The quadrants are divided by the average values for the 25 Member States included in the analysis.

this respect, the impacts of the economic crisis and great recession, which varied by Member State and by region impacted on the decisions made by movers / potential movers. The net effect of this was to worsen the gaps in performance in terms of macroeconomic indicators, this is the case for example for the gaps in unemployment and income between workers with different skill levels.

- **A comparative judgement made by movers between working conditions in origin and potential destination countries** is a key factor. Most of destination countries offer better working and living conditions compared to most outgoing countries, this is measured in terms of working hours, or satisfaction with public services as well as confidence in institutions.
- **The choice to move may depend on movers' holding positive perceptions of institutions in the host country.** It is worth noting that the research shows that quality institutions are associated with well performing economies and societies. This is seen as a dynamic process with self-reinforcing mechanism that good institutions contribute to economic growth, and economic growth has a positive effect on institutions succeeding to attract high skilled labour. Furthermore, it is likely that EU skilled movers have high expectation in terms of career prospects and quality of life. Most of these are mainly affected by national rather than regional settings, regulation or policies. This might explain why some EU skilled movers seek work in another Member State rather than moving to a more developed region in their own country, despite language, distance or relocation costs as barriers.
- **Proximity and linguistic similarities are important in decisions.** Many citizens of EU-28 countries living in another EU-28 country, live in countries that are either linguistically or geographically close to the country of their citizenship. However, country size and positive economic and labour market trends, as well as linguistic factors are also clearly attractive to EU movers (the latter particularly in the UK). This is more so the case for EU13 and some southern European Member States. EU movers from these countries mostly live in Germany and the UK.

4.3 Policy responses to brain flow

The issues identified in relation to the data presented in this report continue to form a significant part of Member State's national policy and political discourse. This is true in relation to both Third Country Nationals and EU movers. In terms of policy toward skilled migration, much of this is most explicitly demonstrated through controls / regulation established in relation to third country nationals, while this is not the case for EU skilled movers. Indeed, **the policy review for this study identified few coordinated approaches towards EU skilled movers.**

In investigating the range of policies and practices associated with EU movers, the report considered a 'mover journey' highlighting the types of policies relevant and what is provided at various stages. This analysis found the following:

- At the pre-departure stage, there is a wide range of policies to motivate skilled natives to remain, particularly, but not exclusively, in Member States and regions previously subject to high levels of outward movement. Additionally, there are initiatives, particularly aimed at retention of young people through using mainstream Labour Market Policy services. It is noticeable that there is little or no activity to encourage migration or to facilitate a process of circular mobility. In this sense the information provision at this stage is toward migration prevention rather than assisting potential movers to consider a wide range of options.
- In terms of support at the arrival and integration stage there is a range of first contact and integration support – though many of this is mostly targeted toward third country nationals, with skilled workers requiring fewer such services.

Policies aiming to keep movers connected to networks are evident at this point in the mover journey and do seem valuable for individuals in terms of integration and potentially in assisting return migration.

- Qualification recognition forms an important part of the mover journey. The EQF has been a valuable tool as a common reference point to compare qualifications and should continue to be so.
- In relation to policies and practices to support return mobility, there are a significant number of strategic initiatives to attract specific groups of workers and specific incentives for returners. These demonstrate ways in which particular regions and Member States see skilled movers as key to labour market and regional development plans.

Policies to support intra-EU mobility have developed and temporary restrictions on mobility have been lifted following the accession of (generally) structurally weaker countries from central and Eastern Europe. Some of the key concerns for policy makers have revolved around the potential impact of mobility with regard to brain drain on the one hand and over-qualification on the other, with questions being raised on whether sufficient policies are currently in place to prevent the significant emergence of such phenomena and to encourage mutually beneficial 'brain circulation'.

There are a number of wider observations which can be drawn taking account of both the policy review and data analysis.

Many policies and measures identified in this study to address skilled migration are small scale. There is evidence of linkages to wider strategic agendas, however this is not always the case and is mostly linked to regional strategy rather than Member State strategy. Indeed, there appears to be relatively little consideration of how policy towards the attraction of EU skilled movers operates alongside policy toward third country nationals (TCNs). By necessity, policy towards TCNs is more formalised and regulated at Member State level. As such individuals do not benefit from free movement and therefore their admission is regulated.

The result is that EU movers are currently not the focus of significant strategies at EU, Member State, or sectoral social partner level. This is the case despite evidence of skill shortages in many professions that are key to economic prosperity and social well-being. More generally, **there does not appear to be significant coordinated activity in skilled migration policy which considers ways in which attraction and retention of skilled EU movers can benefit regional and national economies.**

Despite the ongoing policy development in this area, there is **limited information available on the scale or impact of policies and measures in place that are relevant to EU movers.** As such this limits the ability to conduct an assessment of their effectiveness. Part of increased stakeholder dialogue in this policy area should be to discuss how such meaningful information could be shared.

The policy review demonstrates that policy development in this area requires engagement with a wide range of spatial concerns (for example understanding the regional impact of national initiatives and/or understanding how action / inaction in one region may impact on other regions). **It also requires engagement with a significant number of stakeholders and potentially divergent motivations.** For example, stakeholders that are actively seeking to decrease outward mobility (through promoting labour market opportunities at local and regional level); stakeholders that are seeking to promote mobility for all skilled workers to their region or locality; and, stakeholders that are seeking to promote mobility, but specifically to those that formerly were resident (as natives of) particular localities / regions.

It should also be noted that **stakeholders operating in this area of policy often have quite different policy agendas**, typically characterised by competition between and within Member States for skilled movers – some of which is the result of genuine

costs to society from outward migration. The potential and actual benefits of the movement of people remains poorly understood and poor leadership has led to the exploitation of prejudices and misinformation. Given the issues outlined above it is clear that significant sustained effort and leadership is required in order to develop effective policy in this area.

4.4 Recommendations

A number of policy recommendations arise from this study. These begin with some reflections around shortcomings in the available evidence base:

There is a need to strengthen the evidence base around the movement of skilled labour. Comparable data at EU level is not available with sufficient granularity to understand the extent to which – and in which instances there is evidence of ‘brain waste’. Whilst there is clearly evidence of over-qualification, it is not possible to achieve a sufficiently detailed breakdown of the data to ascertain which individuals from which countries and with which levels of qualifications are most affected by this. Overall, difficulties remain in relation to measuring the flow of EU movers. The best evidence in this regard currently available therefore comes from academic studies and surveys which tend to be targeted at a relatively small population and cannot provide an overall picture at EU level. In particular the perspective of outgoing countries is underdeveloped as national institutions as well as important surveys such as the EU LFS and EU SILC by necessity predominantly collect and analyse data on (social) phenomena within their borders, not including their own citizens outside their borders. More in-depth longitudinal data on migration inside the EU would be of value to provide a more meaningful understanding.

Whilst such academic surveys and studies indicate that some of the key factors around existing brain waste are focussed on difficulties around the validation and recognition of formal and informal qualifications (as well as linguistic skills) and detailed reports are available on the nature of the policy framework governing these issues; less information is available on the quality and actual administration of these matters (and therefore movers experience of these processes) at EU level.

A greater understanding of the impact of wage differentials on the movement of skilled workers would be helpful, together with awareness raising around the impact of a lack of linguistic skills on occupational opportunities upon moving and their knock-on effect on longer term career potential.

With regard to the existing – often relatively small scale and local or regional measures relating to the migration of EU nationals, very little evaluative evidence is available on their impact, demonstrating that greater emphasis needs to be placed on evidence-based policy making.

European-level recommendations

The role for institutions that operate at European level involves different forms of policy action. Firstly, to ensure that the relevant conditions are in place to enable free movement of workers. In principle this is in place through Article 45 of the Treaty on the Functioning of the European Union. In practice actions are required to ensure that this right is accessible, and skilled movers are able to both contribute and take advantage of the Member States that they choose to work in. In this respect the proposed European Labour Authority should play a prominent role in overseeing actions. Its remit is to:

- Facilitate access for individuals and employers to information on their rights and obligations as well as to relevant services;
- Support cooperation between EU countries in the cross-border enforcement of relevant Union law, including facilitating joint inspections;
- Mediate and facilitate a solution in cases of cross-border disputes between national authorities or labour market disruptions.

Lack of recognition of qualifications gained in other countries may be a key barrier to skilled labour flows; this issue is relevant for both EU movers to another Member State but also for returnees that have gained qualifications in another Member State. It is also the case that the lack of validation of work experience gained in other Member States contributes to under employment of EU movers and returnees. Additionally, the low level of employers accessing information to understand validation systems is a potential barrier. Finally, it is also the case that portability of benefits remains an issue for movers.

Through coordination of policy and sharing of information (e.g. peer learning) it is important that European-level institutions promote the benefits and discuss ways in which the costs and benefits of free movement can be understood and shared where possible. This requires knowledge-sharing platforms to be established and facilitated so that Member States and regions may discuss these issues. Linked to this, as noted above it is important that a shared evidence base be discussed and data that are recognised by all partners are continually collated and analysed.

European-level partners must also ensure that regions are part of the discussion. As is noted in this report the impacts of the economic crisis and great recession were highly regionally disaggregated within Member States. Furthermore, the analysis of policies and practices in this report notes that there is often significant competition between regions in Member States for skilled workers. European-level organisations can play a role in promoting collaboration where there is duplication of effort. This can be through promoting sharing of good practice and evidence of what is most effective. The aim here would not be to stifle innovative practice but rather to promote the notion of circular mobility and illustrate that retention and policies for reintegration of returnees' policies may coexist with policies which assist movers.

Member State and regional level recommendations

In terms of recommendations for Member States and regional actors it is clear that there are a number of important factors which should be understood in order to effectively develop and deliver policy related to skilled migration:

- When looking at the 'ideal type'⁴² of an EU mover's journey that takes into account requirements prior to leaving, their time in a host country and – if relevant – their return, it is notable that there are significant gaps in current policy practice. This means that current approaches do not always ensure that migration takes place in a way that makes the best possible use of human capital. This prevents the emergence of an EU-wide labour market to address skills shortages whilst preventing damaging brain drain. It is therefore incumbent on Member States to consider whether it is appropriate to introduce policy responses which address various parts of the mover journey.
- The analysis of the drivers of skilled migration shows that a focus which recognises the range of drivers which influence EU movers is required. The creation of strategy or specific initiatives to attract returners are unlikely to be effective unless placed within an overall suite of measures aimed at economic development or labour market reform, in short, activities to address some of the core reasons for movers leaving. This requires consideration for contextual factors for various Member States.
- It is clear that policy development in this area requires engagement with a significant number of stakeholders and types of policy. As noted above this also requires consideration of the most appropriate spatial scale which will differ for Member States depending on the varied levels of regional and local autonomy

⁴² In this respect what is meant by policy to support the 'mover journey' is: firstly, measures useful in preparation for outward movement, such as information, key skill development, etc.; secondly, integration in destination country (information on new employment opportunities, qualification validation, support to integration in working environments and training); followed by additional support for return migration; and, integration on return to country of origin.

between and within Member States in terms of policy design and delivery. This would involve various stakeholders active at sub-national levels such as: employer representatives, employee representatives, elected officials and regional/municipal authorities, Public Employment services; and, community sector organisations.

In developing policy solutions, it is important that Member States and regions harness available EU-level resources and intelligence (noting the recommended actions outlined above for European level partners). This provides an opportunity for Member States to do the following:

- Member States should support upskilling of residents as a means of improving both the economic development and quality of life for those in more disadvantaged regions – ultimately encouraging convergence.
- Develop new approaches to address the negative impacts of skilled migration and to maximise the benefits of brain flow. Whilst a high number of existing initiatives are aimed at skills, their scope is currently limited and they tend to be regional and small scale rather than national and most are addressed at TCN rather than EU movers. Furthermore, there are a number of remaining issues relating to validation of qualification, discussed in the box below.
- Include consideration of skilled EU movers in national efforts at skills forecasting and national skills development strategies to assist in this matter together with a better understanding of how skilled EU movers currently contribute to national labour markets.
- Participate and encourage EU level partner participation in opportunities for more detailed research as well as peer learning exchanges.
- There are a number of key messages in terms of skills policy that are outlined in the box below.

Skills policy: specific conclusions and recommendation

At European level, the EURES network supports skills and vacancies matching, as well as providing more general information and support on working in another Member State. This makes an important contribution to supporting EU movers. Such supporting measures are set to be further consolidated and developed with the recent proposal for a European Labour Authority. The study recommends that this authority should investigate how the system may further assist movers and returners through the range of potential policies outlined in the mover journey.

At Member State level, there have been steps to support the recognition and validation of University diplomas, professional qualifications and formal as well as informal learning. This work can enhance the comparability and transferability of skills and qualifications, within the context of subsidiarity as education policy remains within the remit of Member States.

The study highlighted the issue of underemployment of skilled EU movers in relation to the roles that they take up (potentially resulting in skills depreciation). Therefore, for Member States, the importance of efforts aimed at aligning National Qualifications Frameworks with the European Qualifications Framework (and use of the EQF in Member States) should continue as one way of remedying this issue. This also has potential to make a contribution to addressing skills shortages in Member States. The New Skills Agenda seeks to address some of these issues in Action 5 (European Qualifications Framework); Action 7 (New Europass); and Action 8 (Brain Flow).

In addition, there are cultural barriers and practical issues that may persist in adoption and use of National Qualifications Frameworks. In this respect, the study recommends greater efforts to reduce the underemployment through encouraging employers to value the potential contribution of EU movers. This may include practical barriers to

assessing the benefit of EU movers and also raising the understanding of the contribution of EU movers more generally, the work of Erasmus+ and the European Voluntary Service is particularly important in this respect.

In addition to these concerns, which mainly relate to work that Member States would undertake internally, the study recommends that increased bilateral and multilateral collaboration between Member States would be valuable and should be encouraged. For example, there are Member States that continue to be significant countries of origin for particular Member States. As such, these Member States' expenditure on education and training supports economic development and closes skills gaps in other EU Member States.

Collaborative approaches may facilitate return or indeed circular flows. Part of this could be improvements in ensuring mutual recognition, the original outgoing countries may then benefit from the future knowledge and innovation brought back through returnees. Several EU Funds making reference to (labour) mobility are available to facilitate circular flows. It is recommended that such measures are used and directed to address these discrepancies. Examples are the European Social Fund, Employment and Social Innovation (EaSI) programme (including the aforementioned EURES) and Erasmus+.

Annex 1 Work undertaken

The overarching purpose of the activities undertaken has been to gather a comprehensive evidence base with which to answer study questions. The purpose of this section is to describe the evolution of the work and decisions taken regarding the data used and case studies carried out. It also includes information on definitions used in the report.

A kick-off meeting was held on 01 June 2017. The meeting provided an opportunity to discuss the aims and scope of the study, proposed definitions of brain flows, boundaries for the review of Member State measures to address brain flows, the methodology suggested by ICF in their offer, potential selection criteria for the case studies, availability and access to data sources, and contractual and management arrangements. A key outcome from the discussion was the following:

The approach to data analysis will be fully considered in the inception report with the aim of making the analysis in the study more robust. ICF will make use of data that it will request from Eurostat. The inception report will make clear exactly which datasets and indicators are to be used to answer each research question.

The policy review will focus on understanding policies in different categories rather than aiming for comprehensive coverage of all policies. Examples of the most significant policies will be included to illustrate the definitions used. Members of the steering group encouraged ICF to further exploit the country experts' specific expertise, rather than limiting themselves to those sources falling within their own linguistic spectrum.

Case studies will be identified through a research-driven process, with an initial review of data, literature review, definition of key terms, establishment of the main policies, and discussion with thematic experts. The Inception Report will contain proposed selection criteria for case studies and the general approach to conducting the case studies.

It was noted that the inception report should contain a full explanation of how each research question will be answered (including with which sources).

Following the kick-off meeting, ICF conducted an initial desk review to provide further elaboration of the study questions, establishing definitions for the study, and an outline of the general approach to conducting case studies. The results of this research were presented in a draft inception report, submitted on 29 June 2017. Following this, the Commission sent some suggested changes to the report to ICF which resulted in a final inception report which was sent to the Commission on 25 July 2017.

The final version of the inception report contains details of agreed data and specific variables to be obtained and analysed by ICF. Progress on this activity is outlined in the next two sections of this report (Section 2.2 and Section 2.3) with analysis of the data presented in Section 3.

In addition, ICF developed some suggested case studies and specific lines of enquiry that the case studies would follow. A paper suggesting specific case studies was submitted to 31 August 2017. The Commission proposed amendments to the case study selection and the case studies to be prepared were agreed on 08 September 2017. Section 2.4 below provides more details on the case studies included in the study.

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Annex 3 Case Study: Germany

A3.1 Introduction: Migration of skilled labour – general patterns

Germany does not have a large number of EU-28 migrants (of all skill levels) as a proportion of its total population. The largest groups of EU-28 migrants living in Germany in 2016 were Polish (0.86 % of the total German population); Italians (0.68 %) and; Romanians (0.54 %).

As shown in Table 11, employment figures of medium- and high-skilled EU-28 migrants (professionals and craft and related trades workers) increased by more than 70 % between 2010 and 2016. There is an increasing relative importance of professionals and craft and related trades workers, whilst technicians and associate professionals vanished from the top three occupations in 2016. The decline in relative importance of technicians and associate professionals is complemented by a rise in popularity of service workers and market sales workers.

Table 11. Top three occupations of medium- and high-skilled EU-28 migrants in Germany in 2010 and 2016

2010	Count	2016	Count
<i>Technicians and associate professionals</i>	183 271	<i>Professionals</i>	310 959
<i>Professionals</i>	171 924	<i>Craft and related trades workers</i>	273 904
<i>Craft and related trades workers</i>	158 985	<i>Service workers and market sales workers</i>	261 953

Source: Eurostat

Interestingly, the occupations most popular amongst medium and high-skilled EU-28 migrants are not the ones with the highest relative share of migrant workers, as shown in Table 12. Disproportional to their popularity, elementary occupations rank highest in relative share of skilled EU migrants amongst the workforce. Their fraction of the total labour force nearly tripled between 2007 and 2016, increasing from 5 % to 14 %.

In contrast, the increasing absolute popularity of occupations evolving around craft and related trades workers (+72 %) is met by an increasing share of the migrant workers amongst the total workforce in this field.

Table 12. Top three occupations with the highest proportion of medium and high-skilled EU-28 migrants in Germany in 2007 and 2016

2007	Count	2016	Count
<i>Elementary occupations</i>	5 %	<i>Elementary occupations</i>	14 %
<i>Legislators senior officials and managers</i>	5 %	<i>Plant and machine operators and assemblers</i>	7 %
<i>Service workers and shop and market sales workers</i>	4 %	<i>Craft and related-trades workers</i>	7 %

Source: Eurostat

We further observe that the overall share of EU-28 skilled migrants in German occupations is increasing in the top three occupations, indicating a rising importance of this segment of the labour force.

While occupations in Germany with the highest increase in skilled EU-28 migrant employees from 2006 to 2016 are; i) Elementary occupations (three times more than 10 years ago: from 77 417 to 235,480); ii) Plant and machine operators and assemblers (almost double that of 10 years ago: from 64 051 to 123 443); iii) Service workers and shop and market sales workers (almost double from 10 years ago: from 143 001 to 261 953), only the latter domain reports substantial shortages of skilled labour. In contrast, especially in elementary occupations, demand for skilled migrant workers is declining in recent years.

Sectors⁴³

In 2016, most medium and high-skilled EU-28 migrants in Germany were employed in; i) Manufacturing (357 128); ii) Wholesale and retail trade; repair of motor vehicles and motorcycles (214 015); iii) Human health and social work activities (173 564). The latter in particular meets a soaring demand for health care professionals across the country.

In 2008, eight years earlier, most medium and high-skilled EU-28 migrants in Germany were employed in; i) Manufacturing (237 407); ii) Wholesale and retail trade; repair of motor vehicles and motorcycles (142 307); iii) Accommodation and food service activities (104 116). While (i) and (ii) remained stable in their popularity over the years, the rising demand for health care professionals appears to manifest itself in the rising popularity of human health occupations.

Sectors that have the highest proportion of medium and high-skilled EU-28 migrants⁴⁴, in 2016 were; i) Accommodation and food service activities (15 %); ii) Activities of households as employers; undifferentiated goods-and services-producing activities of household for own use (14 %); ii) Construction (7 %). The construction sector is strongly affected by an undersupply of engineers in the recent past.

In 2008, this was; i) Accommodation and food service activities (11 %); ii) Activities of households as employers; undifferentiated goods-and services-producing activities of household for own use (9 %); 3) Arts (6 %).

Sectors in Germany with the highest increase in skilled EU-28 migrant employees from 2008 to 2016 are; i) Agriculture⁴⁵ (almost 2.5 times more than 8 years ago: from 6 454 to 15 526); 2) Construction (more than double from 8 years ago: from 75 679 to 167 551); iii) Transportation and storage (more than double from 8 years ago: from 51 074 to 108 690).

Regions

Most skilled EU migrants in Germany live in Bayern (218 563 in 2006 to 380 789 in 2016); Baden-Württemberg (198 473 in 2006 to 343 766 in 2016) and; Nordrhein-Westfalen (NRW) (221 364 in 2006 to 328 906 in 2016). For Bayern and Baden-Württemberg, this is consistent with their relatively high economic growth and the resulting high demand for skilled labour in these regions. It further mirrors the preferences of the general Polish diaspora with around 700 000 migrants located in NRW and around 200,000 in each Bayern and Baden-Württemberg.

As a proportion of the total skilled employed population, the highest proportion of skilled EU migrants live in Baden-Württemberg (4.76 % in 2006 to 6.94 % in 2016); Hessen (4.32 % in 2006 to 6.84 % in 2016) and; Bayern (4.40 % in 2006 to 6.35 % in 2016).

⁴³ Eurostat microdata extract received: 19/10/2017, ICF calculations

⁴⁴ EU-28 medium and high-skilled migrants as a proportion of the sum of medium and high-skilled EU-28 migrants, nationals and third country nationals employed in that sector

⁴⁵ This estimate has low reliability

The largest increase in the proportion of skilled EU migrants (not taking into account regions that had no data or no reliable data), is Bremen. In 2006, 2.92 % (then 5 994) of the population were skilled EU migrants whilst in 2016 this was 6.20 % (16 938).

Activity⁴⁶:

In 2016, the activity rate of all EU migrants (regardless of skill level) in Germany was 80.1 %. This compares to a 79.5 % activity rate for natives. For context, the EU average activity rate for all EU-28 nationals living in another EU-28 country was 78.9 %, whereas the EU-28 average activity rate of nationals was 73.1 %. This illustrates the attractiveness of the German labour market, especially towards regions more strongly affected by low activity rates.

The 2014 Eurostat ad hoc module⁴⁷ on the labour market status of immigrants shows that activity rates for medium skilled migrants⁴⁸ was 81.9 % compared to 81.3 % for natives. The activity rate for high-skilled migrants was 86.6 %, compared to 91.3 % for natives.

A3.2 Understanding the movement of skilled workers

Motives for skilled German emigrants

With 71 579 Germans of working age (aged 15-64) emigrating in 2015⁴⁹, the issue of skilled German emigration is relatively small compared to other European countries. While merely 0.1 % of Germans of working age decide to leave their country⁵⁰, this fraction may be higher when restricted to skilled labourers. However, as we cannot access reliable data on the incidence of emigration amongst skilled German workers, we assume this issue to affect the general economy rather in single key occupations rather than on a broader scale.

Motives for skilled workers emigrating from Germany to other EU Member States typically concern economic factors rather than social networks. As found by Verwiebe et al. (2010), these motives can be further subdivided into the following push and pull factors, ordered by frequency.

Table 13. Motivators for German emigrants

Push factors	Pull factors
Unemployment	(Concrete) Job offers
Low or declining wages	Higher wages
Poor working conditions in Germany	Better working conditions

Source: Verwiebe et al. (2010)

Common drivers of general migration, such as the size of the respective diaspora in general or the prevalence of social networks in the hosting country appear to be of less importance for skilled German emigrants.

Motives for skilled European immigrants

Since 2010, Germany gained substantial popularity amongst skilled European migrants. The current immigration flows can be roughly subdivided into two main trends. Firstly, Germany receives large numbers of migrants from CEE countries (EU8 and EU2). In the past, the immigration from EU2 (Bulgaria and Romania) countries in particular received negative attention, as it was wrongly believed to concern mostly unskilled individuals

⁴⁶ ICF calculations based on Eurostat, EU LFS, ifsa_argan

⁴⁷ Eurostat, EU LFS 2014 ad hoc module lfso_14lactr

⁴⁸ defined as 'Foreign-born (first generation of immigrants, which includes third country nationals)

⁴⁹ Source: Eurostat [migr_emi4ctb]

⁵⁰ Own calculation based on Eurostat

driven by poverty in their home countries (so called 'Armutsmigration'). Secondly, the economic crisis of 2008 led to a sharp increase in immigrants from affected southern-European countries, especially from Italy, Greece, Spain and to a lesser extent Portugal.⁵¹

A major driver for both groups have been the large differences and wage levels and working conditions. For the southern-European countries, these factors are complemented by soaring unemployment rates, especially affecting the youth. The crisis has further pushed Romanian and Bulgarian labourers, who were previously working in Italy or Spain, to move to Germany to find employment.⁵²

These trends have been largely facilitated by the free movement of people in the EU, as well as dramatically decreasing costs of communication. Migrants can now stay in touch with their relatives and friends and prospective migrants have easy access to information and diaspora networks in prospective hosting countries, such as Germany.⁵³

Diaspora

As shown in Figure 49, the largest migrant communities in Germany are Poles, Italians and Romanians. While substantial numbers of Italian migrants were flowing into the country already shortly after Germany concluded its first bilateral agreement on labour recruitment (*Anwerbeabkommen*) with the Italian government in 1955⁵⁴, Poles and Romanians did not have free access to the German labour market before they could seize the freedom of movement for workers in the EU. The first wave of labour recruited labourers during the 1960s and 1970s (mostly Turks and Italians) did not commonly possess any substantial vocational skills but was hired for low-skilled operational tasks in the thriving German economy.

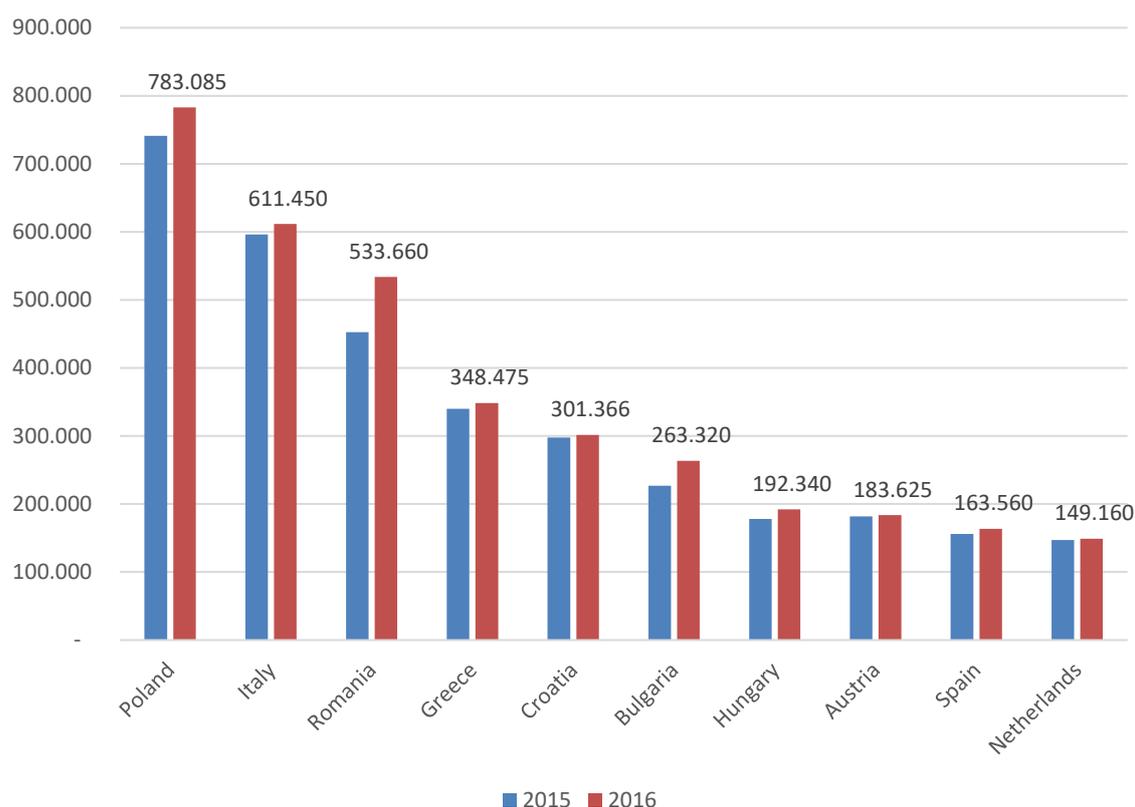
⁵¹ Engler, M. and Weinmann, M. (2015), EU-Migration nach Deutschland: Aktuelle Trends (https://www.ifri.org/sites/default/files/atoms/files/ndc_121_engler_weinmann_de_0.pdf)

⁵² Engler, M. and Weinmann, M. (2015), EU-Migration nach Deutschland: Aktuelle Trends (https://www.ifri.org/sites/default/files/atoms/files/ndc_121_engler_weinmann_de_0.pdf)

⁵³ Engler, M. and Weinmann, M. (2015), EU-Migration nach Deutschland: Aktuelle Trends (https://www.ifri.org/sites/default/files/atoms/files/ndc_121_engler_weinmann_de_0.pdf)

⁵⁴ <http://www.bpb.de/politik/hintergrund-aktuell/68921/erstes-gastarbeiter-abkommen-20-12-2010>

Figure 49. European diaspora in Germany (migrant stock in 2015 and 2016)



Source: Own calculations based on DESTATIS (2017)⁵⁵

Unlike the typical unskilled Italian factory worker from the 1960s, European immigrants to Germany today are medium to high-skilled professionals. Ultimately, this substantially eases sustainable integration into the labour market. While Turkish communities in particular - stemming from recruitment waves in the Sixties - are struggling with their integration into the labour market, the recent waves of skilled European migrants to Germany appear to have much better chances of succeeding in the German labour market.⁵⁶ The perception of these skilled European migrants has received a much more positive image in the recent past. Part of this change of public opinion can be attributed to the refugee crises, shifting most attention towards refugees from non-European countries. While part of the public discourse now evolves around issues with the integration of these refugees, intra-European migrants are perceived as the positive anti-thesis with less cultural distance towards the German majority population.

In the case of migrants from Poland to Germany, Luthra et al. (2014)⁵⁷ find no significant correlation between the incidence of previous social contacts in Germany and the probability to belong to the migrant types of 'settled' or 'temporary'. Both of these types commonly indicated 'work' as their primary motivation to migrate. An existing social network in the destination country only seems to constitute a pull factor for Polish students and Poles moving for family reasons. This leads to the assumption that a pre-existing diaspora plays a minor role for skilled Polish migrants to Germany.

⁵⁵ <https://de.statista.com/statistik/daten/studie/1221/umfrage/anzahl-der-auslaender-in-deutschland-nach-herkunftsland/>

⁵⁶ IAB-Kurzbericht 21/2012

⁵⁷ [http://www.lse.ac.uk/europeanInstitute/LEQS %20Discussion %20Paper %20Series/LEQSPaper74.pdf](http://www.lse.ac.uk/europeanInstitute/LEQS%20Discussion%20Paper%20Series/LEQSPaper74.pdf)

A3.3 Migration of skilled labour and its impact on domestic economies beyond the labour market

Impact on innovation

Immigration

A study by Movinga⁵⁸ finds that migrant labourers are contributing to the German economy by enhancing its innovative potential. Using data from DESTATIS and the OECD, the authors Länder with a significant share of foreign born population (above 8 %) to issue relatively more patents (100 or more) and to host more companies receiving venture capital (20 or more). Bremen constitutes an exception with a high share of foreign born inhabitants but relatively low innovative potential. This may partially be explained by the fact that Bremen is the smallest and least populous of Germany's 16 Länder. In addition, Bremen is economically less prosperous than other western-German federal states in the recent past. The study finds that the economically leading Länder (Bavaria, Baden-Württemberg, Hesse, NRW, Hamburg) in particular features high levels of innovations and high immigrant stocks. Berlin poses a peculiar case, featuring low economic performance, but hosting more than 202 companies receiving venture capital and hosting most migrants in relation to its population (12.77 %). The German capital supports the view of Movinga chief Finn Age Hänsel;

*"The impressive number of companies with risk capital and the number of patent applications in multi-cultural regions like Berlin, Bavaria and Baden-Württemberg show that immigration positively affects innovation and growth."*⁵⁹

In their study on immigration and innovation in Europe⁶⁰, the authors from the International Centre for the Future of Work (IZA) find the relation between migrant communities and innovation to be more complex than what was outlined by Movinga. While the mere size of a migrant community had no significant positive effect on the innovative potential of a region (i.e. the number of patent applications), the internal diversity of such migrant communities, as well as their average skill level proved to be robust predictors of a rise in patent applications. Consequently, the authors suggest promoting skilled migration whilst maintaining a balance between different outgoing countries to enhance innovation in a given region.

Emigration

While skilled immigration has been shown to yield positive results for the innovative potential of German regions, emigration would naturally be believed to have the opposite effects. Since Emigration figures are relatively low in Germany (less than 0.1 % annually), the problem does not affect the German economy on a broad scale. However, emigration of key innovators can prove to have substantially detrimental effects on the quantity and quality of innovations produced in Germany.

In recent years, there is a notable tendency of top-ranking university researchers to emigrate to the UK or the US (since funding and work conditions are much more favourable). As highlighted by the Expert Panel on Research and Innovation (2014)⁶¹, a substantial share of Germany's top-ranking researchers and scientists are emigrating to the US, Switzerland or the UK. Main motivations for these leading innovators are better funding and an environment which provides them with more substantial exchanges with other top researchers. Between 2006 and 2011, a total of 23,460 publishing scientists left Germany whilst 19 521 immigrated in the same period. This negative migration balance can also be observed for patent issuing inventors, posing a major issue to the

⁵⁸ <https://www.movinga.de/en/foreign-human-capital/>

⁵⁹ <https://www.euractiv.com/section/economy-jobs/news/immigration-boosts-germanys-economy/>

⁶⁰ Ozgen, C. et al (2011). Immigration and Innovation in European Regions. IZA Discussion Paper No 5676, April 2011.

⁶¹ https://www.e-fi.de/fileadmin/Gutachten_2014/EFI_Gutachten_2014.pdf

innovative capacity of the country. While this issue concerns relatively low quantities, it is the elite in science and innovation that is emigrating rather than immigrating. To combat this outflow of elite researchers and scientists, Germany has launched the policy initiative *German Academic International Network (GAIN)*, to stimulate return migration amongst these high-skilled professionals.⁶²

An interview with a leading German IT company revealed that the ICT industry is commonly not affected by such issues. Having their operations thoroughly globalised, the current residence of technicians plays a minor role for most German IT firms. As highlighted by another interviewee, whilst Germany may have an undersupply of skilled developers at first glance, these services can simply be bought at the global market for IT developers. The companies in the ICT sector instead encourage employees to build global careers, support their desires to emigrate as it increases their motivation and helps them to develop their skills and competences around the globe.

Social consequences of skilled migration

Immigration

As stated by one interviewee, there is generally a positive attitude towards intra-European migration in Germany. EU migration is relatively constant at 4.8 % of the total working population in Germany and their working intensity is higher than the native population. EU migrants are not perceived as alien migrants anymore as Germans value the free movement of labour within the EU. Within Germany, there is a much more positive image of European migrants now than there was of Greek, Italian and Turkish migrants in the 1960s. Resulting from the recent increase in migration from the Middle-East and Africa, some of the negative attention has shifted from concerns in some quarters around Romanian immigration (mainly concerning Roma) towards newly arrived migrants from these countries. Intereuropean migration received a more positive connotation through this dynamic.

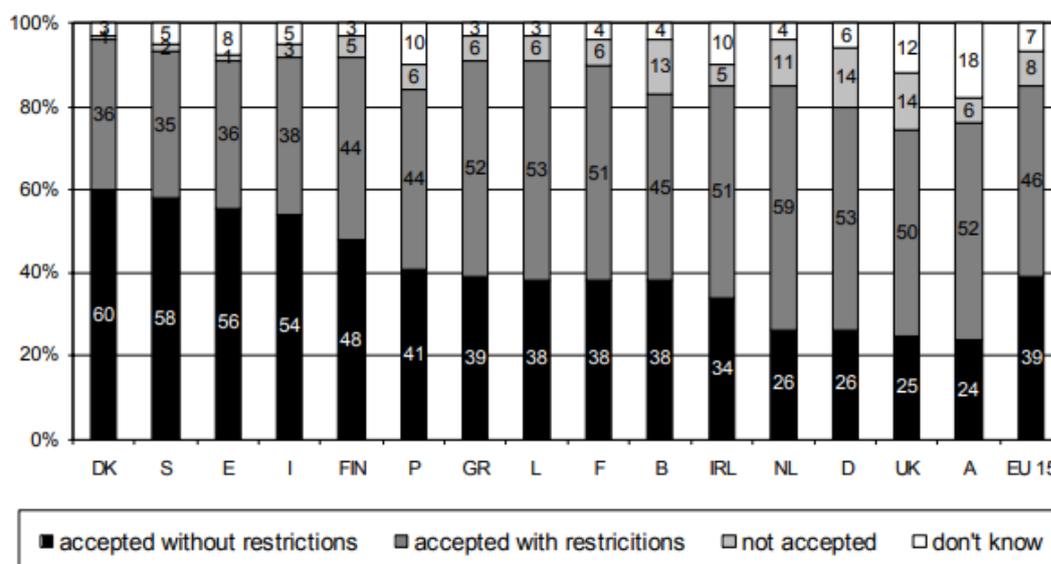
These perceptions are challenged by the findings of the Eurobarometer 138⁶³ in 2014. The survey reveals that whilst Germany features the highest level of non-acceptance of Muslim migrant workers (30 %) and the lowest levels of complete acceptance (6 %), attitudes towards migrant workers from eastern Europe are more positive, however still the most negative across the EU15. While merely 10 % of the respondents would accept workers from eastern Europe, 21 % reject their presence entirely.

This trend does not change substantially when examining the acceptance of citizens of other EU countries in Germany. As illustrated in Figure 50, Germany features the highest level of non-acceptance of other EU citizens (14 %) and amongst the lowest levels of acceptance without restrictions (26 %).

⁶² <https://www.gain-network.org/de/ueber-uns/english/>

⁶³ http://ec.europa.eu/commfrontoffice/publicopinion/archives/ebs/ebs_138_analysis.pdf

Figure 50. Acceptance of citizens of other countries of the European Union who wish to settle in Germany



Source: Eurobarometer 138, figure 12.

Consequently, German society, as well as the labour market impose a range of impediments to the integration of skilled migrant workers. The major hindrance for successful integration remains obtaining sufficient German language skills. One interviewee further highlighted that the recognition process for foreign professional qualifications is perceived as extremely time consuming and difficult and that it imposes a substantial barrier to the integration of skilled workers from other EU Member States. Social hurdles concern norms regarding punctuality, workplace attire and politeness for which the government now provides 'translators' to provide guidance for migrants to seamlessly integrate into the labour market.

As highlighted by one interviewee, the growing diasporas in Germany can benefit the outgoing countries through the exchange of know-how, role models and networks for business opportunities. Former migrants are able to return and to create and reform institutions and structures in their home countries, sharing success of Germany and the EU. This in turn also benefits the promotion of European values across the Union.

Impact on the sustainability of social security systems

The accelerating demographic change puts pressure on the whole German social security systems in general, as well as the pension and health care systems in particular. An inflow of skilled labour alleviates some of the pressure, as these migrants are typically younger than the average German and are thus going to pay into the system for many years whilst consuming fewer healthcare services than the older native population. *The Deutsche Rentenversicherung Bund* (association of German pension insurers) states that the number of contributors to the German pension insurance scheme rose by 1.7 million (or 53 %) between 2008 and 2015. Migrants from other EU Member States, following the EU expansion in 2011 and 2014, have helped to ease the demographic pressure on the German pension system. The same holds for the statutory health insurance system, which reported an improvement of their financial situation as a consequence of increasing EU migration.⁶⁴

In a large scale study on the effect of migration for the Bertelsmann Federation, the ZEW found the monetary impact of migration (including non-EU) to be positive for the case of the German economy. While native German workers are on average higher educated than migrants, they also receive substantially higher pensions. Accounting for

⁶⁴ <http://www.fr.de/politik/fluechtlinge-zuwanderer-entlasten-deutsche-sozialkassen-a-1320478>

this fact, the authors find that in 2012, migrants in Germany paid more contributions to social security than they received. This dynamic resulted in a surplus of EUR 3 300 per migrant. However, further accounting for indirect expenditures, such as police, infrastructure, etc. the costs rise substantially. Following this calculation, each migrant accumulates a deficit of EUR 7 9100 over the course of their lifetime, compared to a deficit of 3,100 EUR for native Germans⁶⁵.

Similar results are found by the IFO institute in 2001.⁶⁶ Using a different definition of social security contributions, the authors find, as an intermediate result, a surplus of migrants' contributions of around EUR 5,600 per year per person. Factoring in the general expenditure for federal services (police, schools, etc.), the study reveals an annual deficit of EUR 2,400 per person per year for those that arrived less than 10 years ago. This deficit decreases (-700 EUR p.a.) for long-term migrants (10 years or longer in Germany), as their children are contributing to the social security systems, especially to the pension funds. In a later publication, the main author of this study (H.W. Sinn) highlights the importance to include these indirect expenditures on federal level, as virtually all of them scale up proportionally with the size of the population. Using the initial calculations by the ZEW, he arrives at an annual deficit of EUR 1.450 per migrant when including these costs (excluding defence expenditure as it does not necessarily scale proportionally with population size and expenditure on schools as it was included in the ZEW calculation before).⁶⁷

It is important to note that the dynamic described by the ZEW and the IFO institute is driven mainly by low-skilled migrant workers. While the entirety of migrants in Germany already provides a surplus in social security contributions, the subset of skilled migrants from other EU Member States can reasonably be believed to have substantially more positive effects on the economy. These effects for skilled migrants may in turn counter the additional cost incurred through the general federal expenditure, resulting in a more positive contribution balance for this migrant group.

This notion is supported by the Bertelsmann foundation, stating that the migrant population is still significantly less qualified than the German majority, largely due to the nature of migration during the Sixties. Accounting for these differences in qualification, one finds that migrants contribute to the same extent to the social security system as their similarly qualified German peers.⁶⁸

Medium and high-skilled migrants are not only providing economic benefits for the social security systems, but are also decreasing the effect of the demographic change, creating a more youthful and multi-cultural society.

A3.4 Migration of skilled labour and its impact on labour market conditions

There is no general labour shortage in Germany, as unemployment figures exceed the number of vacancies by far (2.5 million unemployed versus 0.7 million vacancies in 2017).⁶⁹ Whether there is a shortage of skilled labour in certain occupations is a hotly debated issue in Germany over the last years.

⁶⁵Bonin, H. (2014), „Der Beitrag von Ausländern und künftiger Zuwanderung zum deutschen Staatshaushalt“.

⁶⁶ Sinn, H.-W. et. al. (2001), „Wege zu einer schrittweisen Annäherung der Arbeitsmärkte“, ifo Institut, München 2001.

<http://www.cesifo-group.de/de/ifoHome/publications/docbase/details.html?docId=14582784>.

⁶⁷ Sinn, H.-W. (2015), „Ökonomische Effekte der Migration“, ifo Schnelldienst 1/2015, https://www.cesifo-group.de/DocDL/ifosd_2015_01_01.pdf.

⁶⁸ <http://www.bertelsmann-stiftung.de/de/themen/aktuelle-meldungen/2014/november/sozialstaat-profitiert-von-zuwanderung/>

⁶⁹ Statista 2017, <https://de.statista.com/statistik/daten/studie/2903/umfrage/jahresdurchschnittswerte-des-bestands-an-offenen-arbeitsstellen/>

The vacancy period as an indicator for labour shortages in certain sectors has increased over the past years continuously (BA). A shortage of labour is hereby defined as an unusually long vacancy period, i.e. 40 % above the average period or 10 days above the reference year. Following this definition, there is no nationwide shortage of labour, but there are shortages of skilled labour in certain regions and sectors.⁷⁰

Sectors affected by a shortage of skilled labour

Based on the sectors, which migrants preferably enter, there is no evidence that migrants would address a skill shortage other than in medical and care professions.

While the movement of skilled migrants in these other sectors appear not to be particularly motivated by labour shortages, the untargeted influx of talented professionals nevertheless alleviates pressure on the labour market.

STEM professionals, especially ICT and engineering

The Federal Labour Office (BA) stated that, until 2020, the German employers will be short of 240 000 engineers in the domestic market alone. Together with other skilled workers, the total surplus demand for skilled labour will lead to 2 million unmatched vacancies by 2020 and 5.2 million in 2030. The BA suggests targeted qualification and incentives for individuals who are currently underrepresented amongst skilled workers in Germany, e.g. migrants, as one solution towards tackling the issue.⁷¹ Steering the migration of skilled workers from other Member States is considered another potential approach to combat the shortage of skilled labour⁷².

In February 2011, the German labour market was lacking 117 000 MINT professionals (MINT = Mathematics, Informatics, Natural sciences and Technology). This gap widened by 21,000 between January and February of the same year alone. To tackle this gap, the "Institut der Detuschen Wirtschaft" (IW) suggests a twofold approach. First, foreign MINT graduates from German universities need to be integrated into the German labour market and the visa regulations for these foreigners need to be reformed. Secondly, the pensionable age should be raised to increase the potential labour force in the MINT sector.⁷³ This sheds light on the central issue of retention of international students. While Germany offers low-cost high-quality education in a variety of STEM (science, technology, engineering and maths) subjects, graduates from other Member States often leave the country after completing university.

ITC employers reduced their vocational educational training (VET) volumes from 20 000 to 15 600 between 2001 and 2010. A similar development is observed with regards to engineers. The German Association of Engineers states that from 2018 onwards, 44,000 engineers are going to retire annually. On the other hand, there are only 10,000 graduates in the subjects of electronic technologies and IT, which is insufficient to replace the engineers who are about to retire. Furthermore, more and more Germans quit their engineering studies prematurely. STEM students are increasingly rare, worsening the skill shortage and causing large costs for the German economy. The shortage of qualified engineers alone is estimated to have caused additional costs of around 3.4 billion Euro in 2009.⁷⁴ As a reaction to this trend, some major employers, e.g. Airbus, have implemented the *European e-Competence Framework* for the European labour market to tackle the skill shortage with targeted personnel development in the area of IT, employing a framework of clear job profiles and competences.

Overall, as highlighted by one interviewee, the advancing digitalisation is no substantial driver for skilled intra-European migration towards Germany. Only few IT professionals are immigrating from other EU Member States. Companies that need IT technicians can

⁷⁰ <http://www.bpb.de/politik/innenpolitik/arbeitsmarktpolitik/178757/fachkraeftemangel?p=all>

⁷¹ BUNDESAGENTUR FÜR ARBEIT (2011), Perspektive 2025

⁷² BUNDESAGENTUR FÜR ARBEIT (2011), Perspektive 2025

⁷³ ANGER, Christina; ERDMANN, Vera; PLÜNNECKE, Axel (2011). MINT-Trendreport

⁷⁴ <https://www.igmetall.de/fachkraeftemangel-im-itk-sektor-5075.htm>

buy their services internationally, as the market is entirely globalised and mobile. For businesses there is no need for any European migration of ICT professionals since their location is becoming increasingly irrelevant. This notion is supported by another interviewee, employed by a major German IT service provider. Rather than struggling with convincing other European developers to move to Germany, they would buy their services directly. Furthermore there is a strong trend towards bulk recruitment in Asia. Underlining this notion, one interviewee stated: *"whilst we can easily recruit 4 000 developers in Asia over a couple of months, this would hardly be feasible in the European labour market at all."*

Construction work

In the construction sector too, skilled labour is in short supply. This is particularly true for engineers. In direct comparison, the domain of construction work features the largest unmet demand for engineers amongst all engineering professions.⁷⁵

In the second quarter of 2017, 78 830 engineering vacancies needed to be filled across Germany, constituting a 13 % increase in comparison to the previous year. Main driver of this development is the exceedingly high demand of civil engineers. The trend also manifests in the low and still declining numbers of unemployed civil engineers.

This shortage of high-skilled workers in construction work effects public construction and renovation projects disproportionately. Municipalities had to postpone or halt existing building projects due to the shortage of engineers. Reportedly, 38 % of all engineer vacancies concern civil engineers and in the second quarter of 2017, 465 vacancies were reported per 100 unemployed civil engineers.

Health care

As stated by one interviewee, *"our hospitals wouldn't work without migrants, and not just since recently"*. Demographic change created a soaring demand for skilled workers in care and other medical professions. While 2.86 million Germans received long-term medical care in 2015, the vacancy period for jobs in this sector amounted to an average of 171 days.⁷⁶ The emerging gap of skilled labour is addressed largely by skilled (and non-skilled) migrants from Central and Eastern Europe. The shortage of labour in professions evolving around care for the elderly is considered a national crisis.⁷⁷ Germany has the highest old-age dependency ratio of 31 % (those aged over 65 divided by the number of 15-64-year olds)⁷⁸, illustrating the need for more professionals in medical and care professions, as well as a more general need for more active contributors to the social security system (i.e. workers).

This need for health professionals is partially addressed by policy initiatives, such as the transnational cooperation project for nursing VET between Poland and Germany.⁷⁹ It is intended to address the shortage of skilled workers in the sector of care for the elderly. The VET institutes in both countries collaborate to develop curricula, exchange personnel and learners. The scheme is further funded by the ESF.

As shown in Figure 51, an average of 3.5 % of Germans require long-term care in 2015. This quota, as well as the total number of care recipients, vary substantially between the different Länder. While the situation is less grave for Bavaria and Baden-Württemberg, the eastern-German Länder struggle with rates exceeding 4 %. In these regions, a decreasing working age population and the demographic change create an undersupply of health care professionals. The ageing population in the western German federal states also increased the pressure on the labour market for health care

⁷⁵ VDI/IW-Ingenieurmonitor 2. Quartal 2017

⁷⁶ <https://www.bundesgesundheitsministerium.de/themen/pflege/pflegekraefte/beschaeftigte.html>;

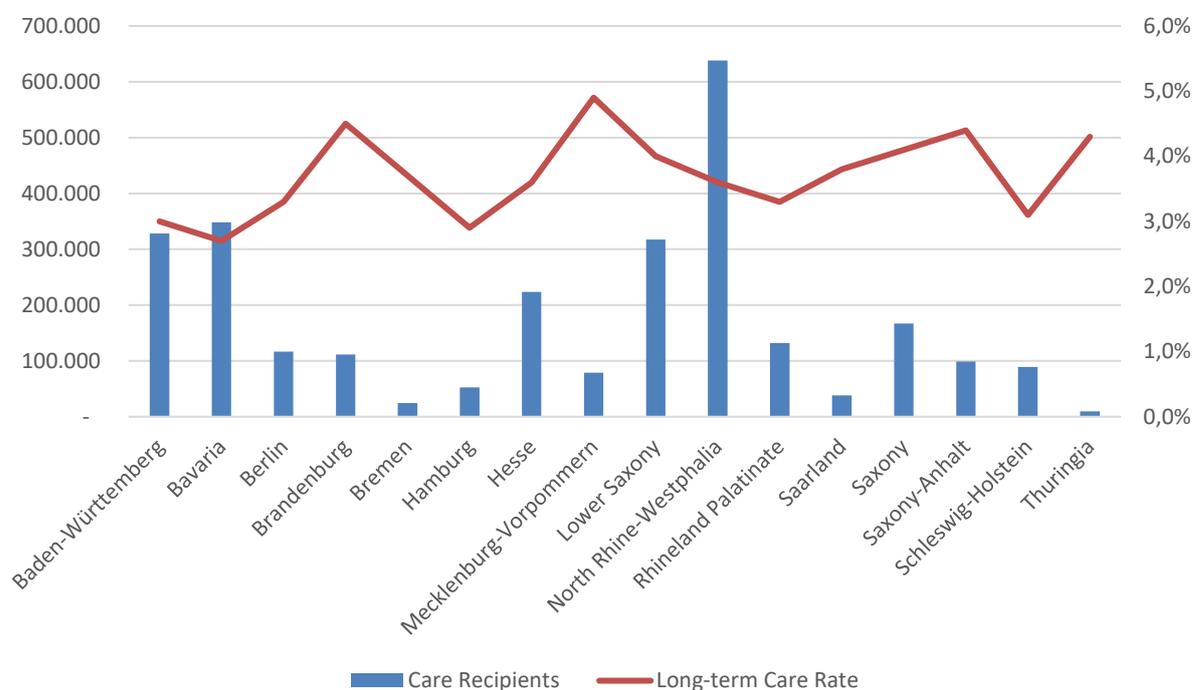
⁷⁷ <https://www.bundesgesundheitsministerium.de/themen/pflege/pflegekraefte/beschaeftigte.html>;
<http://www.faz.net/aktuell/wirtschaft/pflegenotstand-fachkraefte-fuer-altenpflegeheime-fehlen-15160060.html>

⁷⁸ BUNDESAGENTUR FÜR ARBEIT (2011), Perspektive 2025

⁷⁹ http://www.kultursensiblepflege.de/transnationales_projekt.html

professionals. Taken together, North Rhine-Westphalia and Lower Saxony amount to almost 1 million care recipients, creating a demand which can only be partially addressed by the working age population in these Länder.

Figure 51. Long-term care recipients per Länder (2015)



Long-term care rate: Care recipients divided by total population.
 Source: Own calculations based on GBE BUND (2015) (http://www.gbe-bund.de/oowa921-install/servlet/oowa/aw92/dboowasys921.xwdevkit/xwd_init?gbe.isgbetol/xs_start_neu/&p_aid=i&p_aid=89177802&nummer=510&p_sprache=D&p_indsp=-&p_aid=10554816)

As reported by one interviewee, during the financial crisis of 2008, there was a movement in the German economy to attract youth from southern Europe to anticipate the soaring youth unemployment. There were however issues with the fit between applicants and employers. Among other initiatives, the BMAS attempted to recruit skilled Spaniards for professions in elderly care. Unfortunately, the hired migrants turned out to be substantially overqualified for the vacancies which needed to be filled and thus returned to Spain shortly after their arrival.

Many of these vacant jobs in healthcare require hard and physically demanding labour. At the same time, these occupations feature rather low wage levels. There are efforts to make these jobs more attractive for migrants and natives alike. However, these issues are probable to persist due to the accelerating demographic change and the sector's compensation structure.

Immigrating professionals in elderly care are already addressing much of the demand in Germany today, especially with regards to domestic care. As 90 % of Europeans would not like to receive elderly care at a designated institution, demand for domestic care workers is soaring. The domestic care of elderly family members is still a task predominantly carried out by female family members, and if bought as a service, poorly compensated and with low social prestige. While in 2010 merely 2357 working permits were provided to EU health care workers in Germany, estimates of the actual employment of EU health care professionals in domestic care range from 150 000 to 200,000 individuals. In total, around 4.5 million German households are believed to use clandestine employment, amounting to 95 % of the total volume of domestic care. These workers are immigrating for limited periods of time to Germany, living a household and providing a variety of health care services to elderly citizens in their homes. Most of

these female workers are coming from Poland, Czech Republic, Romania and Bulgaria, thus legal employment would be easily possible. The popularity of clandestine employment in this sub-sector of the labour market leads to wages below the legal minimum wage, as well as insufficient worker protection and social security for the migrants.⁸⁰ A survey in 2007 revealed that 54 % of the respondents would illegally employ an eastern European worker for domestic care to avoid the costs for institutional elderly care.⁸¹

Regions affected by a shortage of skilled labour

As highlighted by one interviewee, regional differences are of pivotal importance when considering the impact of migration on the German labour market. Some regions feature full employment whilst in others the economy is declining.

The shortage of skilled labour in the health care sector affects Germany as a whole, but an undersupply of professionals in certain technical occupations concerns only a number of Länder, mainly those featuring exceptional economic growth rates. The main growth regions are Bavaria and Baden Württemberg in Western Germany, as well as Saxony in Eastern Germany.

The economy of Hesse performed slightly below average growth rates for Germany in recent years⁸², but it features high immigration rates of (high) skilled workers, especially in the wider Rhine-Main region. The regional economy features chemical, as well as financial industry, ICT and car manufacturing. Even though the growth rates are well below those in Bavaria, we can observe shortages of skilled labour in a range of technical and non-technical professions. While the undersupply of skilled labour has been decreasing since 2013, the regional chamber of commerce expects a sharp growth in the upcoming years (see *Fachkräftemonitor*⁸³). The quantitative magnitude of this growth is expected to be driven by mainly the lack of workers with vocational education rather than individuals with tertiary education. This trend is symptomatic for Germany as a whole, where the bulk of long-term vacancies concern medium skilled occupation. Whilst the quantity of positions requiring higher education is naturally lower, the lack of crucial professionals may result in a similarly adverse impact for the affected companies.

As emphasised by one interviewee, European migrants hold great potential to close this widening gap of skilled labour. This is further illustrated by the figures of the federal agency for employment (BA) for the Rhine-Main region. Between June 2016 and June 2017, 57 000 new employments within the scope of national insurance were created, half of which (around 29 000) were concerning migrant workers. To accommodate these foreign workers, the region administers an online portal to attract and retain skilled migrants⁸⁴. It is further intended to support integration in the labour market and the local society.

Impact on wage levels

Wage levels in Germany are amongst the highest in the EU. Increasing inflow of skilled labour from the other Member States has not substantially depressed German wage levels. Since 2011, the average increase of gross wages has been consistently above 3 %, which is higher than most of the preceding decade.⁸⁵ Evidence suggests that the state of the economy is the decisive driver for wages in medium to high-skilled professions. Skilled migration stimulates the economy and does not substantially crowd out native workers, thus they would rather have a positive effect on the overall wage level.

⁸⁰ <https://www.caritas.de/fuerprofis/fachthemen/migration/pflege-und-migration-in-europa>

⁸¹ Bange, Thorsten; Röthing, Iris: Qualität ja, aber nicht um jeden Preis. In: *Wohlfahrt intern*, 9/2007

⁸² http://www.vgrdl.de/VGRdL/tbls/VGR_FB.pdf

⁸³ <http://www.fachkraefte-hessen.de/fachkraefte-monitor.html#ivmh7-ig2v6>

⁸⁴ <https://www.find-it-in-firm.de/en.html>

⁸⁵ <https://de.statista.com/statistik/daten/studie/75731/umfrage/entwicklung-der-bruttolohnne-in-deutschland/>

This notion was confirmed by one interviewee, stating that the shortage of labour appears to evoke action by the state rather than by businesses. The development of the wage levels in recent years also does not support the prevalence of labour shortages, neither in general nor in any particular sector. Putting this subjective perception into perspective, the interviewee further highlighted that the number of initiatives for labour market integration launched by the state may overshadow a substantial fraction of companies' efforts.

A3.5 Policy response

EU expansion 2004

The EU-15 were given the option to restrict labour migration from eastern Europe. Germany applied the so called 2-3-2 formula, effectively opting for restricting access to its labour market for seven years. Member States which decided to restrict access to their labour markets in 2004 were asked again in 2006 whether they would like to maintain the restrictions for another 3 years. After this 3 year period, given a substantial disturbance of the labour market, countries could decide to restrict their labour market for another 2 years (which Germany did). Among the EU-15 Member States, Germany was amongst the most restrictive in terms of labour market integration and free movement of labour.

Since the 01 January 2014, German's labour market is fully accessible, also for migrants from Romania and Bulgaria.

Federal labour and migration policies

Due to the free movement of workers within the EU, large scale policy initiatives in Germany less commonly address European migrants explicitly, unless health care professionals are concerned. We find however that a variety of initiatives, broadly aimed at supporting all (skilled) migrants, in fact also improves conditions for professionals from EU Member States. As illustrated in Table 14, skilled migrants can benefit from a broad range of initiatives on federal level:

Table 14. Federal labour and migration policy initiatives

Name	Target group	Aim	Source
Berufsqualifikationsfeststellungsgesetz (BQFG)	Skilled migrants	Labour market integration through qualification and recognition of foreign degrees	http://www.gesetze-im-internet.de/bqfg/
Fachkräfte-Offensive	All skilled workers	Umbrella initiative intended to increase the supply of skilled labour through various channels	http://www.fachkraefte-offensive.de/DE/Die-Offensive/Strategie/politische-weichenstellung-info.html
Integration durch Qualifizierung (IQ) – Integration through qualification	Skilled migrants	Labour market integration through qualification and recognition of foreign degrees. Constitutes a network of a variety of smaller projects	http://www.netzwerk-iq.de/

Name	Target group	Aim	Source
		for labour market integration.	
The job of my life	Potential VET students in foreign countries	Promoting VET mobility (towards Germany)	http://www.thejobofmylife.de/de/home.html
Make it in Germany	Skilled migrants	Labour market integration of skilled migrants	http://www.make-it-in-germany.com/
Stark im Beruf	Skilled mothers with migration background	Reintegration of skilled migrant mothers after parental leave	http://www.starkimberuf.de/
German Academic International Network (GAIN)	Skilled emigrants	Repatriation of skilled German scientists and academics in the US	https://www.gain-network.org/de/
Positivliste der Mangelberufe	Skilled migrants	List of professions affected by a shortage of skilled workers – eases migration requirements for concerned third country nationals	https://www3.arbeitsagentur.de/web/wcm/idc/groups/public/documents/webdatei/mdaw/mta4/~edisp/l6019022dstbai447048.pdf

Source: ICF

“Berufsqualifikationsfeststellungsgesetz” – Law for the assessment of occupational qualifications

Rationale

As highlighted by the interviewees, the German labour market is highly formalised and relies heavily on certifications. This poses a substantial issue to migrant workers whose certifications are often not fully recognised, thus forcing them into jobs for which they are overqualified. To enable the correct matching of skilled migrants with vacancies in Germany, the government has adopted a law which endows migrant workers with the right to receive an assessment of their occupational qualifications. This law, which has been passed in 2012, is intended to support migrant workers and German businesses alike.

The federal government summarises the goals of this law for assessment and recognition of qualification as follows:

- Utilising the potential of skilled migrants in Germany more effectively;
- Enable skilled migrants to access an adequate job that matches their individual qualification;
- Promote integration of skilled migrants into the labour market and society;
- Attract skilled workers from abroad.

The law is thereby intended to contribute to the so called 'Willkommenskultur' – welcoming culture towards migrants.⁸⁶ It builds on the System for the Recognition of Professional Qualifications⁸⁷ for EU citizens to ensure free movement of labour within the EU by encouraging the automatic recognition of qualifications and simplifying administrative procedures.

Inputs

The law encompasses around 450 occupations, including 350 VET occupations, thus it also required changes in 63 pieces of legislation on specifically regulated occupations.

Socio-economic disadvantaged individuals are able to request additional funding for the recognition process (up to 600 EUR per person).⁸⁸

Activities

Since April 2012 there is the general legal entitlement for the assessment of similarity between foreign and German occupational qualifications.

Outputs

The federal statistical office reported that 11 000 requests for evaluation of foreign qualifications have been issued between April and December 2012. Amongst the approximately 8 000 requests that have received a decision by the end of 2012, approximately 93 % of the occupational qualifications were fully recognised as similar to a German qualification. Approximately 7 % of the requests were rejected.

In 2016, 19 179 foreign occupational qualifications were recognised as fully (or with few limitations) equivalent to comparable German qualifications. This constitutes an increase of 15.1 % in comparison to the previous year. Where 6 015 requests were considered equivalent with limitations, including those that require a further education and 699 requests were declined (DESTATIS, 2017).⁸⁹

Skilled workers in other Member States can use an online portal provided by the German government to request an assessment of their professional qualification and to receive counselling on working prospects in Germany.⁹⁰

Outcomes

As reported by the German government in 2017, 90 % of skilled workers with foreign occupational qualification are employed after their recognition has been successful. This increases the activity rate in this sub-group substantially by more than 50 %. The gross annual income increases on average by around EUR 12 000, constituting an increase of 40 %. Furthermore, 10 % of requests for recognition are issued outside of Germany, a possibility which was newly introduced with the right to receive an assessment of one's qualification.⁹¹

Impact

The law eased tensions in the labour market and lowered frustration amongst skilled immigrants. Companies are able to identify and employ migrant workers with suitable skill sets more easily, thus narrowing the gap of skilled labour.

A study of the BiBB revealed that for more than 80 % of the individuals who requested recognition of their occupational qualification from abroad, the recognition has been a decisive factor for their decision to move to Germany.⁹²

⁸⁶ https://www.anerkennung-in-deutschland.de/media/20120320_erlaeuterungen_zum_anerkennungsg_bund.pdf

⁸⁷ <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=LEGISSUM:c11065>

⁸⁸ <https://www.bmbf.de/de/anerkennung-auslaendischer-berufsqualifikationen-1091.html>

⁸⁹ https://www.destatis.de/DE/PresseService/Presse/Pressemitteilungen/2017/09/PD17_324_212.html

⁹⁰ <https://www.anerkennung-in-deutschland.de/html/en/>

⁹¹ <https://www.bmbf.de/de/anerkennung-auslaendischer-berufsqualifikationen-1091.html>

⁹² https://www.bmbf.de/pub/Bericht_zum_Anerkennungsgesetz_2017.pdf

Integration durch Qualifizierung (IQ) – Integration through qualification

Rationale

Initiated by the Federal Ministry of Labour and Social Affairs (BMAS), integration through qualification (IQ) is a governmental programme to improve labour market integration of migrants. It is financed partially by the budget of the Federal Ministry of Labour and Social Affairs (BMAS) and partially by the European Social Fund (ESF). The programme encompasses around 400 subprojects across Germany.

The three main focus areas of the programme are:

- Consulting for occupational qualification and recognition of qualifications (financed mainly by the ESF)
- Qualification activities in the context of the law for assessment and recognition of qualifications (financed mainly by the ESF)
- Developing intercultural competence amongst companies and public-sector stakeholders (financed solely by the BMAS)

The implementation of the programme is further subdivided into 16 networks, one in each of the Länder. At federal level, the IQ multiplier project Transfer (MUT IQ) is aimed at the promotion of collaboration between the different stakeholders, the transfer of good practices and IQ related communication efforts.

The Federal Ministry for Education and Research, as well as the Federal Labour office support the programme implementation on all levels.

Inputs

Funding of the ESF and the BMAS.

Activities

As part of the IQ focus 'ESF-Qualification in the context of the law for the assessment of occupational qualifications', 16 300 individuals were provided with counselling between 2015 and 2016. During this period, more than 8 000 individuals participated in qualification activities.

Between 2012 and 2016, 103 581 individuals received counselling from the IQ contact points. More than half of these individuals received their professional education and qualification in other EU/EEA/CH countries.⁹³

The IQ programme further includes five dedicated centres of expertise to provide expert advice in relevant strands of labour policy and research. The main subject areas of these centres concern the following:

- Consulting and qualification
- Occupation specific language support
- Migrant economy
- Intercultural competence development and anti-discrimination
- Immigration

Outputs

In 2012, 71 % of IQ network users were unemployed; 76 % of these individuals received basic security benefits. The counselling most frequently evolved around the labour market integration of skilled migrants with a previous education/training in the following professions:

- Teacher
- Engineer
- Health care professional

⁹³ https://www.bmbf.de/pub/Bericht_zum_Anerkennungsgesetz_2017.pdf

- Doctor

The different IQ centres further contributed to a range of outputs. The study 'Brain Waste'⁹⁴ and the IQ guides for different aspects of migration law constitute outstanding contributions which achieved an impact beyond the usual stakeholder groups of migrants and participating institutions. (see https://www.netzwerk-iq.de/fileadmin/Redaktion/Bilder/Fachstelle_Beratung_und_Qualifizierung/Leitfaden/IQ_Leitfaden_AufenthaltsGesetz_DIGITAL_final.pdf),

Outcomes

As highlighted by Gesine Keßler-Mohr, IQ coordinator for the Hamburg region, a pivotal outcome of the IQ programme is its continuous promotion of anti-discriminatory measures and trainings in job centres and municipalities to ensure the labour market access of migrants. IQ further supported the joint occupational language course programme of the ESF and BAMF through its expertise in the area of labour market integration of migrant workers.⁹⁵

As highlighted by Iris Beckmann-Schulz, head of the competence centre for occupation-specific German, the quality criteria developed by the IQ network for occupation-specific German are now used by jobcentres to assess and improve the quality of their language courses and teachers.⁹⁶

Impact

The network approach of the IQ programme contributed to impacts on various levels. Most notably, the programme and its different initiatives provide a catalyst for the labour market integration of skilled migrants. Providing expertise and support to individuals and institutions, the programme has decreased occupational mismatch of semi and high-skilled migrant workers in Germany. By enabling individuals to find adequate employment that rightly utilises their professional training/education, IQ has lowered frustration amongst skilled migrant workers and German employers struggling with labour shortages. The vast majority of the common occupations for which the IQ programme provided counselling are affected by shortages of skilled labour. The IQ programme thus also anticipates the shortage of skilled workers, which threatens the German economy, especially in the health care sector.

Make it in Germany

Rationale

While the German economy is booming, certain sectors show signs of shortages of skilled workers. This magnitude of these shortages will increase through the accelerating demographic change. To anticipate this trend and its adverse effects for the German economy, the German government has devoted much attention to efforts securing a skilled labour force and made the issue a central piece on its political agenda.

Launched in 2012 as part of the 'Fachkräfte-Offensive', 'Make it in Germany' is a programme intended to facilitate an influx of skilled labour to address labour shortages in the different sectors and regions. The programme is further aimed at expressing the German 'Willkommenskultur' and to promote a modern, open and multifaceted image of Germany and its society. This should attract and retain skilled workers, entrepreneurs and students from foreign countries. The programme was commissioned by the Federal Ministry for Economy and Energy (BMWi) and is being administered by the IW. The programme incorporates counselling services provided by the Federal Labour Agency

⁹⁴ https://www.anerkennung-in-deutschland.de/media/brain_waste.pdf

⁹⁵ https://www.netzwerk-iq.de/fileadmin/Redaktion/Downloads/IQ_Publikationen/IQ_konkret/2015_02_IQ_konkret.pdf

⁹⁶ https://www.netzwerk-iq.de/fileadmin/Redaktion/Downloads/IQ_Publikationen/IQ_konkret/2015_02_IQ_konkret.pdf

(BA) and the International Placement Services (ZAV), the Federal Office for Migration and Refugees, and the Federal Institute for VET (BiBB).

'Make it in Germany' is the official multilingual online portal for international skilled workers, available in German, English, Spanish and French (a limited amount of information is provided in Albanian, Arabic, Bosnian, Indonesian, Italian, Russian, Serbian, Turkish and Vietnamese). It is designed to inform those who are considering migrating to Germany on how to make their move a success. The portal illustrates the preparations that have to be undertaken in the outgoing country prior to the actual migration, as well as the crucial first steps necessary to blend into the German labour market and society seamlessly. Users can seek individual counselling with regards to job search, recognition of professional qualifications, visa and life in Germany. The programme offers such counselling via email, phone or online chat.

The online portal further provides a job board in which skilled migrants can search for suitable vacancies and learn about in which sectors and regions there is a shortage of labourers with their particular skillset.

'Make it in Germany' also acts as a partner for employers who would like to explore possibilities to recruit and integrate skilled migrant workers. The website features a variety of entrepreneurs who share their positive experiences with skilled migrants and encourage their recruiting on a broader scale.⁹⁷

Inputs

The Federal Ministry for Economy and Energy provided funding for the pilot projects. The Federal government allocated EUR 4 500 000 for this policy initiative, amongst EUR 1 430 000 were allocated to the internet portal and EUR 114 000 to pilot projects.

Activities

Pilot study: Pilot projects in India, Indonesia and Vietnam were set up to attract and retain STEM professionals and to promote the image of Germany as a welcoming country with excellent employment opportunities. As part of these projects, a total of 22 000 individuals received counselling.

Traineeship programme: Ten skilled professionals from each of the three countries were selected for a larger linguistic and intercultural qualification period. The participants were subsequently matched with internship opportunities in Germany. The language courses were conducted in the home countries (three months) and in Germany (one month). As a result, the participants reached language level B1/B2. The cost for the training of these 30 participants amounted to EUR 66,500.

Outputs

The German Society for International Cooperation (GIZ) supports 'Make it in Germany' through targeted information and consulting services in certain non-EU countries, i.e. India, Indonesia and Vietnam. Between 2012 and 2014, the GIZ consultants have provided counselling to around 22,000 individuals interested in migrating to Germany.

Between 2012 and July 2015, the portal was visited by 7.7 million individuals, 90 % of which accessed the portal from outside Germany.⁹⁸

Along with its introduction, the portal was complemented by pilot projects (conducted by the GIZ and the ZAV) to attract skilled workers in India, Indonesia and Vietnam. Workers received individual counselling on how to successfully integrate into the German labour market.

⁹⁷ <http://www.make-it-in-germany.com/de/fuer-fachkraefte/ueber-das-portal/make-it-in-germany>

⁹⁸ Bundestag Drucksache 18/5625 (2015)

Outcomes

Businesses and international organisations welcome 'Make it in Germany' as an important effort to make the German labour market more inclusive for skilled migrant workers. Among these organisations is the OECD, as well as the Council of German Federations for Integration and Migration (SVR).⁹⁹

A user survey in 2013 revealed that the portal led to an increasing interest in Germany amongst 80 % of its users. In 2013, the platform recorded the following user numbers:

Table 15. Users of 'Make it in Germany' 2013

Country	Users
India	556 849
Vietnam	334 861
Russia	280 790
Indonesia	280 552
Germany	228 262
Italy	171 210
Portugal	124 863
Spain	119 896
USA	92 300
UK	40 111
Total	2 756 808

Source: Bundestag Drucksache 18/5625

In June 2015 alone, the guide 'Work in Germany' was downloaded 3 487 times in English language, which indicates a vivid user base of international skilled workers. Between December 2014 and June 2015, the hotline 'Work and Live in Germany' received 14 765 requests for counselling. In 2013, the federal government recorded 7 559 requests via phone and email, specifically related to 'Make it in Germany'.

The job portal 'Make it in Germany' has been used by 1 055 034 users since it was launched in December 2012 until June 2015.

All these figures illustrate that there is substantial interest and motivation of skilled labourers in foreign countries to move to Germany.

Impact

The IW's STEM report in 2015 found that the number of foreign STEM professionals fully employed in Germany had risen by 11.3 % between December 2012 and September 2014. This trend was mainly driven by individuals from CEE (+39 %), India (+32 %) and Spain (+26 %). In the case of India, one can safely assume a positive influence of the pilot programme which accompanied the launch of 'Make it in Germany' in India. However, we observe that the impact is not restricted to the non-EU countries which participated in the pilot, but much of the increasing dynamic of STEM professionals migrating to Germany is driven by other European nationals.

We conclude that the broad focus of this policy initiative sparks and supports intra-European labour migration towards Germany. In the case of STEM professionals, these

⁹⁹ Bundestag Drucksache 18/5625 (2015)

migration flow are addressing the growing issue of labour shortages in the German labour market and are thus fuelling the current growth period of the German economy.

Regional labour and migration policies

Table 16. Overview of regional labour and migration policies

Name	Target group	Aim	Source
Work in Bavaria – Excellence at all levels	Skilled migrants	Attraction and retention of skilled workers from abroad. Also, re-attraction of skilled emigrants	https://www.work-in-bavaria.de/en/employees/
Study and stay in Bavaria	Foreign students	Retention of foreign students studying in Bavaria. The initiative is part of 'Work in Bavaria'	https://www.work-in-bavaria.de/en/employees/work/study/study-and-stay/
Return to Bavaria	Skilled emigrants	Re-attraction of skilled emigrants. The initiative is part of 'Work in Bavaria'	https://www.work-in-bavaria.de/en/employees/work/return-to-bavaria/
Fachkräfteallianz Baden-Württemberg (Skilled workers' alliance Baden-Württemberg)	Skilled workers	Securing a sufficient supply of skilled workers for the regional economy. Special focus on increasing labour market participation of disadvantaged groups. Focuses on sectors health care and STEM	https://wm.baden-wuerttemberg.de/de/arbeit/allianz-fuer-fachkraefte/
Find it in FrankfurtRheinMain	Skilled migrants	Attraction and retention of skilled migrants	https://www.find-it-in-frm.de/en/working-studying.html
Work in Hessen	Skilled migrants (mainly EU)	Attraction of skilled migrants to address shortages of skilled labour	http://www.work-in-hessen.com/dynasite.cfm?dsmid=19019
Thuringia agency for attraction of skilled workers (ThaFF)	Skilled migrants	Attraction of skilled migrants to address shortages of skilled labour	https://www.thaff-thuringen.de/en/welcome-to-thuringia/
MV4you	Skilled emigrants (mainly emigrants to other federal	Retention of talent and re-attraction of skilled workers	http://www.mv4you.de/

Name	Target group	Aim	Source
	states) and skilled workers	who left Mecklenburg-Vorpommern.	
Fachkraft im Fokus (Focus on skilled workers)	Skilled migrants	Securing a sufficient supply of skilled workers for the regional economy. Special focus on matching SMEs and skilled workers. The initiative is funded by the Saxony-Anhalt, BMAS, BA and the ESF	https://www.fachkraft-im-fokus.de/en/about-us/
Zuhause in Brandenburg (At home in Brandenburg)	Skilled emigrants	Re-attraction of skilled emigrants (mainly emigrants to Western Germany)	http://www.zuhause-in-brandenburg.de/blog/
Kultursensible Pflege	Polish VET students in nursing and health care	Cooperation project between Poland and Germany to enable VET mobility of Polish nursing students to Germany. Intended to integrate Polish nurses into the German labour market to address shortage of skilled labour. Funded by Brandenburg, BMAS and the ESF.	http://www.kultursensibelepfege.de/

Source: ICF

Work in Bavaria – Excellence at all levels

Rationale

Germany faces a disadvantage in the competition for international talent when compared to English speaking countries, such as the UK or the US. Since it is important to draw on international talent to fill key vacancies, especially in sectors affected by shortages of skilled labour, the Bavarian Ministry of Economics has launched the 'Work in Bavaria' initiative, featuring an image campaign and a web portal for foreign professionals. The declared aim is to attract highly qualified professionals for local businesses and research.

Inputs

The initiative is funded by the Bavarian Ministry of Economics.

Activities and outputs

As part of the initiative, the Ministry of Economics has launched a website to inform potential skilled migrants, as well as a job board to facilitate matching skilled, foreign jobseekers with local employers. The website 'Work in Bavaria' attracts around 80,000 visitors each year, whilst the integrated job board features 150 000 users.

Outcomes

The initiative has increased the awareness for the issue of shortages of skilled labour and the detrimental effects on the local economy. As a result, 84 regional networks have emerged to address the different aspects of labour shortages and labour market integration.¹⁰⁰

A3.6 Conclusion

The following conclusions can be drawn from the case study:

- Skilled migration eases the pressure on the social security systems caused by the aging German majority population.
- Skilled migration increases the innovative potential of the hosting region, a trend that especially affects Bayern, Baden-Württemberg and Berlin.
- Skilled migration addresses shortages of skilled labour in certain regions and sectors:
 - It benefits especially the health care sector, which faces soaring demand and rising costs due to the accelerating demographic change;
 - Outstanding economic performance of certain regions attracts migrants as there are, amongst other factors, frequent shortages of skilled labour. This trend can be observed especially in Bayern and Baden-Württemberg;
- German society appears to have relatively strong reservations towards EU migrants, which translates into a range of barriers to their labour market participation. The most important of these barriers concern recognition of foreign qualifications and language requirements.
- Germany features a range of policy initiatives to overcome these barriers and to facilitate the integration of skilled European migrants. Many of these initiatives aim to attract and match skilled migrants to employers that suffer from shortages of skilled labour, this is ultimately intended to stimulate economic growth and prosperity. Especially the policy initiatives focused on recognition of foreign qualifications are well received and achieve a positive impact all over Germany.

¹⁰⁰

https://www.stmwi.bayern.de/fileadmin/user_upload/stmwi/Themen/Mittelstand_und_Handwerk/Dokument_e_und_Cover/2015-11-11-Fakten_-_Fachkraefteversorgung_in_Bayern.pdf

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Annex 4 Case Study: Spain

A4.1 Introduction

This section aims to set the social and policy context of migration in Spain, with a focus on skilled labour and the impact of the 2007 economic and financial crisis. The analysis is based on a literature review (Section A4.1.1), discussing the main drivers and barriers to migration flows; a data overview showing key patterns; and a policy mapping (Section A4.2) gathering evidence through desk research and stakeholder interviews on key measures (See **Error! Reference source not found.** for further details on interviewees).

A4.1.1 Literature review

The Spanish economy shows a positive outlook for 2018 with a strong recovery pattern and GDP returning to pre-crisis levels. Although the rate of unemployment has been falling, it remains above the EU average; the share of youth unemployment increased from 37.7 % in 2009 to almost 48 % in 2015.

Furthermore, Spain is amongst the countries with highest levels of poverty and income inequality in the EU. Spanish workers have suffered from long periods of wage moderation to emerge from the crisis.^{101 102} The wage moderation in real terms was the consequence of two factors: i) agreement between social partners in 2012-2014 to promote internal flexibility and wage moderation; ii) a new labour market reform to decentralise collective bargaining, eliminate indefinite job security and reduce firing costs.¹⁰³

CEPR (2016)¹⁰⁴ argue that the austerity policies implemented to address the impact of the crisis indeed had a negative impact on several key macroeconomic variables (consumption, investment, public expenditures) reinforcing the recession. This has resulted in lower wages, increased inequality and a higher prevalence of people at risk of poverty.

All these factors contributed to push individuals to consider migration rather than facing the prospect of unemployment and deteriorating living standards. Numerous studies discuss the underlying drivers for the willingness and ability to migrate from or to Spain, known as *push and pull* factors. For instance, Nelson (2015) and Ramos and Royuela (2016) point to the role of the labour market situation as key push factors for outflow migration. These authors suggest that the presence of high youth unemployment for several years has contributed to skilled labour outflows in Spain^{105 106}.

Santos Ortega (2013) argues that, other than unemployment levels and employment opportunities, contractual arrangements and other working conditions in the domestic labour market can be an important push factor.¹⁰⁷ This is the case for the structural precariousness of jobs, which was present already before the crisis, but worsened during the recession. Since 2007-2011, involuntary part-time work increased significantly by

¹⁰¹ European Commission (2017), Country Report Spain 2017. COM (2017) 90 final.

<https://ec.europa.eu/info/sites/info/files/2017-european-semester-country-report-spain-en.pdf>

¹⁰² ESDE report 2017

¹⁰³ Cardoso, M., Domenech, R., Garcia, J.R., Ulloa, C. (2013), Wage moderation in Spain | VOX, CEPR's Policy Portal. Available at: <https://voxeu.org/article/wage-moderation-spain>

¹⁰⁴ Rosnick, D. and Weisbrot, M., 2013. Ha funcionado la austeridad en España? Available at:

http://cepr.net/documents/Spain-2015-12_Spanish.pdf

¹⁰⁵ Nelson, Olivia, (2015), "The Social Effects of the Spanish Brain Drain". Social Impact Research Experience (SIRE). Paper 35.

¹⁰⁶ Ramos, R. and Royuela, V., 2017. Graduate migration in Spain: the impact of the Great Recession on a low-mobility country. Graduate Migration and Regional Development: An International Perspective, p.159. Available at: http://www.ub.edu/irea/working_papers/2016/201608.pdf

¹⁰⁷ Antonio Santos Ortega (2013) Revista Internacional de Ciencias Sociales Nº 32 / 2013. "Fuga de cerebros y crisis en España: los jóvenes en el punto de mira de los discursos empresariales".

26.6 %, job insecurity by 10.9 % and rates of transition from temporary to permanent contracts were kept below 20 %.¹⁰⁸ Skilled workers who see employment opportunities in other countries appear to show a propensity to seek employment elsewhere when there is a perception of poor working conditions.

Likewise, Izquierdo et al. (2015) point to the differential rates of unemployment between Spain and the countries of destination¹⁰⁹. Regional factors such as the unemployment differentials between regions also play a role. In a somewhat counter-intuitive finding, the research also shows that individuals from more affluent regions are more likely to migrate to other EU countries. This is the case for Catalonia, with only 16 % of the total population (population census, INE) with a lower unemployment rate than average (Ramos and Royuela, 2016) and yet it accounted for 29 % of Spanish migrants in 2011 (Migration Statistics, INE). This appears to indicate that the propensity to migrate is linked to both labour market trends and skill levels. More affluent regions suffer from high outflows of skilled workers, although such individuals tend to have lower unemployment rates.

Another important driver is the macroeconomic environment; The *elasticity*¹¹⁰ of migrants to economic conditions (measured by the differential in GDP per capita between country of origin and destination) is higher for high skilled migrants than for the average migrant (Ramos and Royuela, 2016). No evidence has been found specifically for Spain on how much of an increase in wages is necessary to trigger mobility into a job in another country for which one may be overqualified.

The role of education (human capital) at individual level has been identified in the literature as an important driver to migration flows across the EU. The current pattern of emigration in Spain has changed compared with decades ago. Nowadays, highly-educated people are more likely to emigrate as shown by the fact that the share of highly-qualified amongst Spanish migrants living in OECD countries increased from 5 % in 1980 to 29 % in 2010. From a theoretical point of view, discussed by Venhorst et al (2010), accumulation of human capital seems to encourage mobility, offering migrants higher potential gains compared with less qualified workers¹¹¹. Human capital then becomes a push factor (driver) for migration by equipping people with the necessary skills to move.

A study by Ramos and Royuela (2016) finds that graduates with high grades are more likely to migrate after graduation, and migration rates are higher for Ph.D. holders than for graduates. The study also shows interesting patterns amongst graduates in term of subject of study. Those holding degrees in experimental and technical sciences have a higher propensity to migrate compared to graduates with a degree in health sciences (particularly for men), and a significantly higher propensity than graduates in social sciences. This is likely to be linked to the level of demand in the (domestic and foreign) labour market for the respective skills.

As reported by one of the EU-LFS ad-hoc modules on obstacles to employment by migration background in 2017, language is perceived as an obstacle to intra-EU labour mobility in several Member States, including Spain. The lack of language skills is experienced as one of the main barriers to finding a suitable job amongst first-

¹⁰⁸ Broughton, A., Green, M., Rickard, C., Swift, S., Eichhorst, W., Tobsch, V. and Tros, F., 2016. Precarious employment in Europe: Patterns, trends and policy strategies. Brussels: European Parliament Directorate General for Internal Policies. Available at:

[http://www.europarl.europa.eu/RegData/etudes/STUD/2016/587285/IPOL_STU\(2016\)587285_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2016/587285/IPOL_STU(2016)587285_EN.pdf)

¹⁰⁹ Mario Izquierdo, Juan F. Jimeno and Aitor Lacuesta (2015), "Spain: From Emigration to Immigration?". Bank of Spain. Working Paper 1503.

¹¹⁰ Elasticity is defined as the % change in response to a % change in other variable; i.e., % change in migration in response to a % change in GDP (Gross Domestic Product).

¹¹¹ Venhorst, V., J. Van Dijk and L. Van Wissen (2010), 'Do the best graduates leave the peripheral areas of the Netherlands?' *Tijdschrift voor Economische en Sociale Geografie*, **101** (5), 521-537.

generation movers from Spain.¹¹² Language knowledge for PhD holders seems to be relevant to increased likelihood of migrating in Ramos and Royuela (2016).

The existence of networks (diaspora) lowers migration costs and increases the expectation of success in the migration process (Izquierdo et al., 2015). The authors show concern that in a context of a permanent outflow of Spaniards, the network effect may start to play a role as pull factor. Arango (2016) finds that a new Spanish diaspora is emerging abroad. The possibility of network effects starting to play a role for Spanish emigrants and these outflows becoming permanent is a potential threat to the Spanish economy as highly skilled workers fail to return.¹¹³

Finally, it is important to stress a methodological challenge to quantify the outflows of high-skilled labour. For example, researchers at the INJUVE institute¹¹⁴ carried out a sociological study to explore the motivations to migrate in Spanish young people aged 15-29, affected by the financial and economic crisis. The research team aimed to collect secondary data to estimate the outflow of young people between 2009 and 2013. Because of the lack of detailed indicators on this in Spain, the data collection was done from the countries of destination. However, the total numbers of outflow from Spain within this age group and those inflows of Spaniards of the same age in countries of destination do not match (Navarrete, 2016).¹¹⁵ Nevertheless, the study carried out a survey of over 1,020 respondents aged 18-30, and 20 in-depth interviews. Key findings from the survey are discussed in Section A4.1.1.5. The study provides a useful hindsight consistent with this literature review.

In addition, these hypotheses were confirmed by the experts consulted during the fieldwork phase of this case study. In summary, it is possible to deduce that there is a combination of factors at micro, meso and macro level which reinforce and contribute to the migratory project. The list below summarises these factors:

- Micro level (motivation, capabilities and willingness to migrate):
 - Individuals with tertiary education qualifications and skills;
 - Language skills;
 - High levels of expectation in terms of career progression and working conditions;
 - Knowledge of working standards and opportunities in Spain and abroad;
 - Connection with institutional networks with presence across EU, such as alumni groups.
- Meso level (quality of working conditions, contract type offered, skills gap by sectors):
 - The quantity of vacancies;
 - The quality of vacancies and contractual arrangement vis-a-vis the same offers in the top destination countries (Germany, United Kingdom, The Netherlands).
- Macro level (business cycle):
 - Recession and the relative situation of the domestic compared to the foreign labour market;

¹¹² EC (2017), (draft) 2017 Annual Report on intra-EU Labour Mobility.

¹¹³ Arango, J., 2016. Spain: new emigration policies needed for an emerging diaspora. Washington, DC: Migration Policy Institute.

¹¹⁴ INJUVE is the Institute for Youth, under the Ministry of Health, Social Services and Equality of Spain, aimed to deliver policies for the young people: <http://www.injuve.es/conocenos/injuve>

¹¹⁵ Navarrete, L., 2016. La emigración de los jóvenes españoles en el contexto de la crisis. Análisis y datos de un fenómeno difícil de cuantificar. METAMORFOSIS, pp.101-105.

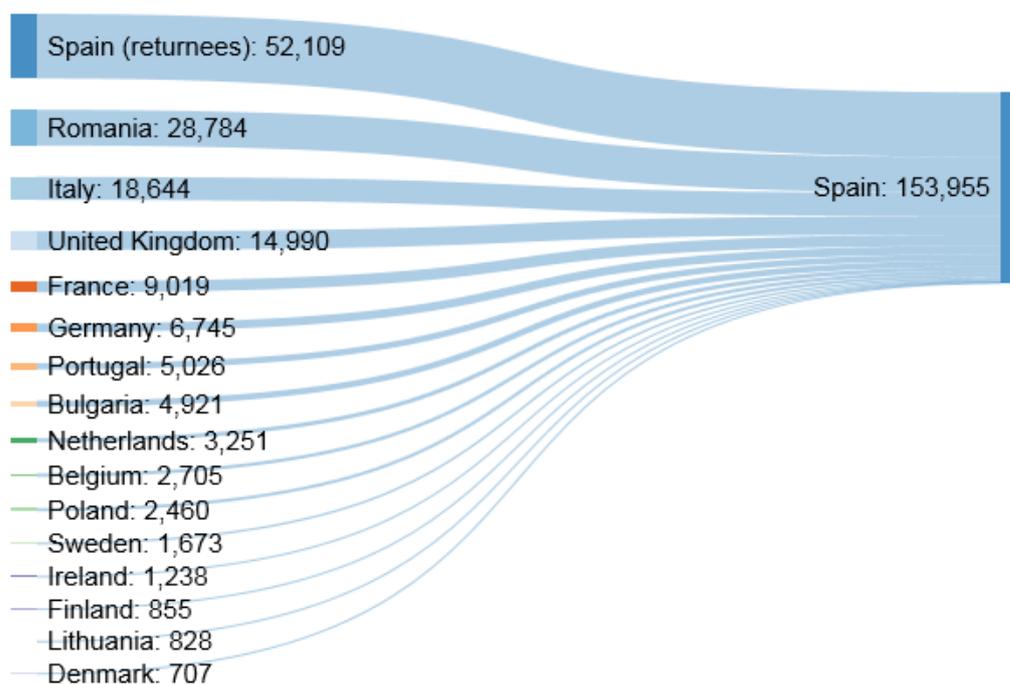
A4.1.1.1 Statistical overview

The section presents data providing contextual information.

A4.1.1.2 Inflows to Spain

Figure 52 below shows data for the number of people from EU countries moving to Spain for at least 12 months in 2015 by citizenship for total age groups. Around 34 % of them are returnees, followed by people from Romania (19 %), Italy (12 %) and the United Kingdom (10 %). It should be noted that these figures include individuals of all age groups (thus including retirees, which account for a significant share of migrants from some countries – for instance the UK).

Figure 52. Total immigration to Spain, 2015



Source: Eurostat [migr_imm1ctz] [Extracted 07/02/2018]

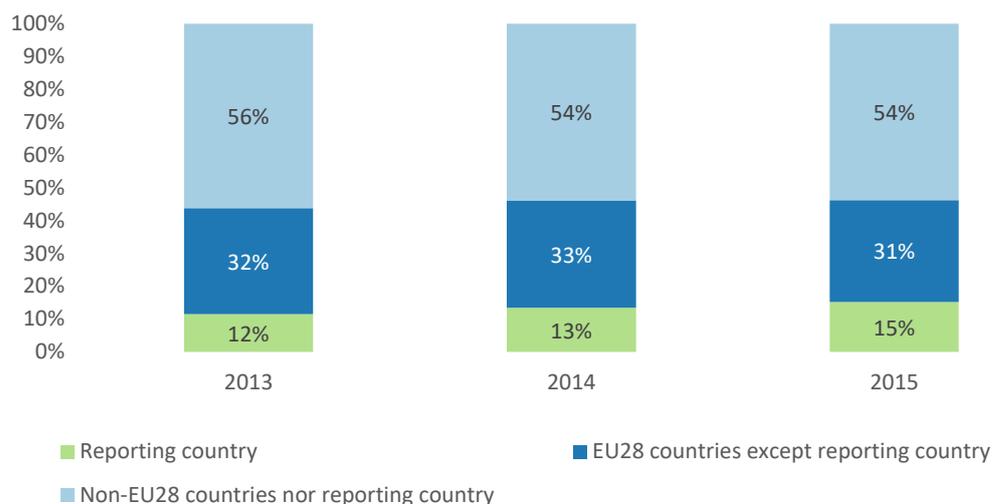
Note: Data is not available for CZ, EE, EL, KR, CY, LV, LU, HU, MT, AT, SL and SI. Population in total age.

According to Fries-Tersch et al (2017), the patterns between 2015 and 2016 have not changed significantly; Spain received 79 000 EU-28 movers of working age (20-64), which ranks Spain third place amongst the top six countries of destination below Germany (366,000) and the United Kingdom (229,000) and above France (59,000) and Austria (55,000).¹¹⁶

Figure 53 below shows that from 2013 to 2015 most of migrants (above 50 %) in Spain come from outside the EU, with just over 30 % coming from EU countries.

¹¹⁶ Fries-Tersch, E., Tugran, T., Rossi L., and Bradley, H., 2017. 2017 Annual Report on intra-EU Labour Mobility. European Commission.

Figure 53. Immigration to Spain by citizenship group



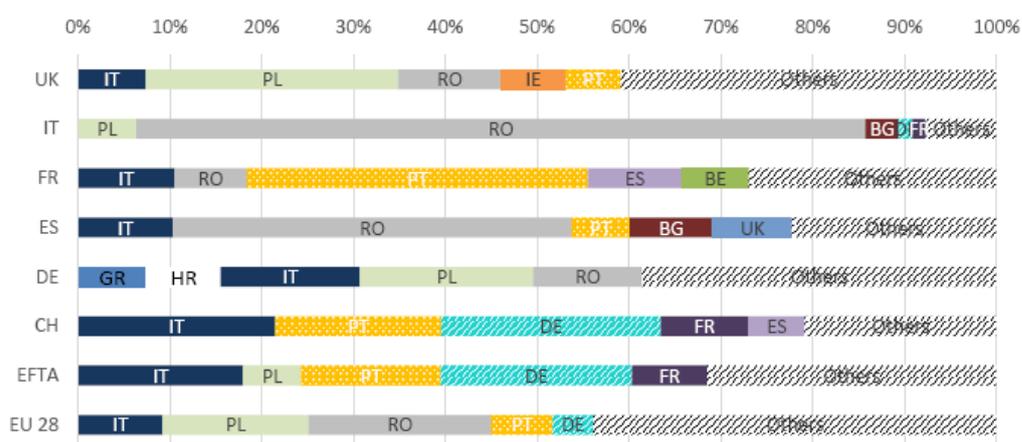
Source: Eurostat [migr_imm1ctz] [Extracted 07/02/2018]

Note: Data does not distinguish between age, sex or skill level. Definition of immigration (and here 'inflows') is "Persons establishing 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"

As the third amongst of top six countries of residence of EU movers of working age (20-64) in total numbers in 2016, Spain shows a total of 3 216 foreigners. 44 % (1 402) of them have an EU-28 citizenship (Fries-Tersch et al, 2017).¹¹⁷

Figure 54 below confirms for the group of EU movers of working age the patterns shown for the overall population in Figure 52 above with Romania, Italy, Bulgaria and the UK being the main countries of origin.

Figure 54. Breakdown by EU-28/EFTA citizenship of movers in working age (20-64) in the top six countries of residence, 2016



Source: MILIEU calculations based on EU-LFS in Fries et al (2017)

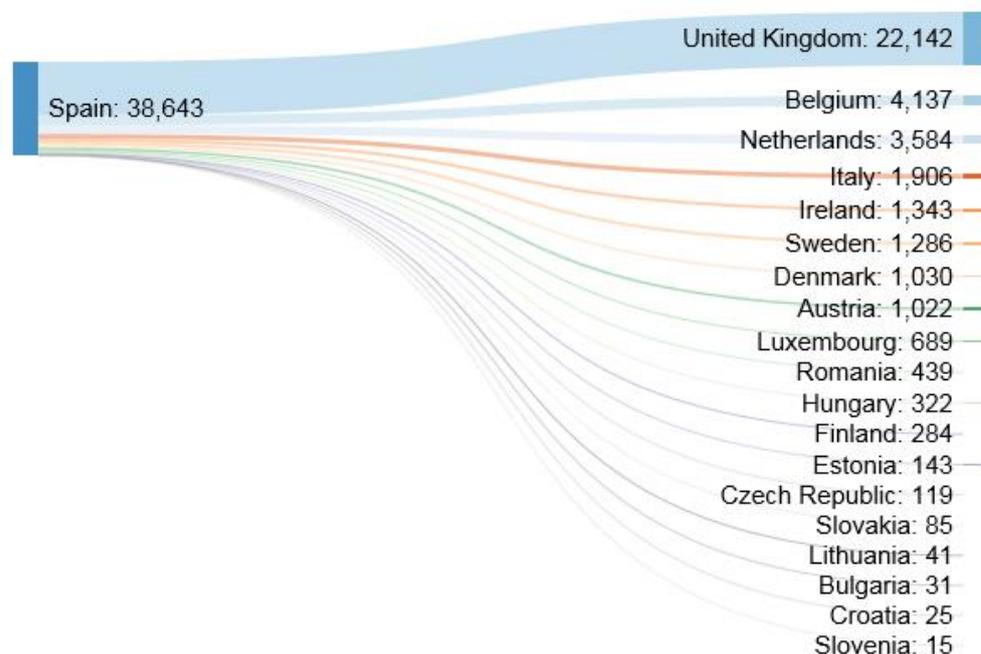
A4.1.1.3 Outflows from Spain

Figure 55 below shows the number of Spanish citizens establishing themselves in another EU country. The United Kingdom is the top destination country receiving more

¹¹⁷ Fries-Tersch, E., Tugran, T., Rossi L., and Bradley, H., 2017. 2017 Annual Report on intra-EU Labour Mobility. European Commission.

than half of this group (excluding the returnees from the total), only followed by Belgium (11 %) and the Netherlands (9 %).

Figure 55. Number of Spanish citizens establishing themselves in EU-28 countries, 2015



Source: Eurostat [migr_imm1ctz] [Extracted 07/02/2018]

Note: Data does not distinguish between age, sex or skill level. Definition of immigration (and here 'inflows') is "Persons establishing 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 month, having previously been usually resident in another Member State or a third country"

Researchers at the INJUVE institute mentioned the methodological challenge found in quantifying the outflows of Spaniards; the research team collected secondary data to estimate the outflows of young people between 2009 and 2013. Because of the lack of detailed indicators on this dimension in Spain, the data collection was done from the countries of destination triangulated with some other data from Spain. However, the total numbers of outflow from Spain within this age group and those inflows of Spaniards of the same age in countries of destination do not match (Navarrete, 2016). The research team highlighted the uneven political interest in mapping inflows and outflows; registering inflows is top priority, while the question of outflows is low in the political agenda in Spain.

The table below summarises the estimated number of outflows of young people aged 18-30 over the period 2009-2013.

Table 17. Outflows of young Spaniards between 2009-2013 aged 18-30, by destination

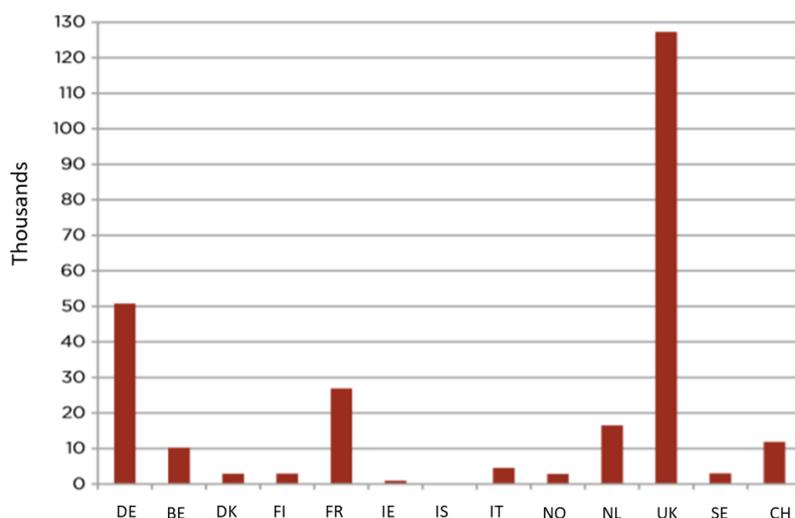
Destination	Numbers (2009-2013)
Europe	263 231
America	346 421
Africa, Asia and Oceania	1 628

Source: Navarrete (2016) based on collected evidence from countries of destination.

Note: Data is based on estimations by triangulating data from Spain and countries of destination.

For the reasons mentioned above, these estimations must be taken with some caution.

Figure 56. Countries of destination for outflows (2009-2013), Spanish young people aged 18-30



Source: Navarrete (2016) based on collected evidence from countries of destination

Unfortunately, this data is not disaggregated by skills/education level. Nevertheless, section A4.1.1.4 below will discuss survey data from this study.

A4.1.1.4 Contextual data

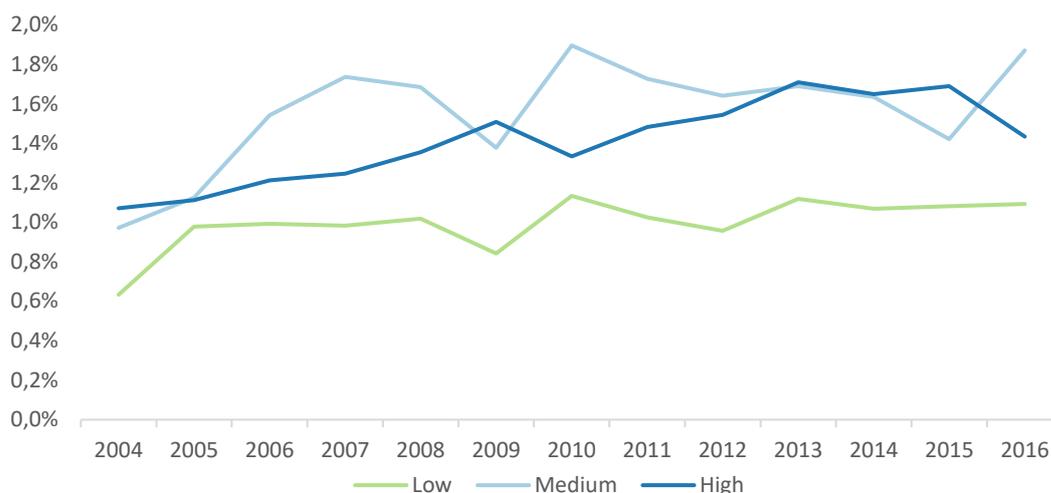
Figure 57 below shows the proportion of EU movers at each skill level as a proportion of the total working population in Spain, from 2004 to 2016. There is a break in the trend in 2009, indicating when the effects of the crisis in the labour market become more visible. The possible underlying factors will be explored further below in Figure 59 and Figure 62 with data on employment by sector and the trends of investment.

From 2004 to 2009, the proportion of high-skilled EU movers increased from 1.1 % to 1.5 % with a slight decline between 2009 and 2010, after which it started growing again, until falling sharply between 2015 and 2016. This proportion was always between 1.1 % and 1.6 %.

The proportion of medium skilled Spaniards leaving the country is initially below those of high skilled, but then starts to grow, peaking at 1.8 % in 2007. It subsequently starts to fall sharply again to fall below that of the highly skilled in 2009. It subsequently resumes its rise between 2009-2010, to decline again from 2010 and reaching a renewed low of 1.4 % in 2015, before rising again. The trend for the low skilled is less volatile compared to the other skill levels and ranges from 0.6 % in 2004 to 1.1 % in 2016, although it also shows a fall in 2009 linked to the impact of the crisis.

Another interesting pattern is the widening gap between low skilled and medium/high skilled, which suggests that the elasticity of employment to the business cycle is quite different by skill level.

Figure 57. EU movers in Spain as a proportion of total working population, by skill level



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford

Note: Data includes ages 15-64. Low skilled corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level)

Figure 58 below shows the number of EU movers in Spain at each skill level as a proportion of the total working population of the corresponding skill level. The proportion of high skilled EU movers is rather stable around 3.4 % from 2004 to 2016, peaking at 4 % in 2009 to decrease since then without showing any significant upward or downward trend.

In contrast, the share of medium-skilled EU movers shows a more volatile pattern. It stood at 4.6 % in 2004 and reached a peak at 7.2 % in 2007, when it seems to respond rapidly to the early part of the crisis and starts to fall sharply reaching a low of 5.8 % in 2009, to recover afterwards. The overall trend in the share of EU medium-skilled movers is upwards between 2004 and 2016.

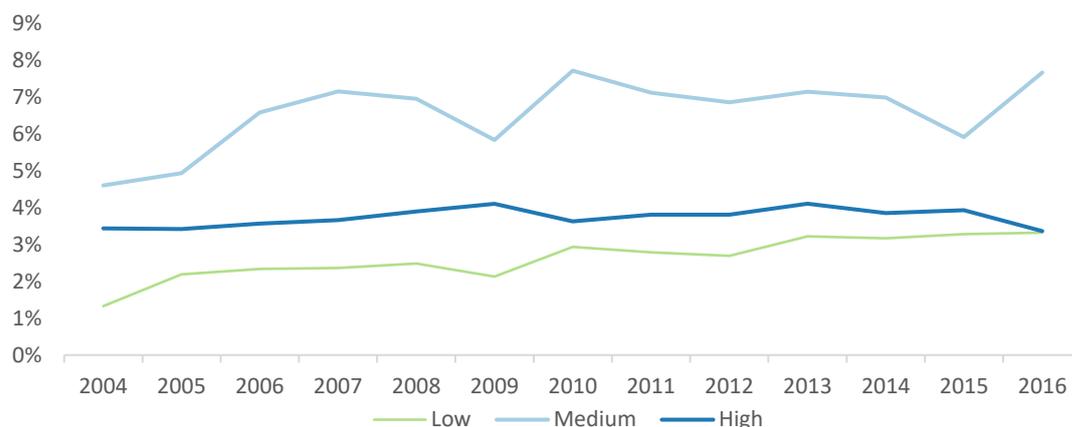
In contrast to medium and high skilled, the share of low-skilled EU movers grew from 1.3 % up to 3.4 % in 2016, always remaining below the share in the other two groups but showing a relatively steady overall growth trend (with a dip in the crisis years of 2008 and 2009). Part of the difference in trends could be linked to the evolution of employment in sectors where different skill levels are concentrated (see Figure 59 below.)

According to Rodriguez-Planas and Nollenberger (2014), who used Labour force data, before the crisis, high-skilled movers in Spain were more likely to find a job and less likely to accept jobs below their educational qualifications. However, these benefits of education have decreased during the recession. The deteriorating economic situation meant that more individuals had to accept jobs for which they were overqualified in order to stay in employment.¹¹⁸

The reason why 2009 shows a fall in the series is the change in expectations. What seemed to be a short-term crisis, soon was perceived as permanent. Besides, the labour market for the high-skilled worker became increasingly difficult during this period (Navarrete, 2016).

¹¹⁸ Nuria Rodriguez-Planas and Natalia Nollenberger (2014), A precarious position: The labour market integration of new immigrants in Spain. Washington, DC, and Geneva: Migration Policy Institute and ILO

Figure 58. EU movers (by skill level) as proportion of the corresponding skills level in total working population

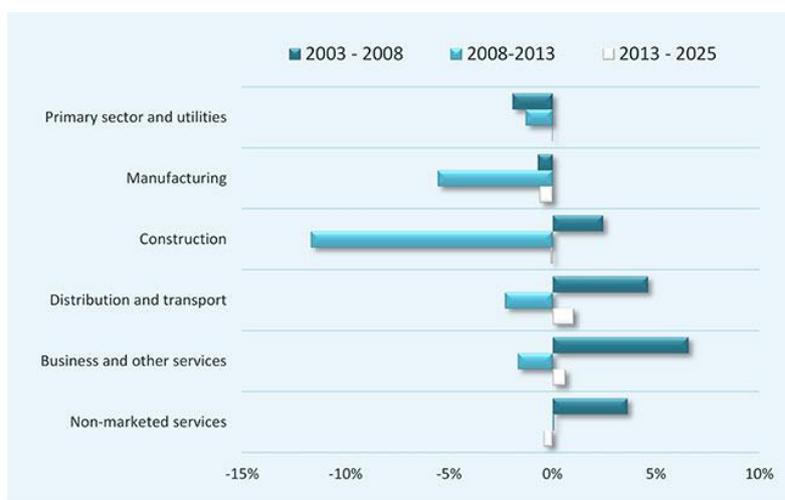


Source: EU LFS microdata, by The Migration Observatory at the University of Oxford

Note: Data includes ages 15-64. Low skilled corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level)

The figures above are also associated with the sharp increase in the number of Spaniards moving abroad from 2009 onwards.

Figure 59. Employment trends by sector, average annual growth rate (%) in Spain

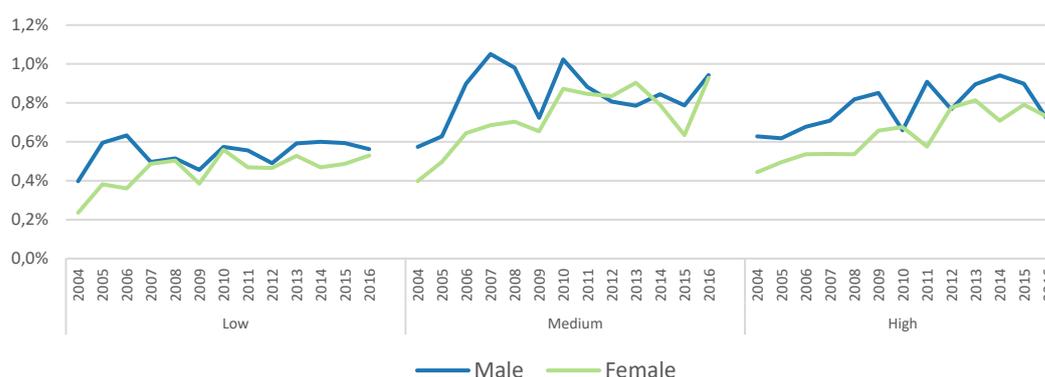


Source: Cedefop skills forecast (2015)

As highlighted by Rodriguez-Planas and Nollenberger (2014), low-skilled movers are concentrated in sectors with poor working conditions such as construction and other services, and males are over-represented in the construction sector.

Figure 60 below shows similar data to Figure 57, but breaks this data down by sex. The trends for high-skilled male and female workers are relatively synchronised, although the decline starts in 2009 for males: earlier and more significant than EU female movers. This might be linked to the performance of the construction sector (see Panel C in Figure 62 below).

Figure 60. EU movers as a proportion of all workers in Spain, by sex and skill level



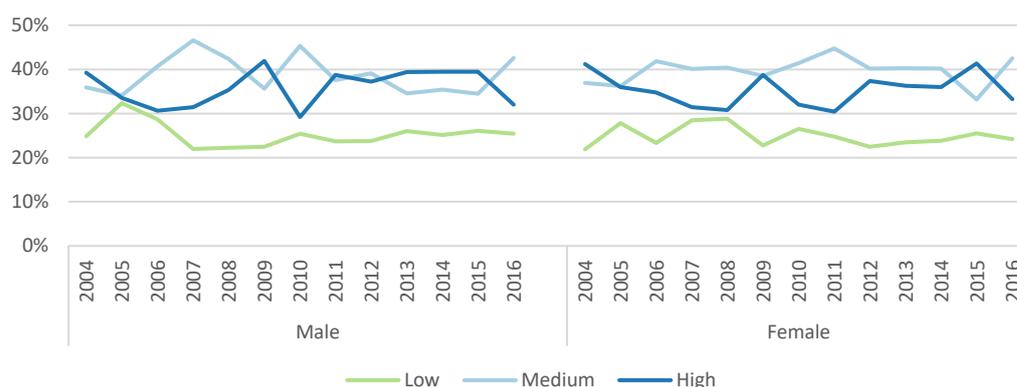
Source: EU LFS microdata, by The Migration Observatory at the University of Oxford

Note: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level)); estimates for low skilled females in 2004 and 2005 have low reliability

Figure 61 below shows the skill distribution of the EU mobile population working in Spain. For male medium-skilled EU movers, the figures show a trend increase from 35 % in 2004 to 45 % in 2007, when their share starts to decline until 2010 with a minor recovery and a low plateau during the period 2011-2016. The prevalence of low-skilled EU movers falls from 32 % to levels below or around 25 % for the period of 2007-2016. Overall, for male EU movers the crisis has widened the gap between low skilled and medium/high skilled, while it closed the gap between medium and high-skilled movers.

Amongst female EU movers, the prevalence of high skilled workers shows a negative trend from 2004 (41 %) to 2008 (31 %), then recovers 9 percentage points in 2009, but falls again and in 2016, is still below the levels of 2004. Medium-skilled females are now more highly represented, being stable around 40 % showing less responsiveness to the business cycle compared to high-skilled EU mobile women. The share of low skilled female EU movers shows some volatility from 2004 (28 %) and oscillates between 20-30 %, but after a fall in 2009 stabilises at 25 %.

Figure 61. EU migrant distribution by skill level, by sex



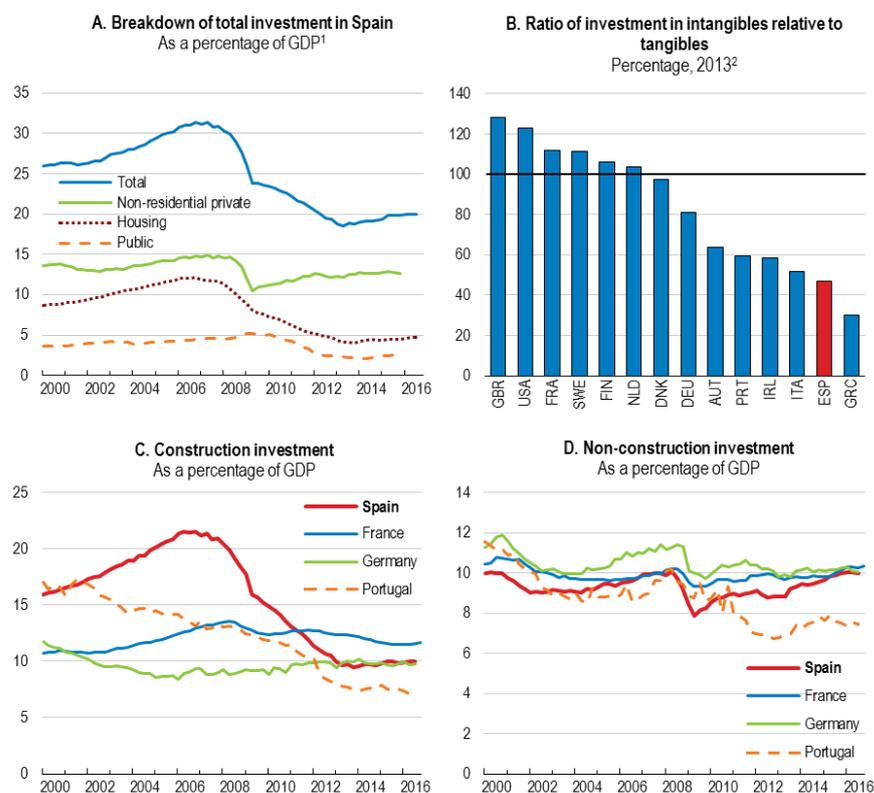
Source: EU LFS microdata, by The Migration Observatory at the University of Oxford

Note: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level)); estimates for low skilled females in 2004 and 2005 have low reliability

Comparatively, it seems that the crisis has had a greater impact on male medium-skilled EU movers than their female peers. This might be linked to how the construction sector

was hit by the economic and financial crisis. Most of the workforce in this sector are low and medium skilled, and males are overrepresented. Panel C in Figure 62 below shows the sharp fall in the level of investment in the construction sector as % of GDP from 2007 onwards.

Figure 62. Investment trends in Spain



Source: OECD (2017), OECD Economic Outlook: Statistics and Projections (database), February; OECD (2017), OECD National Accounts Statistics (database), February; OECD (2015), OECD Science, Technology and Industry Scoreboard 2015: Innovation for growth and society; Corrado, C., J. Haskel, C. Jona-Lasinio and M. Iommi, (2012), "Intangible Capital and Growth in Advanced Economies: Measurement Methods and Comparative Results", Working Paper, June, (available at <http://www.intan-invest.net>).

Note: (1). Data for non-residential private investment refer to total investment (i.e. total gross fixed capital formation) minus government and housing investment. Since data for housing investment for Spain and Portugal may also include government housing, the series for non-residential private investment may be underestimated. (2) Data refer to business sector excluding real estate (i.e. all activities except for real estate activities (L), public administration and defence, compulsory social security (O), education (P) and human health and social work activities (Q)). Investment refers to gross fixed capital formation. Investment in intangibles refers to all knowledge-based capital (KBC) assets. KBC assets that are consistent with the definition in the System of National Accounts (SNA) 2008 include: software, R&D, entertainment, literary and artistic originals, and mineral exploration. Other KBC assets include: design, new product developments in the financial industry, brands, firm-specific training and organisational capital. Investment in tangibles refers to gross fixed capital formation in construction and machinery and equipment.

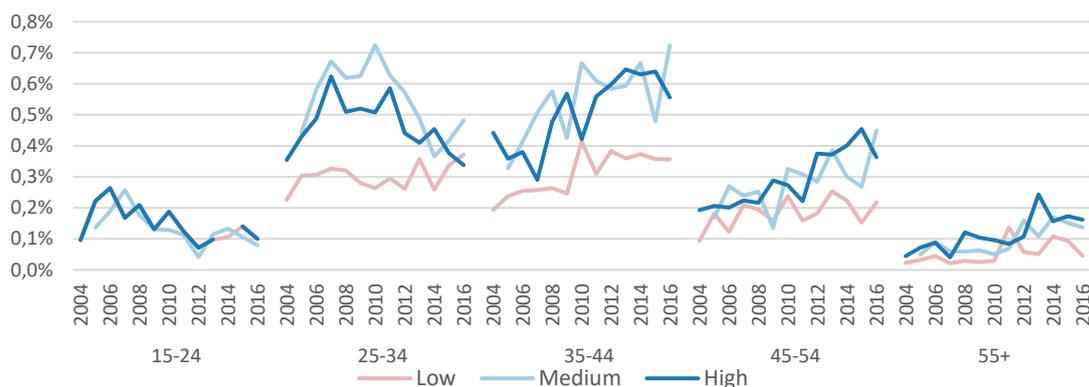
Figure 63 below shows data similar to Figure 57 in that it shows the proportion of EU movers in the total working population, but by age group. Overall, most movers are concentrated in the 25-44 age groups. The figure shows a negative trend from 2006

onwards for high skilled EU movers in the age group 25-34 and this is similar for medium skilled group. On the other hand, for this age group the share of low-skilled EU movers shows a growing trend with some ups and downs.

These patterns should be looked at considering the trends in investments shown in Figure 62 above, where the age of working population (25-44) trend is more aligned to the business cycle.

This dynamic is in contrast to some extent to the older group, 35-44, where all skill levels have a similar growth trend. This indicates that the crisis affected mostly the young working age group 25-34, while the age group 35-54 is relatively more decoupled from the business cycle. However, these figures represent only a small percentage change.

Figure 63. Low, medium and high-skilled EU movers as a proportion of all workers in Spain by age group



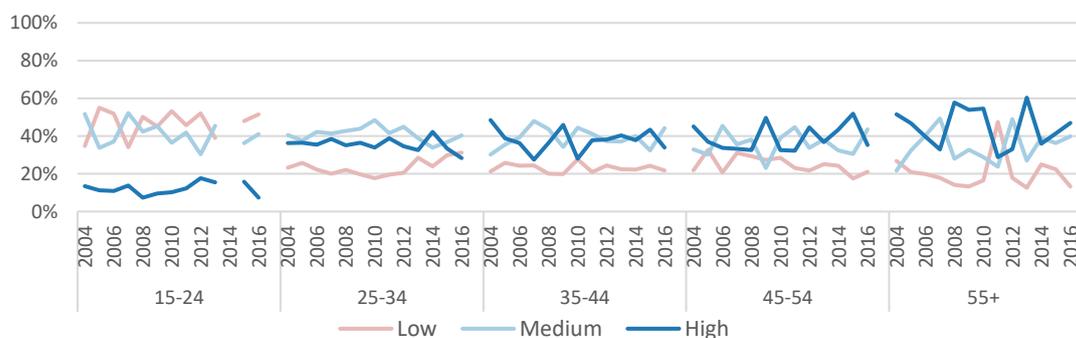
Source: EU LFS microdata, by The Migration Observatory at the University of Oxford

Note: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level))

Figure 64 below shows that within the age group 25-34, the proportion of medium skilled EU movers working in Spain is mostly above the share of high-skilled movers (with the exception of the year 2014).

The share of low skilled remains far below that of medium/high skilled, but the gap closes from 2010 onwards which sees the share of low skilled rise somewhat. The patterns amongst those aged 35-44 is more erratic and volatile for the medium and high skilled. Both range between 30-50 %, appearing quite sensitive to the business cycle and with opposite trends but converging around 40 % in most recent years. The share of the low skilled in this age group remains stable.

Figure 64. Skill composition (low, medium, high) of EU movers working in Spain by age



Source: EU LFS microdata, by The Migration Observatory at the University of Oxford

Note: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level)).

Table 18 and Table 19 shows that – as is to be expected - skilled EU movers are mainly represented in white collar positions and to a lesser extent in blue-collar positions.

Table 18. Top 5 occupations with the largest proportion of EU skilled movers (2016)

Occupation	%
Professionals	2.9 %
Managers	2.2 %
Technicians and associate professionals	2.2 %
Elementary occupations	1.0 %
Craft and related trades workers	1.0 %

Source: EU LFS microdata, by The Migration Observatory at the University of Oxford

Note: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level))

Table 19. Top 5 occupations with the largest number of skilled EU movers (2016)

Occupation	N
Professionals	93 900
Technicians and associate professionals	45 300
Service and sales workers	36 600
Elementary occupations	24 600
Craft and related trades workers	19 900

Source: EU LFS microdata, by The Migration Observatory at the University of Oxford

Note: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level))

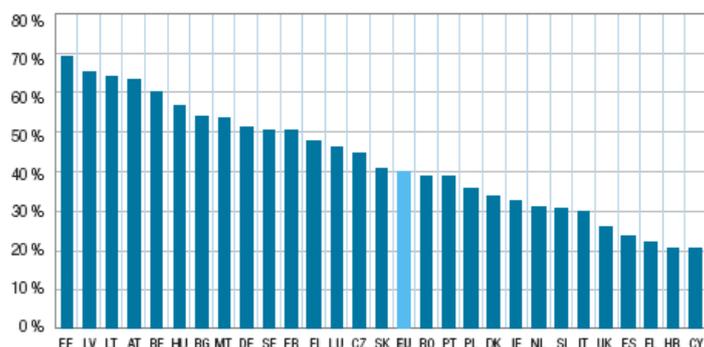
A4.1.1.5 Profile of Spaniards leaving

Arango (2016) considers that emigration of high skilled labour in Spain is depicted in the media as a cause for concern but in the short-term, the number of young graduates leaving was limited. Spain has a relatively high proportion of graduates (32 % of young adults aged 25-34, while the OECD and EU average for this group are 33 % and 29 % respectively) and young emigrants represent only a small fraction of this. Moreover, higher education provision has expanded considerably in recent decades, leaving a high number of graduates underemployed in Spain. This substantially lowered the opportunity cost of any skill loss for the Spanish economy at this time, although, as will be indicated below, there are some concerns around skill loss in specific sectors. In other words, if there is no skills gap for this type of worker, then the loss to the Spanish economy is more limited and could indeed in the short-term reduce unemployment and underemployment amongst high skilled labour.

A Cedefop (2015) report on skills gap in Europe, showed that Spain does not suffer from a considerable issue compared to other EU countries (see Figure 65 below).¹¹⁹

¹¹⁹ Cedefop (2015). Skill shortages and gaps in European enterprises: striking a balance between vocational education and training and the labour market. Luxembourg: Publications Office. Cedefop reference series; No 102. <http://dx.doi.org/10.2801/042499>

Figure 65. Difficulties to find staff with required skills in EU companies, 2013 (EU-28)



NB: Proportion of establishments replying affirmatively to the question 'Did your establishment encounter difficulties in finding staff with the required skills?'

Source: Cedefop (2015) based on Eurofound ECS 2013

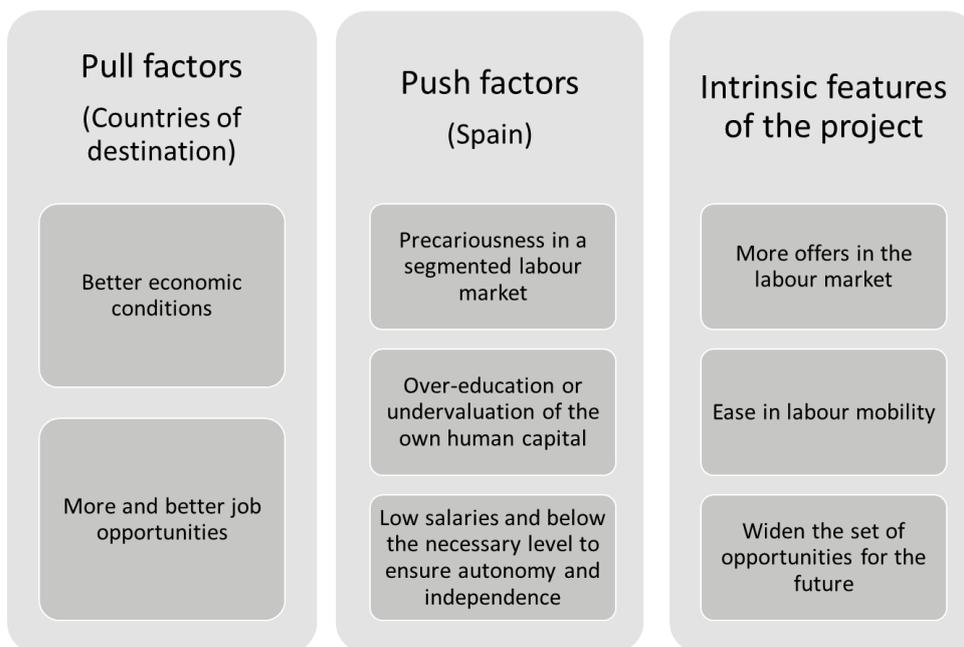
Although the level of skills gaps is relatively low in Spain (at least compared to other EU member states), Arango (2016) stressed that there is a loss in some key profiles such as: *medical doctors, architects, scientists and technicians* who were leaving or planning to leave at the moment of the study. In addition, experts at the Ministry of Employment and Social Security, argued that due to the globalisation process some sectors which are booming abroad are attracting certain profiles of workers from the Spanish labour market. This is the case for the construction sector in the Middle East, which is drawing construction engineers.

Navarrete (2016) and his team of researchers at the INJUVE institute implemented a survey of over 1,020 respondents. Although the sample is not representative of the entire Spanish population, it provides interesting information on the profile of emigrants, and is the best available survey data:

- Approximately three out of five Spaniards emigrating over the period 2007-2013 were aged 15-29;
- Although a third of respondents emigrated in order to complete their education, most of them waited until completing their higher education to leave;
- Most respondents do not have children or a stable partners due to their young age;
- The crisis emerged as the main trigger to emigrate and they regard their permanence abroad as indefinit;
- Most respondents shared some disappointment in relation to the salaries expected abroad and those actually obtained;
- Although young Spanish emigrants have followed a rational cost-benefit appraisal by weighting up the pull and push factors, income was not the key pull factor. In fact, many Spaniards did not choose the destination by its higher income (Dubai, Qatar) but by its cultural and language proximity (America and Europe).

The figure below summarises the pull/push factors mentioned by respondents. These findings are consistent with the topics discussed in the literature review (Section A4.1.1).

Figure 66. Pull/push factors of respondents



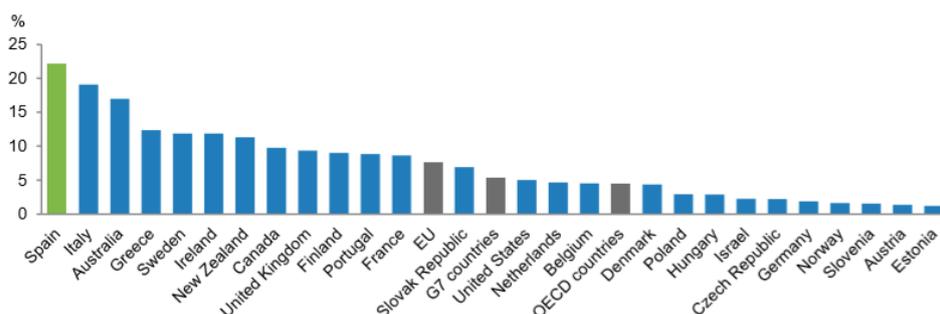
Source: own elaboration based on Navarrete (2016)

A4.1.1.6 Spanish labour market context

Experts at the MEYSS¹²⁰ indicated that the current policy approach is not to target migration outflows but to generate favourable conditions in the labour market to attract and retain skilled labour.

The domestic labour market conditions remain the main challenge for recovery. As discussed by the OECD (2015), the proportion of young people working involuntarily in part-time roles in Spain is the highest amongst OECD countries as shown below. Besides, three out of four young aged 15-24 work in a temporary contract and this has increased during the crisis.¹²¹

Figure 67. Incidence of young people aged 15-24 working involuntarily in part-time roles, 2013



Source: OECD (2015), OECD Labour force Statistics,

In addition, a report from the Ministry of Employment and Social Security of Spain highlighted that the crisis left a polarised labour market for young people. The high availability of low quality jobs during boom times contributed to an increase in early school leaving, which, combined with an expansion of higher education in recent years, left the labour market with two different profiles; a high number of low-educated labour

¹²⁰ Ministry of Employment and Social Security

¹²¹ OECD (2015), OECD Skills Strategy Diagnostic Report: Spain.

struggling to find a job; and a high number of young people with higher education degrees locked in underemployment (MEYSS, 2016).¹²²

A4.1.1.7 Key findings

Several key emerging patterns can be listed:

- Spain is third within the top six countries of residence of EU-28 movers of working age (20-64). 44 % of foreigners in Spain are EU-28 movers whilst the remaining are third-country nationals;
- Romania, Italy and Bulgaria are the top three countries of origin of EU movers to Spain;
- The United Kingdom was the top country of destination for young Spaniards aged 18-30 who emigrated between 2009-2013, followed by Germany, France and Netherlands. This is similar for the outflows of Spaniards amongst all age groups who emigrated in 2015, with the UK at the top, followed by Belgium and Netherlands;
- The percentage share of high-skilled EU movers of the total high skilled working population remains below 2 % with a positive trend over the period 2004-2016 and a slight fall in 2009 during the recession period. The medium skill category is more erratic;
- Those sectors mostly affected by the crisis were construction with a fall of 10 % of GDP between 2008 and 2013, and manufacturing 5 %. Most low and medium skilled workers are concentrated in these sectors;
- Although research and higher education were not the sectors most affected by the economic and financial crisis, it was touched by the austerity policies and budget cuts which worsened the working and living conditions of young scholars and researchers;
- The proportion of Spaniards with higher education degrees is above the EU average, thanks to an increasing provision during the last decades. Nevertheless, some profiles such as engineers, medical doctors, architects and scientist for which there is demand in Spain, are leaving, and some higher educated are reported to suffer from underemployment and are having to accept temporary contracts;
- Although Spain does not show a very big issue in skills gaps compared to the rest of the EU Member States (only 20 % of companies experienced issues finding staff, compared to the EU average of 40 %), the reported underemployment are signals of occurring skills mismatches;
- Key push factors for Spaniards leaving the country are the economic and labour market situation and relatively poor working conditions.

A4.2 Policy mapping

This section aims to present the policy response to the context described above. To this end, each measure, initiative or policy will be described and include evidence on inputs/activities, outputs, and impacts whenever available.

A4.2.1 Measures at regional level: Catalonia

Catalonia started to implement a strategy from a set of initiatives targeting high-skilled labour two decades ago with the aim to become a knowledge society. Since 2000, Catalonia has begun to implement its own policies in its tertiary education sector, targeting attraction and retention of skilled human capital.

Although the strategy is not primarily addressing the outflow of skilled labour, the management of human capital is a key pillar. This is done by both retaining and attracting skilled labour, by improving the recruitment process.

¹²² MEYSS (2016), Estrategia de Emprendimiento y Empleo Joven. Available at: http://www.empleo.gob.es/ficheros/garantiajuvenil/documentos/EEEJ_Documento.pdf

They believe that the most important pull factors to attract skilled labour to Catalonia include:

- Following principles of best practice worklife balance (access to good quality public services such as education, health);
- Good quality job (salary, stability and career progression);
- Comfortable working environment.

All institutions in this region, which are part of the RDI (research, development and innovation) sector, adhere to the Human Resources Strategy for Researchers (HRS4R)¹²³, for which they get accredited. This framework was established by the European Commission (Euraxess) and comprises a five steps process. Committed institutions must:

- Follow principles of best practice recruitment process based on transparency, anti-discrimination and merit;
- Impartial and independent selection committees;
- Onboarding experience and introduction to the working environment and regulations for the selected candidate.

A4.2.1.1 ICREA

The Catalan Institution for Research and Advanced Studies is a foundation supported by the Catalan Government, guided by a Board of Trustees. The Board is chaired by the Ministry of Business and Knowledge and includes representatives from different universities.

ICREA was created to learn from best practice and design new recruitment processes to become more competitive compared to other research institutions by focusing on hiring only the most talented scientists and academics from and beyond Spain. It was established in an effort to overcome rigidities inherent in the Catalan and Spanish research systems that were considered to discriminate many non-Spanish researchers from delivering research in Catalunya, as well as in Spain. The previous system was also thought to discriminate highly qualified Spanish and Catalan researchers with extensive experience abroad.¹²⁴

Several barriers such as institutional, cultural and financial made it difficult for many non-Spanish nationals to apply for, and take up, research roles in Catalunya. The ICREA model ensures permanent roles to researchers outside the Catalan research and academic system by implementing new recruitment and employment practices.

Since its creation, ICREA has recruited 231 researchers/professors who brought top quality research and valuable international experience to Catalunya:¹²⁵

- All ICREAs have significant international experience obtained outside of Spain. Around 64 % of the recruited profiles had experience abroad (mostly USA, Germany and the UK);
- 46 % of them are foreign nationals;
- Most of ICREAs have worked in top higher-education institutions such as Harvard, MIT, Oxford and Cambridge, or renowned research organisations such as the laboratories of CNRS and Max Planck, Bell Labs or the US National Institute for Health;
- The quality of ICREAs delivery is extremely high; they outperform comparator groups of researchers at all levels (Catalunya, Spain, the European Research Area

¹²³ <https://www.euraxess.es/spain/services/human-resources-strategy-researchers-hrs4r>

¹²⁴ Technopolis (2012), Evaluation of ICREA: 2001-2011. Commissioned by ICREA. Available at: https://www.icrea.cat/sites/default/files/wp/external_report/files/technopolis_-_icrea_evaluation_2001-11_executive_summary_-_eng.pdf

¹²⁵

and worldwide) in their bibliometric indicators for quantity, quality and impact of their research output.

ICREA's key outputs include:

- Attracting significant levels of research funding (EUR 34.6 million in 2009);
- A highly successful win rate for the prestigious ERC grants, representing over 50 % of all ERC grant recipients in Catalunya and 30 % in Spain;
- High volume of publications (over 1 600 papers in 2009);
- Being granted 42 patents and creating three spin-off companies.

A4.2.1.2 Serra Hunter

The Serra Hunter Programme (SHP) aims at recruiting around 500 new faculty members into the Catalan public universities during the period 2013-2020. The programme is funded by the Government of Catalonia as well as the seven Catalan public universities: *the University of Barcelona (UB), the Autonomous University of Barcelona (UAB), the Technical University of Catalonia – BarcelonaTech (UPC), Pompeu Fabra University (UPF), the University of Lleida (UdL), the University of Girona (UdG) and Rovira i Virgili University (URV)*.¹²⁶

The programme is managed by an academic director, who is a professor with recognised track record, and an Advisory Board made of prominent academics. Along with the rectors of the universities, the academic director appoints the recruitment committees responsible for the selection of candidates.

The academic director manages and coordinates the programme and guarantees its proper implementation. In addition, he/she prepares a yearly monitoring report on the evolution of the programme, to be submitted to the Catalan government and to the universities. The advisory board advises and undertakes other tasks assigned to it by the academic director.

A4.2.1.3 'CERCA' research models

CERCA is a research framework consisting of a network of institutes located on university campuses and in science and technology parks. They occupy a total area of approximately 95 000 m² in addition to 13 spin-off companies set up based on the research work in these centres. As of 2009, 22 researchers working in CERCA institutes had received grants from the European Research Council (ERC), through both the Starting Independent Researcher Grant and Advanced Investigator Grant programmes. To put this figure in context, a total of 40 researchers in Catalonia have received such awards, while the number for the rest of Spain is 26.

The CERCA governance model can be summarised in the below pillars:

- Each research centre is an independent legal entity, participated by the Government of Catalonia;
- Follow a private sector management model self-monitored under a multi-year activity programme and strategic plan;
- They have an executive management;
- Each centre is designed to have a critical mass of researchers with an international profile;
- They receive stable and significant structural funding from the Government of Catalonia.

The main purpose of this initiative is to improve the regional growth model and increase productivity based on research and innovation in Catalonia tackling the challenges posed

¹²⁶

http://serrahunter.gencat.cat/en/el_serra_hunter_programme_shp_pla_serra_hunter/documentacio_referencia/

by the increasingly international character of the Catalan RDI system. An evaluation of the Catalan research system highlighted some inefficiencies common to other public research organisations especially affecting skilled labour. The attraction and recruitment of skilled labour is the key pillar of this initiative.¹²⁷ The experts at the Region of Catalonia manifested that a competitive recruitment process was part of the conditions to match funding; skilled labour and investment in research complement each other. Therefore, any prospects of brain drain would endanger the whole research system.

The network is delivering the following:

- Consolidated mechanisms to attract talent;
- Fostering research policy alignment between the EU and Spain;
- Defining the focus and priorities of research and innovation plans;
- Leading and coordinating major projects and scientific and technological platforms;
- Creating public-private partnerships.

A4.2.2 Measures focused on returnees

There are several initiatives implemented at national level while others taken at the regional level. Consulted experts of the EURES network in Spain revealed that there has been a considerable outflow of young skilled people since 2007, mainly driven by the lack of opportunities in Spain and better career prospects or working conditions in other EU countries. Since 2016, the situation on the labour market has begun to improve but many vacancies remain unfilled, such as engineers and ICT graduates. Although Spain is aiming to address these skill shortages by attracting returnees, there is no targeted approach by skills or job profile. However, overall skills gaps are not a significant concern in Spain, as already discussed above (Section A4.1.1.5).

As indicated by experts at the MEYSS, the budget constraints have limited the number and scope of the initiatives focused on return or reintegration. All initiatives focused on returnees are implemented by regional authorities. Arango (2016) confirms that there is no large-scale initiative to foster both temporary and permanent return of Spaniards and their descendants, but only scatter projects.

A4.2.2.1 'Planes de retorno – Guia del Retorno'¹²⁸

This is a document listing all the necessary steps for Spanish movers wishing to return to Spain.¹²⁹ There is a set of regulations in place to provide support depending on different needs, such as income supplement, foreign degree recognition, and all sort of administrative practices to ease the reintegration of Spanish movers to their community of origin. This is regulated by Law 40/2006, 14 December.¹³⁰

The document was drafted by the Office of Return which is under the General Secretary of Migration. Unfortunately, there is no monitoring data available on the numbers of downloads.

A4.2.2.2 Retorno del talento joven (Castilla La Mancha)¹³¹

This programme is targets young people aged 25-34 from Castilla-La Mancha who have emigrated due to the economic and financial crisis and could not find a job in Spain after finishing their studies.¹³²

This programme offers three key strands:

¹²⁷ http://cerca.cat/wp-content/uploads/2011/03/CERCA_-Research-Centres-of-Catalonia.pdf

¹²⁸ "Return planes – Guide to return"

¹²⁹ MEYSS (2017), Oficina de Retorno. Secretaria General de Inmigración y Emigración. Available at: <http://www.ciudadaniaexterior.empleo.gob.es/es/pdf/guia-retorno.pdf>

¹³⁰ <http://www.boe.es/buscar/act.php?id=BOE-A-2006-21991>

¹³¹ Return of young talent.

¹³² <http://retorno-talento.castillalamancha.es/informacion-sobre-el-programa-retorno-del-talento-joven>.

- **Subsidy for indefinite term contracts:** economic support to companies for up to EUR 15 000 to promote this type of contracts of young people from the region of origin (under 35) who had resided abroad and wish to come back.
- **Subsidy for entrepreneurial activity:** economic support for up to EUR 6 000 for young people having resided abroad, wishing to set up an activity in the region of origin.
- **'Return passport':** an economic entitlement of up to EUR 3 000 for young people residing abroad wishing to come back.

In addition, the programme uses a website and a team of mediators to facilitate the reintegration process for the young returnees.

More than 1 100 persons consulted the website in its first week of implementation, as revealed by the regional government's speaker Nacho Hernando.¹³³ The online visitors were from more than 30 countries and encouraged people and companies to register. The site can match for movers willing to return with companies looking for labour.

Through the website, the applicant can create a profile and in less than 48 hours, an official from the regional public employment service will contact them to offer a service of counselling and professional advice.

In addition, there is support for ERDF research projects. This will amount to EUR 12 million over the next four years, to consolidate research in the region. These projects can be individual or in consortium and can last from 12 to 36 months. For the first time, these projects can be led by young researchers, focused on both return and attraction of young talent, where half of the investment will be focused on hiring labour.

A4.2.2.3 Volvemos¹³⁴

Volvemos is an online platform that function as intermediary between people residing abroad who wish to return to Spain, and companies seeking young talent.¹³⁵ This national platform provides free information and intermediation for Spanish returnees looking for employment in Spain. The idea was created by three developers:

- Diego Ruiz del Arbol Garcia: an IT engineer
- Sebastien Saenz: French national living in Spain and funder of an HR consultancy
- Raul Gil Benito: Spanish migrant living in Germany

The funding partners of this initiative are also raising awareness amongst local authorities to encourage policies aimed at fostering the return of young people who have left the country and their re-integration. *Volvemos* has a database with more than 7 000 Spanish people residing and working abroad and who are registered on the portal as willing to come back.

The type of services offered to companies seeking job candidates varies depending upon the scope of the service's involvement in the recruitment process:¹³⁶

- **Executive search:** they handle the whole recruitment process for a cost of 10-15 % of the annual gross salary paid to the recruited candidate. This can also include a period of professional support to the applicant to ease the recruitment process.
- **Talent mapping:** the service provides the company with a set of 'blind' CVs without names and if the company is interested it will pay EUR 200-500 per CV.

¹³³ <http://www.europapress.es/castilla-lamancha/noticia-mas-1100-personas-visitado-semana-plataforma-plan-retorno-talento-joven-lm-20170927125524.html>.

¹³⁴ We return

¹³⁵ <http://volvemos.org/>

¹³⁶ <http://volvemos.org/servicios-empresas-comprometidas-el-retorno-talento>.

A4.3 Conclusions

A4.3.1 Main conclusions

Based on the findings from the literature review, the data analysis and the interviews, the following concluding remarks can be drawn:

- Spain is third amongst the top six countries of destination for EU-28 movers; 44 % of the foreign population in Spain comes from an EU Member State while the rest are third-country nationals (TCN).
- The United Kingdom was the top country of destination for young Spaniards aged 18-30 who emigrated between 2009-2013, followed by Germany, France and Netherlands. This is similar for the outflows of mobile Spaniards amongst all age groups in 2015, with UK at the top, followed by Belgium and Netherlands.
- The proportion of high-skilled EU movers of total working population remained below 1.5 % over the period 2004-2016. Amid a positive trend, there was a slight fall in 2009 due to a change in expectations on the crisis. What was experienced as a temporary shock at the end of 2007, began to be perceived as a long-lasting crisis. The labour market in Spain became quite difficult from 2009 onwards for the overall high-skilled.
- The crisis has mostly affected the medium and low-skilled labour. This was mainly due to the crash of the construction and manufacturing sectors, which had a concentration of lower-skilled labour. However, skilled labour was more able to migrate abroad.
- Before the crisis, Spain had already attained a high proportion of tertiary education graduates: 32 % of young adults aged 25-34 compared to the OECD (33 %) and EU average (29 %) for this group. Young emigrants represent only a small fraction of this group. Most of young people with tertiary education are underemployed.
- During this research, it was not possible to obtain primary data on the motivations to migrate. However, secondary survey data reveals that most young Spaniards aged 18-30 leaving Spain were pushed by a segmented labour market, precariousness of job and low levels of salaries. In addition, most of them waited to finish their higher education before leaving.
- The underemployment of high-skilled labour combined with the fact that few companies report an issue of skills gap (24 % compared to 40 % EU average), indicates a low opportunity cost of any outflow of skilled labour. On the contrary, outflow would help to diminish the unemployment and underemployment rates of the high skilled labour. However, in the experts' opinions, the number of vacancies started to recover in 2017 with emerging skills gap in two specific roles: ICT and aerospace engineering.
- The austerity policies implemented since the outbreak of the crisis in 2007 have prevented institutions of more significant interventions to attract returnees. In addition, the presence of underemployment, idle capacity and low skills gap makes a weaker case for this type of intervention.
- Although there are some scattered interventions of a narrow scale on return migration, the main policy priority is to improve the labour market outlook as a comprehensive policy to attract and retain skilled labour.
- Similarly, regions such as Catalonia aiming to achieve a knowledge-based society are aware of the importance of human capital management (attraction and retention) to keep a dynamic and competitive innovation system.

A4.3.2 Key policy recommendations

Based on the analysis performed and interviews with experts, a set of recommendations can be provided:

1. Considering that the evidence of skills gap is weak, and the underemployment of skilled labour came up in the literature review, interventions could be focused on improving the functioning of the Spanish labour market tackling market segmentation, offering better working conditions and prospects for the high skilled labour.
2. Measures on return should focus on specific job profiles depending on skills gap instead of a generalist approach as it is currently done.
3. A better system of follow-up should be put in place to track outflow of skilled labour.

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Annex 5 Case study: Baltic States

A5.1 Introduction: the demographic and labour market situation

The three Baltic States – Estonia, Latvia and Lithuania – have experienced similarly high emigration rates since their accession to the European Union. However, there are important differences between them in terms of the magnitude of the outflows, their impacts, as well as the response measures and policies.

All the three countries have relatively small and declining populations, which range from 1.32 million in Estonia (a 0.02% decrease in 2017 compared to 2016), to 1.95 million in Latvia (a 1% decrease in 2017) and 2.85 million in Lithuania (a 1.4% decrease in 2017) (Eurostat 2018e)¹³⁷. The pace of demographic decline between 1990 and 2016 was the highest in Lithuania, which lost 26% of its population, followed by Latvia, with a 22% decline, and Estonia, which lost 16% of its population over this period (World Bank 2018a).

All the three countries have a similar gender composition, with women representing 53.1% of the total population in Estonia, 54.1% in Lithuania, and 53.9% in Latvia (Eurostat 2018e).

In terms of education, in 2017, 34.7% of the 15-64 years old population in Estonia was tertiary educated, 30.0% in Latvia and 34.8% in Lithuania (Eurostat 2018d).

The countries experience significant differences in terms of in-flows and out-flows of people, reflecting their different population sizes, but also different migration rates. In 2016, 14.8 thousand persons immigrated to Estonia, compared to 8.4 thousand to Latvia and 20.2 thousand to Lithuania (Eurostat 2018a). At the same time, 13.8 thousand people emigrated from Estonia, 20.6 thousand from Latvia and 50.3 thousand from Lithuania (*idem*). In 2016, the immigration rates for Estonia, Latvia and Lithuania were 11.3, 4.3 and 7.0 percent respectively¹³⁸, and the emigration rates were 10.5, 10.5 and 17.5 percent, respectively. The magnitude of net emigration is the largest for Lithuania, while Estonia experienced small, but positive net migration.

The employment rate of individuals aged 15-64 as a percentage in total population in 2017 was for 74.1% in Estonia, 70.1% in Latvia and 70.4% in Lithuania (Eurostat 2018b). The female employment rate is lower than the overall aggregate in all the three countries, being 70.9% in Estonia, 68.4% in Latvia and 70.2% in Lithuania (*idem*). In 2017, the unemployment rate as a percentage of total active population stood at 5.8% in Estonia, 8.7% in Latvia and 7.1% in Lithuania (Eurostat 2018h).

Despite significant differences in terms of emigration, the three countries exhibited similar economic growth rates in 2017, 4.9% in Estonia, 4.5% in Latvia and 3.8% in Lithuania (Eurostat 2018f).

A5.2 Migration of skilled labour – general patterns

Estonia

Emigration from Estonia has fluctuated over the past two decades, for which data is available (Figure 68). The country experienced significant outflows in the early 1990s, when the fall of the communist regime ended a relatively restrictive migration policy, only to decrease by the beginning of the new millennium. Emigration picked up again with the country's accession to the EU, in 2004, and has registered an upward trend ever since.

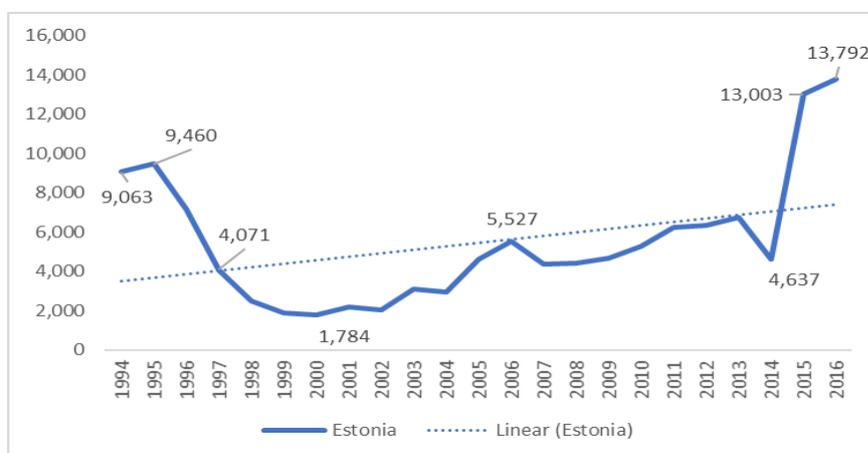
The significant increase in reported emigration from 2014 onwards is due to a change in the way the indicator is calculated: as of 2015, Statistics Estonia also takes into

¹³⁷ Population statistics as of January 2018.

¹³⁸ Based on the formula: Immigration rate=immigration flows/population*1,000

account unregistered migration by considering a person's transition from resident to non-resident as emigration (Statistics Estonia 2017a). This change is meant to more accurately reflect the extent of emigration from Estonia, which was greatly underestimated when it considered only registered emigrants.

Figure 68. Emigration from Estonia, 1994-2016



Source: Eurostat, Demography and Migration Database

In terms of gender, 41.3% of the Estonian emigrants in 2016 were women, while in terms of age, almost half (43.3%) of the country's emigrants in 2016 were between 20 and 34 years of age (Eurostat 2018a).

In 2016, most of the outflows originated from the counties of Harju (50.25), Tartu (11.4%) and Ida-Viru (10.6%) (Statistics Estonia 2017b). The Harju county is home to about 44.3% of the country's population (Statistics Estonia 2018b). It is also arguably the richest region in the country: according to Statistics Estonia (2017b) in 2016, 61.9% of the country's GDP was produced here (13 billion euros out of 21 billion at the national level), followed by the counties of Tartu and Ida-Viru, with 10% and 6%, respectively. The Hiiu and Põlva counties had the smallest shares in 2016, each contributing less than 1% to the Estonian GDP. Moreover, the Harju county registers the highest GDP per capita in the country, 145% of the Estonian average of 16,035 euros in 2016, significantly higher than the next two most affluent counties of Tartu and Pärnu (94% and 67%, respectively). The lowest GDP per capita was recorded in the Põlva county, with only 41% of the Estonian average.

The majority (66%) of the individuals emigrating from Estonia in 2016 have Estonian citizenship, followed by Russian and Finnish citizenships (7% and 5% respectively) (Statistics Estonia 2018d).

Considering the geographical proximity, the cultural similarities and the differences in economic development, it is not surprising that Finland is the main destination for Estonians abroad (19% in 2016), followed by the United Kingdom (2.8%), Germany (1.4%), Russia (1.6%) and Ukraine (0.9%)(Statistics Estonia 2018c). The country of destination is unknown for about 67% percent of the 2016 emigrants in the sample (idem).

Unlike its fellow Baltic states, Estonia does not experience an extensive emigration of individuals with higher education. The majority of Estonian emigrants are low-skilled, blue collar workers (Kumer-Haukanõmm and Telve 2017; Kaska 2013). The low emigration rate of the highly skilled is also reflected in their relative low unemployment rates – the unemployment rate of the tertiary educated was 3.8%, significantly lower

than the 7.9% and 12.2% for Estonians with secondary and primary education, respectively (Eurostat 2018g).

In 2013, for which the latest data is available, 12% of the Estonian emigrants held a Bachelor's degree, 25% had a basic educational level, while almost 35% had finished secondary education (National Audit Office 2015). Moreover, the majority of emigrants were low-income workers, whose average gross income made up 60% of Estonia's average national income in 2013 (*idem*). More accurate information about the educational level of Estonian emigrants is, however, difficult to obtain, since registration upon departure is voluntary and the country does not gather information on demographic characteristics of the leavers. Obtaining information from the countries of destination proved similarly daunting; out of 2.4 thousand Estonian immigrants registered in Finland in 2016, the Finnish Statistical Office presents information on educational levels for only 4%.¹³⁹ Of these, 70% had an upper secondary education (*idem*).

Data from the 2011 Census shows that almost half of the Estonians abroad (47%) tend to be employed in occupations related to crafts and related trades, followed by plant and machine operators (17%) (Kirss et al. 2014), while the main sectors of employment are construction, transport and storing and processing (Kaska 2013). Estonians abroad, thus tend to work mostly in blue collar jobs, likely a reflection of the predominance of low-skilled individuals among all emigrants.

A characteristic that among the Baltic nations seems to be particular to and relatively widespread among Estonians is commuting; for instance, living in Estonia and working in Finland (Genelyte 2016). In 2016, over 22 thousand Estonians commuted to work in a foreign country (Eurostat 2018c). Information on commuters, their educational levels and occupations, are not reflected in any of the statistics above.

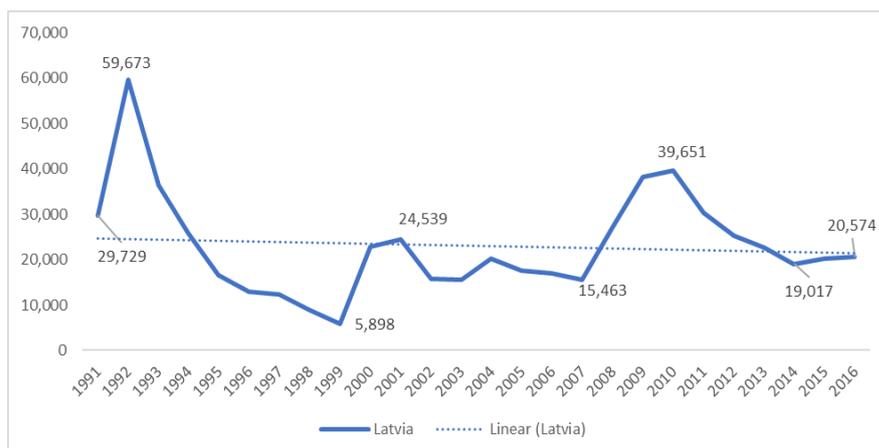
The emigration of students plays a relatively important role in the country's total emigration rate. In the academic year 2012/2013, for which information was available, 7% of Estonia's students were registered at a foreign university in the UK (26%), Finland (12%) and Germany (11%) (Pajumets 2017).

Latvia

In a similar manner to neighbouring Estonia, emigration from Latvia has fluctuated over the past 2.5 decades, showing a slight tendency to decline over time (see trend line in figure 69). Outflows from the country increased immediately after the fall of the communist regime, in the early 1990s, only to decrease by the beginning of the 2000s. The country's accession to the EU in 2004 does not reflect a spike in outflows like in Estonia, but the onset of the economic crisis does. Emigration flows remained relatively constant while Latvia weathered through the effects of the, returning to pre-crisis levels by 2015. Since 1990, the country's population has been reduced by an estimated 457 thousand persons, as a result of emigration (Central Statistical Bureau of Latvia 2018c).

¹³⁹ Data obtained through email communication with the Finnish Statistical Office.

Figure 69. Emigration from Latvia, 1991-2016



Source: Eurostat, Demography and Migration Database

In 2016, an estimated 20.6 thousand people emigrated from Latvia, a 2.3% increase over the previous year (Eurostat 2018a). The majority were ethnic Latvians (50%), followed by ethnic Russians (28%), ethnic Ukrainians (5.4%) and ethnic Belarussians (3.4%) (Central Statistical Bureau of Latvia 2017a). Latvian emigrants are generally very young, 53% of them being aged between 20-39 years in 2016. Women comprised 47% of all emigrants in 2016, 44% of which were between the ages of 20 and 34. Most Latvians (32% in 2016) emigrate from the Riga region (home to almost half of the country's population), while the least from the Vidzeme region (10%) (Central Statistical Bureau of Latvia 2018b).

Today's Latvians mostly migrate to European Union member states (the majority head to the UK, Ireland and Germany), as well as to the European Free Trade Association (EFTA) countries (mainly to Norway) (Central Statistical Bureau of Latvia 2018a). The share of skilled and high skilled Latvians differs, however, by destination, from as low as 13% in Ireland, to 34% in the UK and 21% in other EU/EFTA countries (Hazans 2015b, 2015a).

An estimated 287 thousand individuals have emigrated from Latvia between the years 2000 and 2016, almost a third of which have been skilled and highly-skilled individuals (Hazans 2018). In 2016, one in five Latvian emigrants were highly educated (20%), although with notable gender differences – 26% of the emigrant women were tertiary educated, compared to 14% of the emigrant men (Central Statistical Bureau of Latvia 2018a). In the age group 25-34 years, one in three highly-educated Latvians emigrate (LETA 2018). Many Latvian emigrants depart from fields and occupations in which the state invests significantly in higher education, including science (information technology, engineers) and medicine (Hazans 2018; LETA 2018).

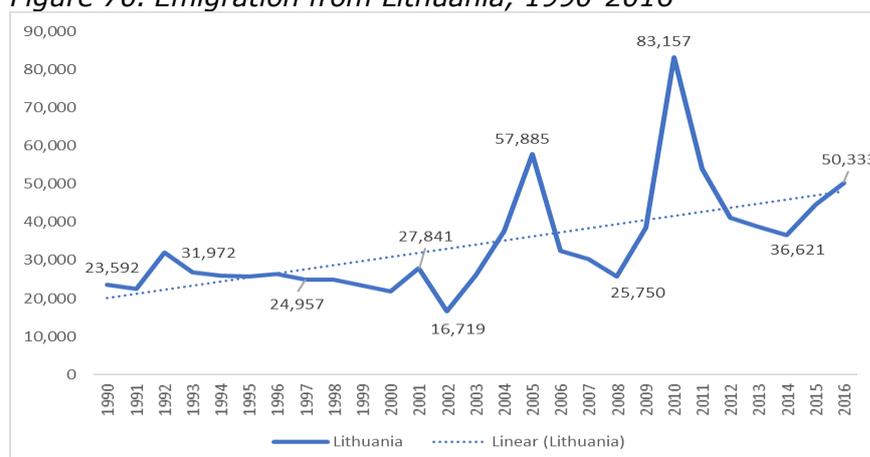
During and immediately after the economic crisis, the share of highly educated emigrants in the total emigration rate was above the pre-crisis levels, but fell between 2013 and 2015 (Hazans 2018). The decline might indicate either that (i) the emigration of the highly skilled from Latvia is actually decreasing; or (ii) the highly-educated are more often than others emigrating with their families, therefore their share in the total emigration rate will decrease (idem).

Lithuania

Lithuania experiences the highest loss of population through emigration, both in absolute and relative terms, among the three Baltic States. Although the levels of emigration from Lithuania have varied to a significant degree over the past more than 2.5 decades, there is a clear upward tendency over time (see trendline in Figure 70).

The country experienced a relatively steady flow of emigration throughout the 1990s, unlike its two neighbours who saw a decrease by the middle of the decade. The accession to the EU in 2004 also more than doubled the level of emigration from the previous years. The most notable peak in outflows can be observed in 2010, when the country experienced the highest level of emigration in its post-1990 history. The dramatic increase is attributed to changes in the Health Insurance Law, which now required all residents to pay for the national health insurance. Therefore, in order to avoid having to pay for it, individuals which have previously emigrated, decided to formally declare their departure (IOM 2011). Due in large part to emigration, the country's population has decreased from 3.7 million in 1990 to 2.9 million in 2016, a decrease of 22% (World Bank 2018a).

Figure 70. Emigration from Lithuania, 1990-2016



Source: Eurostat, Demography and Migration Database

In 2016, a total of 50.3 thousand individuals emigrated from the country, a 13% increase over 2015 (Eurostat 2018a). The Vilnius County experienced the largest outflow in 2016, while the Taurage county experienced the lowest

The Vilnius county is arguably the richest in the country: according to Statistics Lithuania (Statistics Lithuania 2017), the county produced 42% of the total national GDP in 2016, more than double the value of the second richest county, Kaunas (20%). By contrast, the Taurage county only contributed 2% to the national GDP. If we consider GDP per capita, Vilnius county registers 148% of the national average GDP per capita, almost three times higher than Taurage county, where GDP per capita represents only 55% of the national average (Statistics Lithuania 2018a).

An estimated 59.4% of all emigrants in 2016 were aged 20-39 years, while 49.5% of all emigrants were women (Eurostat 2018a). The majority (92%) had a Lithuanian citizenship, while in terms of country of birth, 83% were born in Lithuania, 4% in Russia and 2% in Ukraine (idem). The majority of Lithuanians migrate to the UK (46% in 2016), followed by Ireland (8.4%), Norway (7.8%) and Germany (7.6%) (Eurostat 2018a).

There is limited information concerning Lithuanian emigrants' profiles, as Statistics Lithuania does not compile statistical information about the education, professions, and qualifications of emigrants. A relatively recent OECD report (Sipavičienė 2015), based on a survey carried out in 2014 by the Lithuanian Department of Statistics ("Global poll of foreign Lithuanians") found that out of 31 thousand Lithuanian emigrants in 2014, 82% had been unemployed for a year or more, 4% had been previously working in wholesale and retail, 2.8% in transport, storage and communication, and less than 2% of individuals were employed in academia, although this represents a 2.5 increase over the previous year. According to the survey, 32% of the sample of Lithuanians living abroad have qualifications of higher or high education, the highest educational level

being among those residing in Belarus (52%), Ukraine (48.5%) and UK (44.8%). The same survey found that among the most important reasons for emigrating constitute better wages (52% of respondents), inability to find work in Lithuania (24%), and educational purposes (7%). The number of high skilled Lithuanian workers that have emigrated to OECD countries in the decade prior to 2011 represents more than 8% of the country's domestic tertiary educated population (OECD 2016a).

A5.3 Understanding the movement of skilled workers

Estonia

Since 2015, Estonia has been experiencing a positive net migration rate, largely driven by return migration. This shift reflects in part the deterioration of economic prospects in Finland and Russia and in part Estonia's own strong labour market (OECD 2017a).

Estonia does not officially collect information on emigrants' profiles. However, information can be derived from surveys conducted by the Government over the years. One such survey, carried out in 2013 by the Estonian Ministry of Social Affairs, meant to determine the migration potential of Estonia's working-age population, that is, the number of persons in Estonia who intend to work abroad and have made preparations to this end (Tarum 2014). The report found that highly educated Estonians seem less inclined to emigrate than the lower educated (24% compared to 31%, respectively), however, they tend to do so for longer periods of time, or even permanently. Economic reasons are important determinants of the Estonian highly skilled emigration, however, they weigh differently for different occupations: (i) higher salaries abroad is an important reason to emigrate for 80% of the skilled workers, while only 67% of the office staff and 49% of the specialists/managers consider it so; (ii) unemployment represents an important reason for emigration for 32% of the skilled workers, however, it is seen as important for only 13% of the office staff occupations and 14% of the specialists/managers; (iii) lack of job prospects in Estonia is an important reason for emigration for one in three skilled workers, but only for 7% of office staff and for 23% of specialists and managers. This trend is well-explained by an interviewee:

"Salary and income are important reasons for emigration for the highly skilled, but they often go abroad to gain work experience, life experience, they emigrate to study and then remain to work. In some cases, it is easier to get a better experience abroad: for instance, in the medical sector, the conditions for young doctors were a lot better in Finland than in Estonia, both salary-wise and in terms of working conditions." (Interviewee #3)

Most skilled and highly skilled Estonians intend to emigrate from the education and healthcare sectors, (30 and 37% respectively) and expect to find employment in the construction sector (16%), followed by education (15%) and healthcare and social welfare (12%) while abroad (Tarum 2014). Estonians wishing to emigrate for work purposes expect to earn an average monthly net salary of EUR 1 900, although the wage expectations vary by occupation: legislators and senior managers had an average salary expectation of EUR 3 400; senior officials and middle managers had a salary expectation of EUR 2 700; professionals expected EUR 2 000, while technicians and associate professionals expected EUR 1 800 (*idem*). There are also significant gender differences, with women expecting an average net monthly salary of EUR 1400, while men expecting an average net monthly salary of EUR 2 300.¹⁴⁰ Finland remains the preferred destination for most Estonians planning to emigrate (49%), followed by Norway (11%), Sweden (8%) and UK (7%).

¹⁴⁰ For comparison purposes, the average net monthly salary in Estonia was EUR 778 in the same year.

The issue of emigration is not highly politicised and discussed in the media in Estonia, partly because mobility is seen as a right and one of the pillars of the European Union. As one interviewee comments:

"The shortage of labour is a very pressing issue at the moment, it is discussed publicly, and also our government and politicians are discussing this issue. Emigration is not however linked to the shortages in the media – this is not a very popular topic. One reason being that it points out inequalities in society, another reason being the idea that people are free to move and if they do so it's ok – it's their freedom to choose where they want to live and work and the hope is that sometimes they would return and they will have gained some capital from living abroad. But there has been some public debate, also being critical about the tendency to emigrate. Another reason is that the problem is not as pressing in Estonia as it is in Latvia or Lithuania." (Interviewee #3)

Latvia

Latvia has experienced a significant level of emigration of its skilled and highly skilled population. A large-scale project¹⁴¹ covering Latvian emigrants living abroad found that, on average, the Latvian diaspora is more educated than the residents of Latvia. However, the share of high skilled Latvians varies by country of destination: almost half of all Latvians are tertiary educated in the UK, less than 20% in Ireland, and more than half in Sweden and Norway.

Reasons for emigration vary. The same study found that about 40% of Latvians emigrated for economic reasons. This seems to be in line with findings from the 2015 European Survey on Working Conditions, which assesses job satisfaction, according to which 39% of high skilled Latvians are unsatisfied with their wages, and 23% are unsatisfied with their working conditions (Eurofound 2015).

However, highly-skilled Latvians are likely to also mention non-economic factors as reasons for emigrating. The same study found that many Latvians abroad expressed dissatisfaction with the social and political situation in Latvia, saw no perspective in the future or wanted better prospects for their children (LETA 2018; Hazans 2015b, 2015a).

Return migration represents a significant share of the overall immigration flow, the high rate possibly being a reflection of the circular pattern of migration, with Latvians often re-migrating (Interviewee #4). Less than 40% of the Latvian emigrants are estimated to have permanently returned over the years (Ministry of Culture, University of Latvia 2017).

According to Interviewee #4, an increase in wages equalling them to the minimum wage levels in the destination countries would motivate Latvians to return (Interviewee #4). The current average wage in Latvia is EUR 900, and the wage convergence is slow - despite Latvia having experienced sharp wage increases in the last years, the minimum wage in the destination countries is increasing, too (*idem*).

Unlike in Estonia, emigration is a highly discussed topic in the Latvian media. One interviewee observes:

"Emigration is very much discussed, and the issue is getting more and more attention. The situation with healthcare professionals is becoming increasingly complicated, particularly in the rural area. Hospitals are struggling to fill in positions. [...] It's really bad, there has been a lot on the news that one doctor now has to treat too many patients, or that they're trying to convince, for example, the young professionals to move to the countryside to these hospitals to help them somehow, for some time [...] The issue of emigration is framed as a loss in the media and as a failure of the country to ensure decent living conditions for the people living here. The coverage in the media

¹⁴¹ The Emigrant Communities of Latvia: National Identity, Transnational Relations, and Diaspora Politics. The project covered 14,068 respondents from 118 countries around the world. See <https://migracija.lv> for more information.

is mostly negative. For example, "such and such numbers of people have emigrated". Media loves this news. "So many highly-educated people have left." (Interviewee #2)

Lithuania

In a similar vein to Latvia, Lithuania has experienced a significant share of highly skilled emigration over the past two decades. The emigration of the highly skilled is driven largely by economic reasons, primarily related to wages and working conditions. Low wages, in particular, reduce the attractiveness of the Lithuanian labour market, spurring emigration to more advanced, higher income countries (IMF 2016). For instance, the average hourly wage is 266% higher in the UK – the most popular destination for Lithuanians. On the other hand, in Lithuania the average gross monthly wage for financial and insurance activities was €1,703 in Q3/2017 (Statistics Lithuania 2018b), compared to about €2,800¹⁴² in the UK (ONS UK 2018).

The inability of Lithuanian universities to successfully compete with more prestigious institutions abroad, increases the youth component of emigration, who move abroad for studying purposes (Sipavičienė 2015).

A5.4 Migration of skilled labour and its impact on domestic economies beyond the labour market

The prevalence of working and reproductive-age individuals among emigrants from the Baltic countries has significantly reduced the supply of labour and is likely to contribute to the demographic decline these countries are experiencing. It is estimated that emigration has caused a decrease in the economic growth in Latvia and Lithuania of 0.6-0.9% percentage points (Atoyán et al. 2016). In Latvia, the emigration of the highly skilled in particular, is already hampering growth in certain sectors, i.e. information and communication, where companies experience difficulties in meeting the demand for labour (Ministry of Culture, University of Latvia 2017).

Emigration has lowered growth and slowed income convergence - in 2012, the cumulative real GDP growth would have been 7 percentage points higher for Estonia, 4 percentage points higher for Latvia and 2 percentage points higher for Lithuania in the absence of emigration during 1995–2012 (Atoyán et al. 2016).

The negative effect of emigration, however, can be at least partly neutralised through the inflow of remittances and foreign investments. In 2016 alone, financial transfers to Lithuania from private persons living abroad amounted to EUR 1,156 million, the equivalent of 3% of the country's GDP¹⁴³ (European Migration Network 2017). In Estonia, remittances in 2016 represented 2.1% of GDP, whilst in Latvia they represented 4.4% of the country's GDP (World Bank 2018b).

A5.5 The emigration of skilled labour and its impact on labour market conditions

Estonia

There are a number of occupations forecasted to present shortages in the near future in Estonia, including ICT professionals, healthcare professionals, legal professionals or vocational education teachers (CEDEFOP 2016). However, emigration seems to be contributing only to the shortage of healthcare professionals. The pressure to work overtime combined with the relatively low wages are the main reasons for which Estonian healthcare professionals emigrate. Moreover, due to language similarities with

¹⁴² Average monthly earnings for Q3/2017 based on average weekly earnings of £620 in July 2017, £605 in August 2017 and £612 in September 2017. Exchange rate used: 1 GBP=1.14348 EUR (Feb 1st, 2018)

¹⁴³ By comparison, EUR 1.1 million from the state budget were designated for social security in the same year (idem).

Finland, it is relatively easy for Estonians to find employment in the healthcare sector there (Interviewee #3). It is estimated that approximately 200 nurses and about 3% of medical doctors leave Estonia every year to work abroad (CEDEFOP 2016).

The emigration of skilled labour – although less significant than in the neighbouring Latvia and Lithuania – combined with a declining working-age population and emerging skill shortages, have contributed to an upward trend in wages and will keep wage pressures high in the future (OECD 2017a). One interviewee comments on this trend:

"The higher emigration rate from the medical sector has pushed up wages. There are still wage differences between Estonia and Finland, but they are not as wide as they used to be, for instance, seven years ago. Similar wage pressures have been registered in the construction sector, which has caused return migration. The wage pressure has led to an almost equalization of wages in the construction sector in Estonia and Finland, which, together with family reasons (family back in Estonia) have caused return migration." (Interviewee #3)

Domestic income inequality has significantly increased in recent years, largely driven by high wage dispersion as a result of strong income growth among the higher skilled, for which the country faces an increasing demand (European Commission 2017a). The unemployment rate of the tertiary educated was as low as 3.8% in 2016, compared to 7.9% and 12.2% for individuals with secondary and primary levels of education, respectively (Eurostat 2018g). Businesses report difficulties in finding suitable skilled labour, as a large share of the population is without a professional qualification (National Audit Office 2015). The impact of skill shortages are particularly felt at the regional and local levels outside the capital areas, where they are viewed as obstacles to continued economic development and economic growth (Berlina, Harbo, and Rasmussen 2017).

Immigration could help address the matter of skill and labour shortages and help relax some of the wage pressure the country faces. However, although efforts to attract skilled immigrants have been intensified (see Section A5.6), the current rate of immigration is not likely to meet the skills shortages that the emigration of skilled Estonians and the demographic decline have brought about. The country's selective immigration policy, designed to attract highly skilled non-EU immigrants, has had limited success. Of all immigrants arriving between 2005-2013, about 47% were non-EU and less than half of these had higher education (National Audit Office 2015). Furthermore, in 2013 the largest share (26%) of non-EU immigrants entering the country were employed in the manufacturing sector, an area of activity which does not require highly skilled workers and generates low-added value (*idem*). A similar analysis concerning the education level and type of employment of EU immigrants could not be conducted due to lack of data.¹⁴⁴

An explanation for the limited success in attracting skilled and highly skilled immigrants – in addition to the lack of competitive salaries and the often administratively burdensome hiring process – might be the reluctance of companies themselves to hire foreign labour. Reasons might be related to comfort, lack of knowledge, or unwillingness to become a bilingual working environment (Kirss et al. 2014). As one interviewee comments:

Businesses acknowledge the importance of immigration. However, this is a sensitive topic in light of Estonia's Russian-speaking minority, which accounts for roughly 25% of the population. Estonians are hesitant to encourage immigration; Half of Estonians consider there to be enough immigrants in the country. Businesses have two different attitudes to immigration: (i) ICT companies which are experiencing shortages have understood the need for immigration, since even with significantly increased salaries, return migration does not cover their labour needs; (ii) other sectors are reluctant to hire immigrants for a number of reasons (for instance, they do not want to change their

¹⁴⁴ Declaring the education level is voluntary for EU immigrants and the state does not record information on their employment (National Audit Office 2015).

working language). However, they are increasingly turning towards immigration since they cannot cover their labour needs from the Estonian-speaking population (Interviewee #1).

Wages have increased substantially, at a rate of 5-10% on a yearly basis (Statistics Estonia 2018a). However, for skilled and highly skilled immigrants, the salary is not the only motivator for return – working conditions, the challenge of the job, the vision of the company – all are matters to take into account when returning, aspects which can often not compare (Interviewee #1).

Latvia

The significant emigration rate that Latvia has experienced in recent years, particularly of young Latvians, has contributed to skill and labour shortages, which in turn have driven wages to grow (OECD 2017b). In addition, the country exhibits substantial income inequality, with some of the highest earnings observed for occupations which require tertiary education, such as financial and insurance activities, information and communication, energy sector, and public administration and defence (Central Statistical Bureau of Latvia 2017b).

Most skill shortages are in the STEM fields, where a large number of vacancies are forecasted to remain unfilled in the near future (Interviewee #4). The situation is particularly concerning in the healthcare and ICT sectors, both professions that are in high demand in Latvia and abroad. Particularly in the healthcare sector, countries such as Sweden are actively recruiting doctors from Latvia, who decide to leave for better paid jobs abroad (Interviewee #2). The situation is similar for IT professionals, who have a set of skills easily transferable across countries, making it easier to emigrate. This represents a problem, as Latvia is already experiencing shortages in these occupations and sectors, and these professionals are the most likely to emigrate and the least likely to return (*idem*).

Skilled and highly skilled immigration could help alleviate skill shortages and relax the wage pressures. However, not only does Latvia not have a clear immigration policy, it also lacks a strategic focus on foreign skilled workers (OECD 2016b) (see Section A5.6). Moreover, there are several other barriers that make it difficult for immigration to cover the forecasted labour shortages. The Latvian language is required for most occupations which entail interactions with the public of government authorities, which limits the scope of jobs that foreign skilled workers can take up (OECD 2017b). Unlike Estonia, the country does not provide any preferential treatment to skilled immigrants from non-EU countries in obtaining residence permits (OECD 2016c). Non-EU students who finish their studies in Latvia are subject to a labour market test and do not benefit from any fast track visa and residence permit procedures (OECD 2017b). Lastly, similarly to Estonia, companies in Latvia seem to be reluctant to hire third country nationals, and are primarily interested in attracting Latvians living abroad (Berlina et al 2017).

Lithuania

Almost 35% of Lithuanian firms cite an inadequately educated workforce as a significant obstacle to operations and further investment (OECD 2016a), and 87% of the respondents of the Lithuanian Investment Confidence Index believe that 50 000 workers with a blue card would help solve the shortage of skilled labour force in the country (Investors' Forum 2017). Part of the explanation for the insufficiently skilled labour is the large emigrant outflows of recent years - the number of high skilled Lithuanian workers that have emigrated to OECD countries in the decade prior to 2011, constitutes more than 8% of the country's domestic tertiary educated population (OECD 2016a). The significant emigration of the high-skilled has created a shortage of talent for the country's research community and for research and development activities within enterprises (European Commission 2017b; OECD 2016a).

Lithuania presents one of the highest levels of income inequality in the EU, due, amongst other things, to high employment gaps between low-skilled and high-skilled workers

and a strong and increasing wage dispersion (European Commission 2017b). The unemployment rate for the tertiary educated was as low as 3.0% in 2016, compared to 26.6% and 10.6% for individuals with primary and secondary education, respectively (Eurostat 2018g). The shortage of high-skilled workers will likely generate wage pressures in the future in sectors where there is a shortage of skills, with high wage growth already observed in the ICT and financial and insurance sectors (European Commission 2017b).

A5.6 Policy responses undertaken by the Baltic States to address the outflows of skilled labour

Although the three Baltic countries present similar challenges, the focus of their migration policy responses to highly skilled emigration has been quite different. Estonia, which has the lowest rate of registered departures of skilled migrants among the three states, does not see their emigration as a problem (Genelyte 2016) and has focused extensively on branding the country as an attractive destination for highly-skilled immigrants and foreign students. Latvia, which has experienced significant skilled emigration over the past few decades, has focused almost exclusively on reducing it and promoting the return migration of professionals. Lastly, Lithuania, seems to employ a combination of policy measures designed to; (i) promote return migration of Lithuanians residing abroad; (ii) focus on economic development, which would then make return more attractive; (iii) encourage the development of a community of Lithuanians abroad, who can then share knowledge and skills and sponsor businesses in Lithuania (Berlina et al 2017). These policy measures can be divided into two major directions – (i) promoting return migration and engaging with the diaspora and (ii) attracting qualified labour and foreign students – which will be further discussed below.

Promote return migration and engage with the diaspora

Estonia

The country does not have an official overarching policy in place to incentivise return migration, but there are a number of programs and projects with this objective. A major initiative has been the 'Bring Talents Back Home' programme, initiated by the Estonian Chamber of Commerce and Industry and financed by the European Social Fund (Kaska 2013). The programme, which ran between 2009 and 2012, intended to attract highly-qualified Estonians studying or working abroad by facilitating direct contact between potential returnees and Estonian companies. The project did not offer financial incentives, but rather, the project's website (<http://www.talendidkoju.ee>) was used as a job market platform, allowing employers to place job adverts to which Estonians living abroad could apply (OECD 2012). An estimated 27 Estonians were matched and returned this way, although, since there was no follow up survey, their return cannot be attributed with certainty to the initiative (Genelyte 2016). Initiatives to promote return migration have raised calls for introducing measures to support reintegration, an issue which has been paid far less attention in Estonia than in neighbouring Latvia and Lithuania (Berlina, Harbo, and Rasmussen 2017). One interviewee notes:

"The 'Bring talents back' initiative was not successful in terms of numbers, but it was a learning experience. The government learned that many Estonians would like to return to the country. However, many of them have started families abroad and one of the most difficult obstacles to return would be finding a job for their partner, because of the language barrier. The project also gave rise to a national discussion on why should the country focus on Estonians abroad and who is and who is not considered a talent. Another lesson learned was that the word "talent" itself could be controversial as it could offend the Estonians already living and working in the country, by making them feel inferior. The most important lesson was that talents will not return unless there are English speaking employment opportunities for their partners, school and kindergarten for their children, providing public services in English. The project was deemed a success

in term of raising awareness on the issue of emigration and immigration, with important lessons learned, and it was concluded that there was no need for a similar initiative and most efforts should focus on implementing the changes needed to attract talents.” (interviewee #1).

Further engagement with the Estonian diaspora has so far only been implemented through the Compatriot Programme and its affiliated website ‘Compatriots abroad’, which started in 2004. The programme supports cultural events, the publication of newspapers, assistance and training for potential returnees, and for the 2014-2020 period, education and language training for the children of Estonians abroad (National Audit Office 2015). Participation in the programme has been rather limited, as the available technology and modern means of communication enable Estonians abroad to be connected to family members and be informed of developments in the country without having to join organised events or programmes (*idem*). One interviewee motivates the importance of the Compatriots program and the existence of a limited number of active return measures:

“The country has taken some small-scale measures to engage with the diaspora. There is also the perception that increasing overall living standards in the country and economic growth will be the best thing. However, there are some concrete measures; from 2004, the Compatriot programme whose main objective is to keep close ties with those living abroad. Among the programmes, are opportunities to learn Estonian abroad, which is considered important because Estonia is a small country and when you live abroad there are not that many occasions to use or study it. This is important to maintain the readiness to return to Estonia. The programme also entails a need-based support for those who return, an allowance of up to EUR 200 per family, and it also has a counselling component on how to reintegrate in Estonia.” (Interviewee #3)

Latvia

Seeing emigration primarily as a loss of human capital, Latvian policy-makers have focused exclusively on fostering return migration and reintegration, and on strengthening ties and developing cooperation with the diaspora (Mierina 2015). Reducing emigration and promoting return migration is notably mentioned in the National Development Plan of Latvia (NAP) for the period 2014-2020, where one of the objectives is to “Encourage people to stay in Latvia and facilitate the return of Latvian nationals to Latvia” (CCSC 2012, p. 51). Promoting the preservation of the identity of the Latvian nationals living abroad and the development of a global network is just one of the measures proposed under this objective (*idem*). To this end, a number of legislative changes have been implemented, most notably, the Dual Citizenship Act amended in 2013, which now allows Latvian citizens to hold dual citizenship with a number of countries¹⁴⁵ (Ministry of Foreign Affairs Latvia 2013). Similarly, the Repatriation Law has been amended in 2015 in an effort to widen the scope of application for re-emigration, by lifting the former requirements which limited the right to repatriate to Latvia to only two generations back (Latvijas Republikas Saeima 2015). The new law also stipulates that the state guarantees to cover travelling costs (up to EUR 711.4 per person) and a monthly allowance of 90% of the minimum salary for up to six months, to individuals which have emigrated from Latvia before May 4th 1990 and who wish to repatriate (PMLP n.a.).

There are a number of other comprehensive measures implemented by various ministries within the Government. They include the development of a diaspora working group in 2013, led by the Ministry of Foreign Affairs, and the development of an Action Plan on Cooperation with the Latvian Diaspora for the period 2015-2017, which comprises 50 different activities along four major lines of action: (i) preserving the

¹⁴⁵ The EU, the European Free Trade Association (EFTA) and NATO Member States, Australia, the Federative Republic of Brazil and New Zealand.

Latvian identity and promoting the spread of the Latvian language and literature in the world; (ii) facilitating the civic and political engagement of the diaspora; (iii) cooperation with the diaspora in areas of business, culture, education and science, and promoting the exchange of intellectual potential; (iv) providing support for those who wish to return to Latvia (Ministry of Foreign Affairs Latvia 2014).

The Ministry of Economics has developed the Remigration Support Activities Plan which targets highly-skilled Latvians living abroad and includes activities designed to provide support to Latvian nationals and their families to reintegrate into society after a long absence and to strengthen their bonds with Latvia (Berlina et al 2017). The activities of the plan include Latvian language training, support for entrepreneurs, and measures to recognize qualifications obtained abroad (*idem*).

The Ministry of Environmental Protection and Regional development, in coordination with regional representatives from Kurzeme, Zemgale, Latgale, Riga and Vidzeme, started a more recent initiative in 2018, called PAPS (www.paps.lv). The projects - "Palīdzam atgriezties pašu sētā", meaning "Help to bring back home" - is implemented under the aegis of the 2016 Government Action Plan and provides support for families living abroad, which are considering returning to Latvia. Potential returnees - the focus is on families - can contact the regional contact points, from which they can obtain information on municipal services (e.g. kindergarten and schools), available private and municipal housing and business and job opportunities (Helmane 2018). A later stage of the project is foreseen to involve the funding of start-up projects initiated by returnees, with a maximum amount of EUR 9 000 per start-up (The Ministry of Environmental Protection and Regional Development 2018). A total of EUR 425 699 has been allocated from the state budget for the implementation of the pilot in 2018. The results so far are quite promising - between April and September 2018, a total of 959 persons have received information from regional representatives, 88 families have already returned to Latvia and 71 families are scheduled to return. The relative success of this pilot project points to the importance of involving local and regional authorities in the process of incentivizing return migration, as oftentimes, they are the ones with the most knowledge of local conditions - housing, job availability and schools. On the other hand, it is not known to what extent these returnees are coming back due to the policy, or would have been returning anyway.

Still in 2018, a working group has also been established to work on a diaspora law. One interviewee comments:

"Latvia does not have yet a diaspora law, but it has been recommended by some politicians, considering that about 15% of Latvians live abroad. The working group is now exploring what should go into the law, what practical support should the law include for the diaspora. There are suspicions from the diaspora that this is just politics and they're trying to utilize the diaspora for votes. But if we can get more attention and more support for facilitating return migration and helping them with the problems they face when they come back, then it's all good, populism or not." (Interviewee #2)

Until recently, Latvia did not have a website that would offer information on employment opportunities, similar to Estonia's "Work in Estonia". That changed in 2017, when 'Your Move' (www.yourmove.lv), a private initiative aiming to connect Latvian and foreign professionals to companies in Latvia was created. The website provides information on jobs, salary levels in Latvia, and general information of interest, such as healthcare, taxes, information on education (kindergartens, schools), immigration regulations and culture in Latvia among others. An interviewee comments on the importance of having such a website:

"Why is it important to have a specific website rather than the employment services? This is important because the decision to return is a very complex one. A potential returnee is searching not only for a job, is searching for other things, like "where am I going to live", "how are my children going to integrate in school", "how am I going to find a place in a kindergarten for my children?", "what can my spouse do without the

language skills”, etc. Because what we found from the survey¹⁴⁶ was that very few people have concrete plans to return, but for many it depends, if they would find a suitable opportunity, they would return. So, there’s a substantial number of Latvians abroad who are looking for opportunities to return; at the same time there are employers in Latvia who are looking for employees. And the purpose of the website is to bring them together.” (Interviewee #2)

Lithuania

Return migration was actively promoted in Lithuania before the financial crisis, when the country experienced significant economic growth, through programmes such as the Economic Migration Regulation Strategy (EMRS) in 2007. This strategy, however, became inefficient with the onset of the crisis, since there were in fact no job offers in the country which could incentivise return (Genelyte 2016). The EMRS, which lasted between 2007-2010, was replaced with the Global Lithuania programme in 2011, whose main objective was to strengthen relations with professional Lithuanians abroad and the diaspora (Žibas 2015). There are five priority areas stated in the Global Lithuania Program, concerning: (i) the maintenance of a national identity among Lithuanians living abroad; (ii) the promotion of involvement of the Lithuanians living abroad in the public life of Lithuania; (iii) the strengthening of state-diaspora ties and the encouraging of emigrants to return; (iv) The creation of common connecting communication space; and (v) the promotion of awareness and attractiveness of Lithuania abroad (Interviewee #5). The project is allocated about EUR 3.5 million each year, foreseen in the budgets of the institutions performing specific activities, with most of the resources spent on measures related to maintaining national identity, strengthening communities of Lithuanians living abroad and formal and non-formal language education (*idem*).

A number of initiatives, such as ‘Create for Lithuania’ (2012) and ‘Global Lithuanian Leaders’ have been created in order to engage with the diaspora. ‘Create for Lithuania’ is a programme that targets young professionals who have either studied or worked abroad by offering them a 12-month internship with governmental bodies where they can work on projects such as improving Lithuania’s image, the enhancement of competitiveness and business environment, the promotion of entrepreneurship and foreign direct investment (kurkl.lt 2018). To date, the programme has managed to attract a total of 131 young professionals (*idem*). The ‘Global Lithuanian Leaders’ is an EU-funded platform that facilitates the interaction with mid to senior level Lithuanian professionals in over 45 countries, who can act as business advisors, academic buddies or direct investment ambassadors (lithuanianleaders.org 2018). Since 2009, almost 500 students have been connected to 200 professional mentors under the Big Brother sub-program of the Lithuanian Leaders platform (*idem*).

A high priority target group of diaspora-related measures are highly skilled individuals with expertise, contacts and personal commitment to promoting progress and development in Lithuania (Interviewee #5). Through their expertise, Lithuanian professionals living abroad contribute to the development of Lithuania in various areas: for example, in business and economics, diaspora members provide consultation and advise on Lithuanian business about export possibilities in foreign countries, or diaspora’s contacts are used to attract foreign investments to Lithuania (*idem*).

Another way in which the Lithuanian government hopes to deter emigration and incentivise return migration, is through the improvement of the overall socio-economic and labour market environment in the country (Berlina et al 2017). However, whilst the employers favour policy measures that would simplify the recruitment of labour from third countries when in need of labour, the trade unions have a vested interest in protecting the domestic labour market and ensure adequate employment opportunities

¹⁴⁶ The Emigrant Communities of Latvia: National Identity, Transnational Relations, and Diaspora Politics. The project covered 14 068 respondents from 118 countries around the world. See <https://migracija.lv> for more information.

for the local labour force and not undermine the already low level of wages and working conditions (Genelyte 2016).

Since 2015, the Migration Information Centre has been working as a one-stop shop institution providing returning migrants or people who are thinking about returning with all the necessary information about return migration to Lithuania and guide them to relevant institutions or organizations (Interviewee #5). In 2017, the governmental agency "Invest Lithuania" launched a new initiative 'Work in Lithuania', a web portal aiming to connect companies who have a presence in Lithuania with professionals currently living abroad (*idem*). The target audience of the project is not restricted just to Lithuanians living abroad, but they are the main target of this initiative.

In June 2016, the Lithuanian Government adopted a special action plan that addresses different areas that influence the choice of migration, including the promotion of entrepreneurship and job creation; increasing salaries and social services; attracting investors and talents; strengthening ties with the diaspora, among others (OECD 2017c). The purpose of the plan is to reduce emigration and increase return migration, however, no special budget is allocated for it; rather all measures must be implemented from the existing budgets (*idem*).

Attract highly skilled labour and foreign students

Estonia

The country has increasingly focused on attracting skilled migrants in recent years, objective outlined in a number of national documents, such as the competitiveness plan 'Estonia 2020' and the "Entrepreneurship Growth Strategy 2014-2020" (Berlina, Harbo, and Rasmussen 2017). To that end, a number of measures have been implemented alongside two main dimensions; (i) creating a propitious regulatory environment that smooths out the hiring and integration of foreign labour; (ii) branding the country as an attractive destination in which to work and live.

With regards to the first dimension, a number of amendments have been made to the Aliens Act, in 2008, 2013 and 2016¹⁴⁷, which should make it easier to attract and retain skilled workers and foreign students (European Migration Network 2016a, 2013). The 2016 and 2017 amendments to the Aliens Act make it easier for foreign investors (with investment exceeding one million euro) to enter Estonia and exempts IT professionals and start-ups from the immigration quota (European Migration Network 2016a).

In terms of branding Estonia as an attractive place to live and work, there are a number of initiatives with this end in sight. The Ministry of Interior is developing a welcoming and adaptation programme for incoming migrants - 'Enterprise Estonia'; a state-owned institution that brands the country abroad – and runs a portal www.workinestonia.com, which includes information about job offers which do not need the use of the Estonian language. The EURES job mediation office provides information on living and working in Estonia (Berlina, Harbo, and Rasmussen 2017). In 2016, the Estonian Investment Agency launched a number of targeted campaigns in Ukraine and Finland to promote the country as an attractive destination for skilled specialists, and has further updated and disseminated its Relocation Guide Handbooks, which provide practical information aiming to facilitate immigration (European Migration Network 2016a).

The Estonian Chamber of Commerce "*tries to encourage the hiring of foreigners through 'Foreigner recruitment meet-ups', an initiative started in November 2016.*" (Interviewee #1). The meet-up is organised at a new company, from a different sector every month; for instance, in May 2018, it took place at the Estonian Ballet and Opera, next to Saku Metall, a metal and machinery company, all in an effort to show that not only private

¹⁴⁷ Amendments from 2016 include a 90-day transition period after the expiring of the residence permit; the possibility for third country nationals to work for several employers; the possibility to issue a residence permit for employment purposes to a third-country national who has acquired higher education in Estonia without meeting the minimum salary requirement (European Migration Network 2016a).

capital start-ups, which already have systems in place, hire immigrants, but also national capital companies (*idem*).

Lithuania

Although less actively than Estonia, Lithuania also aims to attract highly qualified third-country nationals. To that end, the country has amended the Law on the Legal Status of Aliens in 2016, creating now more favourable entry conditions and procedures for skilled third-country nationals, entrepreneurs, students and professionals with skills in demand (European Migration Network 2016c). The need for immigration and immigrant integration is also highlighted in the country's Migration Policy Guidelines, adopted in 2014, which represent the first step towards a long-term immigration strategy in the country (Žibas 2015).

Latvia

In Latvia, immigration is not positively viewed as a solution to the emigration of skilled individuals, in large part due to the country's previous experience with the Soviet Union (Genelyte 2016). This means that no overarching strategy to attract third country nationals is in place, although the Immigration Law has been amended in 2016 to make it easier to retain foreign students and to attract start-up creators (European Migration Network 2016b). The government has set the goal of increasing the share of graduated international students staying in Latvia after graduation, to 10% by 2030 (OECD 2017b). To this end, a national agency has set up a website to promote Latvia as a study destination, and students from outside the EU who finish their studies in Latvia can now request up to 6 months of residential permit for job searching purposes (*idem*.)

A5.7 Conclusions

The three Baltic States have experienced significant emigration flows over the past couple of decades. Although they are often analysed together, due to a common history and shared geography, the degree of emigration – particularly of the highly skilled -, as well as the responses this has engendered, vary greatly between them. While Latvia and Lithuania have experienced large outflows, which have reduced the countries' population by over 20% in the past 25 years, Estonia has experienced less out-migration and, beginning in 2015, even started to receive more immigration than emigration. Highly skilled emigration, in particular, is not prevalent from Estonia, while it is a significant concern for its two neighbours.

The three countries have reacted rather differently to emigration, in terms of both policy and media response. While Estonia is making efforts to rebrand itself as a desirable country of immigration and sees emigration as a right to mobility, Latvia and to a lesser degree Lithuania, are actively implementing measures to incentivize return migration. In the latter two countries, in the short run, immigration does not seem like a viable solution to the skill shortages registered, for cultural, historical, or economic reasons. The historical context of its experience with immigration from Russia makes especially Latvia reluctant to accept foreigners. Economically, and in spite of much progress made over the past few decades, the Baltic States do not belong to attractive Member States for immigrants, although this may be changing, and in Estonia the number of immigrants is already larger than the number of emigrants.

However, although often associated with a loss of human capital, emigration can also represent an opportunity to open new trade links, create opportunities for knowledge-sharing and foster technological and scientific innovation. The following sub-section presents a number of policy recommendations, which can help tap into the potential that migration could bring.

Policy recommendations

In order to minimise the costs of migration and maximise its benefits, based on the findings of this report, the following recommendations are proposed:

- All three countries could benefit from a more strategic approach and more coordination between the various stakeholders involved in immigration/returnees issues, as evidenced by section 6 in this report. For instance, the Ministries of Foreign Affairs, Economy, Environmental Protection and Regional Development, are all conducting or have conducted measures to promote return migration in Latvia. Similarly, in Estonia, the Ministry of the Interior, the Chamber of Commerce as well as the Estonian Investment Agency, all have implemented measures to make the country more attractive to immigrants. The lack of an effective overarching strategy and coordination might lead to inefficiency since there is no framework ensuring that all the implemented activities form a comprehensive approach to immigration, where different activities complement each other accordingly (Kirss et al. 2014).
- The immigration of qualified workers, both from the EU as outside, could help the three countries to at least alleviate the labour shortages forecasted to further aggravate in the future. While attracting EU workers is more a matter of increasing the attractiveness of the countries, particularly from an economic stand, there are more straightforward measure to attract non-EU immigrants. Relaxing annual quotas, reducing the obstacles for work permits, and simplifying the administrative processes would make it easier for employers to hire non-EU nationals and meet their labour needs.
- Making job search easier for international students, particularly non-EU, and granting them a longer grace period for finding a job after their graduation could capitalise on young, qualified foreigners already present in the country (OECD 2017a). Moreover, better labour market integration of family migrants could also reduce labour shortages and should be supported by reinforcing activation and training programmes for non-EU nationals (*idem*).
- The relative success of the PAPS pilot project in Latvia achieved in less than 6 months, with over 160 families either returned or making arrangements to return, highlights the importance of engaging with local actors when designing migration-related policies, whether for returnees or immigrants more broadly. Often, local and regional stakeholders are best informed about the availability of housing, schooling, business and job opportunities within the region, and can better facilitate return migration and re-integration.
- Re-integration is an important aspect that could be considered by the governments of all three states. While Latvia seems to be more proactive in this regard, now with a tailored program involving local authorities as well, Estonia and to a lesser extent Lithuania have been less active on it. Yet, as one interviewee points out, many returnees have spent many years away from their country of birth, have lost contact and knowledge of the local labour market, have children and spouses that might not speak the local language, and which need a job and schooling. For these reasons and more, the decision and process of returning is not an easy one and national and local governments as well as municipalities, could collaborate to make the transition smoother.

Note on methodology

This case study is based on desk research and in-depth review of the literature and statistical data. Additionally, a total of five semi-structured interviews were conducted with relevant stakeholders from the three countries, as follows:

Two interviews with stakeholders from Estonia, a representative of the Estonian Chamber of Commerce and a representative from the Employment department within the Ministry of Social Affairs;

Two interviews with stakeholders from Latvia, a representative of the Department for Economic Development and Labour Market Forecasting within the Ministry of Economics and an expert from the University of Latvia;

One interview with a representative of the Department for Lithuanians abroad within the Ministry of Foreign Affairs, Lithuania.

The interviews were conducted via skype, between February 15 – 23, 2018 and included questions concerning the movement of skilled labour, its effect on the economy and the labour market, as well as policy measures taken by the countries.

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Annex 6 Case Study: Ireland

A6.1 Ireland: An introduction

There is a long tradition of Irish emigration, which can be understood in the context of historical events such as various wars, invasions, famines, and accompanying economic and social change. Most regions in the world boast some elements of Irish descent; it is this strong tradition of emigration that led John F. Kennedy to remark in 1963:

"Most countries send out oil or iron, steel or gold or some other crop, but Ireland has had only one export and that is its people."

Remarks at the City Hall in Cork. June 28, 1963¹⁴⁸

Before discussing more recent trends and drivers regarding migration, it is important to note that this tradition of migration remains and is a strong cultural feature in Ireland. Indeed, this tradition is recognised as an inter-generational driver. Research for this case study, including the interviews undertaken to inform the research, illustrated numerous examples of this. This includes, accounts of historical emigration to the USA, the UK and other parts of Europe, Asia, and South America. To some extent this explains Ireland's history as being a country of net outward migration; the University of Cork estimates that: "No country in Europe has been as affected by emigration over the last two centuries as Ireland." They estimate that approximately ten million people have emigrated from Ireland since 1800. To put this into context, the population of Ireland is currently 4.8 million.

This case study does not document the ebb and flow of this migration but will rather focus on more recent trends, events, and policies which have resulted in Ireland becoming a net importer of people. Before discussing the specific issue of high skilled migrants it is useful to consider recent history and the way in which there has been general volatility in migration patterns to Ireland. Looking back over the last three decades Figure 71 below presents an analysis of net migration to Ireland from 1987 to 2016.

This data is interesting as it presents the reaction of migration patterns to distinct periods of economic events, periods of growth as well as the result of policy decisions. Indeed, the issues discussed here are returned to in later parts of this case study because they frame much of the causal relationships which relate to skilled migration to Ireland over the last decade.

Following discussion of data and trends, this case study identifies some of the key push and pull factors which frames the data, before outlining some of the key policy approaches in Ireland, including the way in which policy towards skilled migration sits within an overall national policy approach to skills.

A6.2 The flow of labour to and from Ireland

A6.2.1 The volume and nature of skilled migration to Ireland

Firstly, since the 1990s, the strong economic growth -synonymous with the 'Celtic Tiger' from the mid-1990s to the mid-2000s - saw rapid economic growth as Ireland attracted significant inward investment. During this period emigration was fairly stable but immigration increased, leading to an increase in net migration during this period.

Secondly, a significant increase in net migration was observed as a result of the decision in 2004 to open the Irish labour market to accession countries. The decision made by Ireland was crucial in this respect, but equally crucial to the degree to which Ireland benefitted from this increased migration was the decision by only the UK and Sweden to do the same - with the opening up of other Member States to new migrants from Eastern Europe being undertaken gradually, with the last being Germany and Austria in

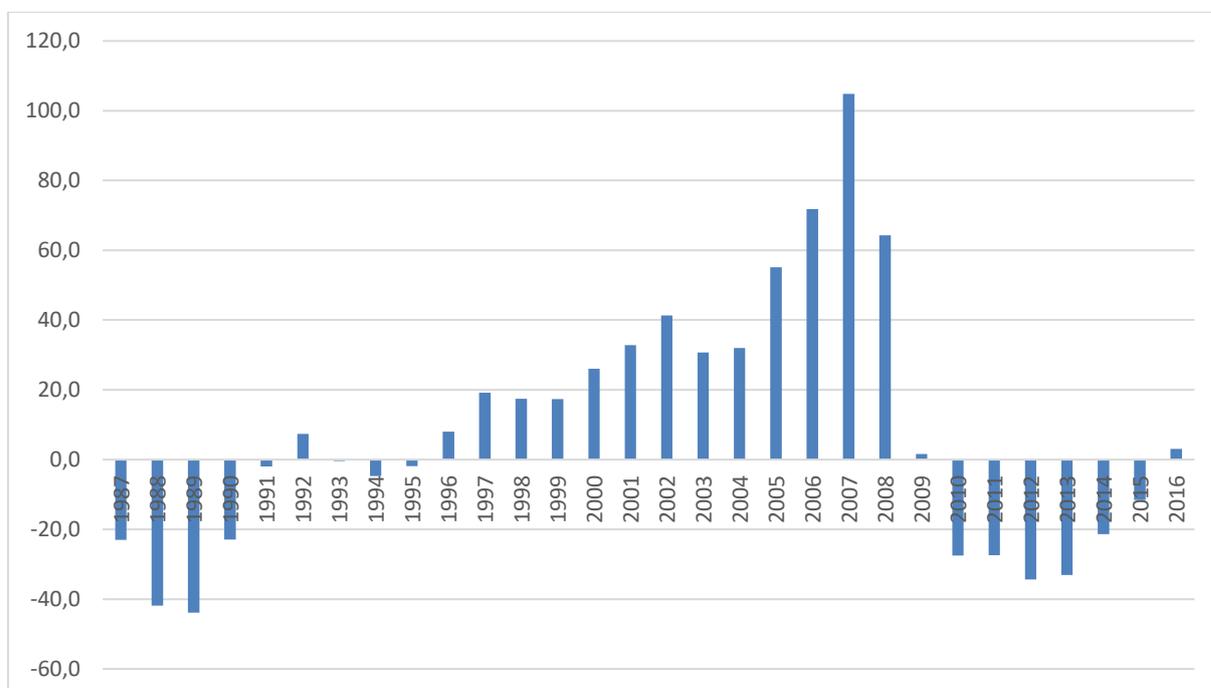
¹⁴⁸ The American Presidency Project, John F. Kennedy: 277 - Remarks at the City Hall in Cork. June 28, 1963. Accessed: 12 February 2017. Available at: <http://www.presidency.ucsb.edu/ws/index.php?pid=9316>

2011. This resulted in a great inflow of migrants from Poland, Lithuania and Latvia to Ireland. The UK National Institute of Economic and Social Research report (2011) estimated that the potential economic impact for Ireland was significant, stating that this was associated with raising the potential level of GDP by 3 per cent in the long-run. By comparison, the UK was expected to benefit from a rise in potential output of just over 1 per cent.

Thirdly, the impact of the economic crisis and great recession in Ireland was severe. The Irish economy contracted severely, the knock-on effect was that Ireland returned to net negative migration for the first time in twenty years. The driving force behind this was the rapid decline in migrants to Ireland but also an increase in emigration, particularly among younger high skilled Irish nationals.

Lastly, the recovery in the Irish economy can be witnessed through the increase in net migration. Interestingly this is (as it is with the effect of the crisis and great recession) attributable to inward migration and reduced emigration. Though it should be pointed out that the balance is toward increased inward migration. This reinforces the fundamental shift that Ireland has made toward being a country of destination rather than an outgoing country. Further elaboration in relation to these trends, and in particular the dynamics relating to higher skilled migrants is discussed below.

Figure 71. Net migration to Ireland



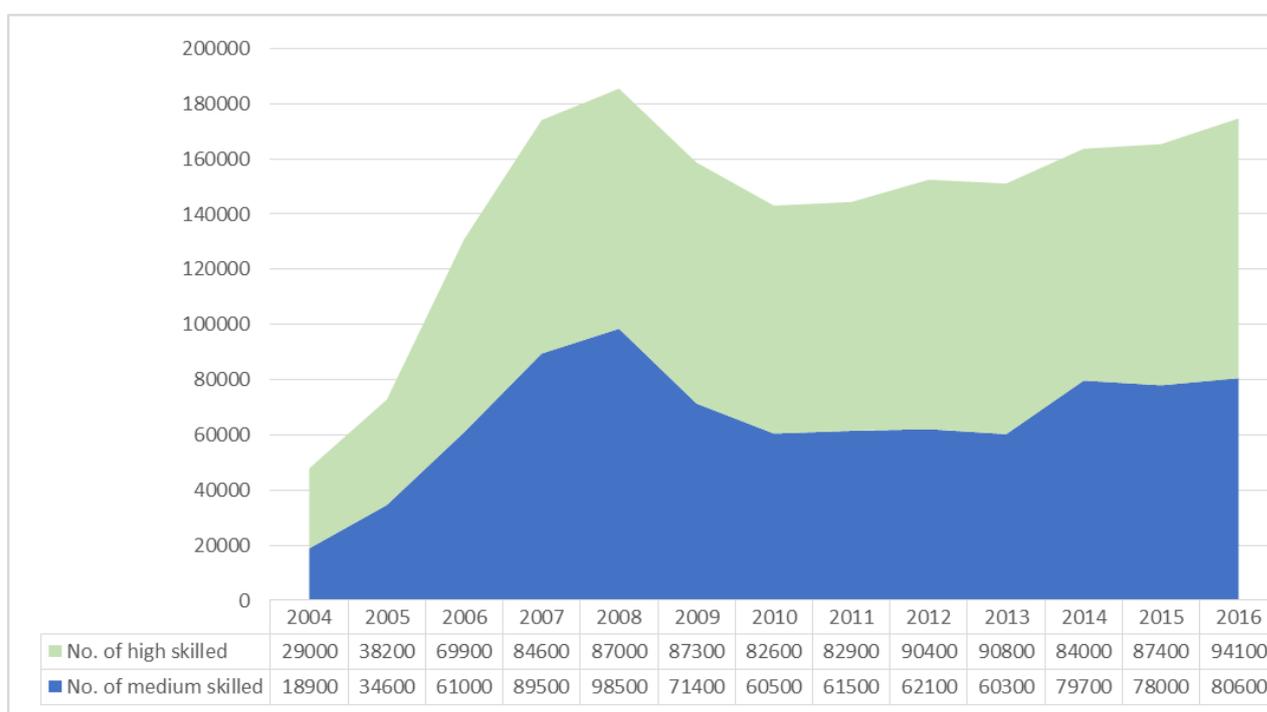
Source: Analysis of data from CSO Ireland: Components of the annual population change, 1987 – 2016.

Figure 72 below provides data to illustrate the volume of medium and high skilled migrants to Ireland from the EU between 2004 and 2016. This data illustrates the increasing importance of both medium and high-skilled migrants to Ireland between 2004 and 2009. Between 2004 and 2009 the number of high-skilled migrants to Ireland increased from 29 000 to 87 300. Similarly, the number of medium-skilled migrants increased over the same period from 18 900 to 71 400. These increases in skilled workforce helped to drive economic growth prior to the economic crisis. The sharp decline in medium and high-skilled migrants in 2009 and 2010 can be understood as a direct consequence of the economic shock of the crisis and contraction in growth and employment witnessed during the recession.

However, between 2010 and 2011 the number of both medium-skilled migrants and high-skilled migrants to Ireland began to grow again (between 2010 and 2011 the number of medium skilled migrants increased by 1 000 and the number of high skilled migrants increased by 300). Following this return to growth, the general trend of an increase in migration from both medium and high skilled migrants has continued – the number of high skilled migrants to Ireland increased by 11 500 between 2010 and 2016 and the number of high-skilled migrants increased by 11 500 over the same period.

The balance between medium and high-skilled migrants does appear to have changed somewhat when the pre-crisis years and post-crisis years are compared. For example, in 2014 high-skilled migrants comprised 61 % of skilled migrants to Ireland from the EU (with medium-skilled migrants making up 39 %), in 2016 skilled migrants accounted for 54 % (the share of medium-skilled migrants increasing to 46 %). This may reflect structural changes to the Irish economy as a result of the crisis and great recession or may simply be a reflection of longer term trends as a result of the Irish economy growing to a position where medium skilled workers are required in more supporting roles. This is further discussed in relation to the skill shortages and demand for future skills outlined below.

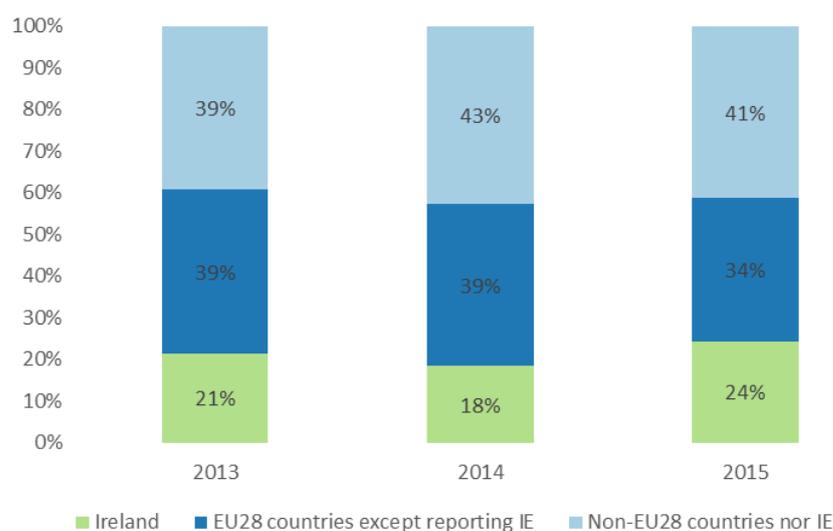
Figure 72. The Volume of migration flows to Ireland (EU skilled workers 2004 - 2016)



Source: EU LFS microdata by The Migration Observatory at the University of Oxford

For the years 2013, 2014 and 2015 further details are available on persons establishing themselves in Ireland by broad category of citizenship during these years (data is not available for other years). This data is illustrated in Figure 73 below. This demonstrates that the largest group of migrants to Ireland are from non-EU countries (39 % in 2013; 43 % in 2014; and, 41 % in 2015), with EU countries making up 39 % of migrants to Ireland in 2013 and 2014, the number fell to 34 % in 2016. Further, it demonstrates that roughly one fifth to a quarter of migrants to Ireland are return migrants, previously resident in the country (21 % in 2013; 18 % in 2014; and, 24 % in 2015).

Figure 73. The nature of immigration flows to Ireland



Source: Eurostat [migr_imm1ctz]

Figure 74 below shows low, medium and high skilled mobile workers by sex as a share of all EU migrants to Ireland between 2004 and 2016. These data illustrate that among male EU migrants to Ireland during this period there was no clear pattern – with medium and high skill migrants varying in their relative significance over the period. Despite this, it is interesting to observe that in 2004 high skilled males made up 44 % of all male migrants to Ireland from the EU, with medium-skilled accounting for 29 % and low skilled at 19 %. By 2016 however the share of medium and high skilled migrants had converged to account for 40 % of male migrants to Ireland, while low skilled migrants only accounted for 7 %. This clearly shows that among males, collectively medium and high-skilled migrants are increasing as a share of all migrants to Ireland.

For female migrants to Ireland from the EU, it is clear there is a similar fall in the share of all migrants that are low skilled (from 14 % of all migrants in 2004 to 6 % in 2016). What is quite different for female migrants however is that the share of females that are high-skilled remains greater for higher skilled migrants than for medium skilled migrant for each year between 2004 and 2016.

Interestingly, in 2008 the share of female high-skilled EU migrants and female medium-skilled EU migrants appeared to be converging but the crisis years witnessed a reduction in the share of female EU migrants that were medium skilled when compared with an increase in high skilled and low skilled.

Figure 74. Skill composition (low, medium, high) of EU migrants working in Ireland by sex



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford

NOTES: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level)). Estimates for low skilled females in 2004 and 2005 have low reliability. Figures may not add up to 100 % as some respondents did not provide their skill level. These have been omitted from the figure. Numerator: Male/female EU migrants employed in Ireland by skill level. Denominator: Male/female EU migrants employed in Ireland. The figure below shows low/medium/high skilled mobile workers by age group as a share of all EU migrants to Ireland between 2004 and 2016.

Figure 75 below provides a breakdown of EU migrants to Ireland between 2004 and 2016. Data is classified by skill composition (low, medium, high) and is presented using 10-year age groups.

What this data demonstrates is that for the age group 15-24, between 2004 and 2016, generally speaking the highest share of EU migrants were medium skilled – with the exception of the years between 2010 and 2014 where greater shares of EU migrants in this age group were low skilled. Among the 25-34-year old age group and the 35-44-year-old age group the lowest share of EU migrants was among the low skilled group.

In terms of the medium and high-skilled migrants there were some differences between these two age groups; for the 25-34-year old group of migrants, the share of high-skilled workers was greatest from 2004 until 2014, after which medium skilled workers represented the greatest share of EU migrants. By comparison, among the 25-34-year old group the share of migrants that were high skilled remained greater than the share of medium skilled from 2004 to 2014.

Amongst the 45-54 and 55+ age groups, there were far fewer differences between the shares of migrants that were low, medium, and high skilled. Apart from this specific trend, there was an overall decline in the share of low-skilled EU migrants in each of these age groups between 2004 and 2014. Additionally, consistent with other age groups, there was been an increase in the share of medium skilled migrants between 2012 and 2016.

Figure 75. Skill composition (low, medium, high) of EU migrants working in Ireland by 10 year age groups



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford

NOTES: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level)). The following estimates have low reliability: In 2004, 25-34 year old low skilled EU migrants, 45-54 year old medium skilled migrants, 15-24 year old high skilled migrants. In 2005, 45-54 low skilled EU migrants and 55+ year old medium and high skilled EU migrants. In 2006, 55+ year old medium skilled EU migrants. Some estimates for 55+ year olds in 2004 are not reliable enough to publish and have been removed. Figures may not add up to 100 % as some respondents did not provide their skill level. These have been omitted from the figure. Numerator: EU nationals (other than reporting country) by 10-year age groups employed in Ireland by skill level. Denominator: EU nationals (other than reporting country) by 10-year age groups employed in Ireland

Figure 76 below illustrates flows of migrants from Ireland. As is noted above in the analysis of net migration, the issue of EU migrants coming to Ireland is one important element of the overall mix of skills concerning migration. Emigration also plays an equally important part in this overall mix.

The Labour Market Policy Thematic Review 2017¹⁴⁹ of Ireland presented detailed information on emigration flows by skill level for the years 2011 to 2016. This data was derived from the Central Statistics Office, Ireland using the 2016 Census. The data below for third-level emigrants directly corresponds with the definition of high skilled (ISCED 5-7) used in the charts above. However data presented above for medium skilled (which relates to ISCED 3-4) does not directly compare with what is presented below. In the chart below, post-leaving certificate (Level 4) and higher secondary and below, corresponds to ISCED Levels 1-3.

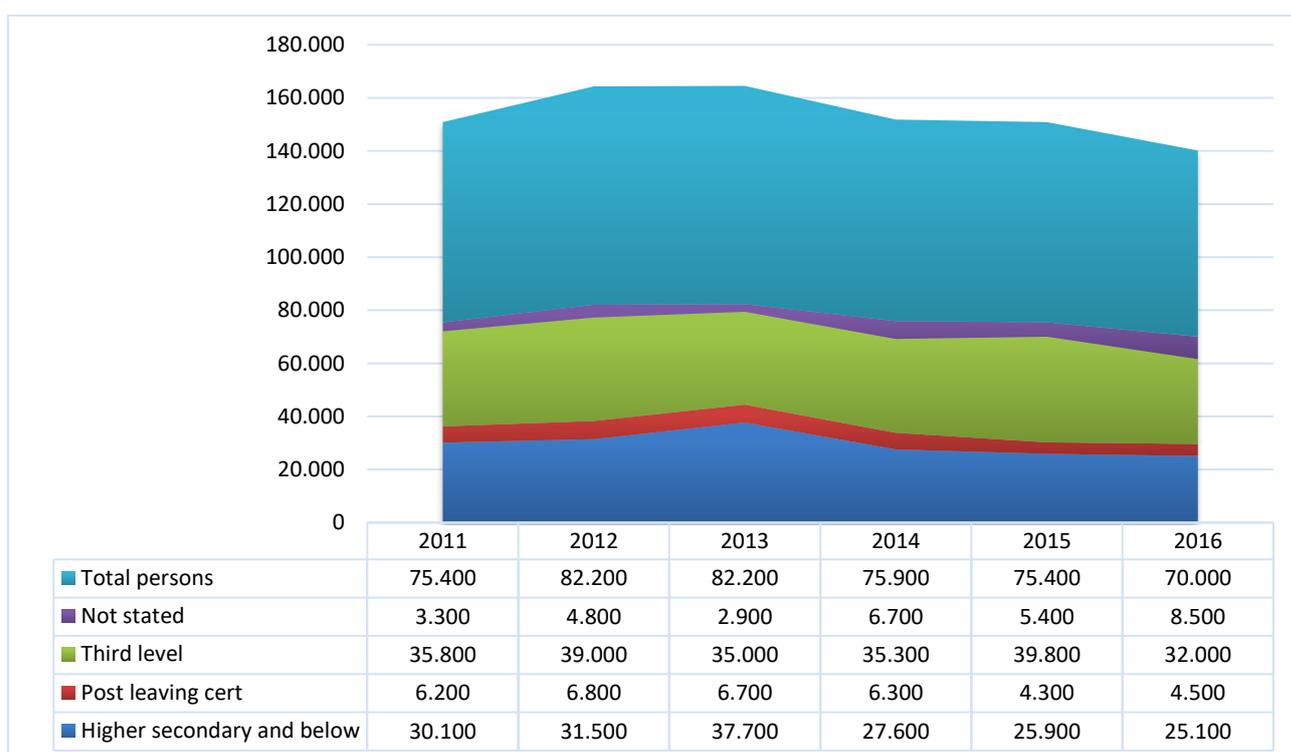
¹⁴⁹ European Centre of Expertise in the field of labour law, employment and labour market policy (2018). Labour Market Policy Thematic Review 2017: An in-depth analysis of the emigration of skilled labour.

The figure below demonstrates the following key points:

- Between 2011 and 2016 the proportion of emigrants with a tertiary degree ranged from 43 % to 53 %, those with below secondary education ranged from 34 % to 46 % while those with post-leaving certificate education (i.e. post-secondary education) represented between 6-8 % of emigrants.
- The data shows that the highest share of emigrants was those with tertiary education (53 % of emigrants having a tertiary degree in 2015 compared to 34 % with secondary education and 6 % with post-secondary education)
- Whilst in 2013 the share of those emigrating with at most secondary level education (46 %) exceeded those emigrating with a tertiary degree (43 %). However, overall, the majority of individuals migrating over the previous 5 years have been those with tertiary education

Therefore, this data illustrates that, despite the more recent return to net inward migration in recent years, Ireland has experienced a substantial outflow of highly skilled individuals. The Labour Market Policy Thematic Review 2017¹⁵⁰ of Ireland also noted there was no major variation between male and female emigration patterns (European Centre of Expertise, 2018).

Figure 76. Estimated Emigration (aged 15 and over) classified by Educational Attainment, 2011 – 16



Source: CSO, Population and Migration Estimates using the 2016 Census.

Notes: Higher Secondary and below corresponds to ISCED levels 1-3, post-leaving certificate corresponds to ISCED level 4 and tertiary corresponds to ISCED levels 5-8.

Data presented in the section above outline the most significant characteristics of the flows of migrants, and in particular high skilled migrants to Ireland. This data shows the following key trends, discussed in more detail in the following subsections:

¹⁵⁰ European Centre of Expertise in the field of labour law, employment and labour market policy (2018). Labour Market Policy Thematic Review 2017: An in-depth analysis of the emigration of skilled labour.

- There were substantial increases in both the number of high-skilled and the number of medium-skilled migrants to Ireland between 2004 and 2008. This was followed by a fall in the numbers of both these categories of migrant from 2009 to 2010. Following this a return to growth of both medium and high-skilled migrants from the EU is evident.
- Overall from 2004 to 2016 the number of skilled migrants increased from 47 900 (18 900 medium skilled migrants and 29 000 high skilled migrants) to 174 700 skilled migrants (80 600 medium-skilled migrants and 94 100 high-skilled migrants). It is interesting to reflect that the share of skilled migrants that were high skilled in 2004 was 61 %, compared to 54 % in 2016.
- Between the years 2013, 2014, and 2016 there were more migrants to Ireland from non-EU countries than from EU countries. During these three years, approximately one fifth to a quarter of migrants to Ireland were return migrants.
- The high-level drivers behind these trends were a mixture of policy decisions – opening up of the labour market to accession countries in 2004; and economic change - strong economic growth from the mid-1990s to the mid-2000s; the economic crisis and great recession in 2008; and a return to growth in the Irish economy, resulting in net migration in 2016.

These trends and drivers must be understood in the context of more fine-grained details which illustrate what migrants are doing when they get to Ireland, the extent to which they are employed and in which sectors and occupations. This information is discussed in the next section of the case study. Following this more detailed information regarding policy and programmes related to high skilled migration are presented and discussed.

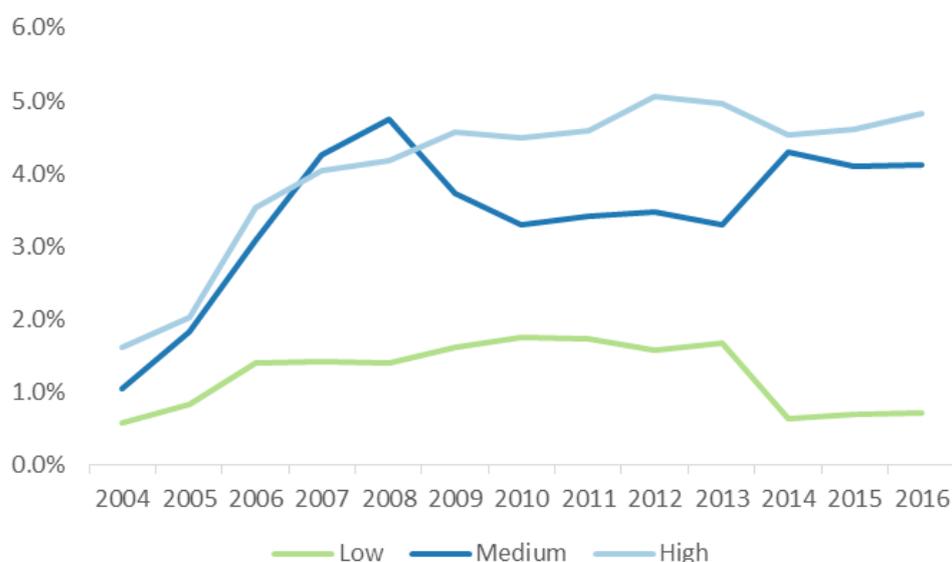
A6.3 Employment of migrants in Ireland

This section analyses data in relation to employed EU migrants in Ireland and their integration with the Irish labour market. Data is used to consider the importance of EU migrants in relation to the all workers in Ireland and the sectors and occupations in which EU migrants to Ireland are employed.

The chart below gives an indication of the significance of EU migration to Ireland between 2004 and 2014. This reaffirms the increase in migrants to Ireland as shown in the data above but also provides deeper understanding of the relative significance of this growth in the context of the Irish labour market. For example, in relation to low-skilled migrants, the data shows that they consistently account for only 1 % of all workers in Ireland. By contrast medium and high-skilled workers are more significant in the Irish labour market. Taking a twelve-year perspective, medium and high-skilled migrants have increased in significance from 2004 to 2016. In 2004 the share of medium-skilled workers in Ireland that were EU migrants was 1.1 %, with 1.6 % of high skilled workers being EU migrants. By 2016 these shares had increased to 4.1 % and 4.6 % respectively.

Whilst these percentages may seem rather low when presented as a share of all workers in Ireland, the data in Figure 77 put these percentages into perspective – the data table in this figure shows there were 61 700 more medium skilled workers from the EU in Ireland in 2016 than there were in 2004, and there were 65 100 more high-skilled workers from the EU in 2016 compared to 2004.

Figure 77. Low/medium/high skilled mobile EU workers working in Ireland as a share of all workers in Ireland



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford.

Notes: Data includes ages 15-64. Low skilled corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level).

Tables 1 and 2 below present further information regarding the integration of EU migrants in Ireland, showing the types of economic activity in which, they participate by identifying the most significant sectors and occupations that in which they are employed.

Table 20 shows information for the top five sectors with the largest number of skilled EU migrant workers and the top five sectors with the largest proportion of EU skilled migrant. The table firstly shows the top five sectors in terms of employment by volume, listing the sectors which employ the most EU skilled migrants. Secondly, to the right in the table, are the top five sectors in terms of the proportion of EU skilled migrants, relative to all workers in Ireland are shown.

This data shows the importance of EU skilled migrants to the manufacturing sector; wholesale and retail trade; and accommodation and food service activities; together these sectors employ 79 400 EU migrants. This demonstrates their impact on these sectors and the contribution they make. In terms of the accommodation and food service activities sector, EU migrants account for 17.6 % of employment in the sector. Whilst this table shows data for employment of skilled migrants it is worth reflecting on the fact that some of the employment in this sector may be casual, seasonal work. As such there may be some underemployment within this share, with skilled workers undertaking temporary work for which they may not utilise their formal qualifications.

Another important finding from the analysis of these data is that EU migrants account for 14.7 % of employment (12 600 jobs) in the information and communication sector in Ireland. This sector has been the subject of significant policy focus (and is discussed in more detail below). The potential for growth in the sector is recognised in policy initiatives and the data shows that Ireland has had some success in attracting and retaining EU skilled migrants that are helping to grow this sector.

Table 20. Top five sectors with the largest number of skilled EU migrant workers (2016)

Top 5 sectors with the largest number of skilled EU migrant workers	Number	Top 5 sectors with the largest proportion of EU skilled migrants	%
Manufacturing	27 800	Accommodation and food service activities	17.6 %
Wholesale and retail trade; repair of motor vehicles and motorcycles	26 200	Information and communication	14.7 %
Accommodation and food service activities	25 400	Administrative and support service activities	14.4 %
Information and communication	12 600	Manufacturing	12.1 %
Human health and social work activities	12 300	Other service activities	9.9 %

Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford.

Notes: data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level))

Table 21 below shows information for the top five occupations in Ireland with the largest number of skilled EU migrant workers and the top five sectors with the largest proportion of EU skilled migrants. This data usefully illustrates how the highest numbers and shares of EU migrants are employed in Ireland.

The table identifies that service and sales workers and professionals collectively employ 63 000 EU migrants. Whilst these categories of occupation are rather broad, the data presented in the previous table indicate which sectors many of these individual jobs are located within. For example it is likely that some of these jobs will be within the retail and accommodation sectors. For such roles it is likely that language skills would be important. This is an issue identified in the interviews for this case study, the fact that Irish employers generally require a good standard of English, though this is a function of the main markets within which such employers operate. Nevertheless, there are policy implications for this for EU migrants and also for third-country nationals (TCN) migrants. Indeed, for non-English speakers this increasingly means that positions which may be considered to be relatively low skilled for native speakers are, in fact, filled by migrants that have formal language qualifications, some of which are taken at a medium-high levels.

It is interesting to reflect from the data that there are proportionately high numbers of EU migrant workers working in the craft and related trades; this indicates that there are a range of creative workers (accounting for 11.1 % of all EU skilled migrants to Ireland). For the most part, these workers are clustered around Dublin city, which has a strong artistic tradition. However, the interviews for this case study have identified that EU migrants are increasingly spreading to other parts of Ireland, due to increasingly high-speed and reliable internet connections, meaning that they can stay connected and trade through ecommerce.

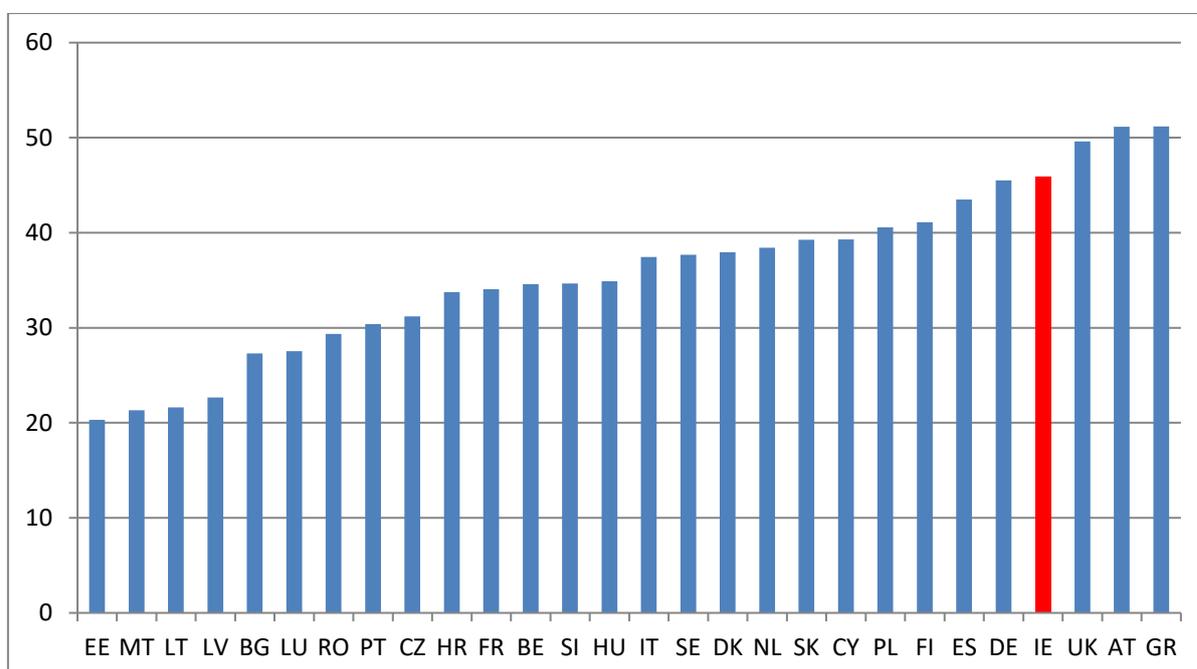
Table 21. Top five occupations with the largest number of skilled EU migrant workers (2016)

Top 5 occupations with the largest number of skilled EU migrant workers	Number	Top 5 occupations with the largest proportion of EU skilled migrants	%
1. Service and sales workers	32 500	1. Elementary occupations	17.0 %
2. Professionals	30 500	2. Craft and related trades workers	11.1 %
3. Elementary occupations	29 200	3. Technicians and associate professionals	10.1 %
4. Technicians and associate professionals	22 700	4. Plant and machine operators and assemblers	9.8 %
5. Craft and related trades workers	20 900	5. Service and sales workers	8.5 %

Source:

These developments are set within an overall pattern of underskilling in the Irish labour market. The Labour Market Policy Thematic Review 2017¹⁵¹ of Ireland illustrated Cedefop data which demonstrates the level of overeducation in Ireland (European Centre of Expertise, 2018). This shown in Figure 78 below, demonstrating Ireland is a Member State with one of the highest rates of reported underskilling. This presents a significant issue (and informs some of the policy issues outlined in Section A6.5).

Figure 78. Employees reporting that they are overskilled for their job (%)



Source: Cedefop European Skills and Jobs Survey, 2014.

¹⁵¹ European Centre of Expertise in the field of labour law, employment and labour market policy (2018). Labour Market Policy Thematic Review 2017: An in-depth analysis of the emigration of skilled labour.

A6.4 Understanding patterns of migration

A6.4.1 Push and pull factors

The trends outlined above provide an understanding of the key flows of migrants to Ireland with an understanding of the period 2006 to 2016 placed into some historical context. The previous section noted some important issues which act as push and pull factors for migrants to Ireland. This section incorporates this into a wider discussion of these push and pull factors. It is further informed through academic research and policy research. Additionally interviews undertaken for this case study are used in this section.

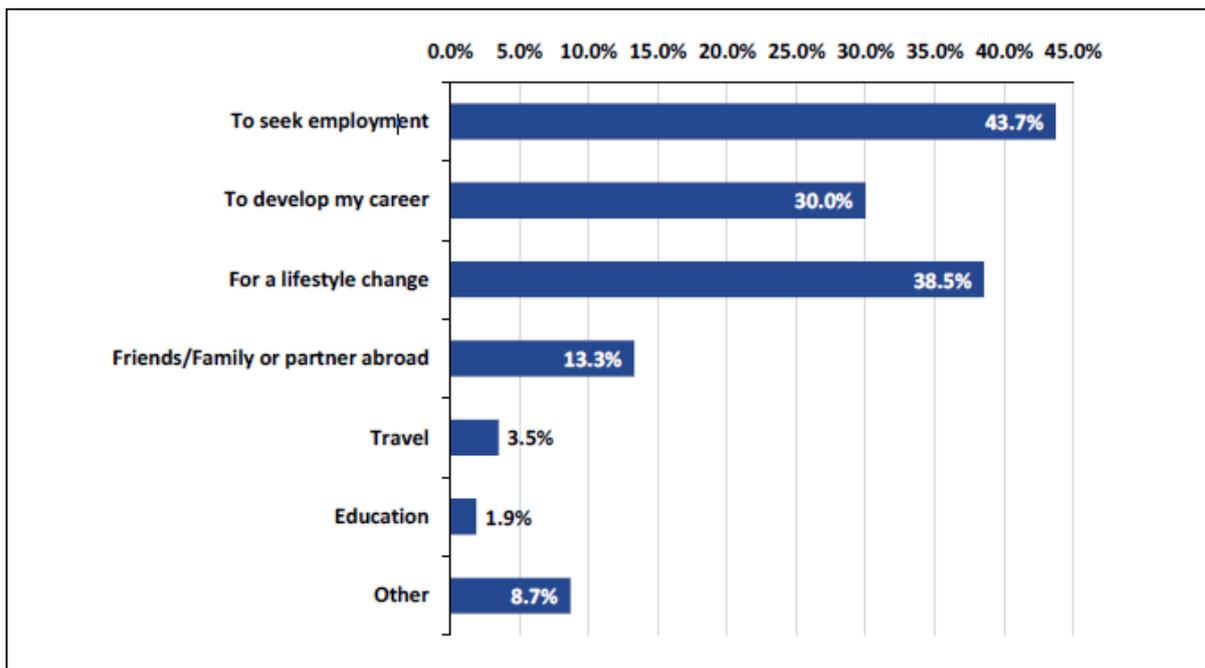
A recently published report by the Department of Foreign Affairs and Trade (2018) surveyed Irish emigrants and returnees in order to determine their main reasons for leaving and returning. This evidence is interesting, though it does not provide specific analysis for skilled migrants and also includes respondents that left Ireland for different parts of the world. It is however, the most up-to-date evidence on attitudes of Irish migrants.

The evidence in Figure 78 clearly identifies that employment is a very important factor in migration decisions, with just less than 44 % of respondents identifying this as the reason for emigration. Career development was a reason for some 30 % of respondents. A significant share of respondents (38.5 %) identified a lifestyle change as the reason for migration. It also interesting to note that 13.3 % identified that friends and family were abroad, which reflects the previously discussed Irish diaspora, as a self-reinforcing driver for migration (albeit not necessarily for skilled EU migrants).

In terms of reasons for returning, there is a high share of returnees that state family and friends (79.3 %); wanting children to grow up in Ireland (41 %); and wanting children to be educated in Ireland (24.4 %). It is interesting to contrast these personal reasons and reasons connected to children, with the number that returned for employment opportunities, which is only 9.4 %.

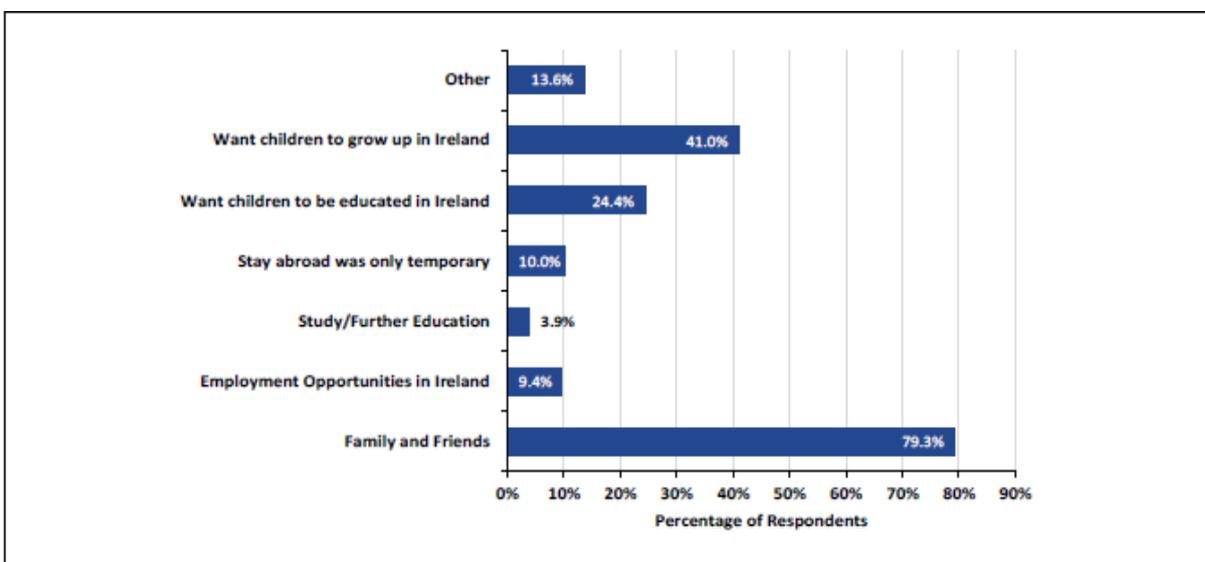
This survey thus suggests that the reasons for emigration are quite different to those for returning. Emigration appears to be far more motivated by economic / employment reasons when compared with reasons for returning which are personal and related to families and children. As noted above this information is not specific to EU-migration, nor is it specific to skilled migrants. The subsections below review more evidence related to push and pull factors.

Figure 79. Reasons for leaving Ireland – respondents to emigrants survey



Source: Department of Foreign Affairs (2018) *Indecon Economic Report on Addressing Challenges Faced by Returning Irish Emigrants*. p.24

Figure 80. Reasons for returning to Ireland



Source: Department of Foreign Affairs (2018) *Indecon Economic Report on Addressing Challenges Faced by Returning Irish Emigrants*. p.25

A6.4.1.1 Macro level push and pull factors

The **economic environment** is clearly an important factor which can be considered a push and pull factor. The data above illustrated how the rise of the Celtic Tiger from the mid-1990s to the mid-2000s saw rapid economic growth, this attracted and retained a range of workers to Ireland of all skill levels. Interestingly it was noted that during this period emigration was fairly stable but immigration increased, leading to an increase in net migration during this period. Of those that continued to leave Ireland during this period it is noted that the highest proportions were amongst young people (see

motivations of younger migrants below). Additionally the economic crisis / great recession reaffirms the economic environment as a key push/pull factor. During this period there was significant outward migration from Ireland – a return to negative net migration for the first time in twenty years. The Migration Policy Institute Report (2016) highlights the fact that some sectors, construction in particular felt the brunt of the recession but that wider pay and promotion freezes are also relevant impacts, particularly among skilled workers that acted to increase migration from Ireland. Following this there was a return to economic growth and a return to positive net migration in 2016.

It is also the case that the **industrial mix of Ireland** does not provide a significant number of economic opportunities when compared with alternative options for skilled workers. For example, compared to the UK there are relatively fewer opportunities and it is also the case that migration to the United States is an attractive proposition for many skilled Irish workers, given the fact that English is also the first language. Doquier (2016) identifies that Ireland was the country that lost the highest number of college graduates to the United States in the 2000s, though the same sources recognise the net benefit from high skilled migration to Ireland. Indeed, this was a recurring issue in the interviews conducted for this case study, noting particularly that among young people, this is seen as an attractive experience.

The **free movement of people** is also significantly associated with push and pull of skilled migrants. It was noted during the interviews that the significant increase in net migration is observed due to the decision in 2004 to open the Irish labour market to accession countries, which largely led to high skilled migrants moving to Ireland – latterly followed by their families and dependents (Zaicevaet et al., 2008). Interestingly though this is also a push factor for some during the great recession. The Migration Policy Institute Report (2016) found that for many migrants from Ireland, underemployment acted as a driver for them to leave, because they could not find work at the correct level for their skills. In this respect, free movement allowed them to make an easy departure.

It is worth noting that, during the period of economic crisis and the great recession Ireland's policy toward skilled immigrants– was tightened up by a more stringent set of criteria to ensure that the flow of third country nationals met employer demand and did not adversely impact on native workers (discussed in the following section). Although not of central importance to this study, there is recent academic research which suggests that the crisis motivated countries that had been subject to increased flows of migrants, looked at ways of reducing the flow of migrants (Cerna, 2014). This is relevant at the higher skill levels, for example, in Ireland the unemployment rate for 25-64-year olds with tertiary education was 6.8 % in 2010, amongst the highest in Europe (OECD, 2012).

This **size of diaspora communities** in Ireland has also appreciably grown in recent years. As noted above, in the story of Ireland, it is equally crucial that other Member States (with the exception of the UK and Sweden) chose to delay opening up their labour markets to accession countries. This had the effect of enabling Ireland to gain, in the words of one interviewee a 'first mover advantage' in the sense that migrants moving to Ireland established a diaspora that may have been diluted if other Member States had opened up their labour markets to accession countries in 2004. A question related to this topic was posed in the interviews– whether Ireland's economic growth would have been as strong without the skilled migrants from Poland, Lithuania and Latvia, if many had gone to Germany for example rather than Ireland. The potential economic impact of this migration is noted above; in this respect the interviews for the case study reinforced that first-wave migrants are often the most capable, higher-skill migrants, with second-wave migration involving those requiring additional support.

Working conditions and quality of life were also identified. This is noted as a comparative judgement for migrants –the extent to which this acts as a factor which motivates people to migrate to Ireland varies considerably depending on working

conditions in Member States of origin. Indeed, this factor was often noted to be more relevant to third-country nationals rather than EU migrants. In the context of EU skilled migrants, it is more likely that this may have been a factor in the 1990s rather than in more recent years, given the implementation of EU directives related to working conditions (health and safety and work and also The Working Time Directive as a guarantor of basic conditions).

A current feature of discussion is the **Brexit** process and the extent to which this may impact on skilled migration in Ireland. The interviewees identified this as a cause of concern – particularly for Irish migrants currently resident in the UK. However in the context of skilled migration it is not felt that this would necessarily lead to significant changes. The UK is likely to still want to attract skilled migrants, so this will not necessarily lead to new opportunities for Ireland to capture on a brain dividend from the Brexit process. The main issue in this respect is that Ireland's economy, when compared to the UK, is limited in scope of sectors and the scale of economic and labour market opportunity – particularly for high skilled occupations and sectors. In this respect the fact that there are big companies and big cities also plays a part in what attracts high-skilled migrants.

A6.4.1.2 Micro level push and pull factors

Age and gender are understood to be a key push and pull factor. In relation to Irish persons emigrating, the data illustrates the strong tendency for migrants to be young, as noted above in relation to the high number of Irish college graduates that migrate to the United States. The interviewees discussed this tendency and noted that the need to travel is firmly part of the Irish psyche and it is intergenerational.

The fact that the language of Ireland is **English** is an important push and pull factor and this is frequently referenced in the literature and policy papers. Indeed the widespread use of English in Europe makes Ireland far more accessible to potential migrants as a viable place that they can gain employment.

A6.5 Policy responses

This section presents some of the policy responses that have been put in place to address some of the issues identified above. These policy responses are discussed in terms of their spatial focus, the intervention rationale for the policies, with a description of the outcomes that the policies were seeking to achieve. It is not intended to evaluate these initiatives but rather to provide an outline of the strategic approach to EU migration that has been taken in Ireland, this is informed through document review and interviews conducted for this case study.

A6.5.1 National strategy and initiatives

There is no specific strategy to target EU migrants as this is not considered necessary because they have free movement and can benefit from the types of initiatives described in this section. A key focus of the national strategy, as it relates to migrants, (both from the EU and TCNs) is an attempt to use public policy to match business demand with available supply. This is undertaken through a range of activities which firstly, seek to understand the nature of business skills demand, and secondly, to meet this demand. This section focuses on the public policy efforts in this respect.

These policies do not focus on a specific strategy related solely to EU skilled migrants, but rather they are part of the work of the Department of Foreign Affairs and Trade and/or the Department for Education and Skills which are the most important departments developing and overseeing relevant policies.

A6.5.2 Skill shortages and underskilling – the dual role of European and third-country national (TCN) migrants

Within the Department for Education and Skills, the Skills Planning and Enterprise Engagement Unit has overall responsibility which plays a key role in the delivery of Ireland's National Skills Strategy (Ireland's National Skills Strategy 2025 – Ireland's

Future). The purpose of this strategy is to outline Ireland's profile and to provide a strategic vision and specific objectives for Ireland's future skills requirements, and set out an action plan to achieve the vision and objectives. This is relevant in the context of EU skilled migration because the strategy recognises the positive impact that EU migration, and migration in general can have on the Irish economy.

Indeed, the open approach to migration is recognised through the National Strategy for Higher Education, one of its stated aims is to support the development of 'internationally oriented, globally competitive institutions'¹⁵². Furthermore, the National Skills Strategy 2025 recognises that international mobility can play an important part in skills development. In particular, the strategy implicitly understands the benefit of circular migration as it notes 'the mobility of Irish students, staff and researchers, and the intercultural experience which this provides, assists in the development of language and other core skills'¹⁵³.

A key issue in relation to EU migrants in Ireland is underemployment. In order to address this issue two key policies are relevant:

- NARIC Ireland which provides advice on the academic recognition of a foreign qualification by comparing it, where possible, to a major award type and level on the Irish National Framework of Qualifications (NFQ). A comparability statement for each qualification listed is available for download.
- QQI (Quality and Qualifications Ireland) is an independent state agency responsible for promoting quality and accountability in education and training services in Ireland. It was established in 2012 by the Qualifications and Quality Assurance (Education and Training) Act 2012.

Underemployment is a significant issue in Ireland. The Cedefop European Skills and Jobs Survey, 2014 ranked Ireland as one of the fourth highest Member States for their share of workers identifying as over skilled for their current roles.

As is noted above, the entry requirements for TCNs into Ireland were tightened up during the great recession. Under this system non-EEA nationals must have a valid employment permit which requires that they have a job offer from a prospective Irish employer. Irish employers have to demonstrate that there is a requirement to appoint the applicant for the permit because they have made efforts to recruit an Irish or EEA national for the post.

Additionally, and of more direct interest for this case study, critical skills employment permits are available for two categories of eligible occupations: jobs with annual salaries of EUR 60,000 or more – for this category all occupations are eligible; and, jobs with annual salaries of EUR 30,000 or more – the occupation must be on the 'highly skilled' occupations list.

The list of jobs included in the highly skilled occupations list is included as Annex 2 to this case study. Interestingly there are some similarities between the employment categories that these occupations cover and their alignment with the sectors and occupations that are detailed below in the tables of occupations and sectors that employ EU skilled migrants. For example: ICT Professionals; Engineering Professionals; Business, Research and Administrative Professionals; Sales, Marketing and Related Associate Professionals. The full list is:

- Natural and Social Science Professionals
- Engineering Professionals
- ICT Professionals

¹⁵² Higher education System performance Framework 2014-2016.

¹⁵³ Ireland's National Skills Strategy 2025. p.44.

- Health Professionals
- Health and Social Services Managers and Directors
- Nursing and Midwifery Professionals
- Therapy Professionals
- Health Associate Professionals
- Teaching and Educational Professionals
- Business, Research and Administrative Professionals
- Quality and Regulatory Professionals
- Sales, Marketing and Related Associate Professionals

This confirms one of the findings from interviews conducted for this case study that there are areas of significant alignment between what are understood to be the potential benefits for the Irish economy from EU migration and what the benefits from TCN migration to Ireland may be.

Further to this, the list is also important because it highlights areas of strategic importance that are not shown in the data tables above. For example, it is evident that the importance of TCNs in terms of their role in public authorities is recognised in the highly skilled occupations list. Between 1 000 and 2 000 permits were issued each year between 2010 and 2014 (an employer has to show that no Irish or EU worker could be found before such permits are issued). The list contains a number of important public service occupations for which Ireland requires labour. For example: Health Professionals; Health and Social Services Managers and Directors; Nursing and Midwifery Professionals; Therapy Professionals; Health Associate Professionals. Additionally, there are education profession occupations such as: Natural and Social Science Professionals; and Teaching and Educational Professionals.

A6.5.2.1 Information, advice and guidance

A range of information, advice and guidance is provided through Irish state services. This demonstrates what is provided in Ireland. The first initiative described is most relevant to this study as it relates to EU migrants, with the remaining three more relevant to TCNs:

- The Reception and Integration Agency works with the Department of Employment Affairs and Social Protection (DEASP) to support the repatriation of nationals of newer EU member states. The scheme applies to people who have failed the habitual residence condition attaching to social assistance payments. Any citizen of a former-EU accession state, and certain other 'special-case' EU nationals, who find themselves destitute during their time in Ireland, can apply for repatriation. Applicants for this scheme contact the DEASP's representative (formerly known as the Community Welfare Officer).
- The Immigrant Council of Ireland (ICI) is an independent, national organisation which supports migrants coming to Ireland for purposes such as work, study, family reunification, and self-employment or to visit. The ICI provides an information service and a limited legal service to immigrants. It also offers a training service, organises public events and produces publications on immigrant issues such as citizenship and residence rights, visas, employment permits, family reunification and voluntary return. The ICI works with immigrant groups to influence government policy on issues relating to immigrants and to campaign for immigrants' rights. The ICI runs regular clinics for migrant workers, offering free and confidential employment law advice.

- The Migrant Rights Centre Ireland (MRCI) is a national organisation providing support to migrant workers and their families. It targets families in vulnerable circumstances and tries to improve their social and economic conditions. The MRCI's drop-in centre provides information, advice and assistance. The MRCI also encourages migrants to get involved in their community and actively participate in all levels of society.
- For any asylum seeker or an irregular migrant from a non-EEA state, wishing to return voluntarily to their country of origin but without the means to do so, the International Organisation for Migration (IOM) can assist with the return. The IOM is an independent international organisation working in the field of migration - see 'Where to apply' below. The Voluntary Assisted Return and Reintegration Scheme provides the appropriate travel documentation and arranges for transit and arrival assistance if needed. When travelling with the IOM, the person travels independently and without an escort. The reasons for their stay in Ireland remains confidential and is not shared with anybody outside the voluntary return process. For people who return voluntarily and without any outstanding criminal court proceedings, they may apply to re-enter Ireland legally for the purpose of work, study.

A6.5.3 Global Irish: The National Diaspora Strategy 2015

There is a wide range of activities and discrete projects that are funded under the National Diaspora Strategy. These activities are not all directly relevant to high skilled migrants, and many are also not relevant to EU migrants. However, many of the activities and projects are relevant to all skill levels and migrants regardless of origin or destination.

A key principle of much of the activity in the strategy is that it seeks to provide information in neutral terms, enabling people to make informed choices.¹⁵⁴ In this sense the strategy supports the principle of circular migration, providing information to Irish citizens that are considering moving abroad and also information to those considering returning, through outreach activity. Additionally there are also services for non-Irish citizens who may be considering going to Ireland or leaving to return to their country of origin.

The Emigrant Support Programme, a fund which aims to strengthen the international Irish community and its bond with Ireland through various projects. Additionally an Irish International Business Network is funded through the initiative which enables Irish ex-pat business to business networking, an additional element of this is the Irish in Britain networking group which has the same aims but with a specific focus on Irish business owners in Britain.

As noted above, most of this activity is relevant to Irish diaspora, however some activities also support other EU national migration to Ireland. In relation to skill level it should however be pointed out that most of the services are targeted to those in greatest need, therefore not typically those with highest skills. However these initiatives are presented in order to provide a picture of policy focus in Ireland. Other initiatives funded through this strategy are discussed below.

¹⁵⁴ However, one of the aims of the initiative is to encourage highly skilled Irish emigrants to return to Ireland.

A6.5.3.1 Crosscare migrant project

An interesting example of the positive approach to migration is the Crosscare Migration Project¹⁵⁵. The key elements of the project and services provided are summarised in terms of the key parts of the migration process:

Leaving Ireland: provides a wide range of information such as what is required prior to leaving Ireland. This includes a range of legal and practical advice. Legal advice includes information on essential documents and whether visas or work permits are required. Practical advice includes preparations such as money matters and language learning.

Returning to Ireland: also includes legal information, such as information on social welfare and payments and residency conditions. In addition, it includes a wide range of practical advice and guidance, including information on education, housing and returning with children.

Immigration information: this involves provision of a range of information that is specifically related to immigrants to Ireland that are from outside the EU, or those with family members from outside the EU. As with the other types of advice, this includes legal and practical information.

The first two services outlined above (*Leaving Ireland* and *Returning to Ireland*) are directly related to EU migrants and the third (*Immigration Information*) is mostly related to TCNs. Collectively these initiatives reaffirm the point made above – the overall positive approach to migration evident in Ireland. Additionally these initiatives further demonstrate an example of an initiative which encourages and actively seeks to facilitate the process of circular migration. The services provided for leaving Ireland are matched with services provided to returning to Ireland.

Interviews undertaken for this case study indicate that this approach is useful for individuals and families seeking advice because it is understood to be independent. The service provides information advice and guidance to approximately 4 000-5 000 families each year. Furthermore the heritage of the organisation providing the information is understood by those accessing the service to be a positive element (in terms of the organisation's mission statement and other charitable activities).

A6.5.3.2 Safe Home

There are four main aspects to services provided:

- **Advice and information:** provides information and advisory service to anyone (regardless of age or circumstances) who may be contemplating returning or moving to Ireland;
- **Outreach visits:** home visits with Safe Home housing applicants are carried out throughout the UK. Where relevant applicants are referred to local support services in the area to improve their situations (financial/housing/support), as they wait to return home to Ireland;
- **Housing assistance:** assists older Irish born emigrants to return to secure accommodation in Ireland;
- **Connect:** acts as a link with home for those emigrants who decide to remain on in their host countries. This is through a monthly newsletter, which can be found online and disseminated globally (with about 600 hard copies sent out).

The organisation supports around 4 000 interactions per year; estimated that around 10 % of these are for skilled migrants. This group of people require signposting to

¹⁵⁵ Crosscare is the Social Support Agency of the Catholic Archdiocese of Dublin and provides a range of social care, community and youth work services across the Dublin Archdiocese. The organisation employs more than 500 staff with over 1,500 of volunteers in locations throughout the greater Dublin area and Wicklow.

relevant state services. One of the key services is the QQI, discussed above, so that they can investigate how their qualifications will be recognised in Ireland. In this sense the linkages between the skills strategy which seeks to attract and retain skilled employees, QQI, and the problem of underemployment are evident. One of the things that is evident during this signposting is that it is not just non-Irish migrants that have an issue with recognition of qualifications, but also Irish citizens that have gained qualifications abroad.

A6.5.4 Movement Ireland

Movement Ireland is an independent, not-for-profit organisation working to develop the connection between Ireland and Europe. The purpose of the organisation is to facilitate links between all sectors of Irish society and the EU by running a number of advocacy campaigns, education programmes, training courses, information briefings and networking events

The organisation is relevant to the overall picture regarding European migration because it works to provide accurate information to facilitate European issues being discussed in Ireland in a reasoned, robust and fair manner. A key aim is to increase awareness and understanding of the issues affecting Irish citizens by providing factual information to individuals, public representatives, business and the media. With an overall goal to provide an unbiased, independent voice on all elements of Ireland's membership of, and relationship with, the EU.

A significant amount of networking work is done by Movement Ireland with young skilled migrants to help them in their careers in Europe, particularly in Brussels through networking events. As such the organisation promotes engagement with Europe.

A6.6 Conclusions

This section provides an outline of the main conclusions from the information and analysis presented in this case study, the first subsection provides an overview of the data and what are considered to be the key push and pull factors. Following this there is a consolidated view of the policy approach in Ireland.

These policies are set within the context of an historical tradition of movement of Irish people, both in terms of emigration from Ireland and return migration to Ireland. Ireland has historically been a net exporter of people. More recent trends however as documented in this case study show that Ireland has become a net importer of people.

This case study demonstrates the complex range of push and pull factors on the flow of movers in and out of Ireland – the consequences of economic events, periods of growth as well as the result of specific policy decisions taken in Ireland and other EU Member States. The case study illustrates the mix of following key messages:

- Strong economic growth in the 1990s to the mid-2000s saw Ireland attract significant inward investment. During this period emigration was fairly stable but immigration increased, leading to an increase in net migration during this period.
- The decision in 2004 to open the Irish labour market to accession countries was crucial in increasing inward movers, but equally crucial for the degree to which Ireland benefitted from this increased migration was the decision of only two other Member States (the UK and Sweden) to do the same.
- The impact of the economic crisis and great recession in Ireland was severe. The Irish economy contracted severely, the knock-on effect was that Ireland returned to net negative migration for the first time in twenty years.
- The recovery in the Irish economy resulted in an increase in net migration. Interestingly this is (as it is with the effect of the crisis and great recession) attributable to inward migration and reduced emigration.

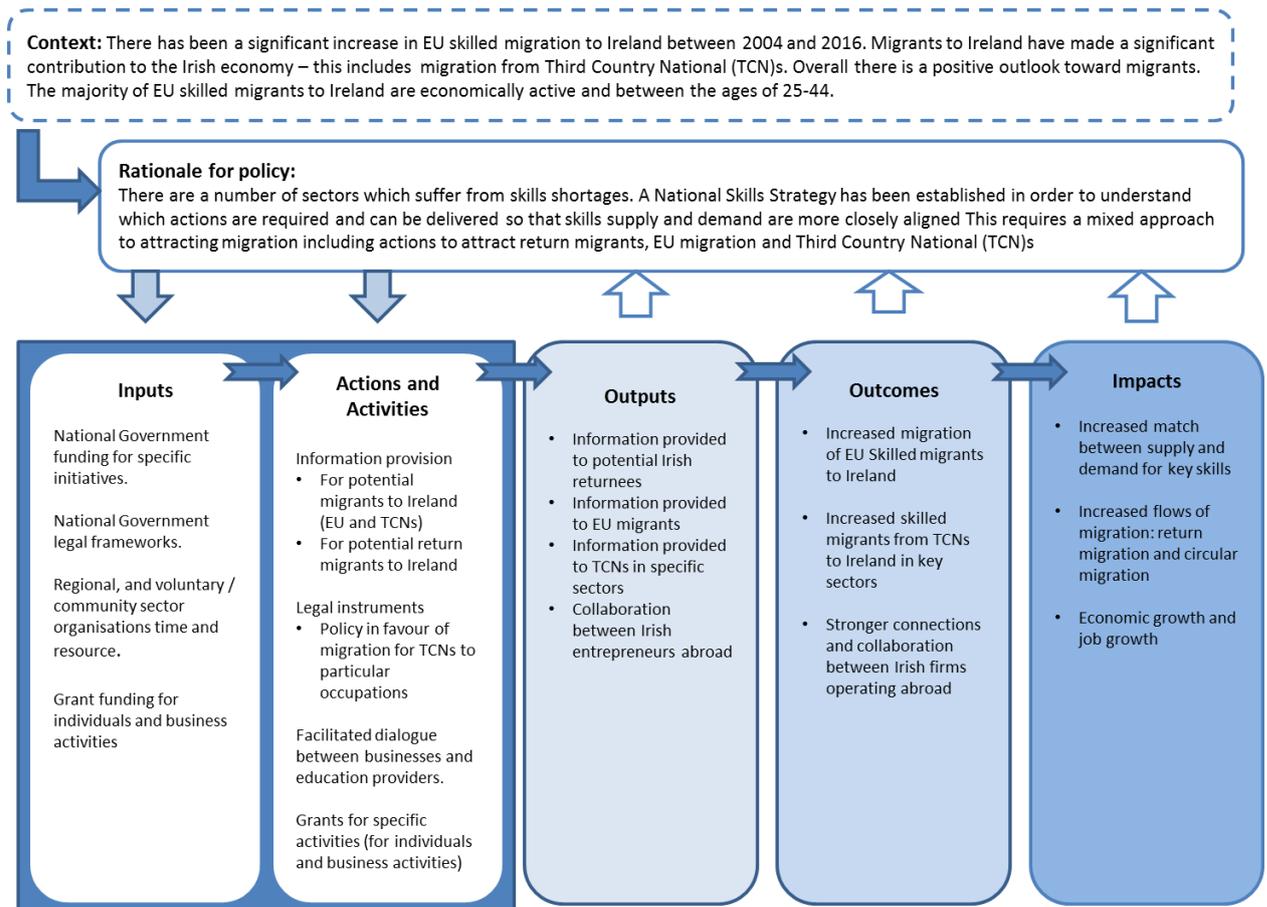
For skilled Irish workers, the case study also identified that the industrial mix in Ireland may act as a push factor for skilled migrants. When compared to the UK, there are relatively fewer opportunities and it is also the case that migration to the United States is an attractive proposition for many skilled Irish workers, given the fact that English is also the first language. Additionally, the strong tradition of migration in Ireland is noted as an inter-generational phenomenon, with the existence of diaspora communities of Irish people across the globe, making emigration an easily imaginable course of action.

A live issue which may become of significant consequence in the coming months and years are the consequences of Brexit. This may result in return migration to Ireland from the UK. However, as the UK seeks to retain skilled workers it may be that the policy landscape following Brexit presents as yet unknown challenges for Ireland.

Figure 81 below provides a summary of the type of activities that are undertaken in Ireland, summarising the range of activities that were described and discussed in the case study. This illustrates the fact that migration is understood by policy makers in Ireland to have had a significant benefit to the Irish economy, with the majority being economically active and making a contribution to the Irish economy and society.

It is also the case the provision toward EU skilled migrants is not seen as separate to that of TCNs, with both eligible for much of the measures provided. The obvious difference being that TCNs require a work permit to work in Ireland, nevertheless many of the services targeted toward TCNs equally apply to EU movers. The most applicable measures for EU movers are the range of information provided which is largely aimed at increasing integration into the Irish labour market and society.

Figure 81. Summary Logic Model for migration policy in Ireland



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Annex 7 Case Study: Health

A7.1 Introduction: the demographic and labour market situation

This section presents the current demographic and labour situation of the health sector. It draws on statistics from the Eurostat EU Labour Force Survey (EU LFS), joint OECD-Eurostat data on health workforce migration and OECD database on health workforce migration. Where the EU LFS is used, this section refers to the NACE code Q, which describes the category 'Human health and social work activities'. This includes many different activities, not all of which require degrees related to medical professions. For example, it includes child-daycare activities and any social work activities.¹⁵⁶ OECD data (either standalone or jointly with Eurostat) on health workforce migration is based on national data sources. Definitions and data collection methods are not strictly harmonised.¹⁵⁷

The 2014 EU Skills Panorama highlights the health sector as a sector for growth. It is forecast to grow with a net increase of 1.8 million jobs between 2013 and 2025. Increased demand for employees in this sector will stem from changes in both supply and demand. The ageing workforce is also a concern, with the share of people aged 50 or older increasing from 27.6 % in 2008 to 34.1 % in 2016, as reported in *The State of Health in the EU: Companion Report 2017* by the European Commission's Directorate-General of Health and Food Safety (DG SANTE) (European Commission, 2017). On the supply side, attrition or employees leaving the sector 'for other reasons' (more so than in other sectors) will lead to a high number of vacancies. On the demand side, the ageing population drives up demand for health care.¹⁵⁸

In terms of occupations, the EU Skills Panorama reports that health (associate) professionals (i.e. doctors and nurses, also veterinary) are in high demand across the EU, except in the Netherlands.¹⁵⁹

The number of people working in the health sector has already experienced a steady increase over the last eight years. Figure 82 below shows that from 2008 to 2016 the total number of employees working in the health sector across the EU increased from 20 965 000 to 23 799 000: an increase of 13.5 %. Note that the figure below uses NACE classifications, hence employees included employed people in the aforementioned child-day-care activities.

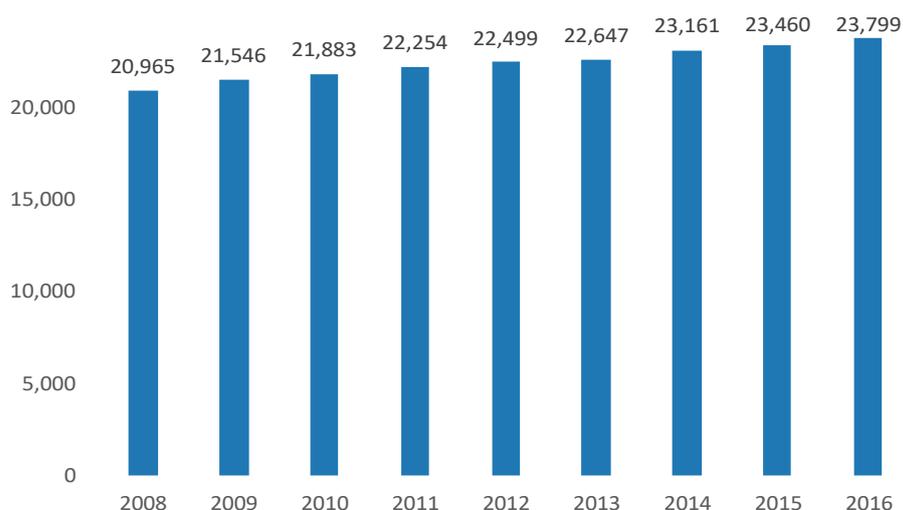
¹⁵⁶ A full list of included activities in code Q can be found in Eurostat's methodologies and working papers series, in particular on NACE Rev. 2, available from: <http://ec.europa.eu/eurostat/en/web/products-manuals-and-guidelines/-/KS-RA-07-015>

¹⁵⁷ A full list of national sources and data coverage can be found via this resource: <http://www.oecd.org/els/health-systems/Table-of-Content-Metadata-OECD-Health-Statistics-2017.pdf>

¹⁵⁸ The full analytical highlights for the health sector is available from: http://skillspanorama.cedefop.europa.eu/sites/default/files/EUSP_AH_Health_0.pdf

¹⁵⁹ The full analytical highlights for health professionals is available from: http://skillspanorama.cedefop.europa.eu/en/analytical_highlights/health-professionals-skills-opportunities-and-challenges and for health associate professionals from: http://skillspanorama.cedefop.europa.eu/en/analytical_highlights/health-associate-professionals-skills-opportunities-and-challenges

Figure 82. Number of employees in the human health and social work activities sector across the EU (in thousands)

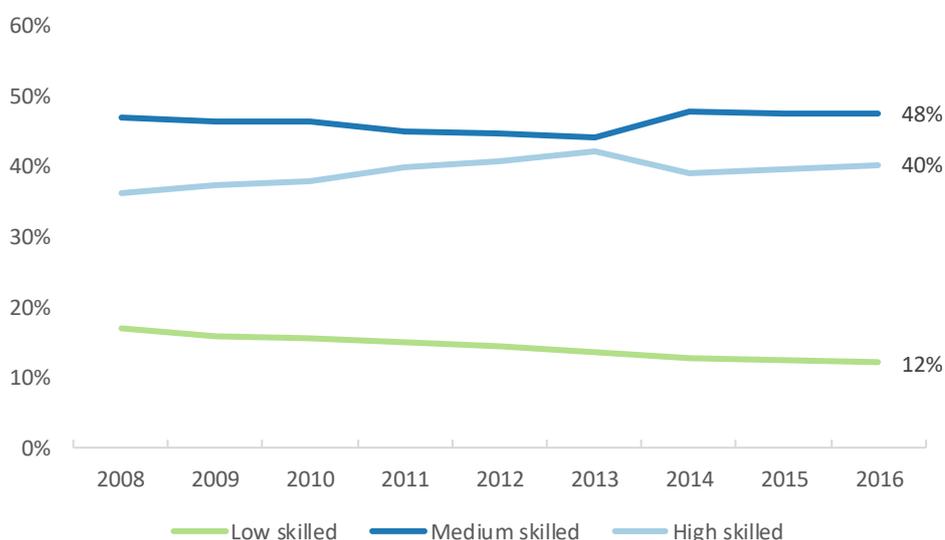


Source: Eurostat *lfsa_egan2* (Latest data available from: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsa_egan2&lang=en)

Notes: Data includes ages 15-64. ICT sector corresponds to NACE code 'Q', i.e. Human health and social work activities

Most of those employed in the health sector are either medium or high skilled. This appears to be a rather stable trend over the last eight years with this group making up 80-90 % of the workforce. Figure 83 shows that in 2016, medium-skilled employees made up 48 % of all employed people in human health and social work activities, 40 % were high skilled and 12 % were low skilled.

Figure 83. Proportion of employees employed in the human health and social work activities sector across the EU28 between 2008 and 2016 by skill level (%)



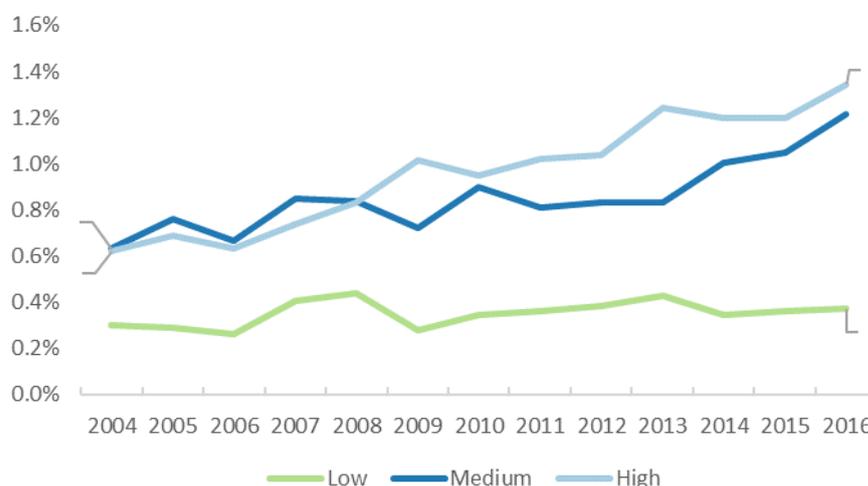
Source: Eurostat *edat_lfs_9910*

Notes: Data includes ages 15-64. ICT sector corresponds to NACE code 'Q', i.e. Human health and social work activities

The number of EU migrants working in the health sector has also increased by 113 %, from 302,614 in 2004 to 705,289 in 2016. Figure 84 shows the percentage of low, medium and high-skilled EU migrants as a proportion of the total EU workforce in the human health and social work activities sector. The figure shows that EU migrants make

up a larger proportion of the workforce in 2016 compared to 2004, in particular those medium and high-skilled migrants. As of 2009, the number of high-skilled EU migrants in human health and social work activities across the EU surpassed the number of medium skilled EU migrants. However, the difference is small.

Figure 84. Low, medium and high-skilled EU migrants as a proportion of all workers in the EU Human health and social work activities sector



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford

Notes: Data includes ages 15-64. Low skilled corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level). The 2004 estimate for EU low skilled workers in Human health and social work activities sector has low reliability.

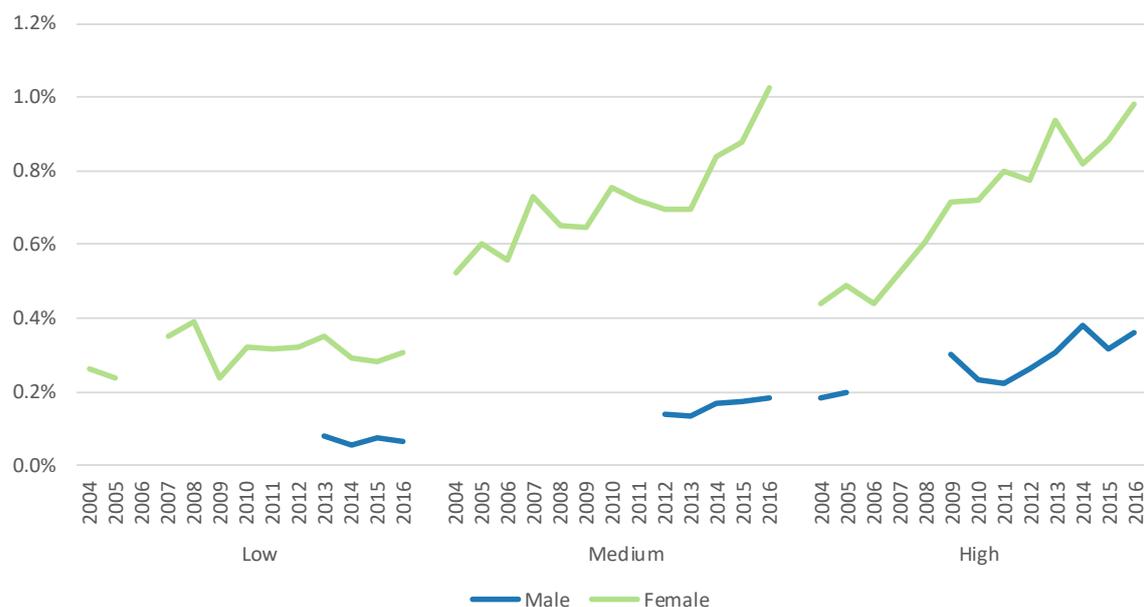
Evidence from the OECD also finds an increase in foreign-born doctors and nurses in the OECD area. Between 2000/2001 and 2010/2011 the share of foreign-born doctors grew in most countries from an average of 19.5 % to 22 % and the share of foreign-born nurses for the same period rose from 11.0 % to 14.5 % (OECD, 2015).

A7.2 Migration of skilled labour – general patterns

A7.2.1 Gender

Evidence from the EU LFS suggests that more EU migrants in the human health and social work activities workforce are female, rather than male. Figure 85 suggests that, in 2016, low and medium skilled male EU migrants make up less than 0.2 % of the workforce, while high skilled male EU migrants make up 0.4 % of the workforce. Medium as well as high-skilled female EU migrants, on the other hand, each make up over 1 % of the workforce in the sector in 2016. Note that the gaps in the data are due to estimates being too small to be reliable.

Figure 85. Skilled EU migrants as a proportion of all workers in the EU health sector by sex



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford

Notes: Data includes ages 15-64. "Skilled" includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level)). The following estimates were unreliable and are not presented in the figure: Male low skilled (2004; 2006-2012); Male medium skilled (2004; 2006-2011); Male high skilled (2006-2008); Female low skilled (2006). The following estimates have low reliability and should be interpreted with care: Male low skilled (2005; 2013-2016); Male medium skilled (2012-2014); Male high skilled (2004); Female low skilled (2004).

These findings are in line with the overrepresentation of women in this sector. Eurostat data on employees in this sector, regardless of their citizenship or educational attainment¹⁶⁰, shows that women have consistently represented almost 80 % of all employees, e.g. for each male employee, there are four female employees. Considering this context, the proportion of low and medium-skilled female EU migrants is roughly in line with expectations, while the proportion of highly skilled female EU migrants is somewhat below what is to be expected: for each high-skilled male EU migrant there are only 2.5 high-skilled female EU migrants, compared to four female employees for each male employee in the sector as a whole. Indeed, Figure 86 confirms that most male EU migrants working in this sector are high skilled, which would explain their relative overrepresentation in the previous figure. Data is not available for all years due to estimates being unreliable, in particular for low skilled. The data that can be presented shows that over half of all male EU migrants in the human health and social work sector are high skilled, while around a third are medium skilled. The rest (10 %) are low skilled. Medium and high-skilled female EU migrants each make up about 40 % of the total female EU migrant population in this sector.

¹⁶⁰ Based on Employment by sex, age and economic activity (from 2008 onwards, NACE Rev. 2) - 1 000 [lfsa_egan2]

Figure 86. Skill composition (low, medium, high) of EU migrants working in the EU health sector by sex



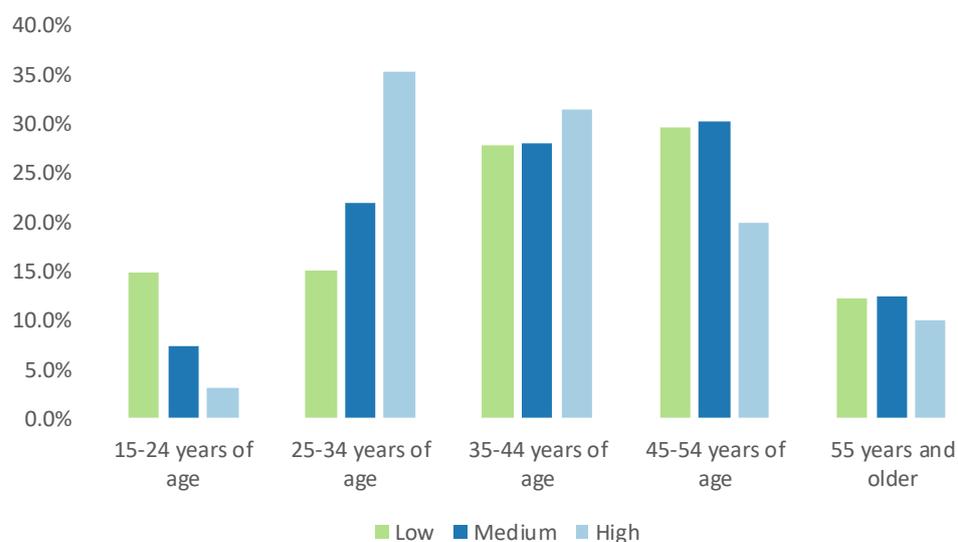
Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford

Notes: Data includes ages 15-64. Low skilled corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high-skilled corresponds to ISCED 5-8 (i.e. third level). For the following years components of the skills composition of male or female EU movers were unreliable and therefore have been removed: Males: 2004, 2006-2012; Females: 2006. The following estimates have low reliability and should be interpreted with care: All figures for male and 2004 for females.

A7.2.2 Age

Most EU migrants in the human health and social work activities sector are aged between 25 and 54-year-old, i.e. prime working age. This is evident from the next figure, which shows the proportion of EU migrants as a share of all employees in the human health and social work activities sector, by 10-year age groups from 2004 to 2016. The figure only presents 2016 as estimates, especially for low-skilled, and are largely unreliable for previous years. There are some slight differences between medium and high-skilled EU migrants in this sector; high-skilled EU migrants are clearly concentrated in the 25 to 34 and 35 to 44-year-old age groups (35.4 % and 31.5 % of all high skilled EU migrants working in this sector), whereas medium skilled EU migrants are concentrated in the 35-44-year-old and 45-54-year-old age groups (respectively 28.0 % and 30.3 % of all medium-skilled EU migrants working in this sector).

Figure 87. Age composition (in 10-year age groups) of EU migrants working in the EU health sector by skill level in 2016



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford

Notes: Data includes ages 15-64. Low skilled corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level). All figures for low skilled EU migrants have low reliability, as do the 15-24-year-old age group for medium and high skilled EU migrants, and the 55 years and older age group for high skilled EU migrants.

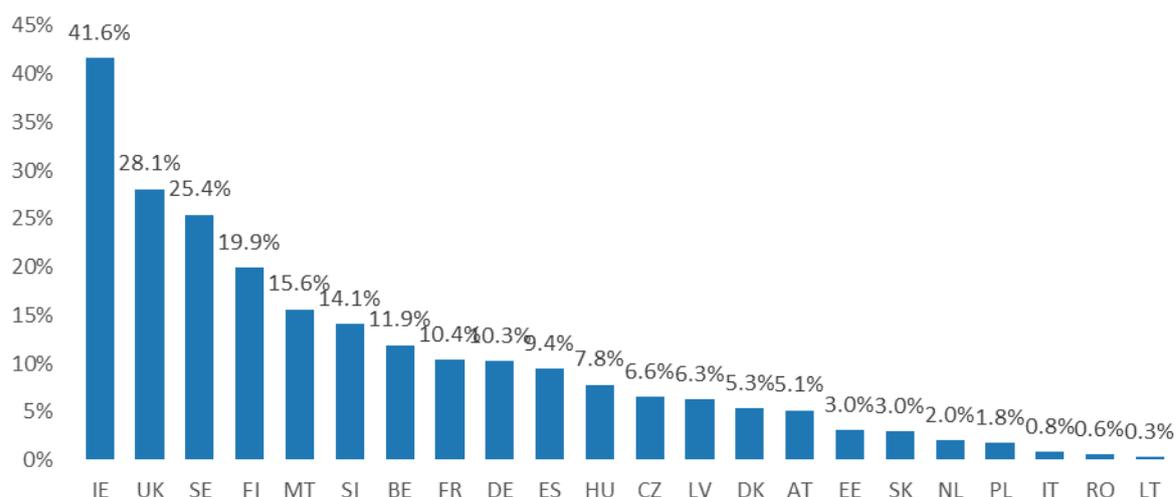
The presented findings on the age and gender of skilled employees in the human health and social work activities sector (i.e. more males than expected considering the sector is female-dominated, and of younger working-age) find resonance in previously conducted studies. For example, a study by Varga (2016) using Hungarian panel data on physicians and dentists from 2003 to 2011 shows that men were 22 % more likely than women to emigrate, and migration increased more for younger age groups than older age groups. Another study by Chiscop (2013) on the brain drain from Romania's health work force highlight that 7-10 % of young Romanians in the health workforce leave every year. Ifanti et al. (2014) also point out that predominantly young Greek practitioners are leaving the country.

A7.2.3 Destination countries

Joint OECD-Eurostat data provides an insight into the countries that have the highest proportion of foreign-trained doctors and nurses. These figures do not distinguish whether foreign-trained doctors and nurses are EU or third country citizens.

The first figure shows the proportion of foreign-trained doctors. Ireland and the UK have the highest proportions, followed by Sweden and Finland. Unsurprisingly considering their population size, the UK, Germany and France have the highest total volumes of foreign-trained doctors: 50 177 (2016), 34 850 (2015) and 23 207 (2015) respectively. With the exception of Malta and Slovenia, none of the EU-12 Member States that joined after 2004 have a higher proportion than 10 % of foreign-trained doctors.

Figure 88. Proportion of foreign-trained doctors in EU countries

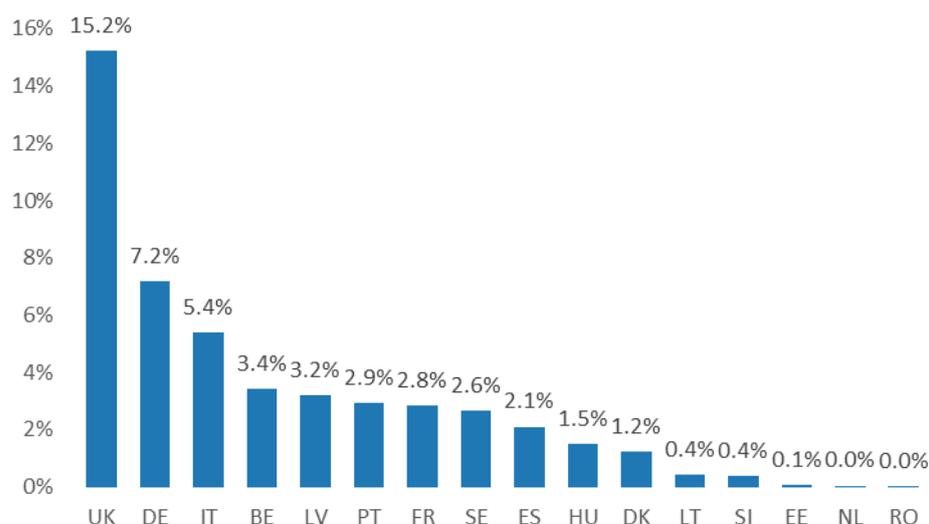


Source: OECD-Eurostat Health workforce migration [hlth_rs_wkmg], ICF calculations.

Notes: Figures are for 2016, except for DE, EE, FR, HU, PL, SI (2015); DK, NL, RO, SE (2014); FI (2012) and SK, ES (2011). Data is not available for BG, EL, PT, CY, HR, LU.

The second figure shows the proportion of foreign-trained nurses. Fewer countries have data available on nurses (e.g. No data is available on foreign-trained nurses in Ireland). For countries that have data available, the UK has the highest proportion of foreign-trained nurses: proportionally more than twice the next country, which is Germany. In terms of total values, the UK also has the highest number of nurses (105 811 in 2016), followed by Finland (71 178 in 2012) and Germany (65 000). Finland is absent from the figure as the total number of nurses in Finland is not provided, only the number of foreign-trained nurses.

Figure 89. Proportion of foreign-trained nurses in EU countries



Source: OECD-Eurostat Health workforce migration [hlth_rs_wkmg], ICF calculations.

Notes: Figures are for 2016, except for DE, EE, HU, RO, SI (2015); DK, NL, SE (2014); ES (2011). Data is not available for BG, CZ, IE, EL, MT, AT, PL, SK, FI, CY, HR, LU

Foreign doctors make up a higher proportion of countries' total stock of doctors than nurses do of their profession. One explanation for this could be that specialist doctor vacancies are more difficult to fill due to the smaller available supply pool considering the length of time required to train doctors. Therefore, doctors are recruited from abroad. Nurses' positions generally are less highly specialised, meaning there is likely to be a larger overall pool of workers with relevant qualifications (i.e. pool of supply) and vacancies may therefore be easier to fill nationally.

A7.2.4 Countries of origin

Health workforce migration data from the OECD website provides an overview of the stock of foreign-trained doctors and nurses by citizenship. The next tables provide the top 3 EU citizenships of foreign-trained health professionals in each EU country for which this data is available. Generally stock data¹⁶¹ is used as this had a higher availability, but flow data¹⁶² is used where no stock data was available.

The table on doctors shows that Romanian doctors make up the largest group of EU migrant doctors in three other countries (Germany, France and Hungary) and are either the second or third largest group in a further four (Belgium, Spain, Ireland and the Netherlands). Whilst not shown in this table, Romanian doctors have recently overtaken the inflow of Danish and German doctors in Sweden. Also, not pictured in the table is the increase in numbers of Italian doctors in Belgium and the UK. Italian doctors are set to overtake the stock of other EU nationalities that currently make up the top three EU nationalities of doctors in these countries. The UK and Germany, which have the largest total numbers of foreign-born doctors, have a high number of Greek doctors.

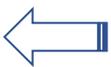
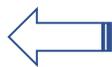
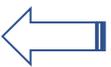
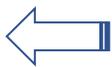
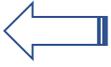
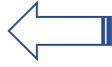
Other than the abovementioned observations, the table also indicates that doctors often move to neighbouring countries:

¹⁶¹ Stock data refers to the number of doctors or nurses who have obtained their first medical qualification (degree) in another country and are entitled to practice in the destination country.

¹⁶² Flow data refers to the number of doctors or nurses who have obtained their first medical qualification (degree) in another country and receive a new authorisation in a given year to practice in the destination country.

- The top 3 EU nationalities in Austria are from neighbouring countries Germany, Hungary and Slovakia;
- Aside from Romanian doctors, Belgium sees many French and Dutch doctors entering the country;
- The Czech Republic primarily hosts Slovakian doctors, while Hungary primarily has Romanian doctors practice in its borders;
- Finland relies on doctors from neighbouring Estonia and Sweden;
- Sweden sees many doctors from neighbouring Denmark and nearby Germany and Poland practice in its borders;
- Latvia has a higher number of Estonian doctors practice within its border than any other EU nationality;
- Slovenia has a higher number of Croatian doctors practice within its borders than any other EU nationality.

Table 22. Nationality of foreign-trained doctors per country (top three nationalities)

Receiving country	Nationalities	Receiving country	Nationalities
AT 	1 DE (1,159) 2 HU (267) 3 SK (119)	HU 	1 RO (1,630) 2 SK (45) 3 DE (22)
BE** 	1 FR (1,312) 2 RO (1,247) 3 NL (1,112)	IE 	1 UK (731) 2 RO (723) 3 HU (289)
CZ 	1 SK (2,070) 2 PL (26) 3 BG (16)	LT 	1 ES (6) 2 LV (1) 3 -
DE 	1 RO (3,503) 2 EL (2,486) 3 AT (1,977)	LV 	1 EE (56) 2 LT (6) 3 PL (3)
DK* ** 	1 SE (58) 2 DE (25) 3 HU (14)	NL 	1 BE (562) 2 DE (227) 3 RO (46)
EE 	1 FI (20) 2 LV (8) 3 DE (6)	PL 	1 DE (59) 2 BG (58) 3 CZ (57)
ES 	1 IT (568) 2 DE (511) 3 RO (343)	SI 	1 HR (198) 2 BG (36) 3 IT (34)
FI 	1 EE (1,276) 2 SE (950) 3 DE (343)	SE** 	1 PL (1,445) 2 DE (1,088) 3 DK (816)
FR 	1 RO (4,324) 2 BE (1,820) 3 IT (1,447)	UK** 	1 IE (1,837) 2 EL (1,373) 3 DE (1,253)

Source: OECD Health workforce migration data

Notes: Data is for 2016, except for DE, EE, HU, PL, RO (2015), LV, NL, SE (2014), FI (2012), ES (2011); Stock data except for DK (average of 2011-2016 annual inflows) (*). Belgium has seen a recent increase in inflow of Italian doctors; Inflows from Romanian and Hungarian doctors into Sweden have recently overtaken the inflows from Germany and Denmark; Inflows from Italy and Germany (top four and five) into the UK have recently overtaken inflows from Germany.

The data on nurses shows a similar trend to that for doctors; Romanian nurses are amongst the largest EU nationality in seven countries (largest in Germany, Spain, Hungary, Italy and the UK). Notably, Belgian nurses practice in France in very large numbers and Romanian nurses practice in similarly large numbers in Italy, while Italian nurses in increasing numbers move to Belgium, Germany and the UK: all destination countries (i.e. France, Italy, Belgium, Germany and the UK) are countries with a relatively large proportion of foreign-trained nurses. While not currently visible in the table, if the trend continue Italian nurses would appear in the top three for these countries. Portuguese nurses, compared to Portuguese doctors, also appear quite mobile. Nationals from this medium-sized country in terms of population (about 10 million) appear within the top three of three large countries (Spain, France and the UK).

Table 23. Nationality of foreign-trained nurses per country (top three nationalities)

Receiving country	Nationalities	Receiving country	Nationalities
BE **	1 FR (1,485) 2 RO (1,329) 3 NL (709)	IT	1 RO (11,714) 2 PL (2,511) 3 ES (361)
DE* **	1 RO (386) 2 ES (359) 3 PL (242)	LT	1 LV (13) 2 PL (4) 3 -
DK*	1 SE (14) 2 DE (6) 3 RO (6)	LV	1 LT (12) 2 EE (2) 3 -
EE	1 LV (3) 2 FI, DE, SE (1) 3 -	NL	1 BE (41) 2 PL (13) 3 ES (13)
EL	1 DE (68) 2 PL (47) 3 CZ (46)	PL*	1 LT (3) 2 DE, CZ (1) 3 -
ES **	1 RO (630) 2 PT (505) 3 DE (100)	PT	1 ES (1,004) 2 DE (31) 3 FR (25)
FI	1 EE (659) 2 SE (282) 3 DE (82)	SI	1 HR (7) 2 DE (3) 3 AT (2)
FR	1 BE (10,268) 2 ES (1,790) 3 PT (1,315)	SE	1 FI (600) 2 DE (229) 3 DK (117)
HU	1 RO (576) 2 SK (47) 3 DE, PL (4)	UK **	1 RO (8,151) 2 ES (7,617) 3 PT (5,364)

Source: OECD Health workforce migration data

Notes: Data is for 2016, except for EE, EL, FR, HU, PL, SI (2015), LV, NL, PT, SE (2014), FI (2012), ES (2011); Stock data except for DE (average of 2012-2015 annual inflows) and DK (average of 2011-2016 annual inflows) (*). Belgium. Germany and the UK have seen a recent increase in inflow of Italian nurses; Spain has a similar stock of Bulgarian nurses (99) to German nurses (100) (**).

The number of Romanian nurses in Italy is likely to be understated. As an Italian case study by Bertinato et al (2011) mentions: "Traditionally given by families, care of the elderly is increasingly provided by (often illegal) migrant workers." Italy has a structural lack of nurses, and the trend for an increasingly elderly population would suggest that this demand will only increase.

Other studies confirm high levels of mobility of healthcare professionals between neighbouring countries. Maier et al (2011) identify the following 'hot-spots for mobility between neighbouring countries':

- Austria – Germany (two-way flows);

- France – Belgium – The Netherlands (reciprocal flows within regional (i.e. linguistic) proximity);
- Austria and neighbours (one-way flows from neighbours to Austria);
- Finland – Sweden – Estonia – Russia (two-way flows between Finland and Sweden and inflow from Russian to Finland and Estonia, and from Estonia to Finland).

A7.2.5 Return migration

Data on return migration is not systematically collected at the European or national level. Estimates are sometimes based on surveys or interviews measuring intentions of respondents. One such a qualitative study on the motivations and experience of health professionals who migrate to the United Kingdom finds that most interviewees did not have immediate plans to return to their country of origin (Young et al, 2014). However, these interviewees had been in the country for a longer time at the time of the interview, i.e. they had not recently moved. Generally, interviewees in this study moved to fulfil a specific goal, such as training, but then remained in the country. Those who did mention they wanted to return cited personal or cultural ties with the country of origin, moral obligations or bad experiences in the UK. We conducted an interview with an Italian consultant working in the NHS, which conforms to the findings of Young et al (2014) that most move for a specific goal but end up staying in the country. This consultant moved to take up a job offer and eventually got married and had children in the UK. He briefly described it as:

“I’m rooted now, I’m staying.”

A quantitative study in Finland, in which Finnish-trained health professionals who had emigrated were followed up, found that ‘about 40 % of nurses, 40 % of medical doctors and around 30 % of dentists had returned to Finland within two years’ (Kuusio et al, 2011).

A report from Eurofound confirms that quantitative data on return migration is hard to come by. It states: “In most cases, return migration is low, and due to the pressing reasons behind leaving (such as income differentials or differences in working and living conditions) most of the countries have no illusion about hoping for their citizens to return soon. It can be assumed that this may be one of the reasons why they do not invest more in documenting return migration” (Eurofound, 2013).

Some data is available on differences between the likelihood of return migration for doctors and nurses. A report from the International Organisation for Migration points out that data shows that migrants with upper secondary educational attainment (i.e. medium skilled) are more likely to return than those with tertiary educational attainment. The report suggests this is in line with the statements “that nurses are more prone to temporary migration or have been more affected than physicians by the recession, driving them to return to their countries of origin.” (IOM, 2014).

A7.2.6 Student and researcher mobility

Section A7.2.4 presents evidence of regional student mobility (students moving to neighbouring countries). Two such countries who are recipients of foreign students are Austria and Belgium. Students move to these countries from Germany (to Austria) and the Netherlands and France (Flanders and Wallonia in Belgium). The motive behind these moves are higher barriers to accessing training in the medical profession in the home country, in particular ‘*numerus clausus*’ (also known as ‘*numerus fixus*’) in the Netherlands and France (i.e. caps or quotas which limit intake into training) and relatively low fees in Belgium (Glinos et al, 2011). The OECD also finds that, increasingly, medical students study abroad and points out that this will make national

workforce planning increasingly complex considering not all of these medical students will stay in the host country but will rather return (OECD, 2015).

Our interview with an NHS consultant originally from Italy provides additional qualitative insight: This consultant completed his training in Italy but did further academic research in the US. On return to Italy, he could not find a job at the level, specialty and with the right combination of academic and clinical work. While he found an advertisement for vacancies in the UK in an Italian magazine for his specialty, he notes that his previous experience in the US made the decision to go the UK easier:

“I had a good experience in the US and I thought, they are both Anglo-Saxon, I’ve made the move before and the UK is closer...”

Whilst our sample of one is not enough to draw conclusions, it is not unthinkable that health professionals with a previous study or research experience abroad are more likely to move abroad for work.

A7.2.7 Key patterns in terms of skills profile and specialties

Data presented in Section A7.2.5 suggested that high skilled medical professionals are more likely to move to work in other EU countries and stay on for longer, while medium skilled medical professionals are more likely to work abroad for shorter periods of time. It does not directly follow that doctors migrate more and stay for longer than nurses, as qualification levels attained by nursing students who completed their training differ across countries: in some countries, nurses are required to obtain bachelor’s degrees which fall under ISCED Level 6 and the aggregate category ‘higher skill level’, while in other countries nurses are trained at vocational education providers at ISCED level 4 (i.e. the aggregate category ‘medium-skill level’).

In terms of specialities, data is not collected at a European level. However, some case studies provide some insight:

- Chiscop (2013) highlights the specialties that are most affected by outflows from Romania. These are Intensive care, Psychiatry, Diabetes, Nutrition and Cardiology;
- A Eurofound study finds specific outflows from Lithuania of surgeons (8.5 %), obstetricians (6 %) and obstetricians/gynaecologists (4.7 %). This compares to 3 % of Lithuanian healthcare professionals leaving since its accession to the EU (Eurofound, 2013);
- Various case studies highlight the need of nurses specialised in elderly care (e.g. Austria, Italy).

Further evidence suggests that demand for particular specialties are European-wide and that outgoing countries often see emigration of specialists who are needed in the home county. Anaesthetics and emergency or intensive medicine are specialties mentioned by Maier et al (2011), summarising findings from several case studies.

A7.3 Understanding the movement of skilled workers

Various push and pull factors play a role in decisions for skilled healthcare professionals to either move or stay. This section discusses different push/pull factors separately, however generally it is a combination of these factors that contribute to a decision to move, in conjunction with the individual’s situation for example regarding care responsibilities for dependants. Also, there is a degree of interaction with developments at the macro-level that affect these factors simultaneously. For example, cuts to public services lead to fewer resources for health professionals (in a context of increased demands due to an ageing population) and freezing of wages. Generally, the push and pull factors which will be discussed here must be seen in the context of EU enlargement and the economic crisis. While literature does not find a clear increase following the

accession years of 2004 and 2007, likely due to limits on international labour mobility from accession countries. However, the staggered lifting of these limits across the EU in combination with the crisis facilitated outflow of these countries. To some extent, this has helped (and is still helping to, as discussed in Section A7.3.4) alleviate under-employment of health professionals in some countries.

Many of these push and pull factors exist within policy frameworks that are established at national level (i.e. austerity measures, wage freezes, funding allocation) or which relate to institutional characteristics (such as, presence or absence of meritocracies, and presence of corruption), which may drive health professionals to move abroad to countries with more favourable conditions, rather than to dynamic regions in their country of origin.

A7.3.1 Wages

Wages are an important push or pull factor for any worker. Health professionals move from countries where wage differentials exist with other countries. For example, Chiscop (2013) notes that in Romania an estimated 10 % of all physicians left for Western Europe since 2007, "...where they can gain 10 times higher salaries and work in more dynamic, competitive environments." Wages in the Romanian health sector are not only low compared to their West European counterparts, but also compared to other public-sector jobs in Romania. Varga (2016) notes that pay for medical doctors in Hungary declined during the recession. Graduate medical doctors in particular are paid less than graduates from comparable studies but who work in industry. In particular young doctors experience low pay, as they are not able to top up their low base pay with as much 'thank-you money' (used in many central and eastern European) as their seniors. A report by the European Public Service Union and the University of Hertfordshire found that poor salaries were the most common reason given in the survey for outward migration of health workers (EPSU and University of Hertfordshire, 2012).

On the other hand, increasing salaries can be a reason to return. In a response to concerns on the outflow of healthcare professionals, several New Member States increased the salary of their health professionals. In Estonia and Poland this increase coincided with a fall in the number of health professionals applying for recognition of their qualification to work abroad (Kautsch & Czabanowska, 2011; Saar & Habicht, 2011).

A7.3.2 Working conditions

Working conditions are also important push (or pull) factors. We can distinguish working conditions resulting directly from the work, as well as perceptions of the medical profession. Chiscop (2013) mentions that physical working conditions as well as the image of the profession are push factors for Romanian health professionals. Firstly, Romanian hospitals often have poor and/or out-of-date facilities. Secondly, financial issues exacerbated by corruption and the abovementioned 'thank-you money' provides the profession with a poor image, leading to poor social status for medical practitioners. Poor medical equipment is also mentioned as a push factor in a case study into Lithuania (Padaiga et al, 2014). Ifanti et al (2014) point out that as a result of the recession, many young doctors are either unemployed or forced to work part-time, which pushes these young doctors to find (full-time) work abroad. Across Europe, austerity measures following the recession have put further financial strains on public services, including on health care provision. Stricter financial controls are directly translated to the work floor through increased paperwork and increased workloads. Increased workloads and subsequent long shifts at anti-social hours (nights, weekends) are mentioned by German nurses (Ognyanova et al, 2014) and Irish doctors (Humphries et al, 2014).

A7.3.3 Professional development opportunities

Professional development and career advancement are also important aspects that can push health professionals from or pull them to a country. Filippidis (2015) mentions

limited funding of biomedical research and contracting health budgets as one of the primary drivers for outmigration of young Greek doctors. Similarly, Legidi-Quigley et al (2014) find that the most frequently mentioned motivation in their sample of EU qualified doctors working in the UK was advancing knowledge, either through further study, training or gaining experience. The lack of professional development opportunities is mentioned as a driver for emigration in case studies of various other countries, for example in a study funded by the European Observatory on health systems and policies, encompassing evidence from 17 European countries, such as (but not limited to) Germany, Estonia, Poland and Slovenia. A Eurofound study states that this motivation generally weights heavier for doctors than nurses (Eurofound, 2013).

Professional development and career advancement was also the primary driver for our interviewee UK NHS consultant from Italy. He explains that after completing his studies in Italy, he was looking to apply for a PhD position in his specialty. However, this was not available. While waiting for such a position to become available, he actively looked for pathways into such a position but mentions:

“People promise you things, to keep you in the job, but there is no real job progression, just a lot of promises. You do the PhD, the teaching, you publish and do academic work in preparation for something but it never comes”.

For him, the last straw was being invited for an interview for an assistant-professor role which ended up being a set up as they already had a candidate in mind and simply invited him for to make up candidate numbers. This lack of meritocracy is also mentioned in a case study on Italy, which highlights this as being a main driver for Italian doctors moving to the UK (Bertinato et al, 2011). The consultant points out this is a general issue in Italy and that his case is not isolated. Lack of available senior positions due to low attrition in particular mean young doctors who want to progress are deadlocked, while at the same time their seniors do try to keep a team of more junior doctors around them:

“Highly skilled professionals come to the UK for a better career. There are surgeons in Italy who are 60 years old and still cannot operate alone as their boss won’t allow it... it is a way to keep control.”

A7.3.4 Availability of jobs

Unemployment following from a combination of oversupply and cuts in funding for employing doctors is an issue in south European countries, in particular in Greece and Italy.

In Greece, poor workforce planning is a cause of oversupply: there is no thorough planning around the number of medical students being admitted to medical school. As a result, Greece is spending money and resource on training a workforce that they cannot employ. Furthermore, there not any planning for the ratio of specialists to general practitioners. Subsequently, while the country has an oversupply of specialists (i.e. hospital doctors), there is a structural shortage of general practitioners, in particular in rural areas (Ifanti et al, 2014). Filippidis (2015) elaborates on the outflow of young doctors in particular: many young Greek doctors go abroad to the UK and Germany. The article states there was an increase of 113 % between 2008 and 2013 in the number of Greek graduates in medicine who registered to practice medicine in the UK, and the number of Greek doctors in Germany increased from 1 708 to 3 011 from 2008 to 2014. The outflow of young doctors specifically risks in the short term a shortage of junior doctors, and in the longer term of doctors more generally, as young doctors may leave permanently. These risks contain consequences for the quality of care as well as return on investment in terms of costs to the Greek state associated with initially training these doctors.

In Italy, as in Greece, there is no adequate link between intake of medical students into medical school and demand at the healthcare sector. While Italy has introduced caps on intake, low study and workforce attrition rates (Bertinato et al, 2011) suggest it is not correctly aligned with the labour market. In our interview with the Italian consultant, this is confirmed. He points out that a full stop on recruiting specialist is required to allow the older workforce to retire and remove the deadlock for the various younger doctors waiting to progress.

A7.3.5 Other factors

The abovementioned push and pull factors are the main generalised motivations making up individual's decisions to move abroad. However, other supportive arguments are mentioned in the literature.

Language is a supportive factor that drives many health professionals either to the UK because they want to improve their English or already speak it, or to another country with proximity in Language. Legido-Quigley et al (2014) finds that their Spanish interviewees move to the UK to improve their English, while Maltese and Greek doctors move to the UK because they already speak English. These findings are supported by the observed high flows within Dutch speaking areas (between the Netherlands and Flanders), French speaking areas (France and Wallonia) and German speaking areas (Germany and Austria).

Varga (2016) finds that peer pressure played a role for Hungarian doctors: if doctors from the same workplace had recently immigrated, other doctors in the same work place were more likely to also immigrate.

A7.3.6 Impact of education and training on skilled labour flows

Varga (2016) showed that younger medical doctors from Hungary had the shortest average stay abroad (52 months compared to 54 months for all age groups). Of all age groups, this youngest age group had the highest proportion of returnees. The study suggests this could be due to young Hungarian doctors who continue their studies abroad and return upon completion, which could indicate lower stay rates by Hungarian medical students studying abroad.

Other studies echo these findings: while there is general mobility of medical students (specifically to neighbouring countries), they are less likely to stay in a host country following graduation. This poses a particular issue for the health workforce planning for countries that see high inflows of medical students. This is the case for Belgium which sees high inflows of Dutch and French students who are bypassing the cap on intakes of medical schools in their own countries, as well as the cap that applies to Belgian students of medical and health-related studies. In Wallonia, a 30 % quota was introduced for non-resident students enrolling on particular medical and paramedical courses. Safuta and Baeten (2011) point out that the high inflow of foreign student must have a significant impact on the education budget, and that this must have played a role in the introduction of these quotas. There is a similar concern for Austria which experiences a high inflow of Germans medical students (Glinos et al, 2011). In response to these concerns, Austria implemented quotas to ensure that 75 % of available places at Austrian universities were filled by Austrians (Offermanns et al, 2011).

A7.3.7 Permanency of stay

The permanency of stay is difficult to measure as return flows and length of residency are not structurally measured. Often, intentions around the duration of stay is used as a proxy. One such study finds that most healthcare professionals moving to the UK express they did not have particular expectations around the permanency of their stay

abroad but took a rather shorter-term approach, letting the decision of staying or moving on depended on the outcome of job offers or training applications (Young et al, 2014; Legido-Quigley et al, 2014). A Polish case study finds that younger specialist from Poland are more willing to migrate permanently, whereas their seniors who have families prefer shorter-term placements abroad (Kautsch and Czabanowska, 2011). A Slovakian case study similarly finds that evidence from studies that young graduates are more likely to immigrate permanently (Beňušová et al, 2011). A Eurofound study points out that doctors are generally more likely to bring their families with them when they move abroad, whereas nurses do not. The study points out that 73 % of interviewed return migrants cited family reasons as their motivation to return, with married women being most likely to return for this reason ('for the sake of family cohesion and for children') (Eurofound, 2013). Considering the high number of women in the health sector, and assuming female migrant health professionals are more likely to be nurses (based on the data presented in the previous section, which showed higher proportion of medium skilled females migrate), nurses may be more likely to return in the shorter-term. Generally, younger doctors and nurses who do not have children or other care responsibilities might be more flexible to move abroad for longer periods of time, which allows them to root and eventually stay in the host country.

A7.3.8 The impact of outflow of skilled healthcare professionals in countries of origin

The outflow of skilled health professionals in outgoing countries poses a large issue for these countries in meeting the challenges that the sector faces across the EU, i.e. the aging population. It exacerbates already existing shortages. Chiscop (2013) highlights this issue in Romanian context, where young Romanian doctors leaving the country in large numbers and the healthcare workforce is an already aging workforce. With the outflow of these young doctors meant to replace the aging workforce, severe shortages are expected in the next 10 to 15 years. Chiscop also points out that there is no concerted policy in Romania to deal with the outflow and the resulting increase in demand for labour will take place in context of an already understaffed workforce. This is also not compensated by inflows from third-countries, nor is there any strategic workforce planning: "Human resource planning is mostly based on the educational capacity of the medical schools and less on the population's needs" (Chiscop, 2013).

Similar concerns are raised for Greece. The outflow of Greek physicians, particularly young ones, raises short-term concerns on how the Greek health care system will be able to cope with the lack of young doctors who provide a particular service not typically covered by their more experienced colleagues. Ifanti et al (2014) note that there are currently not any strong policies dealing with the outflow. They argue for policies that offer doctors, and in particular the younger generation (with the eye on future supply and demand), better opportunities in Greece. Aside from this, better workforce planning, for example building on WHO recommendations, is crucial as there is currently no evidence of this. This includes adjusting the number of new intakes into medical school and creating better links to the labour market.

A further important issue is that the outflow of skilled healthcare professionals exacerbates inequality: Resources put towards the training of these health professionals fails to obtain a return on investment. When skilled professionals move abroad, they primarily move to countries with better economic conditions. This means that, countries already experiencing harsher economic conditions are left with poorer healthcare (as they cannot meet demand), and the skilled professionals they trained do not pay tax or consume (and therefore invest) in the economy of their home country.

It is worth noting that shortages are more strongly experienced in rural areas, as skilled professionals tend to move to more urban areas. This means that these areas are more deprived of adequate healthcare, as well as other economic benefits that increase in parallel with an increase in skilled employment (e.g. more economic return flows into

the system). Therefore, another impact is an increase in divergence between rural and urban areas.

A7.3.9 Coping mechanisms

As has been alluded to so far, structural national strategies to cope with labour shortage in the health sector is generally lacking. Some outgoing countries also lack (effective) workforce planning. Even so, those countries who do practice workforce planning (e.g. Belgium, Austria, France, UK) find it difficult to incorporate information on in- and outflows, do not address structural retention issues or recruitment difficulties in rural areas and often continue to experience shortages of particular specialties that are high in demand.

At the hospital and medical school level, exchanges with foreign schools exist (e.g. in Belgium, Italy), as does the use of services of specialised international health agencies (Belgium, Finland, France and the UK)

At the national level, arrangements exist in several countries for the easier entry of non-EU nationals with skills in high-demand areas, which almost always include the health sector (e.g. Germany, Romania, the UK).

A7.4 Policy responses

This section discusses policy responses in more detail. The first subsection discusses policy responses in destination or host countries, which focus on stimulating mobility of EU healthcare professionals to their country. The second subsection discusses policy responses in outgoing countries. The third section highlights existing efforts at formulating policy tools and recommendations at the European level.

A7.4.1 Policy responses in destination countries

As mentioned above, several typical destination countries use agencies to recruit specifically EU doctors and nurses. After desk research and a consultation via HOSPEEM (the European Hospital and Healthcare Employers' Association), most current information was found from the UK's National Health Service (NHS). Therefore, this section will focus on measures in the NHS. Interesting – but more dated – examples are described in 17 case studies as part of a study on health professional mobility and health systems, from 2011 (Wismar, 2011). Section A7.3.9 already summarised the most cited measures in this study.

The UK struggles with a shortage of health professionals. Figures from 2017 reported a total of almost 42 000 unfilled vacancies for nurses, midwives and allied health professionals, corresponding to a vacancy rate of 9.4 % (NHS, 2017). To meet demand, the NHS has taken various steps at national level. Some examples are NHS guidance on staff retention, investments in apprenticeships and programmes providing incentives for nurses who have left the profession to return to nursing. The NHS also deploys measures that involve actively recruiting doctors and nurses from other EU countries, generally using (international) recruitment agencies.

International recruitment agencies play an important role at the Trust¹⁶³ and hospital level. The NHS keeps a list of national and international agencies that comply with the UK Code for ethical recruitment, to help hospitals find quality staff. The following boxes present two best practice examples of trusts using these agencies to recruit nurses, and one example of an Italian doctor using an agency to find work in the UK.

¹⁶³ NHS organisations at the geographical and/or functional level.

Box 1. Salisbury NHS Trust recruiting nurses from Portugal

Salisbury NHS Trust recruiting nurses from Portugal

Salisbury NHS Trust experienced difficulties in finding enough experienced nursing staff in surgery, musculoskeletal, acute and elderly medicine. With a shortage of nurses from the UK, the NHS Trust sought help by engaging a recruitment agency on the list of agencies complying with the UK Code of Practice for ethical recruitment. This agency specialised in bringing registered, i.e. experienced, health professionals to the UK.

The agency and hospital organised joint interviews, based on the needs of the hospital (e.g. command of the English language, particular competencies as well as commitment to a particular set of values and beliefs in line with those of the NHS). The interviews took place in Portugal. After selection, the agency negotiated employment contracts, assisted with registrations and sorted travel arrangements.

Once the Portuguese nurses arrived in the UK, the agency met them at the airport and the hospital provided them with on-site accommodation. In the first week, the group of Portuguese nurses were provided with an induction programme to support them in settling in to their new environment. They have since become an important part of the hospital.

The hospital summarises the impact of this exercise as follows:

- Three months following their arrival, there was a reduction in the amount spent on agency nurses;
- The nurses are enthusiastic, eager to enhance their skills and develop their career;
- They are keen take on new roles and they bring a new dimension to the wards;
- They bring learning and insight from Portugal;
- They have helped ease the pressure by reducing the number of nurse vacancies.

Source : <http://www.nhsemployers.org/case-studies-and-resources/2013/11/recruitment-outside-of-the-uk-for-band-5-nurses>

Box 2. Northern Lincolnshire and Goole NHS Foundation Trust recruiting Spanish nurses

Northern Lincolnshire and Goole NHS Foundation Trust recruiting Spanish nurses

Facing a shortage of local supply of nurses and despite efforts to recruit more locally, the Trust was unable to fill its vacancies.

The Trust decided to work more closely with a partner recruitment agency they already used to fill vacancies, and worked together with this agency to hold an assessment centre recruitment day in Madrid. The assessments focused on important aspects for the trust, such as competencies, language skills and values.

Following the recruitment exercise, the Trust successfully recruited Spanish nurses who received a welcome and support to settle in upon arrival. They also completed a six-week induction programme. The exercise was so successful that more assessment days were planned, and the model is to be adapted for use in the recruitment of all nurses and healthcare professionals.

The hospital summarises the mutual positive impacts (for the patients, the Trust, the Spanish nurses and the staff at the Trust more widely) as follows:

- The Trust gained nursing staff who are passionate about delivering excellent care;

- The Trust experienced reduced spend on agency workers meaning a consistency of nursing staff, which is improving the patient experience;
- Having a well-informed staff that live and demonstrate the Trust's values has had positive impacts on staff retention rates;
- The nurses from Spain have created a close-knit network within the wider Trust community. Many nurses from Spain register their interest in working for the Trust, which is evidence of the great working environment of the Trust.

Source : <http://www.nhsemployers.org/-/media/Employers/Documents/Recruit/VBR-CS3-RFV-internationally-Nth-Linc.pdf>

Box 3. International recruitment of EU doctors, a consultant's perspective

International recruitment of EU doctors, a consultant's perspective

Unable to find a job in the right specialty and at the right level, C. decided to look abroad. There are no agencies or organisations arranging this in Italy, so finding a job abroad includes using social networks like LinkedIn, professional magazines and websites from specialty associations. C. found an advertisement in an Italian medical journal from an agency recruiting his specialty in the UK, in a more rural area:

"That's when I decided to apply. I thought I'd try. They rang me 1,5 hours after I sent my CV and we arranged an interview over the phone."

C. travelled to the hospital for the interview and left to go back to Italy. The morning after he arrived back, he received an offer for a locum (temporary) basis. The agency approach was rather hands-off, but they did provide good support in getting all necessary registrations in order. After an initial temporary employment contract for 6-7 months as a locum consultant, C. has now been a core member at this hospital for 7 years, married in the UK and has now obtained UK citizenship.

As a consultant in a senior position, C. is now responsible for recruiting for the NHS hospital. He points out that using agencies is an expensive way of filling vacancies and it does not always yield good results as the information they provide on prospective applicants is not always accurate. He attempted instead to approach the Italian association in his specialty with the aim of setting up an exchange in training or something similar, but never heard back:

"I contacted the director of [my specialty] [in my home town], I thought maybe it is an opportunity for them, it is a change of scenario, it is beneficial for everyone. But they never replied. We did something similar for doctors from India, where we exchange staff for a year of training: it's good for everyone and generally positive."

C. foresees Brexit causing issues for the hospital's ability to fill vacancies and meet demands in the future.

"In recruitment, we've seen a massive drop in CVs from Europe: the number of Spanish, Italian, Greek, Czech and Polish applicants has dropped. Firstly, the new requirements for a high IELTS score means that I cannot appoint people [with a score below this]. Secondly, the uncertainty around Brexit is a push factor."

These examples illustrate that recruiting via agencies can be an effective way for destination countries to fill vacancies. In both examples from NHS Trusts nurses are recruited in cohorts and in close cooperation with an agency that engages in the process and tailors the recruitment process to the needs of the Trust.

On the other hand, the interview with the Italian consultant points more to ad hoc recruitment of doctors, which is reflective of the highly specialised positions they fulfil. It also illustrates the important role of the agency in matching supply and demand, as there was no evidence of recruitment agencies or institutions in Italy facilitating exchange of medical personnel with the UK. However, the more ad hoc and hands-off approach can be costlier as the recruitment process does not take into account the specific hospital requirements as much as the best practice examples of nurse recruitment in Portugal and Spain. This means that quality is not as high and it is more likely that recruitment fees have to be paid again to fill the same position.

Generally, none of the examples provide evidence of (facilitated and/or intended) return migration of these professionals who are recruited from the other EU countries to the UK.

A7.4.2 Policy responses in countries of origin

Literature uniformly points to the absence of concerted strategies that address the various factors that cause the outflow of skilled healthcare personnel, in particular in outgoing countries. Some stand-alone measures have been implemented. For example, at the national level some countries have implemented salary increases. At the hospital level there are examples of retention measures that address working conditions. However, outflows are generally caused by a range of different factors, in particular: wages, working conditions, professional development opportunities and availability of jobs. Outflows occur on the precondition that on or more of these factors exist as push factors in the outgoing countries (low wages, poor working conditions and professional development opportunities, high unemployment) and as pull factors in destination countries (high wages, good working conditions and professional development opportunities, vacancies), as well micro-level decisions at the individual level.

One initiative in the Austro-Czech border region does address these factors. While the policy is not directly aimed at the outflow or inflow of skilled healthcare personnel, the fact that it does address various factors that motivate this mobility means it indirectly can affect mobility. The initiative (Healthacross) has as main aim to build a sustainable healthcare workforce in the border region. It is described in the next box:

Box 4. Healthcare cooperation in the Austrian-Czech border region: Healthacross

Healthcare cooperation in the Austrian-Czech border region: Healthacross

Introduction

In 2004 the Czech Republic, Hungary, Slovakia and Slovenia comprised four of the ten new Member States to become part of the European Union. For Austria, this meant it gained four new EU neighbours with whom it would share a single market. It was acknowledged that this change would have a large impact on the capacity of health care provision of all these countries because of differences in price levels and wages causing respectively higher patient and health professional mobility. In the latter case, conditions risk a health professional brain drain from these new Member States to Austria.

Healthregio

Healthregio, funded by Interreg (under the European Regional Development Fund), commenced in late 2004 and aimed to formulate strategies to promote a joint sustainable development of the health sector in the border region. This was (and is) particularly challenging not only because of the increased demand on the health sector due to the aging population, but also because the border regions are rural areas and experience outflows of professionals to urban areas, in particular in the Czech Republic. In addition, the regional hospitals constitute major employers and are

important to the local economies in the region. Of various deliverables, one of the outcomes of Healthregio was a call for adequate support and infrastructure to underpin cross-border cooperation.

Healthacross

In 2008, Healthacross was the first step following the exploratory work under Healthregio to implementing concrete cooperative projects that should, and did, form the basis for cross-border cooperation in the region. Activities comprised formulating guidelines for cooperation, clarifying legal and financial issues to cooperation and conducting a feasibility study for a cross-border health centre. Healthacross was partly funded under Interreg and was managed by the Health and Social Fund of Lower Austria (NÖGUS), a regional governmental organisation. Other stakeholders include the regional government of South Bohemia (Czech Republic), as well as the hospitals in these regions. However, all hospitals in the border regions are public and fall under the responsibility of the regional government. The main focus of Healthacross remains the joint sustainable development of the health sector in the border region, and particularly high-quality patient care.

Recent projects under Healthacross

Healthacross is ongoing and supports concrete collaborative projects. Recent projects that have been implemented that follow-up from Healthacross are:

Healthacross in Practice – A patient focused cooperation that enables Czech patients from the city of České Velenice easy access to the hospital in Austrian Gmünd, i.e. without further financial contribution from the patient. Gmünd is the closest hospital to Czech České Velenice. To access timely health care, this is the best option for Czech citizens. The involved regional governments, the Austrian hospital and Czech General Practitioners worked together to shape this programme which is now successfully operational. For Czech patients this has meant they can quickly access excellent healthcare and for the Austrian hospital it has helped prepare in terms of capacity for treating this patient group: so far, 5,000 Czech patients have been treated since 2013.

Health without borders and follow-up project Unlimited Health Together bring together Lower Austria and the Czech South Moravia region to plan for sustainable provision of health care. This consisted firstly of collecting and comparing data on human resources and patient demographics in both areas. It also explored the possibility for concrete cooperation between hospitals and various collaboration projects are currently being set up:

- An endometriosis centre is being established in the Lower Austria hospital with the help from a Czech hospital. Through training sessions from Czech specialists to the Austrian hospital, this centre is currently being realised.
- Cooperation on radiotherapy treatment in a Czech hospital in the border region for Austrian patients who would have otherwise had to travel a longer distance to one of the Austrian hospitals.
- Establishment of cross-border emergency cooperation (e.g. dispatch of ambulances) with Lower Austria, South Bohemia and South Moravia, enabled by a treaty between the Federal Government of Austria and the Czech Republic (January 2016) which enables cross-border emergency care.
- All projects include aspects specifically related to human resource, such as network meetings (conferences, exchanges of views and experiences, excursions) and exchanging personnel, rotation of personnel, joint basic and advanced vocational training.

Impact of cross-border cooperation in healthcare

While Healthacross and the various cooperative projects it facilitates do not focus explicitly on cross-border mobility of healthcare professionals, it does address underlying conditions for establishing a sustainable service which in many cases constitute important push and pull factors for health personnel. In an interview with Healthacross management the following impacts with regards to important push and pull factors were identified:

- Generally, cooperation enables optimisation of the use of resources, allowing provision of high quality care in a sector that experiences shortage of personnel and austerity cuts through creative and innovative cross-border solutions;
- Better cooperation enables joint planning and joint solutions in terms of workforce capacity (push factor: personnel have to work overtime due to lack of sufficient capacity (poor working conditions); pull factor: sufficient capacity ensures good working times and conditions);
- Improved capacity at the hospital enables personnel to provide quality care (push factor: low quality care affects professional satisfaction; pull factor: ability to provide high quality care enables high professional satisfaction) and;
- Professional development opportunities for Austrian and Czech professionals, e.g. the endometriosis centre (push factor: lack of development opportunities; pull factor: professional development opportunities attract or retain medical professionals).

In conclusion, the existence of this cross-cooperation between regional governments and hospitals is providing benefits for patients (better access to quality health care), health care providers (better planning of capacity, optimal use of resource) and professionals (better working conditions, professional satisfaction and development opportunities).

Whilst wage increases are out of scope of the Healthacross initiative, it addresses other factors that can exist as either push or pull factors as follows:

- Working conditions: the policy enables better use of resource in the border region, which means less pressure on the work force and more room to provide quality rather than prioritising quantity. An interview with management from Healthacross highlighted that the initiative receives positive feedback from healthcare personnel who feel they are better able to treat patients, which provides professional satisfaction.
- Professional development opportunities: cooperation that focuses on building specialised capacity (such as the endometriosis centre and radiotherapy treatment) provides an opportunity for professionals to teach and learn.

Healthacross management furthermore highlights that, although no studies have been conducted, it is likely that the existence of this cooperation helps retain personnel in this rural region and makes it more attractive (in terms of having a positive unique selling point) when recruiting healthcare professionals.

A7.4.3 Policies at the EU and global level

A lot is being done at the European and international level to increase knowledge and develop policy tools to address the mobility of healthcare professionals.

For example, in this study we have referred to various sources from the World Health Organisation (WHO) that focus on mobility of healthcare professionals, such as policy briefs and policy dialogues. In addition, Healthacross is part of the WHO Regions for Health Network.

EPSU (European Public Service Union) and HOSPEEM (European Hospital and Healthcare Employers' Association) have together signed the Code of Conduct on Ethical Cross-Border Recruitment in recognition of the inequalities and unnecessary burdens on healthcare systems, caused by unethical recruitment practices in the EU¹⁶⁴. Following in 2012, a report on the "Use and implementation of the EPSU-HOSPEEM Code of Conduct on Ethical Cross-Border Recruitment and Retention in the Hospital Sector" was adopted. In light of the 10-year anniversary of the Code of Conduct, the Sectoral Social Partners have published a media release, reiterating their commitment to the Code.¹⁶⁵

EPSU and HOSPEEM both acknowledge the WHO's Code of Practice on the International Recruitment of Health Personnel, which "aims to establish and promote voluntary principles and practices for the ethical international recruitment of health personnel and to facilitate the strengthening of health systems. Member States should discourage active recruitment of health personnel from developing countries facing critical shortages of health workers. The Code was designed by Member States to serve as a continuous and dynamic framework for global dialogue and cooperation."¹⁶⁶

The EU Health Programme funded a joint action platform for collaboration and exchange between Member States to support them to prepare the future of the health workforce. One of the work packages of this platform (called 'Joint Action Health Workforce Planning and Forecasting') was to provide better understanding of collected data at the Member State and European level, with a particular focus on migration and mobility data. This programme closed in 2016 and is currently being followed up by another programme under the name of SEPEN (Support for the health workforce planning and forecasting expert network, to run in 2017 and 2018. This project builds on the Joint Action platform and aims to:¹⁶⁷

Develop expert networking to structure and exchange knowledge and provide a forum to address health workforce challenges;

Map national health workforce policies in all EU countries;

Foster the exchange of knowledge and good practices on health workforce through European workshops;

Provide tailored support to some countries on national implementation of health workforce planning.

The WHO conducted an analysis of the applicability of the WHO Global Code of Practice on the International Recruitment of Health Personnel within a European context, as part of the EU Joint Action on Health Workforce Planning and Forecasting. The following is an excerpt from the reports' conclusions which are most applicable to the EU context. It highlights the need for good workforce planning, retention policies through creating good working conditions, fostering circular migration through institutional level bilateral cooperation and compensation for outgoing countries through national tools and better use of EU cohesion policies.

Box 5. Joint Action Health Workforce Planning and Forecasting conclusions on the applicability of the WHO Global Code of Practice on the International Recruitment of Health Personnel within a European context

¹⁶⁴ The Code of Conduct on Ethical Recruitment is available from EPSU <https://www.epsu.org/article/epsu-hospeem-code-conduct-and-follow-ethical-cross-border-recruitment-and-retention-0> and HOSPEEM <https://hospeem.org/activities/hospeem-epsu-code-of-conduct/>

¹⁶⁵ for the Media Release is available from EPSU: <https://www.epsu.org/article/employers-and-trade-unions-renew-commitment-ethical-cross-border-recruitment-and-retention> and HOSPEEM: <https://hospeem.org/activities/socialdialogue/10-year-anniversary-hospeem-epsu-code-conduct-ethical-cross-border-recruitment-retention-hospital-sector/>).

¹⁶⁶ The full Code is available from the WHO: <http://www.who.int/hrh/migration/code/practice/en/>

¹⁶⁷ This information (and further information) on both programmes is available via: https://ec.europa.eu/health/workforce/overview_en

Some tools developed and used when implementing the WHO Code in relation to third countries cannot be applied because of the special legal framework of the European Union. However, by improving workforce planning and by looking for solutions from a wider range of health workforce measures, the application of the Code's principles can be supported and thus inequalities within the EU could be mitigated.

Within the context of free movement of the labour force, retention measures seem to be the most feasible and effective way of keeping health workforce in the source countries, as migrating is a voluntary choice. Retention can be fostered by creating fair and equitable working conditions. Retention focus can be enhanced at the European level by disseminating good practices and sharing case studies.

Fostering circular migration has been identified as a tool which can also be effective within the EU context. Institutional level bilateral cooperation seems to be the most feasible solution, tailored to the needs of different types/profiles of health professionals. The aims of such cooperation have to be clearly set, the proper time-frame adjusted, and the circle has to be closed by offering in the source country relevant posts with a salary level that reflects the value of the experience gained abroad (which also has to be recognised at the professional level).

The principle of free movement does not make it possible to set up EU systems for financial compensation of source countries for the emigrating workforce (this solution does not exist in other professional areas either). Solutions have to be sought first at the national level (introduction of tuition fees together with loans to finance studies, or in the case of free training, reimbursement of training costs to the state when migrating, etc. could be examples). Ethical recruitment practices have to be sought also at the EU level. Better use of EU cohesion policies and the European Social Fund could support compensating source countries for investments made in training of health workforce. This aspect has to be taken into account when EU Member States decide on the priorities of the operational programmes providing the framework for setting the national spending priorities of EU funding

Source: Joint Action Health Workforce Planning and Forecasting 'The applicability of the WHO Global Code of Practice on the International Recruitment of Health Personnel within a European context'. Available from: http://euhwforce.weebly.com/uploads/2/3/0/5/23054358/150609_wp4_who_applicabilty_report.pdf

Outcomes from a joint event between the Health Workers for All (HW4All) project, EPSU and the European Public Health Alliance (EPHA) on whether and to what extent the ethical recruitment principles contained in the 2010 WHO Global Code of Practice on the International Recruitment of Health Personnel are applicable in the EU context highlight similar key points and call for increased cross-border cooperation, more help from the EU for outgoing countries in strengthening and creating partnerships as well as setting up and improving administrative (e.g. registers, information systems) and educational infrastructure.

A7.5 Conclusions and key policy recommendations

The healthcare sector is experiencing a high shortage of workers and in particular skilled workers. This shortage is only set to exacerbate in context of an aging population. Increasingly, skilled EU migrants make up a greater proportion of the total EU workforce. Without distinguishing between doctors and nurses but rather looking at the sector as a whole, these skilled EU migrant healthcare professionals are predominantly female, but in a sector with a high proportion of female workers EU migrants are more likely to be male compared to their native peers. Skilled EU migrants working in healthcare are most likely to be between 25 and 54-year-old.

Ireland and the UK have the highest proportions of foreign-trained doctors, followed by Sweden and Finland. Available data on nurses shows the UK has the highest proportion of foreign-trained nurses: proportionally more than twice as much as the next country:

Germany. Romanian citizens are one of the largest groups of EU migrant doctors in several countries and annual inflow trends see this number increase. Italian and Greek doctors also make up large numbers of EU migrant doctors, with annual inflows of Italian doctors increasing. Data on nurses show remarkable numbers of Romanian nurses working in Italy and Belgian nurses working in France. Considering the population size of Portugal, Portuguese nurses seem relatively mobile. For both doctors and nurses, patterns of mobility indicate a preference for geographical or linguistic proximity. Student mobility in particular also seems to prefer geographical/linguistic proximity.

The most important push/pull factors that appear to be determining decisions to move are wages, working conditions, professional development opportunities and availability of jobs in the home country. Decisions at the individual level will often be influenced by a range of these factors, as well as personal circumstances such as family considerations.

Outflows of skilled healthcare professionals from outgoing countries cause short and long-term difficulties in meeting demand for healthcare provision. It also risks exacerbating inequality as resources put towards the training of these health professionals fails to obtain a return on investment. This means that countries that already experience harsher economic conditions are left with poorer healthcare (as they cannot meet demand), nor do the skilled professionals they trained pay tax or consume (and therefore invest) in the economy of their home country. Shortages are more strongly experienced in rural areas, as skilled professionals tend to move to more urban areas. This means that these areas are more deprived of adequate healthcare, as well as the aforementioned other economic benefits (e.g. more economic return flows into the system). Therefore, another impact is an increase in divergence between rural and urban areas.

There is very little evidence on strategies to address outflows from outgoing countries, however various healthcare institutions in destination countries employ measures to recruit skilled healthcare professionals from other EU countries. International recruitment agencies specialising in healthcare personnel play a key role in this. The outgoing country is not actively involved.

Strategies addressing outflows in outgoing countries do not seem to exist. Bilateral agreements, if at all present, are ad hoc and limited to a single hospital or medical school. However, cross-border collaboration between health services does exist. An example is the cooperation between the lower Austria and south Bohemia regions. While this collaboration does not focus on the mobility of healthcare personnel per se, it does recognise the underlying push/pull factors creating this cross-border mobility and addresses them to create sustainable healthcare provision in the entire border region.

Mobility of skilled healthcare professionals can help address shortages in a sector where demand for personnel is high across the EU and is only set to increase. However, the benefits of this mobility currently seem to disproportionately fall to destination countries. Recruitment of EU-skilled doctors and nurses help alleviate pressure in these destination countries. In some cases, it can also help alleviate high unemployment rates in outgoing countries. However, this is not a sustainable solution and fails to address the loss of investment for outgoing countries, which are mostly already experiencing poorer economic conditions.

To spread the benefits of mobility of skilled healthcare professionals more equally across the EU, there is a need better workforce planning and retention measures which aim at better working conditions. This is necessary across the board, but especially in outgoing countries.

More bilateral cooperation is needed between outgoing and destination countries that includes an explicit aim to stimulate circular migration. To underpin this cooperation, EU funding could be used to build and strengthen capacity in outgoing countries. Bilateral cooperation does require both outgoing and destination country to be willing participants.

Generally, lessons can be learned from other relevant cooperation projects such as Healthacross, which provides an example for building long-term bilateral cooperation projects that address a range of push/pull factors. The European Social Fund (ESF) and Cohesion Fund (CF) could help to address push factors in outgoing countries, in particular better working conditions and better educational infrastructure providing better professional development opportunities.

Activities as part of this bilateral cooperation could include training sessions in both the outgoing and destination country, other individual mobility actions (e.g. staff exchange) and mutual support for return migration.

Any future framework addressing these issues or facilitating cooperation should include and provide a role to Social Partners, other relevant international organisations (e.g. the WHO) and existing knowledge platforms. These various bodies have amassed a wealth of knowledge on sectoral challenges and existing policies in a national context and have the ability to see the big picture. For the same reason, international recruitment agencies could play a role.

Finally, a continuous dialogue between relevant national, supranational and sectoral organisations and stakeholders is important in order to be able to face new challenges together, for example through the expert network and workshops of the latest project under the EU Health Programme, SEPEN (Support for the Health Workforce Planning and Forecasting Expert Network).

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<http://skillspanorama.cedefop.europa.eu/en/analytical-highlights>

Eurostat data: <http://ec.europa.eu/eurostat/data/database>

OECD data: <http://stats.oecd.org/>

NHS Employers website: <http://www.nhsemployers.org/>

Health Education England website: <https://hee.nhs.uk/>

Annex 8 Case Study: ICT

A8.1 An introduction to the ICT sector

The terms 'IT, ICT, digital economy, e-economy, digital skills, e-skills' and other similar concepts have been widely used and explored in the academic and policy literature, including an important focus on how these trends are transforming the EU economies and labour markets.

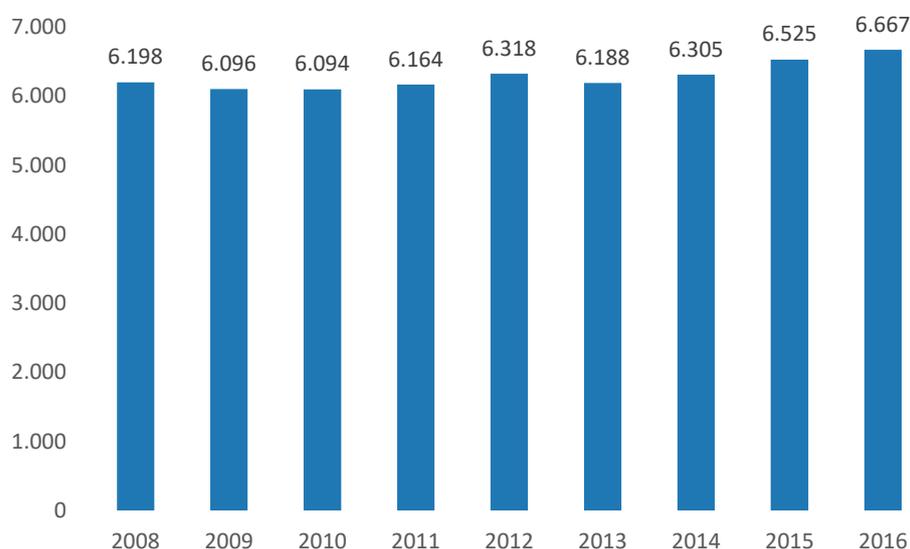
For the purpose of this case study, the focus was defined in relation to ICT professionals working in predominantly ICT-sector firms whose main business and focus of operation is the development, design, application and servicing of ICT based manufacturing, production and services. This definition excludes explicitly the following roles:

- Digital and ICT based roles in other industries and sectors (DG EMPL 2016, ETUI (2016a), Falk, M. and F. Biagi (2015));
- All occupations across the workforce where digital skills are required (see Burning Glass Technologies (2015), Capgemini Consulting (2013), EC (2014), OECD (2016), Pellizzari, M., F. Biagi, and B. Brecko (2015)).

However, the key messages in this case study also have some applicability to these occupations. This focus was chosen because of the study objectives to investigate the flows of skilled workers within the EU, which in this case relates to the mobility of ICT professionals in ICT sector firms (as opposed to mobility of individuals in other industries that require digital competencies).

Employment in the ICT sector has remained relatively stable in the last eight years, despite the economic crisis. The figure below shows a small increase in the total number of employed individuals in the sector, from 6 198 000 in 2008 to 6 667 000 in 2016: an increase of 7.6 %.

Figure 90. Total number of employees employed in the ICT sector across the EU-28 between 2008 and 2016

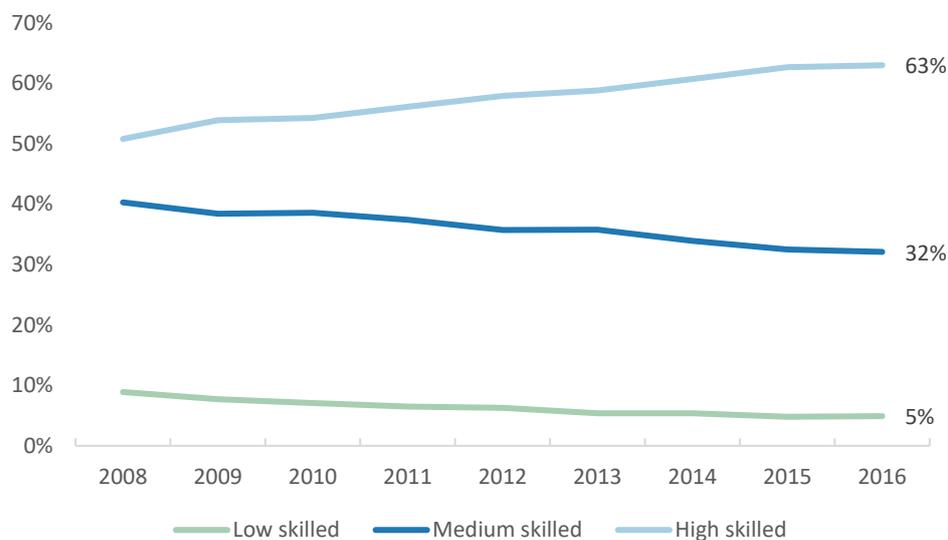


Source: *Employment by sex, age and economic activity (from 2008 onwards, NACE Rev. 2) - 1 000 [lfsa_egan2]*

Notes: Data includes ages 15-64. ICT sector corresponds to NACE=J "Information and communication", only comparable from 2008 onwards (Rev 2).

By far most of those employed in ICT are highly skilled: this is about two-thirds and only appears to be increasing. Medium-skilled and low-skilled employees comprise a much smaller proportion: 32 % and 5 % respectively in 2016.

Figure 91. Proportion of employees employed in the ICT sector across the EU-28 between 2008 and 2016 by skill level (%)

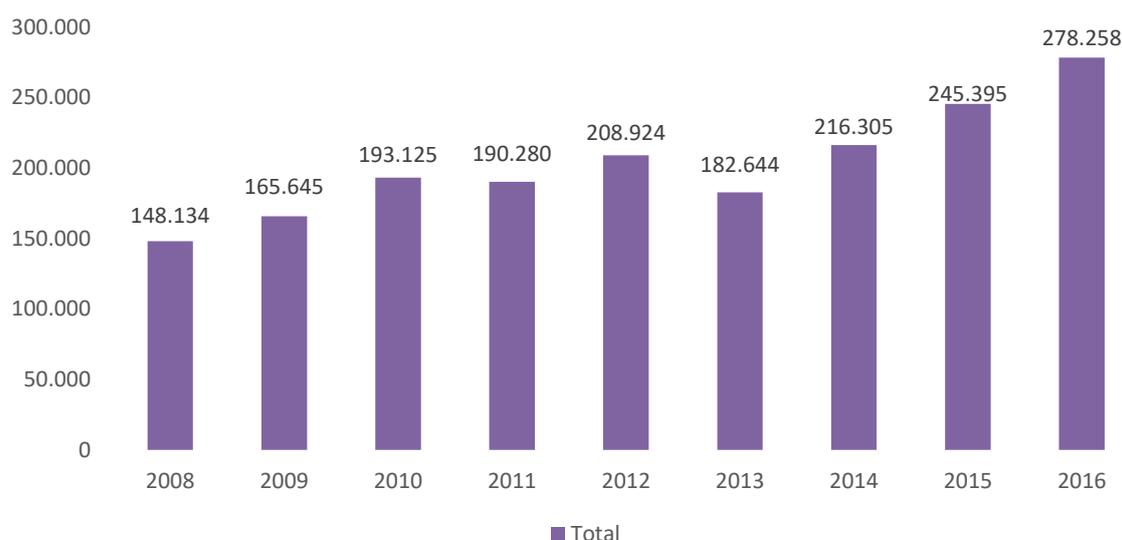


Source: Employees by educational attainment level, sex, age and NACE Rev. 2 activity (%) [edat_ifs_9910]

Notes: Data includes ages 15-64. ICT sector corresponds to NACE=J "Information and communication", only comparable from 2008 onwards (Rev 2). Low-skilled corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level).

From a statistical perspective, mobile ICT professionals are a very small part of approximately 6.6 million strong ICT sector workforce in the EU-28. As shown in Figure 92, in 2016, there were around 280 000 such workers, which was almost double the figure for such workers in 2008 (148 000).

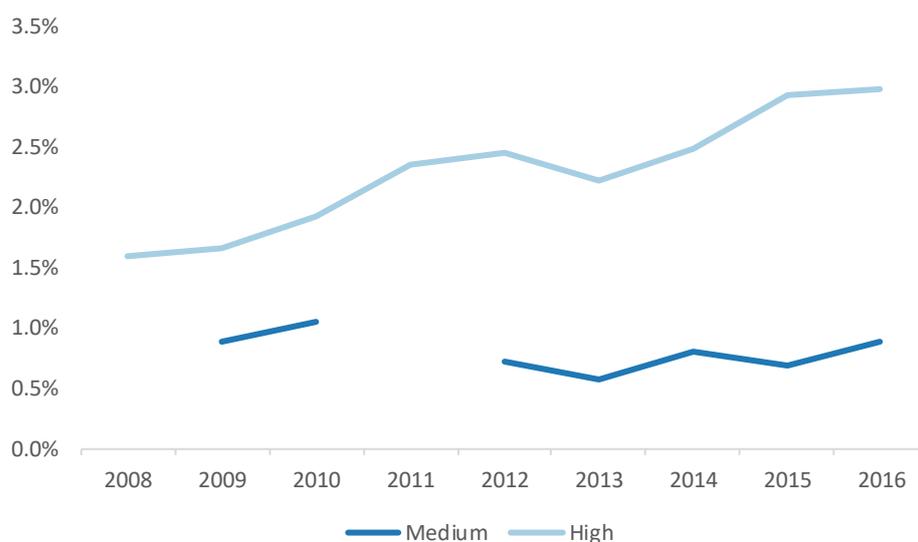
Figure 92. The number of EU migrants (low, medium, high skilled) in the EU ICT sector



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford. Notes: Data includes ages 15-64. Low-skilled corresponds to ISCED 1-2 (i.e. lower secondary), medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level). Method: Numerator: Employed EU nationals (other than reporting country) working in ICT (NACE J category: 'Information and communication') in any of the EU-28 by skill level; Denominator: Employees in ICT in all EU-28.

Overall, the mobility of ICT professionals within EU-28 is rising, especially for high-skilled ICT workers (see Figure 93). Estimates for low-skilled (and for some years, medium-skilled) ICT EU migrants are unreliable, reflecting their very small numbers. Hence, they are not or only partly presented in the figure.

Figure 93. Medium and high-skilled EU migrants as a proportion of all workers in the EU ICT sector

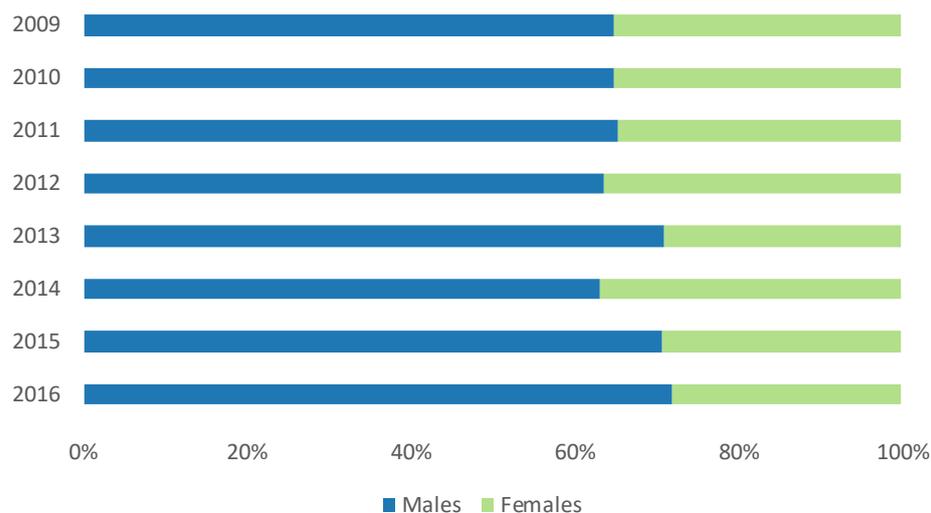


Source: EU LFS microdata, by The Migration Observatory at the University of Oxford. Notes: Data includes ages 15-64. Medium skilled corresponds to ISCED 3-4 (i.e. upper secondary) and high skilled corresponds to ISCED 5-8 (i.e. third level). Method: Numerator: Employed EU nationals (other than reporting country) working in ICT (NACE J category: 'Information and communication') in any of the EU-28 by skill level;

Denominator: Employees in ICT in all EU-28. Estimates for medium-skilled EU migrants working in ICT were unreliable and have been removed for 2008 and 2011. The figure for medium-skilled EU migrants working in ICT in 2013 has low reliability.

Intra-EU ICT sector mobility has a clear gender dimension with more male ICT workers moving to another EU Member State, compared with women (see Figure 94). In 2016, 72 % of all migrant EU ICT workers were male, a proportion which has increased since 2009, whereas the proportion of females has decreased. This also reflects the overall gendered employment patterns in the ICT sector, not just migrant workers, which tend to be dominated by men.

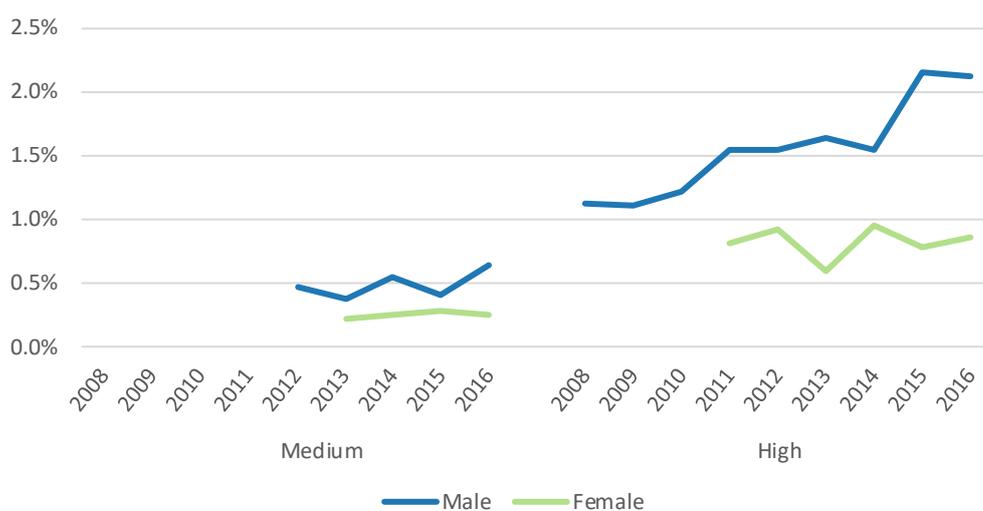
Figure 94. Proportion of male and female EU migrants working in the EU ICT sector



Source: EU LFS microdata, by The Migration Observatory at the University of Oxford. Data includes ages 15-64. Method: Numerator: Male/female EU nationals (other than reporting country) employed in ICT (NACE J category: 'Information and communication') in all EU-28 by skill level. Denominator: Male/female EU migrants employed in ICT (NACE J category: 'Information and communication') in all EU-28. Numerator: All EU nationals (other than reporting country) employed in ICT (NACE J category: "Information and communication") in all EU-28 by skill level. 2008 is not available as estimates for female EU migrants working in ICT are unreliable.

This gendered employment pattern also especially manifest in the higher skills levels (see 0). However, data is not available for low-skilled and its availability is limited for medium-skilled and female workers as estimates are unreliable. Data that can be shown confirms what is shown in Figure 94; that is most EU migrants working in ICT are high-skilled and male, with the gap between male and female high-skilled ICT workers increasing in 2015 and 2016.

Figure 95. Skilled EU migrants as a proportion of all workers in the EU ICT sector by sex



Source: EU LFS microdata, data by The Migration Observatory at the University of Oxford. Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level)). Numerator: Employed EU nationals (other than reporting country) working in ICT (NACE J category: 'Information and communication') in all EU-28 by sex. Denominator: Employees in ICT in all EU-28. Data for medium-skilled males (2008-2011) and medium-skilled females (2008-2012) and high-skilled females (2008-2010) are unreliable and cannot be presented. All estimates for medium-skilled EU migrants have low reliability (except males in 2016) and should be interpreted with caution.

From a geographical perspective, skilled, EU-migrant ICT workers are concentrated in few Member States. The top destination country is the UK with 82 100 workers, followed by Germany; Spain (24 200); France (18 200); and Ireland (12 600). However, as a proportion of the country's ICT workforce, migrant ICT workers are mostly prevalent in Luxembourg, Ireland, Austria, Belgium and only then, the UK.

Table 24. Top five countries with the largest proportion of skilled EU-migrant workers as a proportion of their ICT workforce (2016)

Country	%
LU	38.7 %
IE	14.7 %
AT	8.1 %
BE	6.9 %
UK	6.6 %

Source: EU LFS microdata, by The Migration Observatory at the University of Oxford. Notes: Data includes ages 15-64. 'Skilled' includes medium skilled (ISCED 3-4 (i.e. upper secondary)) and high skilled (ISCED 5-8 (i.e. third level)).

A8.2 Importance of ICT sector to Europe's economic growth

ICT underpins economic growth of other sectors, in particular increasing productivity of a wide range of sectors (it is unlikely that the service sector would have grown and increased its productivity over the past decade without the enabling technologies and devices produced in the ICT sector). Given this, ICT has the potential to deliver increased economic growth in the EU. Indeed, releasing the full potential of ICT and digitalisation both in the ICT sector and across the economic sectors can have a positive

net employment effect (DG EMPL 2016, Koutroumpis, P., A. Leiponen and L. D. W. Thomas (2012), JRC PREDICT reports). EU businesses are missing out on the chance to grow by not taking full advantage of digital technologies (Strategic Policy Forum 2016, ETUI 2016 b). Literature noted ¹⁶⁸the rise in the EU-US labour productivity gap since 1990s as mainly due to three factors, all of which are (directly or indirectly) ICT related (also Evangelista, R., P. Guerrieri and V. Meliciani (2014)). This includes the fact that the US have experienced a higher productivity growth rate in the ICT producing sector; higher investments in the US in the ICT capital and a higher rise in the productivity in the sectors which are heavily ICT-based (such as services). ICT was becoming less of a growth-driver in the EU during a period in which the US-EU labour productivity gap was increasing.

The use of ICT and digital empowerment was also found to have the potential not only for major positive economic effects, but also to deliver inclusive growth through including disadvantaged groups in the labour market (Evangelista, R., P. Guerrieri and V. Meliciani (2014), Koutroumpis, P., A. Leiponen and L. D. W. Thomas (2012)). Although there is some literature identifying potential displacement effects of the ICT skills rise, most concur on the positive impact of ICT-led growth (see for example Michaels, G., A. Natraj and J. Van Reenen (2014), Pantea, S., F. Biagi, and A. Sabadash (2014)).

A8.3 Skills challenges in the ICT sector

One of the key reasons preventing the full potential of ICT driven economic growth in Europe is the range of skills shortages experienced in the ICT sector.

At the core of the challenge is the high level of skills required of ICT professionals.¹⁶⁹ The sector tends to have more workers with higher levels of education compared to other sectors and the average workforce in the EU-28, whilst the share of employees with low education levels (i.e. below lower secondary education) is significantly below that of the average workforce. A study by COWI (2015) found especially high-educational levels in specific ICT occupations, such as computer programming, consultancy and related activities (62); - data processing, hosting and related activities and web portals (631); In these two ICT professions, 66 % and 53 % respectively of those employed have amongst the highest educational level - well above the average of all employed workers (32 %, according to 2013 data).

This high-level of skills demand amongst the ICT professionals is also confirmed by other sources. Specifically, the Digital Skills Survey which investigated the digital skills existing in all European workplaces using a self-reporting approach (DG CONNECT 2016). It also investigated the patterns of specialist digital skills – which included in the definition of such skills as programming and software development, and the design and maintenance of ICT architecture for the workplace. The survey found a significant proportion of workplaces require workers to possess this type of digital skills where they are employed as professionals and technicians (43 % and 44 % respectively), and to a lesser extent, as managers (33 % of workplaces). Workplaces also require specialist digital skills among skilled agricultural workers and clerical workers (25 % and 22 % respectively). Smaller proportions of workplaces require individuals to possess specialist digital skills where they are employed as sales workers (16 %), building workers (11 %), plant machine operators (10 % of workplaces) or in elementary occupations (7 %). Specialist digital skills are more frequently required in the 'design and maintenance of ICT for the workplace'. The importance assigned to advanced digital skills increases significantly (all other characteristics being equal) for large-sized workplaces, and for workplaces operating in 'information and communication, professional, scientific and

¹⁶⁸ Biagi (2013).

¹⁶⁹ COWI (2015).

technical activities, administrative and support service activities' and 'manufacturing and utilities' macrosectors.

Importantly, the Digital Skills Survey also found digital skills gaps in the higher end and medium-skilled occupations. Overall, the vast majority of European workplaces (85 %) reported that all of their employees are fully proficient at performing job tasks involving the use of digital technologies. However, around one in seven workplaces (15 %) considered that some of their staff are not fully proficient and reported digital skills gaps in their workforce. Broadly speaking, at an occupational level, digital skills gaps are more likely to be found in the high-skilled (managers, technicians) and in medium-skilled (clerical workers, sales workers) occupations, and to a lesser extent in the low-skilled occupations, with the exception of workers in elementary occupations.

Furthermore, the demand is increasing for an even higher level of skills in the ICT sector. Workers are expected to remain up-to-date on the latest technological developments and multiple non-technical skills are required in combination with ICT skills, e.g. the ability to work in a team, problem-solving, communication skills, and skills to support business professionals are now essential. At least in some European countries, the demand for low-end developers and database administrators is replaced by demand for workers with higher level ICT skills such as business analysts, sales specialists and high-end developers (COWI 2015). Importantly, COWI 2015 also found significant variations between the European countries in this respect, depending on where the countries ICT sectors are within the different phases in their product lifecycle (more or less advanced).

This wide range of skills and competencies required from ICT professionals is also confirmed by other sources. According to Cedefop's European skills and jobs survey (ESJS), the key five skills for ICT professionals are advanced ICT skills, problem solving, moderate ICT skills, learning and job-specific skills (EU Skills Panorama 2016a). Michaels, G., A. Natraj and J. Van Reenen (2014) furthermore found that industries that experienced the fastest growth in ICT also experienced the fastest growth in the demand for the most educated workers and the fastest falls in demand for workers with intermediate levels of education.

The high level of skills demanded, coupled with the lack of adequate labour supply and education and training systems cannot keep up with the industry requirements and has resulted in significant ICT professional skills shortages.

ICT professionals are consistently amongst the top vacancies reported by the Public Employment Services (even though PES have limited a share of vacancy markets in most European countries, particularly in the higher skilled sectors). For example, amongst the top shortage occupations reported by the Public Employment Services across Europe (EC 2016), the highest ranking in 2016 and 2015 were software and applications developers (reported as the top shortage in 21 countries¹⁷⁰); 16th were database and network professionals as reported in 10 countries¹⁷¹. Similarly, a survey of over 100 IT companies across Europe in 2015-2016 showed that the domains where the gap between supply and demand were highest were in software development, business/ management (i.e. project management, strategical thinking, agile methodologies etc.) and cyber security.¹⁷² On the latter, The International Information System Security Certification Consortium (ISC)2 forecasts an overall cybersecurity skills shortage of 350 000 workers in Europe by 2022.

Hüsing, Korte and E. Dashja's (2015) analysis of job vacancy data also showed an increase in 'Management' and 'Plan/Design' positions of information security management and governance, and architecture, analysis, where a growth of 459 000 jobs was noted over 2010-2013. They also found a high demand for 'core ICT jobs', such as software and application developers, web and multimedia experts, database

¹⁷⁰ BE Actiris, BE Le Forem, BE VDAB, CY, DE, DK, EE FR, HR IE, IS, IT, LT, LU, LV, NL, NO, PL, SI, SK, UK.

¹⁷¹ BE Actiris, BE Le Forem, BE VDAB, EE, IS, LT, LU NL, PL, SK.

¹⁷² <http://www.ecfalliance.org/20161215-0>

designers and administrators, system administrators and network and operations practitioners. In vacancy data the most sought-after IT positions currently are software engineering, web development jobs and application administrators. Demand for ICT skills in recent years has been strong, with the growth in the core IT jobs up to 4 % p.a. - the growth in management jobs is up to 8 % p.a. However, demand for medium-level skilled associate and technician jobs is declining.

A8.3.1 Available future projections

Future projections foresee a continuous strong demand for ICT professionals, alongside with new ICT skills requirements. According to Cedefop, ICT professionals are among the most in-demand workers in the EU. All member states apart from Estonia, Greece, Portugal, and Finland are likely to face shortages of these workers (EU Skills Panorama 2016a). From 2005 to 2015, employment for ICT professionals grew by one third. From 2015 to 2025, a 10 % growth is expected, translating into some 400,000 new jobs. In addition to these new jobs, replacement demand is expected to vacate around 1.5 million jobs, quadrupling the total demand for ICT professionals during the 2015-2025 period.

Hüsing, T., W. B. Korte and E. Dashja (2015) predict that the ICT workforce in Europe will grow from 7.5 million in 2014 to 8.2 million in 2020, of which 6.1 million will be ICT practitioners and 2.1 million ICT management and analysis level employees. They forecast a modest but steady job growth of on average 112,000 ICT workers per year until 2020, a figure which is curbed by the available supply of ICT professionals. More than 750 000 more jobs could be created if the ICT professional skills were available. The bottlenecks are identified as largest in the UK and Germany, but also Italy. Taken together, these three countries will account for almost 60 % of all vacancies in Europe.

The ICT industry is also facing a need for new, highly-specialised ICT skills, i.e. big data analytics, cyber-security, coding/programming and cloud computing (Strategic Policy Forum 2016, e-skills UK (2013), Forfás and the Expert Group on Future Skills Needs, Assessing the Demand for Big Data and Analytics, 2014)). The study drew together several other estimations of new skills requirements in the ICT sector. According to the US Bureau of Labour Statistics, the number of computer programmer jobs in the US is expected to grow by 30 % from 2010 to 2040. As a guide to the likely skills demand, the European Commission expects the market for big data to grow by 40 % each year, reaching USD 16.9 billion worldwide between the years of 2015 to 2041. Big data analytics skills are particularly (and increasingly) sought-after in the labour market. In the UK alone, the number of big data analysts working in larger firms is expected to increase by more than 240 % over the next five years. Another recent study in Ireland pointed out that, under a high growth scenario, demand from businesses expanding, as well as replacing people, could result in 21 000 job vacancies for big data analysts in the run-up to 2020.

A8.4 Policy responses to the skills challenges in the ICT sector

The scale and depth of skills challenges in the ICT sector has resulted in a response at the strategic policy level, both at the European and national levels, as well as initiatives at the company level.

At the policy making level in Europe, a Digital Skills and Jobs Coalition was established by the European Commission.¹⁷³ The Coalition brings together member states, companies, social partners, non-profit organisations and education providers to share practises in promoting digital skills as well as taking concrete actions in terms of pledges to address skills shortages in the ICT professions (e.g. providing more training courses),

¹⁷³ <https://ec.europa.eu/digital-single-market/en/digital-skills-jobs-coalition>

encouraging Member States to adopt their own ICT skills strategies as well as aiming to promote dialogue between education-system stakeholders and ICT companies.

Another key action taken by the European Commission to promote mobility amongst ICT professionals across sectors in the economy and/or EU Member States, is to offer a common European framework for ICT professionals in all industry sectors (EU Skills Panorama 2016a).¹⁷⁴

At the national level, a range of national coalitions for digital skills, ICT sector skills councils, expert groups have also been launched:

- National coalitions (or coalitions at the regional level) launched in 17 member states¹⁷⁵
- ICT sector skills councils such as e-skills in the UK
- Expert groups to investigate the key ICT skills shortages and put forward recommendations to address these (Ireland), ICT skills audits (Malta)
- Specific measures to make ICT professions more attractive:¹⁷⁶ to work with the unemployed and public employment services to attract more unemployed to ICT jobs¹⁷⁷; interventions in the education system to raise ICT talents from a young age.^{178,179}

At company level, the key ICT sector response to the skills challenges has been intra-company training, skills development schemes and academies, with employers focusing on hiring and retaining already highly-skilled personnel and keeping them up to date with the latest developments (COWI 2015, for example, the industry recognised IBM certification and CISCO CCNA Security certification).

A DG CONNECT (2016) study found that amongst the ICT companies that have taken action to tackle digital skills gaps, training is the most common (see Table 25). In particular, on-the-job training was used by 81 % of workplaces taking action to address digital skills gaps; external training and development programmes were mentioned by 61 % of workplaces. Recruiting new staff with the necessary skills or hiring temporary staff (where the intra-EU mobility would play a role) was an option taken up by far fewer

¹⁷⁴ European Commission 'Towards a European Quality label for ICT industry training and certification', viewed 1 June 2016.

¹⁷⁵ <https://ec.europa.eu/digital-single-market/en/national-local-coalitions>

¹⁷⁶ For example, IT professionals working in Romania have income tax exemption. In 2017 there were some amendments to the regulation to make it broader, see <http://www.fredpayroll.com/income-tax-exemption-it-employees/>

¹⁷⁷ ICT Professionals - FTI (Spain) programme worked closely with State Employment agency (to send the jobseekers) and the industry (to shape the curricula): <https://ec.europa.eu/digital-single-market/en/content/ict-professionals-train-unemployed-people-digital-skills-and-commit-hire>

In Bulgaria, a partnership between BAIT - Bulgarian Association of Information Technologies and State Employment Agency was established to inform better people about digital opportunities in their own country. BAIT stemmed from a clear need to train the labour mediators from labour offices on how to handle information re-skilling and up-skilling opportunities available in the country. Thanks to this pilot, all labour offices throughout Bulgaria provide information about all current training sessions and courses in the field of information and communication technologies, conducted by the leading companies in the sector, the catalogue was gathered by BAIT; <https://ec.europa.eu/digital-single-market/en/content/eskills-jobs-bulgaria-national-online-platform-partnership-national-employment-agency>

¹⁷⁸ IT Talents Training Camp in Bulgaria is an intensive education program for software development beginners. The candidates go through a selection process divided in several steps including two logic tests and an interview by HR. The students who successfully complete the course are offered a career opportunity immediately after the graduation – a full-time job in one of more than 60 Bulgarian IT companies. The company establishes lasting relationships between companies and junior programmers, responding to the continuous shortage of qualified IT professionals. The education is free, while the partner companies cover the costs of the training of the hired students.

¹⁷⁹ A recent survey has shown that 15 EU countries have already integrated coding in their school curriculum, 9 of which have done this at the primary school level, and 12 at the upper secondary education level. <https://www.euractiv.com/section/digital/infographic/infographic-coding-at-school-how-do-eu-countries-compare/>

workplaces – only 38 % and 28 % of workplaces respectively, while outsourcing tasks involving ICT was used by almost 29 % of ICT sector workplaces taking action to tackle digital skill gaps. Actions such as hiring new staff (both on a permanent or temporary basis), outsourcing tasks or seconding staff, were more frequently undertaken by larger-sized workplaces than by micro-sized workplaces. For example, 88 % of large-sized versus 32 % of micro-sized workplaces recruited new staff.

Table 25. Workplaces that have taken action to tackle digital skill gaps by type of action, size and sector¹⁸⁰, EU-28 (% of workplaces with digital skill gaps which undertook actions)

Sector	On the job training	External training	Changing working practices	Reallocating tasks	Recruiting new staff	Hiring temporary staff	Outsourcing of tasks	Secondment of employees	Other
A. Agriculture (%)	86.9	85.9	85.2	2.3	72.7	83.8	84.0	1.2	1.1
C. D. Manufacturing and utilities (%)	89.4	63.6	50.8	48.6	50.0	36.1	38.3	16.4	13.4
F. Construction (%)	80.1	56.9	46.7	46.2	40.4	27.5	30.4	19.4	9.8
G. H. I. Commerce, transport, accommodation and food service (%)	82.6	51.6	44.8	43.1	34.8	19.7	27.3	11.0	11.7
J. M. N. Information and communication; Professional, scientific and technical activities; Administrative services (%)	81.4	60.6	52.5	52.2	38.3	28.4	29.3	13.9	12.2
P. Q. Education and human health (%)	93.0	69.9	53.2	50.9	39.9	17.8	24.9	15.5	6.6
Total (%)	84.4	58.3	48.8	47.2	39.0	24.6	29.3	13.8	11.2

Q28. Which of the following steps is your workplace taking to overcome the fact that some of its employees are not fully proficient in carrying out tasks involving ICT use? (Please select all that apply)

Number of valid responses: 1,486

N=1,476,489

Source: DG CONNECT (2016) European Digital Skills Survey (weighted values)

In this respect, several industry examples are illustrative of this approach to invest in training of the companies' own workforce (see Box 62 below):

¹⁸⁰ The aggregate sectors are reported in the original source.

Box 6. CISCO Networking Academy¹⁸¹

The Academy has been established for around 20 years ago and has by now trained over 1.5 million students. There are around 9 600 academies around the world with about 20 000 instructors. The Academy was established with the aim of corporate social responsibility in mind to offer online learning platform for a variety of beginner and advanced ICT skills, including programming, networking, database administration and others. The courses are developed based on the research exercises to promote ICT market intelligence and skills needed in the market. There is also an emphasis on teaching soft skills required by the sector, such as team working, critical thinking, and decision-making. The online learning is offered free of charge and CISCO certificates obtained are recognised globally in the ICT sector.

The Academy offers a support system to its instructors, and the courses are designed to be very close to the actual working world of ICT, covering current topics and the latest concepts (e.g. Internet of Things). It also uses industry wide products, alongside CISCO products hence training students in industry-wide services. The challenges faced by the Academy relate to:

- Ensuring that sufficient time is allocated to the instructors in their workplaces;
- Ensuring instructors are given time to undertake further training;
- The lack of industry-neutral quality assurance body of CISCO Academy learning concept.

The mobility aspect is not explicitly tackled in the Academy, but the Academy also contributes to raising the skills levels of future CISCO employees, as some Academy graduates obtain employment with CISCO, alongside moving to other IT companies and non-ICT careers.

Box 7. Digital Skills Academy (across Europe)¹⁸²

Digital Skills Academy pledges to increase the number of digitally-skilled employees across Europe by upskilling 8,400 working professionals across Ireland and other European countries including France, Germany, Greece, Spain, Portugal and the United Kingdom by the year 2020. This goal will be achieved through the delivery of Digital Skills Academy's innovative, industry-linked digital technology online degree programmes, which have proven capabilities to deliver high employment outcomes for participants while simultaneously boosting the digital capabilities of partner companies. The digital skills gap across Europe will be reduced and the European digital economy will be strengthened as part of this initiative.

It is also noteworthy that few employers in the ICT sector are taking action to address the ICT skills shortages. DG CONNECT (2016) study found that the vast majority of all workplaces in the European Union have not taken any steps to improve the digital proficiency of employees (77 %) ¹⁸³, with only 11 % reporting not having taken any steps, although they have plans to. Only 12 % of total workplaces have taken action to tackle the digital skills gaps. This was slightly higher at 18.4 % in the information and communication; professional, scientific and technical activities; administrative services sector (the closest approximation to the ICT sector). The study found also a strong positive correlation between the size of the workplace and the probability of undertaking steps to tackle digital skills gaps. This has serious negative implications for the ICT

¹⁸¹ <https://www.netacad.com/>

¹⁸² <https://digitalskillsacademy.com/>

¹⁸³ This includes both workplaces reporting digital skills gaps (15 %) and those workplaces which reported having no digital skills gaps (85 %).

sector, which is characterised by the presence by a small number of global brands with the majority of firms being SMEs or start-ups (see JRC PREDICT reports on business demography in the ICT sector).

A8.5 The role of intra-EU migration in the ICT sector

The role of intra-EU migration in the ICT sector is not prominently reflected in the policy and academic ICT literature and national ICT-sector policies and company initiatives. The focus lies much more on closing skills gaps via own staff training, in-company development (as discussed in the previous section) or recruitment of foreign skilled workers from third countries. The issue of intra-EU migration in the ICT sector has also not featured prominently on the trade union agenda (see for example UniEuropa 2009) or in the work of ICT sector organisations (for example, it has not been discussed in the work of CEPIS Council of European Professional Informatics Societies). In the work of the Digital Skills and Jobs Coalition at EU level the issue of mobility has also not featured prominently, likely reflecting the members' lack of interest in mobility and focus on the upskilling and on-the-job training of existing employees (for example, there are no current initiatives relating to the mobility amongst the actions pledged by the coalition members).

The lack of attention to intra-EU migration aspect in the ICT sector is surprising given that the ICT sector is believed to be particularly susceptible to mobility (COWI 2015). This is considered to be due to relatively high wages in the sector where the differences between wage levels in the EU Member States is one of drivers of mobility within the EU. ICT worker mobility from typical low wage countries in the Eastern European Member States to higher wage countries could be induced by large differences in salaries and general expected quality of life (COWI 2015). On the other hand, high-wage countries experience constant global pressure to minimise costs, which may induce companies to outsource or reallocate jobs to minimise cost levels. However, solid empirical research in this aspect is lacking.

Furthermore, literature analysing the intra-EU migration has not paid great attention to the ICT sector (ETUI 2015a, Canetta, E.; Fries-Tersch, E. and Mabilia, 2014, Galgóczi B., Leschke J. and Watt A. 2014, Kahanec and Zimmermann, 2011, Kaczmarczyk, P., & Lesińska, L. (2013)). The literature in general tends to focus on the geographical patterns of mobility or skills levels of mobile workers with emphasis on the east-west migration, without necessarily exploring the sectoral dimension of mobility (partly also due to the lack of good quality data available). When the analysis of sectoral mobility is undertaken, it has focused on the sectors with predominantly lower-skill levels (e.g. agriculture, hotels/catering) (ETUI 2015a, 2015 b, Friberg and Eldring (2013)). Such analyses have found evidence to clearly contradict assumptions about a 'knowledge driven migration' in the EU – and more the trend towards the over-qualification and the corresponding underutilisation of intra-EU migrant workers' skills (ETUI 2015 b).

Evidence from several countries reviewed in the case study illustrates the lack of systematic specific emphasis on intra-EU migration aspect in the ICT sector.

In Austria, the ICT sector is facing skills shortages across the range of occupations¹⁸⁴. Despite skills shortages and high-wage premiums, employers are generally reluctant to recruit from abroad. Only one in five employers consider recruiting from abroad when faced with skills shortages as most companies are small or have little experience with recruiting foreign labour. Also, candidates from abroad are perceived to not have the right skills for the Austrian market (OECD 2014b). In addition, a preference for German-language skills and qualifications recognised in Austria as well as the perception that international recruitment is complex and unreliable contribute to this. Initiatives to

¹⁸⁴ <http://www.migration.gv.at/de/formen-der-zuwanderung/dauerhafte-zuwanderung/fachkraefte-in-mangelberufen/mangelberufsliste-2017/#c2816> ; <https://www.karriere.at/blog/it-fachkraefte-2015.html> ; <https://www.hays.at/personaldienstleistung-aktuell/fachkraefte-index-at>.

attract skilled workers so far have focused on newly arrived migrants in general, have been of small-scale and mostly focussed on Vienna (Vienna expat centre; career services from the Austrian Conference of Universities; labour integration offices; official migration website). The services offered to foreign workers are aimed at all foreigners, without differentiating necessarily between EU and third country nationals, for example:

- General website aimed at EU mobile workers providing information on mobility, working and living conditions in Austria: <http://www.migration.gv.at/de/formen-der-zuwanderung/mobilitaet-innerhalb-der-eu/>
- PES website aimed at the foreign workers: <http://www.ams.at/service-arbeitsuchende/auslaenderinnen>

A similar situation was found in Germany where employers declaring shortages have not considered recruitment from abroad (either from EU or third countries), in part, due to their insistence on German-language skills and specific qualifications, and in part to a perception that international recruitment is complex and unreliable (OECD 2013). This is despite the ICT shortages faced, as documented by a number of studies documenting IT shortages in Germany¹⁸⁵. Overall, as highlighted by one interviewee in this study, only a few IT professionals are immigrating from other EU Member States. Companies that need IT technicians can buy their services internationally, as the market is entirely globalised and mobile. Another aspect is that, there is diminishing business case for any European migration of ICT professionals as the physical location of the business is becoming increasingly irrelevant. This notion is supported by another interviewee, employed by a major German IT service provider. Rather than struggling with convincing other European developers to move to Germany, they would buy their services directly in their country of living. Furthermore, there is a strong trend towards large-scale recruitment of IT professionals in Asia based on the availability of large pool of talent. Underlining this notion, one interviewee stated: *"while we can easily recruit 4,000 developers in Asia over a couple of months, this would hardly be feasible in the European labour market at all."*

The existing measures to attract skilled workers from abroad do not necessarily differentiate between EU and third-country nationals, and are aimed at skilled workers in general, thus covering ICT professionals. For example, Germany has started a general initiative on securing skilled labour (covering all migrants in all shortage professions, IT professionals including) 'Skilled Workers Offensive'.¹⁸⁶ Furthermore, the German Public Employment Service has a special division dealing with attracting skilled workers across all sectors to Germany (ZEV).¹⁸⁷

Nevertheless, individual initiatives to attract specifically skilled ICT workers from abroad exist at the national level. In Ireland, the Tech/Life Ireland is a recent initiative of the Government of Ireland under the ICT Skills Action Plan.¹⁸⁸ It is funded by the Department of Jobs, Enterprise and Innovation in partnership with Enterprise Ireland, IDA Ireland and the Irish Technology Industry. It provides a hub of activities to promote technological ecosystem in Ireland, through several activities:

- Providing information and support to foreign technology workers interested in coming to work in Ireland and companies willing to invest in the Irish technology sector– without differentiating between EU and third-country nationals;

¹⁸⁵ <http://www.iab.de/de/publikationen/themen.aspx>

¹⁸⁶ <http://www.bmwi.de/Redaktion/DE/Dossier/fachkraeftesicherung.html>;
<http://www.bmwi.de/Redaktion/DE/Dossier/fachkraeftesicherung.html>; <http://www.make-it-in-germany.com/>

¹⁸⁷ <https://www3.arbeitsagentur.de/web/content/DE/service/Ueberuns/WeitereDienststellen/ZentraleAusland-sundFachvermittlung/index.htm>

¹⁸⁸ <https://techlifeireland.com/tech-in-ireland>

encompassing information on immigration rules, living and working conditions in Ireland, school system;

- Providing access to jobs and vacancies in the Irish tech sector, free of charge online and highlighting the key IT shortages (Top five most in demand skills in Ireland);
- Holding offline and online events, networking opportunities and discussions about the development of the Irish technology industry.

At European level, individual IT mobility support initiatives have been identified.

The European Digital Job Fair took place in November 2015 and was organised by DIGITALEUROPE in collaboration with EURES Spain, Brainport and AMETIC under the Grand Coalition for Digital Jobs, an initiative of the European Commission¹⁸⁹. The event was hosted and sponsored by Telefónica, and in partnership with Huawei, Activate (a Google's initiative), and Microsoft. The fair provided an opportunity to foster ICT worker mobility in the EU by enabling digitally skilled people from Spain to interview for jobs available in companies from Germany, the Netherlands and the UK, which face a high demand of digital technology experts. The anecdotal feedback from one interviewee contacted for this study about the fair suggested that there were successful job and candidate matches during the fair, as many useful contacts took place, with the advantage of having direct contacts and exchanges between the jobseekers and potential employers. There were plans to repeat the fair in Portugal but this was not implemented due to the lack of funding. Currently, the Digital Coalition for Skills and Jobs is not planning to repeat the fair.

The recently launched Digital Opportunities Scheme by DG CONNECT¹⁹⁰ is also pertinent in this respect, as it offers cross-border exchanges and traineeships for students from universities in ICT companies in other countries. Traineeships' contents are defined as broadly digital components, therefore not necessarily very specific to the IT sector, this allows a degree of flexibility for both students and receiving companies. They are funded under Horizon2020 framework, implemented through Erasmus+ programme. The scheme is open to all Erasmus+ programme countries and to the Horizon 2020 associated countries thus implying both intra-EU and third country mobility dimension.

Recommendations

Around 280 000 mobile ICT professionals are a very small part of around 6.6 million strong ICT-sector workforces in the EU-28. However, the mobility of ICT professionals within EU-28 is on the rise, especially amongst the highly-skilled workers. Most migrant ICT workers are male. They are also highly concentrated in few top destination countries, such as the UK, Germany, Spain, France and Ireland.

The ICT sector is critical to the economic growth, requiring a highly-skilled workforce, and is experiencing a series of skills shortages, including new skills needs developing on a continuous basis, given the rapid technological change in the sector (e.g. cybersecurity, big data analytics, cloud computing) as well as core IT professions such as software and application developers, web and multimedia experts, database designers and administrators, system administrators and network and operations practitioners. IT occupations are consistently on the top demanded occupations amongst the vacancies reported to the Public Employment Services. The future demand for IT professionals is likely to remain.

At the policy level, coalitions to address these skills challenges have been established at the European and national levels, and specific initiatives to address the lack of qualified workers have been taken (e.g. European qualification framework). At company

¹⁸⁹ <https://www.europeanjobdays.eu/en/events/european-digital-jobs-fair-madrid>

¹⁹⁰ <https://ec.europa.eu/digital-single-market/en/digital-opportunity-traineeships-boosting-digital-skills-job>

level, the key response has been to upskill existing employees with employers focusing on hiring and retaining already highly-skilled personnel and keeping them up-to-date with the latest developments. Recruiting new staff is not necessarily a top option taken by the companies. Also, few employers in the ICT sector are taking any action to address the ICT skills shortages.

Intra-EU migration in the ICT sector is not prominently reflected in the European/national ICT sector policies and company initiatives. The focus lies much more on closing skills gaps via own staff training, in-company development (as discussed in the previous section) or recruitment of foreign skilled workers from third countries. Literature analysing the intra-EU migration has also not paid attention to the ICT sector. Employers, especially of small and medium size, have little experience with recruiting foreign labour, also candidates from abroad are perceived to not have the right skills or qualifications in the national market. Furthermore, given the increasing delocalisation of IT businesses, it is easier for employers to buy in specific IT services directly from the suppliers abroad or outsource the services to third countries with large IT workforce (e.g. in Asia).

The existing measures to attract skilled workers from abroad tend to cover both EU and third-country nationals, and are aimed at skilled workers in general, thus also including but not specifically targeting ICT professionals. However, considering the cost of the ICT sector skills gap and the opportunities which increased IT sector mobility could offer to close these gaps, the potential of migration of ICT workers within the EU to reduce these costs of non-action is not being fully exploited.

Robust future policy action could be considered in following areas:

- Opportunities to promote shorter-term exchanges between companies and individuals in different Member States, akin to the traineeship schemes, where mobility for professionals could be more temporary, project/ task based or virtual, without losing the social security entitlements in the home country. This would also allow to respond to the emerging new forms of employment in the sector, such as crowd-working.
- Reverse gender patterns in the intra-EU ICT migration, in conjunction with overall ICT sector initiatives to improve its gender balance: by investigating the successes of existing initiatives to attract more women and general measures to support women's mobility in the labour markets across Europe (which is often tied to family responsibilities and hence requires adequate childcare structures).
- Cross-border mobility of young and older ICT workers; initiatives which will motivate workers to move to work in another member state, particularly as young ICT workers are, in principle, more prone and open to mobility.

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Annex 9 Case Study: Poland

A9.1 Introduction: the demographic and labour market situation

Poland's demographic situation and the conditions on its labour market changed between 2008-2017. The most important contributors included an ageing society and improvement (after 2013) of the economic situation, which contributed to a drop in the unemployment rate and growth of salaries. An important feature of Poland is the relatively high level of education of its citizens, which has been steadily increasing since the transformation of 1989.

Ageing society

Forecasts from the Central Statistical Office (CSO) show that the number of young persons will be dropping systematically (Figure 97 in A9.7) due to a low fertility rate in Poland (1.36 in 2016 – CSO 2017), amongst other factors contributing to this trend. In 2050 the share of people aged 65 and more in Poland's population will reach 32.7 %, in comparison to 14.7 % in 2013 (CSO 2014). These processes may lead to the destabilisation of Polish economy in the future. According to data concerning the demographic dependency ratio, this ratio will grow from 58 persons in 2014 to 77 in 2050, where the number of persons of post-economically active age will increase from 29 persons to 50 persons in 2050 (CSO 2016).

Occupational activity and unemployment

CSO's data shows that the unemployment rate has been systematically dropping over the last few years. At the end of 2013, it was 13.4 %; 9.7 % in 2015 and 6.6 % in 2017¹⁹¹. It should be pointed out however that for unemployment, the rate in Poland strongly varies regionally. CSO's data for 2017 show that in some provinces, despite of a favourable economic situation, finding a job is still a major challenge. The greatest unemployment rate can be found in the following provinces: *warmińsko-mazurskie* (11.7 %), *kujawsko-pomorskie* (10 %) and *podkarpackie* (9.7 %). These are regions that have been trying to tackle this problem for some time. For comparative purposes, the best picture of the labour market can be observed in the following provinces: *Wielkopolskie* (unemployment rate 3.7 %), *Śląskie* (5.2 %) and *Małopolskie* (5.4 %).

The risk of unemployment changes together with the level of education and age. Among the persons registered at employment offices in 2017, it was people with the lowest skills and young persons aged between 25 and 43 years who were the groups that visibly prevailed (see Figure 97, A9.7).

Poland is distinguished by a relatively low occupational activity rate. A particularly disturbing phenomenon is the low occupational activity of women. In 2017 this amounted to 48.9 %, whilst among men it reached 65.2 %. According to CSO's data, the higher the education level, the higher the occupational activity rate. In 2017, the occupational activity rate among persons with higher education was 80.2 %, whereas amongst persons with the lowest level of education it was 58.9%¹⁹².

A trade analyses of occupational activity for 2016, shows that most people were employed in agriculture, forestry, hunting, fishery and trade. The least number of people were employed in organisations relating to cultural and entertainment activities or real estate services (data generated in CSO's domain-specific knowledge databases, 27.01.2018).

¹⁹¹ Please see: <http://stat.gov.pl/obszary-tematyczne/rynek-pracy/bezrobocie-rejestrowane/stopa-bezrobocia-w-latach-1990-2017,4,1.html> (accessed on 28.01.2018).

¹⁹² Please see: Economic activity of Poland's population, Q2 2017, CSO, Warsaw, 2017.

Education

The results of surveys conducted on occupational activity rate as part of the National Census in 2011 show that the Polish society is quite well educated¹⁹³. Nearly 70 % of people had at least secondary education when the survey was conducted (secondary and post-secondary education – 44 %, higher education – 24 %). At the same time, there is still interest in university education. There were more than 400 000 graduates of higher education institutions in Poland in the years 2010-2014¹⁹⁴.

Remuneration level

Remunerations in Poland are not high in comparison to other EU countries, especially 'the old EU'. Despite the fact that the average monthly gross remuneration has been constantly increasing for past years (from PLN 2,943,88 in 2008 to PLN 4,276.61 in 2017¹⁹⁵), it is still significantly lower than, for instance, in Great Britain (approx. PLN 10,573.00¹⁹⁶), a country to which Poles migrate the most. The minimum hourly wage in 2017 in Poland was PLN 13.00. In comparison, in Great Britain it was approximately. PLN 36.00 after conversion¹⁹⁷.

Migration of skilled labour – general patterns

The moment Poland entered the European Union (EU), migration abroad became an every-day reality for many Poles. Although, years have gone by without any methods to monitor the scale of this phenomenon, to identify migrants based on social and demographic properties, their motivation and hopes associated with the stay abroad. Nonetheless, the issue of migration was raised in recent years in qualitative and quantitative studies and in theoretical documents. Some of them covered the entire country (for instance, the National Census from 2011 – NSP 11), others focused on selected regions of Poland, usually those which were particularly affected by migration (for instance, studies concerning Małopolskie, Śląskie Or Opolskie provinces). Their results and conclusions drawn from the analyses are discussed below. Due to the fact that the main tendencies were identified in all studies (earlier and later ones, nation-wide and regional ones¹⁹⁸), the analysis focuses, above all, on CSO's statistics as the latest nation-wide results of quantitative studies. It should be pointed out though that these studies did not focus specifically on persons with high competencies. However, migrant education was typically one of the variables covered by the research.

It should be also kept in mind that the available data of the Central Statistical Office (CSO) is burdened with a large error of underestimation of the scale of migration from Poland as most of the people leaving the country, as well as those returning to Poland, do not report it. Hence, data obtained from registers does not reflect the actual scale of migration. For that reason, it is difficult to study the return migration of qualified Poles and the CSO does not conduct on-going studies of this phenomenon. Partial information about Poles returning from countries of emigration may be indicative by their return. However, the register containing such data (PESEL register) does not collect information about their education¹⁹⁹.

¹⁹³ Document prepared on the basis of data from the Local Data Bank, CSO, www.stat.gov.pl (accessed on 26.01.2018).

¹⁹⁴ Please see: Human capital in Poland, CSO, Warsaw 2017.

¹⁹⁵ Please see: <http://stat.gov.pl/obszary-tematyczne/rynek-pracy/pracujacy-zatrudnieni-wynagrodzenia-koszty-pracy/przecietne-miesieczne-wynagrodzenie-w-gospodarce-narodowej-w-latach-1950-2016,2,1.html> (accessed on 26.01.2018) and Employment and remuneration in the national economy in Q1-Q3 2017, CSO, Warsaw 2017.

¹⁹⁶ Based on the databases concerning the Average Weekly Earnings - total pay, Central Statistics Office, <https://www.ons.gov.uk> (accessed on 26.01.2018).

¹⁹⁷ Based on <https://www.gov.uk/national-minimum-wage-rates> (accessed on 26.01.2018).

¹⁹⁸ See, among other things NSP 11, Czapiński, Panek 2015, Frelak, Roguska 2008, Bieńkowska et al. 2010, Słany, Ślusarczyk 2013, Szymańska et al. 2012.

¹⁹⁹ Information provided by the Department of Demographic and Labour Market Studies of the Central Statistical Office.

Scale, directions and nature of migration abroad

CSO's estimates show that at the end of 2016, approximately 2.5 million Polish citizens remained temporarily abroad (an increase of 118 000(4.7 %), in comparison to 2015)²⁰⁰. According to experts, returning migrants are still marginal compared to the outflow of Poles abroad. The destinations most frequently chosen by Poles are Great Britain and Germany (see Figure 98 in A9.7). These destinations appear in all studies devoted to migration destinations (including qualitative studies), although sometimes the order of destination countries in various years changes. Increased interest in moving to Germany after 2011 can be associated with changes in the law which made this market more accessible to Poles.

Brzozowski and Kaczmarczyk (2014) made an attempt to answer the question from which regions of Poland the Poles migrated the most. The authors point out that in 2011 approx. 70 % of migrants from Poland were people from urban areas. The largest outflow was observed in Śląskie, Małopolskie And Dolnośląskie provinces, whereas the largest loss of residents was observed in Podlaskie and Podkarpackie provinces.

It is difficult to point out unequivocally whether migrations from Poland are short or long-term migrations. CSO's studies provide arguments in favour of the existence of the phenomenon of relatively long-lasting migration. According to NSP 11 a definite majority of migrants (77 %) stay abroad for more than 12 months (Slany and Ślusarczyk 2013). Meanwhile, earlier analyses of the Institute of Public Affairs point to a phenomenon of relatively short, cyclical trips lasting several months. Frelak and Roguska (2008) indicate that in Great Britain nearly half of the respondents (46 %) surveyed in their study stayed there for up to 6 months. At the same time, after returning to Poland, 33 % stated that they want to emigrate again. Qualitative studies conducted in 2017 by the Institute for Labour Market Analyses confirm the existence of a phenomenon of cyclical migrations, especially among persons from areas affected by high unemployment rate (podkarpackie province)²⁰¹.

Social and demographic structure of migrants

In previous waves of emigration of Poles, men left the homeland more frequently, usually to improve the material status of their families staying behind in Poland. Meanwhile in post-accession migration, the number of women slightly prevailed (51 % - see Figure 98 in A9.7). This trend is also noticeable in various studies (e.g. Szymańska 2012). Women also decide to stay abroad longer than men (see Figure 98 in A9.7).

A group that dominates among migrants in comparison to the rest of the society is young people in their twenties and thirties with secondary or higher education (see Szymańska et al. 2012). According to CSO's data (NSP 11 - Kostrzewa, Szałtys 2013) the largest group among the migrants were persons aged between 25 and 29 (383 thousand). Women prevailed in this group (54 %) while men prevailed in older groups (between 35 and 59 years of age). Analyses of the flow of people between Poland and other countries also indicates that it is frequently married couples who decide to migrate (45 %), and even whole families, also those multi-generational ones. This phenomenon is particularly visible in areas affected by a high unemployment rate, i.e. due to their poor economic development (see Budyta-Budzyńska 2017). On the other hand, studies show that migration often leads to disintegration of the family when a parent goes abroad, leaving children behind (see Kozdrowicz, Walczak 2010).

Well-educated people constituted the largest group of migrants; according to National Census, since 2011 every fifth person (22.8 %) has higher education (women

²⁰⁰ Please see: Information about the volumes and directions of temporary emigration from Poland in the years 2004-2016, CSO, Warsaw 2017.

²⁰¹ Unpublished results of studies conducted among the employees of district labour offices as part of the project "Supporting the execution of stage 1 of implementation of the Integrated Qualification System on the level of central administration and institutions awarding qualifications and guaranteeing quality of awarding qualifications."

accounting for 63 %), and 40.5 % has secondary education (including: vocational secondary education - 21.4 %; general secondary education - 19 %, post-secondary education - 3.8 %). Nearly one fifth of migrants has completed basic vocational school (Kostrzewa, Szałtys 2013), with men prevailing in this group.

When comparing the level of education of the group of people leaving the country to the overall population of Poland, an above-average representation of highly-qualified persons among the migrants can be noticed (see Figure 98, A9.7). According to CSO's estimates from 2011, more than 1.2 million people with at least secondary education left Poland, including more than 400 000 with higher education. This accounted for nearly 7 % of the overall population of Poland with this level of education (*Source*: Kostrzewa and Szałtys 2013).

The group of best educated migrants was dominated by arts graduates who, at the time of economic slowdown, faced substantial difficulties entering the Polish labour market. A certain over-representation in comparison to the overall population of Poland was observed among computer scientists for whom leaving their country ensued from a desire to improve their professional skills rather than the need to escape unemployment (see 0 in the A9.7).

The problem of outbound migration of doctors is a current Polish public debate. However, the scale of this phenomenon is difficult to estimate. According to OECD's data, every tenth graduate of medical school leaves Poland, i.e. approximately. 300 people per year. Meanwhile, the Supreme Medical Council indicates that one quarter of medical students considers emigrating after they obtain their diploma (see Karwowska 2017). Data concerning certificates of qualifications acknowledgement are indicative of the medical students' interest in migrating. According to the Supreme Chamber of Physicians and Dentists' statistics, in the years 2004-2010 such certificates were issued to 8 000 physicians (6.6 % of the total number). However, this does not mean that they all left the country. Analyses of the Centre of Migration Research of the University of Warsaw show that migration abroad responsible for shortages in medical staff only to a small extent. Representatives of this profession outflow much more often to other sectors of the economy, for instance, to the pharmaceutical sector (Brzozowski and Kaczmarczyk 2014).

According to experts, the problem of migrations abroad applies mainly to persons just starting their professional career in the medical field, for instance, without specialisation. Remunerations of experienced physicians in recent years increased in Poland to such level that migration abroad motivated by income is no longer attractive to them. Amongst specialists there is a tendency to go abroad temporarily to improve their competencies, gain new experience, or establish contact and cooperation with eminent experts from other countries. Moreover, physicians with the highest competencies often travel for a short period of time to perform specific treatments, for instance, those that are unique and posing a professional challenge or that are particularly profitable. This last trend was observed by the Centre of Migration Research of the University of Warsaw among physicians aged 50 and over. Migrations of less experienced physicians and nurses ensue, above all, from the low level of their remunerations in comparison to other EU countries, as well as from their excessive burden with duties. Currently, Poland has one of the least number of physicians per thousand inhabitants.

Reasons for migration

The most important motivation for migration is economic factors. Studies devoted to this issue show that the majority of people migrating abroad hoped to earning considerably more money than in Poland, which would allow them a higher standard of living and also to accumulate savings²⁰². In the light of the above-mentioned

²⁰² Please see National Census from 2011; Czapiński and Panek 2015; Frelak d Roguska 2008; Biełkowska et al. 2010; Słany and Słusarczyk 2013; Szymańska et al. 2012; Iglicka 2010; Gmaj and Małek 2010.

quantitative and qualitative studies, it seems justified to divide labour migrants into three groups:

- The largest group are persons who worked before migrating. For these individuals, migration is dictated by a desire to earn a better living abroad, for which they sought a new place of employment abroad on their own.
- This group are graduates of secondary and post-secondary schools who are unable to find a job in Poland and decide to migrate. It should be pointed out though that the studies in question concern mainly migrations taking place during the time of economic slowdown, which particularly affected young people without professional experience (see Kozielska 2013).
- Persons who have been delegated by their employer to work in another country (for instance, to a branch of an international corporation) and who return to Poland after their contract is over.

Reasons involving family also influence the decision to migrate. A desire to join a life partner or the rest of the family already living abroad pushes the persons left behind in Poland to migrate. Since 2007 this motive has become ever more popular whilst economic factors are becoming less important (see 0 in the A9.7).

Another but less important factor contributing to the decision to migrate was the desire to improve competencies, especially language skills. Results of in-depth studies show that women had such desire more often (67 % - see Czapiński and Panek 2015)²⁰³.

Cyclical studies, 'Social diagnosis', carried out in Poland, indicated that only 0.2 % of household members went abroad in 2011-2013 and 2013-2015 to get an education. This percentage was slightly lower - 0.4 % - in comparison to the previous period 2007-2011. Nearly three-quarters (74 %) of persons migrating for educational reasons in the 2013-2015 were young people aged of 18-34.

Regardless of the data provided above, statistics concerning participation in the Erasmus programme are indicative of an interest, in travel abroad, particularly amongst students, dictated by a desire for self-development (see A9.7). Meanwhile, for academic researchers, trips abroad are a typical phenomenon since, as pointed out by experts, mobility is key feature of that profession. Trips lasting several months or even years do not usually mean permanent migration but are a stage of professional development. Nonetheless, observations of an expert from the Foundation for Polish Science show that return from a long scientific stay abroad may entail unexpected risks. They are associated, on one hand, with peculiar reluctance of co-workers in Poland to work with the returning migrant as they consider him to be a threat to their own professional position. On the other hand, these risks ensue from the differences in the scientific level of work being performed by a given person abroad and in Poland (if the position of the domestic centre is lower than that of the foreign centre).

Table 26. Scale of travels abroad by students and university employees as part of the Erasmus programme in the years 2008-2014

Years	Number of Polish students who went on a scholarship*	Number of travels of university staff from Poland to conduct courses / participate in trainings *
2008/09	13 402	3079 / 1262
2009/10	14 021	2974 / 1476
2010/11	14 234	3381 / 1834
2011/12	15 315	4022 / 2318

²⁰³ Surveys conducted on samples: 2005-2009 (N=157), 2007-2011 (N=107), 2011-2013 (N=68) and 2013-2015 (N=52) among persons who returned from migration.

2012/13	16 219	4442 / 2800
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2013/14	15 517	4388 / 2841
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* The data also includes short stays abroad lasting several days.

Source: <http://www.erasmus.org.pl/odnosniki-podstawowe/statystyki.html> (accessed on 26.01.2018).

Surveys conducted among academic researchers confirmed that the scale of migration in this profession group is rather small. However, a connection was identified between the degree of mobility of the researchers and their age, gender and field of expertise:

"Young holders of doctorate degrees, males, representing natural sciences or humanities, leave Poland much more often. In certain fields, such as humanities or agricultural science, the difference between the holders of doctorate and post-doctorate degrees as regards international mobility is very clear. Persons with a higher academic degree are less interested in travel abroad. Researchers seldom return to Poland motivated by career development. Much more frequently these are external factors such as end of the contract or personal, economic or political reasons" (Batorski et al. 2009).

A9.2 Understanding the movement of skilled workers

In recent years the main stream of migration of Poles was directed to Great Britain and Germany. The joint factors attracting migrants to both countries are the level of remuneration (significantly higher than in Poland) and relative ease of finding a job in those two labour markets. Additionally, migration has been facilitated by the fact that Polish diasporas in both countries were already large and they had their own organisations who were able to support the newly arrived migrants (Bieńkowska et al. 2010). Some of the migrants joined their families who had emigrated earlier to Great Britain and Germany. An additional magnet attracting Poles to Britain was a desire to acquire or improve their language competencies. Learning English as a universal language in an international context was an important asset for migrants. Studies conducted among this community show that a significant majority of Poles participated in intensive language courses concurrently with their work. Another advantage to selecting Great Britain is its social support system which gives migrants a sense of stability and security (also important to those who have problems finding a place on the labour market). The attraction to Germany for Poles is its geographical proximity and the transparency of its labour market rules. Another important factor is, especially as regards to the provinces located in the immediate proximity to Germany, that some of the residents living in those areas have double citizenship (for instance, in Silesia region). For this group migrations across the western border are a natural and easy process from a legal point of view.

Factors motivating leaving and coming back decisions

Surveys conducted amongst Polish migrants and re-migrants show that they leave Poland, above all, for financial reasons. Nearly three quarters of them leave Poland to find work, with men indicating this reason more often (see 0 in the A9.7). Meanwhile, women indicate more often family matters and educational purposes as their main reason for migrating. Some of the migrants also wanted to change their surroundings and to get to know a different culture.

More in-depth analyses of educational migration as part of the Erasmus programme shows that the outflow of Poles studying abroad is not offset by an inflow of foreigners wanting to raise their competencies in Poland. For 88 000 students leaving Poland to study abroad, there are only 50 000 incomers. Amongst university employees this difference is more profound because there are more than twice as many people leaving than coming. Nonetheless, the number of students from abroad in Poland, beyond the Erasmus programme, is growing. In the 2015/2016 academic year it amounted to 65 793²⁰⁴ people.

²⁰⁴ Post-secondary schools and their finances in 2016, CSO, Warsaw, 2016.

Table 27. Erasmus programme participants in Poland in the years 2008-2014

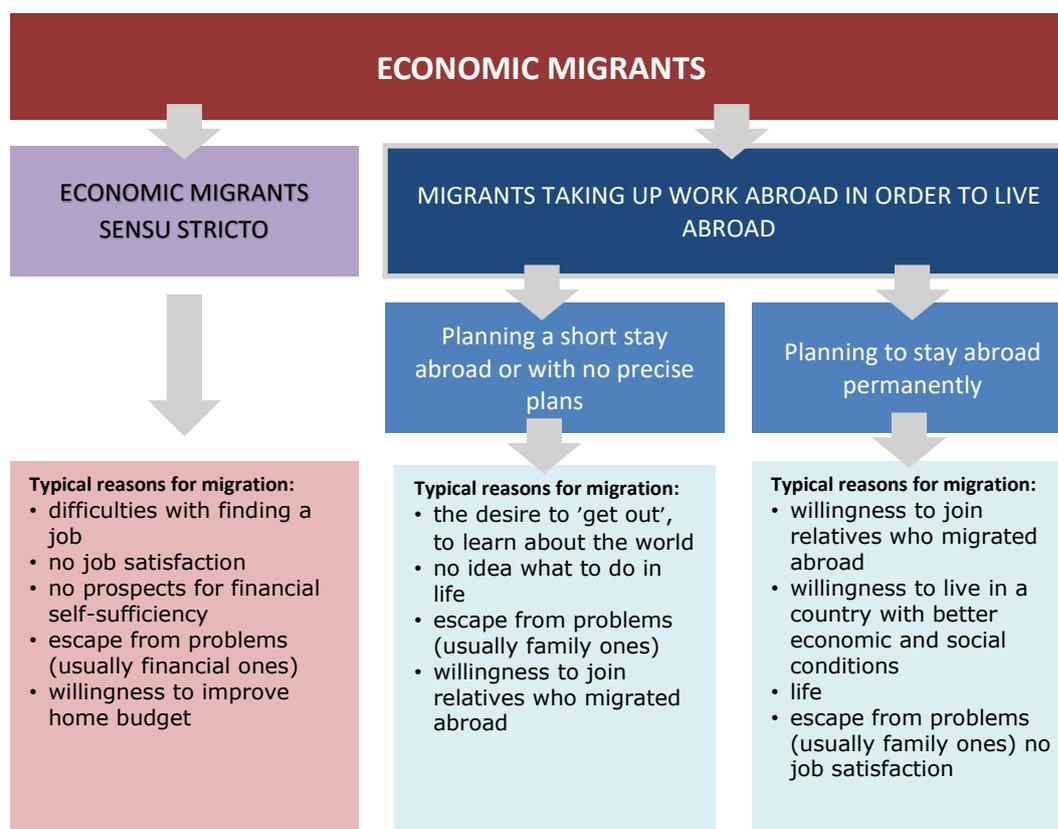
Year	The number of Polish students who went on a scholarship	The number of foreign students who came to Poland on a scholarship	The number of travels of university staff from Poland in order to conduct courses / participate in training	The number of arrivals of employees from foreign universities in order to conduct courses / participate in training
2008/2009	13 402	4923	3079 / 1262	1683 / 221
2009/2010	14 021	6070	2974 / 1476	1819 / 294
2011/2012	14 234	7583	3381 / 1834	2034 / 342
2010/2012	15 315	8972	4022 / 2318	2138 / 473
2012/2013	16 219	10772	4442 / 2800	2371 / 723
2013/2014	15 517	11 693	4388 / 2841	2612 / 946
Sum	88 708	50 013	22286 / 11531	12654 / 2999

Source: Own compilation based on Erasmus Programme data, http://www.erasmus.org.pl/odnosniki-podstawowe/statystyki.html#Erasmus_w_liczbach (accessed on 30/01/2018).

Students as a group participate in migration processes as seasonal workers travelling abroad in the summer months. This distinguishes them from other seasonal migrants who take up employment in agriculture or construction in the autumn too. The scale of seasonal migrations is difficult to estimate; according to Norway's Labour Inspection approximately 50 000 Poles do not register their stay and work there although the number of Polish labour migrants undertaking seasonal work in Norway ranges between 80 000 and 120 000 people (Czubara 2010).

The most important factors pushing Poles from Poland are low salaries and difficulties finding a job corresponding to qualifications (see Figure 96). Migration to better developed regions or cities within Poland was a less attractive option for migrants than going abroad, due to country-wide low salaries. It seems that recently, due to a decrease in the unemployment rate, this second factor ceases to be important, whereas the importance of the first one remains unchanged. In addition, whilst in the case of short-term trips, the financial goal set by the migrant is of key importance, in the case of permanent emigration, family reasons become a priority. Migrants who do not plan to come back are joining their families abroad.

Figure 96. Factors pushing people out of Poland and attracting them to the country of emigration based on migration behaviours (study on re-emigrants from Silesia region)



Source: Szymańska et al. 2012.

The main factors making it easier to decide to come back to Poland include:

- Family left behind in Poland (procreation as well as origin);
- Economic nature of migration (no work in the country of migration);
- No political/administrative barriers to coming back to homeland and going back to the country of migration;
- Low costs of transport;
- Low accessibility to social benefits in the countries of migration;
- Availability of work mainly through contacts inside one's own ethnic group (domino effect);
- Relatively short stay abroad (the longer the stay the smaller the probability of coming back);
- No language skills (Slany 2010).

In another study the conditions which should be fulfilled for migrants to come home include:

- Definite pay raise (77 %);
- Guarantee of work corresponding to the skills and experience of the employee allowing professional development and promotion (42 %);
- Work should guarantee employment (40 %);
- Good housing situation and low tax burden (30 %);
- Standard of living comparable to that in the country of emigration (24.3 %);
- Change in the political and economic situation (21 %);
- Improvement of administration;
- Facilitation in opening own company (19 %) (Frelak, Roguska 2008).

Qualitative studies also show that other reasons for the decision to return can be; problems with resettlement; stress associated with migration; unwillingness to move again in search of more attractive work. This last factor was visible in case of persons with the highest competencies. At the same time, some of those returning, contemplate going abroad again, especially those adjusting to the cultural shock (Matejko 2010, Grzymała-Moszczyńska et al. 2015). They consider another migration, primarily to find a job that corresponds to their skills and/or for a salary that would satisfy them. Analyses also shows openness to another migration amongst persons working abroad in specialist occupations corresponding to their education (lawyer, clerk, computer scientist), as well as skilled workers (welder, construction worker). For these people a continuation of career abroad does not pose an occupational problem. A factor that most strongly prevents them from going abroad again, for instance permanently, are family ties.

At the same time, studies show that the percentage of persons leaving the country with an intention to stay abroad permanently is small amongst migrants – 10 % (see Kostrzewa, Szałtys 2013). After 2009 (a year in which the consequences of the global economic crisis were felt) a drop in the number of migrants staying abroad for at least 12 months was observed (see Figure 98 in A9.7).

The trend of returns to Poland was also observed by transport removal companies specialising in moving migrants. According to the data from Clicktrans, since 2014 when the situation on the Polish labour market improved, the percentage of people ordering moving services was greater among persons returning than among those emigrating (see 0 in A9.7).

Whereas the main reason for the migration of Poles is money, the most important reason for returning are personal issues, mainly those associated with the desire to return to family (76 %) and friends left behind in Poland (see 0 in A9.7). Every third re-emigrant comes back after achieving a specific goal (mainly related to income). In qualitative studies young re-emigrants declared that they are returning because they want to start a family in Poland. Meanwhile, parents of young children indicated that childcare is more widely available in Poland than abroad (due to its relatively low cost) and that they prefer the Polish educational system. The respondents critically spoke about the 500+ programme (parents receive PLN 500.00 for every second and subsequent child under the age of 18) as a stimulus which insufficiently motivates them to return²⁰⁵. A bigger stimulus may be, in case of Poles residing in Great Britain, uncertainty associated with Brexit. Some of the migrants (for instance, students from Poland – estimated at 6 000see Borońska-Hryniewicka 2016) are delaying the decision to come back to Poland until the final outcome concerning their stay in the UK post- Brexit, some of them are already returning. According to a study (unpublished) carried out by the National Bank of Poland at the end of 2016, despite Brexit, Poles plan to stay in the UK for three years or longer.

In summary, it can be said that the key factor attracting migrants to Poland are personal issues and better situation in the labour market. Factors pushing people out are salaries which are still not very competitive in comparison to the United Kingdom or Germany. Considering the nature of the migrations which are supposed to be only temporary, an increase in the number of job offers in Poland and family ties are decisive criterion for return. Thus, we can expect a greater wave of re-emigration in the upcoming years. The government can support this process more widely by investing in the expansion of the institutional childcare system (considering the fact that the migrant group is dominated by young people who want to start a family or who already have children) and by stimulating salary raises in deficient occupations, for instance, physicians.

²⁰⁵ See Janik A., Coming back from emigration. "This no longer an El dorado" <http://www.nowiny24.pl/wiadomosci/podkarpacie/art/9411077,polacy-wraca-ja-z-emigracji-to-juz-nie-jest-eldorado,id,t.html>, logging in 27.01.2018

However, achieving the level of remunerations of specialists similar to that of German or British specialists seems to be a huge challenge (for instance, currently physicians without specialisation in Germany earn six times more than those in Poland²⁰⁶). It should be pointed out that return of persons with the highest skills, even when assuming that the level of their remunerations will be similar to that achieved abroad, will be hindered if the skills acquired abroad are difficult to transfer to the Polish market. Such a situation can appear, for instance, in the case of persons working abroad in a different legislative system (see Makulec 2013).

Analysing the migration processes in Poland, we cannot avoid the phenomenon of strong inflow of foreigners, especially from Ukraine. As described later in this document, this is a group entering Poland due to the gap created, among other things, by the emigration of Poles. The demographic structure of the migrants from Ukraine and the nature of work performed by them in Poland are very similar to those observed in the group of people leaving Poland (see Chmielewska et al. 2016). Although Ukrainian migrations currently make relatively short cyclical stays, this can change into a permanent stay should there be a potential deterioration of the political or economic situation in Ukraine. Moreover, the observable growth of interest in university studies in Poland may, in the case either an unchanged or deteriorated situation on the Ukrainian labour market, encourage young Ukrainians to stay in Poland. In this scenario, a simultaneous inflow of foreigners and re-emigrants could significantly change the current situation in the Polish labour market, increasingly known as the 'worker market'.

A9.3 Migration of skilled labour and its impact on domestic economies beyond the labour market

Assessment of the actual scale of impact of migration on the Polish economy is difficult due to the previously mentioned lack of knowledge of the flow of people abroad and back. Nonetheless, based on available data, it is possible to say that the scale of cash transfers sent by migrants back to Poland has an impact on the economic situation of Poland's population. Analyses conducted by the National Bank of Poland shows that since 2009 more than EUR 4 billion is transferred to Poland each year (see Figure 100 in A9.7), which accounts for approx. 1.1 % of GDP. Studies conducted by the National Bank of Poland also show that as time passes, transfers from long-term migrants are increasing. Amounts being transferred to Poland from Great Britain and Ireland have been decreasing for several years, which may indicate, amongst other things, of Poles returning to Poland.

The potential ensuing from the scale of transfers is not however being fully utilised; qualitative studies on migration show the majority of the money being transferred to Poland is spent on ongoing needs of families (Budyta-Budzyńska 2017 stimulating consumption. For some families left behind in Poland, the money received from abroad may be the only source of income. Cash transfers are usually spent on home renovations or on buying new homes (approx. one quarter of expenditure – see Jończy 2014) and on increasing the standard of living of the migrants' families. The money does not go towards the local community, i.e. sponsoring the renovation of public facilities (Budyta-Budzyńska 2017). Due to increased demand for goods and services, only cities and larger towns rather than rural areas can count on development. An analysis of literature on the subject shows that, due to the way money earned abroad is spent, the innovative potential of those returning from abroad is small (Iglicka 2010).

Some of the funds sent by migrants go towards taxes to the state budget but do not feed the budgets of local governments (Jończy 2014). Thus, the costs of outflow of potential employees (persons of economically active age dominate among the migrants) from local markets can increase. This phenomenon will be felt most in regions most affected by migration processes, for instance, in Opolskie province.

²⁰⁶ See <http://www.rynekzdrowia.pl/Finanse-i-zarzadzanie/Zarobki-mlodych-lekarzy-w-Niemczech-2-4-tys-euro-w-Polsce-2-tys-zl,170891,1.html>, logging in 24.01.2018

Considering some migrations will be long-term or permanent, their consequences might have a negative impact on the social security system. Taking into consideration that that majority of the migrants are young, their absence in Poland will amplify the negative consequences of an ageing society (see Brzozowski, Kaczmarczyk 2014) thus contributing, among other things, to the growth of the demographic dependency ratio (see Jończy 2014).

Migration also leads to a depopulation of certain regions of the country. This applies, in particular, to rural areas where mainly elderly people stay behind. These processes were observed particularly in provinces with the largest migration scale (see Szymańska et al. 2012, Moj 2015, Budyta-Budzyńska 2017). As Brzozowski and Kaczmarczyk (2014) point out, in certain regions (Opolskie, Podkarpackie, Świętokrzyskie provinces), "migration losses" of persons of productive age can be estimated even at 25-35 %." This trend can be halted, to a certain degree, only by re-emigration. Although, persons returning home often settle down in areas (characterised by a better situation on the local labour market) different to those from which they emigrated from (see Brzozowski, Kaczmarczyk 2014).

Studies show that re-emigrants (especially those who came back after a longer stay abroad) are accustomed to a different society and often go through a culture shock making it difficult for them to adapt to the conditions back in the homeland (Gmaj, Małek 2010). This may potentially result in a decision to go abroad again, this time permanently.

Among social consequences which are worth mentioning, there are positive impacts. A greater majority of re-emigrants indicate that working abroad allows them to develop soft skills. These skills make them more entrepreneurial, independent, confident of their capabilities and strong position (Gmaj, Małek 2010, Kozielska 2013) which they can use in the labour market as well as in their social life.

Moreover, migration, especially return migration, has an impact on the lives of the youngest generation, i.e. migrants' children. Ties with parents or those who stay behind weaken, making it difficult for children to re-establish previously close relations with their loved ones upon their return. This is often the cause of frustration of children as well as adults. Meanwhile, children who stayed or were born abroad feel alienated after coming to Poland. Moreover, children who stayed abroad for a long period of time experience resettlement problems associated with language and cultural barrier (see Czubara 2011, Grzymała-Moszczyńska 2015). Among other problems, they find it difficult to integrate into the educational system due to differences in the teaching programmes and teaching style.

To a certain degree the gaps ensuing from the outflow of Poles abroad can be filled in by the inflow of foreigners. The largest group are Ukrainians. The National Bank of Poland estimates that in 2015 there was approx. one million Ukrainians employed legally (Chmielewska 2016). Similar to the case of migrating Poles, persons with high skills (37.7 % with higher education, 53 % with secondary education) prevail amongst the Ukrainians coming to Poland. Men account for more than 57 % of the migrants. As regards to age, the two largest groups are young people aged 25 or below (24.3 % - their percentage increased significantly in recent years) and older people age f 45+ (35.7 %). The nature of the Ukrainian migration (usually short but cyclical stays) renders this community unable to socially fill-in for the persons leaving Poland, for instance, their tendency to settle down in depopulated areas. Analysing the impact of the Ukrainians on Poland's economy, it should be pointed out that, similar to the migrating Poles, this community (66.4 %) often send their savings back to their homeland. Ukrainian migrants usually do that in person, taking advantage of the proximity of the country of origin. Thus, the impact of the transfers of the funds saved by the Ukrainian migrants on the demand for goods and services in Poland is limited. Although, legally employed Ukrainian migrants contribute to the Polish budget through taxation, the nature of their occupations, which are usually low-paid jobs, does not make a sufficient contribution.

Migration of skilled labour and its impact on domestic economies beyond the labour market

Analyses of documents concerning the impact of migration on the labour market, particularly the scale of unemployment, make it possible to draw several important conclusions:

- Migrations abroad influence the level of unemployment in the country and its regions. However, it is not possible to fully assess the scale of this impact;
- Impact of migration on the level of unemployment and on the labour, market is different on the scale of the entire country and its regions;
- Observations of the fluctuations of the scale of unemployment in the country and in the regions, cannot be made solely from the point of view of migration flows as economic situation plays the key role in this regard.

After Poland's accession to the EU the unemployment rate dropped systematically (see Table 28). These changes were particularly visible in the holiday months. This phenomenon is associated with migration, especially with seasonal migration, although this relationship is not conclusive. As Brzozowski and Kaczmarczyk (2014) indicates, there is no phenomenon of 'full employment' in Poland. In comparison to other EU countries, Poland has low occupational activity rates. An additional problem is the fact that the scale of unregistered gainful activity remains unknown and the labour market is described in terms of structural mismatches, i.e. spatial ones and those related to qualification levels. This means that the effects of migration can appear in the areas associated with the labour market, which are not well known such as unregistered activity, and overlap with other processes taking place.

An additional characteristic of the Polish labour market, especially before accession to the EU, was surplus of labour supply leading to high level of unemployment. As mentioned earlier, a significant faction of young and educated migrants were those the process of/ just completed university studies; some of which completed schools with a relatively low quality of education. Moreover, due to the mismatch between the educational programmes and the needs of the labour market, the knowledge obtained at university may have been inadequate to expectations of the employees. For that reason, it is difficult to examine the outflow of young, relatively well-educated Poles abroad through the 'brain drain' effect.

Table 28. Unemployment rate in Poland years 2004-2017 (as of December of the given year)

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
19,0	18,9	14,8	11,2	9,5	12,1	12,4	12,5	13,4	13,4	11,4	9,7	8,2	6,6

Source: Prepared on the basis of CSO's data, <https://stat.gov.pl/obszary-tematyczne/rynek-pracy/bezrobocie-rejestrowane/stopa-bezrobocia-w-latach-1990-2017,4,1.html> (accessed on 26.01.2018).

An additional factor which should be considered is the duration of the migration. As Brzozowski and Kaczmarczyk (2014) indicates, a significant portion of post-accession migrations from Poland was temporary, short-lasting and conditional (i.e. the aim of the migration was to reach an intended earning-related goal). This thesis is confirmed by CSO's data according to which, over a period of three years (end of 2007 to the- end of 2010) the number of persons remaining outside of Poland for a minimum of three months decreased from approximately 2.27 million to 2 million and then increased in 2011 by 60,000. This data shows that after 2008 the number of emigrants decreased and the number of people returning from migration exceeded the number of people leaving the country (Brzozowski, Kaczmarczyk 2014).

After Poland's accession to the EU the situation in the domestic labour market improved²⁰⁷. The actual impact of migration on the aggregated situation on the labour market (taking into account factors other than migration) was relatively small. This is confirmed by analyses conducted by Bukowski, Koloch and Lewandowski (2008), which look at factors such as demographic structure, changes in the occupational activity and changes in the number of job vacancies. They showed that corrections concerning unemployment in Poland should be attributed, above all, to changes in the sphere of job creation (and liquidation). It can thus be assumed that after accession, economic development of Poland had a greater impact on the decrease in unemployment level than the flows of migrants.

Data concerning the occupational activity ratio suggests that significant flows of people from Poland to abroad and vice-versa did not significantly impact on its increase. The value of the occupational activity ratio did not change significantly over the years. Between January 2010 and November 2017, the value of this ratio increased slightly from 54.9 % to 56.7 %. However, in the group of people with university degrees, it is the highest and has remained at 80 % for years²⁰⁸.

The situation in selected regions of the country looks somewhat different. Migrations occur, above all, in suburban areas characterised by high unemployment and low number of job vacancies. In some regions (for instance, in Opolskie, Podkarpackie, Świętokrzyskie provinces) the outflow of people of productive age is estimated at 25–35 % of the population (Kaczmarczyk 2014). Such significant demographic changes with limited scale of return migration cannot remain indifferent to social security systems in the future. Nonetheless, in the medium-term, the impact of migration on the local labour market was also limited. For instance, in Opolskie province, the largest scale of impact of migration on the level of unemployment (its drop) was visible in years 2004-2007, while it abated the following year. R. Jończy (2014) points to the fact that some of the post-accession migrants, initially using a back-and-forth economic migration, decided in the end to stay abroad. Moreover, a "change in the exchange rates in 2008 reduced the purchasing power of the funds being transferred to Poland, thus strongly reducing the investment capabilities of migrants. Finally, a significant part of people who worked abroad in the 2006-2008 decided to return to Poland, which revived the economy. However, it led to a certain 'overcrowding' in the labour market, resulting, together with the macroeconomic crisis, in the growth of unemployment in the region in 2008." The author also points out that emigration did not cause a significant increase in registered employment in the Opolskie province. An exception were eastern parts of the province where, in 2007-2010, the residents were returned in large numbers, often taking up employment or starting their own businesses. The inclination of returning migrants to start their own businesses can be particularly valuable from the point of view of creating new workplaces.

Entrepreneurship of returning migrants and their situation on the labour market

Results of studies show that entrepreneurship of re-emigrants measured by their inclination to start their own businesses is high. Among the returning persons with higher education the percentage of entrepreneurs is significantly higher than amongst persons with lower attainment in education. Regional studies conducted in the Śląskie province also indicate a large entrepreneurial potential among the returning migrants. Every fourth person returning to this province has an interest in starting a business (Szymańska et al. 2012).

²⁰⁷ The number of unemployed persons decreased from 3.2 million in 2004 to 1.2 million in 2008, and, in consequence, the unemployment rate dropped from 19.1 % to 7.1 % (in the analogical period).

²⁰⁸ Data generated from Domain-specific Knowledge Databases CSO - <http://swaid.stat.gov.pl/SitePages/StronaGlownaDBW.aspx>, logging in 26.01.2018

Available data also shows that persons returning from emigration more favourably match the labour market demands than before going abroad. This also applies to regions most strongly affected by the migration processes (Szymańska et al. 2012). In the Śląskie province, returning migrants - more often than at the moment of going abroad - pursued a business activity, worked full-time or part-time (see Figure 102 in A9.7). They were also registered as unemployed less often.

Other analyses show that Silesian migrants with the best education who came back to Poland do particularly well in the labour market. In 2011, nearly 80 % (77.1 %) of them were professionally active, with more than half (53.2 %) being employed on a full-time basis. Only every tenth (12.2 %) returning migrant with higher education remains unemployed (Brzozowski, Kaczmarczyk 2014).

This is happening despite an unwillingness of employers to employ persons returning from abroad declared by migrants during qualitative studies. The above data show that returnees are able to successfully overcome the difficulty of getting adjusted to the Polish organisation of work after returning, identified during qualitative studies. This applies to the way the tasks are performed, the effectiveness of work itself, as well as to relations between the employee and their manager (migrants returning from Great Britain see it as a partnership, in contrast to organisational culture dominating in Poland). Perhaps in the long-run, a wider inflow of persons with experience gained abroad will result in changes to organisations' human resource management in Poland, as well as in the remuneration systems.

Migration processes and changes in remunerations

The assumption that the outflow of employees to foreign markets, and the accompanying drop in the number of candidates for work in Poland, will prompt employers to strongly compete for the labour through more attractive remunerations is not supported by the evidence. Similarly, there is no evidence that a large inflow of returning migrants could initiate a reverse phenomenon – a significant drop in remunerations. Whereas during the most intensive wave of migrations in 2007, nearly one third of the entrepreneurs considered declaration to migrate by employees as the most important factor leading to wage increases. However, in the following year such declaration was made only by 1 % of employees, and in 2010 – just under 1 % (Janicka, Kowalska 2010; Gumuła et al. 2011).

It should be pointed out that, in the analysed period the scale of migration did not diminish significantly. Considering the fact that remunerations in Poland after 2008 were constantly increasing, as data presented in the beginning of this document show, it can be assumed that this trend will remain unchanged. Especially, as the experts from the National Bank of Poland indicate that “the low scale of pay pressure is associated with relatively large personnel adaptations in Poland – significant rotation and quantitative adaptations (e.g. through contracts for a specified period of time) increase the payroll discipline” (Tyrowicz 2013). Potential increased inflow of returning migrants can only slow down the pace of that growth. This opinion was shared in 2015 (when the situation on the labour market showed improvement) by the experts of bank Credit Agricole. They assumed at that time that the “nominal pace of remunerations growth in the national economy will be 4.1 % in 2016 (with the risk up) in comparison to 3.7 % in 2015”²⁰⁹.

This situation looks slightly different in case of selected professions, for instance, those requiring high qualifications, such as physicians. Their outflow from the Polish labour market, associated with various factors – not only migration – as mentioned earlier, leads to an increase in the pay pressure related to this profession. This has also been

²⁰⁹ Please see: Will reverse migration make it possible to avoid an explosion of pays? Macro Map Credit Agricole Economic Weekly, 15-21.06.2015, https://static.credit-agricole.pl/asset/m/a/k/maktromapa-20150615_8922.pdf (accessed on 27.01.2018).

noticed by the central authorities who, after recent protests of the medical residents in autumn 2017, adopted a programme of successive pay raises of physicians in the upcoming years²¹⁰.

The pay pressure may be also felt in other sectors where employers must cope with staff shortages. Analyses of the Ministry of Family, Labour and Social Policy show that deficient jobs currently include those requiring high skills (e.g. physicians, IT and finance experts), as well as professions associated with simple works, including physical work (warehouse keepers, employees of the food industry or real estate services)²¹¹.

An opportunity to fill in the gaps, including those resulting from Poles migrating abroad, is the inward migration of foreigners, especially from Ukraine²¹². Studies devoted to Ukrainians coming to Poland show that most of them perform simple work, often below their qualifications (Górny et al. 2013). They usually find work in the construction sector, household services, in agriculture and horticulture, as well as in transport and trade. Nonetheless, statistics concerning work permits being issued to foreigners indicate that there is a significant inflow of highly-skilled migrants as well (see Table 29). Ukrainians dominate in almost every migrant job group covered by the analysis. It should be pointed out that majority of work permits are issued for a period of 3 to 12 months. Based on these data it is difficult to estimate whether migration of foreigners will be a long-term phenomenon or whether the current model of cyclical migrations, most popular among the Ukrainians, will prevail. It is expected that long-term migrations on the Polish labour market will have a higher impact.

Table 29. Work permits issued to foreigners according to citizenship, job groups (first half of 2017)

	Occupations	Permits for foreigners migrating to Poland - total	Permits issued to Ukrainians
according to groups of Occupation and Specialisation Classifications	Representatives of public authorities, upper-level officials and managers	787	288
	Specialists	4 749	2 628
	Technicians and other middle personnel	5 938	4 699
	Office workers	4 241	3 970
	Service workers and sales clerks	5 779	4 081
	Farmers, gardeners, foresters, fishermen	1 219	1 123
	Industrial workers and tradesmen	32 508	28 577
	Machine and device operators and assemblers	22 848	18 688

²¹⁰ Please see: http://www.nil.org.pl/dla-lekarzy/zrp-informuje/wynagrodzenie-zasadnicze-rezydentow-w-nowym-rozporzadzeniu?SQ_DESIGN_NAME=print

²¹¹ Please see: Signal information about deficient, balanced and surplus jobs in the first half of 2017, <https://www.mpips.gov.pl/analizy-i-raporty/raporty-sprawozdania/rynek-pracy/zawody-deficytowe-i-nadwyzkowe/rok-2017/> (accessed on 29.01.2018).

²¹² Data of the Ministry and the National Bank of Poland show that the inflow of people from Ukraine is the largest. Please see Górny et al. 2013 and data of the Ministry of Labour and Social Policy concerning statistics of work permits issued to foreigners (www.mpips.gov.pl).

	Workers performing simple work	29 039	26 795
according to occupation groups	Computer scientists	1 681	765
	Lawyers	16	6
	Entertainment jobs	225	168
	Medical jobs	405	177
	Teaching jobs	220	79

Source: Based on data from the Ministry of the Family, Labour and Social Policy, www.mpips.gov.pl

The central authorities, noticing an opportunity in acquiring competency resources from abroad (especially from Ukraine), implemented some supportive measures for the foreign migrants²¹³. In 2017 short-term visas in travel between Poland and Ukraine were abolished. During the first three months of the visa-free travel, the traffic of people increased by 12.9 % in comparison to the analogical period of 2016 (Expertise of the Centre for Eastern Studies, 2017). However, this increase can be a natural consequence of the growing number of Ukrainians living in Poland and visiting their own country. Domestic universities have also created incentives by targeting their recruitment campaigns to young foreigners. In effect, new trends in migrations appeared after 2014, such as wider migration of youths and students, young specialists, small and medium entrepreneurs and family reunification (Expertise of the Centre for Eastern Studies, 2017).

In summary, data indicates that in the short and medium term the movements associated with outward and inward migration of Poles do not significantly affect the situation on the labour market. However, in the long term, the impact of the migration phenomena can be significant and negative, especially in the regions most affected by the outflow of their residents to other countries. The degree of the long-term effect of migration will depend, not only on the scale of returns of Poles from abroad but also on the scale of inflow of foreigners to Poland (especially those who want to stay there permanently).

A9.4 Policy responses undertaken by Member States to address the outflows of skilled labour

No nation-wide strategy concerning migration processes have been developed so far in Poland. However, local strategies have been developed and implemented by local authorities in the provinces, which were most affected by the outflows of their residents (for instance, Opolskie province). This does not mean that the central authorities have not undertaken actions to limit the scale of migration and support the return of Poles. In 2008, an inter-ministry working group on return migration was established, whose aim was to develop assumptions and guidelines concerning the government's migration policy. The effect of its work was a document containing two conclusions most important

²¹³ The Act on foreign nationals came into force in May 2014. It simplified, above all, all procedures of applying for a stay permit and implemented many facilitations for foreigners working or studying in Poland and wanting to legalize their stay (Łodziński and Szonert 2016). In 2016, changes making it easier to hire foreigners came into force. The process of obtaining a work and stay permit for foreigners was simplified. New stay permits for employees delegated to work from third countries were introduced. In 2017, declarations of an intent to award work to foreigners were replaced by seasonal and short-term work permits (see <http://kadry.infor.pl/wiadomosci/748438,Duze-zmiany-w-zatrudnianiu-cudzoziemcow-20162017.html>, accessed on 28.01.2018). Moreover, on 1 January 2018 the Act on employment promotion and labour market institutions was amended and a new type of permit was introduced – namely the seasonal work permit. It can be obtained by foreigners who are supposed to be employed to perform work dependent on season changes, mainly in agriculture, horticulture or tourism.

from the policy perspective: 1) returns are an inevitable consequence of mass emigration; 2) the main aim of the state policy is not to influence individual migrants' decisions to return, but to provide them with tools to make a rational choice (Lesińska 2013). With this in mind, the central authorities dedicated their focus on making the return process easy for Polish migrants, from an institutional and informational point of view. This approach was also expressed in the informational campaign called *Have you got a Plan to Return?* launched in 2008 and a number of initiatives undertaken by the central authorities in subsequent years. A portal (www.powroty.gov.pl)²¹⁴ was launched as part of the campaign containing all informational materials associated with returns and support offered to returning migrants. It is extensively visited by migrants seeking information when planning to return. In the years 2008-2011 this portal was visited by more than 350 000 people; 1 200 users sent queries to the portal's editorial team (Lesińska 2013). It is important to mention however, that in the initial years of its functioning the portal was widely advertised, which could have affected its popularity. Data obtained from the Ministry of Family, Labour and Social Policy shows that interest in it may now have diminished. A portal (www.zielonalinia.gov.pl) and an international hotline were also launched, which made it easier for the returning residents to find work in the Polish labour market. Additionally, a document called *The Returner* was prepared; a guidebook for persons planning to return from emigration. It was distributed as a hard copy version and is currently a part of the aforementioned portal.

Apart from informational activities addressed to the returnees, the central authorities emphasise extending the competencies of employees of the labour market institutions who are contacted by returning Poles. Specialised training is therefore offered to everyone employed at district and provincial labour offices.

The government also implemented supportive measures for the persons who came back to Poland. The most important ones include: The Tax Abolition Act (by 2010 as many as 57 000 persons took advantage of it) in order to avoid double taxation; offering tax credits and investment allowances; facilitating the recognition of diplomas and qualifications acquired abroad; and making the acquisition or restoration of Polish citizenship easier (Lesińska 2013).

Another issue worth mentioning is the creation of the programme 'Support at the Start' in 2013. As part of the programme, labour offices can give unemployed persons, including returning migrants registered at the District Labour Office (starting from 2014), financial support in the form of loans granted from the Labour Fund for the purpose of opening their own business²¹⁵. Another initiative was to facilitate the resettlement process for children whose parents were returning from abroad. For this purpose, Polish catch-up lessons (from 2 to 5 a week) or lessons from another subject were introduced. The lessons are held at the school being attended by the pupil but cannot last longer than 12 months from the day such need was reported by the parents.

Returning migrants are targeted, albeit inaccurately, - among the priority groups of targeted activities as outlined in the government's strategic documents including the Sustainable Development Strategy and to the assumptions concerning the social and economic development of Poland prepared by the Economic Committee of the Council of Ministers. Moreover, the authorities intended to take measures targeted at selected groups of migrants identified as highly skilled professionals. However, these measures have not yet been fully implemented.

Opinions concerning the measures undertaken by the government are varied. There were some critical views among the migrants on the practical value of the above-mentioned portal's contents and the degree of preparedness of the employment

²¹⁴ Initially the portal was financed with EU funds, currently it is financed by the state budget.

²¹⁵ Please see the interview with Magdalena Sweklej, Ministry of Family, Labour and Social Policy and www.wsparciemstarcie.bgk.pl (accessed on 09.02.2018).

authorities to provide support to those returning from abroad (see Iglicka and Ślusarczyk, 2010). To meet the expectations of Poles abroad, the Polish diaspora organization, Poland Street, implemented a project in 2009 called '12 Cities. Come back, but where to?' Its aim was to give the migrants very practical knowledge about the current situation in the regional labour markets and the formalities associated with coming back home and the places to access information. As part of the project representatives of the 12 largest Polish cities (Warsaw, Kraków, Łódź, Poznań, Wrocław, Gdańsk, Rzeszów, Bydgoszcz, Katowice, Lublin, Białystok and Olsztyn) answered questions raised during meetings with migrants in Great Britain. The cities also advertised themselves on the social media portal 'Nasza Klasa. (Iglicka and Ślusarczyk 2010)

In Poland the initiatives for migrants were also undertaken by non-governmental organisations. Some of them were additionally supported by central authorities. Such activities include implementation of two editions (2015 and 2016) of the project called '(Z) powrotem w Polsce' [Back in Poland] run by the Foundation Sto Pociąg, and co-financed by the Senate of the Republic of Poland. The aim of this project was to facilitate the resettlement of returning migrants to conditions in Poland. As part of this project, in 2016, among other things, an informational brochure was prepared for persons returning from migration 'Back in Poland. Guidebook for persons returning to Poland' (see Białek et al. 2016), available on the internet. The project's participants were also able to take advantage of:

- Consultations as well as informational and integration meetings;
- Workshops and coaching sessions for adults (return culture shock, how to utilise the potential acquired abroad after coming back, supporting the child returning back to the Polish education system);
- Social group support on Facebook – more than 8,000 followers;
- Possibility to commence cooperation with returning migrants, repatriates, Polish diaspora and Poles abroad²¹⁶.

In 2017 the project did not receive financing from the Senate's funds. However, the Foundation is trying to pursue the above-listed activities, to a limited extent, utilising its own funds on statutory actions.

An initiative addressed to migrants with the highest skills – scientists – was undertaken by another non-government organisation – the Foundation for Polish Science. As part of its 'Homing' programme (run since 2016), it offers grants for post-doctoral projects run, among others, by young persons with a Ph.D. degree returning to Poland from abroad²¹⁷. During the three editions that have taken place so far, grants were awarded to 27 Polish scientists staying abroad²¹⁸. Also, as announced by the Ministry of Science and Higher Education, measures aimed at attracting scientists living abroad back to Poland, will be undertaken by the Polish National Agency for Academic Exchange (NAWA) established at the end of 2017.²¹⁹

Non-governmental organisations also carry out research projects to get a better understanding of the migrants' problems. An example of one such measure is the project '(Un)easy returns home? Study of the functioning of children and youths returning from emigration' run in 2015 by the Foundation Prof. Bronisław Geremek Centre (in partnership with PZU Foundation) in cooperation with a team of psychologists from the Jagiellonian University and SWPS²²⁰. The main aim of the qualitative study conducted as part of the project was to obtain information about the process of resettling children

²¹⁶ See <http://www.stopociąg.pl/s/index.php/dla-powracajacych-z-zagranicy>, logging in 28.01.2018

²¹⁷ Initially the grants were financed from the Norwegian Funds, currently they come from the structural funds as part of the Innovative Economy programme and from own funds of the Foundation for Polish Science.

²¹⁸ Please see: <https://www.fnp.org.pl/oferta/homing> (accessed on 28.01.2018).

²¹⁹ Please see: www.nawa.gov.pl (accessed on 28.01.2018).

²²⁰ Please see: <http://nielatwepowroty.pl/cel-projektu> (accessed on 29.01.2018).

and youths returning to Poland and to make recommendations for parents and guardians of children, their teachers and employees of psychological and pedagogical counselling services. Data obtained by the study team shows that Polish schools are not sufficiently prepared to work with re-emigrant children. Deficiencies identified include; procedural deficiencies (schools have no clear guidelines how to proceed in case of appearance of a child that has been living abroad for a long time); system deficiencies (the issue of working with recurring migrants' children is not covered by pedagogical studies or post-graduate studies for teachers; the extra 5 hours a week of Polish, for 12 months maximum, often prove to be insufficient); competency deficiencies (lack of preparation of teachers, pedagogues and psychologists to alleviate the problems with the resettlement of re-emigrants' children to the Polish education system; lack of preparedness to hold Polish classes as a second or foreign language, not the mother tongue; lack of understanding and openness of teachers to cultural differences; inability of teachers to react to signs of discrimination of the child returning from abroad by other children.

A9.5 Conclusions

The scale of migration and re-emigration to Poland is difficult to estimate. This problem is associated, among others, with the fact that persons leaving and returning to Poland do not register their movements. For this reason, all statistical data and forecasts presented herein should be approached with caution.

Nonetheless, based on the analysis made for this study, several broader conclusions can be drawn:

- A definite majority of migrations concern young, relatively well-educated persons, i.e. having at least upper secondary education (in comparison to the overall population of Poland there is an over-representation of people with middle and higher education among the migrants). Thus, conclusions concerning the overall population of migrants can be treated as adequate for the group of people with high skills (in accordance with the project's assumptions).
- A small percentage of people leave the country with an intention to stay abroad permanently.
- The main factors pushing people from Poland are low earnings, unattractive working conditions, lack of job offers corresponding to the learned occupation.
- The main reason for returns were family matters and achievement of the goal (mainly related to income) set before going abroad.
- Poles abroad usually perform simple work, significantly below their qualifications.
- A substantial part of them (more often persons with higher education and women) improve their skills (mainly language skills) while working by participating in further training courses. After returning, Poles would like to perform work corresponding to their qualifications, but the situation on the labour market does not allow everyone to achieve this. Inability to find work corresponding to qualifications contributes to the decision to open up one's own business (this phenomenon appears more often among persons with higher education) or, especially when combined with experienced culture shock.
- The resettlement processes after return is better for those prior to returning to Poland, who obtained information about the situation in Poland and the necessary formalities associated with the return (issues associated with tax, healthcare and education of children), and sought employment in Poland while still abroad.
- In recent years, the number of person returning exceeds the number of people leaving Poland. Still, according to the experts interviewed in this study, one cannot talk about a phenomenon of mass returns.
- During the course of this study, it was not possible to obtain credible information about the scale of migration and returns of persons with the highest qualifications, representing selected sectors, for instance, physicians or

scientists. In the experts' opinion, the migration processes did not take on a mass scale in case of these occupation groups. Among physicians one can observe strong internal migration to the private sector and other branches of the economy (for instance, the pharmaceutical industry). On the other hand, the occupation of a scientist is characterized by mobility, which means that trips lasting several months, or years are a natural phenomenon in this occupation group. A problem can be resettling to the working conditions in Poland ensuing from less satisfying working conditions and inability to fully utilize the skills acquired abroad.

- The gap created after emigrants leave can be filled in, to a certain extent, by foreigners migrating to Poland, especially from Ukraine. However, they usually perform work which is unattractive to Poles (due to the level of remunerations and working conditions) and below their qualifications (this group is dominated by persons with middle and higher education). Their migration takes on the form of cyclical, relatively short stays. Nonetheless, as the number of persons studying and staying in Poland after completing education increases, their stays become longer and the political and economic crisis in Ukraine deepens, it can be assumed that the impact of foreigners on filling in the said gap will be increasing.
- Despite a significant outflow of people associated with the migration processes, the impact of this phenomenon on the labour market on the country's scale is insignificant (in the short and medium-term perspective). However, strong regional variation can be observed here. Negative demographic processes are deepening in provinces particularly affected by migration, which, in the long-run, will not be indifferent to the local labour markets.

A9.5.1 Policy recommendations

Based on the analysis of the data obtained and interviews with the EU experts, a list of recommendations for the central authorities can be formulated:

- Central institutions should make every effort to better identify the scale and trends surrounding migration and re-emigration and to conduct a reliable diagnosis of the needs of the persons considering return to Poland. For this purpose, it would be justified to conduct cyclical and wide empirical studies in Poland and in the countries with the biggest Polish diaspora.
- According to the experts, creation of a strategy encouraging persons living abroad to come back may prove ineffective. It seems more effective to implement solutions not so much dedicated to the returnees but supporting the development of the entire economy. This can be done, for instance, by stimulating enterprises' investments and innovativeness (which may contribute to the creation of new job vacancies) and making it easier for parents and persons taking care of their dependents to enter the labour market (by developing institutional care). Among the tools implemented with the returnees in mind, in the upcoming years the authorities should update and promote the existing and create new points of information about the situation in Poland and about the formalities associated with re-emigration. Non-governmental organisations cooperating with migrants and re-emigrants in Poland and abroad should get involved in the preparation of effective solutions in this regard.
- Governmental support (grants, subsidies) for initiatives being undertaken by organisations helping persons returning from migration abroad in areas, in which the authorities have no solutions developed (for instance, psychological support), is of high significance.
- Other areas requiring enhancement include competencies of the employees of the labour market institutions, among others, regarding the knowledge about the returnees' problems, assistance institutions, legal solutions, and counselling. Moreover, the labour market institutions should be better prepared to play the role of intermediary contacts between the persons returning from migration and the employers.
- In order to support resettlement of returnees' children to the Polish education system, the Ministry of National Education should prepare appropriate

procedures and programmes for teachers preparing them for work with children and youths coming from abroad. This refers, for instance, to inclusion of the issue of resettling of re-emigrants' children in the post-graduate studies for teachers and pedagogical programmes, launching of specialisation paths for educators teaching Polish as a second or foreign language. The Ministry should also create a network of consultation points for re-migrating parents and support groups for children and youth. Among other recommended initiatives in this area that could be considered are: planning and organisation of courses for teachers, psychologists and pedagogues, employees of psychological and pedagogical counselling services, to help them become more aware of the resettlement problems of this group of pupils.

A9.6 Bibliography

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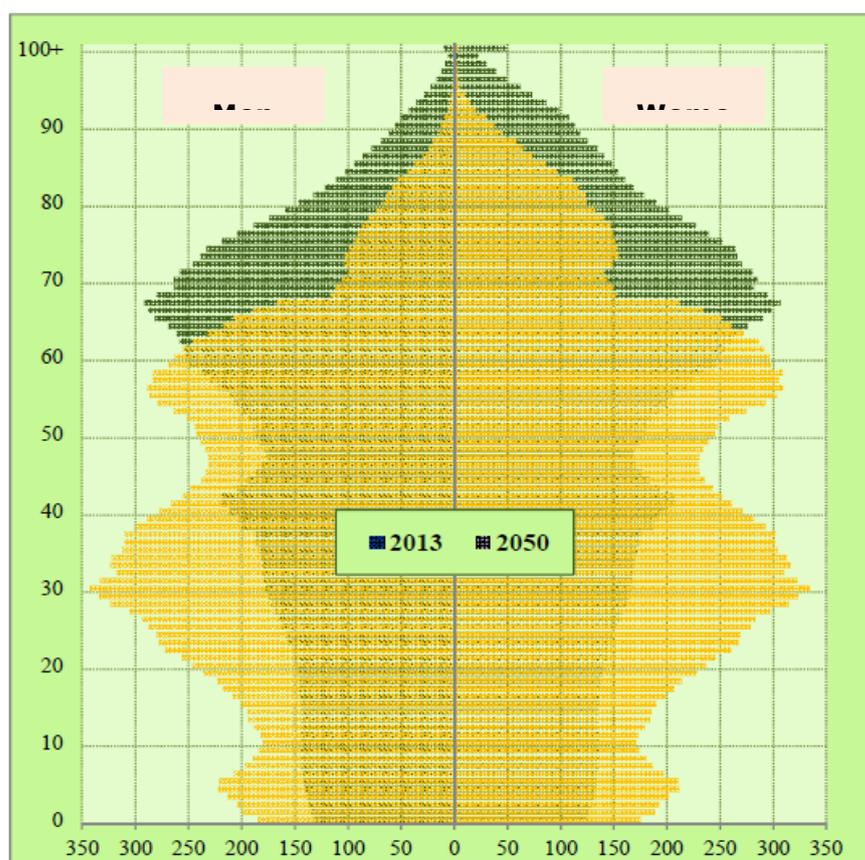
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A9.7 Statistical information

Figure 97. The pyramid of the population's age in 2013 and 2050



Source: Demographic situation of the elderly and the consequences of the aging of the Polish population in the light of the forecast for 2014-2050, Central Statistical Office, Warsaw 2014

Table 30. Unemployed people in Poland registered by age and level of education

	Unemployed	I-III 2017	IV-VI 2017	VII-IX 2017
Age	From 18 to 24 years	170 714	141 311	150 043
	From 25 to 34 years	370 588	319 593	308 419
	From 35 to 44 years	294 439	257 151	248 890
	From 45 to 54 years	236 070	203 000	190 055
	From 55 to 59 years	155 086	137 018	127 693
	60 years old and more	97 320	93 574	92 013
Education	Lower secondary and below	371 186	318 919	303 087
	Basic vocational	350 759	296 582	285 397
	General upper secondary	141 448	126 934	124 298

Post-secondary and technical upper secondary	285 483	252 614	247 889
Higher	175 341	156 598	156 442

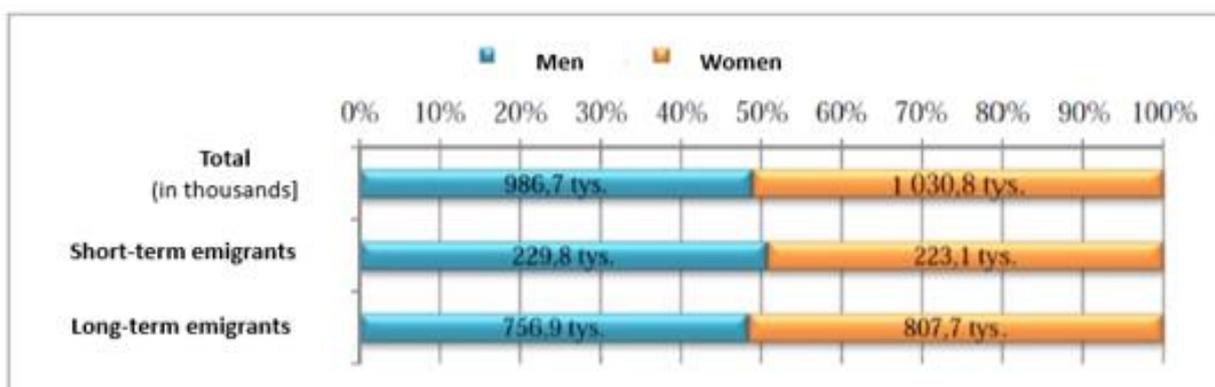
Source: Own compilation based on CSO's Knowledge Base Fields, 27/01/2018

Figure 98. Main directions of migration from Poland for permanent residence in 2004-2016 by country

Country of residence	Number of migrants in thous.								
	2004	2005	2010	2011	2012	2013	2014	2015	2016
TOTAL	1 000	1 450	2 000	2 060	2 130	2 196	2 320	2 397	2 515
Europe	770	1 200	1 685	1 754	1 816	1 891	2 013	2 098	2 214
European Union (28 countries)	750	1 170	1 607	1 670	1 720	1 789	1 901	1 983	2 096
Including:									
Austria	15	25	29	25	28	31	34	36	39
Belgium	13	21	45	47	48	49	49	52	54
Cyprus	.	.	3	3	2	1	1	1	1
Czech Republic	.	.	7	7	8	8	9	9	9
Denmark	.	.	19	21	23	25	28	30	32
Finland	0,4	0,7	3	2	2	3	3	3	3
France	30	44	60	62	63	63	63	64	64
Greece	13	17	16	15	14	12	9	8	8
Spain	26	37	48	40	37	34	32	30	29
Holland	23	43	92	95	97	103	109	112	116
Ireland	15	76	133	120	118	115	113	111	112
Germany	385	430	440	470	500	560	614	655	687
Portugal	0,5	0,6	1	1	1	1	1	1	1
Sweden	11	17	33	36	38	40	43	46	49
Great Britain	150	340	580	625	637	642	685	720	788
Italy	59	70	92	94	97	96	96	94	93
Countries outside the EU, including:	20	30	78	84	96	102	112	115	118
Norway	.	.	50	56	65	71	79	84	85

Source: Information on the size and directions of migration from Poland in the years 2004-2016, Central Statistical Office, Warsaw 2017

Figure 99. Emigrants temporarily living abroad for more than 3 months by sex and residence period



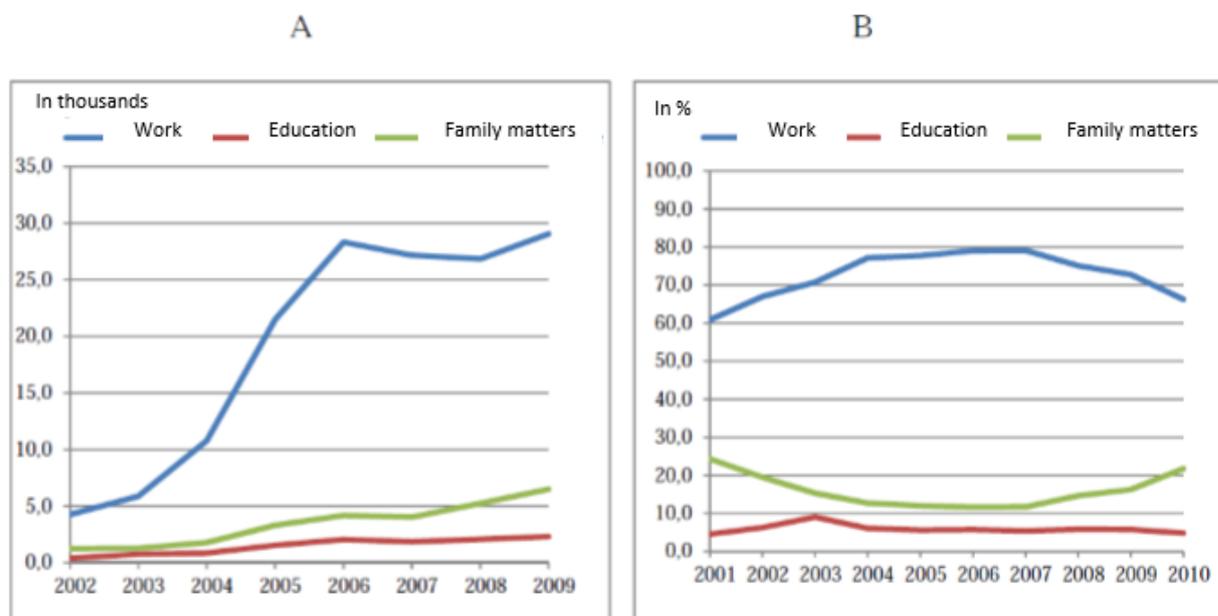
Source: Kostrzewa and Szałtys 2013

Figure 100. Emigrants temporarily living abroad for more than 3 months and total population with higher education with a master's degree, doctor or equivalent, engineer, bachelor, certified economist by field of education ^{a)}

Field of study	Emigrants	Total population
	in percentages	
Total	100,0	100,0
Teacher training, pedagogy, including special pedagogy	11,0 3,6	16,3 4,6
Humanities, learning about languages, art, including foreign language philology	13,4 5,9	8,9 2,2
Social sciences, economics, law, including economics	38,7 11,1	36,2 4,8
Biological sciences	2,5	2,1
Physical sciences	2,6	2,9
Mathematics, statistics	0,6	1,0
Informatics	4,3	3,0
Engineering, production processes, construction, including mechanics and machine construction	11,6 1,8	15,2 3,0
Agriculture, veterinary	2,2	3,2
Health and social care	6,4	6,9
Services including tourism and recreation	6,6 4,1	4,4 1,5
Not specified	0,1	0,0

a) Emigrants for whom information on their level and field of education has been established

Figure 101. Emigrants by reasons and year of departure (a) and the structure of the reasons for departure by the year of departure (B) ^{a)}



a) For long-term emigrants for whom the reason and year of departure were established

Source: Kostrzewa Z., Szaltys D., *Migracje zagraniczne ludności. Narodowy Spis Powszechny Ludności i Mieszkań 2011 [Population's migration abroad. National Population and Housing Census]*, CSO, Warsaw 2013

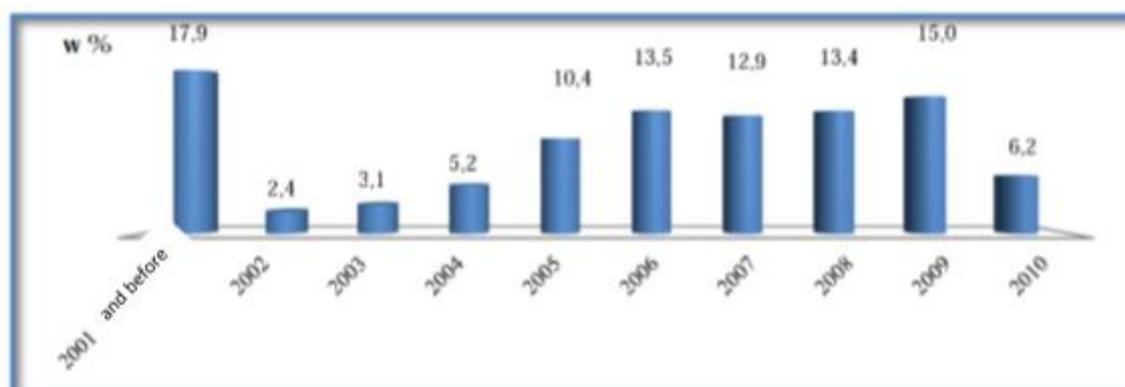
Figure 102. Causes of migration abroad for temporary stays over 3 months by sex of migrants^{a)}

Reasons for migration	Total			Cities			Villages		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
TOTAL	100,0								
Work	72,8	78,7	62,2	70,4	80,5	59,4	77,1	85,1	67,4
Education	5,7	3,9	8,4	6,9	4,2	9,9	3,6	2,0	5,6
Family matters	15,7	12,6	22,4	16,0	9,8	22,8	15,2	9,7	21,7
Treatment, rehabilitation	0,2	0,2	0,3	0,3	0,2	0,4	0,1	0,1	0,1
Other	5,5	4,6	6,7	6,3	5,2	7,5	4,0	3,1	5,1

a) In percentage of total migrants for whom the reason for departure was established

Source: Kostrzewa and Szaltys 2013

Figure 103. Emigrants staying abroad temporarily for 12 months and longer by year of departure ^{ab)}



- a) In percentage of total emigrants for whom the year of departure was established
 b) Data for 2010 include departures by the end of March 2010

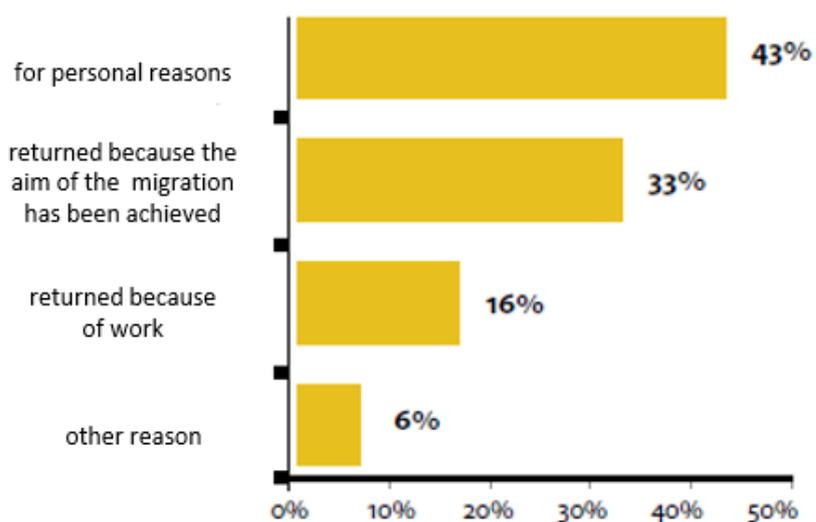
Source: Foreign migrations of population, National Population and Housing Census 2011

Figure 104. Moving to and from Poland



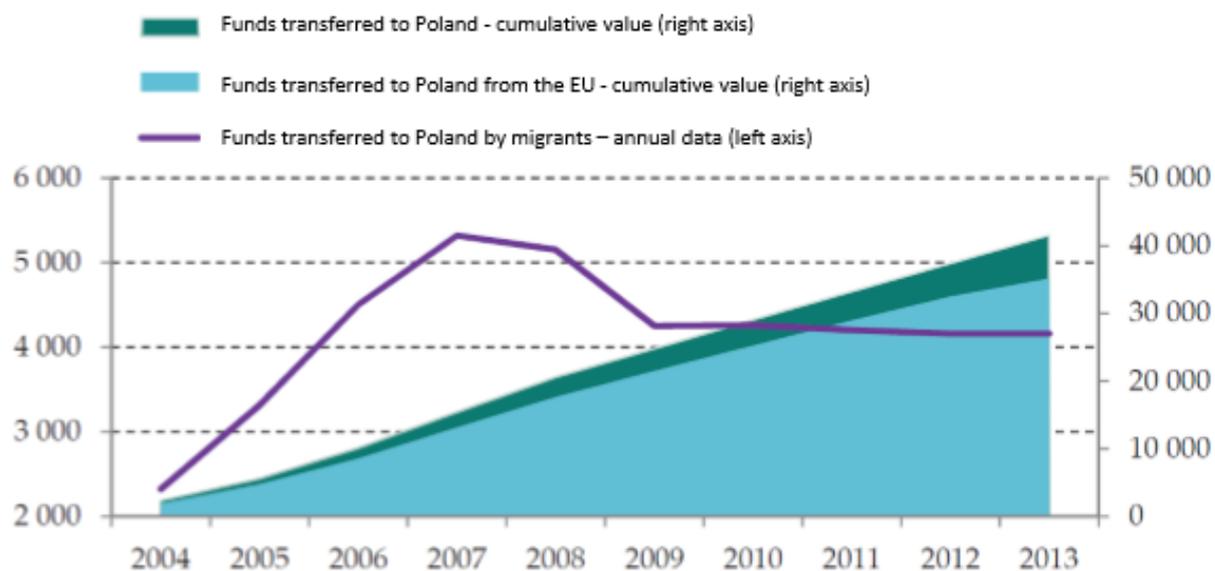
Source: Report on removals. How and where do the Poles move, <http://www.info.clicktrans.pl/raport-przeprowadzki-2017-jak-i-dokad-przeprowadzaja-sie-polacy/> (accessed on 25.01.2018)

Figure 105. Motivation for return migration



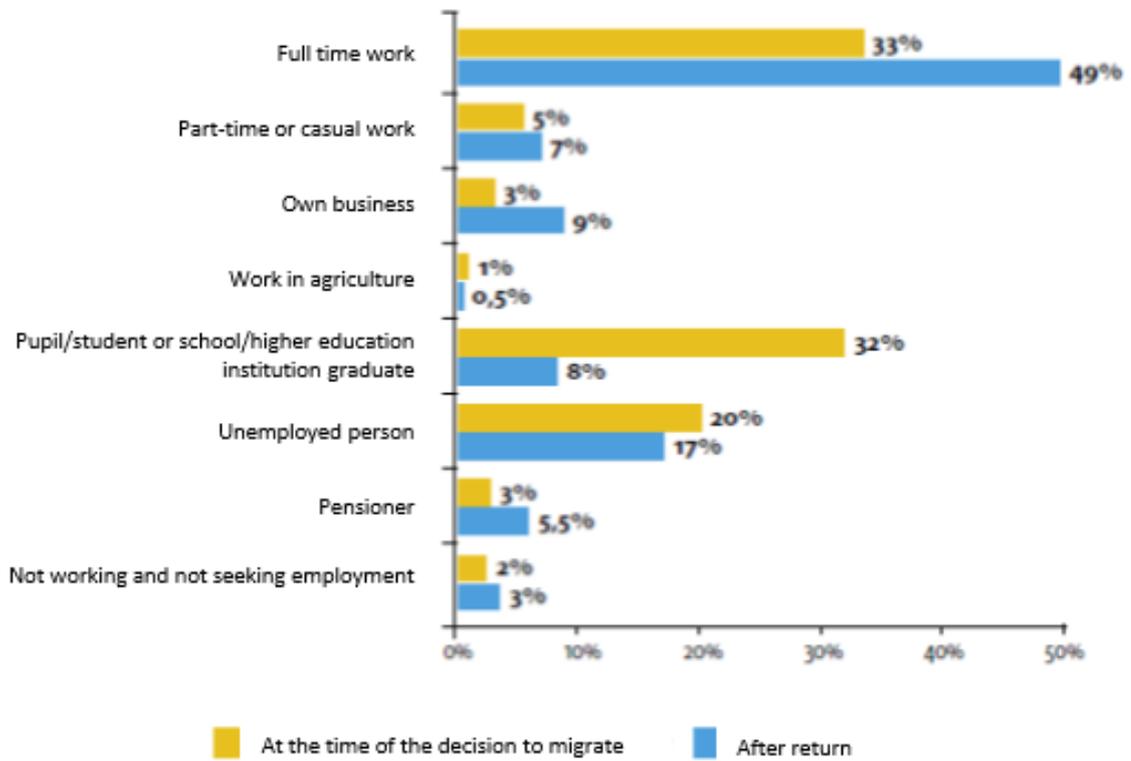
Source: Szymańska et al. 2012

Figure 106. Funds transferred to Poland in individual years (left axis) and cumulative values (right axis) - in EUR million.



Source: Chmielewska 2015

Figure 107. Comparison of the professional situation of the migrants after returning to the Śląskie Voivodeship and at the time when the decision to go abroad was taken



Source: Szymańska et al. 2012

Annex 10 Case Study: Bulgaria and Romania

A10.1 Introduction: the demographic and labour market situation in Bulgaria and Romania

Over 3 million Romanians and more than 1 million Bulgarians currently live and work abroad. More than a decade after joining the EU, the two countries remain its poorest Member States and so for many natives relocating to Western Europe in pursuit of better study or work opportunities is still an attractive choice. Although emigration has affected both the high- and low-skilled, Bulgaria and Romania have some of the highest rates of active, highly-educated citizens leaving the country within the past ten years. The Bulgarian Academy of Sciences (BAS) estimated in 2016 that in five to ten years Bulgaria will have lost some 400 000 qualified cadres – which is significant for a workforce of about 2 million – and the larger Romania is likely to suffer from an even higher loss of (skilled) labour.

Despite the simultaneous accession of Bulgaria and Romania to the EU in 2007, it should be noted from the onset of this case report that there are marked differences between the two countries which would undoubtedly affect the stock/ flows of labour into other parts of Europe. Bulgaria is a lot smaller than Romania: with a population of just over 7 million, it represents only 1.5 % of the EU population and 1.3 % of the EU workforce. Romania, with a population of 19,5 million, is the seventh largest Member State of the EU and the second largest country in Eastern Europe.

Policy documents, research studies and media reports all seem to agree that the lack of labour in general and of skilled workers in particular has negatively impacted domestic economies and labour market conditions of Bulgaria and Romania. Key sectors of these countries' economies such as education and healthcare, as well as other sectors suffer from labour and skill shortage. Furthermore, for a country the size of Bulgaria, having millions of Bulgarians emigrate over the past few decades is a significant demographic change. Emigration is not solely responsible for this (and also has positive effects), combined with the general aging of the population, both Bulgaria and Romania are reported to have a diminishing workforce.

Given the scale of emigration and the challenges facing Bulgaria and Romania as a result of it, it is vital for their respective governments to develop and implement policies tackling the loss of skilled labour and even attracting the highly-qualified back to these countries, as well as to support such initiatives by other actors. To what extent such policies and/ or initiatives have been put in place in Bulgaria and Romania is thus the primary focus of this case report.

A10.2 Movement of skilled labour in Bulgaria and Romania – general patterns

There are no official, nor systematic data on how many (highly-skilled) Bulgarians have left the country, nor how many have returned from abroad. According to a recent report published by the Open Society Institute (OSI) – Sofia²²¹ in October 2017, the total number of people born in Bulgaria and living abroad is about 1.1 million, of which 600-700 000 have left for economic reasons. Those who have left Bulgaria live mainly in the EU, Turkey and the United States. About half a million Bulgarians live in other EU Member States, mainly Spain, Greece, Germany, the UK and Italy (see Figure 108).

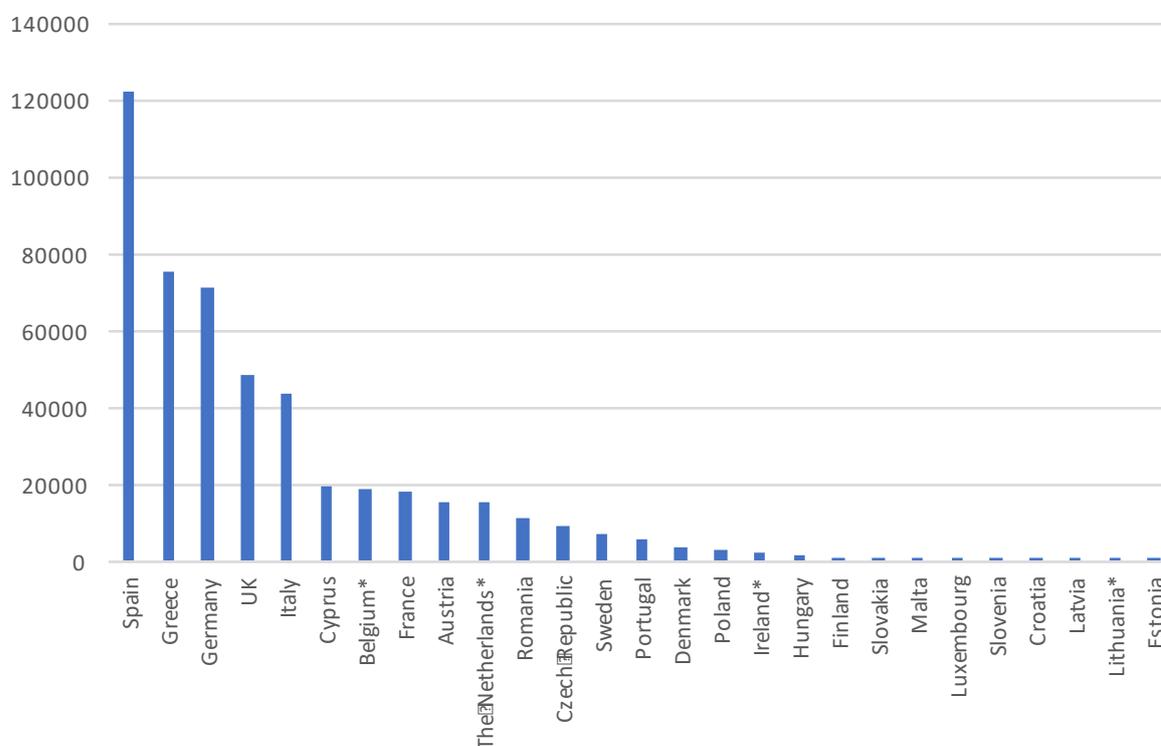
Bulgaria and Romania's EU membership has provided nationals with visa-free travel to about 150 countries in the world since 2007 and free access to the EU labour market since 2014. The OSI report cited above finds that there has been no increase in the number of people leaving Bulgaria after the start of EU membership (which has mostly led to the legalisation of those who had already left up to that point). Over the last three

²²¹ The OSI report is based on official Bulgarian and foreign statistics, and UN data, all showing similar results, albeit with some differences that can be explained by differences in time range and the definition of migration, as well as inaccuracies in data.

decades, there has been a significant, gradual reduction in the number of Bulgarians leaving the country, to just over 17 500 (2001-2011) and 4 000 (2011-2016) people on average per year. On the contrary, other sources such as Boros (2016) claim that, with the accession of Bulgaria and Romania to the EU, East-West migration after 2007 intensified as wage levels in Bulgaria and Romania had been significantly lower.

The OSI 2017 report notes that Eurostat also publishes population data by citizenship. However, these data are incomplete and do not allow comparisons over the years. In 2016, more than 700,000 Bulgarians were living in the EU, mostly in Germany (32 %), Spain (18 %), Greece (11 %), UK (9 %) and Italy (8 %).²²² However, not all Bulgarian citizens are born in Bulgaria, for example those from traditional Bulgarian communities in Moldova, Ukraine or the Western Balkans may use their Bulgarian citizenship to work in the EU. Furthermore, children of Bulgarians born abroad may also receive Bulgarian citizenship, but will not have emigrated from Bulgaria. Therefore, the OSI report concludes that data on Bulgarian citizens living in the EU somewhat overestimate the number of Bulgarians who have left the country.

Figure 108. In 2011, the largest number of people born in Bulgaria lived in Spain, Greece, Germany, UK and Italy



Source: Eurostat census (*or annual) data for 2011 as cited in Trends in Bulgarian Migration, Open Society Institute – Sofia, 2017

Further OSI (2017) data shows that over the last five years, the number of people leaving Bulgaria remains high at about 25,000 people per year; the inverse flow of Bulgarians to the country, however, is gradually increasing as well, exceeding 21,000 people on average annually. Thus, net migration from the country averages at around 4,000 people per year, which historically is well below the levels for the past three decades. Whilst the inflow of Bulgarians is lower than their outflow, it shows the beginning of a process of return migration to Bulgaria.

According to official statistics published in 2016 by the National Statistical Institute (NSI) in Bulgaria, 21,241 persons changed their residence from abroad to Bulgaria. Of these,

²²² Excludes data for Malta and Cyprus and includes data from EEA countries.

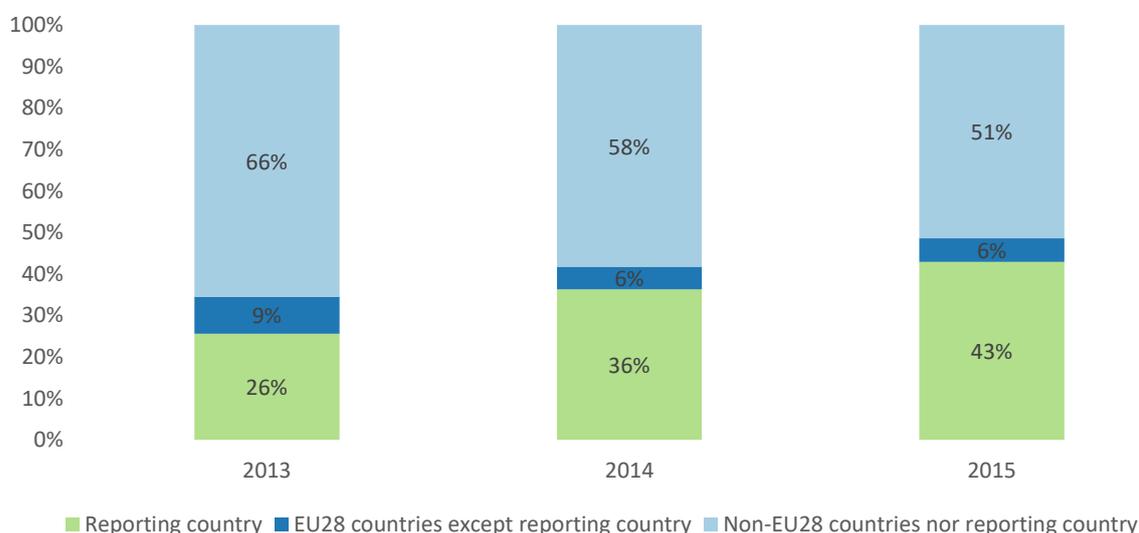
46 % were born in Bulgaria, i.e. these are Bulgarians who have returned to the country, another 9 % are born in other EU countries, and the rest come mainly from Turkey, Russia and Ukraine.

In terms of return migration, OSI (2017) finds that over the last three years, about 10 000 people born in Bulgaria have returned every year, which is more than twice as many compared to 2013 when the number of Bulgarians returning was 4 771. Thus, over the period of 2013-2016, a total of 35 000 Bulgarians returned home. According to the authors, the rate of return could increase in the presence of high economic growth, increasing employment, and a reducing income gap and standard of living between Bulgaria and western European countries.

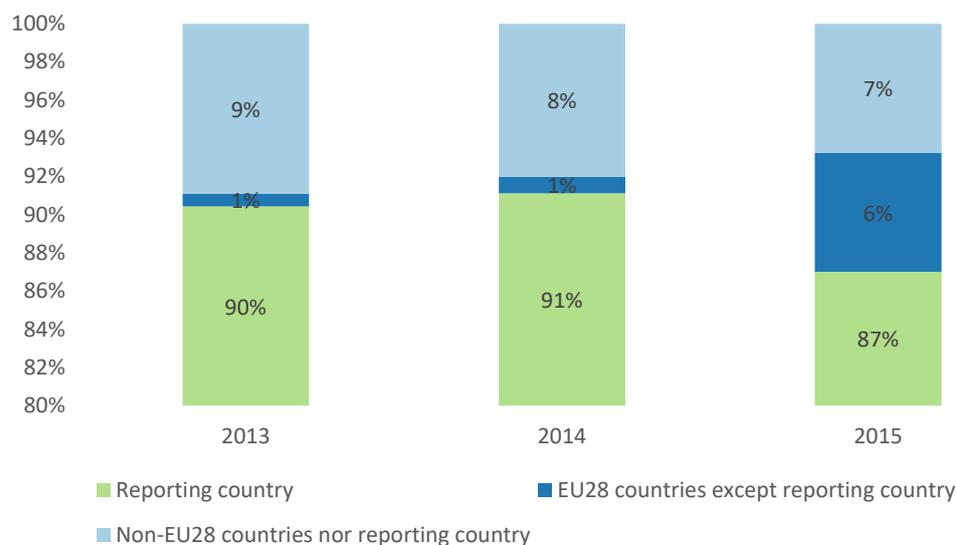
In Romania, too, there are no official statistics on how many people have left or returned. The UN estimates that some 3.4 million Romanians currently live and work abroad. The UK, Germany, France, Italy and Spain seem to be the top choices of destination for Romanians. The number of people from Romania residing abroad is much higher than Bulgaria. According to the UN, the largest Romanian communities today consist of about 1.1 million people in Italy and over 650 000 each in both Spain and Germany (OSI, 2011; Goga, & Ilie, 2017).

Back in the 2000s, Spain, Italy and Germany accounted for a large proportion of outflows in Europe; at that time, the country also witnessed return flows of Romanians from Germany and Spain – as did Bulgaria when its migrants returned from temporary stays in Germany (Boros, 2016). More recently, Eurostat data shows that the number of Bulgarians and Romanians returning home for at least a year has for the most part increased between 2013 and 2015. As for citizens from other EU Member States, not many of them establish themselves in Romania or Bulgaria according to the same dataset (see Figure 109).

Figure 109. *Whilst the number of Bulgarians returning home has increased in recent years, not many citizens from other EU Member States establish themselves in the country*



In Romania, an even smaller number of other EU nationals establish themselves in the country, whilst the number of Romanians returning home seems to be fluctuating in recent years.



Source: Eurostat, *Persons establishing themselves in Bulgaria and Romania by citizenship, 2013-2015*

A10.3 Characteristics and patterns of the movement of (skilled) labour in Bulgaria and Romania

Age, gender, type of migration

A total of 30 570 people left Bulgaria in 2016, with an even gender split (15 393 men, 15 177 women); the majority of people who left (25 795) had Bulgarian citizenship and were aged between 20 and 44 years (NSI, 2016).

After the year 2000, the data illustrate that the proportion of migrants that were middle-aged, married women with secondary or tertiary education increased (without their children or spouse); they performed low-skilled work and sent up to 40 % of their income back to Bulgaria. This period is further characterised by temporary migration and only between one-fifth and one-fourth of Bulgarians intended to remain permanently abroad (OSI, 2011).

After 2007 when Bulgaria acceded to the EU, the number of Bulgarian women abroad continued to be higher, and a significant change is observed in the share of whole families moving abroad, which increased compared to the period before 2007 (OSI, 2011).

In Romania, the lower and upper age limit of people leaving the country seems to be slightly higher than Bulgaria: according to National Statistics Institute (NIS) data (2014), the main category of Romanians moving abroad consists of people aged between 25 and 64 years, followed by people aged between 15 and 24 years, both in 2002 and 2012 (Goga, & Ilie, 2017).

Education

Although it is unclear whether highly-educated people are more likely to move abroad, students are a critical factor in this. According to Boros (2016), the largest number of foreign students at German universities in 2014, after China and the Russian Federation, originated from India, Austria and Bulgaria (between about 6,700 and 9,300 students from each). Based on information from the German statistical database Statista, the *Deutsche Welle* (2016) reports that more than 225,000 Bulgarians were living in Germany in 2015, many with an above average education.

According to the OECD, in 2010-2011, Romania was among the countries which saw the number of emigrants with higher education increase at a significant rate of 108 % (Goga, & Ilie, 2017).

Sectors affected

In both Bulgaria and Romania, healthcare is one of the sectors which has been most affected by the emigration of doctors (e.g. anaesthesiologists, surgeons and other specialists), nurses and other medical professionals to other EU countries. According to the latest data cited by one of the interviewed stakeholders, there were 55 000 nurses in Bulgaria at the start of to mid-90s, whilst their number at present is 25 000 – i.e. some 35,000 Bulgarian nurses have retired, exited the labour market or otherwise moved abroad.

This issue is widely covered in both national and international media as well, for example, *Deutsche Welle* (2016) reports that some 43,000 pharmacists have left Romania in the ten years since the country joined the EU, with 5 000 Romanian medical specialists working in Germany alone. In Bulgaria, the number of doctors has decreased from roughly 35,000 to 28,000 (*Deutsche Welle*, 2016), and Romania appears to be even more affected, with an estimated 30 % of doctors leaving the country, reducing the overall number of physicians from 20 000 in 2011 to 14,000 in 2014 (Global Risk Insights, 2015).

The Economist (2017) further reports of polls of Bulgarian medical students shows that 80-90 % plan to leave the country after graduating. This seems to be the case in Romania as well, where one of the interviewed stakeholders stated that many medical students have no choice but to leave after graduation. This is largely due to an insufficient number of further training places available for them across hospitals in the country. According to this interviewee, this is only one of the reasons for leaving, with higher wages in other parts of Europe and many other personal factors also playing a role in the decision.

It is not only the healthcare sector, which has suffered a loss of talent from Bulgaria and Romania, as confirmed both by the literature and stakeholder interviews. Specialists across different fields, including education, research, IT, engineering, aviation and construction have chosen to leave for other EU countries which offer higher salaries – showing how systemic and widespread the loss of skilled labour is in both Bulgaria and Romania. According to one of the interviewed stakeholders in Bulgaria, at present there is also a trend of teachers moving from Bulgaria to Romania.

A10.4 Understanding the movement of skilled labour in Bulgaria and Romania

Next to higher wages and better working conditions, research shows that Bulgarians and Romanians are attracted by the quality of institutions in other countries such as good schools and hospitals. This is confirmed by stakeholders interviewed for this case study; in one interviewee's own words: *"young people in particular do not just want to make a living; they want security for them and their families, as well as opportunities for better social and cultural life."*

Boros (2016) refers to passionate debates in Germany about an alleged 'immigration into the welfare system' or a so-called poverty migration from Bulgaria and Romania following their free access to the EU labour market in 2014. However, the author also recognises the reverse situation, that it was mainly the highly-educated people who left. Other sources too, notably The Economist (2017) finds that better social benefits matter more for unskilled migrants.

As for key pull factors, many of those who have left their home country early in their lives are less likely to have established social networks that might attract them back home and so they may stay abroad instead. Furthermore, in the case of Bulgaria, there

is a general misconception that those returning home after a period away have failed to make it abroad.

A review of the literature regarding the impact of the financial crisis in 2008 or Bulgaria's and Romania's accession to the EU in the preceding year, shows conflicting views. For example, OSI (2011) claims that the attractiveness of moving abroad decreased due to a reduction of differences in unemployment rates between Bulgaria and Western Europe; as well as, the narrowing of income levels from four times higher in western Europe in the 1990s to only 2.5 times lower in Bulgaria a decade later.²²³ According to Boros (2016) who points out that about 2.2 million eastern Europeans moved to eastern Europe to find a better life and work between 2003 and 2007, as a result of the financial crisis of 2008. Also, the termination of (normally five-year) employment restrictions following Bulgaria and Romania's EU membership, migration from the eastern part of Europe to the West became even more pronounced after 2010.

In the case of Bulgaria, the economic and financial crisis appears to have struck the country in 2009, as confirmed by several interviewees, when about 4 000 workplaces were shut down. Although some employers opted for reducing the working hours (in lieu of having to shut down workplaces), many of those who lost their jobs at the time looked for work outside Bulgaria. The situation started improving in 2014 when these employers increased the working hours, which showed that when confidence returned to businesses, economic growth also resumed. However, according to one of the interviewees, the national labour market is still recovering from this loss of labour today.

In Romania, the economic and financial crisis seems to have hit the country earlier, in 2008, and one of the interviewed stakeholders reports that the crisis only amplified the already existing situation in Romania, whereby the government sought to implement more liberal labour market policies, giving greater flexibility to employers. This meant that, where employment contracts were previously long and stable, part-time working arrangements increased due to the policy change. According to this interviewee, the introduction of more flexible employment contracts contributed to the desire among some workers to emigrate to seek more stable employment elsewhere.

Seasonal emigration flows play a significant role in the movement of labour from Eastern Europe. However, at least in the case of Bulgaria, they mostly concern low-skilled workers, for example in the agriculture, tourism and social care sectors. In one interviewee's own words; *"whole villages in Bulgaria are being sustained through seasonal work, as the remuneration which workers earn abroad is often enough for them to survive until the next year."* As for inverse flows of seasonal workers, several interviewees report of mainly hospitality workers from Ukraine, Moldova and FYROM working in Bulgaria, i.e. mostly low-skilled labour. Although IT companies reportedly lobby the government regarding the possibility to bring in highly-qualified IT specialists from third countries, as this would allow them to develop this part of the economy further, cases of skilled third-country nationals (TCNs) working in Bulgaria seem to be rare at present – and this seems to be also the case in Romania, according to one interviewee.

It is difficult to state with certainty whether the issue of movement of skilled labour from Bulgaria and Romania is a subject of national, political and/ or media debate. National as well as foreign media certainly tend to cover the issue, the latter usually reporting on the two countries together. In general, however, there appears to be limited discourse about the labour market situation in these countries which has a serious deficit of not only highly-qualified cadres, but all kinds of labour in both Bulgaria and Romania. In one interviewee's own words; *"if the idea is for the domestic economy to grow, that would mean employing more qualified labour."*

²²³ Measured in terms of purchasing power parity.

A10.5 Movement of skilled labour and its impact on the domestic economies of Bulgaria and Romania beyond the labour market

The movement of labour from Bulgaria and Romania, whether skilled or not, has had serious negative consequences on their domestic economies. For example, The Economist (2017) citing International Monetary Fund (IMF) data reports that by 2030, GDP per capita in Bulgaria and Romania may be 3-4 % lower than it would be without emigration. The *Deutsche Welle* (2016) further points out that the lack of well-trained workers appears to affect foreign investors in Bulgaria.

As mentioned previously, important sectors of the domestic economies of Bulgaria and Romania have been affected by the movement of skilled labour which is a cross-cutting issue across different sectors of the economy, from IT to construction.

Socially, the healthcare systems of Bulgaria and Romania suffer from a shortage of specialised medical staff. This loss of talent is further exacerbated by the sunk investment in training, as Romania, for example, spends roughly EUR 3.5 billion on educating doctors (Global Risk Insights, 2015). On the one hand, foreign media report of whole regions such as in Germany, which would have a shortage of medical staff if eastern European doctors had not moved to work there (*Deutsche Welle*, 2016); on the other hand, national media highlight the issue of small towns and villages with deterred access to primary medical care (for example, lack of GPs in rural areas in Bulgaria).

As for the impact of the movement of skilled labour on the sustainability of social security systems due to emigration, does not appear to be as relevant: neither Bulgaria, nor Romania have a strong welfare system; as a share of GDP, social spending in the two countries is roughly half of that in many richer European countries (The Economist, 2017).

Both Bulgaria and Romania profit from remittances sent back home to workers' families. According to the latest Eurostat data on balance of payments, in 2015 Romania was the third largest recipient of intra-EU remittances (after Poland and Portugal), with a value of EUR 1.7 billion. Bulgaria was the sixth largest recipient of intra-EU money transfers (after Italy and Hungary), with a total value of EUR 0.5 billion, i.e. three times less than Romania.

The largest surplus in personal transfers (which is seen to be broader than workers' remittances) was registered in 2015 (right after Poland and Portugal) in Romania (+ EUR 1.7 billion) and Bulgaria (+EUR 0.8 billion). As remittances support national household consumption in the outgoing countries and represent an important source of foreign exchange, net remittances in Bulgaria and Romania (as well as Portugal and Poland) make a substantial contribution to balancing a negative current account.

Evidence suggests that remittances tend to compensate for the loss of labour only partially, and only in the short term. For example, outflows between 2004 and 2009 were estimated by Holland et al. (2011) to reduce potential output by 5 % to 11 % in the most affected countries, including Bulgaria and Romania (as well as Lithuania). The same study found the impact on GDP per capita to be significantly smaller, while still negative in most of the outgoing countries.

Other social and economic effects include: population decline as a result of the aging of the population in both Bulgaria and Romania; faster aging of the population as a result of second-generation 'movers' choosing to remain abroad because they have grown up or studied there; potentially lowered level of remittances as entire families decide to move abroad; community and regional discrepancies throughout the territory of both Bulgaria and Romania, as small towns and villages become even poorer as more and more people move abroad or do not profit from remittances as much as other areas (e.g. Goga, & Ilie, 2017).

A10.6 Movement of skilled labour and its impact on labour market conditions in Bulgaria and Romania

In terms of direct effects on the national labour market, due to an aging population combined with emigration, the labour forces of both Bulgaria and Romania suffer from serious deficits of labour and a shrinking labour force. Most of the stakeholder interviews noted that employers in these countries complain about labour and skill shortages, and inability to find employees suitable for highly-qualified posts. The Economist (2017) reports that firms in Bulgaria are adapting to labour shortages by raising wages to attract workers (including from abroad), and that wages in the country have grown faster than productivity for the past five years (which makes exports less competitive). Some employers in Bulgaria have also recently started to offer one-off relocation packages of up to BGN 5 000 (approx. EUR 2,500) to Bulgarians living abroad who are willing to return for the purpose of taking-up qualified employment.

In addition to a deficit of labour, negative effects on the labour market of Romania include: a diminishing number of taxpayers; strong pressure on the national retirement systems as a result of the aging population and the diminishing size of the working population; fields of activity which are seriously affected by the movement of labour (e.g. healthcare, education, research), both in terms of efficiency and of personnel (Goga, & Ilie, 2017). As for Bulgaria, Beleva (2016) claims that in the short-term emigration contributes to a decrease in the pressure on the labour market and towards a decrease in the unemployment level; however, in the longer term this leads to a decrease in the quality of the human capital/ labour force; and disrupts the professional continuity in families and discourages the attainment of higher educational qualifications, as those who move abroad assume positions, which require low qualification but provide higher wages.

The activity rate for Bulgarian natives was 68.7 % and for Romanian nationals was 65.6 %, in 2016. Both are lower than the EU average activity rate of nationals of 73.1 %. Although evidence of linking this to emigration has not been identified, one of the interviewed stakeholders reports widespread demotivation among people in Bulgaria and lack of enthusiasm to study and/ or participate in the labour market, earning a low or local salary when they could be living off remittances, for example.

Finally, with regard to any evidence of over-skilling, the IT sector in Bulgaria in particular has been rapidly developing over the past few years and is allegedly attracting software engineers back to the country; however, the extent to which this really concerns such highly-qualified professionals appears to be controversial, as many of the jobs in this sector are within call centres as reported by one of the interviewees. However, it is unclear whether this is related to the movement of skilled labour. Another interviewee stated that students graduating with a Law or Economics degree later have a very hard time finding a job in Bulgaria.

A10.7 Policy responses undertaken by Bulgaria and Romania to address the outflows of skilled labour

Government measures addressing the outflows of skilled labour in Bulgaria

In Bulgaria, a number of legal acts and strategic documents govern the outflows of skilled Bulgarians and their potential return as elaborated in this next section. In general, there is an observed lack of long-term policy response addressing such an important issue. Also, most of the interviewed stakeholders confirmed that the existing measures are insufficient.

The two foremost policies of the Bulgarian government which attempt to address the outflows of skilled labour are:

- The annual *National Action Plan on Employment* by the Ministry of Labour and Social Policy, which was adopted 19 January 2018 for the year 2018, and

- The multi-annual *National Strategy on Migration, Asylum and Integration* by the Ministry of Interior, currently covering the period 2015-2020.

Whilst the *National Action Plan on Employment 2018* does not appear to explicitly refer to the emigration of highly-qualified Bulgarians, it recognises the difficulty of employers to find well-trained workers and the need to reduce the shortage of skilled labour in the country. The demand for skilled labour, according to the Action Plan, can be seen across the manufacturing industry, education, health and social sectors, engineering and technical specialties, and ICT. According to one of the interviewed Bulgarian stakeholders, however, it is not clear whether this conclusion is based on a national labour demand forecast (which this stakeholder claims is missing in Bulgaria) or rather follows the general EU trend.

Some of the completed or planned measures in the Action Plan which aim to reduce the shortage of skilled labour in Bulgaria include:

- The increase of the minimum wage in Bulgaria to BGN 510 (approx. EUR 260) since 01 January 2018, an increase of 11 % from BGN 460 (approx. EUR 235) previously – also highlighted by some of the interviewed stakeholders as a measure to attract Bulgarians back to the country;
- The development of a comprehensive model for overcoming the shortage of skilled labour in four pilot sectors of the Bulgarian economy: machine-building and metalworking, electrical engineering and electronics, medicine and beauty and health services, and transport. This action foresees assessment of the attractiveness of key professions in each sector, development and testing of a methodology for assessing labour productivity and tying this with salary negotiation, and development and implementation of practices and tools for enhancing the corporate social responsibility of employers with the aim to increase the attractiveness of jobs in the above-mentioned sectors and attract and retain skilled labour.
- The provision of vocational and/ or foreign language training for overcoming the shortage of skilled labour in the knowledge-based and ICT sectors, and the manufacturing industry; this measure targets inactive and unemployed persons of up to 29 years of age and those who are already employed in the above-mentioned sectors.
- The *National Action Plan on Employment 2018* states that the Labour Migration and Labour Mobility Act is due to undergo amendments in 2018, to incorporate further EU rules on entry and residence of TCNs for the purposes of research, studies, training, voluntary service, pupil exchange schemes or educational projects and au pairing. Indeed, within the tripartite dialogue, the Bulgarian government and employers aim to address any labour market gaps through third-country migration. However, this appears to meet the resistance of the social partners who see importing labour from third countries as dumping existing labour in the country.
- Finally, the *National Action Plan on Employment 2018* refers to the work of the Labour and Social Affairs Offices of the Ministry of Labour and Social Policy in Athens, Berlin, Vienna, Dublin, London, Madrid and Nicosia, which contribute to awareness-raising and protection of the rights of Bulgarian citizens living and working in these countries, and to the strengthening of bilateral labour market cooperation within the context of free movement in the EU. Although this is not entirely mentioned in the Action Plan, in addition to offering individual consultations, the Labour and Social Affairs Offices abroad appear to organise periodic career fairs and/ or information days, whose purpose among others is to promote two-way mobility of Bulgarian citizens currently living in these countries. However, one of the interviewed stakeholders noted that, in general these career and/ or information days are not marketed well. As a result, they tend to be

poorly attended both by Bulgarian nationals overseas and Bulgarian employers, and so this cannot effectively promote the return of expats.

Further to the measures of the Ministry of Labour and Social Policy, the Ministry of Interior develops and implements Bulgaria's overall migration policy, which is set in the *National Strategy on Migration, Asylum and Integration (2015-2020)*. The Strategy sees migration policy towards Bulgarian citizens and persons of Bulgarian origin living abroad as a possible resource for overcoming the negative demographic trends in the country. It envisages that economic growth, completion of reforms in key public sectors and proactive government measures are expected to encourage the return and participation of Bulgarians living abroad on the national labour market, the settlement in the country of persons of Bulgarian origin residing abroad, and the overall return of Bulgarians who left the country in the past two decades, thereby preventing their emigration from becoming permanent. Whilst these expected results set by the Strategy are very ambitious, the measures foreseen to achieve them do not appear to be specified.

The National Strategy on Migration, Asylum and Integration (2015-2020), tying in with the National Action Plan on Employment 2018, further refers to the integration of TCNs increasingly becoming a key element of the country's overall migration policy. As the primary institution responsible for the legal and labour migration of TCNs, as well as their integration, this has been ensured through the Labour Migration and Labour Mobility Act of the Ministry of Labour and Social Policy as mentioned above. The implementation of a programme for employment and training of refugees is also foreseen to continue going forward, however, in general these TCNs do not appear to be seen by the government, nor by some of the interviewed stakeholders as a resource which could help Bulgaria in addressing the loss of skilled labour.

Finally, tying in with the *National Action Plan on Employment 2018* – the National Strategy on Migration, Asylum and Integration (2015-2020) states that the work of the Labour and Social Affairs Offices of the Ministry of Labour and Social Policy is expected to continue to develop going forward, expanding to new events in the above-mentioned countries, other EU Member States and/ or potential third countries.

In the field of free movement of labour within the EU and employment of TCNs, the government states its intention to use *EURES* as a tool to promote labour mobility, as well as to contribute to the tackling of labour shortages and skill mismatch. This was contested by one of the interviewed stakeholders, who noted that *EURES* primarily addresses the 'export' of Bulgarian labour into other EU countries at present.

The Ministry of Labour and Social Policy in Bulgaria chairs a working group on Free Movement of Persons at the Council for European Affairs; the rules on this are set in the *Labour Migration and Labour Mobility Act*, which was adopted by the National Assembly (the Parliament) on 13 April 2016. The Act aims to ensure equal treatment of employees, regardless of their citizenship, and synchronises the Bulgarian legislation on free movement of employees with EU law. It also aims to consolidate the existing legal framework in the field of labour migration and labour mobility, hence the relevant parts of the existing Employment Promotion Act appear to be transferred into this new legislation.

Some of the most significant developments introduced by the Labour Migration and Labour Mobility Act (including active measures to promote access to the local labour market for foreign workers from third countries) are:

- New measures for equal treatment of employees, regardless of citizenship, in relation to fundamental rights concerning their professional realisation and economic status in Bulgaria;
- Access for non-EU citizens to the Bulgarian labour market, including traditional employees, intercompany transfers, freelancers.;

- Advanced mandatory payment of at least two average salaries to employees from non-EU countries who are hired in Bulgaria and practice certain professions listed by the Ministry of Labour and Social Policy;
- Relaxed hiring procedures, including the issuance of a Blue Card, for highly-qualified professionals in certain sectors (predominantly IT);
- Requirement that employers submit an application and pay a fixed fee in order to extend foreign employees' work/ residence permits for over three months, where the employee was hired due to expert knowledge, skills and professional experience necessary for the relevant position;
- Simplification of procedures for hiring foreigners and abolishment of the labour market test, which was required in the past to prove the lack of appropriate local employees.

Since 2016, Bulgaria has a Law on Bulgarians living outside the country, which appears to regulate support programmes (government and otherwise, the former with a duration from one to five years) for Bulgarian communities abroad in the field of science, culture, education and health. The Law is overseen by the State Agency for Bulgarians Abroad which was established back in 1992 to implement the state policy towards Bulgarians living abroad and to coordinate the activities of all state institutions with competence in this field. It should be highlighted, however, that neither this Law, nor the activities of the Agency appear to address the issue of return migration of Bulgarians living overseas, even though it would be appropriate to do this given the large numbers of Bulgarians who have left the country.

The Agency's main role is to foster the implementation of projects and initiatives supporting Bulgarian communities abroad in order to preserve the Bulgarian national identity, language, traditions and culture. It maintains an online database²²⁴ of Bulgarian communities overseas, which includes contact details and information about Bulgarian cultural and youth organisations, schools, print and electronic media, etc. It also maintains contact with and supports the activities of administrative offices looking after Bulgarians abroad; this reportedly includes dialogue with representatives of Bulgarian academic communities overseas and facilitating the organisation of career forums with the aim to encourage the return of Bulgarian expats.

Finally, there is a recent agreement between the Supreme Audit Institutions (SAIs) of Bulgaria, Hungary and Romania to conduct a coordinated audit of the Graduate Career Tracking Systems which aims to highlight good practices/ lessons learned with regard to career tracking of graduates employed in other countries.

Non-government initiatives in Bulgaria aiming at the return and/ or reintegration of young people with experience studying or working abroad

Non-governmental stakeholders, notably NGOs appear to be more actively committed to promoting the return of Bulgarians living abroad than the government at present:

Back2BG and the forum Career in Bulgaria. Why Not?

Perhaps the most important, non-government initiative which aims to promote the return of Bulgarians with education and/ or work experience abroad is *Back2BG*,²²⁵ a project of the Identity for Bulgaria Foundation since 2007, and its annual forum *Career in Bulgaria. Why Not?*²²⁶ organised in partnership with the *Tuk-Tam* (Here-There)

²²⁴ Online database of Bulgarian communities abroad by the State Agency for Bulgarians Abroad, <http://www.aba.government.bg> [Bulgarian version]

²²⁵ Back2BG, <http://back2bg.com/index.php/> [Bulgarian version]

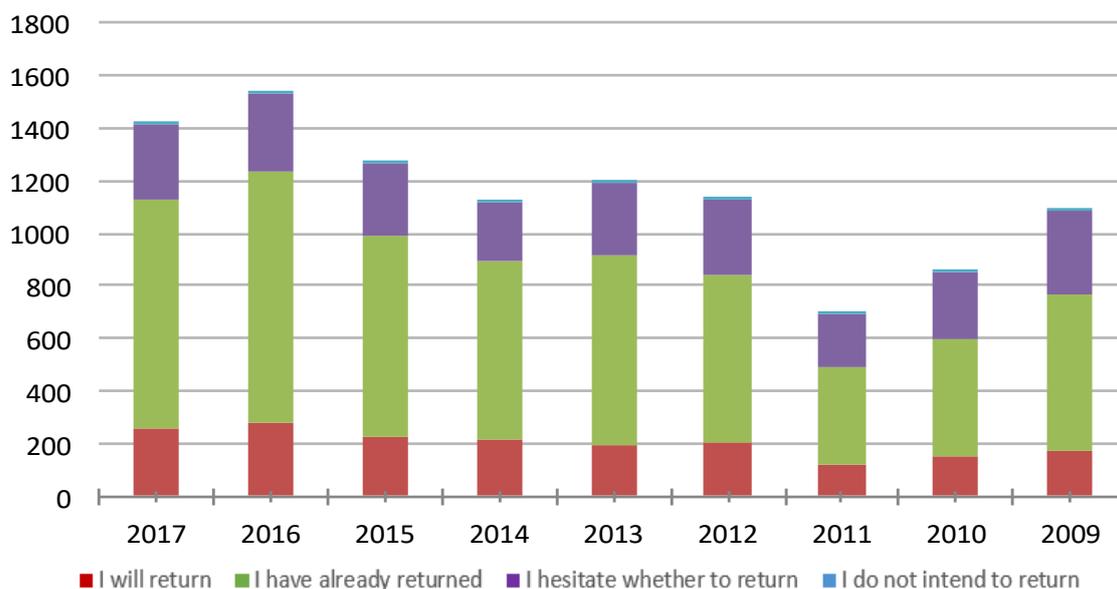
²²⁶ *Career in Bulgaria. Why Not?* <https://karieravbulgaria.com/forum-2017/> [Bulgarian version]

Association. Each year the career fair connects some 1 500 graduates/ professionals with experience abroad with employers in Bulgaria (see Figure 110).

The 10th edition of the forum took place in the capital, Sofia, on 05 September 2017 under the patronage of the European Parliament and with the support of the State Agency for Bulgarians Abroad. Over 100 employers participated in the career fair, which also includes a series of lectures, with many employers taking part annually and building entire teams of Bulgarians who have studied and/ or worked abroad. According to the organisers, employers find such candidates to be more responsible, proactive, adaptive and fluent in foreign languages. Candidates from abroad also expect faster career growth in Bulgaria, as well as better opportunities for starting their own business. During the 2016 edition of the forum, 70 % of the candidates found an employer they liked, and 94 % of employers found people they would hire to work.

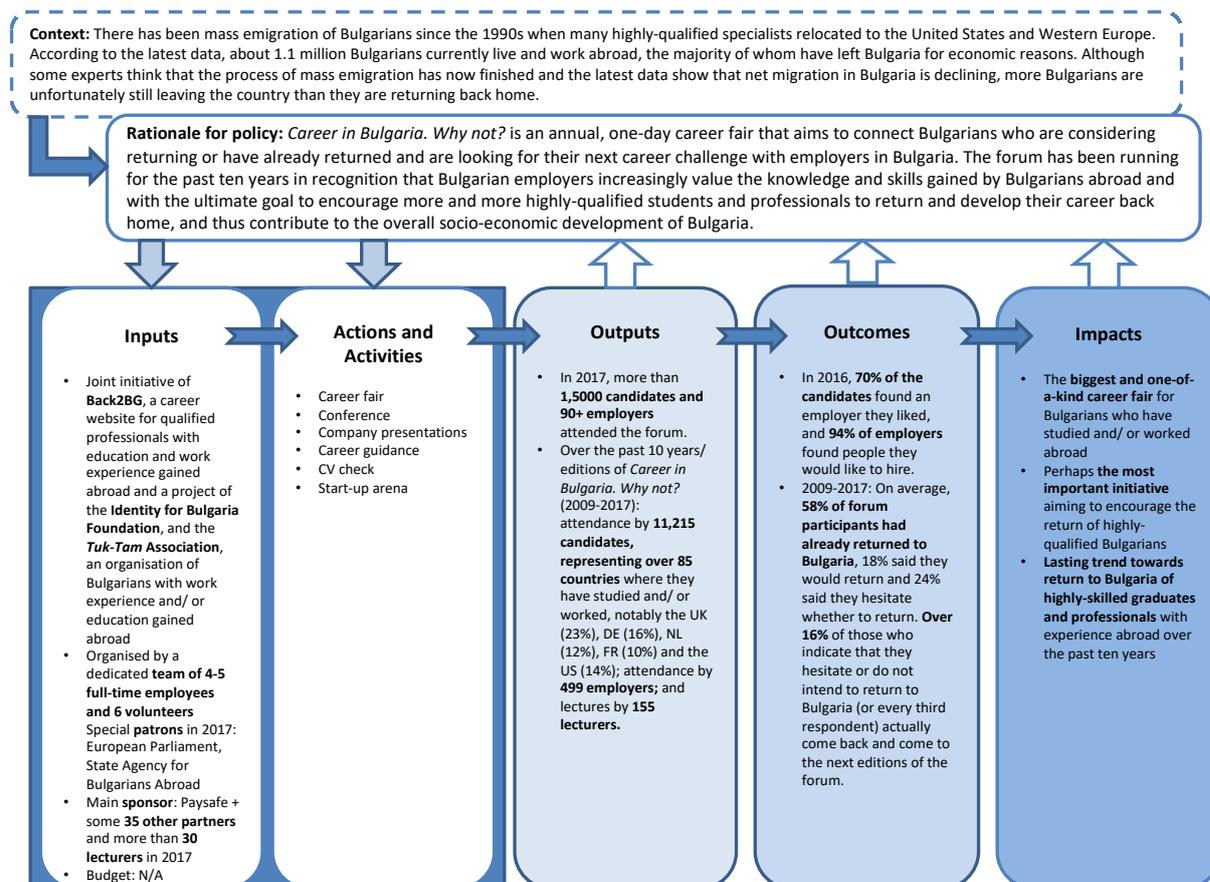
Over the past ten years, 2008-2017, a total of 11 215 candidates, 499 employers and 155 lecturers have attended the forum *Career in Bulgaria. Why Not?* The graduates/ professionals with experience abroad represent over 85 countries, mostly Western Europe, notably the UK (23 %), Germany (16 %), the Netherlands (12 %) and France (10 %), and the United States (14 %) – where traditionally there are a large number of Bulgarian students. These graduates/ professionals are looking for jobs in the field of management, marketing and PR, consulting services, finance and auditing and sales. Sectors with the highest interest in recent years are the not-for-profit, education and production sectors.

Figure 110. The number of participants in the forum *Career in Bulgaria. Why Not?* is increasing, whilst the percentage of people who hesitate to return is decreasing in comparison to those who have returned



Source: *Career in Bulgaria. Why not? 2009-2017 summary statistics* provided by the Tuk-Tam Association

Figure 111. *Career in Bulgaria. Why not?* is the most important (non-government) initiative which aims to promote the return of Bulgarians with education and/ or work experience gained abroad



Source: *Career in Bulgaria. Why not?* 2017 data and 2009-2017 summary statistics provided by the Tuk-Tam Association

The organisers of *Career in Bulgaria. Why Not?* report a lasting trend towards return to Bulgaria of the highly skilled graduates/ professionals with experience abroad over the past ten years: of all participants attending the forum in 2009-2017, on average 58 % had already returned to Bulgaria, 18 % said they would return and 24 % said they hesitate whether to return. According to the organisers, over 16 % of those who indicate that they hesitate or do not intend to return to Bulgaria (i.e. every third respondent) actually come back and come to the next editions of the forum.

Back2BG provides further opportunities for professional realisation in Bulgaria to young people with experience abroad through the *Career Speed Dating*²²⁷ series. The series connect jobseekers with experience abroad with ten employers in Bulgaria at a time, and each candidate has three minutes to introduce themselves to a company and/ or enquire about any open positions and/ or opportunities for career development within the company. The last edition of the Career Speed Dating series took place in Sofia on 29 November 2017 and a prerequisite for the profile of candidates was proficiency in French and/ or German.

Tuk-Tam (Here-There) community of Bulgarians who have studied and worked abroad

Tuk-Tam is an association of Bulgarians with experiences living, studying and/ or working abroad. In addition to being one of the main organisers of the forum *Career in*

²²⁷ *Career in Bulgaria. Why Not?* Career Speed Dating, <https://karieravbulgaria.com/csd-november-2017/> [Bulgarian version]

Bulgaria. Why Not? Tuk-Tam implements a number of other projects promoting the return of highly-skilled Bulgarians to the country:

In 2016, the organisation launched the *Scholarship Fund Go, Learn & Return*²²⁸ which provides stipends to young people interested in pursuing a Master's degree abroad. These scholarships are awarded to eligible candidates on the condition that they do not spend more than six months abroad following graduation and return to work in Bulgaria for at least a year. In 2016-2017, the association awarded seven scholarships for a total amount of BGN 43,000 (approx. EUR 21,500). In 2018, three further scholarships of BGN 10,000 (approx. EUR 5,000) each will be awarded.

Similarly, the project *EDU Tuk-Tam*²²⁹ encourages Bulgarian students to study abroad and return to work in Bulgaria by providing them with reliable information on study abroad opportunities. More than 500 stories of young Bulgarians' experiences living and studying abroad are shared on the website of the project, along with other useful information such as studying in the UK after Brexit, how to choose an appropriate Master's course, etc.

A *Guide for Newcomers* is regularly published online by *Tuk-Tam*.²³⁰ It provides information to returnees from abroad on practical issues such as finding a home, finding a job, legalising diplomas, eating organically, finding volunteering opportunities, etc. At the time of writing, *Tuk-Tam's Guide for Newcomers* had been downloaded from the website of the organisation 550 times;

Another recent *Tuk-Tam* project is *Идейник*,²³¹ an online social entrepreneurship competition for Bulgarians with experience abroad who seek solutions to issues of social importance. The competition is open to both returnees and those currently living outside Bulgaria. In the first edition of the competition in 2017-2018, 15 teams tackle issues of social importance in the field of active citizenship, education, healthcare, urban environment and green entrepreneurship. Five ideas have been shortlisted and the winner will be announced in March 2018.

Finally, *Tuk-Tam Buddy* and *Tuk-Tam Ambassadors Abroad* are also worth mentioning, along with the monthly information meetings held by *Tuk-Tam* to provide consultation and advice to Bulgarians who have recently returned.

Bulgarian Careers Fair

Since 2013, a new career platform created by and for students and young professionals with experience and education abroad, *Bulgarian Careers Fair*,²³² aims to promote Bulgaria as an alternative for quality career development. *Bulgarian Careers Fair* has so far been held in London (2013 to date), Edinburgh (2013) and Frankfurt (2015, 2016, 2017), and will be held in Berlin (as well as London) in 2018. More than 80 employers and 1,600 candidates from 100 universities have registered for the career fairs over the years; since 2016, employers can also advertise jobs in Bulgaria through the web platform and candidates can apply for them with their online profile/ CV.

Government and semi-government measures addressing the outflows of skilled labour in Romania

Eurofound (2012) reports that, back in 2008, Romania produced a plan for encouraging the return of Romanian citizens working abroad, which was adopted by the government as a consequence of labour shortages occurring on the national labour market in 2006-2008. The plan consisted of a set of measures, though only a few were fully delivered amidst the economic crisis during the same year; these include career fairs which are still being organised in countries with large numbers of Romanian workers today (e.g.

²²⁸ *Scholarship Fund Go, Learn and Return*, <http://fund.tuk-tam.bg> [Bulgarian version]

²²⁹ *EDU Tuk-Tam*, <http://edu.tuk-tam.bg/wp/> [Bulgarian version]

²³⁰ *Guide for Newcomers*, <https://tuk-tam.bg/projects/guide/> [Bulgarian version]

²³¹ <http://ideinik.tuk-tam.bg> [Bulgarian version]

²³² *Bulgarian Careers Fair*, <https://bgcareersfair.com> [Bulgarian version]

Spain, Italy), as well as special bilateral agreements on the recognition of skills and expertise acquired abroad, which nowadays are seen as a measure for facilitating returnees' integration on the national labour market (than attracting returnees back to Romania).

Boros (2016) further refers to two policies facilitating the return of Romanian expats, though it does not elaborate on them: *Fondo Microcredito Balkani*, a transnational initiative implemented by Italy and Romania which aims to encourage the return of Romanians, and *Helping reintegration and re-employment of re-migrants by recognising skills collected abroad*. The latter seems to address a major obstacle to the return of the highly-qualified, as according to one of the interviewed stakeholders the current process of state recognition of foreign diplomas is quite problematic.

Fondo Microcredito Balkani is a microcredit fund for Romanians residing in Italy who want to invest their savings into starting up an enterprise in Romania. The fund was managed by the Unicredit Group in Romania under the supervision of the Italian Ministry of Foreign Affairs and the Romanian Ministry of Productive Activities, offering microcredits of up to EUR 20,000 for a maximum duration of five years and focusing mainly on supporting female and youth entrepreneurship. Since 2007, *Fondo Microcredito Balkani* has given out more than 100 loans in Romania with a total value of EUR 1,6 million, of which 35 % in the health and care sector, 25 % in services and enterprises, 25 % in craftsmanship, and the remaining 15 % to individuals or families with wellness and/ or rural-tourism ventures. About 40 % of the funding has been allocated to the region of Transylvania in Romania (Ferri & Rainero, 2010).

In 2008, the *National Employment Agency of Romania* reported that 3,000 Romanian workers attended career fairs organised in Spain and Italy and that such measures encouraging return will continue going forward; however, the same source claims that there seems to be very little awareness among Romanians abroad about these job fairs (Eurofound, 2012).

More recently, one of the measures taken by the Government of Romania in order to improve the living standard in the country in general is to increase of the minimum wage, which currently stands at RON 1,900 (approx. EUR 400-500).

Importantly, there are also a couple of recent projects supported by the Government of Romania which are worth mentioning in the effort to bring back Romanian expats. These projects, which are co-funded by the EU through the Operational Programme (OP) Human Capital 2014-2020 in Romania, are described below:

Implemented by the League of Romanian Students Abroad (LSRS), the project *FIA – Fii Antreprenor Acasă. Investește în viitorul tău!/ Be Entrepreneur at Home. Invest in Your Future!*²³³ aims to encourage entrepreneurship and generate a growing number of businesses in 7 of the least developed regions in Romania. The project will run between September 2017 and September 2020 and targets Romanians over the age of 18 who have spent at least the past year abroad. It will provide entrepreneurs who want to set up a non-agricultural business in urban areas in the North West, West, Centre, South Muntenia, South-East, North-East and South West Oltenia region of the country with funding of up to EUR 40,000.

The expected results of the project are to: (i) raise awareness among 10 000 Romanians from the diaspora on entrepreneurship opportunities by conducting an appropriate online/ offline information campaign; ii) develop entrepreneurial skills for 220 Romanians from the diaspora by providing an e-learning training programme lasting a minimum of 40 hours; and iii) support the establishment of 22 non-agricultural enterprises and the creation of 44 jobs in the above-mentioned regions by awarding 22 grants of EUR 40,000.

²³³ <https://antreprenoracasa.ro/>

According to the project's website, the active components of the project, i.e. the e-learning platform, mentoring network, Entrepreneurship Support Fund, information campaign and relationship with local entrepreneurs add value to strengthening the relationship with Romanians in the diasporas and encouraging their return.

Similarly, the programme *Diaspora Start-Up* implemented by the CAESAR (Centre for Access to the Expertise of Romanian Students and Graduates) Foundation aims to provide grants of up to EUR 50,000 to Romanians from the diasporas and recent returnees, to foster entrepreneurship and establish new businesses in Romania. This includes a one-off resettlement premium of up to €10,000 for those Romanians who wish to return from abroad and take part in the project.

Some of the results achieved by the project in 2017-2018 include helping more than 3000 Romanians to develop in the field of entrepreneurship education, funding more than 300 small- and medium-sized enterprises (SMEs) and creating more than 600 jobs.

Other policy responses in the outgoing countries of skilled labour

Some authors (e.g. Boros, 2016) claim that the decision to return (or not) is influenced not only by policies implemented by the outgoing countries (in this case Bulgaria and Romania), but also by the outgoing countries. Growing unemployment in destination countries, particularly in the years following the financial crisis in 2008, drove some European governments (e.g. Spain) to consider protective measures regarding their labour market, which affected nationals of Romania, but also Bulgaria.

Some examples of this type of policies, provided by Boros (2016), include campaigns in the outgoing countries to make moving abroad a less attractive option, such as the UK's campaign in Romania and *Fondo Microcredito Balcani* looked at above, however, these are not elaborated further.

A10.8 Conclusions

In general, both Bulgaria and Romania appear to have not put in place many coordinated policies that could encourage the return of highly-qualified nationals who emigrated abroad over the past few decades. Whilst there are some policies aimed at encouraging the return of the highly-qualified, this case study finds that most policies are regionally targeted and not driven by central government involvement, there are not much *active* government measures specifically tackling this issue; instead, most of the government actions appear to *adapt* existing wider policies to reflect this issue.

A10.8.1 Key policy recommendations

The interviewed stakeholders agree that the current policy measures in Bulgaria and Romania are not enough, nor sufficiently long-term to address the loss of skilled labour experienced by these countries over the past few decades. In one interviewee's own words; "*there should be a long-term policy that, on the one hand, aims to keep the potential of the working age population within the country and, on the other hand, aims to encourage the return of qualified specialists who have gained experience abroad.*"

Whilst the governments of Bulgaria and Romania should be leading efforts in the area of circular/ return migration (which does not appear to be the case at present), the authorities alone cannot tackle such a major structural issue of the national labour markets. Any successful policy measures should be developed and implemented together with the active participation of employers who are the main stakeholders affected by labour and skills shortages in Bulgaria and Romania. It is unclear, however, to what extent employers are really taking a stand on attracting the highly-qualified (back) to these countries or generally prefer to keep the costs of labour in these countries markedly low. Furthermore, some of the most popular measures to attract the highly-qualified back to Bulgaria and Romania seem to be coming from non-governmental actors at present, for example the *Career in Bulgaria. Why not?* forum in Bulgaria.

Bulgaria and Romania do not have many EU-28 nationals, nor third-country migrants living within their borders. At least in the case of Bulgaria, migration from third countries seems to be mainly for the purposes of seasonal work and appears to concern mostly low-skilled labour, despite recent efforts by the government to promote access to the labour market for highly-qualified TCNs in line with EU rules. Here again one of the interviewees noted the need for a longer-term response to filling vacancies permanently in Bulgaria (rather than over the short-term).

The choice whether to move abroad or to remain in the homeland is subjective of course and there are factors, beyond the labour market, which make Bulgarians and Romanians relocate to another country. Notable pull factors are predominantly the quality of education and healthcare systems, along with opportunities for a better social and cultural life, which seems to be especially important for the younger generation. Therefore, the importance of improving services and developing infrastructure which overall enhances one's life in Bulgaria and Romania needs to be emphasised in the discussion on attracting back the highly-qualified. Importantly, as both Bulgaria and Romania are affected by population aging and a diminishing workforce, targeting measures towards *young people* in particular should therefore be of primary importance.

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