



2018 Annual Report on intra-EU Labour Mobility

Final Report December 2018

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2018 Annual Report on Intra- EU Labour Mobility

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Contents

EXECUTIVE SUMMARY	13
A. INTRODUCTION	16
B. INTRA-EU MOBILITY – EU LEVEL ANALYSIS	18
1. MOBILITY OF EU CITIZENS	21
1.1. Main countries of residence and countries of citizenship of EU-28 movers in 2017	23
1.1.1. Stocks in 2017 and bi-annual developments – countries of destination .	24
1.1.2. Stocks in 2017 and bi-annual developments – countries of origin.....	27
1.1.3. Main characteristics of the EU-28/EFTA movers	29
1.1.1. Recent movers	32
1.2. Mobility trends of EU-28 movers: mobility flows	35
1.2.1. Net mobility at a glance.....	35
1.2.2. Inflows - main countries of destination and changes over time	38
1.2.3. Outflows of nationals – main sending countries and changes over time.	42
1.2.4. Return mobility.....	45
2. MOBILITY OF EU WORKERS.....	48
2.1. Recent developments	48
2.1.1. Stocks of active EU-28 movers in 2017 and changes on 2016.....	48
2.1.2. Length of stay	53
2.2. Economic integration.....	54
2.2.1. Activity status	56
2.2.2. Employment and unemployment.....	58
2.2.3. Employment and unemployment trends.....	61
2.2.4. Sectors of activity and occupation.....	65
2.2.5. Self-employment	70
2.2.6. Gender dimension.....	71
2.2.7. Qualification.....	74
2.2.8. Cross-border workers.....	77
3. QUALIFICATIONS OF EU-28 MOVERS	81
3.1. Mobility by educational level	84
3.2. Overqualification of EU-28 movers	88
3.3. Reasons for moving among EU-28 movers	91
3.4. Labour shortages and intra-EU labour mobility	95
3.4.1. <i>Methodology</i>	97
3.4.2. <i>Intra-EU mobility and shortages across ISCO occupations</i>	98
3.4.3. <i>Intra-EU mobility and shortage NACE sectors</i>	114
4. HOUSEHOLD COMPOSITION OF EU-28 MOVERS	119
4.1. Household characteristics of EU-28 movers compared to nationals.....	123
4.2. Household characteristics of different types of couples according to nationality.	129
4.2.1. Characteristics of couples aged 30-49 years.....	131
4.3. Comparison of single adult EU-28 movers and EU-28 mover couples.....	135
4.4. EU-28 movers with partners or families in other Member States	136
4.4.1. Cross-border workers.....	138
4.4.2. EU-28 movers with a family whose partners joined them at a later point in time	138
ANNEX A METHODOLOGICAL NOTES.....	141
A.1. Definitions and measurement	141

A.2. Main data sources for Sections 2.1 – 2.3: EU Labour Force Survey (EU-LFS) and Eurostat population and migration statistics	142
Eurostat statistics	142
A3. Methodological notes for the section 3.4 on labour shortages.....	144
ANNEX B DATA ANNEX.....	148
ANNEX C BIBLIOGRAPHY.....	185

Country codes¹

AT	Austria	EE	Estonia	IS	Iceland	PL	Poland
BE	Belgium	EL	Greece	IT	Italy	PT	Portugal
BG	Bulgaria	ES	Spain	LT	Lithuania	RO	Romania
CH	Switzerland	FI	Finland	LU	Luxembourg	SE	Sweden
CY	Cyprus	FR	France	LV	Latvia	SI	Slovenia
CZ	Czech Republic	HR	Croatia	MT	Malta	SK	Slovakia
DE	Germany	HU	Hungary	NL	Netherlands	UK	United Kingdom
DK	Denmark	IE	Ireland	NO	Norway		

Abbreviations and acronyms

Abbreviation/Acronym	Definition
AFMP	Agreement on Free Movement of Persons ² (for definition see box below).
EFTA	European Free Trade Association (Switzerland, Iceland, Liechtenstein and Norway). Only Switzerland, Iceland and Norway are included in this report, as no data for Liechtenstein are available from the EU-LFS.
EU	European Union.
EU-2	Bulgaria and Romania.
EU-8	Eight of the 10 Member States that joined the EU in 2004, i.e. Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.
EU-13	The countries which joined the EU between 2004 and 2013, i.e. Bulgaria, Cyprus, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia.
EU-15	The countries which joined the EU prior to 2004, i.e. Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, UK.
EU-27	EU Member States up until 30 June 2013, i.e. all current Member States except Croatia.
EU-LFS	EU Labour Force Survey – see Eurostat website and Annex A.2 of this report for more detail.
pps	Percentage points: the difference between two percentages, e.g. two employment rates, is calculated in the unit of percentage points.
TCNs	Third-country nationals: residents of EU and EFTA countries who are neither EU nor EFTA citizens.

¹ Throughout this report countries are listed in alphabetical order of their codes, as per the EU's inter-institutional style guide [section 7.1](#), except when, for reasons of clarity, they are arranged by data size.

² Agreement between the European Community and its Member States, of the one part, and the Swiss Confederation, of the other, on the free movement of persons, 22002A0430(01), Official Journal L 114, 30/04/2002 P. 0006-0072

Definitions

Abbreviation/Acronym	Definition
Active	Any person who is either employed or unemployed (EU Labour Force Survey (EU-LFS) definition).
Agreement on the free movement of persons (AFMP)	Bilateral Agreement between the European Union and Switzerland that grants the citizens of Switzerland and of the EU the right to freely choose their place of employment and residence within the national territories of the contracting parties. The Agreement was signed in 1999 and entered into force in 2002. It was subsequently extended to the Member States that joined the EU after 2002 ³ .
Baltic countries	Lithuania, Latvia, Estonia.
Country of citizenship/ Country of origin	The country of which the person holds citizenship.
Country of residence	The country in which a person habitually resides. According to Regulation (EC) No 862/2007 on Community statistics on migration and international protection, 'usual residence' means the place at which a person normally spends the daily period of rest (...) or, by default, the place of legal or registered residence. In this report, persons are counted as 'residents' of a certain country if they have resided there for at least 12 months or intend to do so. This is in line with measurement, as the EU-LFS ⁴ and the Eurostat migration statistics only capture persons who stay, or intend to stay, in a country for one year or more.
Cross-border worker	Cross-border workers as may include the legally defined groups of seasonal ⁵ and frontier workers ⁶ and may also include some posted workers (Directive 96/71/EC) ⁷ . However, the concept used in this study goes beyond that to adjust to possibilities of measurement. Therefore, for the purposes of this study, cross-border workers are defined as EU citizens who live in one EU or EFTA country and work in another, regardless of their precise citizenship (provided they are EU-28/EFTA citizens). Cross-border workers therefore move across borders regularly ⁸ . They can be EU-28/EFTA movers – meaning they live in a different Member State than their country of citizenship – and cross-border workers at the same time (for example, where a British person lives in Belgium and works in Luxembourg) ⁹ . Cross-border workers are employed or self-employed in a country other than their country of residence.

³ Swiss Confederation (*Schweizerische Eidgenossenschaft*), 'Free movement of persons', available at: <https://www.eda.admin.ch/dea/en/home/bilaterale-abkommen/ueberblick/bilaterale-abkommen-1/personenfreizuegigkeit.html>, accessed on: 10/09/2018.

⁴ See EU-LFS Explanatory Notes, p. 4, available at: <http://ec.europa.eu/eurostat/documents/1978984/6037342/EU-LFS-explanatory-notes-from-2014-onwards.pdf>

⁵ Seasonal workers are defined in [Regulation \(EEC\) No 1408/71](#) on the application of social security schemes to employed persons and their families moving within the Community, Article 1(c), while they are no longer defined under the currently applicable rules in [Regulation \(EC\) No 883/2004](#); they enjoy the right to free movement according to [Regulation \(EU\) No 492/2011](#) and equal treatment with nationals according to [Directive 2014/54/EU](#). For more details on the definition, please consult the 2016 Annual Report on intra-EU Labour Mobility, Section 2.2.3.

⁶ *Frontier workers* are defined as cross-border workers who return to their country of residence 'as a rule daily or at least once a week', according to [Regulation \(EC\) No 883/2004](#), Article 1(f); they have the right to equal treatment with nationals according to [Directive 2014/54/EU](#). For more details on the definition, see 2016 Annual Report on intra-EU Labour Mobility, Section 2.2.3.

⁷ For definitions of these groups and overlaps and differences between them, please consult the 2016 Annual Report on intra-EU Labour Mobility, Section 2.2.3.

⁸ The frequency of commuting cannot be identified in the EU-LFS, which is the data source for the estimation of numbers of cross-border workers.

⁹ For a more detailed definition, see European Commission, 2011, [Mobility in Europe](#), p. 86.

Abbreviation/Acronym	Definition
Eastern European countries	Poland, Romania, Slovakia, Slovenia, Hungary, Bulgaria, Czech Republic (definition created for the purposes of this study).
Employed	Any person who, during a reference week, worked for at least one hour, or had a job or business but was temporarily absent (EU-LFS definition).
Employment rate	The percentage of employed persons, over the total population in the same reference group.
EU-28/EFTA movers	EU-28 or EFTA citizens who reside in an EU-28 or EFTA country other than their country of citizenship (definition created for the purposes of the study) ¹⁰ .
Foreigner	Any person who is not a citizen of the country in which he/she resides. This term is used here to refer to both EU-28/EFTA movers and third-country nationals (TCNs).
Inflows	The total number in the year of reference of persons who establish their usual residence ¹¹ in a given country for a period that is expected to be at least 12 months, having previously resided in a different country ¹² .
Inflow rate	The percentage of inflows of citizens of another EU Member State over the total resident population in the same age group in the country of destination.
Inactive	Any person who is neither employed nor unemployed (i.e. who is not looking for a job) (EU-LFS).
Mobile worker	In this report, mobile workers are defined active EU-28 citizens who reside in a Member State or EFTA country other than their country of citizenship.
Mobility	This term refers to migration of EU-28 citizens within the EU. This can mean moving one's habitual residence to a Member State/EFTA country other than one's citizenship and/or working in a different Member State/EFTA country than the one where one resides (cross-border workers).
Nationals	Any person holding citizenship and living in the reporting country of residence.
Net intra-EU mobility	Net intra-EU mobility is calculated as the sum of inflows and outflows of nationals, EU-28 and EFTA movers from/into a certain EU Member State.
New EU-28 movers	EU-28 movers of working age and with a length of stay of up to two years.
Outflows	The total number in the year of reference of persons who cease to have their usual residence ¹³ in a Member State for a period that is, or is expected to be, at least 12 months ¹⁴ .

¹⁰ The analysis in section 2 ('Mobility of workers') focuses on EU-28/EFTA movers who were also born outside their current country of residence.

¹¹ According to Regulation (EC) No 862/2007 on Community statistics on migration and international protection, 'usual residence' means the place at which a person normally spends the daily period of rest (...) or, by default, the place of legal or registered residence.

¹² Regulation (EC) No 862/2007, Article 2 (1)(c), defining 'immigration'; this Regulation is the basis for the collection of Eurostat migration data, which are mainly used in this report to calculate immigration rates.

¹³ According to Regulation (EC) No 862/2007 on Community statistics on migration and international protection, 'usual residence' means the place at which a person normally spends the daily period of rest (...) or, by default, the place of legal or registered residence.

¹⁴ Regulation (EC) No 862/2007, Article 2 (1)(c) defining 'emigration'; this Regulation is the basis for the collection of Eurostat migration data, which are mainly used in this report to calculate emigration rates.

Abbreviation/Acronym	Definition
Outflow rate	The percentage of outflows of a certain group of people over the population in the same reference group ¹⁵ residing in the country of origin ¹⁶ .
Posted worker	A worker who, for a limited period, carries out his/her work in the territory of a Member State other than the State in which he/she normally works ¹⁷ . The posted worker has a regular employment relationship in the usual country of work and maintains this employment relationship during the period of posting ¹⁸ .
Return mobility	Return mobility is movement of EU-28 citizens back to their country of citizenship from another Member State. Figures are estimated based on migration statistics, i.e. the inflow of nationals to a certain Member State or the outflow of EU-28 movers from a certain Member State. Using the EU-LFS, returnees (returning movers) are estimated by the number of nationals living in a certain Member State who had been resident in another Member State in the previous year.
Recent EU-28/EFTA movers	EU-28 and EFTA citizens between the ages of 20 and 64, who have lived in an EU-28 or EFTA country other than their country of citizenship for up to 10 years, as of 2016 ¹⁹ (definition created for the purposes of this study).
Southern European countries	Spain, Greece, Cyprus, Italy and Portugal (definition created for the purposes of this study) ²⁰ .
Unemployed	Any person who is not currently employed but who is available for work within two weeks and is actively seeking work (International Labour Organization (ILO) definition).
Unemployment rate	The unemployment rate is the share of unemployed from all active (unemployed plus employed) persons in a given reference population.
Working age	For the purpose of this study, person aged between 20 and 64 years.

¹⁵ For example: outflow rates of nationals are calculated as outflows of nationals over the total number of nationals residing in the country; total outflow rates are calculated as all outflows over the total population residing in the country.

¹⁶ Ibid.

¹⁷ Article 2(1), Directive 96/71/EC of the European Parliament and of the Council of 16 December 1996 concerning the posting of workers in the framework of provision of services.

¹⁸ Article 1(3)(a-c), Directive 96/71/EC of the European Parliament and of the Council of 16 December 1996 concerning the posting of workers in the framework of provision of services.

¹⁹ Figures capture length of stay in the current country of residence. This means that persons with country of citizenship A (e.g. Italy) who have resided in country B (e.g. Germany) for less than 10 years will be counted as 'recent EU-28/EFTA movers'. However, these persons may have previously resided in another country C, which is not captured by the data.

²⁰ Malta is not included because this definition was created for the purpose of examining changes in mobility related to the economic crisis and thus includes the Southern countries most affected by the economic crisis of 2008/2009.

EXECUTIVE SUMMARY

What is the annual report on intra-EU labour mobility?

The annual report on intra-EU labour mobility provides updated information on labour-mobility trends in EU and EFTA countries. Annual developments in **stocks** and **flows** are analysed in the perspective of longer-term trends. The analysis considers the mobility of all working-age citizens (20-64 years) as well as the mobility of those who are active (employed and unemployed). The report also looks at indicators of economic integration of mobile citizens, such as employment/unemployment rates and occupations. This year, two specific topics on the qualifications and the household composition of the EU-28 movers are further analysed.

The two main data sources used are Eurostat population and migration statistics – for mobility of all citizens – and the European Labour Force Survey (EU-LFS) for the analysis of mobility of active citizens and economic integration. For methodological reasons estimated numbers of EU movers differ.

Main features

The latest developments indicate that the large growth in mobility seen in 2015 and 2016, has slightly slowed down. **Intra-EU mobility is still increasing but with a slower speed.**

In 2017, there were **17 million EU-28 movers**²¹ in the EU, according to Eurostat population statistics, **among which 12.4 million of working age** (20-64 years) compared to 11,8 million in 2016. The EU-LFS reflects the same trend but estimates the number of working-age EU-28 movers to be slightly lower, at 11.5 million compared to 11.0 million the year before.

The stocks of EU-28 movers are heavily concentrated in a handful of Member States. Germany, United Kingdom, Italy, France and Spain host 74% of all movers. Romanian, Polish, Portuguese, Italian and Bulgarian nationals made up over 50% of EU-28 movers.

Around 83% of the working-age movers in 2017 were active (employed or looking for work), amounting to 9.5 million.

In addition, there were 1.4 million cross-border workers in the EU²².

Annual inflows of EU-28 movers to other Member States in 2016 declined for the first time since 2012, partly driven by notable decreases in inflows to the UK (-7%) and Germany (-12%) compared to 2015, as well as smaller decreases in other important destination countries (France, Italy, Austria, Belgium).

Net mobility of EU-28 movers – the difference between the number of EU-28 movers coming to and leaving a Member State – has declined between 2015 and 2016, corresponding to an increase in return mobility (more EU-28 movers returning to their country of origin).

Labour market situation of EU-28 movers

The continuously improving performance of the EU's economy in 2017²³ is reflected in larger employment. This also applies to EU-28 movers, whose employment rate increased by +1 p.p. to 76% in 2017 and was still 3 p.p. higher than that of nationals in the countries

²¹ Defined as EU citizens (all ages) living in an EU Member State other than their country of citizenship

²² These are EU or EFTA citizens living in one EU Member State and working in another.

²³ European Commission, 2018, *Employment and Social Developments in Europe: Annual Review 2018*, Luxembourg: European Commission

of residence. Furthermore, unemployment among EU-28 movers further declined (-1 p.p.) to 8% in 2017 while still higher than that of nationals (+1 p.p.).

When comparing the labour situation of the EU-28 movers with their compatriots who remain in the origin country, EU-28 movers have higher chances to be employed (movers' employment rate was 76% compared 73% of non-mobile nationals). In most Member States, EU-28 movers are also less likely to be unemployed than those remaining at home. However, it depends highly on national groups of origin.

The two most important sectors of economic activity for both movers and nationals are manufacturing & wholesale and retail trade, but compared to 2016, the total number of movers increased most strongly in transportation and storage (+12%).

Qualifications of EU-28 movers

In general, EU-28 movers have similar education profiles as nationals. However, recent movers are more highly educated than nationals. Despite this, EU-28 movers work much more often in elementary occupations.

EU movers are overrepresented in specific low-skilled occupations²⁴ for which there are labour shortages (high labour demand/turnover). For most of these shortage occupations there is a comparatively high number of unemployed nationals having worked in these same occupations and therefore have the skills and qualifications to (theoretically) fill the shortages.

At the same time, sending countries also show shortages in these same occupations, with high shares of their nationals working in these occupations abroad.

In addition, there are several high-and medium-skilled shortage occupations (mainly ICT and manufacturing)²⁵ for which there seems to be an absolute lack of labour force among both nationals (low shares of unemployed), and movers.

Household composition of EU-28 movers

This section considers the households and family situations of movers, compared to those of nationals in the countries of residence.

Movers²⁶ (aged 20-64 years) tend to live in smaller households than nationals do (fewer household members). They are more likely to have children present in their household, but they are much less likely than nationals to live with their parents or other elderly persons (aged 64+ years). This is probably related to the age effect, as EU-movers are younger than nationals.

The marital status among movers equals that of nationals. Among those movers who live with a spouse or partner in the same household, 30% live with a national of the country they moved to ('mixed couples') and 65% live with another EU-28 mover ('mover couples').

²⁴ In particular: agricultural, forestry and fisheries labourers, labourers in mining, construction, manufacturing and transport, personal service workers, building and related trades workers.

²⁵ ICT professionals and technicians, Legal, social, cultural and related associate professionals, Metal, machinery and related trades workers, Drivers and mobile plant operators.

²⁶ All results refer to the EU aggregate excluding BG, DK, FI, HR, IE, LT, LV, SE, RO.

A. INTRODUCTION

Aim of the report

This report presents labour mobility flows and patterns in the EU, as per Article 29 of Regulation (EU) 2016/589. It provides key quantitative information to ensure better implementation of initiatives to support the right of workers to free movement. While reports based on different national sources are published from time to time, and EU-wide reports often focus on intra-EU mobility in general, information specifically on intra-EU labour mobility using harmonised and comparable data across the EU is not regularly available. This annual report on the specific issue of intra-EU labour mobility presents general information on stocks and flows of all — particularly active — intra-EU movers, together with information on occupational structure, age structure and employment rates. The report addresses a variety of specific topics, depending on current developments and policy needs.

Specific topics addressed in the Annual Reports are:

- 2014 Annual Report: mobility of young and highly educated people.
- 2015 Annual Report: mobility of cross-border workers.
- 2016 Annual Report: mobility of pensioners; return mobility.
- 2017 Annual Report: gender dimension of mobility; language and other obstacles and drivers of mobility; mobility of health professionals.
- 2018 Annual Report: qualifications of EU-28 movers; household composition of EU-28 movers.

For this 2018 report, Section B.1 focuses on stocks and flows of EU-28 movers in the EU-28/EFTA countries in 2016/2017 and looks at how these have developed in recent years. Different key figures are compared to draw conclusions on broad trends in the direction of main mobility flows, including the gender dimension.

Section B.2 focuses on active EU-28 movers (or EU-28 mobile workers), defined as employed persons and jobseekers. Because the EU-LFS allows more precise analysis, this section focuses on active EU-28 movers who were born outside their current country of residence. As with Section B.1, this section provides figures on stocks in 2017 and recent developments, as well as examining the characteristics of these workers (labours status, education structure, occupations, sectors, over-qualification) and comparing these to nationals in the countries of destination and in the countries of origin. It also identifies similarities and differences between the gender groups. The section closes with a look at the latest trends in cross-border mobility.

Section B.3 aims to analyse EU-28 movers' level of qualifications and if and how they are used in the countries of destination. For this purpose, the section analyses movers' education levels (compared to nationals in the destination and in origin countries) and how this interacts with job-searching and with the type of job carried out after the move. Furthermore, the section identifies shortage occupations and sectors at EU level and in seven countries (DE, ES, FR, IT, PL, RO, UK) and to what extent they rely on EU-28 movers.

Section 2.4 looks at the household (HH) composition of EU-28 movers and their family situation, and compares it to that of nationals in the destination countries. Different characteristics (e.g. household size, marital status, number of children in the HH, number of elderly in the HH) are compared at an individual level as well as for different types of couples – 'mover couples' (two EU-28 movers as partners in the same HH), 'mixed couples' (one EU-28 movers, one national) and 'national couples'. Last, the section looks at the extent to which EU-28 movers live in another country than their family. Due to data limitations, it focuses on the situation of cross-border workers, on the one hand, and on movers who formed a family before the move and where one partner moved at a later point, on the other.

Legal background: EU applicable rules and recent developments

The principle of free movement of workers is enshrined in Article 45 of the Treaty on the Functioning of the European Union (TFEU). The Treaty rules on free movement of persons initially applied only to economically active persons (i.e. employed persons and jobseekers)²⁷.

In 1993, the Maastricht Treaty gave new life to the EU rules on free movement of persons, enshrining the Article 20 right of EU citizenship and giving, in Article 21, all EU citizens and their family members the right, in principle, to move and reside freely within the EU. These provisions must be viewed in the context of the general principle of non-discrimination based on nationality enshrined in Article 18 of the TFEU and in Article 21(2) of the Charter of Fundamental Rights of the European Union.

Secondary legislation set out more detailed rules to regulate free movement, through Directive 2004/38/EC on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States²⁸. The Directive codified previous legislation which dealt separately with distinct categories of EU citizens. The specific rights concerning free movement of workers and their family members are provided in Regulation (EU) No 492/2011 (replacing Regulation (EC) No 1612/68). Accordingly, all Union citizens and their family members have the right to move and reside freely within the territory of the Member States²⁹. Inactive EU citizens have the right to reside in another Member State for more than three months if they have sufficient resources and comprehensive sickness insurance cover³⁰. Moreover, Directive 2015/54/EU on measures facilitating the exercise of rights conferred on workers in the context of freedom of movement for workers aims at ensuring a more effective and uniform application of the right to free movement and provides specific rules for effective enforcement.

The free movement of persons also applies to countries which are part of EFTA³¹, as a result of the Agreement creating the European Economic Area (EEA) and the Agreement on the Free Movement of Persons (AFMP) with the Swiss Federation³².

On 28 June 2018, Directive 2018/957/EU amending the Posting of Workers Directive was adopted by the European Parliament and the Council. The revised Directive will ensure that posted workers benefit from the same mandatory rules on remuneration as local workers of the host Member State. It also introduces the concept of long-term posting: a worker will be considered to be posted long-term after 12 months, automatically extended to 18 months upon notification by the service provider. After this period, the worker will be subject to nearly all aspects of the labour law of the host country. The revised Directive will apply to workers in the road-transport sector only from the date of application of the sector-specific rules currently under negotiation. Member States must transpose the Directive into national law by 30th July 2020 and cannot apply it before that date.

On 13 March 2018 the European Commission presented a legislative proposal for establishing a European Labour Authority tasked to ensure that EU rules on labour mobility be enforced in a fair, simple and effective way. It would further cooperation between Member States on labour market issues, including managing disputes about labour mobility arising from disparities between labour market systems.

²⁷ Regulation (EU) No 492/2011 of the European Parliament and of the Council of 5 April 2011 on freedom of movement for workers within the Union.

²⁸ Directive 2004/38/EC of the European Parliament and of the Council of 29 April 2004 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States, OJ L 158, 30 April 2004, pp. 77–123.

²⁹ Council Directive 2004/38/EC on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States.

³⁰ Juravle, C. et al. (2013) 'A fact finding analysis on the impact on the Member States' social security systems of the entitlements of non-active intra-EU migrants to special non-contributory cash benefits and healthcare granted on the basis of residence', European Commission, p.1.

³¹ EFTA countries included in this report are Iceland, Norway and Switzerland. Liechtenstein was excluded as no data are available from the EU-LFS.

³² Decision 94/1/EC and Decision 2002/309/EC. Additional protocols were signed to extend the agreement to 'new' Member States in 2006 and 2009: Council Decision 2006/245/EC and 2009/392/EC.

B. INTRA-EU MOBILITY – EU LEVEL ANALYSIS

This report focuses primarily on labour mobility, i.e. mobility of persons who move to seek or take up employment. However, figures on mobility of inactive citizens are also provided for the purposes of providing context, or where figures on active movers are not available or insufficiently reliable to analyse certain issues.

Three forms of *labour mobility* may be identified:

Long-term labour mobility, where someone moves his/her residence to a country of which he/she is not a citizen, for at least one year, to take up work or seek work. In most Member States, persons are obliged to register their residence after three months of living there and national data sources capture these 'short-term' movers. However, the EU-LFS only captures those persons who 'have resided in a country for at least one year or intend to do so', which is why the above definition has been adopted for this report. This concept of long-term mobility must be distinguished from the legal term 'permanent residence', meaning the right to permanently reside in another country after a residence there of at least five years³³.

In 2017, the composition of (long-term) intra-EU labour mobility was as follows (Table 1): 17 million EU-28 movers of all ages according to migration statistics were living in an EU Member State other than their country of citizenship. Among those, 12.4 million were of working age, making up 4.1% of the total working-age population across the EU-28.

The EU-LFS estimates the number of working-age EU-28 movers in 2017 slightly lower, namely at 11.5 million. Of these, around 83% or 9.5 million were employed or looking for work ('active EU-28 movers'). They made up 4% of the total labour force in the EU-28 Member States.

Cross-border mobility, where someone resides in one country but is employed or self-employed in another and who, for this purpose, moves across borders regularly. This concept itself houses different definitions (see Section 2.2.8).

In 2017, there were 1.4 million cross-border workers residing in one EU Member State and working in another. This represents 0.7% of the total employed population in the EU.

Posting of workers, where employees who are regularly employed in one Member State are sent to another Member State by the same employer to work there for a limited period. It can also include *posted self-employed persons*, being persons who normally pursue an activity as self-employed person in a Member State who go to pursue a similar activity in another Member State.

The analysis here starts with a wider concept of mobility among persons of working age (Section B.1), before focusing on the mobility of workers (Section B.2). Section 2.2. looks at the movements of cross-border workers.

Mobility of posted workers is analysed in a separate report³⁴, which shows in summary that in 2017, 2.8 million portable documents A1³⁵ were issued essentially to 1) employed persons who are employed by an employer which normally carry out its activities in a Member State and who are posted by that employer to another Member State to perform work on its behalf (Article 12(1) of Regulation (EC) No. 883/2004), 2) persons who normally pursue an activity as a self-employed person in a Member State who go to pursue a similar activity in another Member State (Article 12(2) of Regulation (EC) No. 883/2004); and 3) persons who pursue an activity as an employed/self-employed person in two or more Member States (Article 13 of Regulation (EC) No. 883/2004). Compared to 2016, the overall number of PDs A1 issued increased by more than 500,000 certificates, representing

³³ Directive 2004/38/EC.

³⁴ J. Pacolet and F. De Wispelaere, (2018), 'Posting of workers. Report on A1 portable documents issued in 2017', Network Statistics FMSSFE, European Commission.

³⁵ A1 portable documents are used to certify the EU Member State in which the holder pays social contributions.

a growth rate of 22%. This is the highest growth rate since data on the A1 certificate are collected at EU level.

Of those, 1.7 million were applicable to postings to one specific Member State (Art.12 of Regulation (EC) No 883/2004³⁶), representing an increase of 6.5% compared to 2016. Of those, Germany received one quarter (427,175), followed by France (241,363) and Belgium (167,335). Of those postings to one Member State, Germany and Poland sent the most (332,091 and 235,836 respectively), followed by Slovenia (163,876)³⁷. While the number of PDs A1 for posting issued by Germany increased a lot (+100,000), those issued by Poland declined (-24,000). It is estimated that one individual was sent abroad twice during a year, and therefore the number of PDs A1 in 2017 would correspond approximately to 900,000 posted workers during that year. It is further estimated that this represents approximately 0.4% of employment throughout the EU – which is slightly less than the share of cross-border workers (**Table 1** below). Furthermore, the report finds that almost 47% of posted workers work in the construction sector.

In addition, 1 million PDs A1 were issued to persons pursuing an activity as an employed or self-employed person in two or more Member States (Art. 13). The growth in these types of PDs A1 on 2016 is remarkable and accounts for the large overall growth in PDs A1. It is estimated that this corresponds to around 850,000 persons receiving such a PD A1 in 2017. This represents also 0.4% of employment that can be related to employment of such persons working in two or more Member States. The main sector such persons work in the road freight transport sector, accounting for around 50% of those PDs A1. The main issuing Member State is Poland (almost one third of PDs A1 under Art.13).

Another form of labour mobility is so-called *return mobility*. This is a type of long-term labour mobility, where EU movers return to their country of origin. Due to lack of precise figures, return mobility is approximated from figures on nationals moving to their country of citizenship (see Section 1.2.4). Return mobility increased in 2016 and amounted around 680,000 nationals returning to their country of origin. Compared to the number of nationals who left their country in 2016, return mobility amounts to a ratio of 70%.

Table 1 Composition of intra-EU mobility by different types, EU-28 citizens in the EU-28, 2017

Type of mobility	Extent
'Long-term' EU-28 movers (all ages) living in EU-28* (Eurostat demography figures)	17 million
'Long-term' EU-28 movers of working age (20-64 years) living in EU-28* (Eurostat demography figures)	12.4 million
<i>(as share of the total working-age population in the EU-28³⁸)</i>	4.1%
EU-28 movers of working age living in EU-28** (EU-LFS figures)	11.5 million
...of which active EU-28 movers (employed or looking for work) **	9.5 million
<i>(as share of the total labour force in the EU-28)</i>	4%
EU-28 movers of working age who were born outside the country of residence (EU-LFS figures)	10.8 million
Cross-border workers (20-64 years) **	1.4 million
<i>(as share of the total employed in the EU-28³⁹)</i>	0.7%

³⁶ Article 12 relates to employed persons who are employed by an employer which normally carry out its activities in a Member State and who are posted by that employer to another Member State to perform work on its behalf, and persons who normally pursue an activity as a self-employed person in a Member State who go to pursue a similar activity in another Member State.

³⁷ J. Pacolet and F. De Wispelaere, (2018), 'Posting of workers. Report on A1 portable documents issued in 2017', Network Statistics FMSSFE, European Commission.

³⁸ The total working-age population in the EU-28 in 2017 was 302million.

³⁹ The number of total employed (all nationalities) in EU-28 countries was 217 million.

Type of mobility	Extent
Number of postings ⁴⁰ (of employed and self-employed), (no. of PDs A1) ⁴¹ ***	2.8 million
= approximative number of persons	1.8 million
Annual return mobility (20-64 years) (2016) ****	680,000
(as ratio to EU-28 nationals leaving their country of origin in 2016) *****	66%

*SOURCE: EUROSTAT MIGRATION STATISTICS, 2017

**SOURCE: EU-LFS 2017; INCLUDES EU-28 AND EFTA CITIZENS LIVING IN ONE EU MEMBER STATE AND WORKING IN ANOTHER ONE.

***SOURCE : HIVA-KU LEUVEN, ADMINISTRATIVE DATA PD A1 QUESTIONNAIRE,

****SOURCE: EUROSTAT MIGRATION STATISTICS, 2016; APPROXIMATION BY USING NUMBERS OF NATIONALS MOVING TO THEIR COUNTRY OF CITIZENSHIP.

***** SOURCE: EUROSTAT MIGRATION STATISTICS, 2016, SHARE OF EU-28 NATIONALS MOVING TO THEIR COUNTRY OF CITIZENSHIP (RETURNEES) FROM EU-28 NATIONALS LEAVING THEIR COUNTRY OF CITIZENSHIP (OUTFLOWS), AGE GROUP 20-64; FIGURES ARE CALCULATED BASED ON AGGREGATES EXCLUDING CYPRUS, PORTUGAL, GREECE AND FRANCE FOR BOTH RETURN MOBILITY AND OUTFLOWS, AS FIGURES ARE NOT AVAILABLE FOR OUTFLOWS OF NATIONALS.

⁴⁰ The number indicates the total number of PDs A1 issued by EU-28 Member States and EFTA countries referring to Art. 12 and Art.13 of Regulation 883/2004. PDs A1 are issued for persons insured in a Member State other than the Member State of (temporary) employment. The number of PDs A1 is not necessarily equal to the number of posted workers. Note that differences exist in the definition of 'posting' between Regulation (EC) No 883/2004 and Regulation 96/71/EC (Posting of Workers Directive).

⁴¹

Approximative number of persons posted to one Member State (PDs A1 Art.12)	900,000
(as share of the total employed in the EU-28)	0.4%
Approximative number of persons working in two or more Member States (PDs Art. 13)	850,000
(as share of the total employed in the EU-28)	0.4%

1. MOBILITY OF EU CITIZENS

This section provides an overview of how many EU and EFTA citizens of working age were living in a different country than their country of citizenship in 2017 (stocks) and how the situation has changed since the previous year. Special focus is on the countries that host the greatest number of EU 28/EFTA movers, and the biggest groups of EU-28/EFTA nationals living outside their own country.

Furthermore, it considers the number of working-age EU citizens moving into and out of the Member States in 2016 (latest year for which flow data is available) and compares this with annual movements of previous years, analysing trends since 2009.

Key findings

Destination countries

- In 2017, the stock of EU-28 movers in the main destination countries increased by 5% compared to 2016, with a 14% increase in the UK, 4% in Germany, and between 1% and 3% in France, Italy and Switzerland. Aside from these, there were large increases in Portugal (12%) and Poland and Lithuania (both 14%). Hungary saw an 8% decrease in EU-28 movers residing there.
- In the UK, the number of Romanian nationals has increased by 25% to 300,000, and Portuguese by 20%. In Ireland, numbers of German, French, Spanish and Italian movers have more than doubled compared to 2016.
- Luxembourg had the highest share of movers among its population (44%), followed by Switzerland, Cyprus, and Ireland (all between 10% and 20%).
- The share of working-age people amongst movers is considerably greater than in the general population (almost 20% higher).
- At EU level the gender distribution of EU movers at working age is slightly in favour of females (51%). In Germany and Switzerland, males are over-represented, whilst in the Netherlands and Italy females are over-represented.
- In Italy and Spain a very large proportion of movers have been there for over ten years. This continues a trend seen in recent years. The UK, Denmark and Austria all have high proportions of movers who have been in the country for less than ten years. This corresponds to increasing flows to these countries.
- Net mobility of EU-28 movers was positive in 2017 for all EU countries, meaning that more EU-28 movers were moving to all these countries than leaving them, except Spain and Latvia where the inverse was true. However, annual inflows of EU-28 movers to EU Member States declined for the first time since 2012. This was partly driven by small decreases in inflows to the UK and Germany, which receive half of all inflows in the EU.

Countries of origin

- At EU level, 44% of persons living in a country different from their citizenship in 2017 were EU-28 movers and 55% third-country nationals. TCNs also outnumbered EU-28 movers in Germany, France and Italy; the UK had more EU-28 movers than TCNs.
- Romanian, Polish, Portuguese, Italian and Bulgarian nationals made up over 50% of the total number of EU-28 movers. These nationalities were also the most prominent amongst *recent* movers. The number of Bulgarian movers increased by 13%.
- In terms of gender distribution for different nationalities, there was a difference of more than 10 pps in favour of male movers from Cyprus, Italy, the UK and Greece. The share of females was more than 20 pps higher than males amongst Finnish, Czech and Swedish movers.

- Nearly all EU countries had negative net mobility for nationals, meaning that more nationals left the country than returned to it. The only exceptions were Denmark and Malta.
- Inflows of nationals to their country of origin increased in the EU-28 by 9% compared to the previous year.
- In six EU countries, over 50% of the EU-28 movers entering the country in 2016 were returning nationals. These countries were Romania, Lithuania, Hungary, Croatia, Latvia and Portugal.

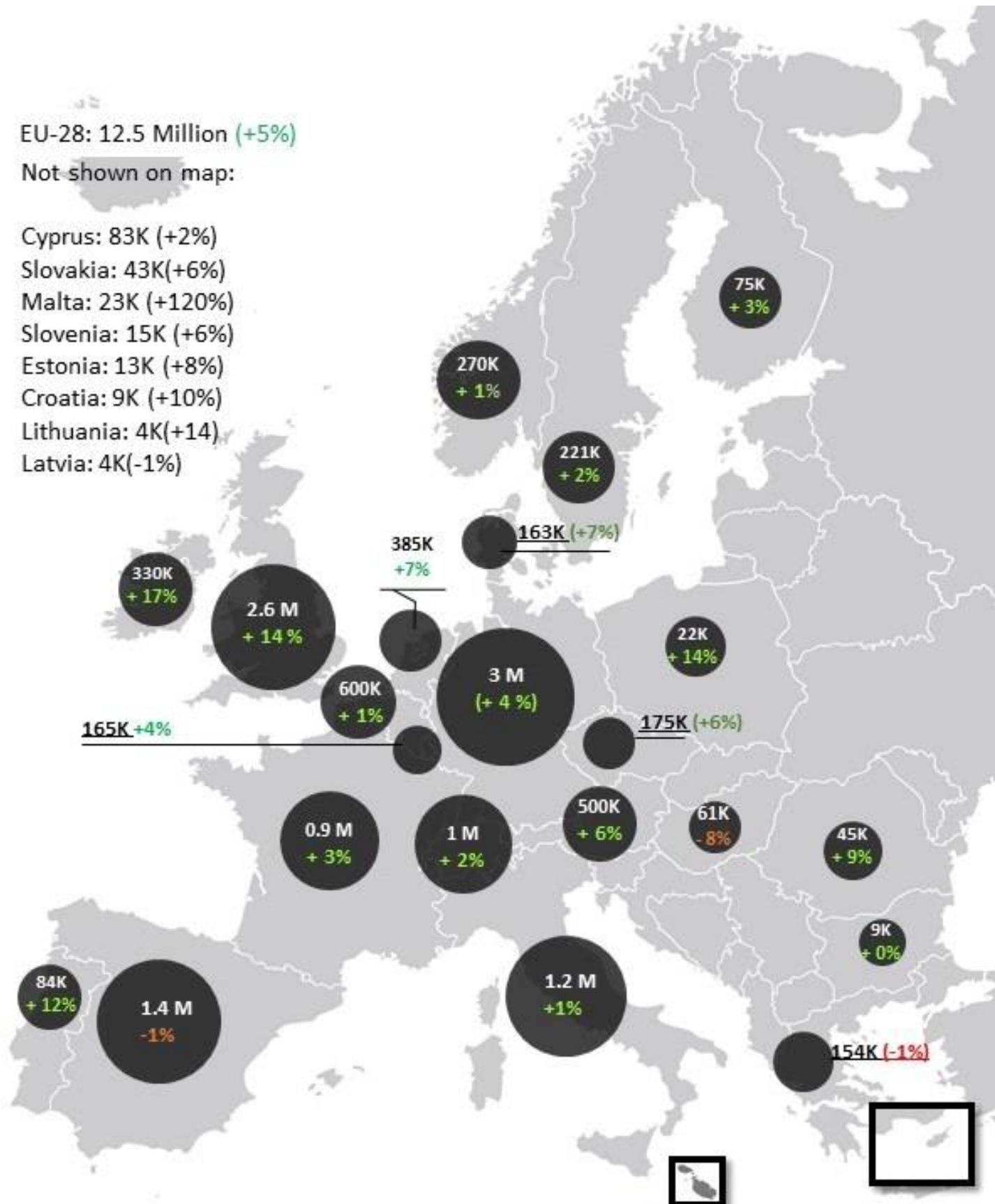
1.1. Main countries of residence and countries of citizenship of EU-28 movers in 2017

The upward trend in intra-EU mobility of recent years continues in 2017, with 12.5 million EU-28 citizens of working age living in another EU-28 Member State, and another 1.3 million living in EFTA countries. This continues a stable annual growth rate of 5% observed since 2014. The mobility of EFTA citizens is growing at a lower rate, roughly +1% compared to 2016, with around 170,000 living in the EU-28 and 10,000 living in another EFTA country ([Table 2](#)).

EU-28 and EFTA countries continue to host an important number of TCNs, around 16 million in 2017. Their numbers continue to grow in most Member States, but at a stable rate of 4% compared to last year and in the period 2015-2016.

1.1.1. Stocks in 2017 and bi-annual developments – countries of destination

Figure 1 Distribution of EU-28 movers aged 20 to 64 years across the EU-28 and EFTA, and the change in stocks compared to 2016⁴²



SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP 'MIGR_POP1CTZ' (EXTRACTED ON 27 MARCH 2018), MILIEU CALCULATIONS. PROVISIONAL DATA FOR FR. ESTIMATED FIGURES FOR IT. BREAK IN TIME SERIES FOR LU (2016).

The stocks of EU-28 movers are heavily concentrated in a handful of Member States. Germany, United Kingdom, Italy, France and Spain host 74% of all movers. Among these countries only France has less than 1 million movers (around 985,000) and Germany as many as 3 million. Switzerland is another important destination country with around 1 million EU-28 movers, slightly more than France.

Germany (3 million) and the United Kingdom (2.6 million) alone host almost half of all EU-28 movers. Although the numbers for Germany increased 4% compared to 2016, the change is much bigger in the UK (+14%). Both countries have an upward trend going back to 2015. In 2017, Germany, Austria, Czech Republic, the Netherlands, Luxembourg and Denmark had relatively similar annual growth rates at national level compared to 2016 (between 4% and 7%) which are also generally in line with the annual growth rates between 2015 and 2016. The rest of the most important destination countries, Italy, France and Switzerland, hosting in total 3 million EU-28 movers, had a lower than average growth, between 1% and 3%. Among the biggest six, only Spain had an absolute lower number of EU-28 movers, with a 1% decrease compared to 2016. This continues a (slowing) downward trend in stocks of movers in Spain observed since 2014. It corresponds with the trend in net-mobility of EU-28 movers to and from Spain, which, while still remaining negative overall, is now increasing (see section 1.2.1).

The Member States with the highest year-on-year increases on 2016 are Malta (+120% increase), Iceland and Ireland (+17% for both), Poland, Lithuania and the UK (+14% for all) and Portugal (+12%). Going in the other direction, stocks of EU-28 movers decreased (in addition to Spain) in Greece and Latvia (-1% for both) and Hungary (-8%).

It has to be noted that the relatively strong increase in stocks in the UK (+14%) in 2017, compared to the previous year (+7%) seems to contradict the decrease in net mobility that the UK has seen in 2016. This discrepancy can be explained by a strong increase of net mobility of EU-28 movers to the UK in 2015 and still in the first quarter of 2016 (see sections 1.2.1 and 1.2.2) and by the fact that population data in the UK (as well as in Ireland) refer to June of the previous year (unlike most other countries where it refers to December 31st of the reference year -1 or January 1st of the reference year)⁴³. Therefore, this increase in stocks reflects very well the development in inflows and outflows of EU-28 citizens.

Table 2 Top six countries of residence of EU-28 movers of working age (20-64) in total numbers, 2017, foreign population by broad groups of citizenship (totals in thousands and row %^{44,45})

	EU-28		EFTA		TCNs		Total foreign population
DE	3,047	(45%)	33	(0%)	3,694	(55%)	6,775
UK	2,645	(58%)	16	(0%)	1,870	(41%)	4,531
ES	1,393	(44%)	16	(1%)	1,791	(56%)	3,201
IT	1,187	(32%)	6	(0%)	2,530	(68%)	3,723
CH	997	(66%)	3	(0%)	504	(34%)	1,505
FR	985	(33%)	28	(1%)	1,986	(66%)	2,999
EU-28	12,446	(44%)	171	(1%)	15,353	(55%)	27,970
EFTA	1,289	(66%)	10	(1%)	649	(33%)	1,949

⁴³ Source: Eurostat 'Demographic statistics: A review of definitions and methods of collection in 44 European countries.', pp.10-11, available at: <https://ec.europa.eu/eurostat/documents/3859598/6851536/KS-GQ-15-002-EN-N/7d6ba1c1-fa04-464b-89ff-ec8796b2db5d>

⁴⁴ The row sum of shares may approximate 100%, due to rounding of the numbers.

⁴⁵ See Table 28 in the Annex for full table.

MEMBER STATES WITH THE HIGHEST NUMBER OF EU-28 MOVERS IN 2017, EXPRESSED IN THOUSANDS.

THE MOBILE POPULATION IS BROKEN DOWN BY BROAD NATIONAL GROUPS OF EU-28 AND EFTA CITIZENS AND TCNS.

THE PERCENTAGES INDICATE THE SHARE OF EACH GROUP FROM THE TOTAL FOREIGN POPULATION.

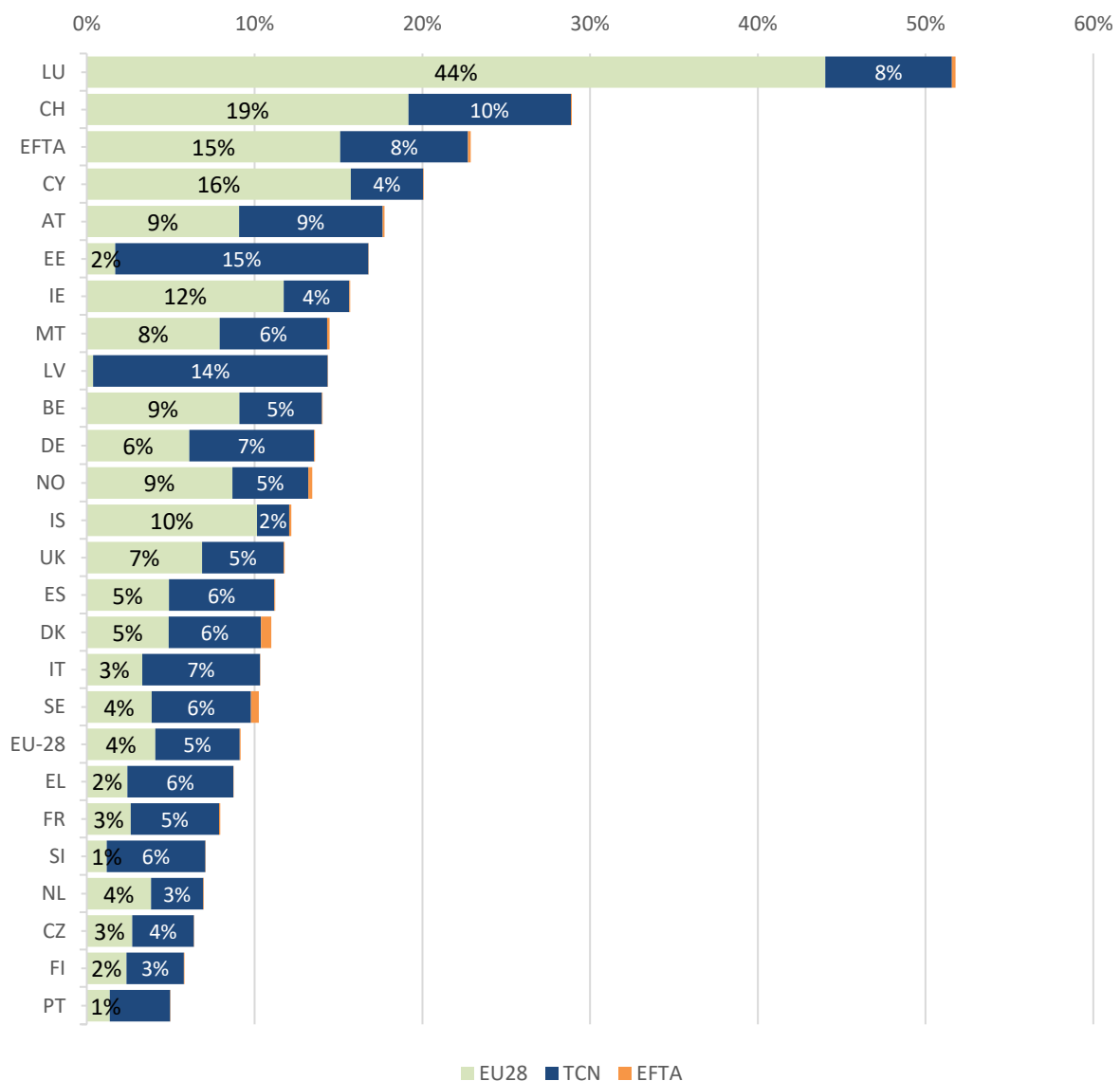
PROVISIONAL DATA FOR FR. ESTIMATED FIGURES FOR IT. BREAK IN TIME SERIES FOR LU (2016).

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP 'MIGR_POP1CTZ' (EXTRACTED ON 27 MARCH 2018), MILIEU CALCULATIONS.

Distribution of different groups varies across the Member States. In Germany, Spain and even more so in Italy and France, third country nationals constitute a larger proportion of the population than EU-28 movers. This division is almost reversed for the UK and especially Switzerland, where the largest proportion the foreign population is EU-28 movers.

Findings change when the shares of these groups are considered within the total population of the destination country. The most important countries of destination mentioned above are no longer on the top of the list, except for Switzerland where foreigners constitute 29% of the population. Luxembourg is by far the country where foreigners make up the biggest share of the total population (52%). Other countries with important shares of foreigners are Cyprus (20%), Austria (18%), Estonia (17%) and Ireland (16%) where EU-28 movers and TCNs make up 15% or more of the population. In terms of distribution between the EU-28 movers and TCNs, Luxembourg and Estonia seem to constitute two extremes: in the former, the ratio is more than 1 to 5 in favour of EU-28 movers. In the latter, it is almost 1 to 8 in favour of TCNs. In the Eastern European countries, the share of TCNs is bigger than that of EU-28 movers, especially in Latvia (14% and 0% respectively) and Slovenia (6% and 1%). In some important destination countries, the share of EU-28 movers and TCNs is similar, as in Austria (9% each), the UK (7% to 5% in favour of EU-28 movers) or Spain (6% to 5% in favour of TCNs). In others the difference is bigger, either with a bigger group of EU-28 movers, as in Belgium (9% to 5%), or with a bigger share of TCNs, as in Greece (2% to 6%) and Italy (3% to 7%).

Figure 2 Share of working age (20-64) EU-28 and EFTA citizens and TCNs in the total population of EU-28 and EFTA countries, 2017⁴⁶



SHARE OF EU-28 AND TCNS WITHIN THE TOTAL POPULATION, ONLY THE COUNTRIES WITH 5% OR MORE FOREIGN POPULATION ARE PRESENTED IN THE GRAPH.

THE PERCENTAGES INDICATE THE SHARE OF EACH GROUP FROM THE TOTAL POPULATION.

PROVISIONAL DATA FOR FR. ESTIMATED FIGURES FOR IT. BREAK IN TIME SERIES FOR LU (2016).

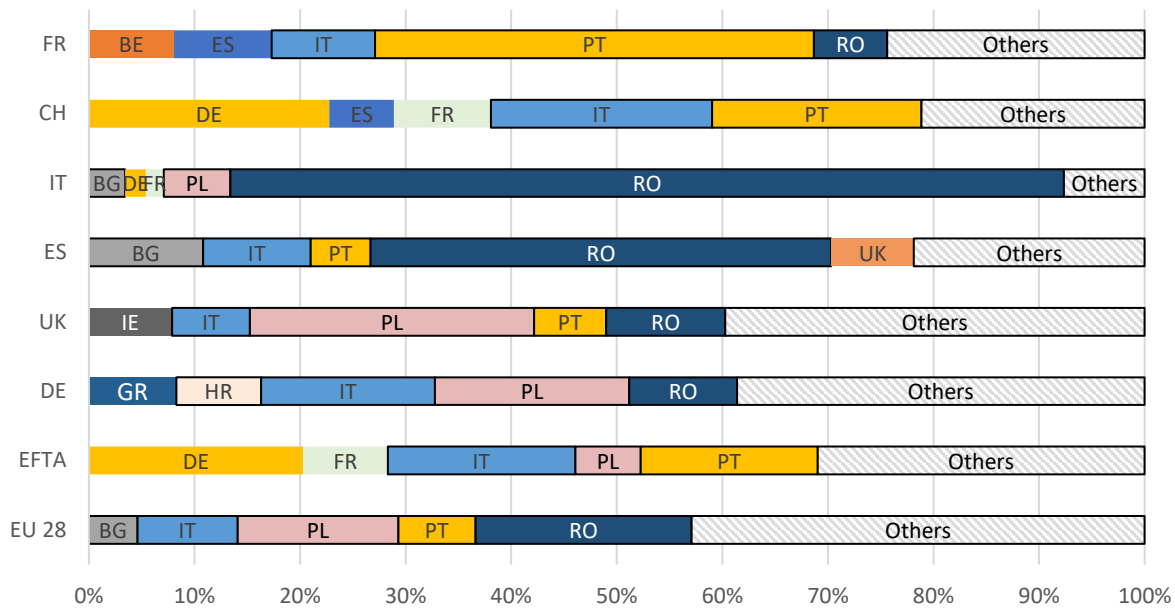
SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP 'MIGR_POP1CTZ' (EXTRACTED ON 27 MARCH 2018), MILIEU CALCULATIONS.

1.1.2. Stocks in 2017 and bi-annual developments – countries of origin

The main countries of origin remain unchanged from 2016, with **Romanian, Polish, Portuguese, Italian and Bulgarian** nationals constituting the largest groups at EU level. Together their numbers reach around 6.6 million people, more than half of the total EU-28 movers in the EU. **Within EFTA**, that changes slightly as Bulgarian and Romanian working-age movers are replaced by **German and French** nationals as the largest groups.

⁴⁶ See Table 28 in Annex for full table.

Figure 3 Breakdown by citizenship of EU-28/EFTA movers of working age (20-64) in EU-28, EFTA and in the top six countries of residence, 2017⁴⁷



MOST REPRESENTED NATIONALITIES FOR EU-28/EFTA MOVERS IN THE SIX COUNTRIES OF RESIDENCE WITH THE HIGHEST NUMBERS OF EU-28 MOVERS, EU-28 AND EFTA, DATA REFERS TO 2017.

SOURCE : EU-LFS, MILIEU CALCULATIONS.

Compared to the previous year, with the exception of Bulgarian nationals, whose numbers increased 13% at EU level, all the other main groups increased by between 1% and 5%. For EFTA countries, this was also true, with increases ranging between 0.2% (Italian nationals) and 7% (French nationals). Among the biggest groups, only Portuguese nationals decreased in numbers within the EFTA countries, very slightly from 199,000 to 198,000.

Although the increase remains under 10% for the most important groups of nationalities in the main countries of destination, there were a few notable changes. For instance, the number of Bulgarian nationals in Spain went up by about 20%, from 109,000 to 130,000. In the UK, the number of Romanian nationals increased by 25% to reach 300,000, and the number of Portuguese rose by 20%. Some of the groups in the main destination countries decreased in numbers, including Bulgarian citizens in Italy (from 43,000 to 40,000) and in the UK (from 764,000 to 734,000), Portuguese nationals in Spain (from 73,000 to 68,000) and UK nationals in Spain (from 99,000 to 94,000).

Other important changes from the previous year include Belgian nationals in Spain (from 10,000 to 15,000), Greek and Bulgarian nationals in the Netherlands (increasing by 58% and 83% respectively), Greek nationals in Italy (47% increase), British nationals in Switzerland (162% increase) and Belgian nationals in the United Kingdom (50% increase). Numbers of German, French, Spanish and Italian nationals in Ireland have increased considerably, more than doubling in numbers for all groups. Increases in the numbers of movers from Eastern Europe to Austria, especially of Bulgarian, Hungarian, Romanian, Slovenian and Slovakian nationals, is another notable change. In the same vein, the numbers of Lithuanian citizens in the UK (from 29,000 to 37,000) and German citizens in Ireland (from 19,000 to 24,000) have increased as well.

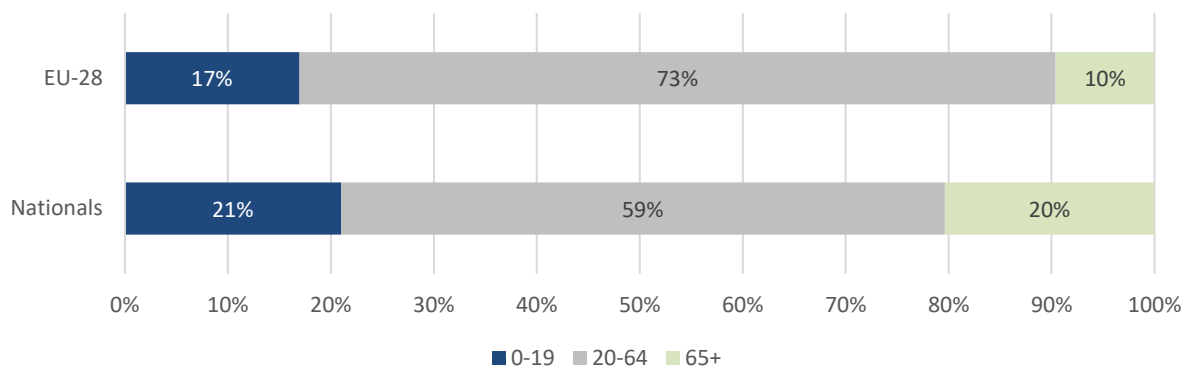
⁴⁷ See Table 29 in Annex for information on all countries.

1.1.3. Main characteristics of the EU-28/EFTA movers

Age Structure of EU-28 movers compared to the nationals of the country of destination

As in previous years, **the proportion of 20-64 year-olds is much bigger among the EU-28 movers than among the national population of a country with a 14% difference**. At EU level, around 73% of EU-28 movers are between 20 and 64 years of age, while, among nationals, 20-64 year-olds make up around 59%. These proportions are almost the same as in 2016, with a slight decline of 0.6% in the share of 20-64 year-olds among the EU movers. By contrast, the proportion of people aged 65+ among nationals (20%) is twice the size of the proportion of EU-28 movers in the same age group. The proportion of persons aged 0 to 19 years among movers (17%) is also smaller than among nationals (21%).

Figure 4 Age structure of EU-28 movers vs. nationals of the host countries, EU-28 aggregate, 2017



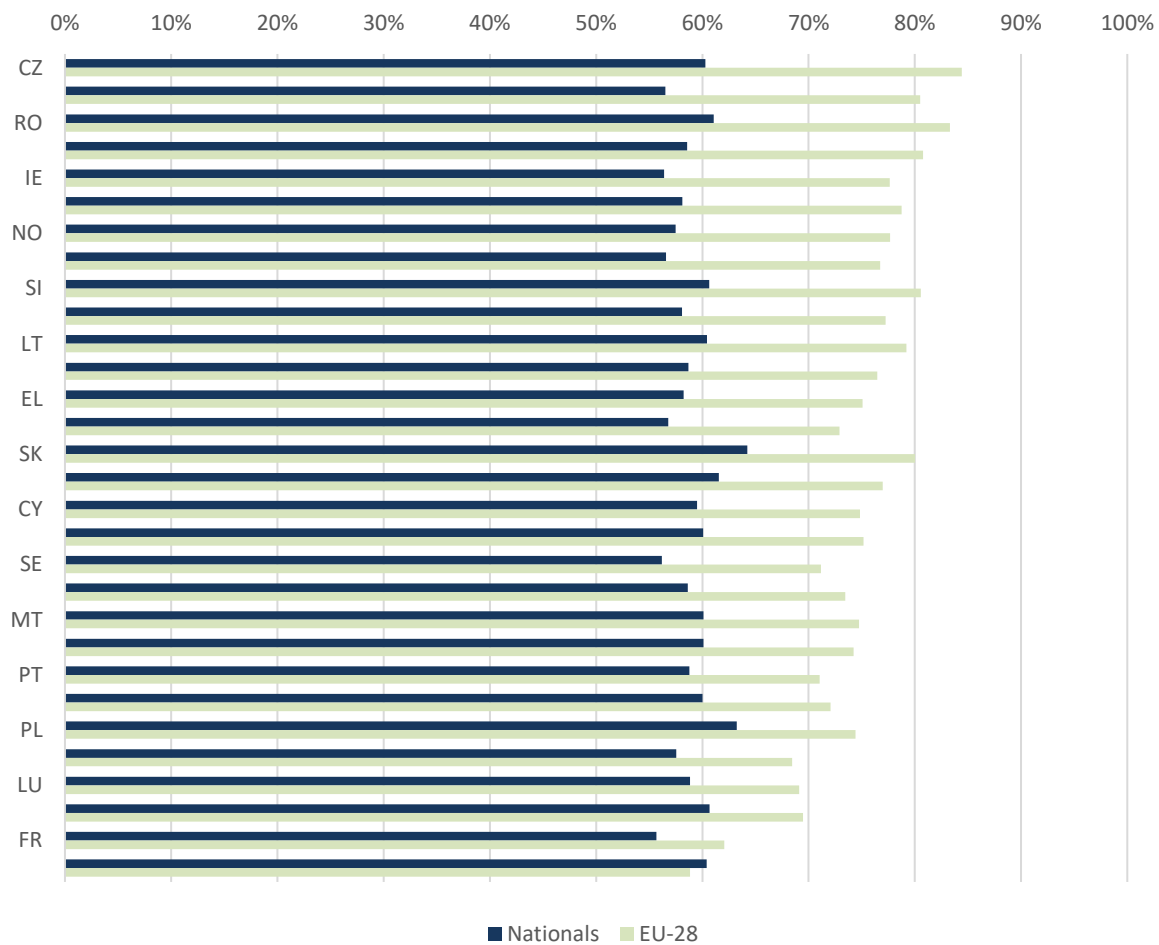
AGE STRUCTURE OF EU-28 MOVERS VS. NATIONALS OF THE HOST COUNTRIES, EU-28 AGGREGATE, 2017.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP 'MIGR_POP1CTZ', (EXTRACTED ON 27 MARCH 2018), MILIEU CALCULATIONS.

In all Member States except in Croatia, the share of working age persons is bigger among EU-28 movers than nationals. However, the difference between the two groups varies considerably across the countries. On the one hand, there is a difference of 10% or less in countries like Bulgaria (9%), France (6%) and Luxembourg (10%). The gap is at least twice as wide in countries like Czech Republic (24%), Denmark (24%), Estonia (22%), Netherlands (21%) or Ireland (21%).

Among the main destination countries, the difference in the share of the working-age population is similar to the EU average in the UK and Spain, whereas it is larger in Germany and Italy (due to a higher share of working-age persons among movers) and lower in France (due to a much lower share of working-age persons among movers).

Figure 5 Shares of 20-64-year-old among EU-28 movers and among nationals of the host country, 2017 (sorted in descending order by difference between EU-28 movers and nationals)



THE SHARE OF 20-64-YEAR-OLD AMONG THE EU-28 MOVERS AND THE NATIONALS OF THE HOST COUNTRY, AT COUNTRY LEVEL AND THE EU-28 AGGREGATE, 2017.

PROVISIONAL DATA FOR FR. ESTIMATED FIGURES FOR IT. BREAK IN TIME SERIES FOR LU (2016).

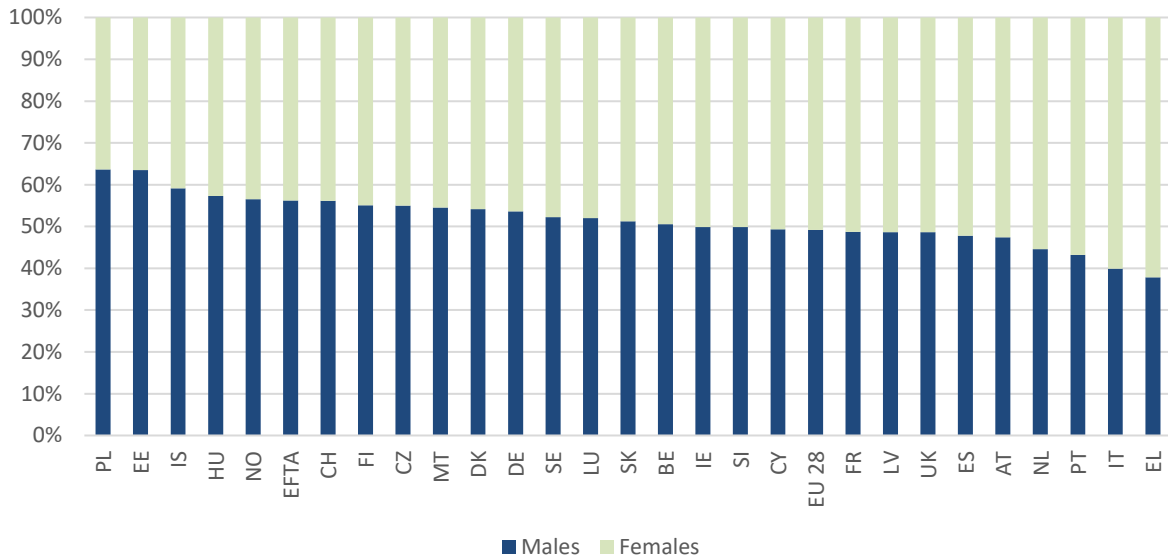
SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP 'MIGR_POP1CTZ', (EXTRACTED ON 27 MARCH 2018), MILIEU CALCULATIONS.

Gender Distribution of EU-28 movers

At EU level, the distribution of male and female movers of working age seems to be balanced slightly in favor of females (51%). However, there are pronounced differences at country level. In the main destination countries, males are over-represented in Germany (54%) and Switzerland (56%); in France the distribution reflects that of EU level (49% males). The share of females is larger in Spain (52%), Austria (53%), Netherlands (55%) and even bigger in Italy (60%).

In some of the Central and Eastern European countries male EU-28 workers are over-represented: in Poland 64% and in Estonia, 63% of EU-28 movers are male. At the other end of the spectrum there is Greece, where 62% of the movers are female and Portugal, where 57% of the movers are female.

Figure 6 Gender distribution of EU-28 movers, by country of residence, 2017



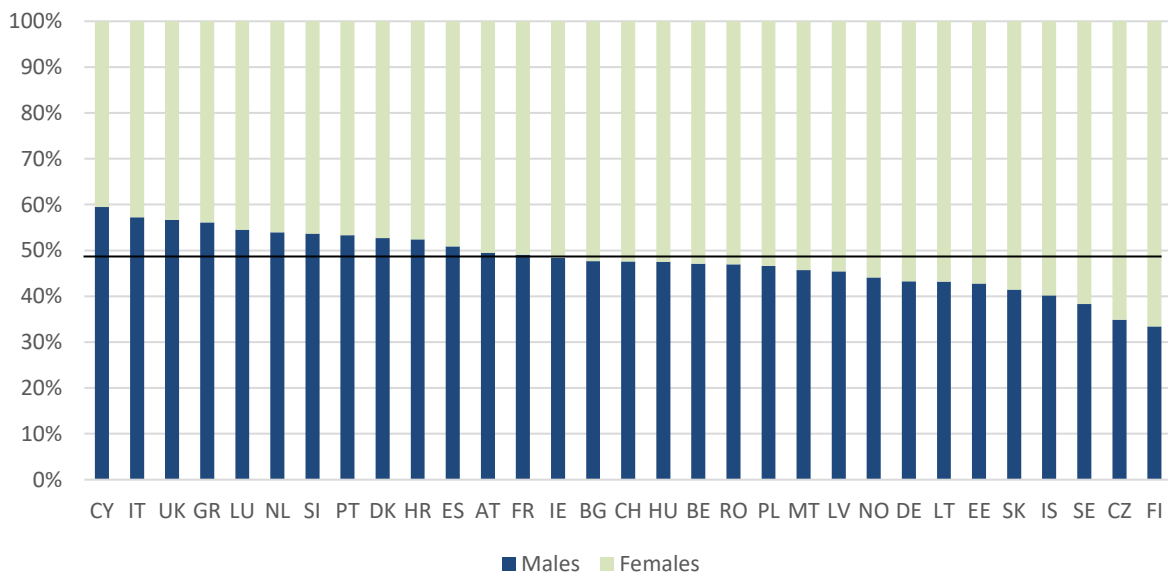
SHARE OF MALE AND FEMALE MOVERS OF EU-28 MOVERS AND EU-28 AND EFTA AGGREGATES BY COUNTRY OF DESTINATION, 2017.

FIGURES FOR BG, HR, LT AND RO ARE BELOW RELIABILITY LIMITS THEREFORE EXCLUDED FROM THE GRAPH. FIGURES FOR SI ARE HAVE LOW RELIABILITY.

SOURCE: EU-LFS DATA, MILIEU CALCULATIONS.

When looking at gender composition from the perspective of country of origin, no patterns based on geography or time of accession emerge. Among the movers who are nationals of Cyprus (59%), Italy (57%), the United Kingdom (57%), Greece (56%) and to a lesser extent Portugal (53%), males are over-represented. Among the main groups of movers such as Romania, Poland and Bulgaria, females constitute a bigger group (53% for Romania and Poland, 58% for Bulgaria). Females are also over-represented among the Finnish (67%), Czech (65%) and Swedish (62%) nationals who live in another EU-28 country.

Figure 7 Gender distribution of EU-28/EFTA movers by country of origin



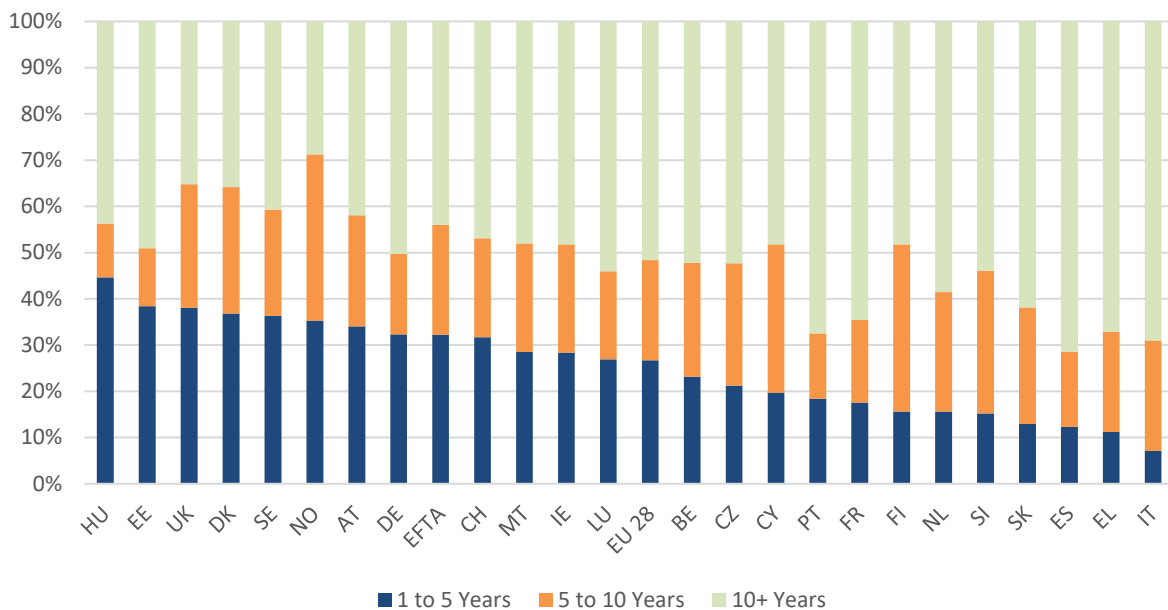
SHARE OF MALE AND FEMALE MOVERS OF EU-28 MOVERS BY COUNTRY OF ORIGIN, 2017.

SOURCE: EU-LFS DATA, MILIEU CALCULATIONS.

Length of Stay

An important means of reading the dynamics of the intra-EU mobility is by looking at how long EU-28/EFTA movers have spent in their country of residence. For instance, half of movers (51%) moved into their current country of residence over ten years ago. 22% of them moved between six and ten years ago, and the remaining group (27%) moved within the last five years. This distribution has been stable for the last three years.

Figure 8 EU-28/EFTA movers of working age (20-64) by country of residence and years of residence, 2017



EU-28/EFTA MOVERS BY COUNTRY OF RESIDENCE AND YEARS OF RESIDENCE, SHARES OF DIFFERENT GROUPS IN PERCENTAGES.

FIGURES FOR BG, HR, LV, PL, RO AND IS ARE BELOW RELIABILITY LIMITS AND HENCE EXCLUDED FROM THE GRAPH.

FIGURES INCLUDE 'BORN IN THIS COUNTRY' AS PART OF THE 10+ CATEGORY.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

The difference in length of stay between countries is also telling. In the graph above, it can be seen that some countries have been losing importance as destination countries. Although they are hosting important numbers, Spain, Italy and Greece have much smaller groups of EU-28/EFTA movers who arrived in the last five years and the majority (more than 65%) have been living in those countries for more than ten years. The same can be said for France, though to a smaller extent, as the group of EU/EFTA movers who arrived in the last five years is somewhat bigger (18%).

On the other end of the spectrum are the countries that have come forward as important destinations: in Sweden, Denmark, the United Kingdom and Norway, the share of EU-28/EFTA movers who arrived in the last five years is bigger than those who arrived more than ten years ago. This echoes the increase in inflows over the past years for Sweden, Denmark and the UK (although the latter declined in the 2015-2016 period and for Norway in the 2013-2014 period) (Figure 13). In Austria and Germany, the share of movers who arrived more than ten years ago is still bigger compared to other groups, but the number of arrivals from other EU-28 countries in the last five years is bigger when compared to the group who arrived between six and ten years ago, also echoing the increase in inflows in the past years (Figure 13).

1.1.1. Recent movers

In 2017, roughly 5.6 million EU-28 movers of working age had been living in their country of residence for up to 10 years (recent movers). This is a slight decrease (-2%) from 2016.

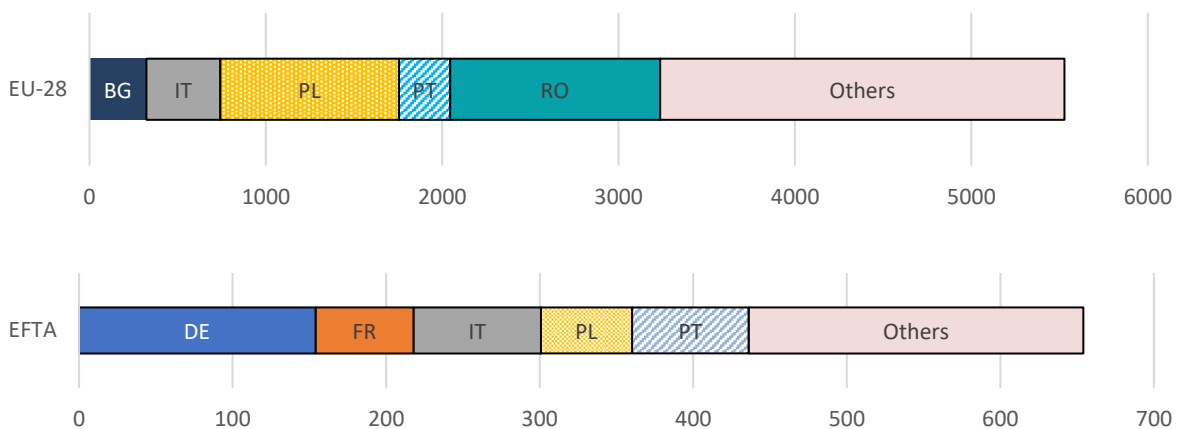
In EFTA countries, the number of EU-28 movers is around 657,000, an increase of 1% from the previous year.

The 2007-2017 period is particularly important since it follows the accession of Romania and Bulgaria in 2007 and of Croatia in 2013. The impact of the accession of new Member States and the subsequently formed migration dynamics have not been felt in the same manner in all Member States. For instance, although Germany hosts more EU-28 workers in total, the United Kingdom seems to be a more important destination for movers who arrived in the last ten years, with 1.75 million recent movers compared to 1.48 million in Germany. Switzerland hosts the third largest number of recent movers (520,000), followed by Italy (360,000), Spain (345,000) and France (310,000).

Trends in length of stay described above are reflected here too: over the last three years, the number of recent movers has been steadily declining in Spain and Italy, whereas it has been growing in Austria, Netherlands and Belgium⁴⁸.

The most represented nationalities amongst EU-28 recent movers are Romanian (22%), Polish (18%), Italian (8%), Bulgarian (6%) and Portuguese (5%). It would appear that the main origin countries have changed over time: in particular, the importance of Romanian and Polish movers has increased (their share is 15% among all movers) and the importance of Italian and Portuguese movers decreased slightly (their shares are 9% and 7%, respectively, among all movers).

Figure 9 Stocks of recent EU-28 movers of working age (20-64) at EFTA and EU level, main nationalities (in thousands), 2017



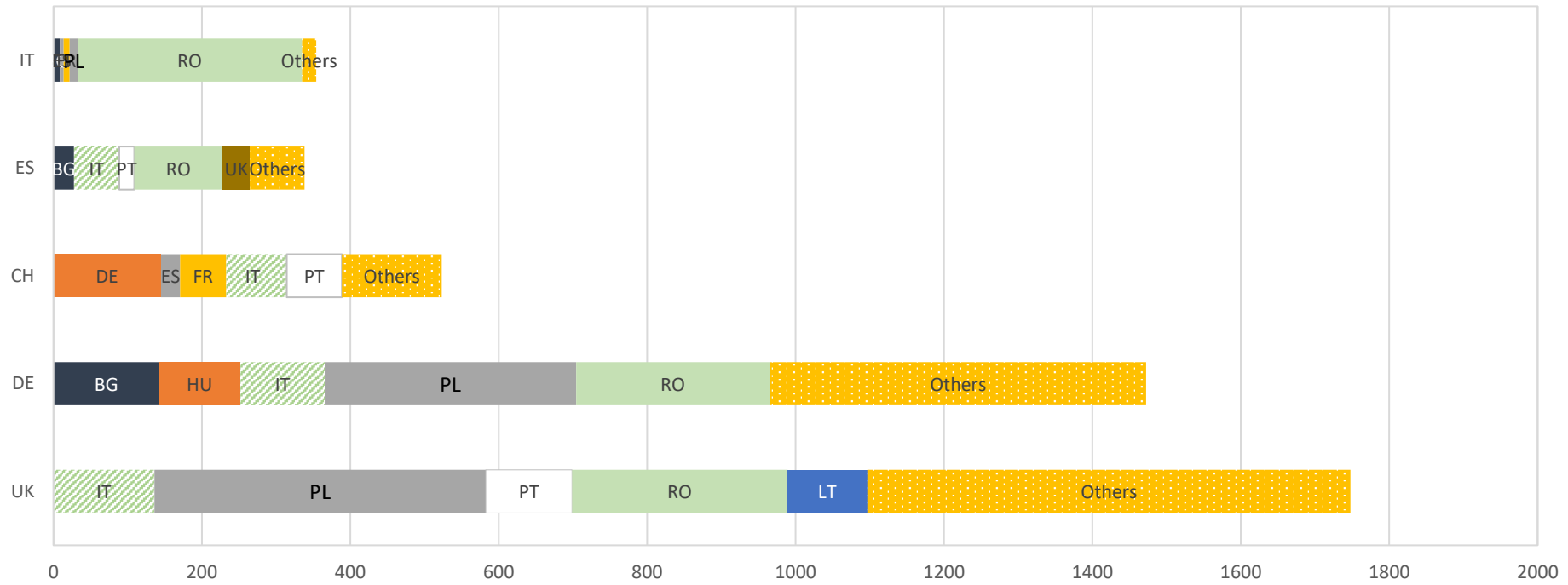
RECENT EU-28 MOVERS ARE DEFINED AS EU-28 CITIZENS LIVING IN AN EU-28 OR EFTA COUNTRY OTHER THAN THEIR OWN FOR UP TO 10 YEARS IN 2017. THE FIGURES REFER TO THE EU-28 AND EFTA AGGREGATES AND ARE EXPRESSED IN THOUSANDS.

EFTA: FIGURES FOR CY AND MT ARE NOT INCLUDED IN THE 'OTHER' CATEGORY. NUMBERS OF RECENT EU-28 MOVERS FROM FRANCE AND ITALY MAY VARY BY UP TO +400 PERSONS; NUMBERS OF RECENT EU-28 MOVERS FROM PORTUGAL MAY VARY BY UP TO +800 PERSONS; NUMBERS OF RECENT EU-28 MOVERS FROM OTHER COUNTRIES MAY VARY BY UP TO +16,800 PERSONS.

EU-28: NUMBERS OF RECENT EU-28 MOVERS FROM OTHER COUNTRIES MAY VARY BY UP TO +400 PERSONS, WHILE THEY DO NOT VARY FOR THE OTHER COUNTRIES OF ORIGIN.

⁴⁸ EU-LFS 2018, Milieu Calculations.

Figure 10 Stocks of recent EU-28 movers of working age (20-64) in the five main countries of residence, main nationalities (thousands), 2017



RECENT EU-28 MOVERS ARE DEFINED AS EU-28 CITIZENS LIVING IN AN EU-28 OR EFTA COUNTRY OTHER THAN THEIR OWN FOR UP TO 10 YEARS IN 2017.

FIGURES ARE EXPRESSED IN THOUSANDS.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Among the recent EU-28 movers that live in an EU-28 country, 20% arrived in the last two years. Among the ones who live in an EFTA country, the 22% arrived in the last two years. The comparison between the number of people who arrived in the last two and the last ten years can give an indication of an accelerating or slowing migration flow. Across the countries, most of the EU-15 corresponds to the EU-28 average. Exceptions are Italy (3% arrived in the last two years), Greece (9% arrived in the last two years), Netherlands (12% arrived in the last two years) and France (14% arrived in the last two years), and at the other end of the scale, Ireland (31% arrived in the last two years), the United Kingdom (25%) and Luxembourg (26%). These correspond with the inflow figures: inflows between 2013 and 2016 are bigger in Ireland and Luxembourg compared to 2009-2013 and they have been steadily increasing in the UK since 2012, with a small decline in 2016. Among the EU-13 countries for which data is available, the share of the EU-28 movers who arrived in Poland in the last two years make up 84% of all arrivals in the last ten years, indicating a very sharp increase. Inflow figures confirm this trend: the number of EU movers arriving to Poland went up from 10,000 in 2009 to 23,000 in 2015 and although there is a slight decline in 2016 (17,000), this presents an increase of 68% in the flows between 2009-2016. Hungary is another country, although to a lesser extent, which has a high proportion of its stocks arriving within the last two years (32%).

1.2. Mobility trends of EU-28 movers: mobility flows

The following section presents results of mobility flows (net flows, inflows and outflows) for the annual period of the latest year for which data is available, namely 2016; as well as comparisons to the previous year (2015) and over longer time spans (since 2009).

Although the latest flow data (migration statistics) is only made available 2 years after the reference year and the data on stocks (population statistics) 1 year after the reference year, flows data should reflect in the stocks, because population statistics refer to January 1st (so, the most up-to-date stock data presented in section 1.1 refers to the state of play on January 1st 2017, and flow data to mobility flows during the year 2016).

1.2.1. Net mobility at a glance⁴⁹

Net mobility refers to the difference between inflows of outflows of certain population groups in a country of residence: positive net mobility means that more persons moved to a country than left it during the reference year; negative net mobility means that more persons left a country than moved to it during the reference year. **Figure 11** and **Figure 12** represent the mobility of different groups by country of residence.

Overall net mobility at EU-28/EFTA level remains positive in 2016 but varies for different population groups.

Net mobility of nationals remains negative both for EU-28 (-480,000) and EFTA (-8,600) nationals. **Net** mobility of nationals has remained stable in most countries since 2014, since *both* outflows of nationals *and* returns of nationals increased (see sections 1.2.3. and 1.2.4.). An exception is Germany where there was a change in calculation method, resulting in a change of net mobility from -22,000 (in 2015) to -100,000 (in 2016)⁵⁰. In the EFTA countries, net mobility of nationals decreased from -4,600 to -8,600 in the same period.

When looking at individual Member States, net mobility for nationals is negative in all EU-28 and EFTA countries, except Malta and Denmark. Among the countries with a negative

⁴⁹ Four Member States do not have figures for outflows: CY, EL, FR AND PT, therefore the analysis provided in this section does not take these four countries into account.

⁵⁰ The Eurostat metadata file states that the estimation methods have been changed for Germany and there is no change on definitions, see Eurostat International Migration statistics 'Reference Metadata in Euro SDMX Metadata Structure (ESMS), Annex 'Immigration statistics break in series description', available at: https://ec.europa.eu/eurostat/cache/metadata/en/migr_immi_esms.htm#relatedmd1523430063481

net mobility of nationals, Germany⁵¹ (-100,000), Poland (-72,000), the United Kingdom (-54,000) and Romania (-52,000) are important examples. The outflow of nationals has resulted in an increasing negative mobility in Poland since 2014 but has been fluctuating for the UK and Romania during the same period. Among other EU-13 sending countries Lithuania (-24,000) and Croatia (-20,000) also have significant negative net-mobility for nationals, relative to the country size. Other notable changes in the 2014-2016 period include increases in net negative mobility among Lithuanians (from -9,000 to -24,000) as well as Croatian (going down from -12,000 to -20,000), Polish (from -53,000 to -72,000) and Swiss nationals (from -3,300 to -6,000).

It can be seen that the EU aggregate for **net mobility of EU-28 movers** decreased by 14% from 543,000 to 465,000⁵². However, it remains positive for all countries except Spain and Latvia. In both countries, especially in Spain-28 inflows have been increasing, contributing to a smaller negative net-mobility (from -37,000 in 2014 to -1000 in 2016). This coincides with the improving economy in Spain (see last paragraph in section 1.2.2). Net mobility for EFTA nationals remains stable with small differences compared to last year. Echoing the main findings of the previous section, Germany (+186,000) and the United Kingdom (+104,000) have a much higher net mobility of EU-28 and EFTA movers than other main destination countries. That said, in the United Kingdom the net mobility of EU-28 citizens has decreased from +151,000 in 2015. Italy (+35,000), and to a smaller extent the Netherlands (+24,000), Austria (+26,000) and Switzerland (+21,000), have a similar net mobility in 2016. Numbers since 2014 remain relatively stable especially for Italy (slight decline from 38,000 to 35,000) and the Netherlands (21,000 to 24,000). The numbers have been declining somewhat more sharply in Austria (from 33,000 to 23,000) and in Switzerland (from +31,000 to +21,000) in the same period.

The Czech Republic, which is not a traditional receiving country, has a net mobility of +19,000 EU-28 movers, more than in Belgium and Sweden (both around +15,000). The net mobility of EU-28 movers to the Czech Republic has been increasing since 2014, but the change was much bigger between 2015 and 2016, when it went from 9,000 to 19,000. This coincides with impressive labour market performance in the Czech Republic. At the end of 2017 it had the lowest unemployment rate in the EU, and employment rate had reached 78.5%. It also had the highest job vacancy rate in the EU at 4%, showing that there is a demand for labour in the country, and nominal wages are expected to have grown according to the Commission Autumn 2017 forecast.⁵³

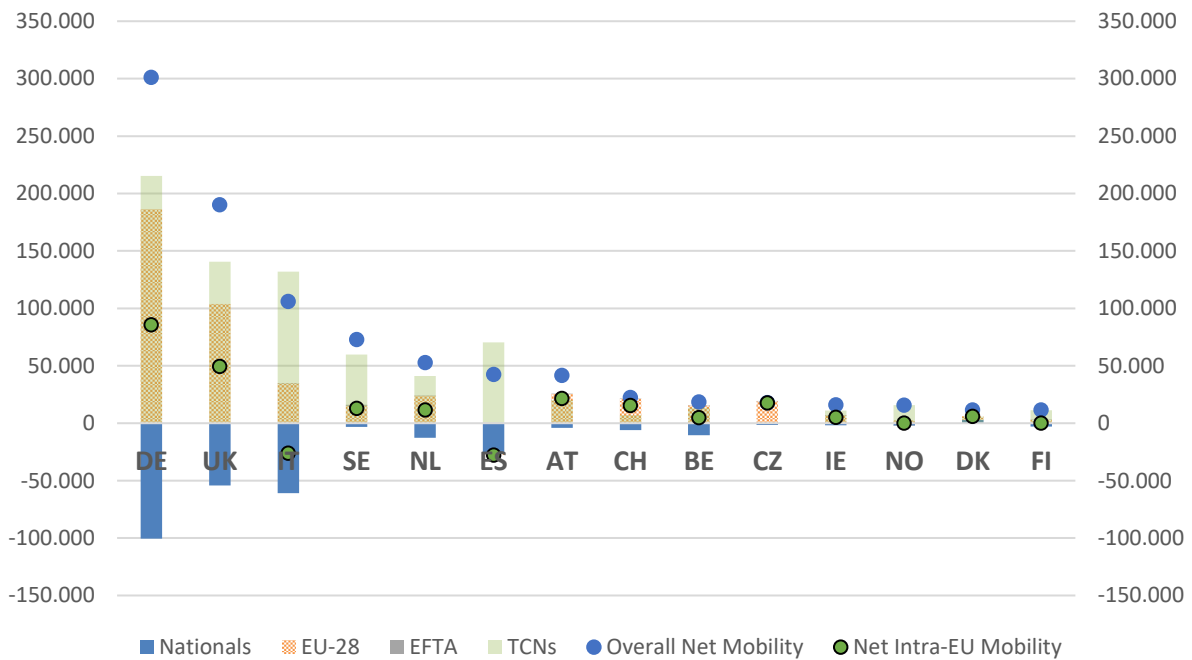
Unlike the nationals of EU28 countries, net mobility of TCNs in 2016 remains positive across the countries with only one exception, Latvia (-500). Germany (+215,000), the United Kingdom (+141,000), Italy (+132,000) and Spain (+70,000) are the countries with the biggest net mobility for TCNs.

⁵¹ As mentioned below, Germany had a methodological change which has considerable impact on the outflow numbers, therefore also on net-mobility.

⁵² The EU-28 aggregates do not include CY, EL, FR and PT.

⁵³ European Commission (2018) Country Report Czech Republic 2018, SWD (2018) 202 final <https://ec.europa.eu/info/sites/info/files/2018-european-semester-country-report-czech-republic-en.pdf>

Figure 11 Net migration and mobility flows by the country of residence, working age (20-64)⁵⁴, 2016



NET MOBILITY FLOWS BY COUNTRY OF RESIDENCE, BY BROAD GROUPS OF CITIZENSHIP. NUMBERS ARE EXPRESSED IN THOUSANDS.

'OVERALL NET MIGRATION FLOWS' ARE CALCULATED AS THE SUM OF NET MIGRATION OF NATIONALS, EU-28 AND EFTA MOVERS AND TCNS, WHILE 'NET INTRA-EU MOBILITY' EXCLUDES FLOWS OF TCNS

FIGURES RELATE PERSONS MOVING TO AND FROM THE COUNTRY INDICATED ON THE X-AXIS, REGARDLESS OF COUNTRY OF PREVIOUS OR NEXT RESIDENCE. FIGURES MAY INCLUDE EU-28 AND EFTA CITIZENS MOVING FROM OR MOVING TO THIRD COUNTRIES.

FIGURES FOR AT, IE AND UK ARE BASED ON AGE DEFINITION 'AGE COMPLETED IN YEARS'.

INFLOWS: BREAK IN TIME SERIES FOR DE (INFLOWS OF TCNS), EL (INFLOWS OF EU28, TCN AND EFTA NATIONALS)

OUTFLOWS:

OUTFLOW FIGURES FOR EFTA CITIZENS ARE NOT AVAILABLE FOR DE, ES THE UK.

ESTIMATED FIGURES FOR DE. BREAK IN TIMESERIES FOR DE

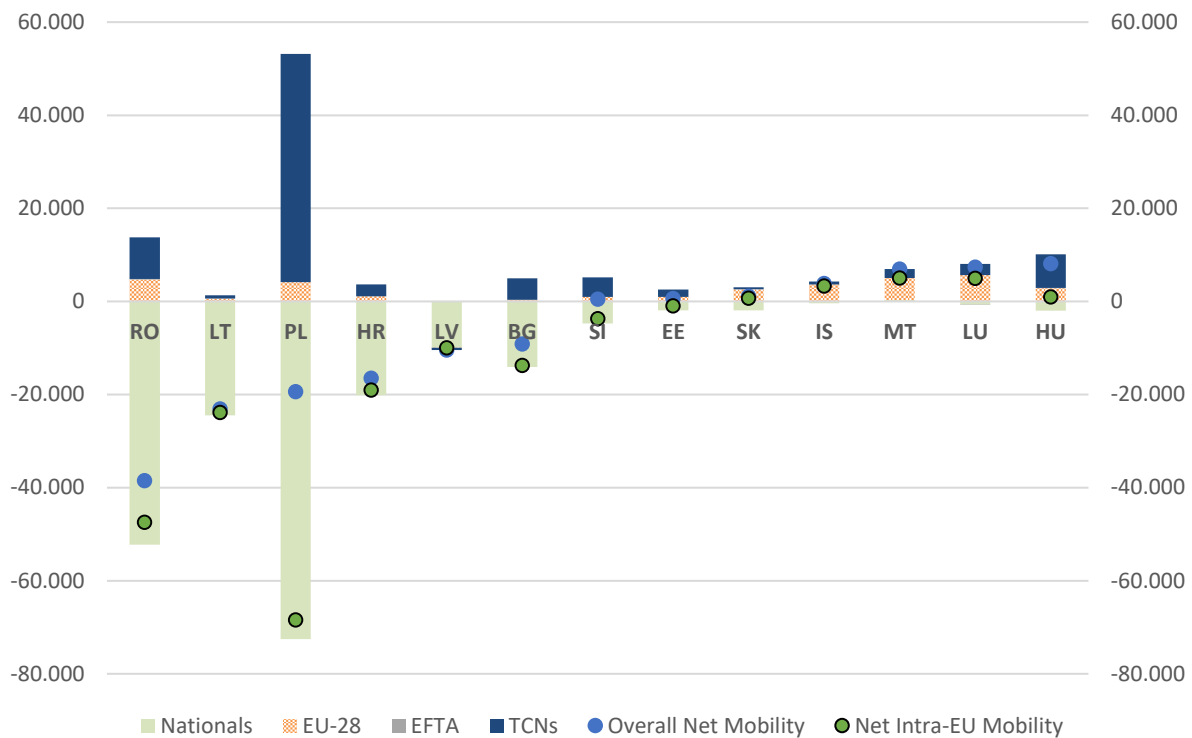
OUTFLOW FIGURES NOT AVAILABLE FOR EL, FR AND PT. TCNS AND EFTA FIGURES ARE NOT AVAILABLE FOR EL. THESE COUNTRIES ARE NOT INCLUDED IN THE GRAPHS.

THE LATEST FLOW DATA AVAILABLE ARE FROM 2016.

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] EXTRACTED ON 16 MARCH 2018, AND IMMIGRATION DATA [MIGR_IMM1CTZ], EXTRACTED ON 19MARCH 2018, MILIEU CALCULATIONS

⁵⁴ See [Table 37](#) for full table.

Figure 12 Net migration and mobility flows by the country of residence, countries with smaller totals, working age (20-64)⁵⁵, 2016



NET MOBILITY FLOWS BY COUNTRY OF RESIDENCE, BY BROAD GROUPS OF CITIZENSHIP. NUMBERS ARE EXPRESSED IN THOUSANDS.

'OVERALL NET MIGRATION FLOWS' ARE CALCULATED AS THE SUM OF NET MIGRATION OF NATIONALS, EU-28 AND EFTA MOVERS AND TCNS, WHILE 'NET INTRA-EU MOBILITY' EXCLUDES FLOWS OF TCNS

FIGURES RELATE PERSONS MOVING TO AND FROM THE COUNTRY INDICATED ON THE X-AXIS, REGARDLESS OF COUNTRY OF PREVIOUS OR NEXT RESIDENCE. FIGURES MAY INCLUDE EU-28 AND EFTA CITIZENS MOVING FROM OR MOVING TO THIRD COUNTRIES.

FIGURES FOR MT, RO, SI ARE BASED ON AGE DEFINITION 'AGE COMPLETED IN YEARS'.

PROVISIONAL DATA FOR FIGURES FOR MOVERS FOR BG AND SK.

ESTIMATED FIGURES FOR PL.

OUTFLOWS:

OUTFLOW FIGURES FOR EFTA CITIZENS ARE NOT AVAILABLE FOR PL.

PROVISIONAL DATA FOR BG AND PL.

ESTIMATED FIGURES FOR PL.

OUTFLOW FIGURES NOT AVAILABLE FOR CY. THIS COUNTRY IS NOT INCLUDED IN THE GRAPHS.

THE LATEST FLOW DATA AVAILABLE ARE FROM 2016.

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] EXTRACTED ON 16 MARCH 2018, AND IMMIGRATION DATA [MIGR_IMM1CTZ], EXTRACTED ON 19 MARCH 2018, MILIEU CALCULATIONS

1.2.2. Inflows - main countries of destination and changes over time

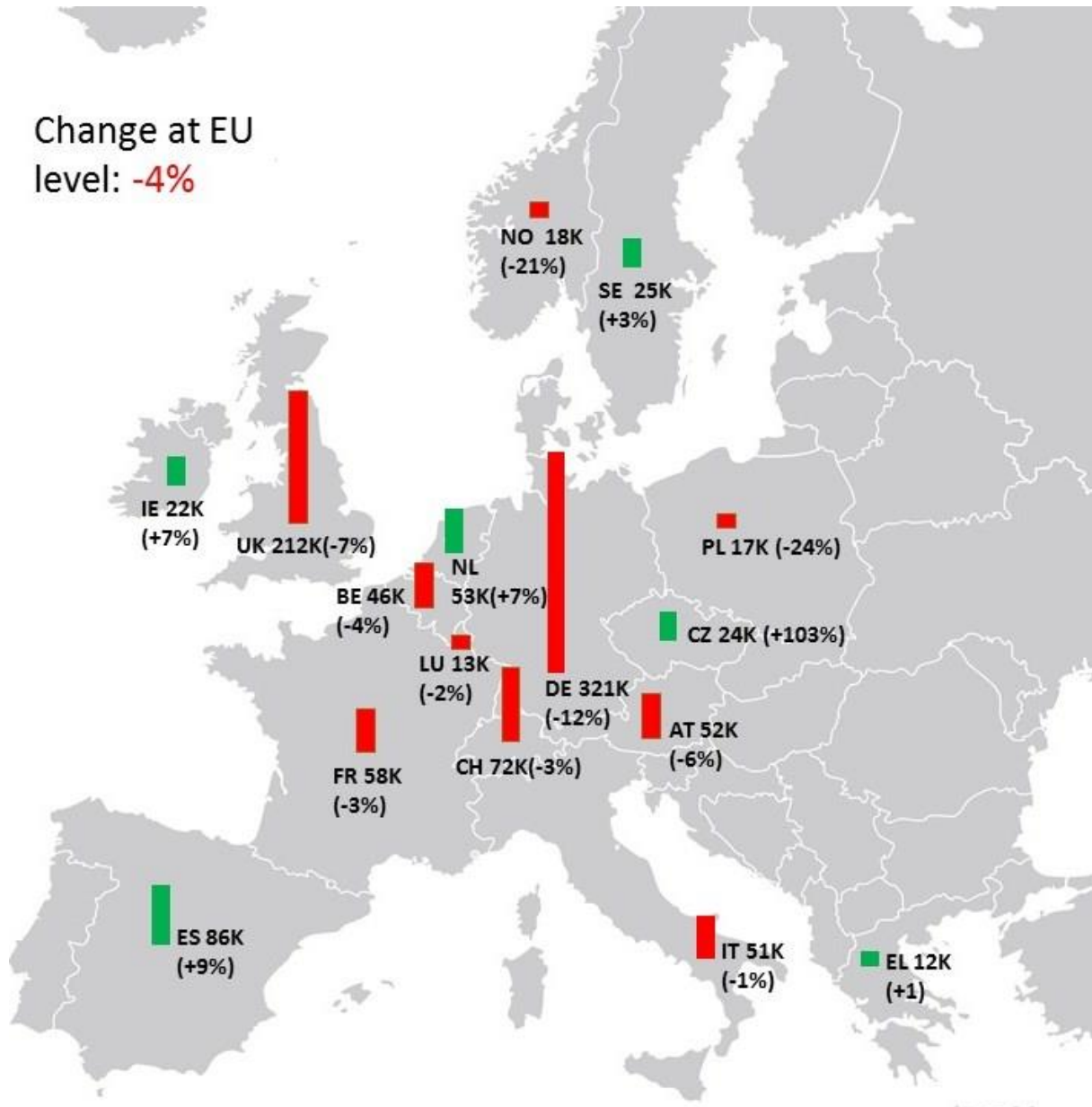
Annual inflows of EU-28 citizens to another EU Member State slightly declined from 1.11 million to 1.06 million in 2016, a decrease of 4%, the first decrease since 2012⁵⁶. The number of EU-28 citizens moving to an EFTA country also slightly declined to 94,000, mainly due to a decrease in the numbers of people going to Norway and Switzerland, a trend that has been observed since 2013.

⁵⁵ See [Table 37](#) for full table.

⁵⁶ Due to breaks in series and unavailability of figures for certain Member States, a trend analysis for longer than before 2012 is not possible at EU level.

The number of incoming EU-28 citizens varied considerably between the countries (Figure 13). The main destination countries, especially Germany and the UK, had much bigger numbers of incoming EU-28 citizens than others. With more than half a million people in 2016, these two countries received half of all inflows in the EU. There is, however, a slight decline compared to 2015: moves into Germany declined by 12%, and by 7% in the UK. Inflows had been increasing in Germany since 2009, and in the UK since 2013.

Figure 13 Distribution of inflows to EU-28/EFTA Member States of nationals of another EU28 country in 2016, 20-64 years



SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED ON 27 MARCH, MILIEU CALCULATIONS. RED BARS INDICATE A DECREASE IN THE FLOWS FROM LAST YEAR. GREEN BARS INDICATE AN INCREASE IN THE FLOWS FROM LAST YEAR. THE CHANGE IS INDICATED BETWEEN THE BRACKETS FOR EACH COUNTRY

The decline in inflows of EU-28 movers to the UK joins the decline in EU-28 net mobility to the UK mentioned above. It is of course tempting to relate any recent development in flows of EU-28 movers in or out of the UK to Brexit. The pattern of net migration over recent

years shows a peak in 2015-2016, with a sharp decline since⁵⁷, which would coincide with the Brexit referendum that took place in June 2016. Latest figures at the time of writing from the Office for National Statistics suggest that this pattern of decreasing net mobility is continuing.⁵⁸

Flows into Spain continue to recover, and have been increasing since 2013, reaching 86,000 in 2016. Other important destination countries, including Austria, Belgium, France, Italy and the Netherlands, have very similar figures, ranging from 46,000 in Belgium to 58,000 in France. There is a slight decline in numbers for all of these countries, except for the Netherlands. Other notable changes concern Czech Republic (103% increase), Malta (61% increase) and Iceland (78% increase).

It is important to note that these figures underline different scales of migration when the size of the countries is taken into account. The relatively smaller size of Austria, Belgium and the Netherlands receiving similar number of inflows to bigger countries like France and Italy indicates that these countries are coming forward as important destinations (**Table 31**). Switzerland also received a high number of incoming movers, both in total and as a share of its population, although the number slightly declined on the previous year. It is also important to note that Switzerland has a very steady and stable migration profile, at least compared to EU-28 countries: inflows range from 72,000 to 76,000, increasing or decreasing only slightly over the years since 2009.

Luxembourg had the highest percentage of incoming EU-28 and EFTA citizens as a proportion of its work-age population, with 3.5%. Malta (2.7%) and Iceland (2.5%), Cyprus (1.1%) and Austria (1.0%) are the other EU and EFTA countries with the greatest proportion of movers within their working age population.

Table 3 Main countries of destination of EU-28 movers of working age (20-64) in total numbers and in shares from the population, 2016 and % change compared to 2015, (total numbers in thousands)⁵⁹

Largest inflows of EU-28 movers in 2016 (% change to 2015)		Largest inflows of EU-28 movers compared to total population in country (% change to 2015)	
DE	321(-12%)	LU	3.4% (-0.3%)
UK	212(-7%)	MT	2.6% (+0.9%)
ES	86(+9%)	IS	2.4% (+1.0%)
CH	72(-3%)	CH	1.4% (-0.1%)
FR	58(-3%)	CY	1.1% (0.2%)
NL	53(+7%)	AT	1.0%(-0.08%)
AT	52(-6%)		
IT	51(-1%)		

INFLOWS OF EU-28 IN 2016, TOTAL NUMBERS ARE EXPRESSED IN THOUSANDS. SHARES IN COLUMN 2 EXPRESS NUMBERS OF INFLOWS BY NUMBER OF TOTAL POPULATION IN THE COUNTRY. SHARES IN BRACKETS EXPRESS RELATIVE DIFFERENCES OF TOTAL INFLOWS OF EU-28 FOREIGNERS TO 2015.

FIGURES RELATE TO FOREIGN EU-28 MOVING TO THE COUNTRY INDICATED IN THE ROWS, REGARDLESS OF COUNTRY OF PREVIOUS RESIDENCE. FIGURES MAY INCLUDE EU-28 PREVIOUSLY RESIDING IN THIRD COUNTRIES.

THE LATEST FLOW DATA AVAILABLE ARE FROM 2016.

AGE DEFINITION FOR AT, MT AND UK IS 'AGE IN COMPLETED YEARS' UNLIKE THE OTHER COUNTRIES THAT USE 'AGE REACHED DURING THE YEAR'.

BREAK IN TIME SERIES: DE.

⁵⁷ Office for National Statistics (2018) Migration Statistics Quarterly Report: August 2018
<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/bulletins/migrationstatisticsquarterlyreport/august2018#migration-patterns-for-eu-and-non-eu-citizens>

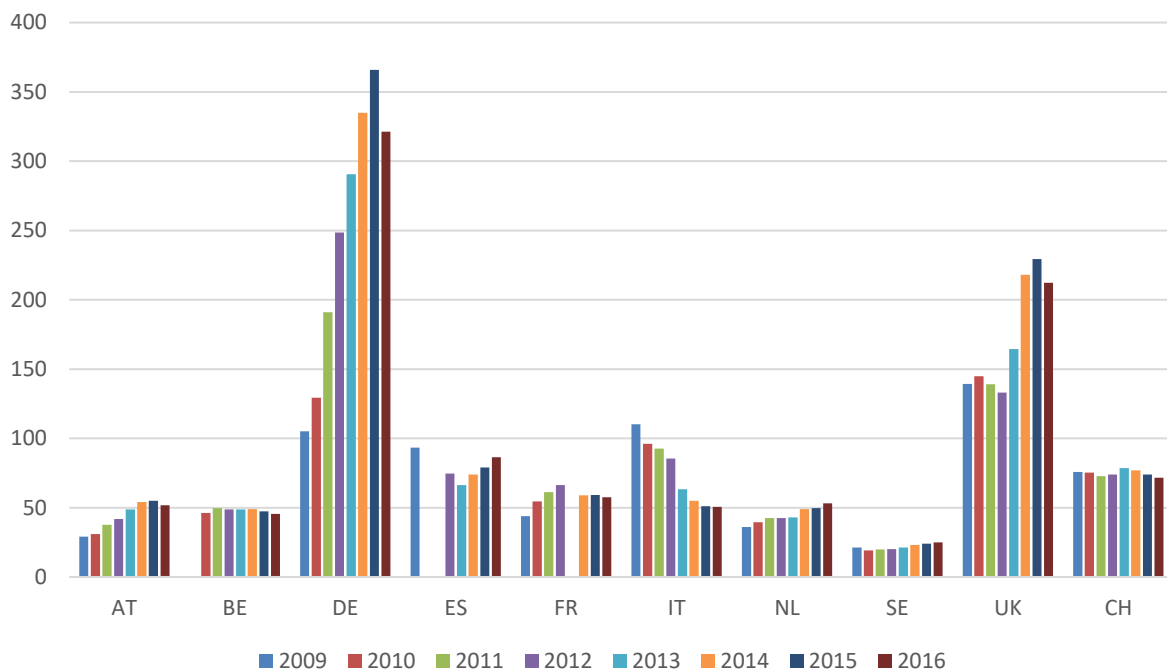
⁵⁸ Ibid.

⁵⁹ See Table 38 in Annex for all countries.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS.

At the EU aggregate level, the volume of inflows increased by about 50% between 2009 and 2016. At Member-State level, the dynamics vary considerably. In one group, there are countries with stable (albeit increasing or decreasing slightly over the years) annual flows. Between 2009 and 2016, the flows into these countries did not change by more than 50%. They include Belgium (1% decrease), Sweden (18% increase) and Switzerland (6% decrease), as well as France (31% increase), Finland (12% increase) and Luxembourg (36% increase). In a second group, there are countries where inflows changed by 50% or more over this same period, such as Austria (78% increase), Denmark (60% increase), Czech Republic (78% increase), Poland (68% increase) and Portugal (70% increase). Some smaller countries have more dramatic increases, such as Malta (281% increase) or Estonia (263% increase) but this percentage represents an actual increase from almost zero to a few thousand. Perhaps the most important change is recorded in Germany, where inflows have doubled since 2009. It should be noted that Germany is receiving a major share of EU-28 movers from newer Member States such as Romania and Poland.

Figure 14 Evolution of inflows of foreign EU-28 and EFTA citizens of working age (20-64) in the top 10 countries of destination 2009-2016, (in thousands)⁶⁰



FIGURES RELATE TO FOREIGN EU-28 AND EFTA CITIZENS MOVING TO THE COUNTRY INDICATED ON THE X-AXIS, REGARDLESS OF COUNTRY OF PREVIOUS RESIDENCE. FIGURES MAY INCLUDE EU-28 AND EFTA CITIZENS PREVIOUSLY RESIDING IN THIRD COUNTRIES.

FIGURES FOR YEARS 2009-2012 DO NOT INCLUDE HR CITIZENS.

FOR 2016 FIGURES: BREAK IN TIME SERIES: DE PROVISIONAL DATA: BG, PL AND SK ESTIMATED: PL, PT

NO FIGURES ARE PROVIDED FOR BE FOR 2009.

EVOLUTION OF INFLOWS OF EU CITIZENS FOR THE YEARS 2009 TO 2016 IN THE 10 COUNTRIES WHERE THEIR NUMBERS WERE HIGHEST IN 2013.

FIGURES FOR AT AND UK USE AGE DEFINITION 'AGE COMPLETED IN YEARS'.

THE LATEST FLOW DATA AVAILABLE ARE FROM 2016.

⁶⁰ See Table 31 in Annex for all countries.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS.

Inflows are largely directed towards EU-15 countries. In 2009, 93% of the inflows were directed to an EU-15 Member State⁶¹. In 2016, the share remains the same. On the other hand, some of the EU-13 have started to receive more important number of inflows compared to 2009, such as the Czech Republic (78 % increase) and Poland (68% increase) (**Table 32** in Annex). Czech Republic has been gaining importance since 2009 but the change from 2015 to 2016 was even bigger, doubling the number of inflows (from 12,000 to 24,000). Inflows to Poland also increased overall during the same time period, but last year declined from 22,600 to 17,000.

Spain and Italy receive relatively fewer EU-28 movers, especially compared to their pre-crisis levels. Yet both countries remain important destination countries; Spain (7% decrease from 2009) seems to be recovering more quickly than Italy (54% decrease from 2009) when it comes to returning to their pre-crisis levels of inflows.

As will be seen elsewhere in this report, Spain appears to be regaining attractivity as a destination country for EU-28 movers and seeing less of its nationals leave. Italy meanwhile is seeing the inverse of this, with inflows of EU-28 and EFTA citizens continuing to decrease and outflows continuing to increase.

Indicators suggest that Spain's economic situation is improving. According to the European Commission's 2018 Country Report, economic growth in Spain continued to exceed expectations in 2017. GDP reached pre-crisis levels, with private consumption being the main driver of growth; employment continued to increase steadily (+1.6 pps) and unemployment continued its descent from the precipitous level seen in 2013 (-2.4 pps), but continues to be high.⁶² In Italy, GDP grew but has still not reached pre-crisis levels. Employment continued its sluggish growth (+0.7 pps) and unemployment its sluggish descent (-0.5 pps).⁶³ The proportion of people at risk of poverty and social exclusion rose by 1.7 pps between 2014 and 2016, whereas in Spain it decreased by 1.3 pps over the same period. Recent figures from the IMF further suggest that Italy and Spain are on different trajectories, with GDP per capita in Spain overtaking that of Italy in 2017.⁶⁴

1.2.3. Outflows of nationals – main sending countries and changes over time

A little more than a million EU-28 and around 30,000 EFTA citizens left their country of origin in 2016. That represents an increase of 17%⁶⁵ and 1.3% respectively for both regions compared to the previous year. Although 17% seems outside of the 'normal' trend for the previous years, which fluctuates between 3% and 5%, this is probably due to a methodological change emigration in statistics in Germany⁶⁶, which almost doubled the number of outflows of nationals (from 79,000 to 175,000). When Germany is excluded from the calculation, the EU-28 aggregate still shows an increase of 7%.

Note that the discrepancy between this increase in outflows and the decrease in inflows of EU-28 and EFTA movers (see 1.2.2) may be explained by the fact that parts of the EU-28/EFTA nationals leaving their countries moved to third countries⁶⁷.

⁶¹ Number are missing for some of the countries. For 2009 numbers are missing for BE, BG and LV. An average of inflows between 2009-2016 was used instead of missing figures.

⁶² European Commission (2018) Country Report Spain 2018, SWD(2018) 207 final

⁶³ European Commission (2018) Country Report Italy 2018, SWD(2018) 210 final

⁶⁴ IMF (2018) World Economic Outlook 2018

⁶⁵ The figure does not include numbers for CY, EL, FR and PT.

⁶⁶ The Eurostat metadata file states that the estimation methods have been changed for Germany and there is no change on definitions, see Eurostat International Migration statistics 'Reference Metadata in Euro SDMX Metadata Structure (ESMS), Annex 'Immigration statistics break in series description', available at: https://ec.europa.eu/eurostat/cache/metadata/en/migr_imm_i_esms.htm#relatedmd1523430063481

⁶⁷ It is not possible to obtain emigration statistics by citizenship AND country of next residence, therefore the exact number of EU-28/EFTA citizens leaving their country for another EU-28/EFTA country cannot be estimated.

The main sending countries remained the same, with Poland and Romania together sending 30% of the overall outflows among the EU-28 Member States. The increase on 2015 in outflows of Polish nationals was bigger than that of Romanians, with 15% and 8% increases respectively. The increase in Poland marks the first upward turn since 2013 (following an increase in 2011), but the overall number in 2016 (around 140,000) is close to pre-2011 levels (between 130,000 and 140,000). Unlike Poland, outflow of nationals has been increasing steadily in Romania since 2013, which followed a downward trend between 2009 and 2012.

The United Kingdom (7% increase, with 110,000) and Italy (14% increase with 85,000) are other important sending countries.

The emigration of nationals since 2009 follows different trends in different Member States. Outflows of nationals from some of the EU-13 have been rising sharply: outflows from Croatia almost tripled in the last four years from 10,000 in 2013 to 26,000 in 2016, and almost doubled in Bulgaria, from 12,000 to 20,000, and in Estonia from 4,700 to 7,700. Slovenia and Slovakia also recorded minor upward changes. On the other hand, the number of outflows of nationals has been decreasing in the Czech Republic (from 8,000 in 2013 to 5,600 in 2016) and Latvia (from 18,000 in 2011 to 13,000 in 2016).

For most of the EU-15 countries the number of nationals leaving their country seems to have remained stable since 2009, especially in Belgium, Denmark, Luxembourg, Netherlands, Austria and Finland. Spain and Italy are the exception, with sharper increases of outflows, in Italy from 37,000 in 2009 to 86,000 in 2016, and in Spain from 51,000 in 2013 (oldest data available) to 65,000 in 2016.

Table 4 Main sending countries (with outflows of nationals of more than 50,000) in 2016 and changes compared to 2015⁶⁸

Country of residence	Outflow of Nationals (main sending countries) in 1000s
RO	169 (+8%)
DE	175 (+121%)
PL	141 (+15%)
UK	112 (+7%)
IT	86 (+14%)
ES	65 (-7%)

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ], EXTRACTED ON 3 APRIL 2018, MILIEU CALCULATIONS.

BREAK IN TIME SERIES: DE, ESTIMATED AND PROVISIONAL FIGURES FOR PL.

FIGURES FOR RO AND UK USE AGE DEFINITION 'AGE COMPLETED IN YEARS'.

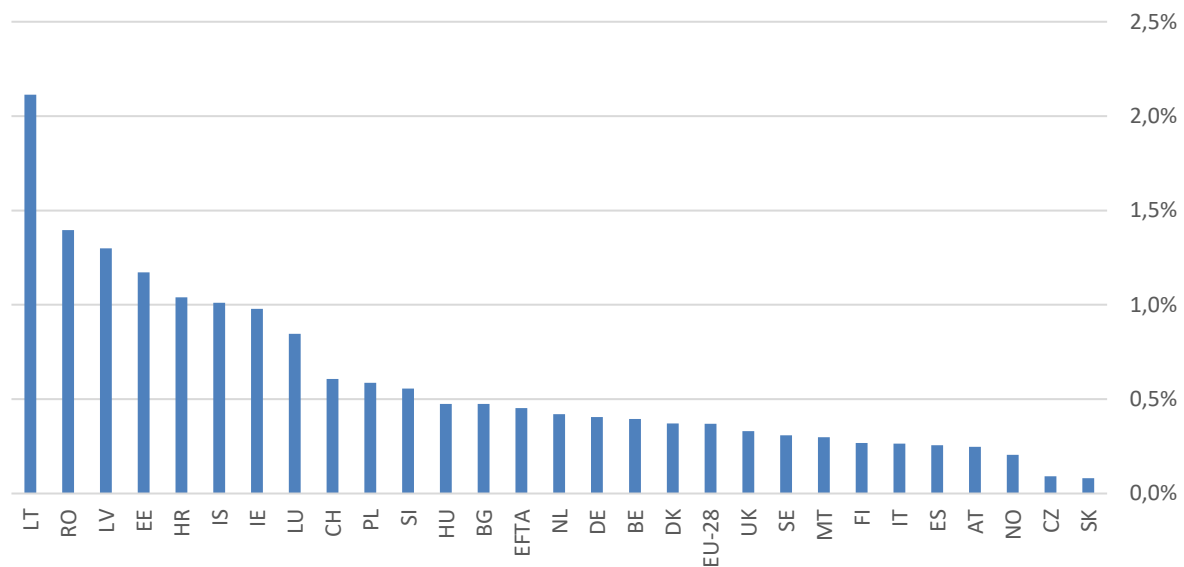
When the outflows are analyzed as a share of the total national population of the sending countries, the result is an 0.4% emigration rate for the EU-28 aggregate level. All the countries that have an emigration rate higher than the EU average are in the EU-13 group, with Lithuania having the highest share (2.1%), followed by Romania (1.4%), Latvia (1.3%) and Estonia (1.2%). In all four countries, there was a slight increase compared to the previous year. Slovenia (0.6%), Hungary and Bulgaria (0.5% each) are also above EU-28 average, although only slightly. The remaining EU-13 countries have shares below the EU-28 average, with the lowest being Czech Republic (0.1%) and Slovakia (0.1%). Compared to 2015, emigration rates seem stable for all of these countries.

Among the EU-15, emigration rates remain lower than the EU-28 average in Austria (0.2%), Spain, Finland, Italy, Sweden and the UK (0.3% for all). The highest shares can

⁶⁸ See [Table 33](#) for full table.

be seen in Ireland (1.0%) and Luxembourg (0.8%). The remaining countries have very similar emigration rates to EU aggregate level with no significant change from 2015.

Figure 15 Outflow rate of nationals of working age (20-64), by country of citizenship⁶⁹, 2016



NUMBER OF OUTFLOWS OF NATIONALS AS A SHARE OF THE TOTAL NATIONAL POPULATION IN THE COUNTRY, 2015.

THE LATEST FLOW DATA AVAILABLE ARE FROM 2016.

CY, EL, FR AND PT ARE NOT DISPLAYED BECAUSE FIGURES ARE NOT AVAILABLE.

EMIGRATION DATA: PROVISIONAL DATA: BG AND PL. ESTIMATED FIGURES: DE AND PL. BREAK IN TIME SERIES: DE

EU-28 AGGREGATE EXCLUDES CY, EL, FR AND PT.

FIGURES FOR AT, EL, IE, MT, RO, SI AND UK USE AGE DEFINITION 'AGE COMPLETED IN YEARS'.

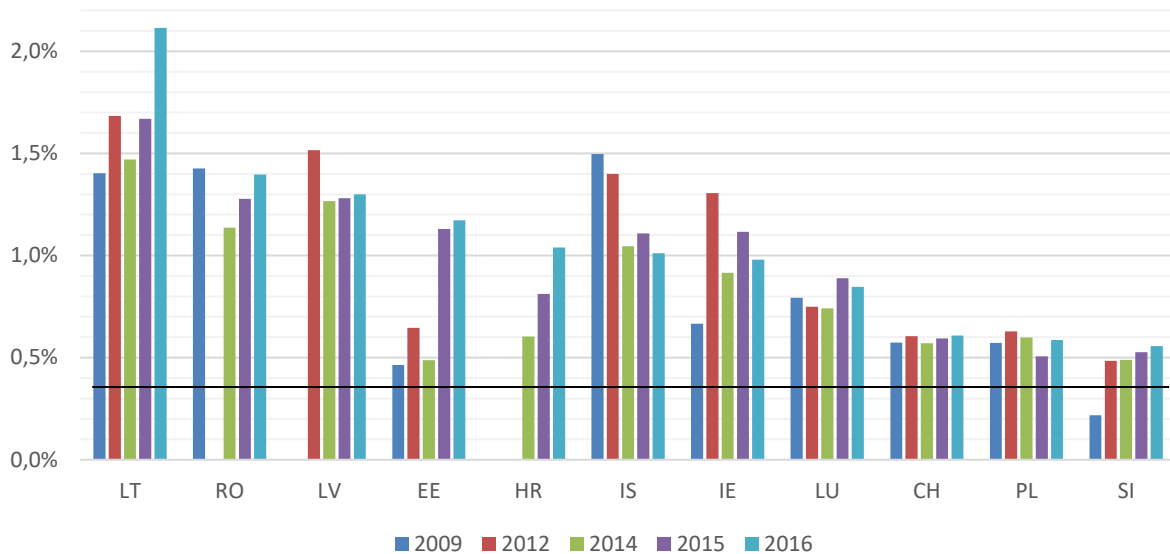
SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ], AND POPULATION DATA [MIGR_POP1CTZ] EXTRACTED ON 3 APRIL 2018 AND 27 MARCH 2018, MILIEU CALCULATIONS.

Since 2009, emigration rates of nationals remain around the EU average (0.4%-0.5%) in Belgium, Denmark and Netherlands. In the UK, Sweden, Spain, Finland and Austria, it is slightly lower around 0.2% to 0.3 %. Among the remaining EU-15, the rates are slightly higher, especially for Ireland (between 0.7% to 1%) and Luxembourg (0.7% to 0.9%) in the same period.

On the other hand, some Member States, mainly among the EU-13, have more significant changes in the emigration rates. Between 2009 and 2016, the emigration rate went up from 0.5% to 1.2% in Estonia and from 1.4% to 2.1% in Lithuania. Data available for Croatia shows a similar trend since 2014 (first year data is available) from 0.6% to 1%. Slovenia has a similar trend with 0.2% in 2009 and 0.6% in 2016.

⁶⁹ For total numbers, see Table 34 in the Annex.

Figure 16 Trend of outflow rate of nationals of working age (20-64) for main countries of origin, by country of origin, 2009-2016



NUMBER OF OUTFLOWS OF NATIONALS AS A SHARE OF THE TOTAL NATIONAL POPULATION IN THE COUNTRY, 2009, 2012, 2014, 2015 AND 2016. THE LATEST FLOW DATA AVAILABLE ARE FROM 2015.

FIGURE SHOWS COUNTRIES WITH OUTFLOW RATES OF 0.5% OR HIGHER IN 2015. THE BLACK LINE REPRESENTS EU-28 AVERAGE.

FOR 2016 FIGURES: EMIGRATION DATA: PROVISIONAL DATA: BG AND PL. ESTIMATED FIGURES: DE AND PL. BREAK IN TIME SERIES: DE

FIGURES FOR IE, RO AND SI USE AGE DEFINITION 'AGE COMPLETED IN YEARS'.

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] EXTRACTED ON 3 APRIL 2018, AND POPULATION DATA [MIGR_POP1CTZ] EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS

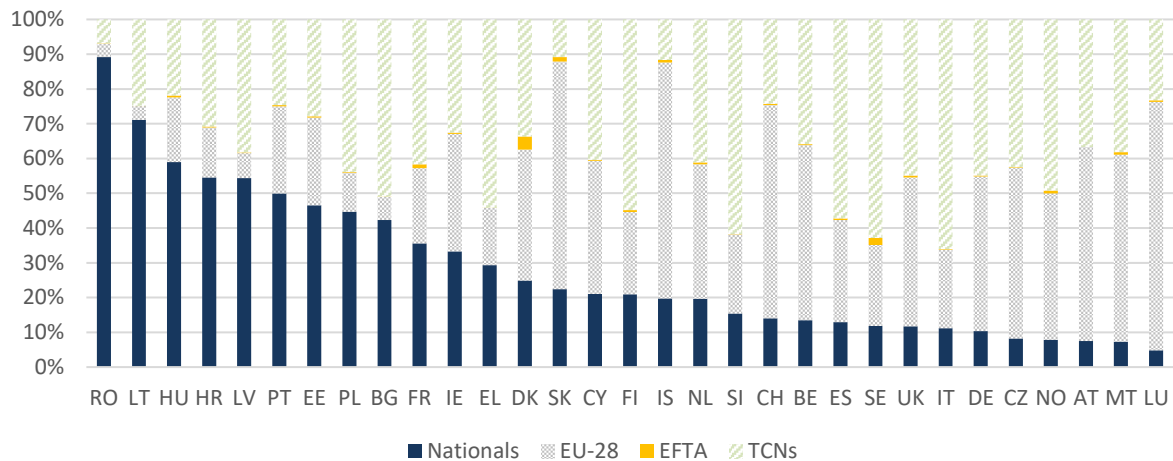
1.2.4. Return mobility

Nationals of EU-28 and EFTA countries returning to their country of origin constitute an important share of inflow movements within the EU/EFTA area. In 2016, the number was around 680,000 for the EU-28 and 21,000 for EFTA regions. This represented 21% of all inflows (nationals, EU-28 movers, EFTA movers and TCNs) at EU-28 level. The share was smaller for EFTA countries, with 13%. Compared to the previous year, inflows of nationals increased by 9% at EU-28 level and decreased by 6% at EFTA level.

In a similar trend to previous years, some of the EU-13 countries have high shares of nationals among the inflows, such as Romania (89%), Lithuania (71%), Hungary (59%), Croatia (55%) and Latvia (54%). This indicates that inflows of other EU-28/EFTA nationals to these countries are still limited. Portugal is the only EU-15 country with a similar share of nationals, at 50%. On the other hand, some of the EU-13 countries have lower shares of inflows of nationals, including Czech Republic (8%), Malta (7%) and Slovenia (15%). In the cases of Czech Republic and Malta, there is a steady decrease in the share of nationals in inflows over the last two years, but it is more due to an increase in the inflows of EU-28 nationals and TCNs than an absolute decrease in the numbers of nationals returning to their country of origin.

Among the EU-15, France (36%), Ireland (33%), Greece (29%) and Denmark (25%) are the only countries with a higher share of nationals within the inflows than the EU average. Among the remaining EU-15, Luxembourg (5%), Austria (7%) and Germany (10%) have the lowest share of incoming nationals.

Figure 17 Composition of inflows of working age (20-64) movers, by group of citizenship, by country of destination, 2016



COMPOSITION OF INFLOWS BY GROUP OF NATIONALITIES IN EACH EU-28/EFTA COUNTRY OF DESTINATION, 2016.

FIGURES RELATE TO FOREIGN EU-28 AND EFTA CITIZENS MOVING TO THE COUNTRY INDICATED ON THE X-AXIS, REGARDLESS OF COUNTRY OF PREVIOUS RESIDENCE. FIGURES MAY INCLUDE EU-28 AND EFTA CITIZENS PREVIOUSLY RESIDING IN THIRD COUNTRIES.

THE LATEST FLOW DATA AVAILABLE ARE FROM 2016.

INFLOW FLAGS

BREAK IN TIME SERIES: DE PROVISIONAL DATA: BG, PL AND SK ESTIMATED: PL, PT

FIGURES FOR IE, EL, MT, AT, RO, SI AND UK USE AGE DEFINITION 'AGE COMPLETED IN YEARS'.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS.

Another useful means of analysis looks at the difference between the nationals who returned to their country of origin and those who moved to another country in the same year. For 2016, as in the previous years, a bigger number of EU-28 nationals left their country of origin than those who returned to it: the ratio between inflows and the nationals leaving is 66%. That means approximately that on two persons who left, there was one returnee.

Not unsurprisingly, the difference between the inflows and outflows of nationals is biggest in the main countries of origin: in Croatia, returnees make 23% compared to the number of nationals leaving the country. The percentage is also low for Latvia (25%), Slovenia (29%), Bulgaria (31%) and Lithuania (34%). On the other hand, the two main countries of origin have more balanced rates for inflows of outflows of nationals (69% for Romanian and 49% for Polish) suggesting that a strong return mobility is accompanying outflows.

 Table 5 Return mobility (inflows of nationals), age group 20-64, 2009-2016 (in thousands)⁷⁰

		2009*	2010**	2011***	2012	2013	2014	2015	2016
EU -28	Total	628	607	596	643	617	641	622	680
	Annual Δ		-3%	-2%	8%	-4%	4%	-3%	9%
EU-13	Total	267	236	239	292	268	265	228	257
	Annual Δ		-12%	1%	22%	-8%	-1%	-14%	13%
EU-15	Total	361	371	357	351	349	376	394	423

⁷⁰ Some of the figures in this table might differ slightly from other parts of the report. This table has been created using data from 2009 to 2016 and in order to obtain the most complete data set possible, both age definitions have been used- whichever provided the most available data.

2018 Annual Report on intra-EU Labour Mobility – Final Report

		2009*	2010**	2011***	2012	2013	2014	2015	2016
	Annual Δ		3%	-4%	-2%	-1%	8%	5%	7%

ANNUAL INFLOWS OF NATIONALS AGED 20-64 YEARS.

FIGURES ABOVE REFER TO INFLOWS OF NATIONALS FROM EU MEMBER STATES, BUT ALSO FROM THIRD COUNTRIES.

*EU 28 TOTAL MISSING BE, BG AND LV, EU 13 TOTAL MISSING BG AND LV, EU 15 TOTAL MISSING BE

** EU 13 AND EU 28 TOTAL MISSING BG AND LV

** EU 13 AND EU 28 TOTAL MISSING BG

THE LATEST FLOW DATA AVAILABLE ARE FROM 2016

SOURCE : EUROSTAT MIGRATION STATISTICS (MIGR_IMM1CTZ).

FIGURES FOR IE, EL, ES, HR, LT, MT, AT, RO, SI, SE AND UK USE AGE DEFINITION 'AGE COMPLETED IN YEARS'.

FIGURES FOR LU, SK USE AGE DEFINITION 'AGE COMPLETED IN YEARS' FOR YEARS 2009-2012.

FIGURES FOR BE AGE DEFINITION 'AGE COMPLETED IN YEARS' FOR YEARS 2011 AND 2012.

FIGURES FOR BG USE AGE DEFINITION 'AGE COMPLETED IN YEARS' FOR YEAR 2012.

BREAKS IN SERIES: NL, PL, CY, DE (2009), BE AND HU (2010), EE (2015), DE (2016)

PROVISIONAL DATA: BG AND SK (2013), BG, PL AND SK (2014, 2015, 2016).

ESTIMATED FIGURES: DE AND PT (2015), PT (2016)

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED ON 06 JUNE 2018, MILIEU CALCULATIONS.

2. MOBILITY OF EU WORKERS

This section gives an overview of the mobility of **active EU-28 movers**⁷¹ of working age (20-64 years) in 2017, together with some of the trends of recent years. Unless mentioned otherwise, figures refer to EU-28 movers who live in a different Member State or EFTA country than their citizenship and who were *born outside the country of residence*. The section furthermore looks at economic integration of movers compared to nationals (employment rate, sectors, occupations, etc.) as well as examining the gender dimension of several key indicators.

2.1. Recent developments

Key findings

- 2017 saw the **smallest annual growth in stocks of active EU-28 movers of working age since 2010**; the number increased by 3% on 2016 to 9.5 million (compared to a 7% increase between 2015 and 2016)⁷². The total number of active EU-28 movers born outside the country of residence amounted to 8.9 million and had also grown by 3%.
- The overall **slow-down in the growth rate of stocks of active movers was reflected in main countries of residence** (DE, UK, FR, ES, IT, CH) where the year-on-year increases on 2016 were smaller than in the year before.
- Malta saw by far the largest increase in stocks of active EU-28 movers (+54%). Other countries that saw comparatively large increases in stocks of active movers were Austria, Sweden, the Netherlands, Belgium, Slovakia and Portugal.
- An exceptionally large decrease in the stock of active movers could be seen in Hungary (-30%), following decreases in both 2015 and 2016. A fairly large decrease in stocks could also be seen in Greece (-11%), where numbers also decreased in 2015 and 2016.
- Most EU-28 movers of working age were not born in their current country of residence. **The shares of those who were born in the country are rather negligible at EU-28 level (6%) and in most countries of residence.** Exceptions are Switzerland, Germany, Belgium, Luxembourg, the Netherlands and Greece, which have above-EU average shares of non-national EU citizens born in the country.
- The **highest shares of new active movers** (i.e. those who arrived between 2015 and 2017) **can be seen in Ireland, the UK, Switzerland, Luxembourg, Austria and Norway** where they make up **more than 10%** (the EU average) of all movers. This reflects the increasing importance of these countries as destination countries of mobile workers.

2.1.1. Stocks of active EU-28 movers in 2017 and changes on 2016

In 2017, the total number of active (employed and unemployed) EU-28 movers⁷³ in the EU-28, including those born in the country of residence, increased by 3% to 9.5 million. This is the smallest growth since 2010, as can be seen in [Figure 18](#).

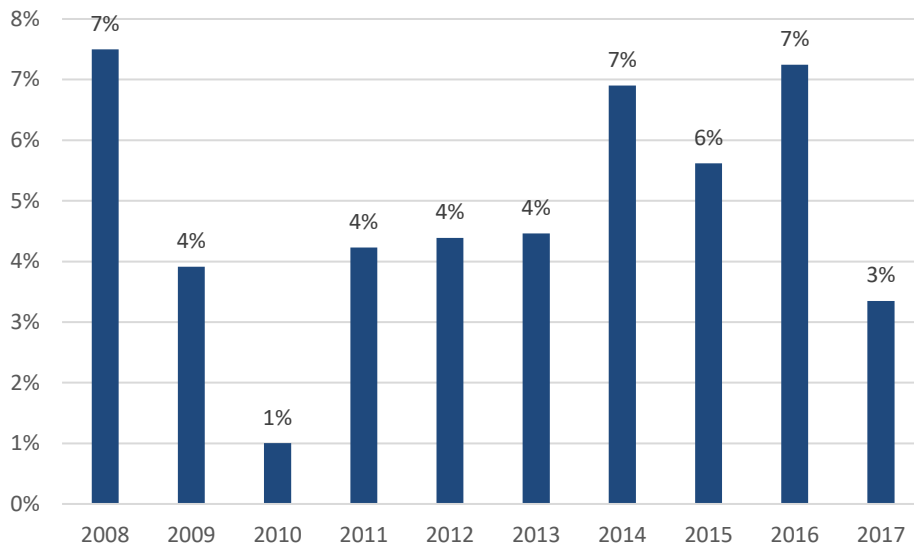
⁷¹ 'active' includes employed (including self-employed) and job-seeking individuals

⁷² It is likely that the small increase is also due to methodological specificities of the EU-LFS (namely, that it does not capture very new movers adequately); because also the increase in the total working-age population was only 3% according to EU-LFS figures, while it was 5% according to Eurostat population data. Therefore, this figure may be a slight under-estimation of the actual increase.

⁷³ Includes movers born in the country of residence.

The total number of active EU-28 movers residing in an EFTA country in 2017 was just over 1 million, showing a marginal increase of 1% compared to 2016. The total number of EU-28 movers living in the EU-28 or EFTA in 2017 was therefore, 10.6 million. The number of movers from the EFTA countries to EU-28 and other EFTA countries was 142,000, an increase of 13% on 2016.

Figure 18 Increase in number of active EU-28 movers (20-64 years), in % compared to previous year, 2008-2017 (figures include EU-28 movers born in the country of residence)



SOURCE: EUROSTAT EU-LFS 2018, 'POPULATION BY SEX, AGE, CITIZENSHIP AND LABOUR STATUS (LFSA_PGANS)', AVAILABLE AT: [HTTP://EC.EUROPA.EU/EUROSTAT/WEB/LFS/DATA/DATABASE](http://ec.europa.eu/eurostat/web/lfs/data/database), EXTRACTED ON 04/06/2018.

The **total number of active EU-28 movers born outside the country of residence** was 8.9 million in 2017. Their number also increased by 3% on 2016. The main countries of residence remained unchanged from 2016 (see [Figure 64](#) and [Figure 65](#) in Annex): the UK and Germany each hosted around one quarter of all active movers each; Spain, Italy and Switzerland hosted around 10% each and France 7%. Together, these six countries hosted almost 90% of all active movers throughout the EU.

The number of active EFTA movers (EFTA citizens residing in another EU-28 MS or EFTA country) amounted to 126,000 in 2017, with the main countries of residence being Germany, the UK, France, Sweden, Denmark – each hosting between 14,000 and 26,000 EFTA movers.

The **year-on-year increases on 2016 in the main countries of residence of EU-28 movers were smaller than in the year before** ([Figure 19](#) below), **reflecting the overall slow-down in the growth rate of active movers**. Germany only saw an increase of 2% (compared to 11% in 2016), the UK an increase of 5% (compared to +12% in 2016) and France an increase of 1% (compared to +9% in 2016). Italy, Spain and Switzerland saw minor changes in the stocks of active movers compared to 2016 (-1%, +1% and -2%, respectively)⁷⁴. In all countries except the UK, these increases correspond more or less to the increases in stocks of all (including inactive) movers ([Figure 1](#) in section 2.1). In the UK however, the increase in overall stocks was quite a bit larger (+14%) than the increase in the stock of active movers (+5%). This is despite the fact that the activity rate among new movers (those who moved to the UK between 2015 and 2017) was higher than in most other main countries of residence (except Switzerland). It

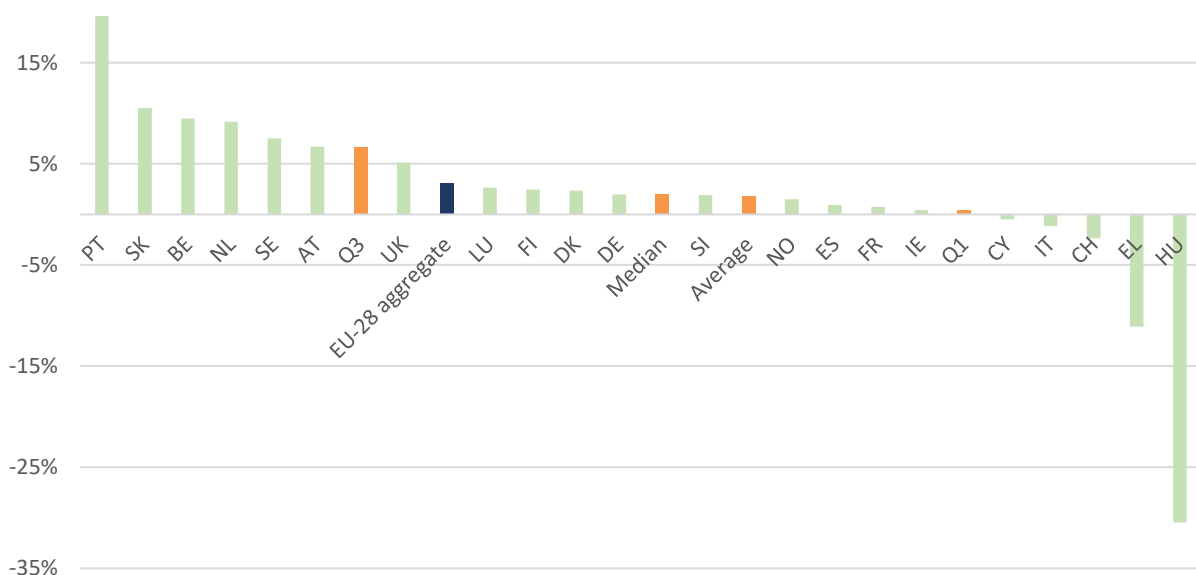
⁷⁴ The figures of annual changes for 2015 and 2016 refer to all movers (including those born in the country) and were revised in 2018 due to updates from Eurostat – however, annual changes of movers including those born in the country are in the same range as that of movers excluding those born in the country.

is thus possible that the comparatively low increase in stocks of movers is due to an outflow of active movers in the last years, or to a transit of previously active movers into inactivity.

The largest year-on-year increase could be seen in Malta (+54%) which is an outlier compared to the other countries' year-on-year changes⁷⁵. The scale of this increase corresponds to a very large increase in the overall stock of movers (+120%, see **Figure 1**). This is a change to the previous year, where Malta saw a decrease in stocks and the year before, where it only saw a small increase. The quartile of the 21 Member States and EFTA countries for which reliable data was available⁷⁶ with the largest increases saw an increase in stocks of active movers of between 7% and 20%. These were Austria (+7%), Sweden (+8%), the Netherlands (+9%), Belgium (+9%), Slovakia (+11%) and Portugal (+20%). In Portugal and Slovakia, this increase presents a turn, following decreases in the previous two years (2015 and 2016); also in Sweden, annual changes had previously been negative or at 0%; in Austria, Belgium and the Netherlands, the increase is roughly in line with changes in the previous two years.⁷⁷

An exceptionally large decrease in the stock of active movers could be seen in Hungary (-30%). This follows smaller decreases in 2015 (-10%) and in 2016 (-5%)⁷⁸. A fairly large decrease in stocks could also be seen in Greece (-11%), also following decreases in 2015 (-22%) and 2016 (-9%).

Figure 19 Annual changes 2016-2017 in stocks of active EU-28 movers (20-64 years), by country of residence



GRAPH EXCLUDES THE FOLLOWING COUNTRIES : MT (BECAUSE IT IS AN OUTLIER); CZ, EE AND PL (LOW RELIABILITY AND/OR OUTLIERS); BG, HR, IS, LT, LV, RO (BELOW RELIABILITY).

Q1 IS THE FIRST QUARTER OF THE DISTRIBUTION = THE 25% OF SELECTED COUNTRIES WITH THE **LOWEST ANNUAL CHANGES**.

MEDIAN = 50% OF SELECTED COUNTRIES HAVE VALUES BELOW AND 50% HAVE VALUES ABOVE THE MEDIAN.

AVERAGE = AVERAGE ACROSS CHANGES IN THE SELECTED COUNTRIES ; DIFFERS SLIGHTLY FROM EU-28 AGGREGATE CHANGE, BECAUSE THE LATTER IS HEAVILY INFLUENCED BY CHANGES IN THE LARGE COUNTRIES OF RESIDENCE.

⁷⁵ Large increases could also be seen in Poland (+60%), in Estonia (+41%) and in the Czech Republic (+25%) – however, figures are of low reliability. – furthermore, the changes in the stocks of all movers (including inactive) based on migration statistics are much lower, thus these results need to be interpreted with caution.

⁷⁶ This excludes MT (because it is an outlier); CZ, EE and PL (low reliability); BG, HR, IS, LT, LV, RO (below reliability).

⁷⁷ The figures of annual changes for 2015 and 2016 refer to all movers (including those born in the country) and were revised in 2018 due to updates from Eurostat – however, annual changes of movers including those born in the country are in the same range as that of movers excluding those born in the country.

⁷⁸ The figures of annual changes for 2015 and 2016 refer to all movers (including those born in the country) and were revised in 2018 due to updates from Eurostat – however, annual changes of movers including those born in the country are in the same range as that of movers excluding those born in the country.

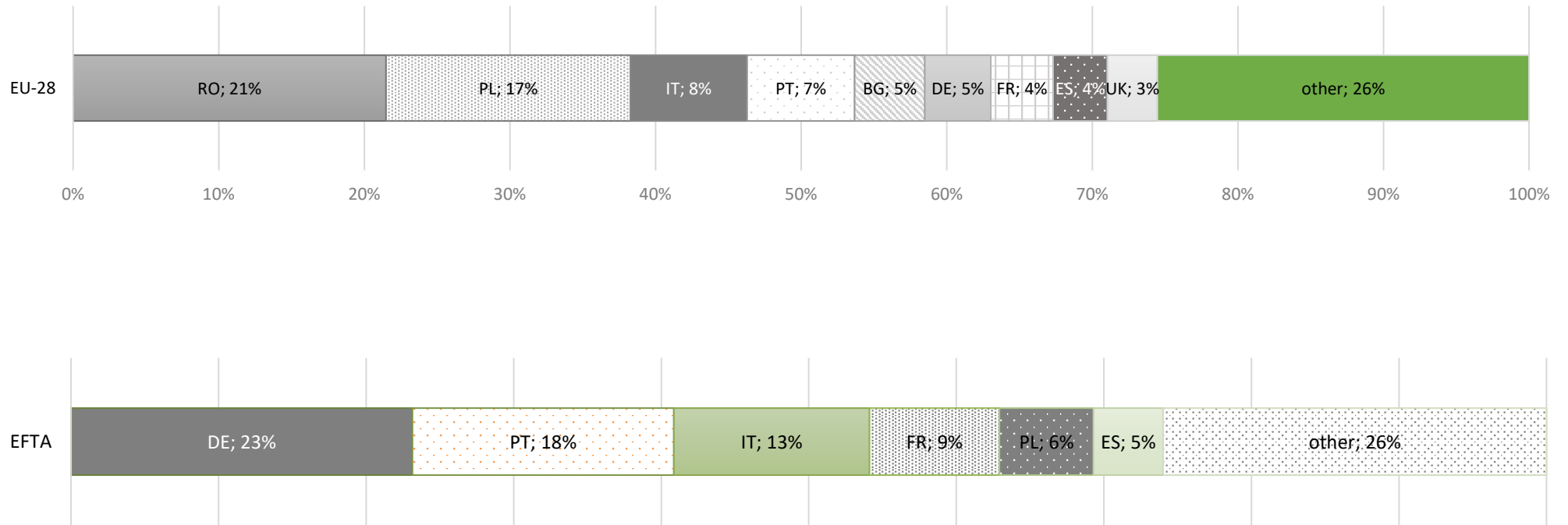
Q3 IS THE THIRD QUARTER OF THE DISTRIBUTION = THE 25% OF SELECTED COUNTRIES WITH THE **HIGHEST ANNUAL CHANGES**.

FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

2018 Annual Report on intra-EU Labour Mobility – Interim Report

Figure 20 Stocks of active EU-28 movers (20-64 years) at EU and EFTA level, main nationalities, 2017



FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

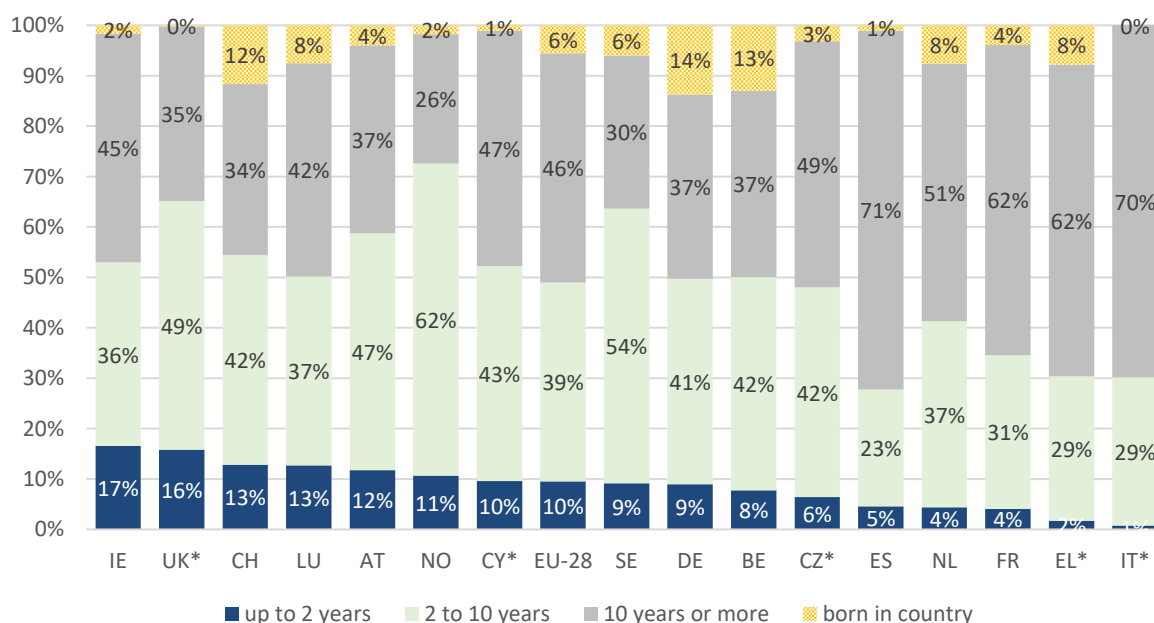
2.1.2. Length of stay

The number of years that movers have been residing in another EU-28 country gives an indication of both the composition of the group of movers (which is relevant, for example, when looking at integration), but also of recent developments of mobility into and out of that country. This section on mobility of EU workers focuses on *movers who were born outside of their country of residence*. As can be seen, **the shares of those who were born in the country are rather negligible at EU-28 level (6%) and in most countries of residence**. Exceptions are Switzerland, Germany, Belgium, Luxembourg, the Netherlands and Greece, which have above-EU average shares of non-national EU citizens born in the country. Whereas these citizens are largely aged between 25 and 54 years, some are younger and may be ‘second generation’ movers. According to 2014 data, the share of young (15-24 years) citizens born in the country but having another EU nationality is particularly high in Luxembourg (57%), but also in Greece (38%) and Switzerland (34%)⁷⁹. Nevertheless, one can assume that persons born in the country integrate in a very different way in the host society, as, for example, they are exposed to the host country language from a very young age.

Furthermore, some countries have clearly lost their attractiveness as destination countries over the past ten years (as mentioned in previous reports) – in Italy, Greece, France and Spain, over 60% of movers have lived there for over ten years. On the other hand, in countries like the UK, Sweden and Norway, the majority of movers arrived only within the past ten years.

The distribution also shows how many movers arrived in 2015 to 2017 (*new movers*), compared to those who arrived before. One can see that these shares are highest in Ireland and the UK, followed by Switzerland, Luxembourg, Austria and Norway, where they make up over 10%, which is the EU average.

Figure 21 Years of residence of active EU-28 movers (20-64 years), by country of residence, 2017



* THE FOLLOWING CATEGORIES FOR THE FOLLOWING COUNTRIES ARE NOT PRESENTED IN THE GRAPH BECAUSE THEIR VALUES ARE TOO SMALL TO BE PUBLISHED: IT - 'BORN IN COUNTRY' ; EL - UP TO 2 YEARS// **LOW RELIABILITY FOR UP TO 2 YEARS: IT; LOW RELIABILITY FOR BORN IN COUNTRY: CY, CZ, EL, UK.**

BG, EK, EE, FI, HR, HU, LT, LV, MT, PL, PT, RO, SL, SK, IS ARE NOT PRESENTED IN THE GRAPH BECAUSE FIGURES FOR TWO OR MORE CATEGORIES ARE TOO LOW TO BE PUBLISHED.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

⁷⁹ Source: EU-LFS 2014 AHM

2.2. Economic integration

A crucial aspect of mobility is how movers perform on the labour market in the country of destination, and if and how they affect the labour market. This is relevant both from the perspective of the movers and from the perspective of the country of destination: the motive to move for around 50% of intra-EU movers is work-related (see section 3.3. below), meaning the half of citizens either move to seek employment or to take up an offer of employment. This decision can be linked to professional or personal aspirations, such as improving one's career by taking up higher-skilled jobs, earning a better salary, or simply finding a job at all. Movers also affect the labour market of their country of destination, by bringing certain skills, filling labour shortages, or increasing competition for certain jobs. Their labour status also impacts the overall economy of the destination country, namely because active movers pay taxes and become entitled to social benefits.

This sub-section contributes to this general analysis by providing a statistical overview of the situation of EU-28 movers⁸⁰ in terms of employment and unemployment compared to nationals, the sectors and occupations in which they work, and whether they carry out work corresponding to their skills.

Key findings

Labour market status of EU-28 movers compared to nationals in the country of residence

- EU-28 movers' **activity rate** slightly increased at EU level (+0.5 pps) as did that of nationals (+0.5 pps) compared to 2016 and **EU-28 movers were more likely to be active** (82% at EU level) than nationals (78%).
- At EU level, the **employment rate of EU-28 movers**, at 76%, **was 3 pps higher than that of nationals. Employment rates of EU-28 movers were higher than those of nationals in over half of the destination countries.** Of the main destination countries, the UK and Italy had notably higher employment rates among EU-28 movers than nationals.⁸¹
- Compared to 2016, the difference in employment rates at EU level among movers and nationals remained the same (+3 pps for movers): employment rates for both groups increased by around 1 pp.
- In 2017, **EU-28 movers also had a slightly higher unemployment rate** (8%) than nationals (7%).
- The improvement of the employment situation of both EU-28 movers and nationals over the past years continued in 2017, with employment rates further increasing (by +1 pp) and unemployment rates further decreasing for both groups (by -1 pp).

Labour market status of EU-28 movers compared to nationals in the country of origin

- Movers have, at EU level, a **higher employment rate (76%) than the nationals who remain in their countries of origin (73%)**. In most of the main national groups of movers, the employment rates among movers are higher than that of nationals living in the country of origin. The positive difference ranges from +14 pps among Italians to +2 pps among Romanians.
- **At EU level**, movers are slightly **more likely to be unemployed than those who remain in their home country**. For example, among Bulgarians and Romanians, the unemployment rates of movers are a lot higher than that of nationals (+9 and +8 pps respectively), and slightly higher among British, German and Polish citizens. In most Member States, however, movers are less likely to be unemployed than those who remained at home: this includes the Spanish, Italian, Portuguese and French.

⁸⁰ Unless mentioned otherwise, figures in this section refer to EU-28 movers excluding those born in the country of residence.

⁸¹ Due to relatively low employment among nationals in several very large countries (e.g. IT, ES, FR) and high employment in the UK (the country with the largest number of EU-28 movers) this 'average' is skewed towards higher employment among EU-28 movers.

Labour market status of new movers⁸²

- **New movers perform as well on the labour market** as movers who have resided in the country for longer: at EU level, new movers had almost the same activity rate (81%) as all movers (82%), a slightly lower employment rate (75% compared to 76% among all movers) and the same unemployment rate (8%). However, in Italy and Spain in particular, new movers have extremely high unemployment rates, and France and Italy have high shares of inactive movers.

Sectors and occupations of economic activity

- The two most important **sectors of economic activity** among both movers and nationals are manufacturing and wholesale and retail trade. EU-28 movers work more frequently than nationals in construction (11% vs. 5%) and in accommodation and food services (10% vs. 6%) and less frequently in human health and social work (8% vs. 14%)⁸³. Compared to 2016, the total number of movers increased most strongly in transportation and storage (+12%) and health and social work (+8%) and decreased the most in the arts (-7%), water supply and sewerage (-6%) and activities of households as employers (-6%)⁸⁴.
- Looking at **occupations**, the largest share of movers (48%) can be found in the second lowest skill level group⁸⁵ out of four, which encompasses several occupations, namely clerks, services and sales, craft and trades, plant and machine operators and skilled agricultural workers. One fifth work in elementary occupations (Skill level 1) and another fifth work in high-skilled occupations, such as legislators, senior officials, managers and professionals; 10% work as technicians and associate professionals (skill level 3). As in previous years, compared to nationals, movers are highly over-represented in elementary occupations (20% vs. 8%) and under-represented especially as technicians and associate professionals (10% vs. 17%). Compared to 2016, the occupational groups gaining the most mobile workers in total numbers are plant and machine operators (+8%) as well as legislators, senior officials and managers (+7%), followed by clerks, craft and related trade workers (+6% each).
- Figures indicate that **new movers work to a slightly larger extent than movers in general in high-skilled occupations on the one hand and elementary occupations on the other**.
- In 2017, **13% of EU-28 movers in employment were self-employed, of which the large majority was self-employed without employees (10%)**.

Gender differences in economic status and activity

- In 2017, **male movers' activity and employment rates were each 15 pps higher than that of female movers** (almost the same difference as in 2016). The **difference in the unemployment rate however was only -2pps for male movers**.
- Looking at occupations, **female movers work much more frequently in service and sales** as well as in **elementary occupations** than male movers. The gender difference in elementary occupations is particularly pronounced in EU-15 countries of residence and much less in EU-13 countries. On the other hand, **male movers work to a greater extent in craft and related trade occupations**. Interestingly, there is almost **no gender gap in the high-skilled occupations**.

Overqualification and obstacles to access adequate jobs

- At EU-level, **around 30% of EU-28 movers⁸⁶ feel overqualified** for their job. However, the **perception of over-qualification is lower among those who have lived in the country for a longer amount of time**. This is most likely linked to the fact that **lack of language skills are the main obstacles to finding a suitable job** – and that language skills tend to increase with a person's length of stay in the host country. Indeed, the importance of lack of language skills as a barrier to accessing a suitable job decreases compared to other barriers with more years of residence in the host country. It can also be linked to the fact more recent movers are more likely to have obtained tertiary education than movers who came longer ago.

Cross-border workers

- In 2017, the **total number of cross-border workers**⁸⁷ residing in one EU Member State and working in another one was 1,443,000, a **4% increase on 2016**. Additionally, around 450,000 workers were residing in an EU Member State and working in an EFTA country; 11,000 were cross-border workers between two EFTA countries.
- The **main countries of residence of cross-border workers in absolute terms were France, Germany and Poland**.
- The share of employed EU-28 movers from all employed nationals of the origin country was over five times higher than that of cross-border workers.
- Between 2016 and 2017, the **number of cross-border workers increased most strongly among workers living in Bulgaria, Austria, Lithuania, Portugal, the Czech Republic and Denmark**.
- The number of cross-border workers **decreased the most in Estonia** (-18%), followed by **Hungary, Italy, Slovakia** and **the UK** (between -6% and -7% each). At EU level, two thirds of cross-border workers working in another EU Member State or EFTA country were male (69%) and one third was female (31%). Slovakia and France are the only countries with similar numbers of cross-border workers and EU-28 movers among their nationals.

2.2.1. Activity status

At the EU-28 aggregate level, as well as in most countries of destination, **EU-28 movers were more likely to be active (82% at EU level) than nationals (78%)**. **Figure 22** shows the activity rates among nationals and EU-28 movers for the EU-28 and EFTA countries of residence for which figures were reliable. EU-28 movers are shown to be more active in many Member States, ranging from a very high positive difference in their activity rate (+9 pps) in Luxembourg to a minor positive difference (+1 pps) in Greece.

Only in Cyprus, the Netherlands, Sweden, France and Germany was the activity rate of EU-28 movers lower than that of nationals. In all those countries except Sweden, movers' activity rates were below the EU average.

EU-28 movers' activity rate slightly increased at EU level (+0.5 pps) as did that of nationals (+0.5 pps), compared to 2016. In the countries for which reliable data is available⁸⁸, movers' activity rates changed between -4 pps (Slovenia) and +3pps (Portugal).

⁸² New movers are those who moved within the previous two years, so between 2015 and 2017.

⁸³ Although the share of movers is lower than in other occupations when compared to nationals in the host country, mobility might still create shortages in that sector (as pointed out in the introduction to section 3), because the share of movers might be relatively high compared to nationals working in that occupation in the country of origin (esp. in certain regions, as also mentioned below).

⁸⁴ A comparison of occupations carried out by EU-28 movers between 2011 and 2017 can be found in section 3.

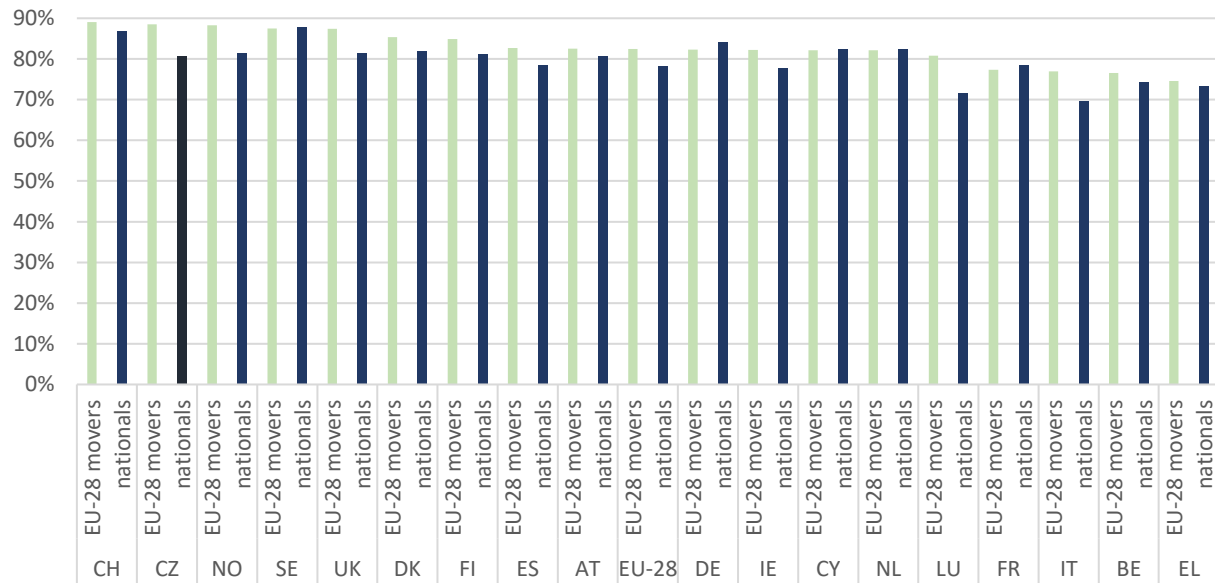
⁸⁵ Skill level group 2 correspond to ISCED levels 3-4 and requires completion of secondary education, see ILO (2012) 'International Standard Classification of Occupations. Structure, group definitions and correspondence tables', cf.p.12, available at: http://www.ilo.org/wcmsp5/groups/public/@dqreports/@dcomm/@publ/documents/publication/wcms_172572.pdf

⁸⁶ Includes movers born in the country.

⁸⁷ This includes employed EU-28 and EFTA citizens aged 20-64 years.

⁸⁸ Excludes: BG, CZ, EE, FI, HR, HU, LT, LV, MT, PL, SK, IS. Figures of employed or unemployed movers in these countries are either below reliability or of low reliability.

Figure 22 Activity rates of EU-28 movers and of nationals (20-64 years), by country of residence, 2017



LOW RELIABILITY FOR FIGURES FOR EU-28 MOVERS: FI

FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

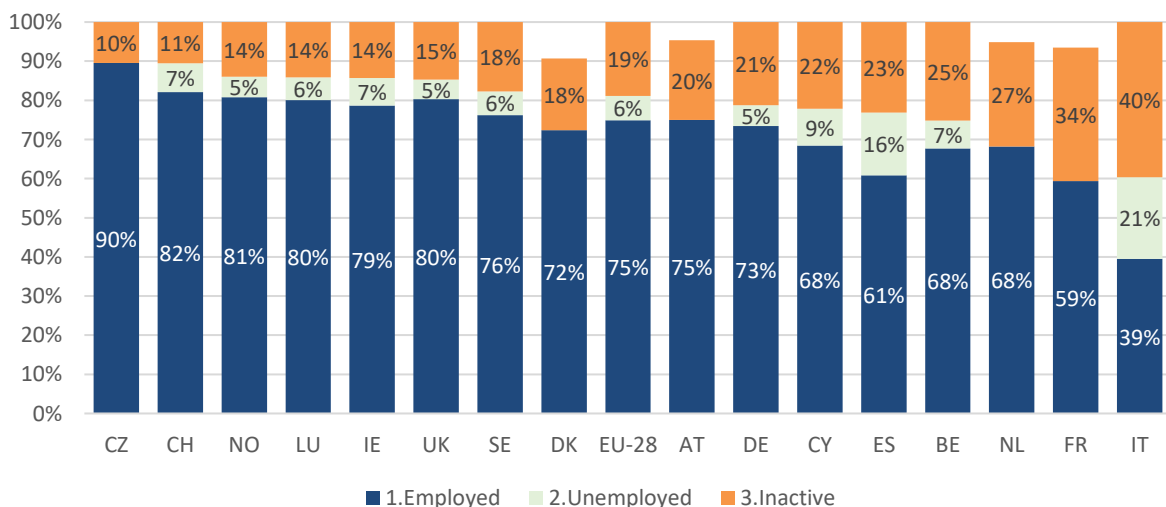
SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Activity status of new movers

At EU level, **81% of the new movers were economically active** and 19% were inactive in 2017. Their **employment rate was 75% at EU level and the unemployment rate 8%** - very **similar to those of all movers**. However, there were large differences between the destination countries. In Italy and Spain in particular, new movers have extremely high unemployment rates and comparatively low employment rates. Furthermore, in Italy, the proportion of inactive new movers at 40% is extremely high – almost double the EU average.

France also shows low employment among new movers, but this is mainly due to a high share of inactive movers (34%).

Figure 23 Activity status of new EU-28 movers (20-64 years), by country of residence, 2017



* THE SHARES OF UNEMPLOYED FOR THE FOLLOWING COUNTRIES ARE NOT PRESENTED IN THE GRAPH BECAUSE THEIR VALUES ARE TOO SMALL TO BE PUBLISHED: AT, CZ, DK, FR, NL// LOW RELIABILITY OF SHARE OF UNEMPLOYED: BE, CY, IT, SE; LOW RELIABILITY OF SHARE OF INACTIVE : CY, CZ, DK.

BG, EE, FI, EL, HR, HU, LT, LV, MT, PL, PT, RO, SL, SK ARE NOT PRESENTED IN THE GRAPH BECAUSE FIGURES FOR TWO OR MORE CATEGORIES ARE TOO LOW TO BE PUBLISHED.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

2.2.2. *Employment and unemployment*

... compared to nationals in the country of residence

While EU-28 movers had higher activity rates than nationals in most countries in 2017, this was not the case for employment rates. As shown in **Figure 24**, the **employment rates of EU-28 movers were higher than those of nationals in over half of the destination countries. Of the main destination countries, only the UK and Italy had higher employment rates among EU-28 movers than nationals.** The other main destination countries had almost the same (Spain) or a lower employment rate for EU-28 movers (-1pps in France and Switzerland and -3 pps in Germany). At **EU level, the employment rate of EU-28 movers, at 76%, was 3 pps higher than that of nationals**⁸⁹.

Compared to 2016, **the difference in employment rates at EU level among movers and nationals remained the same (+3 pps for movers)**: employment rates for both groups increased by 1 pp. The main destination countries also did not see major changes in the difference in employment rates between movers and nationals from 2016 to 2017.

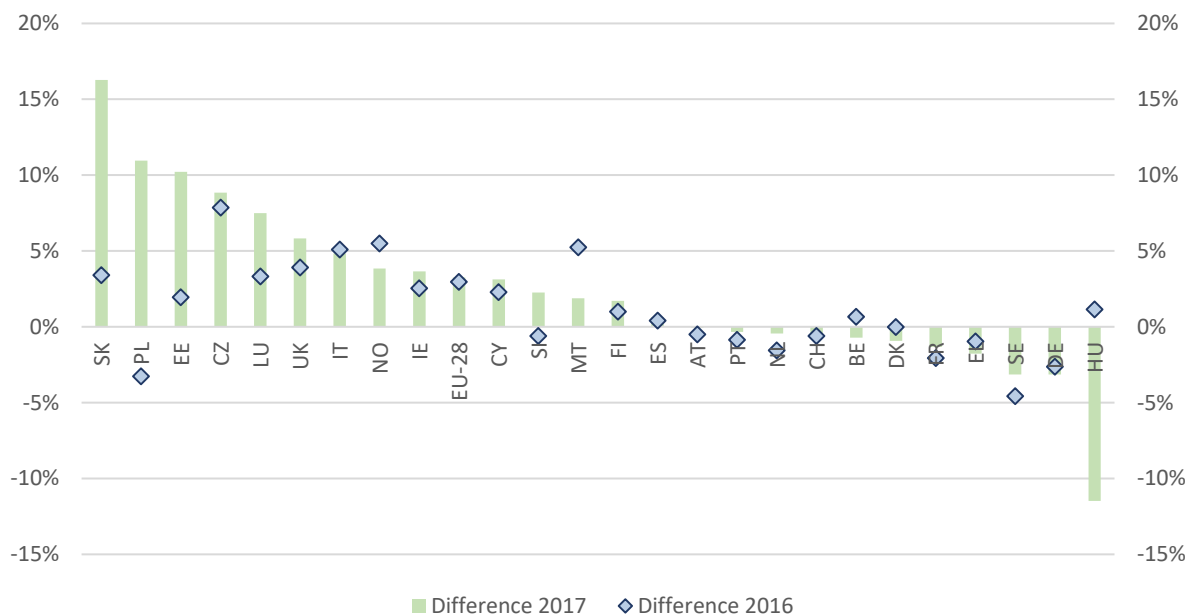
Looking at differences in employment rates of EU-28 movers and of nationals in individual countries in 2017 (green bars in **Figure 24**) shows that in Slovakia, Poland⁹⁰ and Estonia, the difference was largest and movers had an employment rate than was 10pps or more higher than that of nationals. In the Czech Republic, Luxembourg and the UK, movers' employment rate was between 5 pps and 10 pps higher than that of nationals. On the contrary, EU-28 movers in Hungary had a much lower employment rate than nationals (over -10 pps) which is outstanding compared to other countries in which movers' employment rate is lower (the negative difference amounts to a maximum of -3 pps in Sweden and Germany).

Figure 24 also shows how the difference in the employment rates developed since 2016 (blue squares for 2016 values). The largest developments between 2016 and 2017 took place in Slovakia – where movers' activity rate increased a lot – and in Hungary – where movers' activity rate decreased a lot.

⁸⁹ Due to relatively low employment among nationals in several very large countries (e.g. IT, ES, FR) and high employment in the UK (the country with the largest number of EU-28 movers) this 'average' is skewed towards higher employment among EU-28 movers.

⁹⁰ Data for Poland is of low reliability and needs to be interpreted with caution.

Figure 24 Difference in employment rates between EU-28 movers and nationals (20-64 years), by country of residence, 2017 and 2016



THE GRAPH SHOWS THE DIFFERENCE (= EMPLOYMENT RATES OF EU-28 MOVERS MINUS THE EMPLOYMENT RATES OF NATIONALS) FOR 2016 AND 2017.

LOW RELIABILITY: PL (2016 AND 2017 DATA)

FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

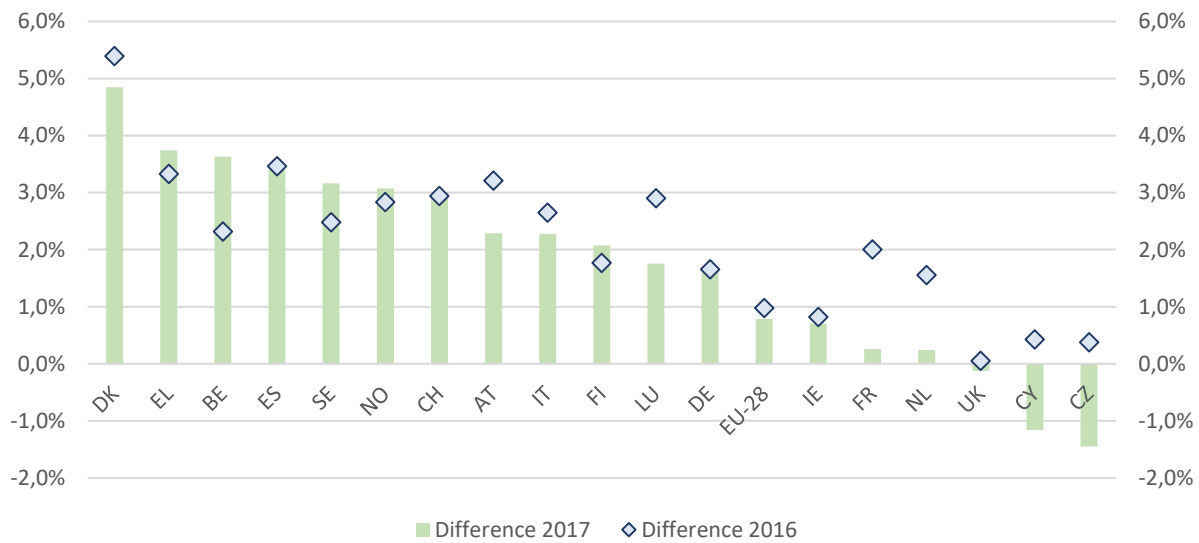
In 2017, **EU-28 movers also had a slightly higher unemployment rate than nationals** (8% compared to 7%) ([Figure 25](#)). Among the large receiving countries, movers' unemployment rate was quite a bit higher than that of nationals in Spain and Switzerland (+3 pps) and in Italy and Germany (+2 pps). In the UK, on the other hand, there was no difference between the unemployment rate of EU-28 movers and that of nationals.

Among the other countries, movers' unemployment rate was a lot higher in Denmark, Greece, Belgium, Sweden and Norway (+3 pps or more). On the other hand, movers had lower unemployment rates than nationals in the Czech Republic and Cyprus.

It is also worth noting that the activity rate is higher amongst movers than nationals at EU-level (+4pps) and in most Member States (see section 2.2.1). Inactive people will not show up in unemployment statistics, so the fact that movers are more active than nationals could also contribute to a higher unemployment rate among movers than nationals.

The difference in unemployment rates between movers and nationals almost went unchanged compared to 2016. In the Czech Republic, Cyprus and France, the difference declined in 2017 by around 2 pps in favour of movers. In the other Member States, the differences changed by maximum +/- 1 pp.

Figure 25 Difference in unemployment rates between EU-28 movers and nationals (20-64 years), by country of residence, 2017 and 2016



LOW RELIABILITY: CZ (2016 AND 2017), FI (2016 AND 2017).

FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

... compared to nationals in country of origin

Together with family reasons, employment is the main reason for EU citizens to move to another country⁹¹ (see section 3.3 for detailed results). Many do so as a strategy to improve their situation on the labour market, be it finding a job at all, finding a better suited job or increasing their salary. Indeed, in 2017, at EU level, **EU-28 movers have a higher employment rate (77%⁹²) than the nationals who remain in their countries of origin (73%)** (Figure 66 in Annex). However, there are large differences between different nationalities regarding the effect mobility has on their employment rates. In most of the main nationality groups of movers (see Figure 20), the employment rates among movers are higher than that of nationals living in the country of origin. The positive difference ranges from +14 pps among Italians, +11 pps among Polish, +6 pps among Spanish and +5 pps among Portuguese, to +4 pps among French and +2 pps among Romanians. Apart from these large nationality groups of movers, positive differences for movers can also be found among Greeks (+19 pps), Croatians (+15 pps), most of the EU-8 citizens, the Baltic citizens, as well as Finnish, Danish, Irish and Austrians.

On the other hand, UK movers are employed to a lesser extent than those UK nationals who stay in the UK (-7 pps); the same goes for Bulgarians (-2 pps). Germans abroad have a similar employment rate to those in the country of origin. Apart from these large nationality groups, a negative difference can also be seen for Czech, Dutch, Swedish, Swiss, Norwegian, Icelandic, Luxemburgish and Cypriot movers.

Interestingly, this positive effect of mobility is only partly reflected in the unemployment rates. **At EU level, movers are even slightly more likely to be unemployed than those who remain in their home country** (Figure 67 in Annex). This, however, is due to the fact that movers also move before they have actually found a job and continue the job search abroad.

⁹¹ Based on replies to the EU-LFS Survey when asked for the main reason for migration; the answer options are: employment and job found before migrating; employment but no job found before migrating; family reasons; international protection or asylum; study; other.

⁹² This value is slightly different from the employment rate of EU-28 movers in the section above, because it includes those movers living in an EFTA country.

Among both Bulgarians and Romanians, the unemployment rate of movers is a lot higher than that of nationals in the country of origin (+9 and +8 pps, respectively), suggesting there is a particularly high number of jobseekers among movers of these nationalities; unemployment in both countries is not particularly high when compared to the EU rate. However, figures also show that unemployment rates of movers are higher than those of non-mobile nationals among British, German and Polish citizens (+3, +2 pps and +1 pps, respectively), if we consider some of the biggest mover countries; this is also the case among Hungarians, Austrians, and Dutch.

In most Member States, however, movers are less likely to be unemployed than those who remained at home. This includes the other large national groups of movers - Spanish, Italian, Portuguese and French – among whom movers see lower unemployment rates (between -2 and -3 pps). The largest benefit can again be seen among Greek movers, who have an unemployment rate 15 pps lower than nationals.

2.2.3. *Employment and unemployment trends*

The improvement of the employment situation of both EU-28 movers and nationals over the past years has continued in 2017, with employment rates further increasing (by +1 pp) and unemployment rates further decreasing for both groups (by -1 pp) (**Figure 26**).

Looking back to 2011, it can be noticed that the improvement of the general economic situation went hand in hand with the improvement of the labour situation of nationals, but of movers in particular: movers saw a slightly larger increase in employment rate compared to nationals between 2011 and 2017 (+6 pps compared to +4 pps) and a slightly larger decrease in their unemployment rate (-4 pps compared to -2 pps among nationals). Between the reference years 2011 to 2017, GDP passed pre-crisis levels in 2013 and grew 2.4% in 2017. The general employment rate passed the pre-crisis high-point in 2016 and grew by 1.6% in 2017.⁹³

The EU-level trend of increasing employment rates among movers is reflected in most of the main countries of residence (**Figure 27**). In 2017 the employment rate of movers increased compared to 2011 in all the main destination countries except Italy, where it decreased by two pps. The highest increase could be seen in Spain (+9 pps), where the difference with the EU-level rate narrowed from 12pps to 9pps.

In the UK and Germany the employment rate for movers has evolved at a similar pace to the EU as a whole (+6 pps since 2011). In 2017, the employment rate for movers was a lot higher than at EU level in the UK (84% compared to 76%) and slightly higher in Germany (78% compared to 76%). Switzerland did not see a large increase (+2pps), which is likely due to the fact that the employment rate was already extremely high in 2011 (82%).

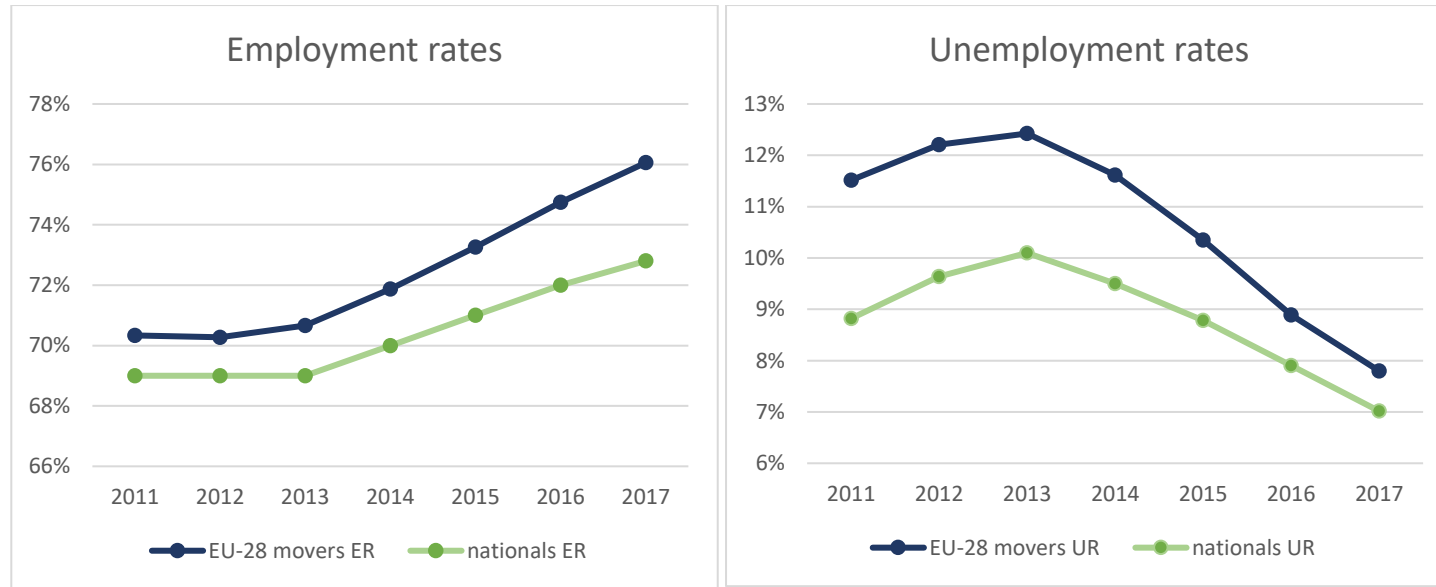
Movers' employment rate in Italy, which was similar to the EU-level rate in 2011, was 9 pps lower in 2017. But the low employment rate is not a phenomenon specific to movers: in 2017 the employment rate of movers was still higher by 5 pps than that of Italian nationals (**Figure 24**).

Another country that did not follow the upwards trend in employment since 2011 is France. While there is no clear trend since 2011, the overall increase is only 1 pp, and in 2017, movers' employment rate was 5 pps below the EU rate. In France, contrary to Italy, the employment rate of movers is lower than that of nationals.

Apart from Italy and France, the employment rate increased more among movers than among nationals between 2011 and 2017. In Italy, movers' employment rate decreased, whereas that of nationals increased by 2 pps. Nevertheless, as shown above, movers' employment rate was still higher than that of nationals in 2017. In France, neither the employment rate of movers nor that of nationals increased a lot (+1 pp. and +2 pps respectively). In Spain, on the contrary, movers' employment rate grew by 9 pps, while that of nationals grew only by 3 pps.

⁹³ European Commission (2018) *Employment and Social Developments in Europe: Annual Review 2018*

Figure 26 Employment and unemployment rates of EU-28 movers and nationals of working age (20-64), EU-28 aggregate, 2011-2017

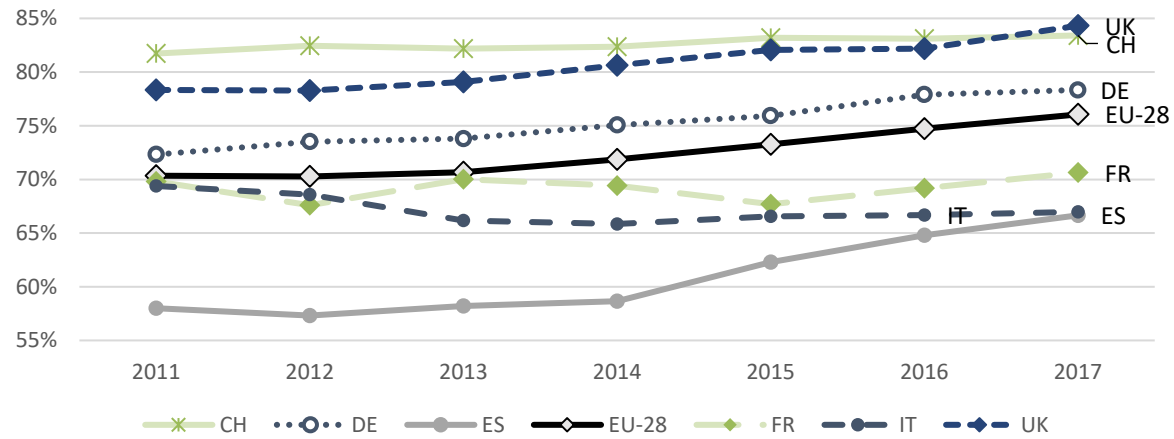


DUE TO RELATIVELY LOW EMPLOYMENT AMONG NATIONALS IN SEVERAL VERY LARGE COUNTRIES (E.G. IT, ES, FR) AND HIGH EMPLOYMENT IN THE UK (THE COUNTRY WITH THE LARGEST NUMBER OF EU-28 MOVERS) THE EU AVERAGE IS SKEWED TOWARDS HIGHER EMPLOYMENT AMONG EU-28 MOVERS.

FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Figure 27 Employment rates of EU-28 movers (20-64 years), EU-28 aggregate and in main countries of residence, 2011-2017



DUE TO RELATIVELY LOW EMPLOYMENT AMONG NATIONALS IN SEVERAL VERY LARGE COUNTRIES (E.G. IT, ES, FR) AND HIGH EMPLOYMENT IN THE UK (THE COUNTRY WITH THE LARGEST NUMBER OF EU-28 MOVERS) THE EU AVERAGE IS SKEWED TOWARDS HIGHER EMPLOYMENT AMONG EU-28 MOVERS.

FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

2.2.4. *Sectors of activity and occupation*

EU-28 movers work in similar sectors to nationals, except for a few differences: EU-28 movers work more frequently than nationals in construction (11% vs. 5%) and in accommodation and food services (10% vs. 6%) and less frequently in human health and social work (8% vs. 14%)⁹⁴. The two most important sectors for both nationals and EU-28 movers are manufacturing and wholesale and retail trade which employ between 12% and 15% each in both groups.

Movers from the EFTA countries, on the other hand, are more likely than nationals and EU-28 movers to work as professionals, in the education sector, in information and communication and in financial and insurance activities. The 'professionals' sector is also one where a comparatively large share of EU-28 movers living in EFTA countries work.

Compared to 2016, the distribution of EU-28 movers across the different sectors remained the same. The total number of movers increased by most in the following sectors:

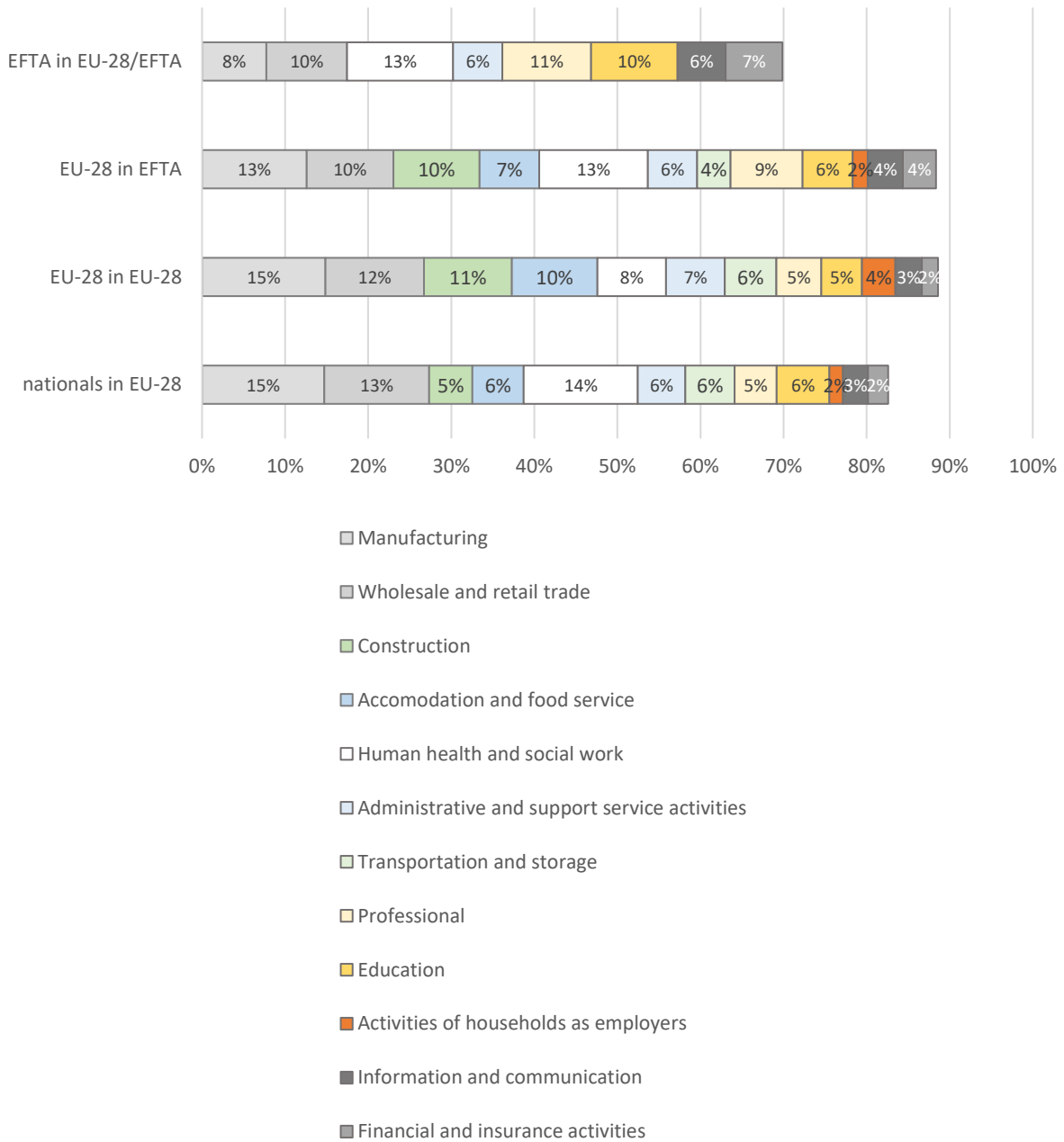
- transportation and storage (+12%) where overall 6% of EU-28 movers were employed in 2017;
- health and social work (+8%) where 8% of EU-28 movers were employed in 2017;
- administrative and support service activities (+7%) where 7% of movers were employed;
- construction (+6%) where 11% of movers were employed in 2017.

The total number decreased the most in:

- the arts (-7%) and water supply and sewerage (-6%) where only a 1% of movers are employed;
- activities of households as employers (-6%) where 4% of movers were employed in 2017.

⁹⁴ Although the share of movers is lower than in other occupations when compared to nationals in the host country, mobility might still create shortages in that sector (as pointed out in the introduction to section 3), because the share of movers might be relatively high compared to nationals working in that occupation in the country of origin (esp. in certain regions, as also mentioned below).

Figure 28 EU-28 movers, EFTA movers and nationals (20-64 years), by sector of employment, 2017 (bars from left to right correspond to sectors in legend from top to bottom)



FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

THE GRAPH DOES NOT SHOW THE REMAINING VALUES TO 100% DUE TO LOW RELIABILITY; IT THEREFORE DOES NOT SHOW THE FOLLOWING CATEGORIES: ACTIVITIES OF EXTRATERRITORIAL ORGANISATIONS AND BODIES, AGRICULTURE, ARTS, NO ANSWER, OTHER, OTHER SERVICE ACTIVITIES, PUBLIC ADMINISTRATION AND DEFENSE, REAL ESTATE ACTIVITIES, WATER SUPPLY AND SEWERAGE

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Across the EU, there is quite an **even distribution of movers across the different occupational skill levels**. The largest share of movers (48%) can be found in skill level group 2 which requires completion of secondary education and encompasses several occupations, namely clerks, services and sales, craft and trades, plant and machine operators and skilled agricultural workers. One fifth work in elementary occupations (with the low skill level) and another fifth work in high-skilled occupations, such as legislators, senior officials, managers and professionals; 10% work as technicians and associate professionals.

Occupations that are quite rare compared to others among movers are managerial occupations, clerks, plant and machine operators and skilled agricultural work.

Compared to nationals, movers are highly over-represented in elementary occupations (20% vs. 8%) and under-represented especially as technicians and associate professionals (10% vs. 17%).

Furthermore, there is a regional difference regarding **movers working in high-skilled professions** (skill level 4⁹⁵): they are **more frequently found in the EFTA countries** (37% of female and male movers) and **in the EU-13 countries** (30% of male movers and 26% of female movers) than in the EU-15 countries (22% of female and male movers).

Compared to 2016, the occupational groups gaining the most mobile workers in total numbers are plant and machine operators (+8%) as well as legislators, senior officials and managers (+7%), followed by clerks, craft and related trade workers (+6% each), service and sales workers (+5%), professionals, technicians and associated professionals (+3% each), skilled agricultural workers (+2%) and elementary occupations (+1%). Nevertheless, the distribution across occupations at EU level has remained almost unchanged between 2016 and 2017.

Occupations of new movers

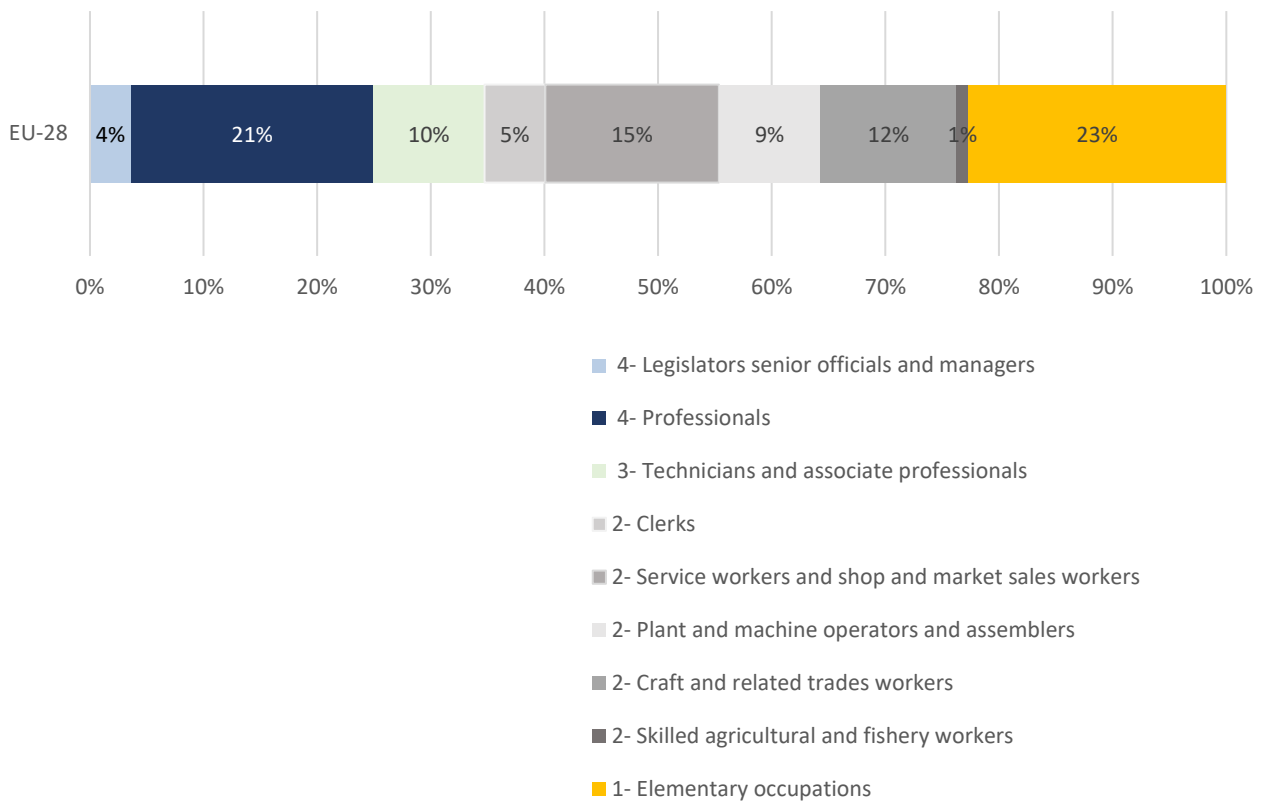
The **distribution across occupations somewhat polarised** when looking only at new movers: whereas the shares of movers working both in high-skilled (skill level 4) and in low-skilled (skill level 1) occupations are slightly higher than those of all movers, the share working in medium-skilled occupations is lower (especially in services and sales and crafts and trade works).

Nevertheless, new movers work in high-, medium- and low-skilled professionals in similar proportions. Around one quarter work in occupations with the highest skill level (managers and professionals), and another quarter work in occupations with the lowest skill level (elementary occupations). The largest share (around one third) work in occupations with the second lowest of the four skill levels (mainly in the occupations service and sales as well as crafts and trades). Only 10% work as technicians and associate professionals.

In most Member States for which data is available the distribution is similar. Some Member States are destinations where movers are mainly in high-skilled occupations (skill level 4), namely Belgium, the Netherlands and Sweden, and in particular Switzerland and Luxembourg, where the share of movers in such occupations is 40% or higher. Compared to this, the large destinations Germany and UK have quite low shares of movers in high-skilled occupations (17% and 22%, respectively). By far the largest groups of movers in these two countries occupy medium-skilled professions.

⁹⁵ Skill level 4 is the highest of all; the methodology for the classification of ISCO codes according to skill levels and the matching with ISCED levels can be found in: ILO (2012) 'International Standard Classification of Occupations. Structure, group definitions and correspondence tables', cf.p.12, available at: http://www.ilo.org/wcmsp5/groups/public/@dqreports/@dcomm/@publ/documents/publication/wcms_172572.pdf

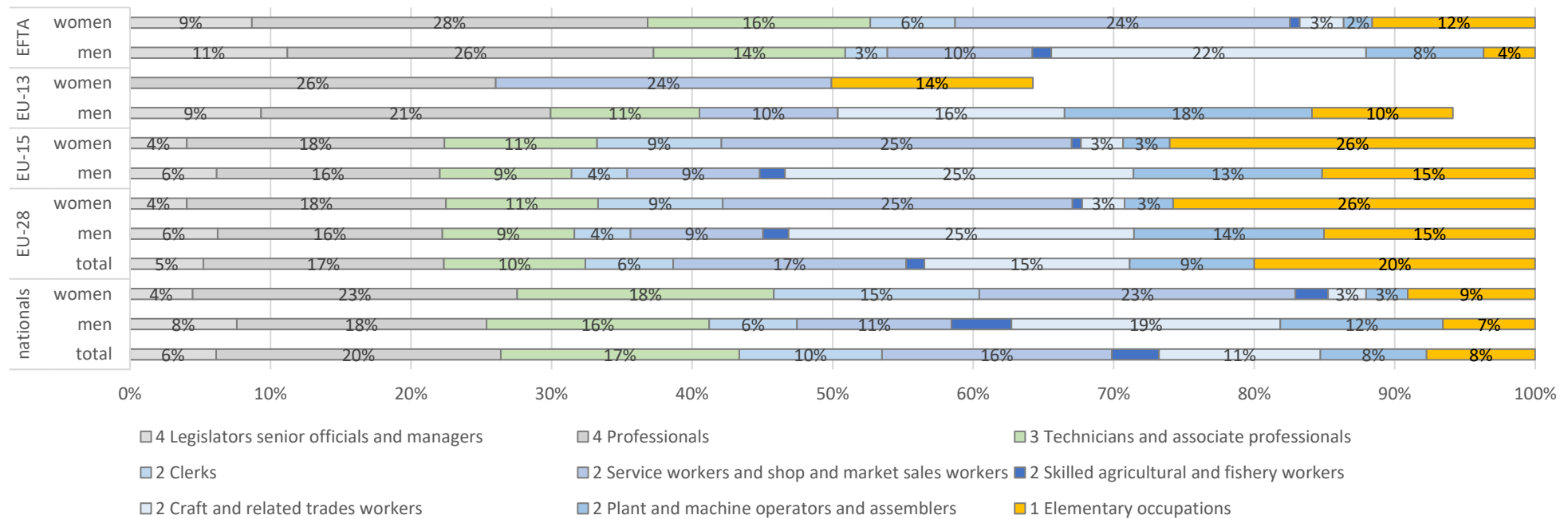
Figure 29 New movers (20-64 years), by occupation according to ISCO skill levels 1-4, 2017, bars from left to right correspond to occupations from top to bottom in legend



THE NUMBERS INDICATE ISCO SKILL LEVELS, WITH 1 BEING THE LOWEST LEVEL AND 4 BEING THE HIGHEST. SKILL LEVEL 1 REQUIRES AT LEAST LOWER SECONDARY SCHOOL COMPLETION, SKILL LEVEL TWO UPPER SECONDARY AND SKILL LEVELS 3 AND 4 REQUIRE A TERTIARY EDUCATION DEGREE. THE ISCO SKILL LEVELS CAN BE MATCHED TO THE EIGHT ISCED LEVELS, AS SHOWN IN TABLE 38 IN ANNEX.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Figure 30 EU-28 movers (20-64 years) by occupation according to ISCO skill levels 1-4⁹⁶ in EU-28, EU-15, EU-13 and EFTA countries of residence, compared to nationals, 2017



FIGURES WITH LOW RELIABILITY : EU-13 MEN : 1 LEGISLATORS, 3 TECHNICIANS, 5 SERVICE WORKERS, 7 CRAFTS, 9 ELEMENTARY OCCUPATIONS ; EU-13 WOMEN : 5 SERVICE WORKERS, 9 ELEMENTARY OCCUPATIONS ; EFTA MEN : 6 SKILLED AGRICULTURAL WORKERS ; EFTA WOMEN : 7 CRAFTS, 8 PLANT AND MACHINE OPERATORS.

EU-28, EU-15, EU-13 AND EFTA INDICATE COUNTRIES OF RESIDENCE, NOT NATIONALITY; THE FIGURES REFER TO EU-28 MOVERS IN THESE COUNTRIES OF RESIDENCE.

FIGURES OF 'NATIONALS' REFER TO NATIONALS ACROSS THE EU-28 COUNTRIES OF RESIDENCE.

WHERE BARS DO NOT ADD UP TO 100% THIS IS BECAUSE DATA OF THE MISSING CATEGORIES CANNOT BE DISPLAYED DUE TO LOW RELIABILITY.

FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

⁹⁶ The methodology for the classification of ISCO codes according to skill levels and the matching with ISCED levels can be found in: ILO (2012) 'International Standard Classification of Occupations. Structure, group definitions and correspondence tables', cf.p.12, available at: http://www.ilo.org/wcmsp5/groups/public/@dgreports/@dcomm/@publ/documents/publication/wcms_172572.pdf

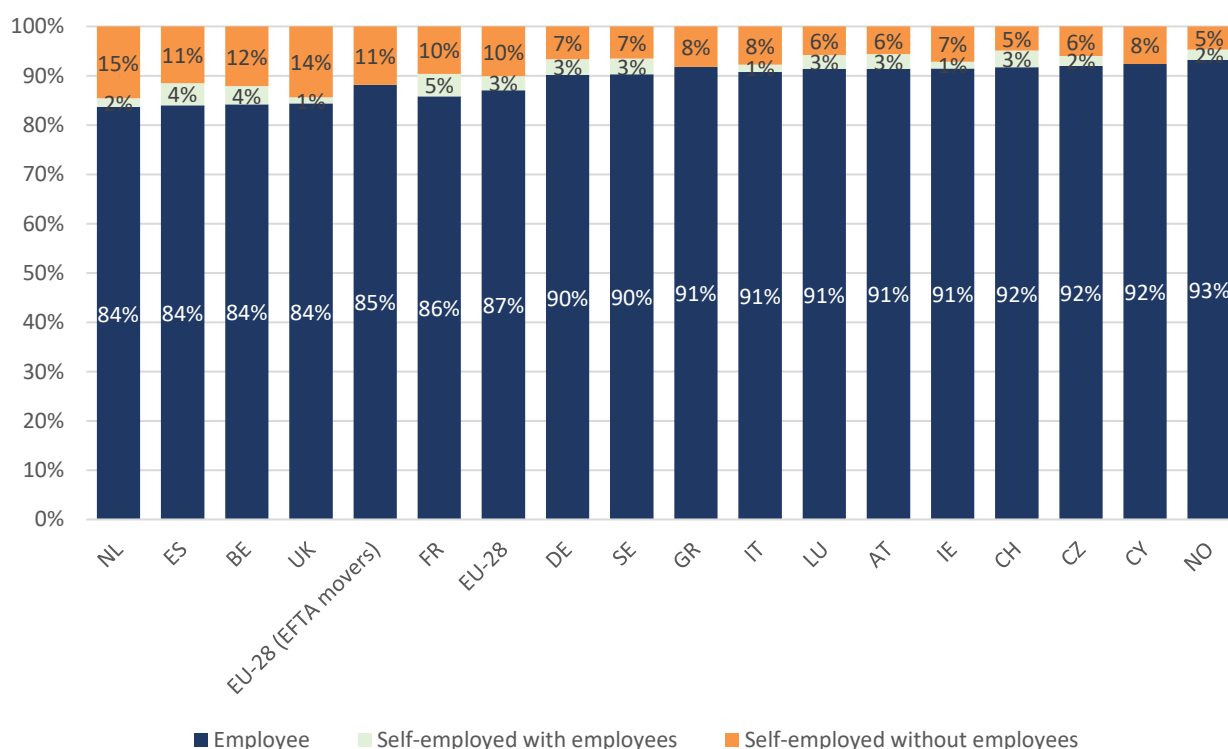
2.2.5. Self-employment

In 2017, 13% of EU-28 movers in employment were self-employed. Among nationals, the share of self-employed is 14%. The share of self-employed movers varied across the Member States, from 5% in Denmark to 16% in the UK, the Netherlands, Spain and Belgium (**Figure 31**). Among the self-employed movers, the large majority was self-employed without employees (10%) and only a small share had employees themselves (3%). Among nationals, this ratio is similar (10% compared to 4%, respectively). For movers, a similar ratio can be found in most Member States, apart from those where the share of self-employed with employees is considerably smaller than self-employed without employees (the Netherlands, the UK, Spain and Belgium), and those where there are large shares of self-employed with employees (Switzerland and Austria).

Compared to 2016, the share of self-employed EU-28 movers has almost not changed at EU level. The largest changes can be found in Malta, Portugal and Estonia where the share of self-employed decreased by 8-10 pps⁹⁷.

Self-employment among movers from the EFTA countries was slightly lower, at 11% - all of these were self-employed without employees (figures for those with employees were too low to be published).

Figure 31 Shares of self-employed with employees, self-employed without employees and employees among EU-28 movers in employment (20-64 years), by country of residence, 2017 (sorted by share of EU-28 self-employed movers in descending order)



* LOW RELIABILITY FOR SELF-EMPLOYED WITH EMPLOYEES: CZ.

BG, EE, EL, HR, HU, LT, LV, MT, PL, PT, RO, SL, SK, IS: ARE NOT DISPLAYED AS FIGURES FOR ONE OR MORE CATEGORIES FOR EU-28 MOVERS ARE BELOW RELIABILITY LIMITS.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

⁹⁷ The share of self-employed also decreased a lot in Poland (-28pps) and Slovakia (-24pps), but figures are of low reliability.

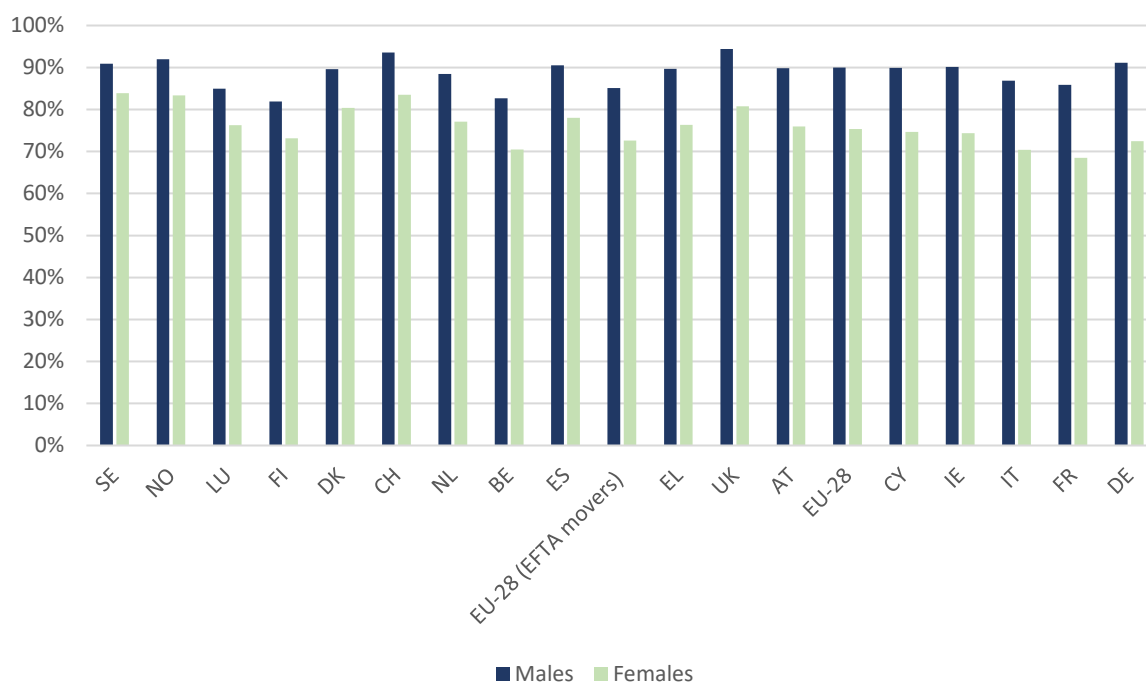
2.2.6. Gender dimension

Considerable differences are evident in the labour situation of men and women among EU-28 movers in some EU Member States. This sub-section details the employment and unemployment situation of male and female movers.

In 2017, male movers' activity rate was 15 pps higher than that of female movers (**Figure 32**). Interestingly, the difference in activity rates between the two gender groups was comparatively high in the main destination countries – it was highest in Germany. On the other hand, in the Scandinavian countries, Luxembourg and Denmark, the difference was between 7 and 10 pps.

The difference in activity rates between the gender groups only increased very slightly (by 0.2 pps) between 2016 and 2017. In most of the Member States, there was a similar development, with changes of less than 2 pps in the difference between the activity rates. However, in Austria the difference increased quite a bit (by +4 pps), mainly due to a decrease in female movers' activity rate (76% in 2017 vs 78% in 2016) and a slight increase in male movers' activity rate. The contrary observation can be seen in Sweden, where the difference decreased by 2.1 pps, mainly due to an increase in female movers' activity rate.

Figure 32 Activity rate of EU-28 movers (20-64 years), by gender, 2017, by EU-28/EFTA country of residence and EU-28 aggregate, sorted by difference in activity rate, in ascending order



LOW RELIABILITY : MALES : FI, EU-28 (EFTA MOVERS)

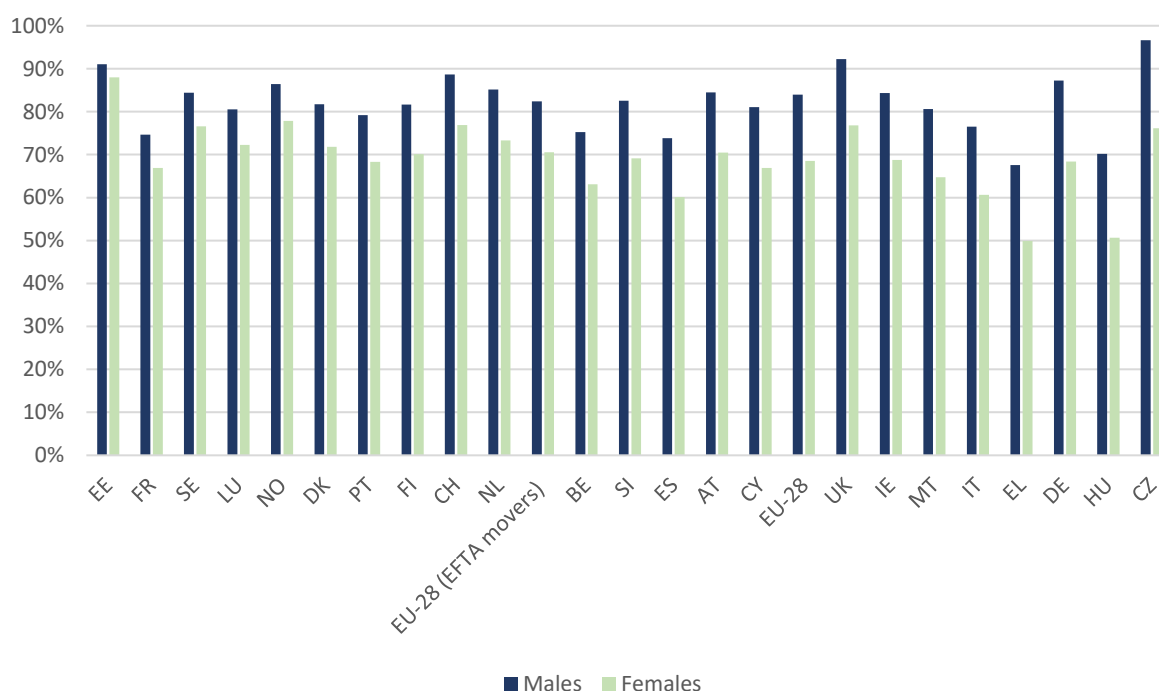
VALUES FOR BG, CZ, EE, HR, HU, LT, LV, MT, PL, PT, RO, SL, SK, IS ARE MISSING BECAUSE NUMBERS OF ONE OR BOTH GENDER GROUPS ARE BELOW RELIABILITY.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

The same difference (15 pps) between male and female movers can be observed in their employment rate at EU level (**Figure 33**): male movers' employment rate in 2017 was at 84%, whereas that of female movers was at 69%. The difference was highest in the Czech Republic (20 pps) and lowest in Estonia (3 pps). Among the main destination countries, the UK, Germany and Italy saw larger differences than at EU level, whereas the difference was lower in Spain, and particularly so in France (only 7 pps).

Compared to 2016, the difference in employment rates did not change either. The greatest year-on-year change among the countries where reliable data was available can be seen in Portugal, where the difference increased by 7 pps – due to an increase in employment rate of male movers by 7 pps and a stagnation of female movers’ employment rate. Another significant difference can be seen in Austria (as for the activity rate), where the difference increased by 5 pps – due to a decrease in female movers’ employment rate to 70% and an increase in male movers’ employment rate to 85%. The difference in Austria is below EU level, but fairly high when compared to the majority of the Member States. In all other Member States, the difference changed by 3 pps or less.

Figure 33 Employment rate of EU-28 movers (20-64 years), by gender, 2017, by EU-28/EFTA country of residence and EU-28 aggregate, sorted by difference in employment rate, in ascending order



LOW RELIABILITY : MALES : MT, SL, EU-28 (EFTA MOVERS) ; FEMALES : EE, HU, MT, SL

VALUES FOR BG, HR, LT, LV, PL, RO, SK, IS ARE MISSING BECAUSE NUMBERS OF ONE OR BOTH GENDER GROUPS ARE BELOW RELIABILITY.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

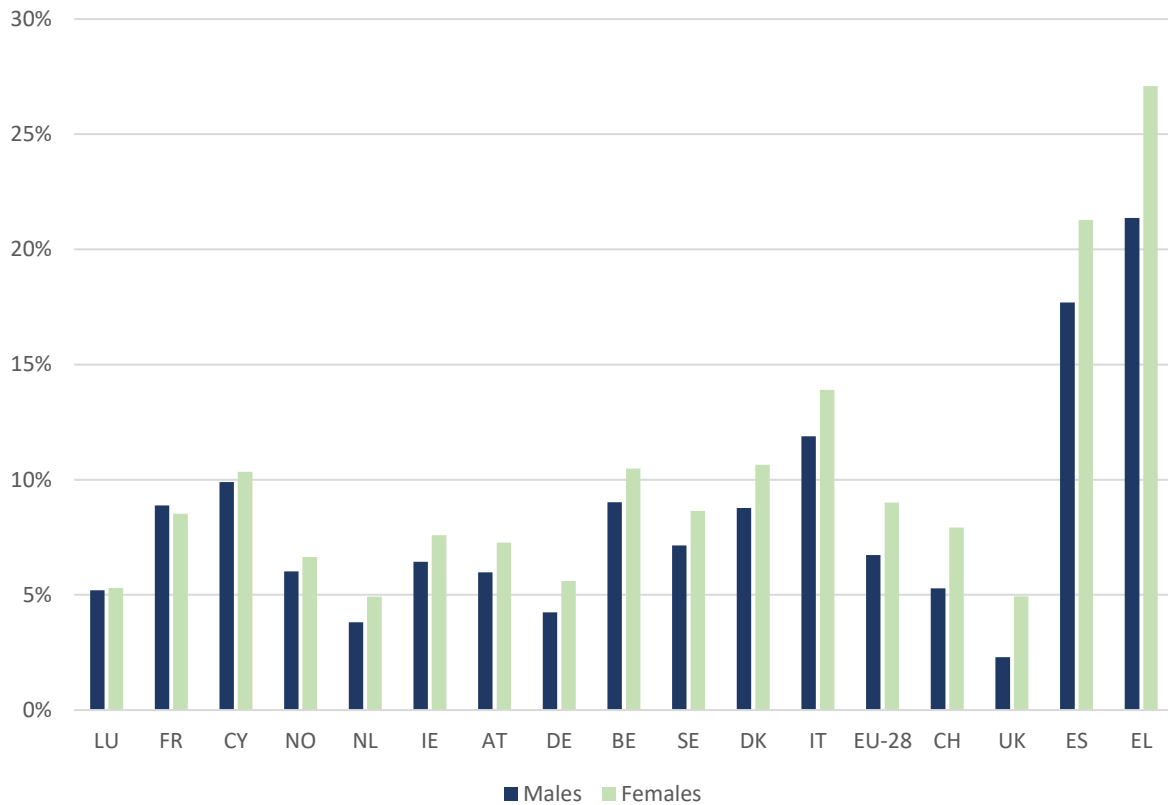
Whereas female movers are a lot less likely to be active or employed than male movers, they are only slightly more likely to be unemployed. In 2017, female movers had an unemployment rate of 9% and male movers of 7%. In most EU Member States with reliable figures, the difference was even smaller (**Figure 34**). The largest difference can be seen in Greece, where female movers’ unemployment rate is 6 pps higher than that of males, and the smallest difference can be seen in Luxembourg, France, Cyprus and Norway, where it is below 1 pp.

Compared to 2016, this difference has not changed. Both the unemployment rate of male movers (8% in 2016, 7% in 2017) and that of female movers (10% in 2016, 9% in 2017) decreased by 1 pp.

The gender difference narrowed significantly compared to 2016 in Denmark from 7 pps to a difference of 2 pps, the EU average. Male movers’ unemployment rate increased and female movers’ unemployment rate decreased. Luxembourg also saw a decrease in the difference (-2 pps), in particular due to a decrease in unemployment among female

movers. On the other hand, the difference became larger in Switzerland (+3 pps) due to an increase in unemployment among females and a decrease among men; a similar observation can be made in Sweden (increase of 2 pps difference). In Cyprus, the difference also increased; although unemployment decreased among both female and male movers, it decreased to a larger extent among female movers.

Figure 34 Unemployment rate of EU-28 movers (20-64 years), by gender, 2017, by EU-28/EFTA country of residence and EU-28 aggregate, sorted by difference in activity rate, in ascending order



LOW RELIABILITY : MALES : FI

VALUES FOR BG, CZ, EE, FI, HR, HU, LT, LV, MT, PL, PT, RO, SL, IS, SK ARE MISSING BECAUSE NUMBERS OF ONE OR BOTH GENDER GROUPS ARE BELOW RELIABILITY.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Regarding the occupations carried out by movers, there are large observable **differences between the gender groups** of movers (Figure 30 above).

First, **women are much more frequently found in service and sales as well as in elementary occupations** than men. The difference between women and men in elementary occupations is particularly pronounced in the EU-15 countries of residence (11 pps difference) and in the EFTA countries, and much less in the EU-13 countries. On the other hand, women are **rarely found in craft and related trade occupations**, whereas this is a frequent occupation among men. These gender differences can also be found among nationals, except for elementary occupations, where the gender gap is minor (2 pps.). Interestingly, both among nationals and among EU-28 movers, there is almost **no gender gap in the high-skilled occupations**.

The distribution of the two gender groups across occupations was almost unchanged compared to 2016 (changes below 1 pp).

2.2.7. Qualification

At EU-level, around 30% of EU-28 movers⁹⁸ feel overqualified for their job, as shown in the 2017 report on intra-EU labour mobility⁹⁹. Overqualification is felt particularly strong among EU-13 movers (compared to EU-15 movers) and among female (compared to male) movers¹⁰⁰. Lack of language skills was easily the most common obstacle to getting a suitable job mentioned by those who felt overqualified for their job and those who did not have a job at the point of inquiry.

This year's report looks at whether movers' length of stay in the host country has any effect on overqualification and at the types of obstacles they encounter.

Results show that the share of EU-28 movers in employment who feel overqualified for their job decreases as length of stay in the host country increases – this was found in most important destination countries for which reliable data could be retrieved (**Figure 35**). This is most likely linked to the fact that lack of language skills is the main obstacle to finding a suitable job – and that language skills tend to increase with a person's length of stay in the host country. It may also be linked to the fact that more recent movers are more likely to have obtained tertiary education than movers who came longer ago (**Table 6**). It is possible that despite these high education levels they were not able to find adequate jobs, especially during the economic crisis. Another reason might be the (informal) access to certain jobs or discrimination which might again be linked to language skills. Furthermore, as shown in section 4, movers often fill 'qualitative labour shortages' among nationals – due to salary differences or because of lack of opportunities in their countries of origin, movers seem to be prepared to take on jobs which nationals may not want to carry out (see also findings in section 3 on 'qualitative labour shortages').

Table 6, Educational attainment levels among employed EU-28 movers (20-64 years), by years of residence in the host country, and nationals, EU-28 aggregate, 2017 (row percentages)

	Low	Medium	High
years of residence: <10	19%	40%	40%
years of residence: 10+	24%	43%	33%
nationals	16%	49%	35%

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

In all countries for which data was reliable (AT, BE, CY, ES, IT, LU) except Sweden and the UK, those movers who arrived within the past five years to the host country were the most likely to feel over-qualified. The share of those feeling over-qualified decreases when looking at the five-to-ten-year bracket. In Austria, Belgium, Italy and Luxembourg, the share decreases further again among those who arrived ten or more years ago or who were born in the country. In the UK, the share feeling overqualified is similar between those who arrived up to five years ago, and those who arrived five to ten years ago; as with the other countries, overqualification then becomes less frequent among those who arrived ten or more years ago.

On the other hand, in Cyprus, Spain and Sweden there is no such inverse correlation between feeling overqualified and years of residence. In Cyprus and Spain, the share of decreases after five years of residence, but then increases again after ten years of

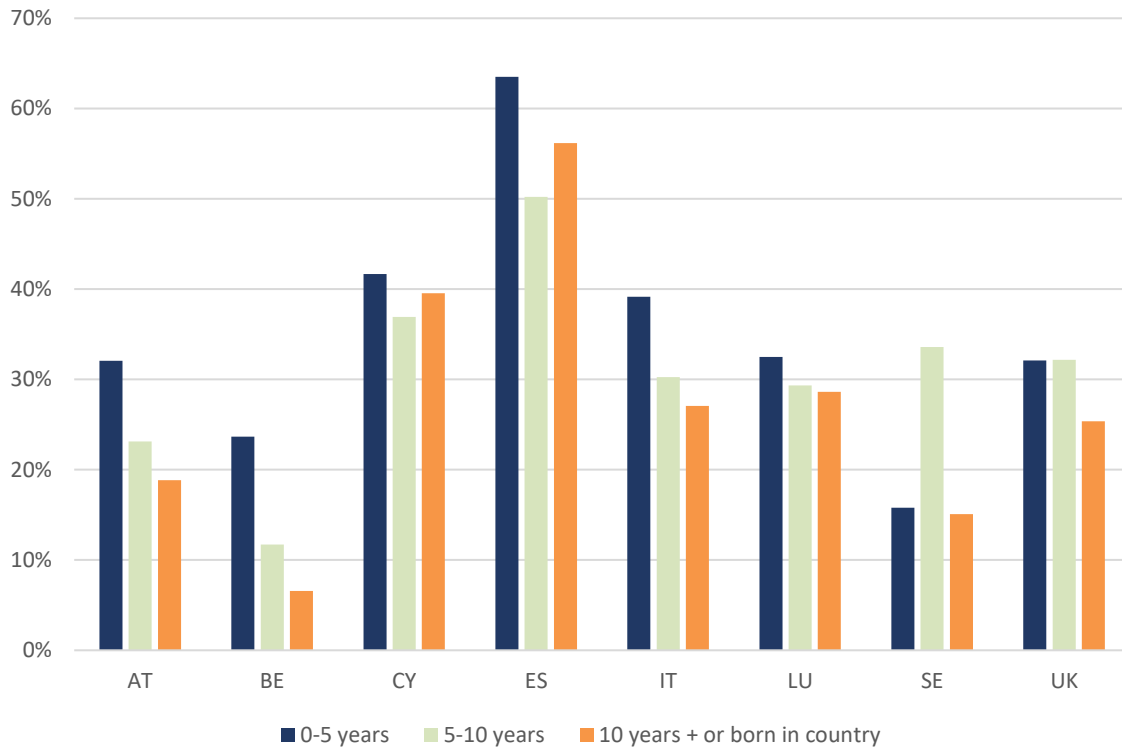
⁹⁸ Includes movers born in the country.

⁹⁹ European Commission (2018), '2017 annual report on intra-EU labour mobility', p. 81

¹⁰⁰ Ibid.

residence. In Sweden, more feel overqualified amongst those who arrived five to ten years ago than in the other groups.

Figure 35 Share of EU-28 movers* (20-64 years) in employment who feel overqualified for their job, by years of residence, 2014

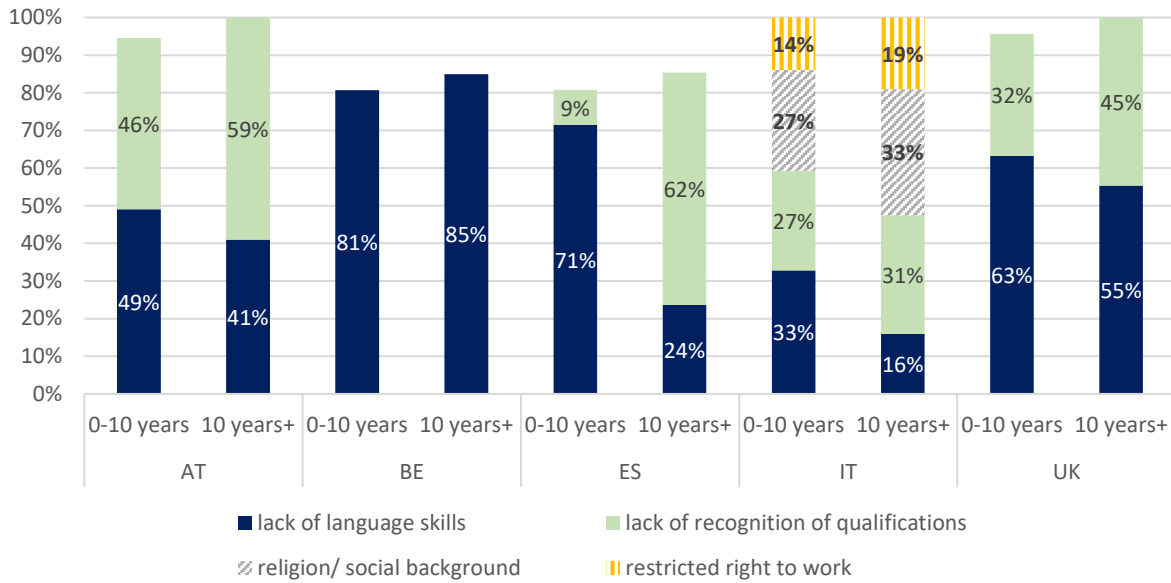


*INCLUDES THOSE BORN IN THE HOST COUNTRY.

SOURCE : EU-LFS, AHM 2014, MILIEU CALCULATIONS.

Furthermore, data in important destination countries (Austria, Belgium, Spain, Italy and the UK) as well as aggregated data from many EU countries shows that a lack of language skills is a very important (if not the most important) obstacle to finding a suitable job among EU-28 movers. According to the same data, its importance decreases with more years of residence in the host country (**Figure 36**). Among the pre-defined obstacles in the questionnaire, the lack of recognition of qualifications becomes more important with the number of years spent in the country, unlike the lack of language skills. Also, religion and social origin and access to the right to work are more important obstacles among movers who have resided in the country for longer.

Figure 36 Main obstacle to getting a suitable job, among EU-28 movers (20-64 years), 2014 – specific obstacles mentioned



THE GRAPH SHOWS THE SHARE OF MOVERS MENTIONING A PARTICULAR OBSTACLE AS THE MAIN OBSTACLE OF NOT FINDING A SUITABLE JOB ; SHARES COMPARE TO THE TOTAL OF ONLY THE FOUR SPECIFIC OBSTACLES MENTIONED IN THE SURVEY.

NUMBERS RELATE TO MOVERS WHO ARE EITHER OVERQUALIFIED FOR THEIR CURRENT JOB OR THOSE WHO ARE NOT IN EMPLOYMENT.

THE CATEGORY '10 YEARS +' INCLUDES MOVERS BORN IN THE HOST COUNTRY.

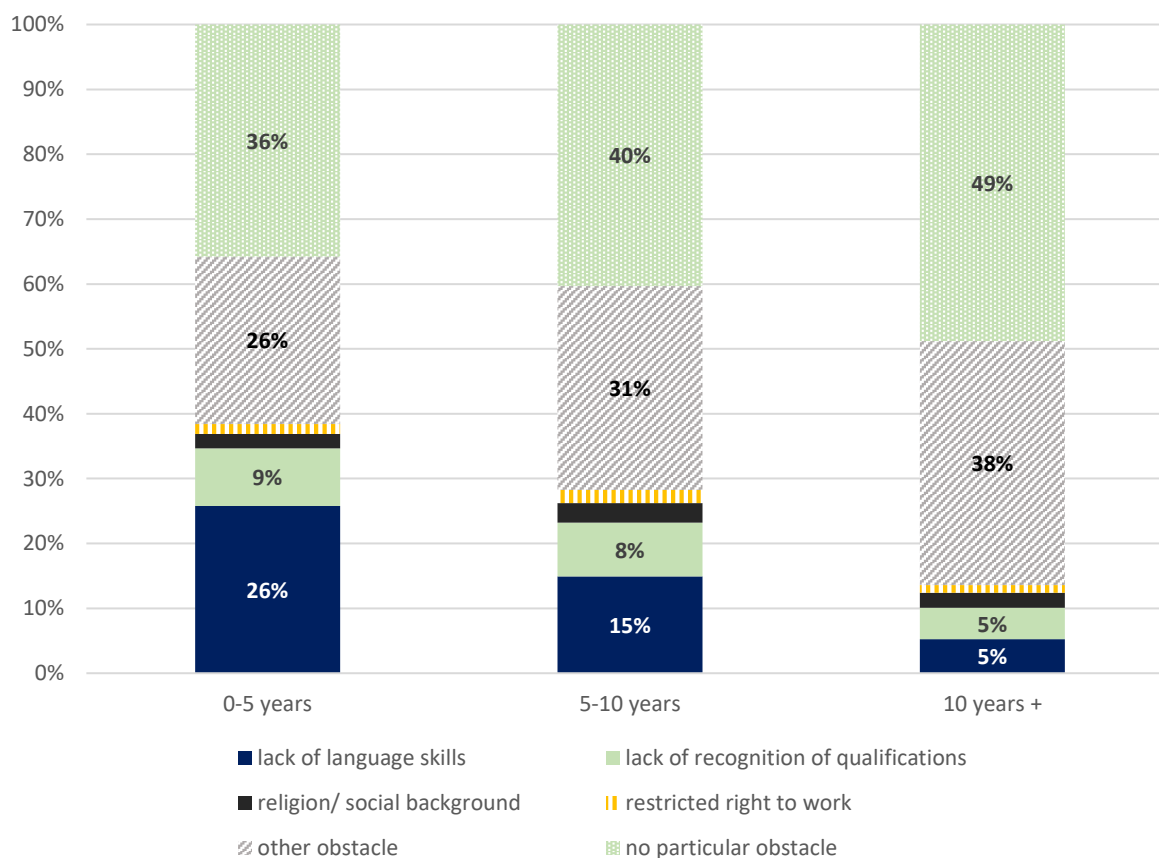
LOW RELIABILITY : ES : LACK OF RECOGNITION OF QUALIFICATIONS FOR 0-10 YEARS ; UK : LACK OF LANGUAGE SKILLS AND LACK OF RECOGNITION OF QUALIFICATIONS FOR 10 YEARS +

SOURCE : EU-LFS, 2014, MILIEU CALCULATIONS.

However, when including 'other obstacles' and 'no particular obstacle' as answer possibilities at EU aggregate level, results show that lack of recognition of qualifications is also found to a lesser extent among movers who have resided in the country for longer – especially among those who have resided there for 10 years or more. However, the relation with length of stay is not as strong as for lack of language skills (Figure 37).

On the other hand, the share of movers mentioning an 'other obstacle' as the main obstacle to finding a suitable job increases with the length of stay; as does the share of those mentioning 'no particular obstacle'. No correlation can be seen between length of stay and the obstacles 'origin religion or social background' and 'restricted right to work' (Figure 37).

Figure 37 Main obstacle to getting a suitable job, among EU-28 movers (20-64 years), 2014 – all answer possibilities, except 'no answer', 'unknown' and 'not applicable'



NUMBERS RELATE TO MOVERS WHO ARE EITHER OVERQUALIFIED FOR THEIR CURRENT JOB OR THOSE WHO ARE NOT IN EMPLOYMENT. THE CATEGORY '10 YEARS +' INCLUDES MOVERS BORN IN THE HOST COUNTRY.

SOURCE : EU-LFS, 2014, MILIEU CALCULATIONS.

2.2.8. Cross-border workers

In 2017, the total number of workers¹⁰¹ residing in one EU Member State and working in another one was 1,443,000, a 4% increase on 2016.

Additionally, 450,000 workers were residing in an EU Member State and working in an EFTA country and 10,000 were residing in an EFTA country and working in an EU Member State; furthermore, 11,000 were cross-border workers between two EFTA countries.

Thus, including the EFTA countries as countries of residence and countries of work, the total numbers of cross-border workers amounted to 1.9 million in 2017 (data by country of residence and country of work can be found in [Table 39](#)).

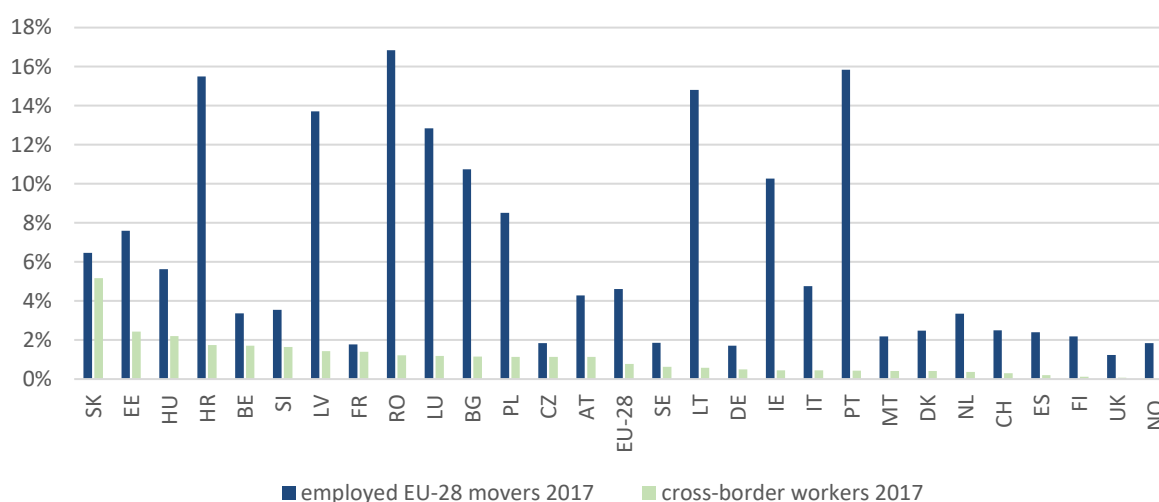
At EU level, two thirds of cross-border workers working in another EU Member State or EFTA country were male (69%) and one third was female (31%). In most Member States (as countries of residence) these shares vary by +/- 10% compared to the EU level figures (see [Figure 68](#) in Annex). Particularly low shares of female cross-border workers can be found among cross-border workers from Croatia (16%) and Estonia (8%), and a particularly high share of women among cross-border workers from Luxembourg (61%).

¹⁰¹ This includes employed EU-28 and EFTA citizens aged 20-64 years.

From the country of origin perspective, the share of cross-border workers of the total employed in the EU-28 and EFTA countries of the same nationality¹⁰² remained the same as in 2016, at 0.8%. This is considerably smaller than the proportion of employed EU-28 movers, which is 4.6% and increased by 0.2 pps in 2017.

Similar to last year, the highest shares of cross-border workers are among Slovaks (5%), Estonians and Hungarians (just over 2% each). Slovakia and France are the only countries with similar numbers of cross-border workers and EU-28 movers among their nationals (the number of cross-border workers was equivalent to around 80% of the numbers of movers). A relatively high number of cross-border workers compared to movers can also be found in the Czech Republic (cross-border workers make 60% of movers).

Figure 38 Share of employed EU-28 movers and cross-border workers from all employed nationals of country of origin, by country of origin, 2017, 20-64



FIGURES FOR CROSS-BORDER WORKERS ARE OF LOW RELIABILITY FOR : MT, NO.

FIGURES FOR CY, FI AND EL NOT DISPLAYED BECAUSE BELOW RELIABILITY.

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS.

Main countries of residence

Around 1.1 million (59%) cross-border workers were residing in the EU-15 and 768,000 (40%) were living in the EU-13 countries. Further 21,000 (1%) were residing in an EFTA country.

The main countries of residence of cross-border workers working either in another EU Member State or an EFTA country were: France (405,000 or 21%), Germany (249,000 or 13%) and Poland (202,000 or 11%). This remained unchanged from 2016.

The number of cross-border workers increased comparatively strongly between 2016 and 2017 among workers living in Bulgaria (+29%), Austria (+24%), Lithuania (+25%), Portugal (+22%), the Czech Republic (+17%) and Denmark (+17%). Bulgaria and the Czech Republic had already seen similar increases in previous years, whereas in Austria and Portugal this represented an upward curve; on the other hand, in Denmark and Lithuania, increases were lower than in the previous year.

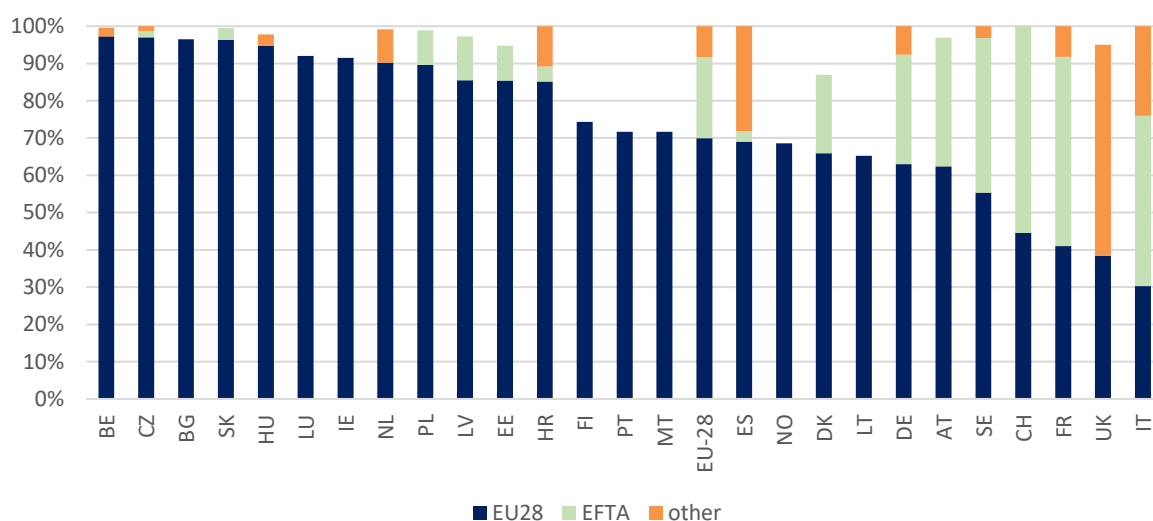
¹⁰² These are all citizens of the country of origin, who either reside and work in the country of origin OR reside in the country of origin and work in another EU-28/EFTA country (cross-border workers) OR reside and work in another EU-28 or EFTA country (EU-28 movers).

The number of cross-border workers decreased considerably in Estonia (-18%) and in Hungary, Italy, Slovakia and the UK (between -6% and -7% each). All of these countries had seen increases in the number of cross-border workers the year before.

Main countries of work

Most cross-border workers from the EU-28 Member States and EFTA countries work in another EU Member State, as can be seen in **Figure 39** below. However, some countries also have high shares of residents working in an (other) EFTA country. This concerns in particular Italy, France, Sweden, Switzerland, but also Germany and Austria. Other countries also see quite a high share of cross-border workers working in third countries, the UK being the prime example, with significant numbers also in Spain and Italy.

Figure 39 Distribution of where cross-border workers are working by their country of residence, 2017



LOW RELIABILITY FOR EU-28 COUNTRY OF WORK AGGREGATE : FI, NO, LT ; **FOR EFTA COUNTRY OF WORK AGGREGATE :** CZ, LV, EE, ES, DK ; **FOR TCN COUNTRY OF WORK AGGREGATE :** CZ, HU, HR, SE.

MISSING VALUES WERE TOO LOW TO BE PRESENTED.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

In 2017, 1.3 million (70%) cross-border workers were working in the EU-15, 110,000 (6%) in the EU-13 and 460,000 (24%) in the EFTA countries.

The main individual countries of work were by far Germany (391,000 or 20%) and Switzerland (387,000 or 20%); Luxembourg (186,000), Austria (175,000), the Netherlands (118,000) and the UK (114,000) are countries of work for between 5% and 10% of cross-border workers, and the other countries provide work for smaller shares.

The table below shows that there are differences between these six countries regarding the composition of countries of origin of cross-border workers: in Switzerland, Luxembourg, Austria and the Netherlands, the large majority of cross-border workers come from each three countries of residence – in most cases, these are those countries that have a direct border (with the exception of the Netherlands which also has a high share of cross-border workers coming from Poland). Furthermore, in Austria, which has many more borders to EU Member States, cross-border workers mainly come only from three of those (SK, HU, DE).

In Germany and the UK, on the other hand, there is one main country of residence (Poland for Germany and Spain for the UK) and then several other countries of residence that almost equally important in terms of numbers of cross-border workers. In the case of Germany, these are neighbouring countries (PL, CZ, FR, AT), but not only (also HU, SK

2018 Annual Report on intra-EU Labour Mobility – Final Report

and RO are important countries of origin). In the UK, the main countries of provenience of cross-border workers, after Spain, are Eastern European countries (RO, HU, PL, BG) as well as Ireland, Italy and France. One can see that geographical proximity is not really a driver for cross-border work in the UK.

Table 7a, Main countries of residence of cross-border workers in the main six countries of work, 2017

Germany		Switzerland		Luxembourg		Austria		Netherlands		UK	
Poland	29%	FR	58%	FR	46%	SK	31%	DE	38%	ES	17%
Romania	10%	DE	20%	DE	29%	HU	28%	BE	31%	RO	10%
Czech Republic	9%	IT	15%	BE	23%	DE	16%	PL	13%	HU	9%
France	9%	other	≤ 3%	other	≤ 0.4%	other	≤ 7%	other	≤ 4%	PL	9%
Hungary	8%									IE	9%
Austria	7%									IT	8%
Slovakia	6%									BG	7%
other	≤ 5%									FR	6%
										other	≤ 5%

The share of cross-border workers from all employed persons in the country of work is by far the highest in Luxembourg, where they make up 42% of all persons working in Luxembourg; the second highest in Switzerland, where they make up 8%, followed by Austria (4%) and Norway (2%) and Belgium (2%). In the other countries, cross-border workers make up 1% or less of the total number of employed.

Compared to 2016, the greatest changes in countries of work could be seen in Hungary (+77% of cross-border workers, most of which residing in Slovakia), followed by Sweden (+39% which seems to be due to an increase in cross-border workers from Denmark and Estonia) and Ireland (+26%, partly due to an increase of workers from Spain)¹⁰³. The remaining countries saw increases between 1% and 10%¹⁰⁴, and only Denmark saw a decrease of 1%. Italy did not see any change.

¹⁰³ The number of cross-border workers also increased more than +10% in Portugal (+13%) and Slovakia (+11%), but figures are of low reliability.

¹⁰⁴ This excludes BG, CY, EE, EL, HR, LT, LV, MT, PL, RO and SL for which data is below reliability limits.

3. QUALIFICATIONS OF EU-28 MOVERS

Migration in general (including from third countries) can bring sizeable benefits to the **receiving countries**. According to Jaumotte *et al.* (2016)¹⁰⁵, in the long-term, receiving economies benefit from immigration in terms of labour productivity and GDP per capita. According to this study, **both high- and low-skilled migrants contribute to this increase**. A similar conclusion may be drawn on the basis of a meta study of the empirical literature on the effects of migration¹⁰⁶. These studies are based on analytical models of data from various countries, including across the EU.

Literature on migration and mobility in EU countries broadly agrees that high-skilled workers in the labour force are particularly necessary in countries with a large knowledge-based economy, where immigration of high-skilled movers contributes to higher levels of GDP per capita and to faster long-term economic growth¹⁰⁷. Additionally, low-skilled migrants can increase labour productivity in host countries through occupational reallocation and task specialisation among both immigrants and the native population. Immigrants tend to take up manual types of jobs while native workers are likely to upgrade their occupations to those requiring more complex skills and offering better payment¹⁰⁸. Another effect of immigration is that highly educated women in host countries tend to increase their working hours and decrease the time spent on household work because of the supply of low-skilled female immigrants providing household and childcare services at lower prices than those demanded by native providers of the same services¹⁰⁹.

For countries of origin, mobility also has some positive effects. Mobility tends to create sizeable benefits for movers and their families (in terms of higher incomes and wellbeing). **Mobility of low- and medium-skilled workers may also alleviate labour market difficulties in countries of origin** (i.e. unemployment, especially during economic crisis). Finding a job abroad helped some workers to get through the crisis and avoid economic hardship. Evidence shows that labour mobility contributed to lowering unemployment rates in some countries of Central and Eastern Europe shortly after their accession to the EU¹¹⁰.

However, the **impact of high-skilled workers leaving their countries of origin may be less positive**. Long-term persistent outflows of skilled labour ('brain drain') tends to have a negative impact on the labour productivity of the countries of origin. An IMF study found that outflows from Southern and Eastern Europe have had an adverse effect on the economic development of these regions and slowed down their convergence with Western Europe per capita income¹¹¹. Remittances to some extent support the income level and

¹⁰⁵ Jaumotte, F., Ksenia K. and Sweta C. S., 'Impact of Migration on Income Levels in Advanced Economies', Spillover Notes, IMF, October 2016, <https://www.imf.org/~/media/files/publications/spillovernotes/spillovernote8>

¹⁰⁶ Ozgen, C., Nijkamp, P. and Poot, J., 2009, 'The Effect of Migration on Income Growth and Convergence: Meta-Analytical Evidence', IZA Discussion Paper 4522, Institute for the Study of Labour, B.

¹⁰⁷ Zhang, Q.A. and Lucey, B.M., 2017, Globalisation, the Mobility of Skilled Workers, and Economic Growth: Constructing a Novel Brain Drain/Gain Index for European Countries, *Journal of the Knowledge Economy*, pp.1-23.

¹⁰⁸ Cattaneo, C., Fiorio, C.V. and Peri, G., 2015, 'What Happens to the Careers of European Workers when Immigrants "Take Their Jobs?"', *Journal of Human Resources*, 50 (3), pp.655-93; D'Amuri, F. and Peri, G., 2014, 'Immigration, Jobs, and Employment Protection: Evidence from Europe before and during the Great Recession', *Journal of the European Economic Association*, 12 (2), pp.432-64, in: Jaumotte *et al.*, 2014.

¹⁰⁹ Cortes, P. and Tessada, J., 2011, 'Low-Skilled Immigration and the Labour Supply of Highly Skilled Women' *American Economic Journal: Applied Economics* 3 (3), pp.88-123, in Jaumotte *et al.*, 2014.

¹¹⁰ Pryymachenko, Y., Fregert, K. and Andersson, F.N.G., 2013, 'The effect of emigration on unemployment: Evidence from the Central and Eastern European EU Member States', *Economics Bulletin*, AccessEcon, vol. 33(4), pp.2692-2697.

¹¹¹ Atoyan, R., Christiansen, L., Dizioli, A., Ebeke, C., Ilahi, N., Ilyina, A., Mehrez, G., Qu, H., Raei, F., Rhee, A. and Zakharova, D., Emigration and Its Economic Impact on Eastern Europe, IMF Staff Discussion note, July 2016, <https://www.imf.org/external/pubs/ft/sdn/2016/sdn1607.pdf>

spending in the countries of origin, but there is a risk of long-term negative impact from brain drain on countries of origin.

Mobility can also cause labour shortages in some skill categories and/or in certain economic sectors in the countries of origin. The extent and nature of these shortages depends on the profile of people emigrating. According to a report prepared for the European Parliament, countries such as Hungary, Lithuania and Poland are characterised as being at high risk of sectoral shortages due to (among other things) emigration¹¹². One example is that of labour shortages in the healthcare sector in various countries of the Central and Eastern European region, due to emigration of health professionals¹¹³. It appears that the economic crisis pushed many health professionals to move, reportedly leading to shortages, particularly in specific underserved regions and in specialist positions¹¹⁴.

The EU policy debate around labour mobility has primarily focused on ensuring free movement of workers across the EU, and its associated benefits. In addition to the basic free movement legislation and recently adopted legal instruments mentioned in the introduction to this report, the Commission set up an operational body to facilitate worker mobility on a fair basis: the European job mobility portal, 'EURES'. Established in 1994, EURES is a network of public and private employment services, trade unions and employers' organisations intended to facilitate the process of free movement of workers across the EU. One of its objectives is to address shortages and surpluses arising in the labour markets of various Member States. Its scope and competences were expanded through the new EURES Regulation adopted in 2016¹¹⁵.

This section examines movers' qualifications in greater detail, and how those qualifications are used in host countries' labour markets. The section also looks at potential links between mobility and labour shortages in host and origin countries.

For the purpose of this analysis, several statistical concepts are used to define 'qualifications' and the professions in which movers work.

Qualifications are measured through different concepts used in the EU-LFS:

- 1) the highest educational attainment level, measured in ISCED (International Standard Classification of Education) categories;
- 2) the field in which this highest educational attainment level was obtained.

The **type of work** carried out by movers, as well as labour shortages in a country, are examined using the following categories:

- 1) Occupational status: ISCO-08 (International Standard Classification of Occupations) at 2-digit level¹¹⁶;

¹¹² Reymen, D. *et al.*, 2015, 'Labour Market Shortages in the European Union', Brussels: European Parliament, http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542202/IPOL_STU%282015%29542202_EN.pdf, accessed on 6 March 2018.

¹¹³ Glinos, I., 2015, Health professional mobility in the European Union: Exploring the equity and efficiency of free movement, Health Policy Vol. 119, Issue 12, December 2015; Eurofound, 2013, Third European Company Survey, First Findings, Dublin Eurofound; Kaminska, M. E. and Kahancová, M., 2010, Emigration and Labour Shortages. An opportunity for trade unions in new Member States? AIAS Working Paper, 87, Amsterdam: Amsterdam Institute for Advanced Labour Studies.

¹¹⁴ European Commission, 2018, '2017 Annual Report on intra-EU Labour Mobility', p.128, quoting Buchan, J. *et al.*, 2012, 'Introduction to health professional mobility in a changing Europe', in Buchan, W. *et al.*, 2014, 'Vol.2 Health Professional Mobility in a Changing Europe', p.18.

¹¹⁵ Regulation (EU) 2016/589 of the European Parliament and of the Council of 13 April 2016 on a European network of employment services (EURES), workers' access to mobility services and the further integration of labour markets, and amending Regulations (EU) No 492/2011 and (EU) No 1296/2013.

¹¹⁶ The **International standard classification of occupations**, abbreviated as **ISCO**, is an international classification under the responsibility of the International Labour Organization (ILO) for organising jobs into

2) Economic activity: NACE (Statistical classification of economic activities in the European Community) at 1-digit level¹¹⁷.

Key findings

- EU-28 movers have a similar education profile to nationals: the largest share (40-50%) have obtained an upper secondary education degree; a second large group (around 35%) have obtained a tertiary education degree; around one-fifth have only completed lower secondary education. Among movers who moved within the past 10 years, the share of those with a tertiary education degree is higher than that of nationals. Here, again, returnees also have, on average, higher educational levels than nationals who remained in the country.
- In destination countries, the ratio of movers to nationals is slightly higher in the group of highly educated (4%) than among those with medium and low educational levels (3% each).
- EU-28 movers are overqualified to a considerable extent: movers with a high educational level undertake jobs in elementary occupations, as clerks, in crafts and as machine operators much more frequently than nationals with the same educational level. For example, of movers working in elementary occupations (which require only lower secondary education), 13% have completed tertiary education (compared to 5% among nationals in the same occupation). Overqualification among movers is particularly high in administration, with 51% of movers working as clerks having completed tertiary education. This share is only 30% among nationals.
- EU-28 movers with low and medium levels of education take up managerial positions less often than nationals with the same educational level.
- EU citizens cite employment as the main reason to move to another Member State, with 51% of movers quoting this as their main reason to move (followed by 37% citing family reasons, 6% moving for study and 5% for other reasons).
- Of those moving for employment, those who move without having already secured a job in the host country is twice as large (35%) as those who have secured a job in the host country before their move (16%).
- Movers with tertiary education are much more successful in securing a job before they move than those with lower educational levels. Of the movers who found a job before migrating, almost half had a tertiary education degree. Movers working in high-skilled occupations are more likely to have found a job prior to the move than those working in low-skilled occupations.
- A first comparison of the shares of movers in occupations and sectors experiencing shortages shows the following:
 - High shares of movers at EU level can be found in several low-skilled occupations experiencing qualitative labour shortages¹¹⁸ (high labour demand, but at the same time high ratio of unemployed nationals to new hires): 'agricultural, forestry and fisheries labourers', 'labourers in mining, construction, manufacturing and transport', 'personal services' and 'building and related trades workers'. In Germany, the same occupations have been found to experience a high share of movers to nationals and a simultaneous qualitative

a clearly defined set of groups according to the tasks and duties undertaken in the job. ISCO is intended both for use in compiling statistics and for client-oriented uses, such as the recruitment of workers through employment offices, the management of migration of workers between countries and the development of vocational training programmes and guidance. For further information, see: [http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:International_standard_classification_of_occupations_\(ISCO\)](http://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:International_standard_classification_of_occupations_(ISCO))

¹¹⁷ Derived from French *Nomenclature statistique des activités économiques dans la Communauté européenne*. NACE is the acronym used to designate the various statistical classifications of economic activities developed since 1970 in the EU. NACE provides the framework for collecting and presenting a large range of statistical data according to economic activity in the fields of economic statistics (e.g. production, employment, national accounts) and in other statistical domains. For further information, see: http://ec.europa.eu/eurostat/statistics-explained/index.php?title=NACE_background

¹¹⁸ Qualitative shortages are defined as 'shortages despite a high number of unemployed nationals in a certain occupation or sector; rather than an absolute lack of labour force with the right skills, these shortages are likely to be characterised by working conditions that may result in recruitment and retention problems.' For a more precise definition, see section 3.4.1.

shortage. In the UK, qualitative shortage and a high share of movers can be observed in the occupations 'drivers and mobile plant operators', and 'labourers in mining, construction, manufacturing and transport', in Italy in 'personal services workers', 'personal care workers', 'building and related trades workers', 'building and related trades workers', 'cleaners and helpers', 'agricultural, forestry and fisheries labourers', 'labourers in mining, construction, manufacturing and transport', and in France 'agricultural, forestry and fisheries labourers' and 'labourers in mining, construction, manufacturing and transport'.

- A high share of movers can also be found among people working as 'food preparation assistants', an occupation facing a quantitative shortage¹¹⁹ (low share of unemployed/new hires) across the EU, notably in the UK and France. In Italy and Spain, a quantitative shortage filled by movers was found in the occupation 'drivers and mobile plant operators'.
- Several occupations face quantitative shortages¹²⁰ that movers can fill to a limited extent (rather low shares of movers): 'ICT professionals and assistants' (Germany), 'legal, social, cultural and related associate professionals (UK and Germany)', 'Metal, machinery and related trades workers' (Germany and Spain), 'Drivers and mobile plant operators'.
- Four sectors were identified at EU level which may experience *qualitative labour shortages filled by movers*: accommodation and food service activities (also in Germany and UK), activities of households as employers¹²¹ (also in Germany, UK, Spain), administrative and support service activities (also in Germany and Spain) and construction (also in Germany and Spain).
- Quantitative shortages were identified at sectoral level in the communication and information sector, as well as in professional, scientific and technical activities. ISCO-level analysis shows a quantitative shortage in the occupation 'information and communication technology professionals', which validates these findings. Results also confirm that movers fill shortages in these sectors to a limited extent, with a share comparable to that of other sectors.
- Intra-EU movers, while filling labour shortages in host countries, may at the same time contribute to creation or aggravation of labour shortages in some occupations in the countries of origin. Data indicate that this may occur primarily in Poland and Romania, where several sub-sectors of elementary occupations, together with craft and related trades, show signs of labour shortages as well as very high shares of nationals working in another EU country.

3.1. Mobility by educational level

A first indication of movers' skill levels is the highest educational level that they have attained, measured in the categories 'low', 'medium' and 'high'¹²². As shown in section 2.2.7 of this report, EU-28 movers who arrived within the past 10 years are more likely to have a tertiary education degree than nationals. When looking at movers regardless of the years of residence, it is notable that their educational profile does not deviate much from that of nationals: they have a slightly higher share of highly educated (32% vs. 30% among nationals), but also a higher share of those with low education (24% vs. 20% among nationals)¹²³.

¹¹⁹ Quantitative shortages are defined as an 'excess demand with insufficient skilled (national) workers to fill the overall demand; difficult-to-fill vacancies and low unemployment rate among nationals.' For a more precise definition, see section 3.4.1.

¹²⁰ *Ibid.*

¹²¹ The full name of the sector is: activities of households as employers; undifferentiated goods-and services-producing activities of household for own use.

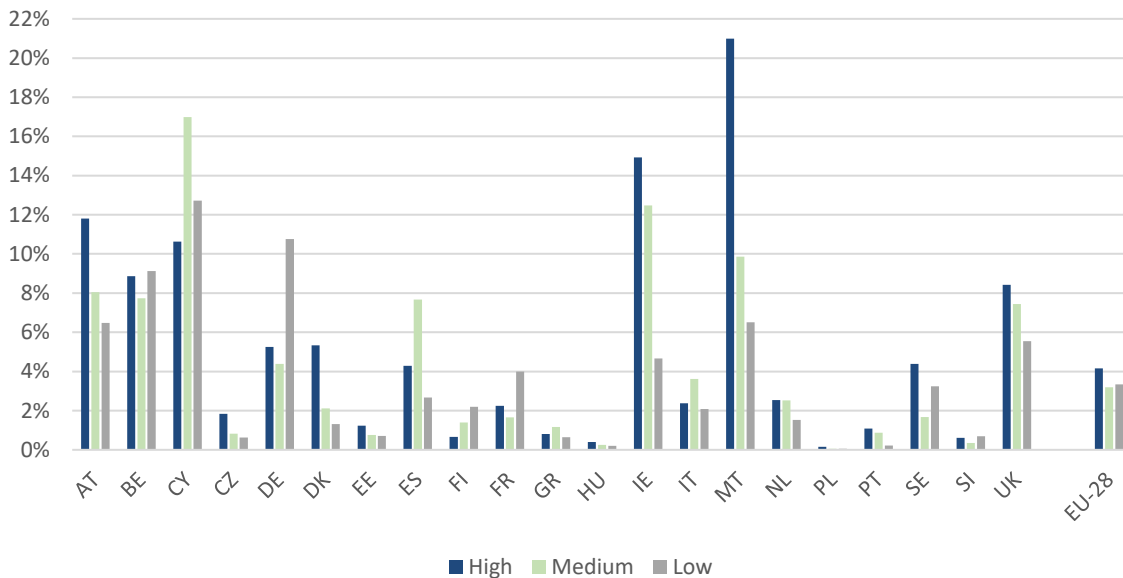
¹²² Low = primary and lower secondary education (ISCED levels 1-2), Medium = upper secondary and post-secondary non-tertiary education (ISCED levels 3-4), High = Short-Cycle Tertiary education (General or Vocational), Bachelor or equivalent, Master or equivalent, Doctoral or equivalent level; source: EU-LFS User Guide, p. 30 and p. 60, available at: <http://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf>

¹²³ EU-LFS 2017, Milieu calculations.

At EU level, the ratio of movers to nationals in the destination country is quite similar across all three education levels: the share of movers equals 4% for the highly educated segment of the population and 3% for each of the medium and low educational levels (see **Figure 40**¹²⁴).

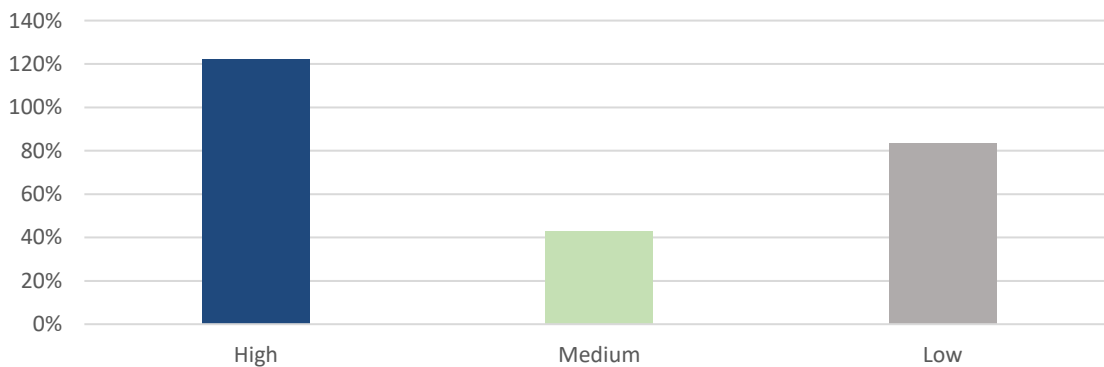
Some Member States, however, rely far more on highly educated movers than on those with lower educational levels. In Austria, Denmark, Luxembourg and Malta, highly educated movers make up by far the largest share. In Luxembourg, there are even more highly educated movers than nationals in absolute numbers (the share being 122%). By contrast, Germany and France, for example, rely mostly on low-educated movers, with movers best represented compared to nationals in the low-skilled category. In the UK, the shares of movers are quite similar in the three educational groups, with low-educated movers having the lowest share compared to nationals. In the EU-13 countries, the share of movers is close to zero, thus many of these Member States are not depicted in the figure.

Figure 40 Share of EU-28 movers to nationals in the country of residence (15 years and above) according to different educational levels, by country of residence, 2017



* BULGARIA, CROATIA, LITHUANIA, LATVIA, ROMANIA, SLOVAKIA BELOW RELIABILITY THRESHOLD (REMOVED); POLAND AND SLOVENIA: LOW RELIABILITY

Luxembourg



¹²⁴ Due to the exceptionally high shares of movers, Luxembourg is depicted on a separate figure.

SOURCE: EU-LFS, 2017, MILIEU CALCULATIONS

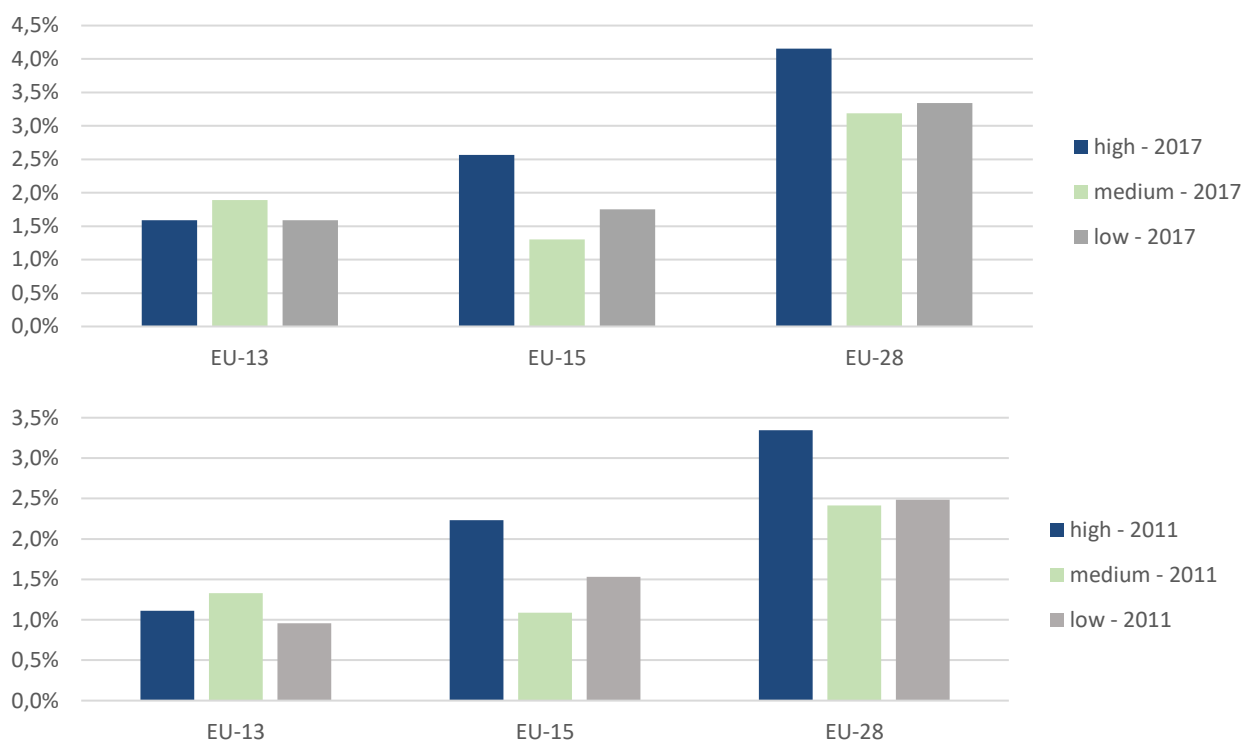
The breakdown and distribution of movers with respect to their educational levels has not changed significantly in recent years. Comparing 2011 LFS data with 2017 data, at the aggregate EU-28 level, the share of movers to nationals in all education levels has increased, with the highest relative increase (from 2.5% to 3.3%) in the group with low educational level, a similar increase in the group with medium education level (from 2.4% to 3.2%) and the lowest relative increase (from 3.3% to 4.2%) in the group with the high educational level.

Several countries, including Austria, Germany, Ireland, and UK saw an increase in the number of EU-28 movers, which is also reflected in rising shares of movers to nationals in the countries of residence. In Germany, the highest increase of the share of movers to nationals was observed for the low-education group (a 4pps increase between 2011 and 2017). The UK and Ireland saw the highest increase in the share of movers to nationals in the group of movers with medium-level education (both by 3pps). In Ireland, the share of movers to nationals in the group of movers with low education dropped by 2pps (from 7% to 5%).

The ratio of movers to nationals according to the three education levels are different for EU-15 and EU-13 groups of movers. For EU-15 movers, the highly educated group prevails (2.6% of highly educated population across the EU are EU-15 movers). For EU-13 movers, however, it is the group with medium-level education that has the highest share compared to nationals in the destination countries with the same level of education (1.9% of people with medium level of education are movers originating from the EU-13). Among EU-15 movers, people with medium-level education make up the lowest share compared to nationals with this education level across the EU. The share of movers with low education is similar in both sub-groups: 1.8% for the EU-15 group and 1.6% for the EU-13 group.

Overall, the general ratio of movers to nationals has not changed significantly compared to 2011. All of the statistics reflecting the share of movers to nationals (for the groups EU-28, EU-15, and EU-13) increased in 2017 compared to 2011 but their ranking remained the same (see [Figure 41](#) below).

Figure 41 Share of movers to nationals in 2017 compared to 2011 (15 years and above)



The share of movers according to education levels in the populations of the countries of origin was examined for the largest countries of origins of movers, such as Germany, Spain, Italy, Poland, and Romania. For all countries of origin, movers with high levels of education were greatest in terms of share of nationals with the same level of education: in Romania, 18.4% of nationals with high-level education moved to other EU countries, compared to 15.1% for all levels of education; in Poland, 7.2% of nationals with high-level education emigrated to other EU countries, compared to 6.1% overall; in Italy, the figure was 5.1%, compared to 2.6% overall; in Spain, it was 2%, compared to 1.4% overall; and in Germany, it was 1.8%, compared to 0.8% overall. The difference between the shares of movers with high and low educational levels is highest in Italy, relatively speaking, at 5% for emigrating nationals with high education, compared to 2% for emigrating nationals with low-level education. More details for these countries of origin can be seen in Figure 42 below.

The situation is broadly similar to 2011. Romania shows the greatest increase in shares in all education levels, especially for the highly educated segment of the population (from 11% to 18%). In Poland, the highest increase was noted for those movers with low levels of education (from 4% to 7%).

Figure 42 Share of movers from selected countries of origin populations according to education levels (15 years and above)



SOURCE: EU-LFS, 2017, MILIEU CALCULATIONS

Both movers living outside the country of origin and movers who return to their country have, on average, higher educational levels than those who did not move. This was previously noted in a 2016 report comparing the shares of persons with low, medium and high educational levels among nationals, movers and returnees from 2010-2015¹²⁵. The fact that returnees have even higher educational levels than movers may indicate that they acquire additional education and skills while abroad.

3.2. Overqualification of EU-28 movers

This section looks more closely at how movers use their attained education level in their work in host countries. More specifically, it examines whether or not movers work in occupations that are commensurate with their educational level and the extent to which

¹²⁵ European Commission, 2017, '2016 Annual Report on intra-EU Labour Mobility', p.103, available at: <https://publications.europa.eu/en/publication-detail/-/publication/ddaa71cc-3e9a-11e7-a08e-01aa75ed71a1/language-en>

overqualification is evident, as an indicator for potential human capital loss. The section then examines if overqualification is a particularly frequent phenomenon among movers.

Overqualification can be assessed in two ways using the EU-LFS. Firstly, respondents' occupations and educational levels can be compared. The ISCO¹²⁶ codes (for occupations) are defined by a certain skill level which then can be matched to educational levels according to the ISCED¹²⁷ codes. This identifies whether or not a person carries out an occupation above or below their education level, allowing an objective measuring of overqualification, as applied for example by Eurostat¹²⁸ (see **Table 38** in Annex). Another approach is to measure this notion 'subjectively', i.e. by asking respondents directly if they feel overqualified for their job (this was a specific question in the 2014 EU-LFS ad hoc module¹²⁹).

Section 2 of this report highlights that subjective perceptions of overqualification are more frequent among EU-28 movers than among nationals, with around 30% of EU-28 movers feeling overqualified for the job they carry out, compared to about 20% of nationals.

Overqualification has also been assessed by comparing the educational attainment level with occupation type according to ISCO. It appears that **EU-28 movers with a high education level (post-secondary degree) undertake jobs in elementary occupations and as clerks, in crafts or as machine operators much more frequently than nationals with the same education level**. Similarly, EU-28 movers with low- and medium-level education take up managerial positions less often than nationals with the same education level.

Figure 43 below presents shares of EU-28 movers and nationals with different educational attainment levels in ISCO 1D occupations. Here, the share of the EU-28 movers with a high educational level is higher than the share of the nationals in many occupations that would only require upper secondary education, such as clerks, crafts, elementary occupations, plant and machine operators and assemblers. The share of overqualified is highest among clerical support workers, where around 55% of movers working in these occupations hold a tertiary education degree, compared to approximately 30% of nationals. In the category of plant and machine operators and assemblers, 14% of movers have a high level of education, compared to only 5% of nationals.

On the other hand, EU-28 movers with low and medium educational attainment take up managerial positions, become legislators or senior officials far less frequently than nationals with similar educational attainment. In the group of movers, those with low or medium educational levels make up only about 20%, compared to 44% among nationals.

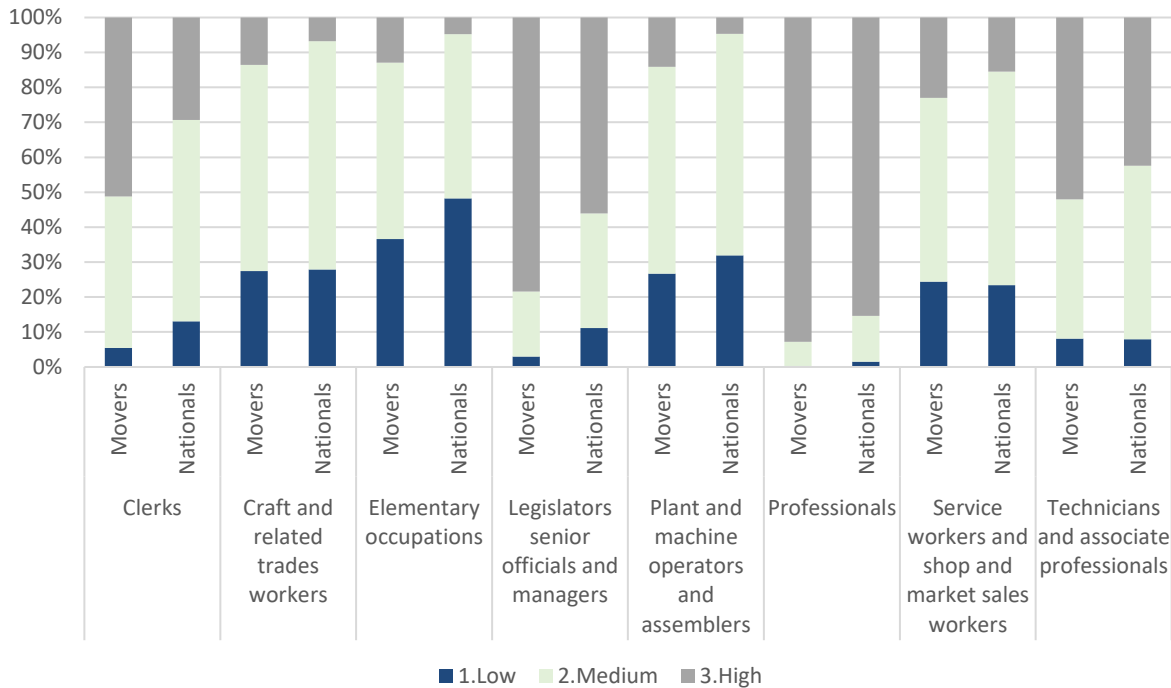
¹²⁶ International Standard Classification of Occupations.

¹²⁷ International Standard Classification of Education.

¹²⁸ Eurostat 'Skills mismatch experimental indicators', <http://ec.europa.eu/eurostat/web/skills/background/methodological-framework>

¹²⁹ The question was: Considering your educational level, experience and skills, do you feel overqualified for your current main job? 'Overqualified' here means that the qualifications and skills of the person would allow more demanding tasks than the current job.

Figure 43 Shares of EU-28 movers and nationals with different education levels in ISCO 1D occupations (15 years and above) 2014



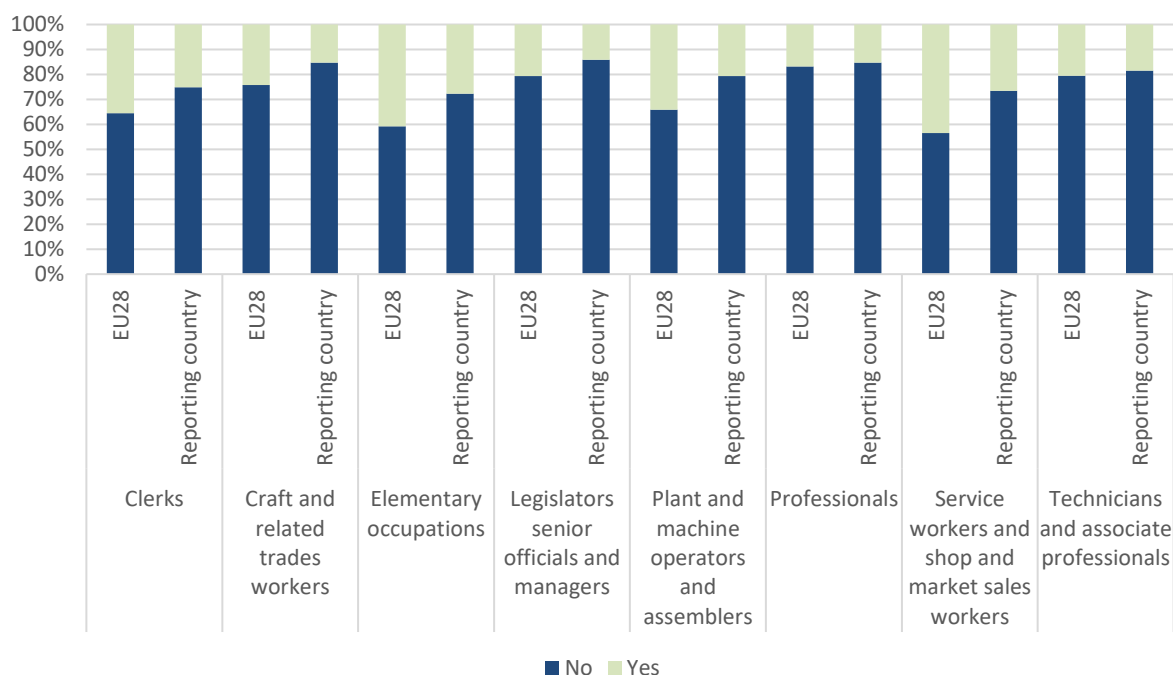
* ISCO SECTORS 'AGRICULTURE' AND 'ARMED FORCES' REMOVED BECAUSE OF A VERY LOW NUMBER OF OBSERVATIONS; GERMANY, THE NETHERLANDS AND DENMARK NOT INCLUDED

LOW, MEDIUM AND HIGH LEVELS BASED ON ISCED SCALE, WHERE LOW STANDS FOR ISCED LEVELS 1-2, MEDIUM STANDS FOR LEVELS 3-4, AND HIGH STANDS FOR LEVELS 5-8

SOURCE: EU-LFS, 2014, MILIEU CALCULATIONS

These findings are validated by an analysis of the subjective perception of overqualification by type of occupation (ad hoc module, see **Figure 44**). In all sectors except 'professionals' and 'technicians and associate professionals', significantly more respondents from the EU-28 movers' group than the nationals stated that they are overqualified for the job they perform. The highest differences are noted in the sectors of service workers and market sales workers (16 pps difference, compared to nationals), plant and machine operators and assemblers (13 pps), and elementary occupations (9 pps difference).

Figure 44 Subjective opinion about overqualification according to ISCO sectors, EU-28 movers vs. nationals (15 years and above), 2014



* ISCO SECTORS 'AGRICULTURE' AND 'ARMED FORCES' REMOVED BECAUSE OF A VERY LOW NUMBER OF OBSERVATIONS; GERMANY, THE NETHERLANDS AND DENMARK NOT INCLUDED

SOURCE: EU-LFS, 2014, MILIEU CALCULATIONS

3.3. Reasons for moving among EU-28 movers

The analysis of reasons for mobility give some indication of how mobility is linked to the labour market situation in the destination and origin countries. In this case, movers who have found a job before moving may represent demand-driven mobility. The fact that effort was invested, not only by the mover but also by the employer, to secure an employment contract in advance of the move, may indicate that there was a certain demand for that mobile worker in the industry. Successfully finding a job while still based in the country of origin can also indicate that there are better cross-national networks for certain occupations or sectors that facilitate job-seeking in another Member State.

On the other hand, moving without having secured a job in the host country may indicate more of a supply-driven mobility: firstly, it is less likely that the movers' skills are in such high demand in the host country that employers would make the effort to search for workers beyond their own national labour market; secondly, the job-search network for the movers' occupations may not be as well developed; and thirdly, it is likely that the mover is confronted with more serious push factors which outweigh the risk of moving without having secured a job in the host country. Such push factors are likely to include difficulties in the labour market for the movers' occupation or in general, such as labour surplus, low wages or difficult working conditions.

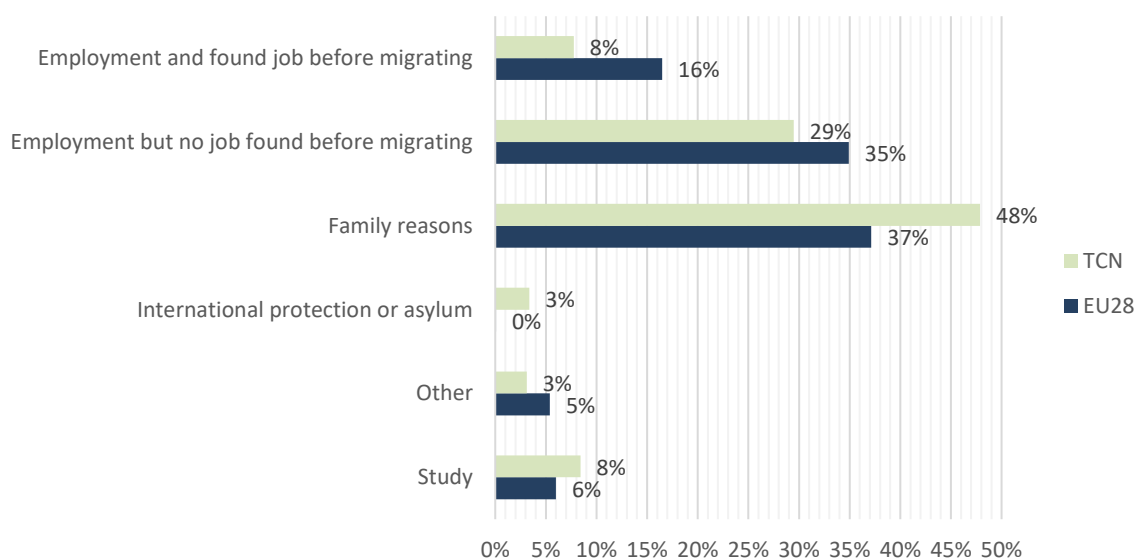
Employment and family reasons appear to be the main reasons for migration among EU-28 movers (**Figure 45**). Among those who move for employment reasons, movers are twice as likely to move without having secured a job beforehand.

Migration reasons were examined by analysing the EU-LFS ad hoc module data of 2014, where respondents were asked a question about their main reason for migrating. Comparing EU-28 movers with third country nationals (TCNs) shows that relatively fewer EU-28 movers came to host countries for family reasons, while a much lower share of EU-

28 movers came as asylum-seekers than among TCN representatives (0.2% vs 3% for EU-28 and TCNs, respectively).

Employment is the main reason for EU-28 movers to move to another Member State. More than half of the respondents cited this as their main reason for moving, including approximately 35% emigrating without securing a job found beforehand and 16% coming to take up jobs they obtained before migrating. Family reasons is the second main reason for emigration, with around 37% moving for this reason. For TCNs, family reasons are the most important cause of migration (38%), with seeking employment in second place (37%). A relatively higher share of TCNs come to the EU to study (8% vs. 6% among EU-28 movers).

Figure 45 Main reasons for migration among EU-28 movers and TCNs (15 years and above), 2014



SOURCE: EU-LFS, 2014, MILIEU CALCULATIONS

Figure 46 below shows the distribution of migration reasons among EU-28 movers per host country. It should be noted that Germany, the Netherlands and Denmark did not participate in the ad hoc EU-LFS module. Even among participating countries, this variable contained a lot of missing data, especially in EU-13 countries such as Bulgaria, Poland, and Baltic States, thus the results of several Member States were removed from the presentation of results by country.

Data show that Italy, Spain, Cyprus and UK lead the destination countries in terms of the share of EU-28 movers who migrated for employment reasons (this share exceeds 50%, including both the movers who found a job before migrating and those who found a job afterwards). In these countries, the share of those who moved for employment reasons but without having previously secured a job is two to three times higher than the share of those who found a job prior to emigration. This is also the case in France, although the large majority of movers came for family reasons, due to the importance of mobility in the past.

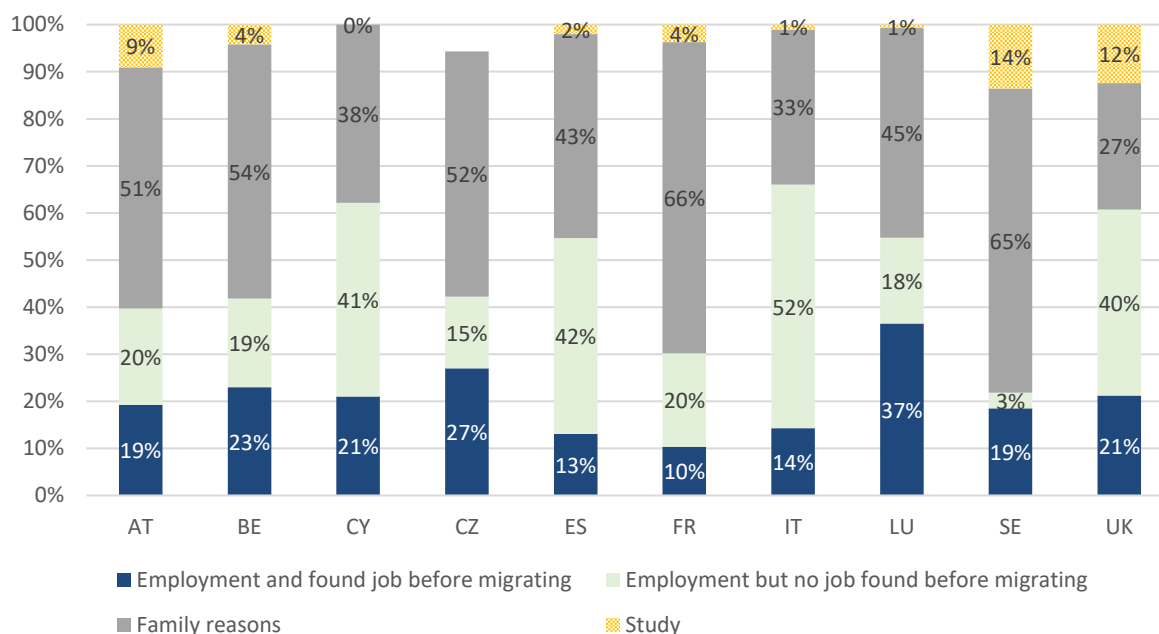
Family reasons are also the primary cause of migration in Austria, Belgium, Czech Republic, and Sweden. In these countries, as in Luxembourg, the share of those who moved for employment having already secured a job in the host country was equal or higher to the share of those who moved without such assured work.

Overall, the highest share of movers who were incited to move by a job found in the host country prior to migrating can be found in Luxembourg (around 35%) and Czech Republic

(around 25%). In Austria, Belgium, Cyprus, Sweden and the UK, this share makes up around 20%. Movers are least likely to have found a job prior to moving to Spain, France and Italy.

The UK, Sweden and Austria are the most popular countries for EU movers planning to study abroad.

Figure 46 Main reasons for migration among EU-28 movers, by country of residence, (15 years and above), 2014



* THE FOLLOWING COUNTRIES WERE REMOVED FROM THE ANALYSIS DUE TO DATA BELOW RELIABILITY LIMITS: BG, PL, LV, HR, RO, SI, SK, FI, GR, HU, PT, EE; FOR CZ, DATA RELATING TO THE REASON 'STUDY' WAS ALSO BELOW RELIABILITY LIMITS AND WAS THEREFORE REMOVED; OPTIONS 'OTHER', 'INTERNATIONAL PROTECTION OR ASYLUM', AND 'UNKNOWN' WERE ALSO REMOVED FROM MIGRATIONS REASONS

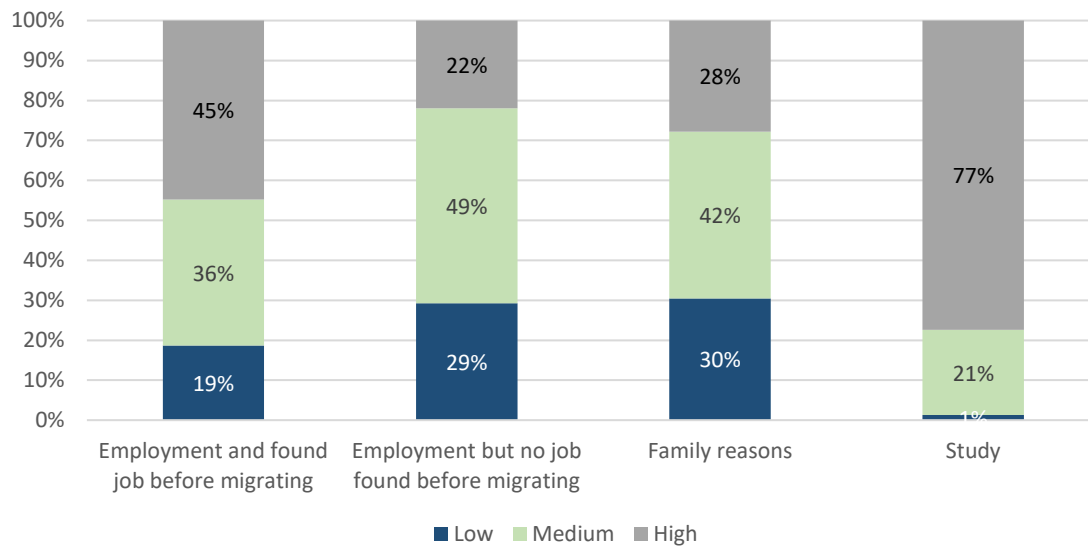
GERMANY, THE NETHERLANDS AND DENMARK DID NOT PARTICIPATE IN THE AD HOC MODULE WHICH INCLUDED THE QUESTIONS ABOUT THE REASONS FOR MIGRATION

SOURCE: EU-LFS, 2014, MILIEU CALCULATIONS

Reasons for migration differ somewhat depending on education level. For example, employment in a job found before migrating is more common for EU movers with a high educational level, with those who migrate without having found a job beforehand are more likely to have medium or low educational levels (Figure 47). Most of those who intend to study already have a high educational level, suggesting that they wish to continue postgraduate studies or specialised courses rather than undertake regular post-secondary studies.

This may indicate that demand for foreign labour is highest in high-skilled occupations, or that movers with high educational levels have better opportunities to inform themselves and acquire employment before moving.

Figure 47 Main reason for migration among EU-28 movers (15 years and above), by education level, 2014



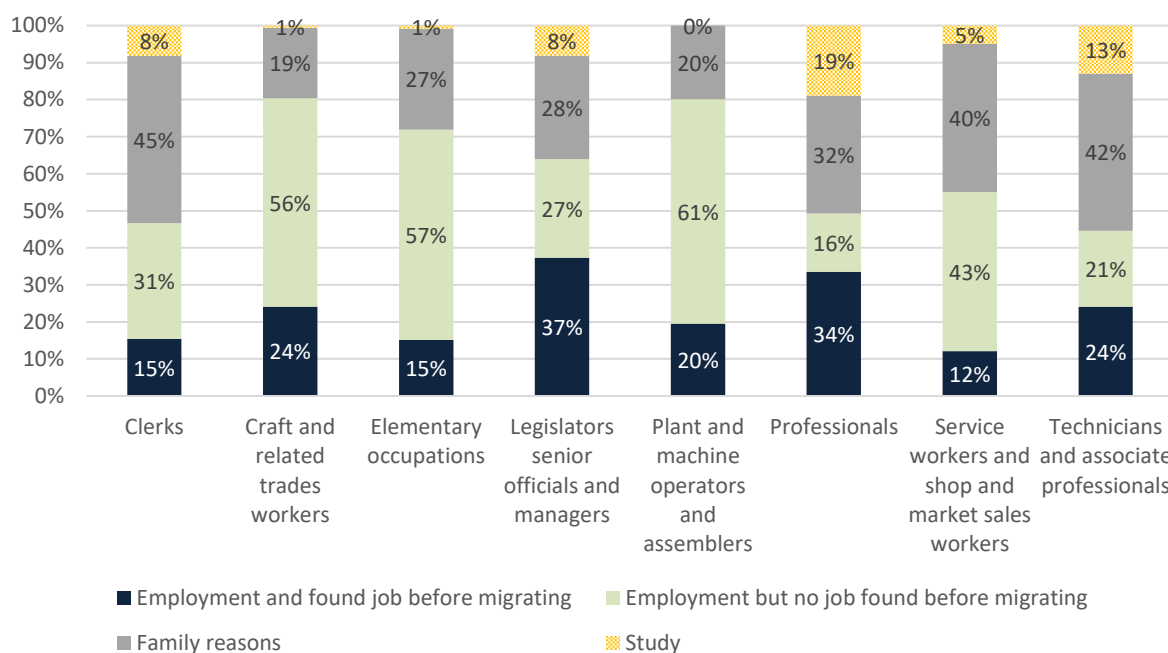
* OPTIONS: 'OTHER', 'INTERNATIONAL PROTECTION OR ASYLUM', AND 'UNKNOWN', AND 'ASYLUM' REMOVED

SOURCE: EU-LFS, 2014, MILIEU CALCULATIONS

The importance of movers' education levels in finding a job before they move is reflected in the reasons for migration by occupation. Results show that movers working in high-skilled occupations are more likely to have found a job prior to the move than those working in low-skilled occupations (see **Figure 48**).

The most common reason for migration among EU-28 movers working in elementary occupations, as well as in the sectors 'craft and related trades workers' and 'plant and machine operators and assemblers', is to seek a job that was not found beforehand. For legislators, senior officials, managers and professionals, the most frequent reason for migration is to undertake a role that was arranged beforehand. Among those working as clerks or in sales and services, as well as technicians and associate professionals, the most frequent reason is to join their family.

Figure 48 Main reason for migration among EU-28 movers, by ISCO occupation, (15 years and above), 2014



* ARMED FORCES AND AGRICULTURE SECTORS REMOVED DUE TO VERY FEW OBSERVATIONS; REASONS 'OTHER', 'UNKNOWN', AND 'INTERNATIONAL PROTECTION OR ASYLUM' REMOVED

SOURCE: EU-LFS, MICRODATA 2014, MILIEU CALCULATIONS

3.4. Labour shortages and intra-EU labour mobility

After examining the education movers bring with them and the types of jobs they carry out, this section looks at how intra-EU labour mobility may relate to labour market demands in countries of destination, as well as in countries of origin. Several aspects are compared, including the occupations or sectors in which movers most frequently work and the occupations and sectors facing labour shortages. Taken together, these may allow for the identification of occupations in which mobility is likely to fill labour shortages or to create shortages in countries of origin.

This analysis distinguished between occupations or sectors with qualitative shortages and quantitative shortages (for detailed methodology, see below and Annex A3.). Both types show shortage indications (frequent hiring, high vacancy rate). However, *quantitative shortages* are additionally marked by a lack of available workforce trained in the area, while this is not the case for *qualitative shortages*, which instead show a rather high number of unemployed available to work in the respective occupation.

The results showed the following:

- 1) Movers are likely to fill *qualitative labour shortages* in several low-skilled occupations: 'agricultural, forestry and fisheries labourers', 'labourers in mining, construction, manufacturing and transport', 'personal services' and 'building and related trades workers'. They are also likely to fill quantitative shortages as 'food preparation assistants'. This is indicated by the fact that all of these shortage occupations have above-average shares of movers, with shares particularly high (above 10%) among 'agricultural, forestry and fisheries labourers' and 'food preparation assistants'.

Looking at sectors of economic activity at EU level, four sectors were identified which may experience *qualitative labour shortages filled by movers*: accommodation and food

service activities, activities of households as employers¹³⁰, administrative and support service activities, and construction. These results are generally valid for the five main destination countries examined (see below). Results are clearest for ‘activities of households as employers’, with the share of new hires/ unemployed being the second highest among all sectors, the share of unemployed nationals to new hires being the highest of all and the share of movers also being markedly higher than those of the other sectors.

The fact that certain occupations (mostly at a lower skill level) rely heavily on mobile workers despite having rather high shares of nationals trained in the area but unemployed, raises questions about whether movers ‘displace’ national workers in such occupations. While this question cannot be analysed in depth here, the business and consumer survey conducted by the European Commission¹³¹ suggests that this is unlikely to be the case. These results indicate that in three major sectors, namely industry, building and services, EU movers from Central and Eastern Europe have not taken jobs away from local employees. The share of companies reporting lack of labour as a reason for limiting business increased during the period 2010-2017 in these sectors in both Central and Eastern Europe and in north-west EU countries (but not in southern EU countries)¹³².

Such broad findings are likely to cover more complex dynamics. For example, it is possible that in certain occupations additional competition through EU movers might contribute to a degradation of working conditions. For example, an analysis conducted on a more local level, based on case studies of four cities (Leeds, Frankfurt, Milan and Rotterdam)¹³³ shows that there is a widespread perception among local workers in these cities that the increased mobility of workers within the EU has raised pressures on their wages and working conditions. It showed that inflows of mobile workers may, to some extent, affect the low-skilled segment of the population and the long-term unemployed (often with migrant backgrounds themselves). According to some trade union stakeholders, in sectors with large numbers of movers, employees’ power – compared to that of their employers – suffers because of the temporary nature of the labour contracts of movers.

Mobility was also found to have certain effects on income distribution. Boeri and Van Ours (2013¹³⁴) state that low-skilled immigrants are likely to compete with low-skilled (normally low income) nationals, driving their wages down and raising income disparity. By contrast, high-skilled immigrants, by competing with high-skilled nationals and driving their wages down, may contribute to diminishing income dispersion.

Dynamics such as these may explain the phenomenon of shortage occupations with high shares of movers and the simultaneous high share of unemployment among nationals.

- 2) Several other occupations see **quantitative labour shortages**: ‘ICT professionals and assistants’, ‘legal, social, cultural and related associate professionals’, ‘metal, machinery and related trades workers’, and ‘drivers and mobile plant operators’. Unlike the occupations mentioned above, these have **comparatively low shares of movers**,

¹³⁰ The full name of the sector is: activities of households as employers; undifferentiated goods-and services-producing activities of household for own use.

¹³¹ European Commission, European Business and Consumer Surveys: Joint harmonised EU industry survey, Joint Harmonised EU Construction Survey and Joint harmonised EU services survey, available at: https://ec.europa.eu/info/business-economy-euro/indicators-statistics/economic-databases/business-and-consumer-surveys_en.

¹³² Bruegel, 2018, The ever-rising labour shortages in Europe, <http://bruegel.org/2018/01/the-ever-rising-labour-shortages-in-europe/>

¹³³ Cancedda, A., Curtarelli, M., Hoorens, S., Virtelhauzen, T. and Hofman, J., n.d. Socioeconomic inclusion of migrant EU workers in 4 cities, Synthesis Report,

<https://www.rand.org/randeurope/research/projects/socioeconomic-inclusion-migrant-eu-workers.html>

¹³⁴ Bouri, T. and van Ours, J., 2013, The Economics of Imperfect Labour Markets, Princeton University Press.

which may indicate that these occupations are affected by labour shortages in many Member States, and that these cannot be sufficiently alleviated by labour mobility.

- 3) Intra-EU movers filling labour shortages in host countries may at the same time contribute to creating or aggravating **labour shortages in some occupations in their countries of origin**. Data indicate that this may occur in Poland and Romania, where several sub-sectors of elementary occupations as well as of craft and related trades show signs of labour shortages, as well as very high shares of nationals working in another EU country.

3.4.1. Methodology

Labour market shortage can be defined as a situation where the **'quantity of workers needed exceeds the available supply'** at a particular wage and working conditions, and at a particular place and point in time¹³⁵ or, more simply, when labour demand is higher than labour supply¹³⁶. Labour surplus is thus the opposite situation, where labour supply exceeds labour demand. Both labour shortages and labour surplus can be measured with different indicators. Given the complexities of measurement, this report focuses its analysis on shortage occupations and sectors.

When looking at how mobility relates to such shortages, two main types of labour shortage are distinguished, based on previous literature^{137,138}:

- **Quantitative shortages** due to an aggregate excess demand with insufficient workers to fill the overall demand (difficult-to-fill vacancies and a low unemployment rate; 'skill shortages' according to McGrath and Behan (2017)).
- **Qualitative shortages** for which the indications are a large share of unfilled vacancies with a simultaneous high unemployment rate. According to McGrath and Behan, these occupations are likely to be low-skilled, where it is not the required skill level that prevents persons from being hired but, rather, the working conditions that result in recruitment and retention problems or 'labour shortages'. Such occupations may be those where the advantages are higher for movers (e.g. earnings are low compared to other occupations in the host country but are higher than in similar occupations in origin countries), thus there may be high shares of unemployed nationals and high shares of movers¹³⁹.

In a quantitative shortage, a high share of movers would indicate that these movers fill the gaps which exist in certain occupations or sectors due to lack of sufficient labour force in the host countries.

In a qualitative shortage, a high share of movers would indicate that although there are a large number of unemployed nationals in this occupation or sector, they may not be willing to accept the working conditions, or they acquired other skills making them fit for other occupations (note that the occupation of the unemployed is assessed by looking at the type of job they performed before becoming unemployed).

¹³⁵ Reymen, D. *et al.*, 2015, 'Labour Market Shortages in the European Union', Brussels: European Parliament, http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542202/IPOL_STU%282015%29542202_EN.pdf, accessed on 6 March 2018.

¹³⁶ *Ibid.*, p. 13.

¹³⁷ *Ibid.*, p. 13.

¹³⁸ McGrath, J. and Behan, J., 2018, 'A comparison of shortage and surplus occupations based on analyses of data from the European Public Employment Services and Labour Force Surveys. Labour Shortages and Surplus 2017', Brussels: European Commission, p. 7.

¹³⁹ McGrath, J. and Behan, J., 2017, 'A comparison of shortage and surplus occupations based on analyses of data from the European Public Employment Services and Labour Force Surveys. Bottleneck Occupations 2016.', p. 6.

In order to examine how mobility might be related to these two types of shortages, the analysis compares the shares of movers to nationals in the main destination countries in identified shortage occupations and sectors at EU level. The analysis also compares the shares of movers to nationals in the country of origin to shortages in the countries of origin. The methodology for identification of quantitative and qualitative shortage occupations/sectors is described in section A3 of Annex A.

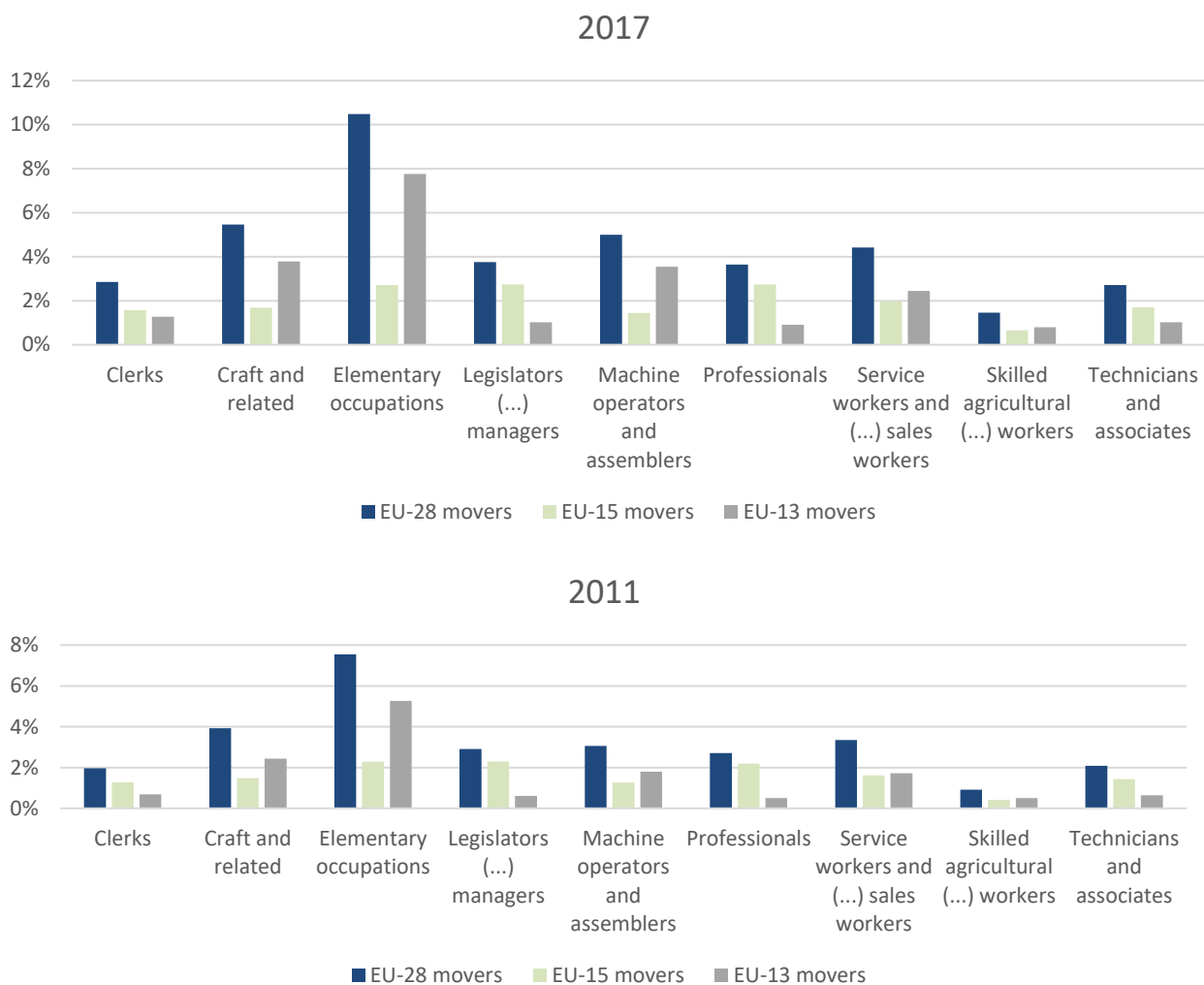
This type of analysis was carried out with EU-LFS 2017 data for all **occupations** at ISCO 2D-level where reliable data were available. The available data only allow for broad conclusions to be drawn and do not allow for estimates of the exact extent (e.g. number of persons) to which labour mobility fills or creates labour shortages in different occupations.

3.4.2. Intra-EU mobility and shortages across ISCO occupations

EU-28 movers are not evenly spread across various types of occupations. Section 2.2.4 of this report highlighted that the largest share of movers (20%) work in elementary occupations. Large groups also work as crafts and related trades workers (15%), as service and sales workers (17%), and as professionals (17%) (**Figure 30**).

A comparison of the share of movers to nationals in different occupations (indicating the level of reliance on movers) shows that movers originating from EU-13 countries work in crafts, elementary occupations, and as plant and machine operators and assemblers more often than do movers originating from EU-15 countries. EU-15 movers have higher shares than nationals in sectors such as 'professionals', 'legislators', 'technicians and associate professionals'. The share of EU-13 movers has increased since 2011, especially in the sectors of elementary occupations and plant and machine operators. See **Figure 49** below for details.

Figure 49 Shares of EU-28 movers to nationals: EU-15 vs. EU-13 movers, 2017 and 2011 (15 years and above)



SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS

In the following analysis, reliance on movers was compared across different types of more specific occupations using ISCO codes at 2-digit level (ISCO2D). These were then compared to the occupations with high qualitative or quantitative labour shortages. Where possible, the countries of origin of movers was also analysed in order to map the likelihood of movers causing shortages in certain occupations in their countries of origin.

EU level results

At EU level, the following types of occupations were found to have the highest shares of EU-28 movers: 'personal services workers', 'building workers', 'cleaners and helpers', 'agricultural, forestry and fisheries labourers', 'labourers in mining, construction, manufacturing and transport', and 'food preparation assistants'. Here, EU-28 movers constitute over 5% of workers (the average across all occupations) in the EU labour market. These data are shown in [Table 8](#) below.

Among the occupations with high shares of movers, the following also show indications of possible shortages (above-average ratio of the indicator 'new hires to employed among nationals'¹⁴⁰): 'agricultural, forestry and fisheries labourers', 'labourers in mining,

¹⁴⁰ For a description of the indicators used, see the chapter 'methodology' and Annex A3.

construction, manufacturing and transport', and 'food preparation assistants'. At the same time, the occupations '**agricultural, forestry and fisheries labourers**' and '**labourers in mining, construction, manufacturing and transport**' are likely to experience qualitative labour shortages because enough labour supply among nationals seems to be theoretically available (above-average ratio of 'unemployed to new hires among nationals'¹⁴¹). Shortages were also identified (through Public Employment Service (PES) reports¹⁴²) in the occupations '**personal services**' and '**building and related trades workers**'. These sectors theoretically have sufficient labour supply available among nationals, thus are likely to face qualitative shortages.

The occupation '**food preparation assistants**' is characterised with a relatively low ratio of unemployed to new hires, suggesting a **quantitative labour shortage**.

Table 8 ISCO-2D shortage occupations with above-average shares of movers, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
EU aggregate - average	5%	8%	67%	
Personal services workers (51)	7%	N/A Shortage according to PES ind. 1&2 ¹⁴³	75%	Qualitative shortage filled by movers
Building and related trades workers (71)	8%	N/A Shortage according to PES ind. 1&2	99%	Qualitative shortage filled by movers
Cleaners and helpers (91)	13%	N/A	101%	Not conclusive
Agricultural, forestry and fisheries labourers (92)	10%	11%	134%	Qualitative shortage filled by movers
Labourers in mining, construction, manufacturing and transport (93)	10%	22%	88%	Qualitative shortage filled by movers
Food preparation assistants (94)	12%	16%	54%	Quantitative shortage filled by movers

* THE TABLE SHOWS ONLY THE OCCUPATIONS WHICH ARE CHARACTERISED WITH ABOVE-AVERAGE SHARE OF MOVERS. THE RATIO OF UNEMPLOYED TO NEW HIRES IS USED TO JUDGE IF THE LABOUR SHORTAGES CAN BE ASSESSED AS QUANTITATIVE OR QUALITATIVE.

¹⁴¹ For a description of the indicators and thresholds used, see the last chapter 'methodology' of this section.

¹⁴² *Ibid.*

¹⁴³ See Annex A for a further explanation of these indicators.

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS

Further occupations show shortages in terms of the ratio of new hires to employed nationals but are not characterised by a high share of movers (average or below average). These include '**information and communication technology professionals**', 'legal, social, cultural and related associate professionals', 'information and communication technicians', '**sales workers**', '**metal, machinery and related trades workers**', '**drivers and mobile plant operators**' and 'street and related sales and services workers'. Four of these occupations (in bold) have also been listed as top shortage sectors reported by PES in the Parliamentary Report of 2015¹⁴⁴.

Among these six occupations, high supply among nationals seems to be available solely for 'sales workers' and 'street and related sales and services workers', indicating qualitative shortages, while the other occupations seem to face a real lack of labour supply with adequate skills among nationals.

Table 8 below shows more detail.

Table 9 ISCO-2D shortage occupations with below-average share of movers, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
EU aggregate average	5%	8%	67%	
Information and communication technology professionals (25)	5%	9%	23%	Quantitative shortage
Legal, social, cultural and related associate professionals (34)	4%	11%	45%	Quantitative shortage
Information and communication technicians (35)	3%	9%	46%	Quantitative shortage
Sales workers (52)	3%	14%	79%	Qualitative shortage
Metal, machinery and related trades workers (72)	4%	10%	63%	Quantitative shortage
Drivers and mobile plant operators (83)	5%	10%	61%	Quantitative shortage
Street and related sales and services workers (95)	N/A	21%	204%	Qualitative shortage

¹⁴⁴ Reymen, D. *et al.*, 2015, 'Labour Market Shortages in the European Union', Brussels: European Parliament, http://www.europarl.europa.eu/RegData/etudes/STUD/2015/542202/IPOL_STU%282015%29542202_EN.pdf, accessed on 6 March 2018.

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS

The following section describes the situation regarding labour shortages in specific sectors according to ISCO-2D and the extent to which they are filled by movers in the main countries of residence of EU-28 movers: Germany, UK, Italy, France and Spain. For Germany, Italy and Spain, which are also significant countries of origin of movers, this study calculated shares of movers (people emigrating from each of these countries) to nationals (in the same countries) according to ISCO-1D sectors. These are shown in the figures placed at the end of each country section. Poland and Romania - two more large countries of origin of movers - are also analysed for possible labour shortages in ISCO sectors.

Germany

In Germany, the following occupations indicate labour shortages in terms of higher than average shares of new hires to employed or PES indicators, while also having higher than average (8%) shares of movers: 'personal services workers', 'building and related trades workers', 'agricultural, forestry and fisheries labourers', 'labourers in mining, construction, manufacturing and transport' and 'food preparation assistants'. Table 9 below shows the labour shortages, if any, in which of these occupations, as well as whether they are quantitative or qualitative in nature (based on the ratio of unemployed to new hires). This analysis is complemented with comparison to PES data based on the statistics underlying the report of McGrath and Behan (2017). All shortages in Germany in the occupations indicated above were found to be qualitative in nature.

Table 10 ISCO-2D shortage occupations with above-average share of movers in Germany, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
Germany average	8%	7%	37%	
Personal services workers (51)	13%	N/A Shortage according to PES ¹⁴⁵	38%	Qualitative shortage filled by movers
Building and related trades workers (71)	16%	N/A Shortage according to PES ¹⁴⁶	63%	Qualitative shortage filled by movers
Agricultural, forestry and	14%	10%	94%	Qualitative shortage filled by movers

¹⁴⁵ Shortage indicated by PES in the occupations 514 ('hairdressers, beauticians and related workers') and 516 ('other personal services workers').

¹⁴⁶ Shortage indicated by PES in the occupations 711 ('building frame and related trades workers') and 712 ('building finishers and related trades workers').

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
fisheries labourers (92)		No shortage reported by PES		
Labourers in mining, construction, manufacturing and transport (93)	18%	10% Shortage according to PES ¹⁴⁷	66%	Qualitative shortage filled by movers
Food preparation assistants (94)	24%	12% No shortage reported by PES	53%	Qualitative shortage filled by movers

Some other labour shortage sectors in Germany were also identified, although with the shares of movers being lower than average. These are shown in Table 10 below, together with information on the share of EU-28 movers and further assessment of the shortage as quantitative or qualitative. The following occupations were found experience a quantitative shortage: 'teaching professionals, information and communication technology professionals', 'legal, social, cultural and related associate professionals', 'information and communication technicians', 'general and keyboard clerks', 'other clerical support workers' and 'personal care workers'. A qualitative shortage was found in the occupations 'sales workers' and 'protective services workers'.

Table 11 ISCO-2D shortage occupations with below average share of movers, Germany, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
Germany - average	8%	7%	37%	
Teaching professionals (23)	4%	8% No shortage indicated by PES	10%	Quantitative shortage
Information and communication	5%	8%	20%	Quantitative shortage

¹⁴⁷ Shortage indicated by PES in sector 911 ('mining and construction labourers').

2018 Annual Report on intra-EU Labour Mobility – Final Report

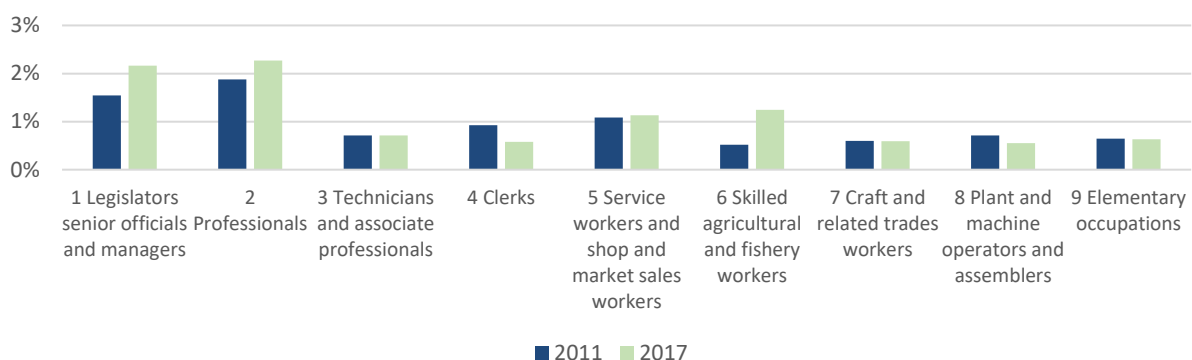
ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
technology professionals (25)		Shortage indicated by PES ¹⁴⁸		
Legal, social, cultural and related associate professionals (34)	4%	8% No shortage indicated by PES	18%	Quantitative shortage
Information and communication technicians (35)	3%	8% No shortage indicated by PES	35%	Quantitative shortage
General and keyboard clerks (41)	4%	8% No shortage indicated by PES	35%	Quantitative shortage
Other clerical support workers (44)	7%	9% No shortage indicated by PES	35%	Quantitative shortage
Sales workers (52)	5%	10% No shortage indicated by PES	41%	Qualitative shortage
Personal care workers (53)	7%	8% No shortage indicated by PES	27%	Quantitative shortage
Protective services workers (54)	3%	15% No shortage indicated by PES	46%	Qualitative shortage

The highest shares of German movers working in other EU-28 countries was noted in the two sectors 'professionals' and 'legislators, senior officials and managers'. Quantitative shortage was detected in one of the sub-sectors of the group of 'professionals', namely 'information and communication technology professionals'. This sector is characterised by a below-average share of movers from other EU countries to Germany. This may suggest that the shortage in this sector experienced in Germany cannot be filled by movers because

¹⁴⁸ Shortage indicated by PES in sector 251 ('software and applications developers and analysts').

other countries also encounter shortages in this sector. No labour shortages in Germany were detected in the sector 'legislators, senior officials and managers'. The overall shares of German movers in other EU-28 countries in the different ISCO occupations in 2017 have changed little compared to 2011 (see **Figure 50**).

Figure 50 Share of Germans working in another EU country compared to Germans working in Germany according to ISCO-1D occupations, 2011 and 2017 (15 years and above)



SOURCE: EU-LFS 2017, MILIEU CALCULATIONS

UK

In the UK, the following occupations indicate labour shortages, with simultaneous higher than average (10%) shares of movers: 'drivers and mobile plant operators', 'labourers in mining, construction, manufacturing and transport', and 'food preparation assistants'. The first two show signs of a qualitative labour shortage due to a relatively high ratio of unemployed to new hires, while the latter, 'food preparation assistants', can be judged to have quantitative shortages (see **Table 12** for more detail).

Table 12 ISCO-2D shortage occupations with above-average share of movers in the UK, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
UK - average	10%	9%	29%	
Drivers and mobile plant operators (83)	11%	13% No data available from PES	35%	Qualitative shortage filled by movers
Labourers in mining, construction, manufacturing and transport (93)	24%	10% No data available from PES	44%	Qualitative shortage filled by movers

2018 Annual Report on intra-EU Labour Mobility – Final Report

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
Food preparation assistants (94)	14%	17% No data available from PES	28%	Quantitative shortage filled by movers

Some other labour shortage occupations in the UK were also identified, with the shares of movers being lower than average. These are indicated in Table 12 below, together with a further assessment of the shortage as quantitative or qualitative.

Quantitative shortage was found in this group of occupations only in 'legal, social, cultural and related associate professionals'. Other occupations, namely: 'information and communication technicians', 'customer services clerks', 'other clerical support workers', 'sales workers', 'personal care workers', and 'protective services workers' show signs of a qualitative labour shortage.

Table 13 ISCO-2D shortage occupations with below average share of movers, UK, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
UK - average	10%	9%	29%	
Legal, social, cultural and related associate professionals (34)	9%	12% No data available from PES	22%	Quantitative shortage
Information and communication technicians (35)	5%	11% No data available from PES	37%	Qualitative shortage
Customer services clerks (42)	6%	13% No data available from PES	33%	Qualitative shortage
Other clerical support workers (44)	6%	12% No data available from PES	30%	Qualitative shortage
Sales workers (52)	6%	17%	41%	Qualitative shortage

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
		No data available from PES		
Personal care workers (53)	7%	13%	31%	Qualitative shortage
		No data available from PES		
Protective services workers (54)	3%	11%	56%	Qualitative shortage
		No data available from PES		

Italy

In Italy, the following occupations show labour shortages with simultaneous higher than average (5%) shares of movers: 'personal services workers', 'personal care workers', 'building and related trades workers', 'building and related trades workers', 'drivers and mobile plant operators', 'cleaners and helpers', 'agricultural, forestry and fisheries labourers' and 'labourers in mining, construction, manufacturing and transport'. All of these occupations, with the exception of the sector of drivers and mobile plant operators, showed qualitative shortages filled by movers. Table 13 below presents the relevant statistics.

Table 14 ISCO-2D shortage occupations with above-average share of movers in Italy, 2017, (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
Italy - average	5%	7%	102%	
Personal services workers (51)	6%	N/A Shortage according to PES ¹⁴⁹	112%	Qualitative shortage filled by movers
Personal care workers (53)	29%	8% No shortage according to PES	137%	Qualitative shortage filled by movers
Building and related trades workers (71)	11%	N/A Shortage	253%	Qualitative shortage filled by movers

¹⁴⁹ Shortage indicated by PES in the sectors 512 ('cooks'), 513 ('waiters and bartenders') and 514 ('hairdressers, beauticians and related workers').

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
		according to PES ¹⁵⁰		
Drivers and mobile plant operators (83)	6%	9% Shortage reported by PES ¹⁵¹	100%	Quantitative shortage filled by movers
Cleaners and helpers (91)	20%	N/A Shortage according to PES ¹⁵²	132%	Qualitative shortage filled by movers
Agricultural, forestry and fisheries labourers (92)	17%	8% No shortage reported by PES	121%	Qualitative shortage filled by movers
Labourers in mining, construction, manufacturing and transport (93)	8%	21% Shortage according to PES ¹⁵³	156%	Qualitative shortage filled by movers

No labour shortage sectors were found in Italy with a share of movers lower than average.

The highest shares of Italian movers working in other EU-28 countries was noted in the sectors of 'professionals', 'legislators, senior officials and managers', 'elementary occupations' and 'service workers and shop and market sales workers'. The analysis above detected qualitative shortages in two sub-sectors of the group of service workers and in three subsectors of the elementary occupations. These sectors are characterised with above-average shares of movers from other EU countries to Italy, which may suggest that the shortage in this sector partly caused by Italian workers moving to other EU countries is then met by movers from other EU countries. Compared to 2011, the share of Italian movers working in another EU country increased markedly in the occupations 'professionals', 'crafts' and 'plant and machine operators' (see **Figure 51**). This increase in the latter two ISCO groups may also have contributed to shortages in sub-groups of these occupations ('building and related trades workers' and 'drivers and mobile plant operators').

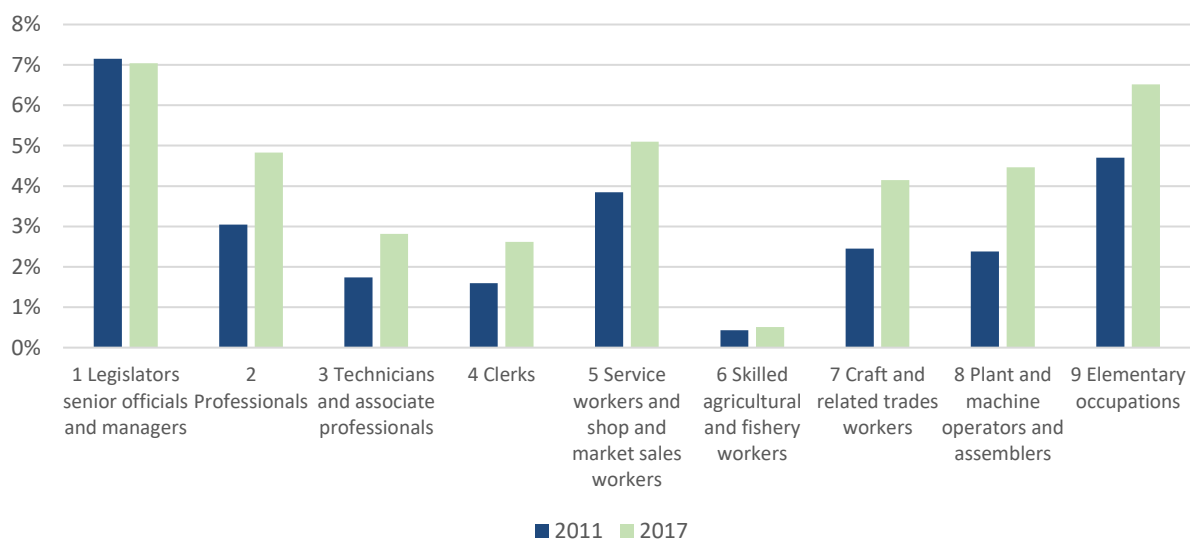
¹⁵⁰ Shortage indicated by PES in sector 712 ('building finishers and related trades workers').

¹⁵¹ Shortage indicated by PES in sector 833 ('heavy truck and bus drivers').

¹⁵² Shortage indicated by PES in sector 911 ('domestic, hotel, and office cleaners and helpers').

¹⁵³ Shortage indicated by PES in the sectors 932 ('manufacturing labourers') and 933 ('transport and storage labourers').

Figure 51 Share of Italians working in another EU country compared to Italians working in Italy according to ISCO-1D occupations, 2011-2017 (15 years and above)



SOURCE: EU-LFS 2017, MILIEU CALCULATIONS

France

In France, only one occupation was found to indicate labour shortages with a simultaneous higher than average (3%) share of movers: 'food preparation assistants'. This occupation is assessed as having a quantitative shortage (see more detail in **Table 12**).

Table 15 ISCO-2D shortage occupations with above-average share of movers in France, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
France average	3%	10%	79%	
Food preparation assistants (94)	11%	17% No data available from PES	55%	Quantitative shortage filled by movers

Some other labour shortage occupations in France were found but their shares of movers being lower than average. These are indicated in Table 15 below, together with a further assessment of whether the shortage is quantitative or qualitative in nature. The sector 'sales workers' indicates a qualitative shortage, while the sector 'personal care workers' shows a quantitative shortage.

Table 16 ISCO-2D shortage occupations with below average share of movers, France, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
France - average	3%	10%	79%	
Sales workers (52)	1%	14% Shortage indicated by PES	114%	Qualitative shortage
Personal care workers (53)	2%	12% No shortage indicated by PES	75%	Quantitative shortage

Spain

In Spain, the following occupations indicate labour shortages with simultaneous higher than average (10%) shares of movers: 'drivers and mobile plant operators', 'agricultural, forestry and fisheries labourers', and 'labourers in mining, construction, manufacturing and transport'. The first of these sectors indicates signs of a quantitative labour shortage, while the sectors 'agricultural, forestry and fisheries labourers' and 'labourers in mining, construction, manufacturing and transport' can be judged as having a qualitative shortage (see more detail in [Table 17](#)).

Table 17 ISCO-2D shortage occupations with above-average share of movers in Spain, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
Spain average	4%	10%	151%	
Drivers and mobile plant operators (83)	8%	11% No data available from PES	124%	Quantitative shortage filled by movers
Agricultural, forestry and fisheries labourers (92)	19%	13% No data available from PES	306%	Qualitative shortage filled by movers
Labourers in mining, construction, manufacturing	5%	31% No data available from PES	200%	Qualitative shortage filled by movers

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
and transport (93)				

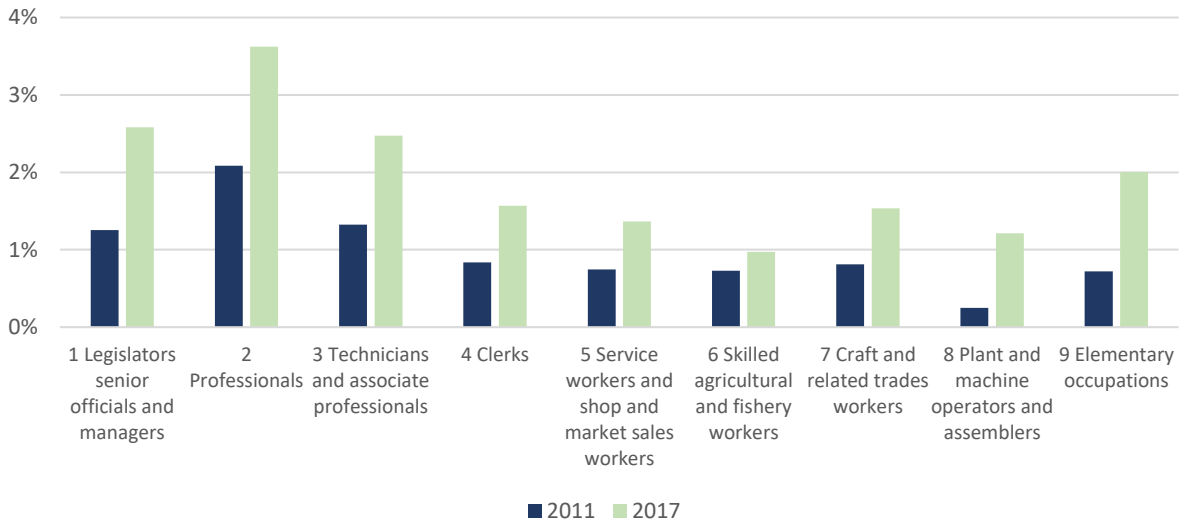
Some other labour shortage occupations in Spain were identified, although with shares of movers lower than average. These are indicated in Table 17 below, together with further assessment of the shortage as quantitative or qualitative. 'Sales workers' as an occupation seems to be affected by a qualitative labour shortage, while 'metal, machinery and related trades workers' shows signs of a quantitative shortage.

Table 18 ISCO-2D shortage occupations with below average share of movers, UK, 2017 (15 years and above)

ISCO-2D	Share of EU-28 movers	Ratio of new hires to employed	Ratio of unemployed to new hires among nationals	Conclusions
Spain - average	4%	10%	151%	
Sales workers (52)	3%	18% No data available from PES	175%	Qualitative shortage
Metal, machinery and related trades workers (72)	2%	16% No data available from PES	122%	Quantitative shortage

The highest shares of Spanish movers working in another EU-28 country were noted in the high-skilled occupations 'professionals', 'legislators, senior officials and managers', and 'technicians and associate professionals'. The analysis detected no shortages in sub-sectors of these occupation groups, as reported by PES. The overall share of movers across all ISCO sectors in Spain changed from 0.9% in 2011 to 1.9% in 2017 (see [Figure 52](#)).

Figure 52 Share of Spanish movers among Spanish nationals working in Spain according to ISCO-1D occupations, 2011 and 2017 (15 years and above)

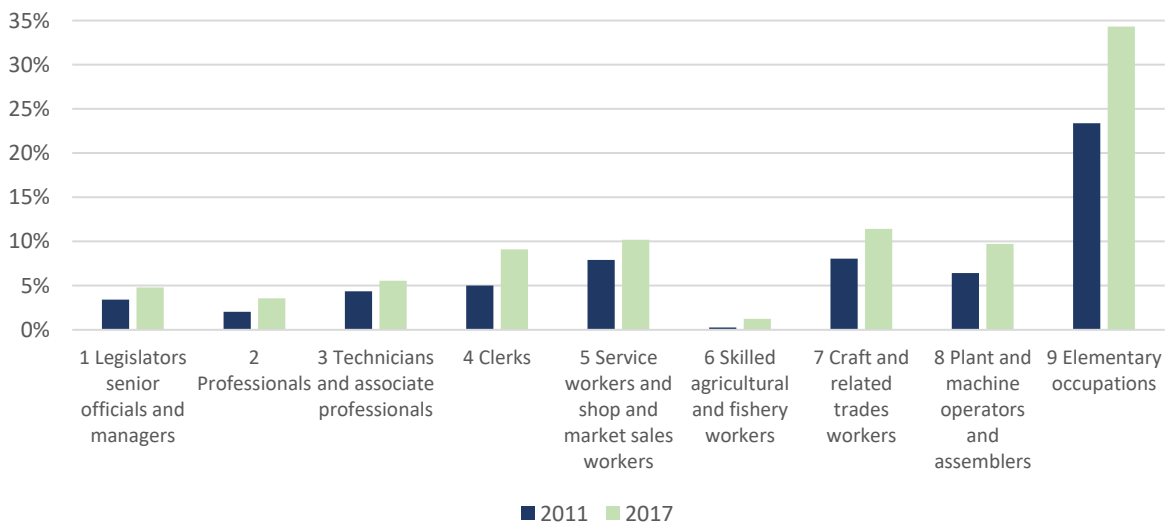


SOURCE: EU-LFS 2017, MILIEU CALCULATIONS

Poland

Poland is one of the largest countries of origin of movers, thus there is a risk that the availability of the labour force for some occupations in Poland may be negatively affected by a significant outflow of movers. In the following ISCO occupations in Poland, the ratio of movers to nationals in Poland employed in the occupation exceeds 5%: 'elementary occupations' (over 30%), 'craft and related trades workers' (11.4%), 'service workers and shop and market sales workers' (10.1%), 'plant and machine operators and assemblers' (9.7%) and 'clerks' (9.1%) (see **Figure 53**). The share of movers has increased since 2011, in particular in elementary occupations (from 23% to 34%), but it has also increased to a minor degree in all other occupations.

Figure 53 Share of Polish movers among Polish nationals working in Poland according to ISCO-1D occupations, 2011-2017 (15 years and above)



SOURCE: EU-LFS 2017, MILIEU CALCULATIONS

The outflow of Polish workers from these occupations seems to have affected several sectors. The analysis of labour shortages according to the ISCO-2D classification indicates that three sub-sectors of 'elementary occupations' show signs of labour shortage in terms of above-average ratio of new hires/employed, namely 'agricultural, forestry and fisheries labourers', 'labourers in mining, construction, manufacturing and transport' and 'food preparation assistants'. In the ISCO-1D sector of 'craft and related trades workers', labour shortage was identified in the sub-sector 'building and related trades workers'. The sector of service workers shows signs of labour shortage in three sub-sectors: 'personal services workers', 'sales workers', and 'personal care workers'. No labour shortages were found in the sector 'plant and machine operators and assemblers'. In the category of clerks, labour shortage was detected in three sub-categories: 'general and keyboard clerks', 'customer services clerks' and 'numerical and material recording clerks'. PES indicates labour shortages in Poland in the following elementary occupations (3D): 933 (transport and storage labourers), 941 (food preparation assistance), 951 (street and related services workers), and 962 (other elementary workers). In crafts, PES indicates shortages in the occupations 711 (building frame and related trades workers) and 754 (other craft and related workers). PES also indicates labour shortages in two sub-sectors of the occupation 'professionals', namely 'software and applications developers and analysts (251); and 'database and network professionals' (252). LFS data did not indicate labour shortage in the professional occupations but the ratio of new hires to employed for the group of occupations '25' was relatively high (7%, compared to 8% average).

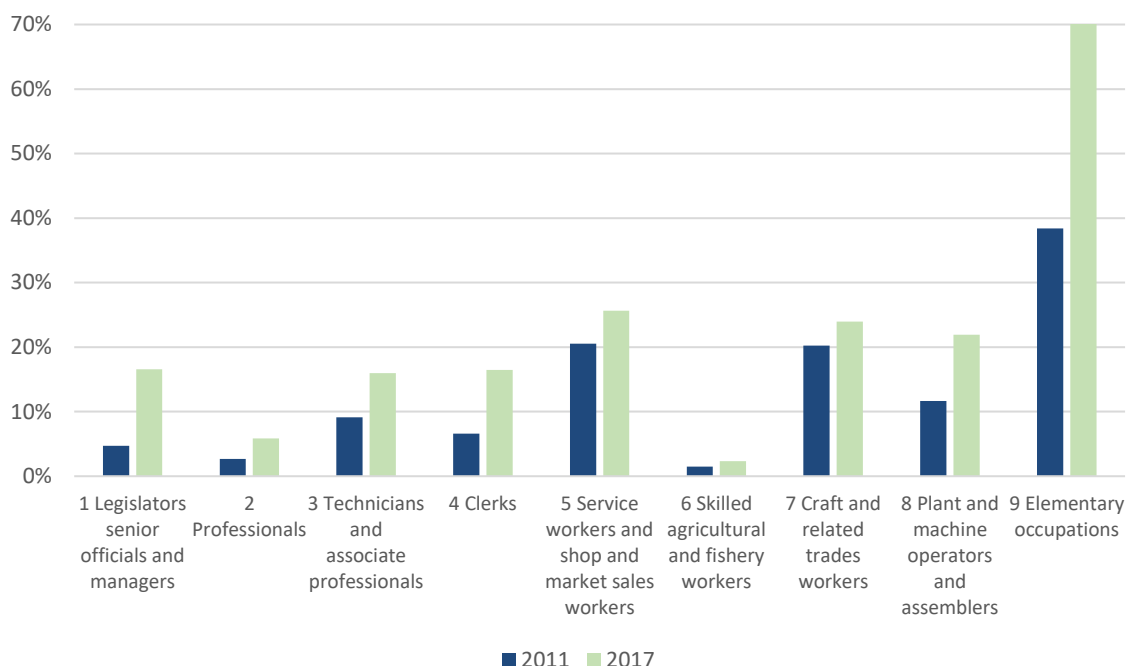
According to the yearbook of the Central Polish Statistical Office¹⁵⁴, the highest job vacancy rate in 2016 was noted in the information and communication sector (2.1%). Transportation and storage sector was second (job vacancy rate 0.9%) while the construction sector was third (0.87%). The high vacancy rate for the transportation and construction sectors is in line with the earlier findings of labour shortage in the ISCO-2D occupation 'labourers in mining, construction, manufacturing and transport'. The high ratio of movers to nationals in the ISCO-1D occupation of 'elementary occupations' to which these occupations belong suggests that these shortages may be at least partly related to the relatively high numbers of Polish movers working in these occupations. The high job vacancy rate in the information and communication sector is in line with findings both at EU level and in Germany, suggesting that the sector of ICT technologies and occupations fit for this sector are facing quantitative shortages which cannot be filled by movers.

Romania

Another large country of origin of movers is Romania. The share of movers to nationals in some ISCO-1D occupations is very high, reaching 70% for elementary occupations. All sectors except 'professionals' are characterised by shares of movers above 10%. The share of Romanians working in another EU country increased significantly between 2011 and 2017, in particular in elementary occupations (from 38% to 70%), legislators, senior officials and managers (from 5% to 17%) and plant and machine operators (from 12% to 22%) (see **Figure 54**).

¹⁵⁴ Central Statistical Office, Yearbook of labour statistics 2017, <https://stat.gov.pl/en/topics/statistical-yearbooks/statistical-yearbooks/yearbook-of-labour-statistics-2017,10,6.html>, p. 163.

Figure 54 Share of Romanian movers among Romanian nationals working in Romania according to ISCO-1D occupations, 2017 (15 years and above)



SOURCE: EU-LFS 2017, MILIEU CALCULATIONS

Like Poland, in Romania several ISCO occupations experience relatively high outflows of workers abroad. Although data are missing for many sectors, labour shortages were identified in three sub-sectors of elementary occupations: 'cleaners and helpers', 'agricultural, forestry and fisheries labourers', and 'labourers in mining, construction, manufacturing and transport', as well as in one sub-sector of 'craft and related trades workers', namely 'building and related trades workers'. PES data for Romania are not available.

3.4.3. Intra-EU mobility and shortage NACE sectors

To identify whether - and how - mobility may be related to labour shortages in certain sectors, another similar analysis to that above was carried out, looking at sectors of economic activity at NACE 1 D level. In addition to the three indicators used above (share of EU-28 movers, ratio of unemployed to new hires among nationals, ratio of new hires/employed among nationals), the Eurostat job vacancy statistics were used to indicate the number of job vacancies as a share of the number of occupied posts and the number of job vacancies.

EU level

(More detailed data can be found in [Table 40](#) and [Table 41](#) in Annex.)

At EU level, four sectors were identified which may experience **qualitative labour shortages filled by movers**: **accommodation and food service activities** (also in Germany and UK), **activities of households as employers**¹⁵⁵ (also in Germany, UK, Spain), **administrative and support service activities** (also in Germany and Spain),

¹⁵⁵ The full name of the sector is: activities of households as employers; undifferentiated goods-and services-producing activities of household for own use.

and **construction** (also in Germany and Spain). The results are clearest for ‘activities of households as employers’ (although job vacancy data are missing): the share of new hires/unemployed is the second highest among all sectors, the share of movers is significantly high, and the share of unemployed nationals to new hires is the highest of all. Results for accommodation and food services, as well as administrative and support service activities, are similar, but the shares of unemployed nationals are not as high. The construction sector also sees a very high share of unemployed nationals, a comparatively high share of movers, and job vacancies/ new hires are also quite frequent, although less frequent than for the other three sectors.

Quantitative shortages may be faced in the **communication and information sector**, as well as in **professional, scientific and technical activities**. For both, job vacancy rates are well above the median and the ratio of unemployed nationals to new hires is quite low (around 50%). However, **movers fill this shortage to a limited extent**, with a share about average, compared to other sectors. The shortage in the communication and information sector seems to go hand-in-hand with the labour shortage in the ISCO category ‘information and communication technology professionals’, as indicated in section 3.4.2 above.

Germany

(More detailed data can be found in [Table 42](#) and [Table 43](#) in Annex.)

The situation in Germany reflects the EU level findings, with some exceptions. In addition to **information and communication and professional activities, education and human health and social work activities** were found to be sectors which may face **quantitative labour shortages**. This is only partially reduced by mobility, since the shares of movers are average or below average compared to other sectors. NACE sector findings show convergence with some results of the ISCO level analysis, where quantitative shortages were found in the following occupations: ‘teaching professionals, information and communication technology professionals’, ‘legal, social, cultural and related associate professionals’, and ‘information and communication technicians’.

Sectors which see **qualitative labour shortages** that are clearly filled by EU-28 movers are similar to those at the EU level: **accommodation and food service activities, activities of households as employers, construction, and transportation and storage**.

The shares of **German movers abroad** are fairly small (3% or less¹⁵⁶), but the largest shares are in accommodation and food service activities and in the arts (both at 3%). While accommodation and food services have a high job vacancy rate, movers may leave the country to find better working conditions or to gain experience elsewhere.

UK

(More detailed data can be found in [Table 44](#) and [Table 45](#) in Annex.)

In the UK, the situation is slightly different for certain sectors. Construction does not seem to be a shortage sector, with relatively low job vacancy rates and share of unemployed nationals. On the other hand, in addition to the other **qualitative shortage** sectors identified above, similar results were found in the UK for **wholesale and retail trade**¹⁵⁷, **water supply and sewerage**, but also **professional and financial/insurance activities**. However, fairly high shares of movers can only be found in wholesale and retail trade and in professional activities, while in professional activities, financial and insurance activities and water supply and sewerage the shares are lower.

¹⁵⁶ With the exception of activities of extraterritorial organisations and bodies.

¹⁵⁷ The full name of the sector is: wholesale and retail trade; repair of motor vehicles and motorcycles.

Other sectors that see quantitative shortages but do not rely heavily on movers (share of movers below the average) are **electricity, human health and social work, information and communication** and **other service activities**.

Two sectors with comparatively **high shares of movers** in the UK are **manufacturing and transportation and storage**. However, these sectors do not seem to be typical shortage sectors because the share of unemployed nationals is above the median and job vacancy rates and share of new hires/employed are quite low (slightly below the median).

Spain

(More detailed data can be found in [Table 46](#) and [Table 47](#) in Annex)

In Spain, the situation is different than that at EU level for certain sectors. **Construction** has a very high share of new hires from employed (although the job vacancy rate is low), a high share of unemployed nationals and a fairly high share of mobile workers, indicating a **qualitative shortage**, levelled out by movers. It should be noted that the analysis of ISCO occupations shows a qualitative shortage in the occupation 'labourers in mining, construction, manufacturing and transport', which seems to validate these findings. Two other sectors with potential **qualitative shortages** are **public administration and administrative and support service activities**, both of which have quite high vacancy rates (especially public administration) and shares of unemployed nationals to new hires (again, public administration in particular). Significant numbers of movers were not identified in public administration, but to a certain (although not very high) extent in administrative and support service activities. However, since the share of unemployed is extremely high in both sectors, the case may simply be that although there are many vacancies and new hires, these are still insufficient against the large numbers of unemployed.

Concerning **qualitative shortages**, **agriculture** has relatively high shares of new hires per employed while at the same time a very high share of unemployed compared to new hires, and a high share of movers. Similar conclusions were drawn on the ISCO occupation 'agricultural, forestry and fisheries labourers'. These are indications that movers here take up positions that nationals may not want to fill. **Accommodation and food service activities** is the sector with the second-largest share of mobile employees. New hires are very frequent in this sector but vacancies seem to be filled quickly, in view of the vacancy rate (mid-range, compared to other occupations). The rate of unemployed to new hires is low compared to other sectors.

Unlike Germany and the UK, the ratio of unemployed to new hires is a lot higher in Spain than at EU level, the average ratio being 159% (compared to 69% at EU level). In all but one sector (professionals), the ratio is over 100%, meaning that the number of unemployed in the sector was at least twice as high as the number of newly filled posts in this sector and thus that the numbers of people who remain unemployed exceed those who recently took up a job in this sector. Thus, a 'quantitative labour shortage' in terms of a purely quantitative lack of labour supply does not fit in Spain's case. The high number of new hires compared to the low job vacancy rates indicates that there is enough labour supply and that vacancies are quickly filled.

The largest **ratio of Spanish movers abroad**¹⁵⁸ compared to nationals working in Spain can be found among **professionals**. Indeed, this is also a sector with a moderately high job vacancy rate and the lowest share of unemployed to new hires, indicating that past outflows may have caused shortages in this sector. The second largest share work in the **electricity sector** (electricity, gas, steam and air conditioning supply). As a sector with a high job vacancy rate and simultaneous high share of unemployed nationals, it is unlikely that mobility has caused serious shortages in this sector. Other sectors that have an above-average ratio of Spanish nationals working abroad are **financial and insurance**

¹⁵⁸ Except for those working in extraterritorial organisations.

activities, administrative and support service activities and **information and communication**. These two latter have comparatively high job vacancy rates, but only the **information and communication sector** indicates a *quantitative shortage*, possibly aggravated by outflows of Spanish nationals.

Italy

(More detailed data can be found in [Table 48](#) and [Table 49](#) in Annex.)

The following sectors show *qualitative labour shortages* and rely on EU-28 movers to a large extent: **accommodation and food service activities** (medium-level share of unemployed), **activities of households as employers** (extremely high share of movers in IT), **construction** (second highest share of movers) and **administrative and support service activities** and **other service activities** to a smaller extent. The qualitative shortage in the sector of households as employers is validated by the analysis of ISCO sectors, where shortages were noted in the occupations 'personal services workers' and 'personal care workers'.

The **agricultural sector** shows indications of a *quantitative shortage* and relies strongly on movers (third highest share of movers among all sectors). In addition, the sectors **manufacturing** and **transportation and storage** indicate possible quantitative shortages and rely on movers, albeit to a smaller extent than the agricultural sector. At ISCO level, the occupation 'drivers and mobile plant operators' shows signs of a quantitative shortage, which seems to be aligned with the shortage in the transportation and storage sector.

By far the largest ratio of *Italian movers abroad* (compared to nationals) can be found in **accommodation and food services**. In Italy itself, this sector relies heavily on movers from other Member States. Many Italian movers also work in the sector of **information and communication** in other Member States, while in Italy itself this sector may see a quantitative shortage (medium level of new hires/employed, but also a lower share of unemployed than most other sectors). Comparatively high shares of Italian movers also work in mining and quarrying, but this sector does not show any indications of shortages in Italy.

France

(More detailed data can be found in [Table 50](#) and [Table 51](#) in Annex.)

In France, some sectors show indications of *quantitative shortages* while simultaneously relying to a large extent on EU-28 movers: **accommodation and food services** (highest score on new hires/employed, third highest share of movers); **administrative and support service activities** (third highest score on new hires/employed and **real estate activities** (fourth highest score on new hires/employed). The shortage in accommodation and food services is validated by ISCO findings, where the occupation 'food preparation assistants' shows similar signs of a quantitative shortage.

The **agricultural sector** also relies strongly on movers, as it is possibly short of potential workers among French nationals (medium score on new hires/employed but fairly low share of unemployed nationals).

The following were also identified as shortage sectors with low shares of movers: arts (quantitative shortage), other service activities (qualitative shortage), wholesale and retail trade (qualitative shortage), professionals (quantitative shortage), transportation and storage (qualitative shortage).

Poland and Romania were analysed from a country of origin perspective, primarily looking at the sectors which see a high ratio of Polish/Romanian nationals working in another EU country (movers) compared to nationals working in the same sector in the home country.

Poland

(More detailed data can be found in [Table 52](#) in Annex.)

By far the **highest ratio of movers** abroad compared to nationals work in **activities of households as employers** (142%), a sector that does not have indications of shortages in Poland itself (lowest ratio new hires/employed). By contrast, mobility may contribute to shortages in the sectors **accommodation and food services** (second highest share of movers abroad), although this is a qualitative shortage (high share of unemployed nationals) and thus may simply indicate high turnover, and **administrative and support services, construction** and **other service activities** (third and fourth highest share of movers abroad), which also show qualitative shortages. The same is true for **wholesale and retail trade** and **manufacturing**, although to a lesser extent.

The ratio of Polish movers to nationals is also fairly high in the **human health and social work** sector and although the indicator for new hires/employed is quite low, the share of unemployed is also very low, indicating that there may be quantitative shortage, which may, in turn, relate to mobility.

For the sectors **information and communication** and among **professionals**, the ratios of Polish movers to nationals are lower than in other sectors (value at the median) but there seem to be quantitative shortages, as indicated by low shares of unemployed/new hires and high job vacancy rates. Thus, even if outflows of nationals are not excessive compared to other sectors, they might nevertheless contribute to shortages.

Romania

(More detailed data can be found in [Table 53](#) in Annex.)

Similar to Polish nationals, by far the **most movers abroad** compared to nationals work in **activities of households as employers** (404%) and there is a strong indication of a shortage (highest ratio of new hires/employed; vacancy rate not available), which may be qualitative or quantitative (data on unemployed are below reliability). Comparatively high ratios of movers can also be found in the sector **transportation and storage**, which seems to see a qualitative shortage. There may also be a shortage (low job vacancy rate, high share of new hires/employed) in **accommodation and food services** but it is unclear whether this is simply high turnover in this sector. The same can be said for **construction** (medium-level of unemployed) and **other service activities** (which have a high job vacancy rate in practice).

Human health and social work activities have the second highest job vacancy rate and the sixth highest share of movers abroad. These seem to be clearly **quantitative shortages**, as the share of unemployed to new hires is, although of low reliability, very low (0%). These shortages are likely to be linked to some extent to the outflows of Romanian workers in that sector.

4. HOUSEHOLD COMPOSITION OF EU-28 MOVERS

Household composition refers to the size of a household and the characteristics of its members (age, nationality, labour status, etc.).

Analysing the composition of households in which EU-28 movers live is relevant to the policy context in several ways, such as: the nationality of a mover's spouse is (in addition to the mover's own labour status) relevant for their own right of residence¹⁵⁹; inactive family or household members of active movers may derive rights to access social benefits, such as pension, family or healthcare benefits¹⁶⁰; cases where an economically active person has inactive family members living in a different Member States may require transportability of benefits.

In December 2016, the European Commission proposed to amend the social security coordination rules with the aim of safeguarding free movement and protecting citizens' rights, while strengthening the tools of national authorities to address possible abuse (COM (2016) 815 final). The proposal introduces improvements to the areas of (i) access by economically inactive citizens to social benefits (equal treatment); (ii) applicable legislation for posted workers and persons working in one or more Member States; (iii) long-term care benefits; (iv) unemployment benefits; and (v) family benefits.

Furthermore, movers' family formations are relevant to the host country's socioeconomic development and questions of integration: the existence of children in mover households, for example, will affect not only the need for education possibilities, but also the country's future labour force potential; different types of partnerships regarding the national background of the partner may have different effects on integration processes in the host country, and European integration and identity on a larger scale¹⁶¹. More precisely, inter-ethnic marriage can be considered a strong indicator for cultural and emotional integration¹⁶². Marriages between movers and nationals of the host country are also likely to have a positive effect on economic integration through the acquisition of important resources to access the labour market, most notably language skills¹⁶³.

This section therefore aims to quantify movers' household composition, using EU-wide comparable data from the EU-LFS. It focuses on several aspects related to the above:

- Section 4.1: the size and characteristics of adult movers' households (number of children and elderly, number of dependent persons, etc.), as well as compared to nationals' households; this section looks at differences at the individual level, comparing the types of household that adult movers live in with those that adult nationals live (this includes households with persons of different nationalities);
- Sections 4.2 and 4.3: characteristics of different types of couples (mover couples, mixed couples, national couples) and comparing those to single adult movers;
- Section 4.4: estimations of the share of movers who are or were likely to support family members residing in another Member State. For methodological reasons, this

¹⁵⁹ Regulation (EU) No 492/2011 on freedom of movement for workers within the Union.

¹⁶⁰ Regulation (EC) No 883/2004 of the European Parliament and of the Council on the coordination of social security systems, 29 April 2004, available at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02004R0883-20140101&from=EN>

¹⁶¹ Gaspar, S., 2008, Towards a definition of European intra-marriage as a new social phenomenon, CIES e-Working Paper No. 46/2008.

¹⁶² Rother, N., 2008, Better integration due to a German partner? An analysis of differences in the integration of foreigners in intra-and inter-ethnic partnerships in Germany, German Federal Office for Migration and Refugees, p. 22, quoting Bernhard, 2002a, Potential for solidarity in migrant families (*Solidarpotenziale von Migrantenfamilien*).

¹⁶³ *Ibid.*

analysis was limited to recent movers (those who moved between 2006 and 2016) and cross-border workers.

The analysis in this section is based on EU-LFS microdata from 2016. Data from the following countries has been excluded from the analysis due to low reliability (BG, HR, LV, LT, RO¹⁶⁴), incomparability of data with the other countries (DK, FI, SE¹⁶⁵) or data revisions (IE¹⁶⁶). Nevertheless, comparisons showed that EU aggregates yielded very similar results, including or excluding these countries, thus their exclusion does not have an effect on the results based on EU aggregates presented below.

All results refer to persons living in private households.

Key findings

Household size

- Around 50% of EU-28 movers aged 20-64 years live in 3 to 5-person households, 30% in 2-person households and 17% in 1-person households. There is little difference compared to nationals, although EU-28 movers are slightly more likely to live in smaller households (one or two persons).
- Results for couples aged 30-49 years show a similar trend: mover couples¹⁶⁷ and mixed couples are more likely to live in smaller households (two or three people) than national couples.

Household composition

- The largest group of EU-28 movers live as a couple with children (33%), the second largest as a couple without children (22%), the third largest as single adults without children (17%) and two or more adults without children (15%). Small shares live as two or more adults with children (10%) or one adult with children (4%).
- Compared to nationals, EU-28 movers live slightly more frequently as couples with children whereas nationals live more frequently in households of two or more adults without children. This is due to the fact that EU-28 movers more often have a child in their households and nationals more often live in a household with an elderly person (65 years and upwards) (see below).
- Movers are also slightly more likely to live in single households than nationals.

Marital status and nationality of partner¹⁶⁸:

- The largest share of EU-28 movers is married (53%), while 37% are single, and 10% widowed, divorced or legally separated. Of those who are married, the large majority (93%) live with their spouse in the same household. This share is lower

¹⁶⁴ The number of EU-28 movers aged 20 to 64 is below reliability limits or of low reliability and further break-downs would result in unreliable data

¹⁶⁵ Data from specific household files would have to be used (also for LU), but total numbers of EU-28 movers aged 20-64 deviate strongly from the data from the usual samples (annual averages, published on Eurostat) – a comparison of data from different types of samples would not be reliable. Data for Luxembourg from the specific household sample was included because the figures for EU-28 movers were almost the same as the ones published on Eurostat.

¹⁶⁶ Data has undergone revisions and the total number of EU-28 movers calculated from the 2016 microdata file was considered to deviate too much from the data published on Eurostat.

¹⁶⁷ 'Mover couples' are couples where both spouses/partners are EU-28 movers; 'mixed couples' are couples where one spouse/partner is an EU-28 mover and the other is a national; 'national couples' are couples where both spouses/partners are nationals.

¹⁶⁸ The term 'partner' is used here to include spouses and co-habiting partners.

than among nationals (97%), perhaps indicating a geographical separation following the move of one spouse.

- There is no difference between nationals and movers at EU level. In most large destination countries, however, movers are more likely to be single and less likely to be or to have been married.
- Of those adult EU-28 movers who live in a household with a partner, the majority (65%) live with another EU-28 mover as a partner, while a further 30% live with a national as a partner¹⁶⁹.

Children in households:

- There is no difference between movers and nationals of working age regarding the number of *own* children in the household. However, movers are more likely to live in a household with one or more children (regardless of whether or not their own) of 15 years and under.
- This seems to be due to an *age bias*, whereby a much larger share of movers than nationals are of an age where living with (small) children is more likely, namely between 25 and 49 years. When controlling for age, as in section 4.2 for example, and looking at a more defined age group (30 to 49 years), results show that mover couples (and mixed couples) are less likely to live with one or more children than national couples.
- Among 30 to 50-year old individual EU-28 movers, the likelihood of the presence of a child or children in the household increases with years of residence. This indicates that many children of EU-28 movers are actually born in the country of residence after the move.

Age bias means that the difference can most likely be attributed to the different age structures of movers and nationals rather than to other characteristics of the two groups.

Presence of parents and elderly persons:

- A larger difference is observed here than for other characteristics. Nationals of working age are much more likely to live with one or both their parents (8 pps difference) or with any person aged 65 years and above (6 pps difference) than EU-28 movers.
- However, this difference is also likely to reflect the age bias¹⁷⁰. When looking at couples aged 30 to 49 years, no significant differences were observed among those living with an elderly person.

Presence of inactive adult(s) in households:

- The share is a lot lower among movers than nationals (7 pps), although the reverse is true in Germany and France. This is most likely due to the age bias and the higher share of nationals of working age living with elderly people (their parents or persons of 65 years and above).
- The share of EU-28 movers who live with one or more unemployed persons is slightly higher among movers than nationals (1 pps).

¹⁶⁹ The remaining 5% are likely to be those who live with a partner who is a TCN.

¹⁷⁰ As pointed out above, even among those of working age, movers tend to be younger (below 50 years) than nationals. On the other hand, those of higher working age (50 years and above) may be considered more likely to live with their parents who, in return, would also be older and are more likely to need to be taken care of. Due to this higher share of those with an older working age, nationals may have overall higher shares of persons living with their parents or with elderly persons.

Labour market status:

- As mentioned in section 2.2, individual EU-28 movers of working age are, at EU level, more likely to be employed and more likely to be active than nationals.
- When looking at couples however, and after controlling for age (using only the age group 30 to 49 years), results show that EU-28 movers living in mover couples are less likely to be employed than EU-28 movers living in mixed couples, or national couples. This is due to a 'couple effect' (single adult mover's employment rate being a lot higher than that of those living in a couple, see below) as well as the age effect.

Education

- Mover couples have the lowest share of highly educated persons and the highest share of persons with a low educational level. For mixed couples, the opposite is true and they also have much higher shares of highly educated persons than national couples. The latter may indicate a selection effect when it comes to choosing a partner of another nationality, i.e. the chance of this might be higher among those with higher educational levels.

Single adult movers compared to movers living in couples

- Among EU-28 movers, the chances of employment are higher for single adult movers (85%) than for movers living in mover couples (77%) or mixed couples (83%).
- Single adult movers have a higher share of highly educated (37%) than movers in mover couples (30%) but a lower share than movers or nationals in mixed couples (49%).

EU-28 movers with partners or families in another Member State

- For methodological reasons, the analysis looked at two groups of EU-28 movers: *cross-border workers* and *recent movers living with a partner who is also an EU-28 mover*.
- Of those cross-border workers who are employed (and thus receive their main social security) in Germany, France, Austria or Luxembourg, 60-70% live with a partner in the same household in their country of residence, 10-20% live with an inactive partner in the same household, and around 50% live in a household with one or more children.
- Among 5.2 million¹⁷¹ *recent* EU-28 movers (who moved within the past 10 years) of working age, there are 1.1 million mover couples where both movers arrived within the past 10 years. Of those, 6% (60,000) had their youngest child outside the current country of residence, indicating that the family formation took place in the country of origin or yet another country outside the current country of residence. Of those couples, the analysis identified instances where one mover moved before the other and was thus potentially responsible for the social security contributions of a partner and a child in another country. The analysis showed that this was the case for around 120,000 recent EU-28 movers, or 2% of all recent EU-28 movers. This is a very conservative estimate because even if the youngest child is born in the current country of residence, family formation may still have taken place before the move.

4.1. Household characteristics of EU-28 movers compared to nationals

This section provides an initial overview of the household composition and family situation of EU-28 movers compared to nationals. The composition analysed refers to the household size and characteristics, for example if there are dependent household members (children and elderly), and the activity status of the adult household members. The analysis refers to working-age (20-64 years of age) individuals and looks at the kinds of households they live in.

Results in this section refer to the individual level, i.e. the analysis looks at the composition of EU-28 mover households compared to the households that nationals live in. These households may include mixed couples in terms of nationalities. Several indicators were calculated for **adult** EU-28 movers and nationals, meaning persons aged 20-64 years old who are economically independent from their parents (active).

Table 19 Shares of adult EU-28 movers and nationals (20-64 years) living in a household with one or more dependent household members, by type, EU-28 aggregate, 2016

	EU-28 movers	Nationals
One or more own child/children in household	47%	48%
One or more children below 15 years in household	39%	32%
One or more dependent children ¹⁷² below 25 years in household	47%	43%
One or both parents in household	5%	14%
One or more persons aged 65 years+ in household	4%	10%
One or more dependent household members in same household (child below 25 years or person aged 65 years+)	49%	51%

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

SOURCE: EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

The analysis showed no significant differences between the **size of households** of EU-28 movers and those of nationals. However, a slightly higher share of movers live in one-person households than nationals (17%, compared to 14%) and movers live less often in households with three or more persons (54% of movers vs. 58% of nationals).

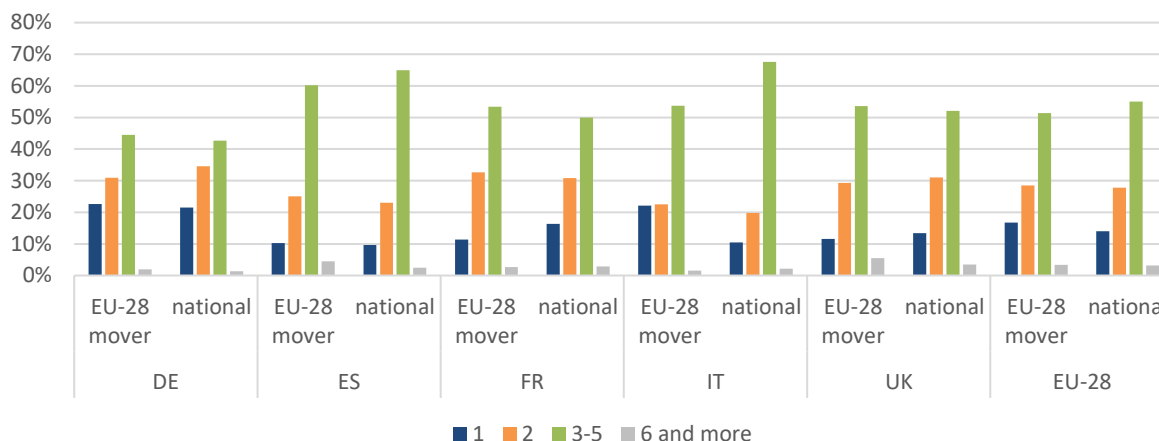
This EU-level tendency of movers to live in smaller households than nationals is observed to a very small extent in Germany (**Figure 55**). In Italy, the shares of movers living in smaller households are far larger than among nationals. By contrast, in France and the UK, movers tend to live in larger households than nationals, although the difference is very small and may also be due to the fact that UK and French nationals are less likely to live in household of three or more persons than, for example, Italians. Spain showed no clear tendency (**Figure 55**).

¹⁷¹ The EU aggregate excludes data for the following countries: BG, DK, FI, HR, IE, LT, LV, SE, RO because the number of EU-28 movers deviates by over 10% from Eurostat published data (DK, IE, FI, LV, SE) or because data on EU-28 movers are below reliability limits (BG, HR, LT, RO).

¹⁷² The EU-LFS definition of 'child' is used here and includes: either a person below 15 years or a person between 15 and 24 years who is economically and socially dependent on their parent. See: Eurostat, EU-LFS User Guide, p. 42, available at: <https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf>

Smaller destination countries in which large differences can be seen (10 pps or more) between EU-28 movers and nationals in household size are Greece and Hungary, where EU-28 movers very clearly tend to live more often in smaller households (one or two persons) than nationals, and less often in larger ones (see [Table 54](#) in Annex).

Figure 55 Share of working age EU-28 movers and nationals, by number of persons living in their household, EU-28 aggregate and main countries of residence



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

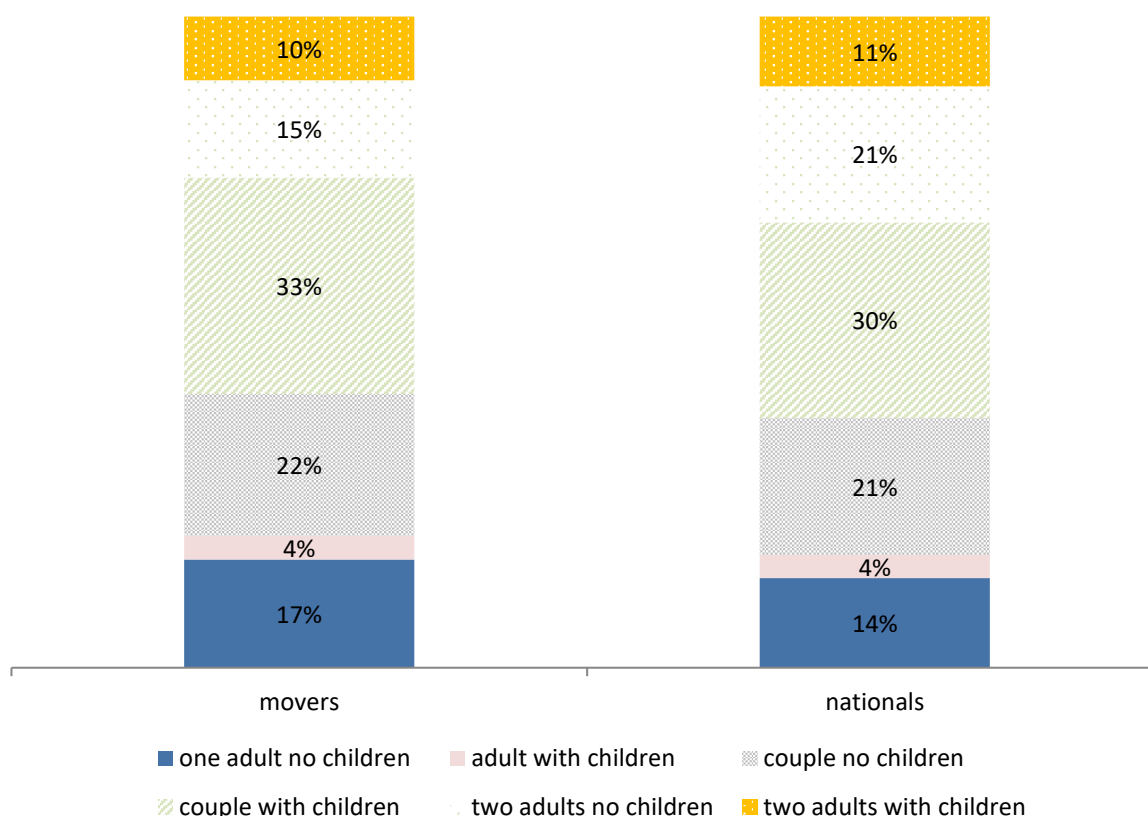
SOURCE: EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

No large differences were observed between movers and nationals in their **household composition**. The main difference at EU level is that EU-28 movers tend to live slightly more frequently as a couple with children than nationals (33%, compared to 29%). This is also the case in all individual Member States, except France and Hungary.

On the other hand, nationals tend to live more frequently than EU-28 movers in households of two or more adults without children (21%, compared to 15% among movers). This is the case in all Member States. Differences are particularly marked in Spain, Greece, Hungary and Portugal, where the share of nationals living in households of two or more persons without children is over 10 pps higher than that of movers. At EU level, this corresponds to the fact that nationals more often live in a household with one or more persons aged 65 years and above (see below).

A slightly higher share of movers than nationals (17%, compared to 14%) live in a single adult household without children, corresponding to the findings on household size above. Particularly strong differences were noted in Hungary and Italy, where differences exceed 10 pps.

Figure 56 Household composition of adult EU-28 movers and nationals at EU level, 20-64 years, 2016¹⁷³



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

NUMBERS REFER TO WORKING AGE 'ADULTS' = PERSONS AGED BETWEEN 25-64 YEARS OR PERSONS AGED BETWEEN 20-24 YEARS WHO ARE SOCIALLY AND ECONOMICALLY INDEPENDENT OF THEIR PARENTS (EU-LFS DEFINITION¹⁷⁴)

SOURCE: EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

At EU level, there is no difference between EU-28 movers and nationals in their **marital status**. Among both groups, the largest share is married (53%) while 37% are single and 10% widowed, divorced or legally separated (see **Table 55** in Annex). Nevertheless, there are differences at Member State level: in most of the large destination countries, EU-28 movers are more likely than nationals to be single and less likely to be or to have been married. This tendency is small in Germany, Spain and Italy and quite large in France (9 pps difference). In the UK, on the other hand, EU-28 movers are less likely to be single and more likely to be or to have been married. Although this tendency not very strong, it does seem to influence the overall result at EU level.

In the smaller destination countries, large differences were observed in Malta and Slovenia¹⁷⁵, where the share of EU-28 movers who are single is over 10 pps lower than that of nationals. In Slovenia, the larger difference is also due to the higher share of nationals being single (46%), compared to the EU average (37%). Nevertheless, the share of movers being single is quite low (20%) and those being married quite high (71%). Results are of low reliability and should not be over-interpreted. The opposite was noted in the Czech Republic and Hungary, where the share of EU-28 movers who are single is over 10 pps higher than among nationals. In Hungary, this is due to a factual higher rate of single movers (48%), while the rate of single nationals is similar to the EU level (36%);

¹⁷³ Results for individual Member States can be found in Table 56 in Annex.

¹⁷⁴ Eurostat, EU-LFS User Guide, p. 42, available at:

<https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf>

¹⁷⁵ The data for Slovenia are of low reliability.

In the Czech Republic however the difference is also due to a lower share of nationals being single (31%) and a slightly higher share of EU movers being single (43%) than at EU level.

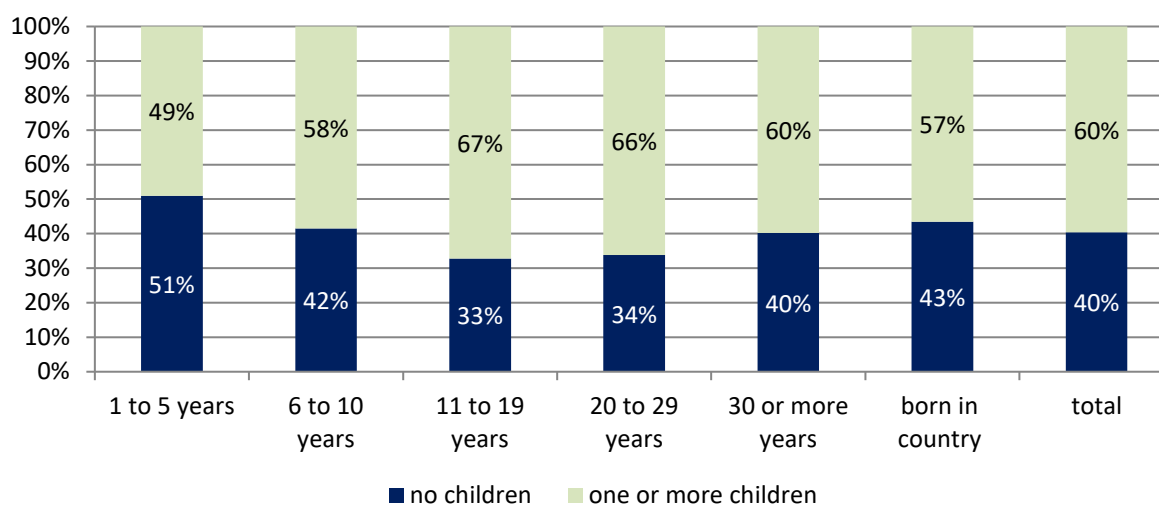
Of those EU-28 movers who are married, **93% live in the same household as their spouse**. This share is slightly higher among nationals, where 97% of married persons share their household with their spouse.

The share of EU-28 movers **who live with one or more own children** in the same household¹⁷⁶ is almost the same as that of nationals, at 47% and 48%, respectively. However, EU-28 movers are slightly more likely than nationals to **live in a household with one or more children aged 24 years or less**, and they are even more likely to **live in a household with one or more children aged 15 years or less** (Table 19).

The situation in the main destination countries (DE, UK, ES, FR, IT) reflects that at EU level, whereby EU-28 movers are slightly more likely to live in a household with one or more children. In Spain, the difference is very large (11 pps) (see Figure 69 in Annex). Further large differences were noted in Estonia¹⁷⁷ and Slovenia¹⁷⁸, where the share of movers living with at least one child below 25 in the same household is over 10 pps higher than among nationals.

Whether or not EU-28 movers live in a household with children changes with the number of years of their residence in the country. Of adult movers aged 30-50 years old¹⁷⁹, the share of those movers living in a household with at least one child increases with the number of years of residence, up to 20 years of residence (see Figure 57 below). For persons who lived in the country for more than 20 years, the share decreases again, suggesting that these might be older age movers whose children have moved out of their parents' household.

Figure 57 Shares of EU-28 movers (30-50 years), with and without children in the same household, by years of residence, EU-28 aggregate, 2016



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

SOURCE: EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

¹⁷⁶ The EU-LFS only allows for an estimate of the number of persons who live in a household with their own child(ren) and those who do not. It does not allow estimates of the number of persons who have child(ren) in general, regardless of the household they live in. Source: Written reply by GESIS Leibniz Institute for Social Sciences, received on 17/09/2018.

¹⁷⁷ Data are of low reliability.

¹⁷⁸ *Ibid.*

¹⁷⁹ This age group was chosen to control for the effect of age on the presence of children in the household: younger or older persons are less likely to live in a household with a child.

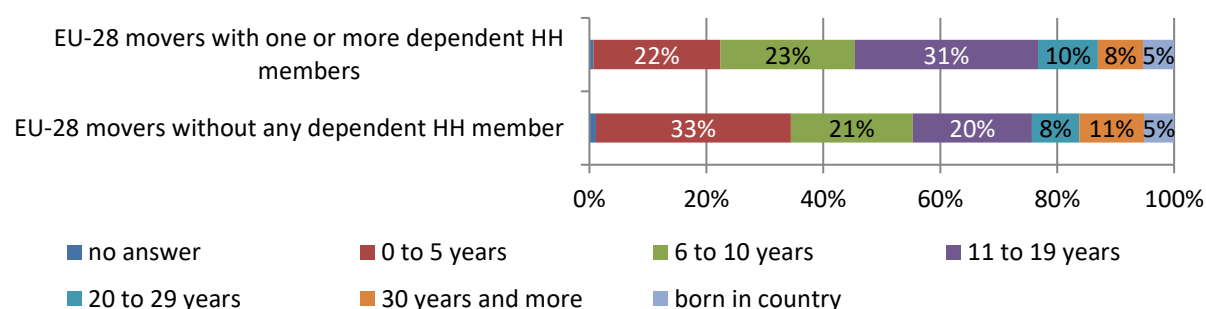
The difference between EU-28 movers and nationals in the share of those **who live with one or both of their parents in the same household** is quite large: only 5% of EU-28 movers live with one or both of their parents, while this share is 14% among nationals. The same tendency can be found in all individual Member States, with some showing an even greater difference, e.g. in Spain and Italy, 7% of EU-28 movers and 20% of nationals live with their parent(s).

Similar results were observed in the shares of those **living with another person aged 65 years or above** in the same household, at 4% among EU-28 movers and 10% among nationals.

Taking children and elderly people together can identify the numbers of movers and nationals who share a household with at least one **'dependent' person**. Here, the latter is defined as either a child aged up to 24 years who is economically and socially dependent on their parents, or a person aged 65 years and above. At EU level, the share of those living with at least one 'dependent' household member is similar among EU-28 movers (49%) and nationals (51%). However, there are differences at Member State level (see **Figure 70** in Annex). Among the main destination countries, Germany, Spain and the UK see a slightly higher share of EU-28 movers than nationals with one or more dependent household members. In France, there is almost no difference. In Italy, on the other hand, nationals are more likely to live with one or more dependent household members than movers. Other countries with larger differences (10 pps or more) are Hungary and Slovakia¹⁸⁰, where nationals are much more likely to share a household with a dependent member.

The number of years of residence also seems to influence whether or not EU-28 movers share a household with a dependent person. While EU-28 movers are less likely to live with one or more economically dependent household member(s) during the first five years of residence, they become more likely to do so after five years and in particular after 10 years of residence. The likelihood decreases again after 30 years of residence (**Figure 58**).

Figure 58 Adult EU-28 movers with and without dependent household members¹⁸¹, by years of residence, EU-28 aggregate, 2016 (bars from left to right correspond to answer categories from left to right, first line and then second line in the legend)



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

EU-28 AGGREGATE EXCLUDES FI, MT, AND PL, DUE TO INVALID DATA FOR 'YEARS OF RESIDENCE'

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

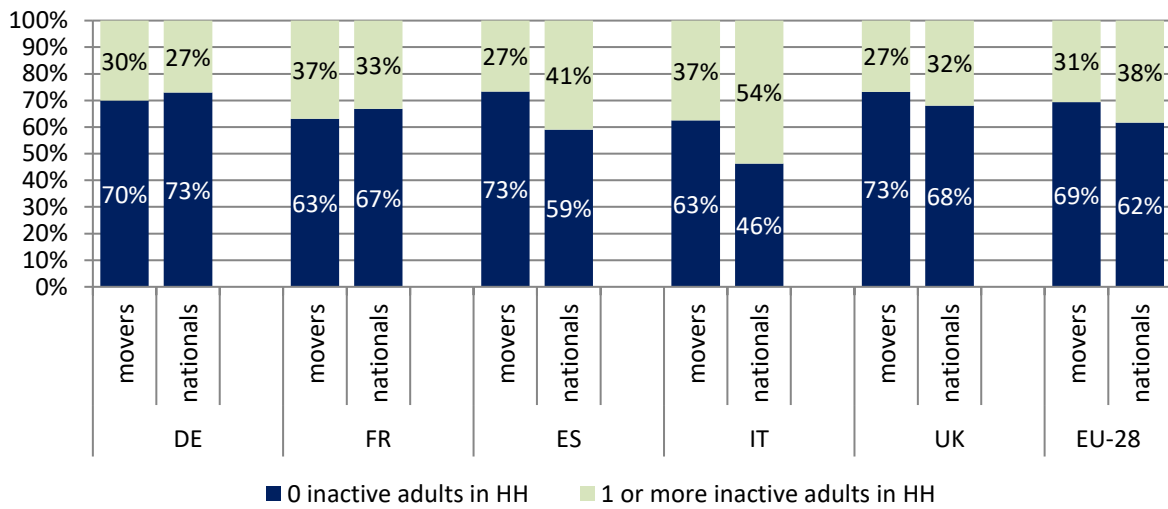
'Dependent' persons were defined mainly through age, and the analysis examined if an adult of working age lived with one or more persons of an age in which he/she is likely to be inactive and thus dependent on the household member.

¹⁸⁰ Figure is of low reliability.

¹⁸¹ Defined as being either a child aged up to 24 years who is economically and socially dependent on their parents, or a person aged 65 years and above.

However, one can also look at the **economic status** of the adults in households of movers and nationals more generally. Here, the study compared the shares of movers/nationals **who share a household with at least one inactive adult**. Results at EU level show that the share of EU-28 movers who live with one or more inactive adult(s) in the household is lower than that of nationals (31%, compared to 38%). In the main countries of residence, results varied, however, with the UK, Italy and Spain show the same tendency as the EU aggregate, while Germany and France had higher shares of movers of those who live with at least one inactive adult household member.

Figure 59 Shares of adult EU-28 movers and nationals (20-64 years) who share a household with none or with one or more inactive adults, EU-28 aggregate and main countries of residence, 2016

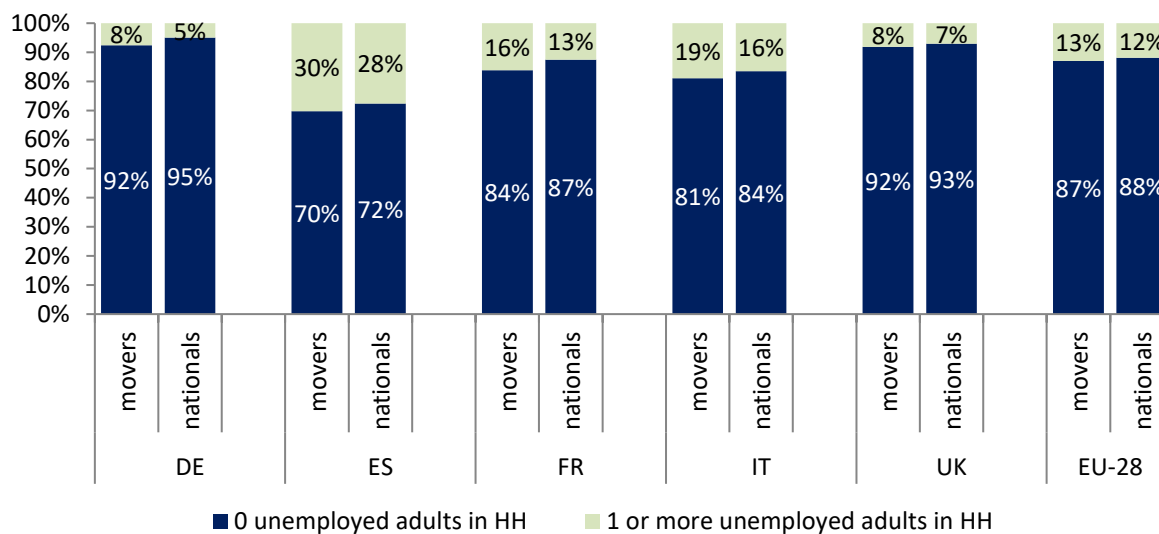


EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

The share of those adults **who live with one or more unemployed adult(s)** is slightly higher among EU-28 movers (13%) than among nationals (12%). The same is true in the main countries of residence, where the difference between EU-28 movers and nationals is slightly larger (2-3 pps) everywhere except the UK (Figure 60). All other countries show a similar trend, except Cyprus, Czech Republic and Greece, where the share of those living with one or more unemployed adults is slightly higher among nationals than among EU-28 movers.

Figure 60 Shares of adult EU-28 movers and nationals (20-64 years) who share a household with none or with one or more unemployed adults, EU-28 aggregate and main countries of residence, 2016



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

4.2. Household characteristics of different types of couples according to nationality

This section takes a closer look at the couple formations of movers and the characteristics of different types of adult couples living in the same household. Working-age couples living together in the same household are likely to be the persons on whom the economic and social situation of the remaining household members (such as children and elderly) depends. The analysis therefore examined the labour market characteristics of both spouses or partners have.

For this purpose, three types of couples are distinguished and compared: 'mover couples' (both partners are EU-28 movers¹⁸²), 'mixed couples' (one EU-28 mover and one national), and 'national couples' (both partners are nationals). The main part of the analysis was carried out for adults aged 30-50 years in order to control for age bias (as explained at the beginning of the section).

Among those who are adults, aged 20 years and above and living in the same household as their partner (who is also an adult of 20 years and above), there are 3.7 million EU-28 movers captured as reference persons in the survey¹⁸³ and 4million EU-28 movers captured as partners in the survey, making 7.7million EU-28 movers who live with their partner in the same household in the EU Member States covered in this analysis.

Of those, 4.9 million (65%) live in a household with another EU-28 mover as a partner ('mover households'); 2.3 million (30%) live in a household where one of the partners is an EU-28 mover and the other is a national of the country of residence ('mixed households').

¹⁸² The term 'partner' includes spouses and co-habiting partners.

¹⁸³ Note that this analysis excludes data from BG, HR, LV, LT, RO, DK, FI, SE and IE, as explained in the introduction to section 4.

Employment status – adults of all ages

The greatest difference was observed between movers/mixed households and purely national households, with the latter having higher shares of households where both partners are inactive and lower shares where both partners are employed or active. They also have lower shares where one person is employed and the other is unemployed or inactive.

Table 20 Labour status of partners in different types of couples (20 years and above) living in the same household, EU-28 aggregate, 2016

	Mover couples	Mixed couples	National couples
Both employed	51%	56%	47%
Both active	61%	62%	51%
One employed, the other unemployed/inactive	33%	27%	24%
One unemployed, the other inactive	2%	1%	1%
Both unemployed	1%	1%	1%
Both inactive	12%	14%	27%

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Age groups

Table 21 below shows that mover couples and mixed couples are on average younger than national couples. This corresponds to previous findings that movers in general are younger than the national population (see **Figure 4** in section 1.1.3). Further analysis shows that mover couples and mixed couples also have higher shares of those of the core working age, i.e. 30-49 years old. They have lower shares not only of those aged 65 years and above (as mentioned above), but also of 50-65 year olds.

Table 21 Partners in different types of couples, by age group, EU aggregate*, 2016

	Mover	Mixed couples	National couples
Both 20-64	88%	84%	72%
One 20-64, one 65+	4%	6%	7%
Both 65+	8%	10%	21%

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

To account for these different age distributions across the household type and the effects that they might have on the indicators in question, the following analysis was carried out only for 30-49 year old adults (where both the reference person and the spouse were in this age group).

4.2.1. Characteristics of couples aged 30-49 years

Employment status

When controlled for age, the results described above on the labour status of the couple in the household changes: among national couples and mixed couples, the chances that both are employed are notably higher (around 10 pps) than among mover couples. The chances are also higher that both are active. On the other hand, mover households are more likely to have one partner employed and the other either unemployed or inactive.

This difference between mover households and mixed or national households may be attributed to some extent to different gender patterns. In mover households, female movers are a lot less likely to be employed (66%) than in mixed or national households (75% and 77%, respectively) and are more likely to be unemployed (9% vs. 5% in both mixed and national households) or inactive (25% vs. 20% in mixed and 18% in national households). While there are differences in the same direction among males in the three household types, these differences are considerably smaller.

The lower likelihood of employment among female movers in a mover couple may be for different reasons. It may be that women are more likely to accompany men in their move and therefore give up their own job. Another reason may be cultural differences, where among cultures of large countries of origin, women continue to stay at home and take care of children. Discrimination against female movers in the labour market may also be a reason – female movers' unemployment rate (9%) is 2 pps higher than that of male movers (7%) (Figure 34 in section 2.2.6). This may indicate that female movers may find it harder to obtain work, despite looking for it.

In addition to the effect of these gender disparities, another reason for lower chances of both partners being employed among mover couples may be the lack of access to resources that facilitate integration in the host country's labour market, such as language competence, social contacts and knowledge on the functioning of the labour market. Movers living in a mixed couple are likely to acquire such resources more easily and naturally than movers living with another mover. For example, in Germany, an analysis of integration of migrants (various EU and non-EU countries of origin) participating in integration courses found that those who have a German partner without a migration background are more integrated, mainly culturally (knowledge and use of German language), but also socially and emotionally¹⁸⁴ than those having a partner of a different nationality.

Table 22 Labour status of partners in different types of couples (30-49 years) living in the same household, EU-28, 2016

	Mover couples	Mixed couples	National couples
Both employed	60%	70%	73%
Both active	72%	78%	80%
One employed, the other unemployed/inactive	35%	27%	24%
One unemployed, the other inactive	1%	1%	1%
Both unemployed	2%	1%	1%
Both inactive	2%	1%	1%

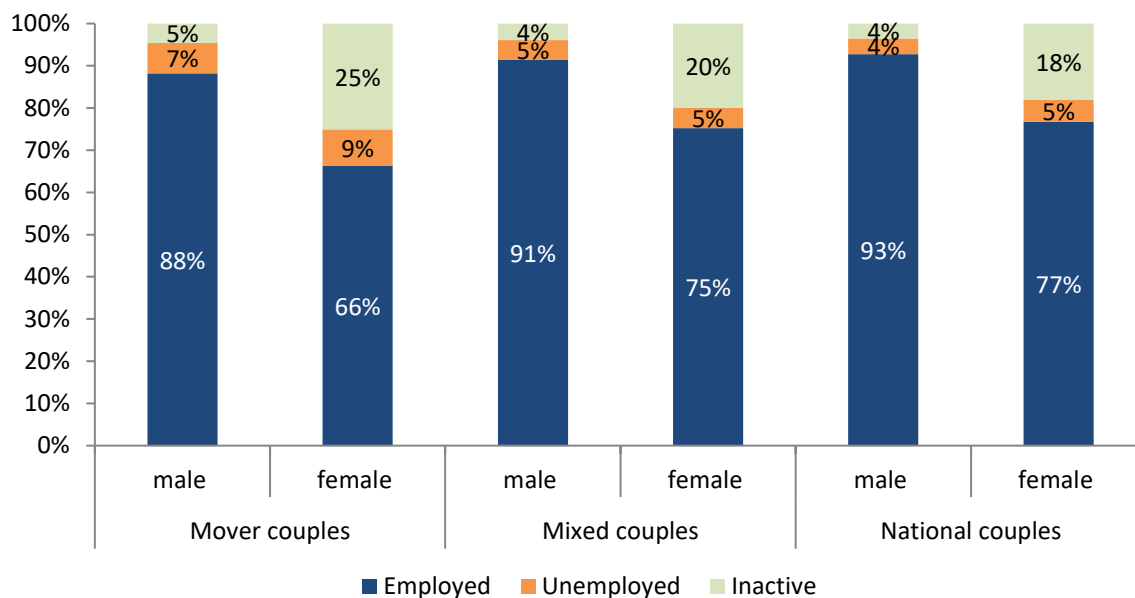
EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

¹⁸⁴ Rother, N., 2008, Better integration due to a German partner? An analysis of differences in the integration of foreigners in intra- and inter-ethnic partnerships in Germany, German Federal Office for Migration and Refugees.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Figure 61 Labour status of men and women (30-49 years) in different types of couples living in the same household, EU-28, 2016



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Education level

Differences were noted in the education status of the individuals living in different types of couples: mover households have higher shares of partners with a low or medium educational level and the lowest share of partners with high-level education. For example, only 30% of movers living with another mover spouse or partner have a high educational level, compared to 38% among national couples and 49% among mixed couples. Mirroring this, the share of low-educated is lowest in mixed couples and highest in mover couples.

Given that among individuals of working age the differences in education levels between movers and nationals are smaller than for couples (see section 3.1 for comparison), one may assume that there is a certain 'couple effect'. As pointed out in section 4.3 below, single adult movers are more likely to be highly educated than movers living in mover couples.

The comparatively high shares of highly educated in mixed couples may indicate that there is more intense contact between movers and nationals among highly educated persons.

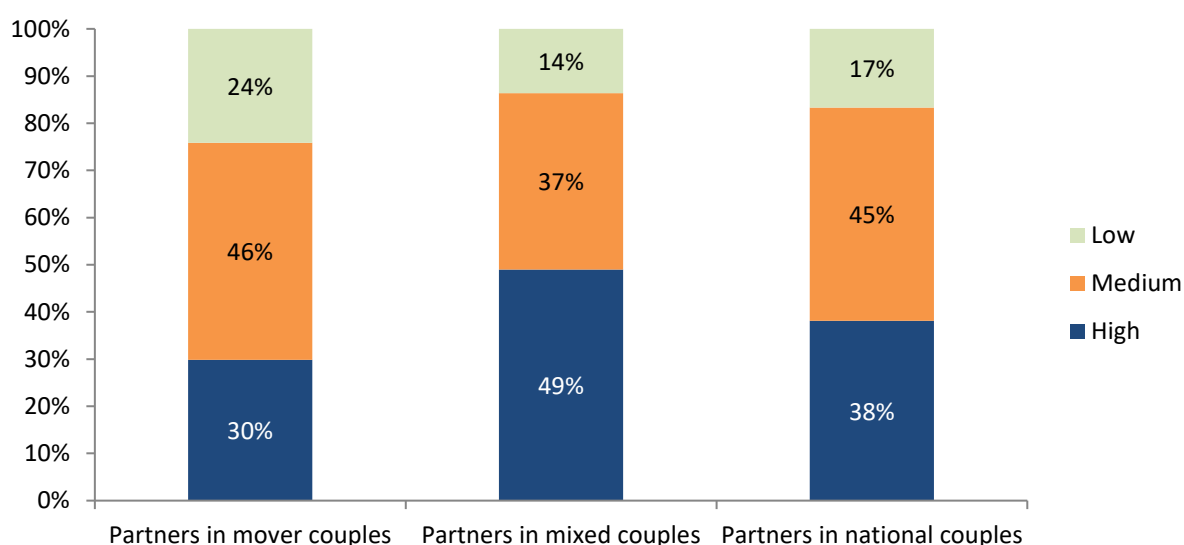
Gaspar (2009) hypothesised on the couples formed from a relatively recent phenomenon that she calls 'free movers'. These are defined as EU citizens who choose to exercise their right to free movement within the EU, independently of labour market necessities or traditional migration flows, who tend to be well-educated and come from middle- and upper-class backgrounds. She says that these unions, either between the mover and a

national of the country of destination, or between two movers of different nationalities in a third country, are characterised by both partners being well-educated¹⁸⁵.

The present study supports this hypothesis to a certain extent. The comparatively high shares of highly educated individuals in mixed couples indicates that there is more intense contact between movers and nationals among highly educated persons. On the other hand, the concept of 'mover couple' used here does not identify whether or not partners have the same national background and thus cannot assess whether relationships between movers of two different nationalities are also more likely among the highly educated.

Overall, these results indicate that highly educated adult movers are more likely to live either in a single household or with a national of the host country, compared to movers with a low educational level.

Figure 62 Education status of partners (30-49 years) in different types of couples living in the same household, EU-28, 2016



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

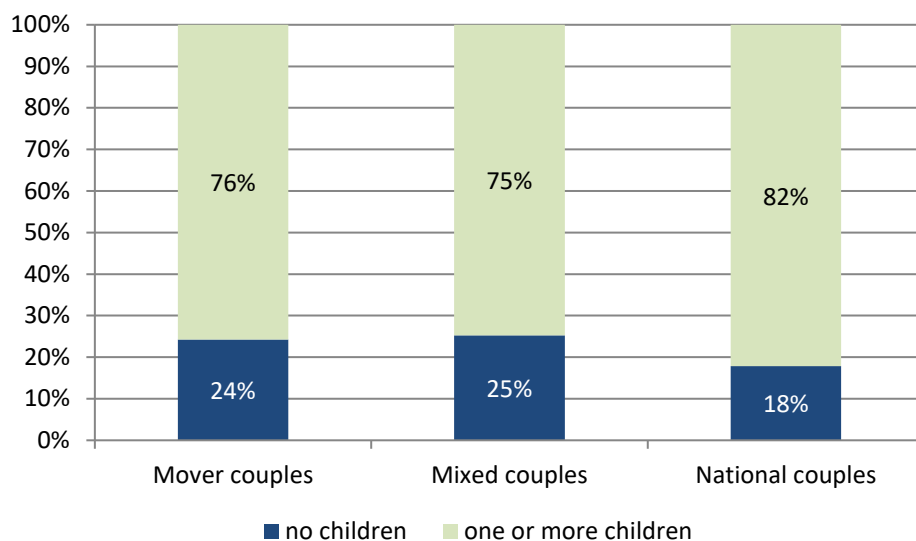
SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Number of children

In contrast to the findings in section 4.1, mover couples are less likely than national couples to live in households with one or more children. These differences may hint at the age bias that was subsequently taken into account in the analysis. Persons aged 50 and above are less likely to still share their household with children than persons between 30-50 years of age, which latter group is over-represented among movers.

¹⁸⁵ Gaspar, S., 2009, 'Mixed marriages between European free movers', CIES e-WORKING PAPER N. ° 65/2009, available at <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.516.4180&rep=rep1&type=pdf>

Figure 63 Different types of couples (30-49 years), with or without one or more children living in the household, EU-28, 2016



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Number of elderly persons

Unlike the above findings, there are no large differences between mover couples, mixed couples and national couples in the likelihood that they will share a household with a person aged 65 years or older. Only 1% (mover couples) to 2% (mixed and national couples) do so. Again, this might show age bias, i.e. that persons 50-64 years old are more likely to share their household with their parents or their partner’s parents than the younger generation.

Table 23 Different types of couples (30-49 years), with or without one or more persons aged 65+ living in the household, EU-28, 2016

	Mover couples	Mixed couples	National couples
No 65+	99%	98%	98%
One or more 65+	1%	2%	2%
N	1,211	998	30,559

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Household size

The fact that mover couples are less likely than national couples to share their households with children or elderly persons is reflected in differences in the overall household size. Mover couples are more likely to live in households with only two or three persons than national couples, and less likely to live in larger households. Interestingly, mixed couples are most likely to live in only two-person households. In all groups, most couples live in

three or four-person households, reflecting the finding that most couples between 30-50 years live with children in the same household.

Table 24 Different types of couples (30-49 years) in the same household, by number of persons in the household, EU-28, 2016

	Mover couples	Mixed couples	National couples
2	19.3%	23%	15.1%
3	30.9%	28%	27.1%
4	36.2%	35%	42.0%
5	10.0%	10%	11.8%
6	2.2%	2%	2.9%
7	0.9%	:	0.8%
8	0.2%	:	0.3%
9	0.2%	:	0.1%
N	1,212	998	30,559

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Number of inactive adults in the household

The analysis examined the different types of couples living in households of four persons (the most frequent household size) and compared the number of inactive adults in these households to determine whether persons in different types of couples were more or less likely to live with an economically dependent adult.

Results showed that inactive adults were more likely to be found in households of mover couples or mixed couples than in households of national couples. Among mover households of four persons, 29% include at least one inactive adult, compared to 26% in mixed households and 20% in national households. This reflects the finding that movers living with another mover are more likely to have an economically inactive partner than movers or nationals in mixed or national couples.

Table 25 Different types of couples (30-49 years) in households of four persons, by number of inactive adults in the household, EU-28, 2016

	0	1	2	3	N
Mover couples	69%	29%	2%	0%	438
Mixed couples	72%	26%	3%	0%	351
National couples	78%	20%	2%	0.1%	12,821

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

4.3. Comparison of single adult EU-28 movers and EU-28 mover couples

This section explores whether or not there are structural differences between adult EU-28 movers who live in a single household and those who live with a partner (and children). In

order to compare these results with those of the previous chapter, adults aged 30-49 years are taken as the focus here.

In total, of the 5.9 million EU-28 movers aged 30-49 years in 2016, 856,000 (15%) lived in one-person households. Of these, 61% were men and 39% women. This is an inverse distribution compared to all movers of this age group, which shows 49% men and 51% women. This under-representation of women as single adult movers corresponds to the recent OECD finding that the share of women is much higher among family-related EU movers (61%) than among employment-related EU movers (42%)¹⁸⁶.

Results show that single adult movers are more likely to be employed (85%) than movers living in a mover couple (77%¹⁸⁷) or in a mixed couple (83%). Interestingly, the employment rate of single adult movers is the same among men and women, unlike the situation for men and women living in couples.

The share of those with a high educational level is higher among single adult movers (37%) than among movers in mover couples (30%), but lower than that of movers or nationals in mixed couples (49%). The share of those with a low educational level is only slightly lower among single adult movers (23%) than among movers in mover couples (24%) and higher than that of movers or nationals living in mixed couples (14%). Contrary to this, recent OECD findings show that movers who moved for family reasons are more likely to have a low educational level than those who moved for economic reasons and that both groups have a broadly similar likelihood of being highly educated¹⁸⁸.

4.4. EU-28 movers with partners or families in other Member States

The sections above look at the members of movers' families living in the same household in the country of residence. This leaves out an important aspect, the phenomenon of so-called 'transnational families'. These are defined by the Confederation of Family Organisations in the European Union (COFACE¹⁸⁹), as 'families (where family members) live some or most of the time separated from each other, yet hold together and create something that can be seen as a feeling of collective welfare and unity, namely 'familyhood' across national borders'¹⁹⁰. The creation of 'transnational families' is often linked to economic mobility and the intention to 'improve living conditions for the whole family and, if children are there, to offer them a better future'¹⁹¹. Thus, the possibility of free movement within the EU and the economic opportunities created by intra-EU mobility may have increased situations where members of the same family live and/or work in different countries.

The phenomenon of transnational families is relevant to policy in several respects. In particular, the arrangement of competence for social protection (social protection benefits for family members also get paid across borders) for children or other dependent family members, where social security contributions are received through a family member even

¹⁸⁶ OECD, 2017, *International Migration Outlook 2017*, OECD Publishing, Paris, pp. 148-149, available at: https://www.oecd-ilibrary.org/social-issues-migration-health/international-migration-outlook-2017_migr_outlook-2017-en

¹⁸⁷ This rate was calculated based on results in Table 2.1, as the share of couples in which both partners are employed (60% for mover couples) PLUS half of the share of couples in which one partner is employed (35%/2 = 17%); the same is applied for mixed couples.

¹⁸⁸ OECD, 2017, *International Migration Outlook 2017*, 41st Edition, pp. 148-149, available at: http://www.keepeek.com/Digital-Asset-Management/oecd/social-issues-migration-health/international-migration-outlook-2017_migr_outlook-2017-en#.WpPomPmnFhE#page139

¹⁸⁹ COFACE Families Europe (Confederation of family organisations in the European Union) is a pluralistic network of civil society associations representing the interests of all families and focusing essentially on policies and legislation that impact the lives of children and families; see <http://www.coface-eu.org/>

¹⁹⁰ COFACE, 2012, *Transnational families and the impact of economic migration on families*, p. 3, available at: <http://www.coface-eu.org/wp-content/uploads/2017/09/Migration-2012-COFACE-position-on-Transnational-Families-en.pdf>

¹⁹¹ COFACE, 2012, p. 4.

if the latter is employed in another Member State. There are other implications for social policy, including the responsibility for caregiving for children and the elderly. Persons who would normally take on these responsibilities (typically women) may take up work in another country and cannot take their dependents with them. This is often the case, for example, in the healthcare sector, where female movers live in private households in another Member State for certain periods, leaving their families behind in the country of origin¹⁹². Situations like these require adaptation mechanisms and supportive policies to alleviate possible negative consequences.

This section aims to quantify the phenomenon of ‘transnational families’. It should be noted at the outset that the analysis is constrained by strong data limitations. The existence of (dependent) family members or partners of movers in other Member States is very difficult to measure with EU cross-national data. One source is the administrative data on portable documents, which are used for the purpose of portability of social benefits. Most importantly, there are data on the export of family benefits which happens when ‘family members live in a Member State other than the one where the insured person works or resides’¹⁹³. According to these data from 22 Member States, family benefits were exported to around 909,000 family members of movers or cross-border workers in 2016¹⁹⁴. Approximately 1.5% of the households entitled to a family benefit live abroad¹⁹⁵.

The extent of ‘transnational families’ is likely to go well beyond what is measurable through administrative documents. This section used EU-LFS data due to its EU-wide harmonisation and because it allows for an approximate measure of the extent of certain types of transnational family networks. As the EU-LFS is a household survey, however, detailed information is only provided about household members. Thus, the numerous variables recorded for household members are not recorded for family members living in other households. Nor does the survey ask about the existence of family members in other households. Given these data constraints, this analysis focuses on two very specific cases for which the extent of ‘transnational families’ can be estimated:

- Firstly, the case of cross-border workers, defined as EU citizens who reside in one country but work in another. The EU-LFS does not ask for the frequency of commute and therefore this group includes persons who commute daily, weekly or for longer distances. EU-LFS data allows for an estimate of the characteristics of the households of cross-border workers, including the number of ‘dependent’ household members, such as children or inactive persons.
- Secondly, the case of EU-28 movers who created a family outside the current country of residence and where the second partner later joined the mover. This situation may be used as an approximation to estimate the extent to which EU-28 movers move while their partner or family remains in another country. With EU-LFS data, the share of movers to which this situation is likely to have applied can be estimated, although it is restricted to those who moved within the past 10 years (see section 4.4.2).
- Given that the data are taken from the EU-LFS (a household survey), information is only available for partners/families currently living in the same household. The analysis therefore focuses on EU-28 mover households, where the two partners moved at different points in time (the approximation is explained in more detail in 4.4.2 below).

¹⁹² COFACE, 2012; Sekulova, M. and Rogoz, M., 2018, Impacts and Particularities of Care Migration Directed towards Long-term Care: Zooming in on Slovakia and Romania, REMINDER project, published by ICMPD, available at: <https://www.reminder-project.eu/publications/literature-reviews/impacts-and-particularities-of-care-migration-directed-towards-long-term-care-zooming-in-on-slovakia-and-romania/>

¹⁹³ European Commission, Statistical reports for 2017 on social security coordination, p. 5, available at: [file:///C:/Users/eft/Downloads/Summary_EUSSC_statreports2017%20\(1\).pdf](file:///C:/Users/eft/Downloads/Summary_EUSSC_statreports2017%20(1).pdf)

¹⁹⁴ *Ibid.*

¹⁹⁵ *Ibid.*

4.4.1. Cross-border workers

This section analyses cross-border workers' family situations. It focuses on cross-border workers in key countries of work, namely Germany, France, Austria and Luxembourg. Figures refer to adult (that is economically and socially independent) EU-28 movers and nationals of working age (20-64 years). It should be noted that the figures only include those cross-border workers residing in one of the 19 Member States included in the data set¹⁹⁶.

In all four countries of work, between 60-70% of cross-border workers share a household with a spouse or a partner in their country of residence. Between 10-20% live in a household with an inactive partner. Around 50% in all four countries share their household with at least one child.

Table 26 Cross-border workers* (20-64 years) in four main countries of work, 2016

	Germany	France	Austria	Luxembourg
Total no. of cross-border workers	295,000	54,000	153,000	181,000
...with partner in household	68%	65%	59%	73%
...with inactive partner in household	19%	11%	12%	17%
...with child(ren) in household	50%	50%	48%	54%

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

DATA REFER TO EU-28 CITIZENS OF WORKING AGE (20-64 YEARS)

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

4.4.2. EU-28 movers with a family whose partners joined them at a later point in time

This section examines the extent to which EU-28 citizens move with their partner or family or move alone, leaving a partner or family in the country at residence and who later joins them. Due to data limitations, this question can only be answered for couples with at least one child, as the birth of the child approximates the point of family formation, which can then be compared to the number of years the couple – or one of the partners – has lived in the current country of residence. Also for methodological reasons, the analysis is limited to EU-28 movers who moved within the 10 years before the reference year (2006-2016)¹⁹⁷.

In 2016, a total of 5.2 million EU-28 movers had moved to one of the Member States included in this analysis¹⁹⁸ during the previous 10 years.

There were 1.1 million households with two spouses or partners who are EU-28 movers of working age and where both partners moved between 2006 and 2016. In 63% of these households, the two partners resided in the country of residence for the same number of years, although this does not necessarily mean that they moved to the country together.

In 60% of the households where both EU-28 partners arrived within the past 10 years, there is at least one own¹⁹⁹ child (aged 0-24 years) present. Around 30% of the households

¹⁹⁶ BG, DK, FI, HR, IE, LT, LV, SE, RO are not included in the dataset due to reliability issues.

¹⁹⁷ The years of residence of over 10 years are only captured in five-year brackets. Therefore, it cannot be estimated whether two partners moved in different years (for example, both may fall in the bracket 11 to 14 years, but one may have 11 years of residence, and the other 14, meaning that the spouse moved three years later).

¹⁹⁸ BG, DK, FI, HR, IE, LT, LV, SE, RO are not included in the dataset due to reliability issues.

¹⁹⁹ The presence of 'own' child in the household means that it is the child of either or both partners.

have one child, a further 22% have two children, 6% have three children and 2% have four children present.

In order to estimate whether or not one partner initially moved, leaving behind the family that followed subsequently, the years of residence of both partners were compared to the age of the youngest child.

644,000 couples have moved within the past 10 years and the age of the youngest child is known. Of these, 60,000 are couples where one partner moved before the other and where the youngest child was born in a country other than the current country of residence. Assuming that most of the children living in households with an EU-28 mover couple are children to both of these partners, this means that in 9% of the couples with children, one partner moved earlier and left behind their partner and possibly a child for at least one year.

Comparing that 60,000 to the overall number of EU-28 mover couples who moved within the past 10 years (1.1 million) gives a ratio of approximately 6%.

At the individual level, this means that 120,000 recent EU-28 movers may have left behind a partner and possibly a child in the country of origin before they joined him or her. This gives a ratio of approximately 2% of all EU-28 movers of working age who moved within the past 10 years (5.2 million). It should be noted that this refers solely to movers where the partner and the child also moved to the current country of residence at some later date.

This is likely to be a very conservative estimate, as it looks solely at the age of the youngest child, given the data limitations²⁰⁰. The family formation could of course have taken place on the birth of an older child, with the youngest child being born in the country of residence after the move, cases which would not show up in these figures as 'family formation before the move'. Nor do the estimates include cases in which the partner (and child(ren)) remain in the country of origin²⁰¹.

Table 27 Estimation of number of EU-28 movers (20-64 years) who moved within the past 10 years with a child born outside the country of residence and whose partner joined them at a later date, EU aggregate*, 2016

EU-28 movers who moved within the past 10 years	5.2 million
...who live with a spouse/partner in the same household	3.4 million
Mover couples where both movers arrived within the past 10 years	1.1 million
...with at least one child (up to 24 years)	650,000
...where one partner moved before the other AND youngest child born (up to 24 years) outside country of residence	60,000
<i>...as share of all mover couples where both movers arrived within the past 10 years</i>	6%
individual level: number of EU-28 movers who arrived within the past 10 years and where one partner moved before the other AND youngest child born (up to 24 years) outside country of residence	120,000
<i>...as share of all movers who moved within the past 10 years</i>	2%

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

²⁰⁰ The age of the children is not captured by each child individually, but only as a count variable in two-year brackets using the questions 'number of persons between 0 and 2 years in the household', etc. See EU-LFS User Guide, variables HHNBCH2 – HHNBCH24, available at: <https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf>

²⁰¹ Such cases cannot be estimated since the country of residence of a spouse or partner who does not live in the same household as the mover is not part of the questionnaire.

2018 Annual Report on intra-EU Labour Mobility – Final Report

DATA REFER TO EU-28 CITIZENS OF WORKING AGE (20-64 YEARS)

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

ANNEX A METHODOLOGICAL NOTES

A.1. Definitions and measurement

When measuring labour mobility for the purposes of supporting policy-making, it is important that what is captured empirically relates to what is defined by the legislation. The box below explains the groups covered and defined by the EU legislation on free movement, and their measurement in this report.

Box 1 Legal and statistical definitions of mobile citizens

Legal definition	Statistical concept and definition
Free movement of citizens	EU-28 movers
EU citizens and their family members have the right to move and reside freely within the territory of the Member States. However, the right of residence for more than three months is only granted to EU citizens and their family members if they are workers or self-employed in the host Member State; inactive EU citizens have the right to reside in another Member State for more than three months if they have sufficient resources for themselves and their family members not to become a burden on the host Member State, if they are enrolled at a private or public establishment and if they have comprehensive sickness insurance cover ²⁰² .	EU-28 movers are defined as EU citizens who have their usual residence in a Member State other than their country of citizenship at a given point in time (<i>stocks</i>), or who moved their usual residence to a Member State other than their country of citizenship in a given period of time (<i>flows</i>). The concept of 'usual residence' is reflected similarly in Eurostat population and migration statistics and the EU-LFS. All three sources refer to the usually resident population as those persons who have resided, or intend to reside, in a country for at least 12 months ²⁰³ . As of this year, section 2 of the report will focus on EU-28 movers who were also born outside their current country of residence. The share of those born in the country, but with a different citizenship is negligible in most countries but excluding them makes the analysis more apt to the term 'mover'. However, this difference cannot be made with migration statistics, therefore it is only applied to figures base on EU-LFS data.
Workers and jobseekers enjoying the right to free movement	Active EU-28 movers
The notion of worker is only defined through case law – based on this, it can be considered that '(migrant) workers' are EU citizens who are in an employment relationship, and who carry out real and genuine activities which are not purely marginal and ancillary, in a Member State other than their state of citizenship ²⁰⁴ . Furthermore, EU legislation stipulates that for the purposes of the right of residence in another EU Member State of more than three months, Union citizens who are no longer employed or self-employed can retain their status as workers under certain conditions, or move to	The legal concepts of migrant workers and jobseekers are approximated by looking at 'active EU-28 movers'. These include EU-28 citizens who are employed or unemployed in an EU Member State other than their country of citizenship (and were born outside that country, see above). The main data source for looking at this group is the EU-LFS. According to EU-LFS methodology, the group of 'employed' includes persons who did any work (one hour or more) for pay or profit during the reference week, sand those who had a job or business but were temporarily absent. The group of 'unemployed'

²⁰² Art. 7 of [Council Directive 2004/38/EC on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States](#).

²⁰³ Eurostat, [Metadata on population statistics](#), point 3.4; Eurostat, [Metadata on International Migration Statistics](#), point 3.4; Eurostat, [EU Labour Force Survey Explanatory Notes](#) (from 2014Q1 onwards), p.4.

²⁰⁴ Directive EC 2004/38 and CJEU case law, source: Verschueren, H. (2015) '[Free movement of workers: the role of Directive 2014/54/EU in tackling current and future challenges](#)', presentation at an Equinet conference, p. 6.

Legal definition	Statistical concept and definition
the status of jobseekers ²⁰⁵ . EU citizens have the right to move to another Member State in order to look for work and to receive the same assistance from national employment offices; they have the right to reside in another Member State with the status of 'jobseeker' as long as they continue to seek employment and have a genuine chance of being engaged ²⁰⁶ .	includes those who were not working during the reference week, but who had found a job starting within three months, or who are actively seeking employment and are available to work ²⁰⁷ .
Frontier workers, seasonal workers	Cross-border workers
Frontier workers are defined as cross-border workers who return to their country of residence 'as a rule daily or at least once a week' ²⁰⁸ . This definition stems from Regulation (EC) No 883/2004 which assigns specific rights to social security to such workers and their family members. Seasonal workers are migrants who come to work in another Member State for a limited amount of time. Such workers are specifically mentioned in Regulation (EU) No 492/2011, without being defined, as benefitting from the right of free movement.	The EU-LFS explicitly asks for respondents' 'country of place of work' which may be different to the country of residence and which allows for cross-border workers to be identified. However, the survey does not ask for the frequency of commute between the country of residence and the country of work. Cross-border workers are therefore defined as EU citizens who live in one EU country and work in another, regardless of their precise citizenship (provided they are EU-28 citizens). Thus, they include the group which as legally defined as 'frontier workers' but may also include persons who commute at a longer interval than once a week and might even include seasonal workers (who only work in another country for part of the year).

A.2. Main data sources for Sections 2.1 – 2.3: EU Labour Force Survey (EU-LFS) and Eurostat population and migration statistics

Eurostat statistics

EU Labour Force Survey (EU-LFS)

The EU-LFS is a large household sample survey providing quarterly and annual results on labour participation of people aged 15 and over, as well as on persons outside the labour force. The EU-LFS measures employment, unemployment and inactivity, and also collects other information on the resident population, in particular citizenship, which can be used to produce estimates of the number of EU citizens living/working in another Member State. EU-LFS data is therefore the best EU wide source to estimate numbers of active EU movers (mobile workers)²⁰⁹. In addition, it can provide more information about specific characteristics of EU mobile citizens, such as age and gender, sector of employment, occupation, education level, etc.

Since the EU-LFS has a legal basis (Council Regulation (EEC) No 577/98 of 9 March 1998), data collection in the Member States are harmonised to a considerable extent. Comparability of figures is ensured by: using the same concepts and definitions especially

²⁰⁵ Ibid.

²⁰⁶ Article 5 Regulation 492/2011 and Article 14(4)(b) Directive 2004/38, source: Verschueren, H. (2015) '[Free movement of workers: the role of Directive 2014/54/EU in tackling current and future challenges](#)', presentation at an Equinet conference, p. 6.

²⁰⁷ Eurostat '[EU-LFS database user guide. Version November 2016](#)', p.55; description of variables WSTATOR and SEEKWORK.

²⁰⁸ Regulation (EC) No 883/2004, Article 1(f).

²⁰⁹ See https://ec.europa.eu/eurostat/statistics-explained/index.php?title=EU_citizens_living_in_another_Member_State_-_statistical_overview, article based on the series of datasets Labour Mobility (lfst_lmb)

the ILO definitions of employment and unemployment; using common classifications (NACE, ISCO, etc.); and recording the same set of characteristics in each country.

Microdata are accessible for researchers, albeit with a time lag of over one year.

The EU-LFS has the following distinct advantages:

- For some countries, it seems to be simply the only source (apart from Census) of data on the stocks of EU foreigners broken down by citizenship.
- EU-LFS data are available on a quarterly basis and published around four months after data collection, making it possible to identify recent trends.
- One variable in the EU-LFS provides information about the length of time for which foreigners have been established in the country. It thus enables an estimate of the inflows that occurred over a certain time and helps to distinguish the recent intra-EU movers from the 'EU foreigners' that have been in the country for a longer time.
- While the use of EU-LFS data might underestimate the absolute number of EU movers, it is likely to give a reasonable indication of the changes in stocks over time.
- It includes many variables related to the employment situation and socio-demographic profile of respondents.
- It allows estimating of stocks and analysis of characteristics of cross-border workers²¹⁰.

However, estimations of 'EU foreigners' can suffer the following limitations²¹¹:

- Higher non-response rate among foreigners.
- Under-coverage of recently arrived foreigners due to delay in entering the reference sample frame²¹².
- EU-LFS estimations of stocks of EU foreigners are consistently lower than figures from migration statistics.
- Small sample sizes of EU movers in many countries reduce the possibility of providing detailed analysis of data.

Population and migration statistics

International migration flows by groups of citizenship, groups of country of birth, groups of country of previous/next usual residence, age and sex and population stocks by groups of citizenship, groups of country of birth, age and sex are collected based on Regulation (EC) No 862/2007²¹³ and related Implementing Regulation.

²¹⁰ For example, a specific chapter on cross-border workers based on EU-LFS data was included in the 2015 Annual Report on intra-EU Labour Mobility.

²¹¹ Limitations are described in Employment in Europe, 2008 (Chapters 2 and 3).

²¹² This seems to be particularly true for some countries (France, Italy, Austria and the Netherlands), see '[EU Employment and Social Situation. Quarterly Review](#)', June 2014, p. 52, footnote 34; the under-estimation is likely to be due to the fact that those movers are not captured adequately by the sample (under-coverage). The [Quality Report of the EU-LFS \(2012\)](#), for example, shows that in many countries, household samples are drawn according to a rotation scheme, meaning that the same households are interviewed for several quarters and only a part of the sample is replaced by new households each quarter or every two quarters; therefore, there is a delay in capturing newly established households (especially if the dwelling is also new). Another reason for under-coverage is that better integrated migrants are generally covered more adequately, for example due to language issues (as mentioned, for example in the Austrian Standard Documentation on the EU-LFS '[Mikrozensus ab 2004 Arbeitskräfte-und Wohnungserhebung](#)').

²¹³ Regulation (EC) No 862/2007 of the European Parliament and of the Council of 11 July 2007 on

The [Eurostat database of population statistics](#) provides data on the *stocks* of foreigners/foreign-born persons on 1 January of the reference year²¹⁴. The [Eurostat database of migration and citizenship data](#) provides data on *inflows and outflows* by citizenship or country of birth or previous/next country of residence²¹⁵. Due to legal deadlines and including the time needed for Eurostat to validate and process the data migration statistics are published more than one year after the reference period/date²¹⁶.

According to the Regulation, there is no obligation for Member States to breakdown the numbers of EU foreigners by individual citizenship. While many Member States go beyond the minimum requirements and publish data broken down by individual citizenship for EU foreigners, this is not the case for all countries (or indeed for all years). Seven Member States²¹⁷ publish the total number of 'EU foreigners', with no breakdown by all individual citizenships. However, 26 Member States transmitted population by single EU citizenship.

From a labour market perspective, the only additional variables available (apart from citizenship) are age group and sex (i.e. there is no information on duration of residence, employment status, or education level).

Migration statistics are mostly based on administrative registers which includes coverage errors, mainly due to the non-propensity to register or deregister. Nevertheless, administrative sources have increased their reliability. Since 2008, data providers have used the following strategies to solve such coverage errors: exchange of data with other National Statistical Institutes; estimation techniques; usage of additional administrative sources.

Although both citizenship and previous/next country of residence are collected for inflow/outflow data, the two cannot be combined. This constitutes an important limitation in the estimation of intra-EU mobility flows. For example, the estimates on inflows to Member States either have to be based on previous country residence being another Member State (and thus include TCNs) or have to be based on citizenship of another Member States (and thus include EU citizens immigrating from third countries). This has been flagged in previous labour mobility reports.

A3. Methodological notes for the section 3.4 on labour shortages

As mentioned in section 3.4.1, two types of labour shortages are differentiated. This section explains which indicators are used, and then how they are combined to identify qualitative and quantitative shortages.

Indicators used in this report

The following indicators were chosen to identify labour shortages. The choice combines some indicators proven useful for this purpose in previous reports:

Two indicators based on EU-LFS data were compared for all ISCO occupations (at ISCO 2D level):

Community statistics on migration and international protection and repealing Council Regulation (EEC) No 311/76 on the compilation of statistics on foreign workers, OJ L 199, 31 July 2007, p. 23 and Commission Implementing Regulation (EU) No 351/2010 of Regulation (EU) No 862/2007.

²¹⁴ Data sets: migr_pop1ctz and migr_pop2ctz, migr_pop3ctb, migr_pop4ctb, migra_pop5ctz, migr_pop6ctb.

²¹⁵ Data sets: migr_immi, migr_emi and respective subsets.

²¹⁶ As of October 2014, the latest data on 'stock' refers to the situation on 1st January 2013 and the latest data on 'in- and outflows' refers to flows that occurred during 2012.

²¹⁷ As far as the latest data on stock of EU foreigners (1st January 2014) are concerned, there is no detail by individual citizenship provided for eight Member States (EL, FR, HR, CY, LU, MT, AT and PL) and for the UK, figures are provided only for the largest communities of EU citizens.

1. Frequent recruitment of workers: ratio of newly hired (employed in the past 12 months) to all employed among nationals of the country of residence (the same as the indicator 3 from the McGrath and Behan (2017) study)
2. Ratio of unemployed to new hires among nationals of the country of residence

For the analysis by sector (NACE 1D level), these two indicators were complemented by the **job vacancy rate**.

Rules to identify quantitative and qualitative shortages, based on the indicators described above:

Quantitative shortage per occupation or sector would be characterized with:

- a. a relatively high (above average across all sectors) ratio of new hires to employed nationals (i.e. there are vacancies but they are filled quickly), AND
- b. at the same time, a low ratio of unemployed to new hires among nationals (indicating, that the unemployed in that occupation relatively quickly fill the vacancies)

Qualitative shortage per occupation or sector would be characterized with:

- a. a high ratio of new hires to employed nationals, AND
- b. a high ratio of unemployed to new hires, indicating that although there are vacancies in the sector and there are potential candidates for these vacancies, the vacancies are not quickly filled.

As a form of **triangulation of indicators 1 and 2**, the resulting quantitative shortage occupations (using the thresholds indicated in the tables in sections 3.4.2/3.4.3 with the results) were compared to shortage occupations identified in previous reports using PES reported labour shortages:

a) For the results at EU level:

- PES Indicator 1. Top 29 shortage occupations across the EU classified by the most PES as shortage occupations²¹⁸, at ISCO 3-D level, 2016
- PES Indicator 2. Top 10 occupation groups facing bottlenecks at EU level, at ISCO 2-D level, 2015²¹⁹

The comparison shows that most shortage occupations identified through the EU-LFS indicators 1 and 2 appeared also on list of either PES indicator 1 or 2, or both. However, only two ISCO-2D occupations were identified as shortage occupations with all indicators: Information and communication technology professionals (Code 250) and Metal, machinery and related trade workers (Code 720). Occupation identified through the EU-LFS indicators that were not identified with PES data were mainly:

- elementary occupations (several occupations with ISCO Code 9-) – these were identified with indicator 2 (high shares of new hires to employed); this matches with the definition provided above of ‘qualitative shortages’, where there is enough labour supply, but the sector faces retention problems – which is likely to result in the high rate of new hires compared to employed

²¹⁸ McGrath, J., Behan, J. (2017), p. 33.

²¹⁹ Reymen et al. (2015), p. 44.

- managerial occupations (several occupations with ISCO Code 1-) – there were identified with indicator 2 (low shares of unemployed compared to new hires); interestingly, these occupations are not frequently mentioned as shortage occupations though by PES. Possibly, this is due to the fact that these types of shortages occur only in some Member States, like Germany and the UK, which have a high weight in the EU-LFS indicators, but not in the PES indicators.

Further details on the convergence can be found in [Error! Reference source not found.](#) in Annex.

b) For the results at national level:

Results from the LFS-based indicators were compared to the latest information on PES reported shortages (reference years varied from 2015-2017) which were transferred by the European Commission. Since results were only reported at ISCO-3D level, the comparison looked at whether there were ISCO-3D occupations were reported as shortages by the PES that belong to one of the ISCO-2D occupations identified as shortages with the LFS indicators.

Indicators to measure labour shortages mentioned in previous reports

The following indicators have been used to measure labour shortages in previous reports²²⁰:

1. PES data

Data from Public Employment Offices (PES) underlying the report of McGrath and Behan (2017) was used in some of our estimates, mostly for validation (see above). It is based on a survey among PES in the Member States asking them for each occupation to a) identify whether there is a labour shortage or a labour surplus (those occupations with the 20 highest shortages/ surplus will be mentioned as such) and b) identify the magnitude of the shortage/surplus in the occupation²²¹. This information was then collected and analysed in several reports²²². Data is mostly reported at 4-digit level, although summaries are also made at lower digital levels. In general, the 'top shortage' and 'top surplus' occupations were identified as those with the highest number of PES mentioning them as such (for example, the 2017 report identifies the top 21 shortage occupations at 4-digit-level in this way²²³).

Two issues arise when trying to compare this type of shortage occupations with data on mobility:

1. Data on the number of movers by occupation is too low to allow the analysis of shares of movers at 4-D-level and also at 3-D level for most occupations.
2. The method of identifying the main shortage occupations by counting the number of PES mentioning them can be used best at EU level, but is less suitable at Member State level. At Member State level, it makes more sense to identify the main shortage occupations by looking at the magnitude of shortage mentioned.

²²⁰ Reymen, D. et al. (2015), European Parliament ; McGrath, J., Behan, J. (2016), European Commission; McGrath, J., Behan, J. (2017), European Commission

²²¹ McGrath, J., Behan, J. (2017), Annex 1, p.35

²²² McGrath, J., Behan, J. 2016 and 2017

²²³ McGrath, J., Behan, J. (2017), p. 11

2. EU-LFS data

It was previously found that EU-LFS data was only useful to analyse at ISCO 2D level, to avoid sampling errors and missing values²²⁴.

Three indicators based on EU-LFS data were considered relevant to identify labour shortages²²⁵, among which indicators 2 and 3 are used in our report. Indicator 1 is not used due to lack of systematic and robust data indicating underqualification of the workers on ISCO 2D level. Indicator 2 is not used to identify labour shortages at such, but to identify whether mobile workers potentially alleviate shortages.

1. High share of underqualified workers in the occupation
2. High share of mobile workers in the occupation
3. Frequent recruitment of workers: high rate of newly hired (employed in the past 12 months) compared to all employed the ratio of unemployed (indicating labour supply) to new hires (indicating labour demand)²²⁶ (McGrath/Behan 2017). However, this indicator has to be interpreted with caution as both high and low values might indicate labour shortages, although of different types: low values indicate skill shortages, whereas high ratios might indicate labour shortages (retention problems) (McGrath/Behan 2016). Typically, the latter would be occupations requiring relatively low skill levels. There would be a large number of unemployed matching these requirements, but the occupation could nevertheless experience hiring or retention difficulties, because jobseekers do not want to work in these occupations²²⁷.

Among these indicators, the indicators 2 and 3 are used in our report. Indicator 1 is not used due to lack of systematic and robust data indicating underqualification of the workers on ISCO 2D level.

3. Job vacancy statistics

A relatively reliable indicator of labour demand are job vacancy statistics²²⁸, as published by Eurostat. The reported Job vacancy rate (JVR) is the number of job vacancies expressed as a percentage of the sum of the number of occupied posts and the number of job vacancies. However, already at ISCO1D level, these are not available in many Member States. Data on vacancies only covers a reasonable amount of Member States by sector (NACE). Therefore, an analysis done using this indicator was conducted on sectoral (not occupational) level.

²²⁴ McGrath, J., Behan, J. (2017), p. 43.

²²⁵ McGrath, J., Behan, J. (2017), p. 23.

²²⁶ McGrath, J., Behan, J. (2017), p. 43.

²²⁷ McGrath, J., Behan, J. (2017), p. 40.

²²⁸ http://ec.europa.eu/eurostat/statistics-explained/index.php/Job_vacancy_statistics#Data_sources_and_availability

ANNEX B DATA ANNEX

Table 28 Stocks of working age (20-64) foreigners, by EU/EFTA country of residence and broad groups of citizenship, totals in thousands and row %, 2017

	EU-28		EFTA		TCNs		Total
AT	493	51%	6	1%	464	48%	964
BE	609	65%	2	0%	329	35%	941
BG	9	16%	0	0%	48	83%	57
CH	997	66%	3	0%	504	34%	1,505
CY	83	78%	0	0%	23	21%	106
CZ	176	42%	1	0%	239	57%	415
DE	3,047	45%	33	0%	3,694	55%	6,775
DK	163	44%	20	5%	184	50%	367
EE	13	10%	0	0%	119	90%	132
EL	154	28%	1	0%	401	72%	556
ES	1,393	44%	16	1%	1,791	56%	3,201
FI	75	41%	1	1%	108	59%	184
FR	985	33%	28	1%	1,986	66%	2,999
HR	9	29%	0	1%	22	71%	31
HU	61	53%	2	2%	53	46%	116
IE	331	75%	1	0%	111	25%	443
IS	21	83%	0	1%	4	16%	25
IT	1,187	32%	6	0%	2,530	68%	3,723
LT	4	32%	0	1%	9	67%	14
LU	166	85%	1	0%	28	15%	195
LV	4	3%	0	0%	164	97%	168
MT	23	55%	0	1%	18	44%	41
NL	385	55%	4	1%	313	45%	703
NO	271	65%	7	2%	141	34%	419
PL	22	13%	1	0%	152	87%	174
PT	84	27%	1	0%	221	72%	306
RO	45	48%	1	1%	48	51%	93
SE	221	38%	27	5%	339	58%	587
SI	15	17%	0	0%	75	83%	90
SK	43	77%	1	2%	12	21%	56
UK	2,645	58%	16	0%	1,870	41%	4,531
EU-28	12,446	44%	171	1%	15,353	55%	27,970
EFTA	1,289	66%	10	1%	649	33%	1,949

NUMBERS ARE EXPRESSED IN THOUSANDS AND AS SHARE OF TOTAL FOREIGN POPULATION.

PROVISIONAL DATA FOR FR. ESTIMATED FIGURES FOR IT. BREAK IN TIME SERIES FOR LU.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP "MIGR_POP1CTZ", EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS

2018 Annual Report on intra-EU Labour Mobility – Final Report

Table 29 Stocks of working age (20-64) foreigners by broad groups of citizenship, as shares of the total population in countries of residence, by broad groups of citizenship, 2017

	EU-28	EFTA	TCNs	Total foreign population
AT	9.1%	0.1%	8.6%	17.8%
BE	9.1%	0.0%	4.9%	14.1%
BG	0.2%	0.0%	1.1%	1.3%
CH	19.2%	0.1%	9.7%	28.9%
CY	15.7%	0.0%	4.3%	20.1%
CZ	2.7%	0.0%	3.7%	6.4%
DE	6.1%	0.1%	7.4%	13.6%
DK	4.9%	0.6%	5.5%	11.0%
EE	1.7%	0.0%	15.1%	16.8%
EL	2.4%	0.0%	6.3%	8.8%
ES	4.9%	0.1%	6.3%	11.2%
FI	2.4%	0.0%	3.4%	5.8%
FR	2.6%	0.1%	5.3%	8.0%
HR	0.4%	0.0%	0.9%	1.2%
HU	1.0%	0.0%	0.9%	1.9%
IE	11.7%	0.0%	3.9%	15.7%
IS	10.1%	0.1%	1.9%	12.2%
IT	3.3%	0.0%	7.0%	10.3%
LT	0.3%	0.0%	0.5%	0.8%
LU	44.0%	0.2%	7.5%	51.8%
LV	0.4%	0.0%	14.0%	14.4%
MT	7.9%	0.1%	6.4%	14.5%
NL	3.8%	0.0%	3.1%	7.0%
NO	8.7%	0.2%	4.5%	13.4%
PL	0.1%	0.0%	0.6%	0.7%
PT	1.4%	0.0%	3.6%	5.0%
RO	0.4%	0.0%	0.4%	0.8%
SE	3.9%	0.5%	5.9%	10.3%
SI	1.2%	0.0%	5.9%	7.1%
SK	1.2%	0.0%	0.3%	1.6%
UK	6.9%	0.0%	4.9%	11.8%
EU-28	4.1%	0.1%	5.0%	9.2%
EFTA	15.1%	0.2%	7.6%	22.9%

NUMBERS ARE EXPRESSED IN PERCENTAGES.

PROVISIONAL DATA FOR FR. ESTIMATED FIGURES FOR IT. BREAK IN TIME SERIES FOR LU.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP "MIGR_POP1CTZ", EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS

2018 Annual Report on intra-EU Labour Mobility – Final Report

Table 30 Stocks of EU-28/EFTA movers of working age (20-64), by citizenship and by EU-28/EFTA country and EU-28/EFTA aggregates, total numbers (in thousands), 2017

Residence	Country of Citizenship																															
	AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK	IS	NO	CH	
AT		.	14		9	129	.		(4)	(6)	(5)	64	51	.	18	.	.	.		(6)	45	.	64	.	13	32	8	.	.	7		
BE	.		17	.	(3)	23	.	.	10	39	.	108		5	.	98	(2)	4	.		80	46	25	54	.	.	5	18			(3)	
CY	.		10		.	(1)				26		.	.	.	.	(1)	.	.			(1)			13	.	.	.	6			
CZ	.		(3)			(2)						(1)				(1)			(1)			6		(3)			58	3				
DE	127	20	168		40		11	.	251	127	6	88	244	136	8	499	37	19	23		95	559	107	310	11	14	28	69	.	.	30	
DK	.		5			24		.	(2)	4	.	(3)	.	(3)	.	7	8		5		8	21	(3)	20	9	.	.	16	6	14	.	
EE	.		.			.											.		(2)												
ES	(4)	15	130		5	63	5		(1)		(1)	54	(3)	7	5	122	10		.		27	43	68	524	(5)		6	94		(1)	5	
FI	.	0	.		.	.	.	29	.	.		.		.	0	.		.			.	.	(0)	.	4			(2)	.		(1)
FR	.	72	16		.	41	.		.	83	.			.	(6)	88	.	.	.		17	33	374	62	.	.	.	60	.		23	
EL	.	.	22	5	.	(3)	.					(1)	.	.	.	.	.				(2)	6		15	.	.	.	4	.		.
HU	.					.							.	.	.					.	.	.		7	.		(5)	.	.	.	.
IE	.	.	3		4	9	.	.	.	11	.	11	6	9		13	29		17		4	98	5	25	.	.	7	77	.		.	
IT	5	3	40		4	23	.	.	6	13	.	20	13	6	.		3		.		4	74	(2)	924	.	.	5	15			4	
LU	(1)	21	2		(1)	12	1	.	2	4	.	31	(1)	2	(1)	15	1		.	.	3	4	57	3	1	(1)	.	3	.		.	
MT			.			.	.					.				(1)								.				3			
NL	(2)	24	10	.	.	45	.	.	7	17	(2)	13	.	8	4	18	3		.			62	12	7	3		(2)	28		(2)	.	
PT		.	.			.				5	.	6					13	.			.				.
SE	(2)	.	4		(1)	21	17	3	4	7	26	5	3	3	(1)	7	6		3		9	22	.	9				15	3	19	.	
SI	.		(1)			.							(3)			.																
SK					(3)										
UK	11	18	78	(9)	36	107	15	(6)	58	129	10	131	.	67	215	201	148		81	(6)	60	734	186	308	28	(5)	54			10	14	
CH	27	11	5		9	224	(3)	(1)	10	60	(4)	91	23	18	(3)	206	(3)	(1)	(2)	.	11	19	195	14	(4)	(2)	12	24	.			

2018 Annual Report on intra-EU Labour Mobility – Final Report

Residence	Country of Citizenship																														
	AT	BE	BG	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK	IS	NO	CH
IS						1	.					.				.	.		.		.	4	.		.		.	.
NO	.	.	3		(1)	14	16	(1)	2	4	5	4	.	2	.	3	19		5		5	50	2	7	30	.	(1)	9	4		(1)
EFTA	28	11	8	0	10	239	19	2	12	64	8	95	23	20	4	210	22	1	8	0	16	73	198	20	34	3	13	33	4	1	1
EU-28	158	177	530	(15)	108	511	58	47	377	447	52	482	342	301	246	1096	251	26	140	.	316	1758	843	2363	71	34	207	424	(11)	52	94

NUMBERS ARE EXPRESSED IN THOUSANDS.

CELLS DISPLAYING '.' INDICATE VALUES BELOW RELIABILITY LIMITS. DATA FOR BG, HR, LT, LV, PL, AND RO ARE ENTIRELY BELOW RELIABILITY LIMITS. FIGURES BETWEEN BRACKETS HAVE LOW RELIABILITY.

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS

Table 31 Inflows of EU-28 and EFTA movers of working age (20-64) by country of destination, total numbers and shares of the total working-age population in country of destination, 2016

Country of destination	Citizenship					
	EU-28		EFTA		Total	
AT	52	1.0%	0	0.0%	52	1.0%
BE	46	0.7%	0	0.0%	46	0.7%
BG	1	0.0%	0	0.0%	1	0.0%
CH	72	1.4%	0	0.0%	72	1.4%
CY	6	1.1%	0	0.0%	6	1.1%
CZ	24	0.4%	0	0.0%	24	0.4%
DE	321	0.6%	2	0.0%	323	0.6%
DK	21	0.6%	2	0.1%	23	0.7%
EE	3	0.4%	0	0.0%	3	0.4%
EL	12	0.2%	0	0.0%	12	0.2%
ES	86	0.3%	1	0.0%	88	0.3%
FI	6	0.2%	0	0.0%	6	0.2%
FR	58	0.2%	3	0.0%	60	0.2%
HR	2	0.1%	0	0.0%	2	0.1%
HU	8	0.1%	0	0.0%	9	0.1%
IE	22	0.8%	0	0.0%	22	0.8%
IS	5	2.4%	0	0.0%	5	2.4%
IT	51	0.1%	0	0.0%	51	0.1%
LT	1	0.0%	0	0.0%	1	0.0%
LU	13	3.4%	0	0.0%	13	3.4%
LV	0	0.0%	0	0.0%	0	0.0%
MT	7	2.6%	0	0.0%	8	2.7%
NL	53	0.5%	1	0.0%	54	0.5%
NO	18	0.6%	0	0.0%	18	0.6%
PL	17	0.1%	0	0.0%	17	0.1%
PT	5	0.1%	0	0.0%	6	0.1%
RO	5	0.0%	0	0.0%	5	0.0%
SE	25	0.4%	2	0.0%	27	0.5%
SI	3	0.2%	0	0.0%	3	0.2%
SK	3	0.1%	0	0.0%	3	0.1%
UK	212	0.6%	3	0.0%	215	0.6%
EU-28	1063	0.3%	16	0.0%	1080	0.4%
EFTA	94	1.1%	1	0.0%	95	1.2%

NUMBERS ARE EXPRESSED IN THOUSANDS AND AS SHARES OF THE TOTAL WORKING AGE POPULATION IN COUNTRY OF DESTINATION.

FIGURES FROM IE, EL, AT, MT, RO, SI AND UK REFER TO 'AGE IN COMPLETED YEARS'.

FOR 2016 FIGURES: BREAK IN TIME SERIES: DE PROVISIONAL DATA: BG, PL AND SK ESTIMATED: PL, PT

BREAK IN TIME SERIES: DE (2016).

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS

2018 Annual Report on intra-EU Labour Mobility – Final Report

Table 32 Evolution of the inflows of foreign EU and EFTA citizens of working age (20-64), by EU/EFTA country of destination, 2009, 2012, 2014, 2015 and 2016

	2009				2012				2014				2015				2016			
	EU		EFTA		EU		EFTA		EU		EFTA		EU		EFTA		EU		EFTA	
AT	29	0.6%	0	0%	42	0.8%	0	0%	54	1.0%	0	0%	55	1.0%	0	0%	52	1.0%	0	0%
BE	:	0.0%	:	0%	49	0.7%	0	0%	49	0.7%	0	0%	47	0.7%	0	0%	46	0.7%	0	0%
BG	:	0.0%	:	0%	3	0.1%	0	0%	1	0.0%	0	0%	1	0.0%	0	0%	1	0.0%	0	0%
CH	76	1.6%	0	0%	74	1.5%	0	0%	77	1.5%	0	0%	74	1.4%	0	0%	72	1.4%	0	0%
CY	9	1.8%	0	0%	9	1.6%	0	0%	3	0.5%	0	0%	5	0.9%	0	0%	6	1.1%	0	0%
CZ	14	0.2%	0	0%	10	0.2%	0	0%	12	0.2%	0	0%	12	0.2%	0	0%	24	0.4%	0	0%
DE	105	0.2%	2	0%	248	0.5%	2	0%	335	0.7%	2	0%	366	0.7%	2	0%	321	0.6%	2	0%
DK	13	0.4%	2	0%	16	0.5%	2	0%	20	0.6%	2	0%	21	0.6%	2	0%	21	0.6%	2	0%
EE	1	0.1%	0	0%	0	0.0%	0	0%	0	0.0%	0	0%	3	0.4%	0	0%	3	0.4%	0	0%
EL	9	0.1%	0	0%	11	0.2%	0	0%	12	0.2%	0	0%	12	0.2%	0	0%	12	0.2%	0	0%
ES	93	0.3%	1	0%	75	0.3%	2	0%	74	0.3%	1	0%	79	0.3%	1	0%	86	0.3%	1	0%
FI	5	0.2%	0	0%	8	0.3%	0	0%	8	0.2%	0	0%	6	0.2%	0	0%	6	0.2%	0	0%
FR	44	0.1%	3	0%	66	0.2%	3	0%	59	0.2%	3	0%	59	0.2%	3	0%	58	0.2%	3	0%
HR	0	0.0%	0	0%	1	0.0%	0	0%	2	0.1%	0	0%	2	0.1%	0	0%	2	0.1%	0	0%
HU	11	0.2%	0	0%	8	0.1%	0	0%	8	0.1%	0	0%	8	0.1%	0	0%	8	0.1%	0	0%
IE	17	0.6%	0	0%	17	0.6%	0	0%	20	0.7%	0	0%	20	0.7%	0	0%	22	0.8%	0	0%
IS	2	0.9%	0	0%	2	0.8%	0	0%	2	1.3%	0	0%	3	1.4%	0	0%	5	2.4%	0	0%
IT	110	0.3%	0	0%	85	0.2%	0	0%	55	0.2%	0	0%	51	0.1%	0	0%	51	0.1%	0	0%
LT	0	0.0%	0	0%	1	0.0%	0	0%	1	0.0%	0	0%	1	0.0%	0	0%	1	0.0%	0	0%
LU	9	3.0%	0	0%	12	3.6%	0	0%	13	3.8%	0	0%	13	3.6%	0	0%	13	3.4%	0	0%
LV	:	0.0%	:	0%	0	0.0%	0	0%	1	0.1%	0	0%	1	0.0%	0	0%	0	0.0%	0	0%
MT	2	0.8%	0	0%	2	0.8%	0	0%	4	1.4%	0	0%	5	1.8%	0	0%	7	2.6%	0	0%

2018 Annual Report on intra-EU Labour Mobility – Final Report

	2009				2012				2014				2015				2016			
	EU		EFTA		EU		EFTA		EU		EFTA		EU		EFTA		EU		EFTA	
NL	36	0.4%	0	0%	42	0.4%	0	0%	49	0.5%	1	0%	50	0.5%	1	0%	53	0.5%	1	0%
NO	22	0.8%	1	0%	31	1.1%	1	0%	29	1.0%	1	0%	23	0.7%	1	0%	18	0.6%	0	0%
PL	10	0.0%	0	0%	19	0.1%	0	0%	21	0.1%	0	0%	23	0.1%	0	0%	17	0.1%	0	0%
PT	3	0.0%	0	0%	1	0.0%	0	0%	3	0.0%	0	0%	5	0.1%	0	0%	5	0.1%	0	0%
RO	4	0.0%	0	0%	3	0.0%	0	0%	1	0.0%	0	0%	7	0.1%	0	0%	5	0.0%	0	0.0%
SE	21	0.4%	2	0%	20	0.4%	2	0%	23	0.4%	2	0%	24	0.4%	2	0%	25	0.4%	2	0%
SI	2	0.1%	0	0%	2	0.1%	0	0%	3	0.2%	0	0%	2	0.2%	0	0%	3	0.2%	0	0%
SK	6	0.1%	0	0%	:	:	:	:	:	:	:	:	3	0.1%	0	0%	3	0.1%	0	0%
UK	139	0.4%	1	0%	133	0.4%	3	0%	218	0.6%	2	0%	229	0.6%	7	0%	212	0.6%	3	0%
EU-28	693	0.2%	13	0%	885	0.3%	16	0%	1046	0.3%	16	0%	1109	0.4%	20	0%	1063	0.3%	16	0%
EFTA	100	1.3%	1	0%	107	1.3%	1	0%	109	1.3%	1	0%	99	1.2%	1	0%	94	1.1%	1	0%

NUMBERS ARE EXPRESSED IN THOUSANDS AND AS SHARES OF THE TOTAL POPULATION (20-64) IN THE COUNTRY OF DESTINATION.

FIGURES EXCLUDE INFLOWS OF CITIZENS OF THE REPORTING COUNTRY.

FIGURES FROM IE, EL, AT, MT, RO, SI AND UK REFER TO 'AGE IN COMPLETED YEARS'.

CELLS DISPLAYING ':' INDICATE MISSING DATA.

BREAK IN TIME SERIES FOR INFLOW FIGURES DE, CY, IS, NL, PL (2009), BE, BG, SK (2012), EE (2015), DE (2016).

ESTIMATED FIGURES FOR INFLOW: DE, PT, RO (2015), PL, PT (2016).

PROVISIONAL DATA: BG (2012), AT, IE, BG, PL (2014), SK (2015), BG, PL, SK (2016).

FOR POPULATION DATA: BREAK IN TIME SERIES ES, MT, SI (2009), SK (2012), DE (2014), FR, EE (2015), LU (2016). PROVISIONAL FIGURES FOR BE (2009) PL, RO (2012), FR, PL (2014), IE, FR AND PL (2015), FR AND PL (2016). ESTIMATED FIGURES IT AND PL (2016).

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS

Table 33 Outflows by groups of nationality, people of working age (20-64), 2016

Country of residence	Nationals	EU-28	EFTA	TCNs	Total*
AT	11	26	0	13	51
BE	23	30	0	19	72
BG	21	1	0	3	24
CH	22	50	0	21	94
CY	:	:	:	:	:
CZ	6	5	0	21	31
DE	175	135	:	109	420
DK	11	18	2	13	44
EE	8	2	0	2	12
EL	:	:	:	:	:
ES	65	87	:	98	250
FI	8	3	0	2	13
FR	:	:	:	:	:
HR	26	0	0	1	27
HU	28	6	0	3	37
IE	23	15	0	10	48
IS	2	1	0	0	3
IT	86	16	0	16	118
LT	37	0	0	4	40
LU	2	7	0	2	10
LV	13	0	0	3	17
MT	1	3	:	3	7
NL	40	29	0	15	84
NO	6	16	1	5	27
PL	141	13	:	19	173
PT	:	:	:	:	:
RO	169	0	:	0	169
SE	16	10	1	7	34
SI	7	2	0	4	12
SK	3	0	0	0	3
UK	112	109	:	82	303
EU-28**	1030	517	5	448	2000
EFTA**	30	67	1	27	124

NUMBER (IN THOUSANDS) OF OUTFLOWS BY BROAD GROUP OF CITIZENSHIP, 2016.

CELLS DISPLAYING ':' INDICATE MISSING DATA.

PROVISIONAL DATA FOR BG, PL.

*TOTALS FOR DE, ES, MT, PL, RO AND UK EXCLUDE MOVERS FROM EFTA COUNTRIES.

**THESE TOTALS EXCLUDE EL, CY, FR AND PT AS BREAKDOWNS BY NATIONALITY GROUPS ARE NOT AVAILABLE.

FIGURES FOR AT, EL, IE, MT, RO, SI AND UK ARE BASED ON AGE DEFINITION 'AGE COMPLETED IN YEARS'.

2018 Annual Report on intra-EU Labour Mobility – Final Report

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ], AND POPULATION DATA [MIGR_POP1CTZ] EXTRACTED ON 3 APRIL 2018 AND 27 MARCH 2018, MILIEU CALCULATIONS

Table 34 Outflows of nationals (20-64) from EU and EFTA countries, 2009, 2012, 2014, 2015 and 2016

	Outflow of nationals					Total outflow				
	2009	2012	2014	2015	2016	2009	2012	2014	2015	2016*
AT	13	11	11	11	11	43	41	42	44	51
BE	:	20	21	22	23	:	58	69	69	72
BG	:	11	20	18	21	:	14	24	22	24
CH	21	22	21	22	22	67	81	87	91	94
CY	:	:	:	:	:	:	:	:	:	:
CZ	0	0	8	6	6	55	40	24	21	31
DE	87	73	84	79	175	223	188	261	278	419
DK	10	11	10	10	11	33	36	37	37	44
EE	3	4	3	7	8	4	5	4	11	12
EL	:	:	:	:	:	:	:	:	:	:
ES	24	40	58	69	65	306	357	313	266	250
FI	6	7	8	7	8	10	11	12	11	13
FR	:	:	:	:	:	:	:	:	:	:
HR	0	8	16	21	26	:	10	17	22	27
HU	4	13	30	32	28	9	21	40	40	37
IE	16	31	21	26	23	60	71	64	61	48
IS	3	2	2	2	2	5	3	3	3	3
IT	37	52	66	75	86	62	81	101	108	118
LT	27	30	26	29	37	31	33	29	36	40
LU	1	1	1	2	2	7	8	9	10	10
LV	:	16	13	13	13	0	20	15	16	17
MT	1	1	1	1	1	3	3	5	7	7
NL	39	41	42	43	40	74	89	90	86	84
NO	5	5	4	6	6	13	17	23	23	27
PL	140	155	146	123	141	180	211	203	194	173
PT	:	:	:	:	:	:	:	:	:	:
RO	195	132	141	157	169	196	133	142	159	169
SE	15	18	18	18	16	30	40	39	43	34
SI	1	1	3	6	7	4	2	3	12	12
SK	3	6	6	3	3	17	11	11	3	3
UK	117	121	116	105	112	332	286	280	263	303
EU-28*	738	803	870	883	1030	1679	1769	1834	1819	2000
EFTA	28	30	27	29	30	85	101	113	117	124

NUMBERS ARE EXPRESSED IN THOUSANDS.

FIGURES FOR AT, EL, IE, MT, RO, SI AND UK ARE BASED ON AGE DEFINITION 'AGE COMPLETED IN YEARS'.

CELLS DISPLAYING ':' INDICATE MISSING DATA.

2018 Annual Report on intra-EU Labour Mobility – Final Report

*THE TOTALS FOR 2016 ARE BASED ON THE NUMBERS INDICATED IN THE TABLE, SMALL VARIATIONS ARE POSSIBLE FROM THE EUROSTAT TOTAL OUTFLOW NUMBERS.

FOR COMPARABILITY, TOTALS OUTFLOWS FOR EU-28 EXCLUDE THE MISSING COUNTRIES.

FOR OUTFLOW DATA: PROVISIONAL DATA: BG (2012), AT, IE, BG, PL (2014), BG, PL (2015), BG AND PL (2016).

FOR POPULATION DATA: BREAK IN TIME SERIES ES, MT, SI (2009), SK (2012), DE (2014), FR, EE (2015), LU (2016). PROVISIONAL FIGURES FOR BE (2009) PL, RO (2012), FR, PL (2014), IE, FR AND PL (2015), FR AND PL (2016). ESTIMATED FIGURES IT AND PL (2016).

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ], AND POPULATION DATA [MIGR_POP1CTZ] EXTRACTED ON 3 APRIL 2018 AND 27 MARCH 2018, MILIEU CALCULATIONS.

Table 35 Outflows of nationals of working age (20-64) as a percentage of the population in the country of origin, 2009, 2012, 2014, 2015 and 2016

Country of residence	Outflow rate among nationals					Total outflow rate				
	2009	2012	2014	2015	2016	2009	2012	2014	2015	2016
AT	0.3%	0.2%	0.2%	0.2%	0.2%	0.8%	0.8%	0.8%	0.8%	0.9%
BE	:	0.3%	0.4%	0.4%	0.4%	:	0.9%	1.0%	1.0%	1.1%
BG	:	0.2%	0.4%	0.4%	0.5%	:	0.3%	0.5%	0.5%	0.6%
CH	0.6%	0.6%	0.6%	0.6%	0.6%	1.4%	1.6%	1.7%	1.8%	1.8%
CY	:	:	:	:	:	0.7%	2.5%	4.2%	:	2.6%
CZ	0.0%	0.0%	0.1%	0.1%	0.1%	0.8%	0.6%	0.4%	0.3%	0.5%
DE	0.2%	0.2%	0.2%	0.2%	0.4%	0.4%	0.4%	0.5%	0.6%	0.8%
DK	0.3%	0.4%	0.3%	0.3%	0.4%	1.0%	1.1%	1.1%	1.1%	1.3%
EE	0.5%	0.6%	0.5%	1.1%	1.2%	0.4%	0.6%	0.4%	1.4%	1.5%
EL	:	:	:	:	:	0.5%	1.6%	1.3%	:	1.3%
ES	:	0.2%	0.2%	0.3%	0.3%	1.0%	1.2%	1.1%	0.9%	0.9%
FI	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%
FR	:	:	:	:	:	0.5%	0.5%	0.5%	:	0.6%
HR	:	:	0.6%	0.8%	1.0%	:	:	0.6%	0.8%	1.1%
HU	0.1%	0.2%	0.5%	0.5%	0.5%	0.1%	0.3%	0.6%	0.7%	0.6%
IE	0.7%	1.3%	0.9%	1.1%	1.0%	2.1%	2.6%	2.3%	2.2%	1.7%
IS	1.5%	1.4%	1.0%	1.1%	1.0%	2.9%	1.8%	1.6%	1.5%	1.6%
IT	0.1%	0.2%	0.2%	0.2%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%
LT	1.4%	1.7%	1.5%	1.7%	2.1%	1.6%	1.8%	1.6%	2.0%	2.3%
LU	0.8%	0.7%	0.7%	0.9%	0.8%	2.2%	2.4%	2.5%	2.7%	2.9%
LV	:	1.5%	1.3%	1.3%	1.3%	0.0%	1.6%	1.2%	1.3%	1.4%
MT	:	0.4%	0.4%	0.4%	0.3%	1.2%	1.2%	1.8%	2.7%	2.4%
NL	0.4%	0.4%	0.4%	0.5%	0.4%	0.7%	0.9%	0.9%	0.9%	0.9%
NO	0.2%	0.2%	0.2%	0.2%	0.2%	0.5%	0.6%	0.7%	0.7%	0.9%
PL	0.6%	0.6%	0.6%	0.5%	0.6%	0.7%	0.9%	0.8%	0.8%	0.7%
PT	:	:	:	:	:	0.2%	0.7%	0.7%	:	0.5%
RO	1.4%	:	1.1%	1.3%	1.4%	1.4%	1.0%	1.1%	1.3%	1.4%
SE	0.3%	0.3%	0.3%	0.3%	0.3%	0.5%	0.7%	0.7%	0.8%	0.6%
SI	0.2%	0.5%	0.5%	0.5%	0.6%	1.3%	0.9%	0.9%	0.9%	1.0%
SK	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%

2018 Annual Report on intra-EU Labour Mobility – Final Report

Country of residence	Outflow rate among nationals					Total outflow rate				
	2009	2012	2014	2015	2016	2009	2012	2014	2015	2016
UK	0.3%	0.4%	0.3%	0.3%	0.3%	0.9%	0.8%	0.7%	0.7%	0.8%
EU-28	0.3%	0.3%	0.3%	0.3%	0.4%	0.6%	0.7%	0.7%	0.6%	0.8%
EFTA	0.4%	0.5%	0.4%	0.5%	0.5%	1.1%	1.3%	1.4%	1.4%	1.5%

NUMBERS ARE EXPRESSED IN PERCENTAGES.

CELLS DISPLAYING ':' INDICATE MISSING DATA.

FIGURES FOR AT, EL, IE, MT, RO, SI AND UK ARE BASED ON AGE DEFINITION 'AGE COMPLETED IN YEARS'.

FOR OUTFLOW DATA: PROVISIONAL DATA: BG (2012), AT, IE, BG, PL (2014), PL, BG (2015), BG AND PL (2016).

BREAK IN TIME SERIES DE, CY, IS, NL, PL (2009), BG (2012), EE (2015), DE (2016).

FOR POPULATION DATA: BREAK IN TIME SERIES ES, MT, SI (2009), SK (2012), DE (2014), FR, EE (2015), LU (2016). PROVISIONAL FIGURES FOR BE (2009) PL, RO (2012), FR, PL (2014), IE, FR AND PL (2015), FR AND PL (2016). ESTIMATED FIGURES IT AND PL (2016).

ESTIMATED FIGURES FOR DE, PL AND PT (2016).

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] EXTRACTED ON 3 APRIL 2018, AND POPULATION DATA [MIGR_POP1CTZ] EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS.

Table 36 Outflows of EU-27/28 citizens of working age (20-64) and total outflows as a percentage of the reference population in the host country, 2009, 2012, 2014, 2015 and 2016

Country of residence	Outflow rate among EU-28 movers (outflows of EU-28 movers as % of EU-28 movers in country)					Total outflow rate (total outflows as % of total population in country)				
	2009	2012	2014	2015	2016	2009	2012	2014	2015	2016
AT	7.3%	6.6%	5.3%	5.3%	5.7%	0.8%	0.8%	0.8%	0.8%	0.9%
BE	:	4.4%	4.9%	4.8%	5.0%	:	0.9%	1.0%	1.0%	1.1%
BG	:	4.8%	9.4%	6.7%	7.2%	:	0.3%	0.5%	0.5%	0.6%
CH	4.2%	4.8%	5.0%	5.1%	5.1%	1.4%	1.6%	1.7%	1.8%	1.8%
CY	:	:	:	:	0.0%	0.7%	2.5%	4.2%	:	2.6%
CZ	:	:	2.8%	1.8%	3.1%	0.8%	0.6%	0.4%	0.3%	0.5%
DE	3.7%	2.7%	4.4%	4.5%	4.6%	0.4%	0.4%	0.5%	0.6%	0.8%
DK	13.4%	11.5%	11.5%	10.6%	11.8%	1.0%	1.1%	1.1%	1.1%	1.3%
EE	3.4%	0.8%	1.3%	17.1%	17.9%	0.4%	0.6%	0.4%	1.4%	1.5%
EL	:	:	:	:	:	0.5%	1.6%	1.3%	:	1.3%
ES	6.9%	6.8%	7.6%	6.6%	6.2%	1.0%	1.2%	1.1%	0.9%	0.9%
FI	5.1%	3.4%	3.7%	3.6%	3.8%	0.3%	0.3%	0.4%	0.4%	0.4%
FR	:	:	:	:	:	0.5%	0.5%	0.5%	:	0.6%
HR	:	:	6.8%	4.8%	5.7%	:	:	0.6%	0.8%	1.1%
HU	3.4%	9.7%	10.2%	8.6%	8.3%	0.1%	0.3%	0.6%	0.7%	0.6%
IE	10.4%	9.8%	9.5%	7.5%	4.6%	2.1%	2.6%	2.3%	2.2%	1.7%
IS	15.5%	6.9%	6.7%	4.8%	6.7%	2.9%	1.8%	1.6%	1.5%	1.6%

Country of residence	Outflow rate among EU-28 movers (outflows of EU-28 movers as % of EU-28 movers in country)					Total outflow rate (total outflows as % of total population in country)				
	2009	2012	2014	2015	2016	2009	2012	2014	2015	2016
IT	2.0%	1.5%	1.5%	1.4%	1.3%	0.2%	0.2%	0.3%	0.3%	0.3%
LT	14.2%	17.2%	2.0%	2.6%	2.3%	1.6%	1.8%	1.6%	2.0%	2.3%
LU	3.8%	3.8%	3.9%	4.1%	4.5%	2.2%	2.4%	2.5%	2.7%	2.9%
LV	:	10.6%	8.5%	21.1%	10.8%	:	1.6%	1.2%	1.3%	1.4%
MT	17.0%	15.7%	27.5%	40.0%	15.6%	1.2%	1.2%	1.8%	2.7%	2.4%
NL	8.0%	9.2%	8.8%	8.0%	8.1%	0.7%	0.9%	0.9%	0.9%	0.9%
NO	3.7%	3.8%	4.9%	4.5%	5.9%	0.5%	0.6%	0.7%	0.7%	0.9%
PL	91.5%	79.4%	63.8%	114.9%	68.5%	0.7%	0.9%	0.8%	0.8%	0.7%
PT	:	:	:	:	:	0.2%	0.7%	0.7%	:	0.5%
RO	14.3%	5.6%	1.6%	5.3%	0.8%	1.4%	1.0%	1.1%	1.3%	1.4%
SE	4.8%	5.4%	4.5%	4.5%	4.5%	0.5%	0.7%	0.7%	0.8%	0.6%
SI	38.3%	24.6%	16.0%	14.9%	13.4%	1.3%	0.9%	0.9%	0.9%	1.0%
SK	4.3%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.1%
UK	7.6%	3.9%	4.3%	3.6%	4.7%	0.9%	0.8%	0.7%	0.7%	0.8%
EU-28	4.7%	4.1%	4.6%	4.3%	4.4%	0.6%	0.7%	0.7%	0.6%	0.8%
EFTA	4.4%	4.6%	5.0%	5.0%	5.3%	1.1%	1.3%	1.4%	1.4%	1.5%

OUTFLOWS OF EU-27/28 CITIZENS AS SHARE OF THE TOTAL POPULATION OF EU-27/28 CITIZENS IN THE COUNTRY (OUTFLOW RATE AMONG EU-28 MOVERS) AND OUTFLOWS OF CITIZENS OF ANY CITIZENSHIP AS SHARE OF TOTAL POPULATION IN COUNTRY (TOTAL OUTFLOW RATE), 2009, 2012, 2014, 2015 AND 2016.

PROVISIONAL DATA: BE (2009), PL, RO (2012), FR, PL (2014) FOR POPULATION DATA; PL, BG (2014, 2015, 2016) FOR OUTFLOW DATA.

BREAK IN TIME SERIES SI (2009, 2012), DE (2014) FR, EE (2015) AND LU (2016). PROVISIONAL FIGURES FOR BE (2009) PL, RO (2012), FR, PL (2014), IE, FR AND PL (2015), FR AND PL (2016). ESTIMATED FIGURES IT AND PL (2016).

FIGURES FOR AT, EL, IE, MT, RO, SI AND UK ARE BASED ON AGE DEFINITION 'AGE COMPLETED IN YEARS'.

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] EXTRACTED ON 03 APRIL 2018, AND POPULATION DATA [MIGR_POP1CTZ] EXTRACTED ON 27 MARCH 2018, MILIEU CALCULATIONS

Table 37 Net mobility by groups of nationality, people of working age (20-64), 2016

Country of residence	Nationals	EU-28	EFTA	TCNs	Total
AT	-4	26	0	20	42
BE	-11	16	0	13	18
BG	-14	0	0	5	-9
CH	-6	21	0	7	23
CZ	-2	19	0	0	18
DE	-101	186	0	215	301

Country residence	of	Nationals	EU-28	EFTA	TCNs	Total
DK		3	3	0	6	12
EE		-2	1	0	2	1
ES		-27	-1	:	70	43
FI		-3	3	0	11	12
HR		-20	1	0	3	-17
HU		-2	3	0	7	8
IE		-2	7	0	11	16
IS		0	4	0	1	4
IT		-61	35	0	132	106
LT		-24	1	0	1	-23
LU		-1	6	0	2	7
LV		-10	0	0	-1	-10
MT		0	5	:	2	7
NL		-13	24	0	41	53
NO		-2	2	0	16	16
PL		-73	4	:	:	-19
RO		-52	5	0	9	-39
SE		-3	15	1	60	73
SI		-5	1	0	4	0
SK		-2	3	0	0	1
UK		-54	104	:	141	190
EU-28		-481	465	2	805	791
EFTA		-9	27	0	23	42

NUMBERS ARE EXPRESSED IN THOUSANDS.

FIGURES FOR IE, AT, EL, RO, SI AND UK ARE BASED ON AGE DEFINITION 'AGE COMPLETED IN YEARS'.

CELLS DISPLAYING ':' INDICATE MISSING DATA.

NO OUTFLOW DATA IS AVAILABLE FOR CY, EL, FR AND PT THEREFORE THESE COUNTRIES ARE EXCLUDED FROM THE TABLE.

BREAK IN TIME SERIES FOR INFLOW FIGURES DE, CY, IS, NL, PL (2009), BE, BG, SK (2012), EE (2015), DE (2016).

PROVISIONAL DATA FOR INFLOW FIGURES: BG (2012), AT, IE, BG, PL (2014), PL (2015), BG, PL AND SK (2016)

ESTIMATED DATA FOR INFLOWS DE, PT AND RO (2015), PL, PT (2016).

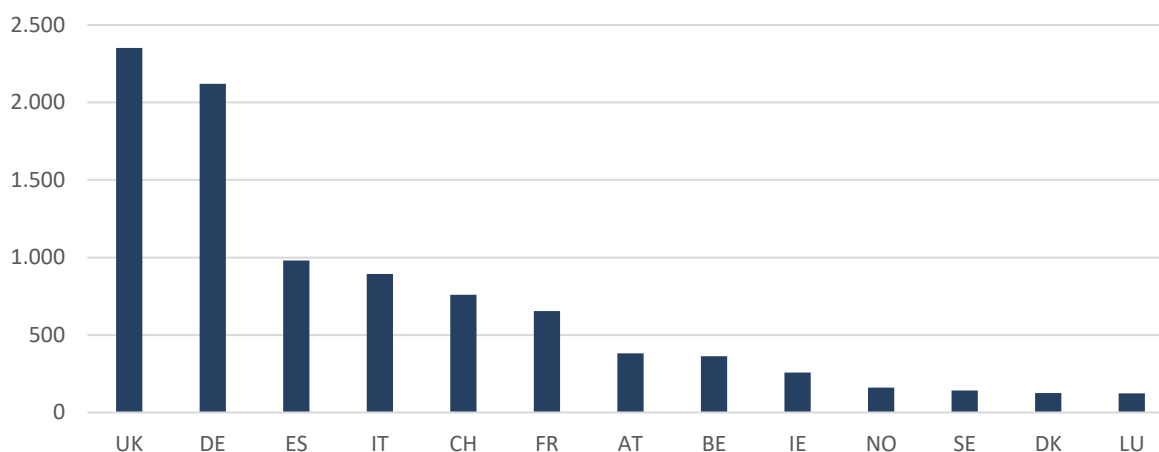
SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED ON 27 MARCH 2018 AND EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] EXTRACTED ON 18 MAY 2017

Table 38 Correspondence between EU-LFS codes and ISCED codes on level of education with ISCO codes on occupations

EU-LFS code: HATLEVEL	ISCED 11 codes	ISCO skill levels	ISCO major groups	
Lower secondary	L	ISCED 01	1	9 Elementary occupations
Lower secondary	L	ISCED 02	1	
Lower secondary	L	ISCED 1	1	
Lower secondary	L	ISCED 2	2	

EU-LFS code: HATLEVEL		ISCED 11 codes	ISCO skill levels	ISCO major groups
Upper secondary	M	ISCED 3		4 Clerical Support Workers, 5 Service and Sales Workers, 6,7,8
Upper secondary	M	ISCED 4		
Tertiary level	H	ISCED 5	3	3 Technicians and Associate Professionals, 1 Managers
Tertiary level	H	ISCED 6	3	
Tertiary level	H	ISCED 7	4	2 Professionals , 1 Managers
Tertiary level	H	ISCED 8	4	

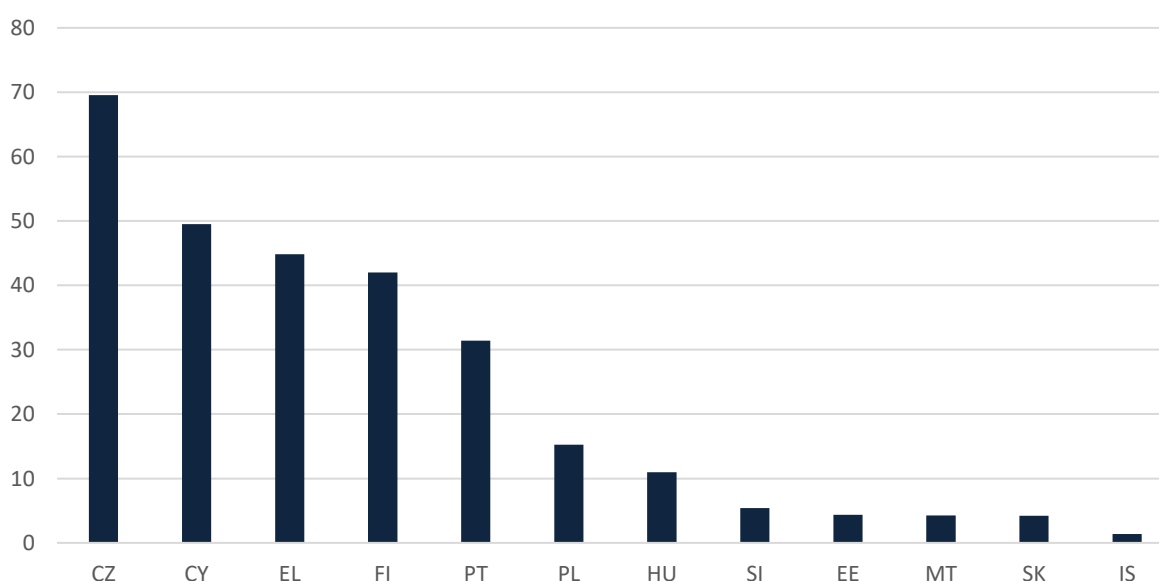
Figure 64 Active EU-28 movers of working age (20-64), by country of residence (over 100,000), 2017 (in thousands)



FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Figure 65 Active EU-28 movers of working age (20-64), by country of residence (below 100,000), 2017 (in thousands)



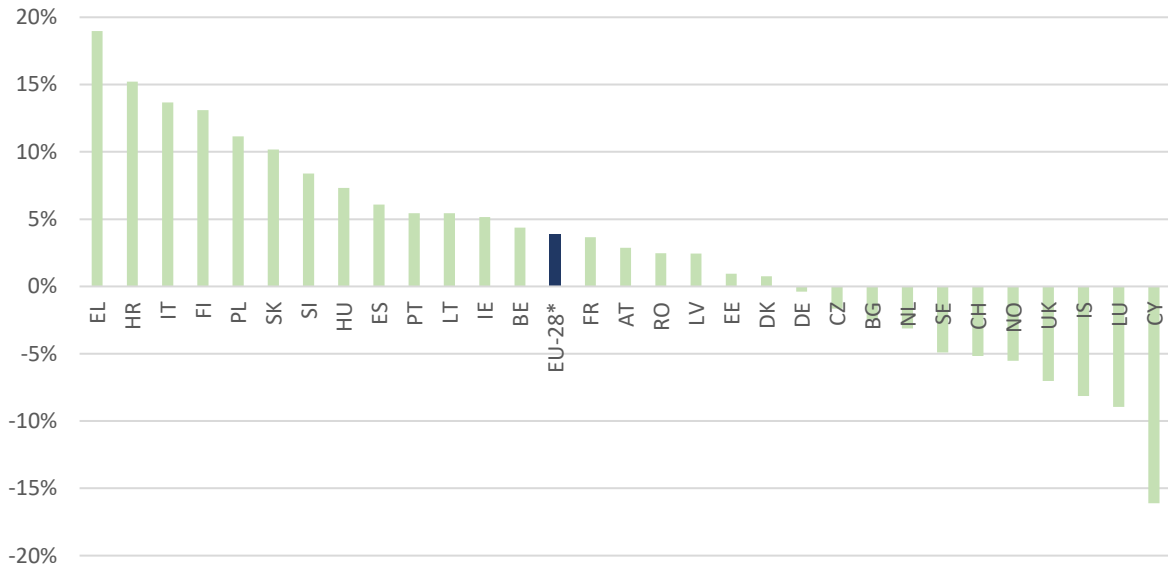
LOW RELIABILITY FOR MT.

FIGURES REFER TO MOVERS EXCLUDING THOSE BORN IN THE COUNTRY OF RESIDENCE.

VALUES FOR MISSING COUNTRIES (BG, HR, LT, LV, RO, IS) WERE TOO LOW TO BE PRESENTED.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Figure 66 Difference in employment rates between EU-28 movers and non-mobile nationals of country of origin, by country of origin, 2017



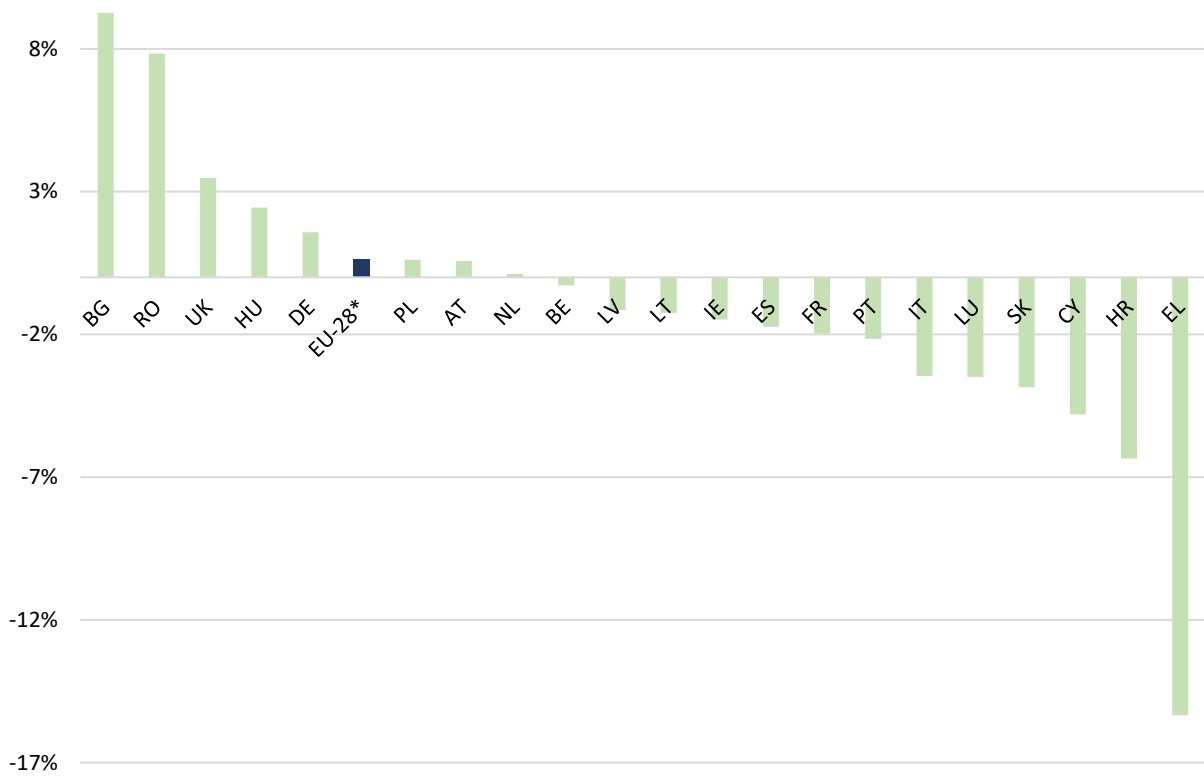
*EU-28 AGGREGATE ALSO INCLUDES EU-28 MOVERS WHO LIVE IN AN EFTA COUNTRY.

FIGURES OF LOW RELIABILITY : CY, IS.

COUNTRIES NOT DISPLAYED HAVE FIGURES BELOW RELIABILITY.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Figure 67 Difference in unemployment rates between EU-28 movers and non-mobile nationals of country of origin, by country of origin, 2017



*EU-28 AGGREGATE ALSO INCLUDES EU-28 MOVERS WHO LIVE IN AN EFTA COUNTRY.

FIGURES OF LOW RELIABILITY : AT, BE, HR, IE, LV, NL, SK.

COUNTRIES NOT DISPLAYED HAVE FIGURES BELOW RELIABILITY.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

2018 Annual Report on intra-EU Labour Mobility – Final Report

Table 39 Cross-border workers (20-64 years), by country of residence (rows) and country of work (columns), 2017

	AT	BE	BG	CH	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HU	IE	IS	IT	LI	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK	UK	EU 28	EF TA	TO TA L
AT				11			27											9														38	21	58
BE							11						18							44			37									115		115
BG							13			(5)																				8	40		40	
CH	0						(5)						(2)				(2)	11													9	11	20	
CY																																		
CZ	11	(1)		(1)			36						(1)				(1)						(3)		(1)				3	(3)	60	(1)	61	
DE	27			77				8					8							53			44		5						5	170	79	249
DK							(2)																	(3)				(3)			9	(3)	12	
EE												10												(1)				(1)			13	1	15	
EL																																		
ES		(1)		(1)			5						6		(3)								(3)			(3)					19	46	(2)	48
FI																															(2)		3	
FR		39		224			34				(5)									86										(7)	181	224	405	
HR	(3)						14										(4)						(1)	(1)				(5)	(1)	32	(2)	34		
HU	49						32																								11	102	105	
IE																														10	11		11	
IS																																		
IT	(2)	3		58			6				3		7																		9	39	58	97
LT																															(6)		9	
LU		(1)					2						1																		6		6	
LV							2																	(1)				(2)			4	11	(2)	13
MT																															(1)		(1)	
NL		15					16																								2	38		38
NO																															(1)		(1)	

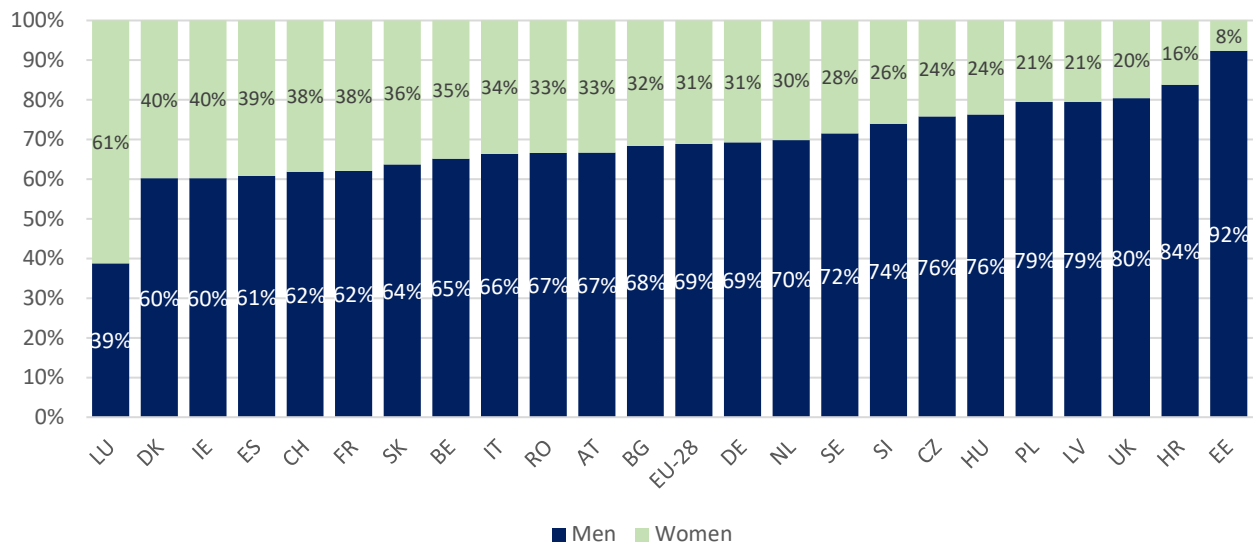
2018 Annual Report on intra-EU Labour Mobility – Final Report

	AT	BE	BG	CH	CY	CZ	DE	DK	EE	EL	ES	FI	FR	HU	IE	IS	IT	LI	LT	LU	LV	MT	NL	NO	PL	PT	RO	SE	SI	SK	UK	EU 28	EFTA	TO TAL	
PL	(11)					(10)	114	(5)															15	16							(10)	183	19	202	
PT											6		6																				19		23
RO							39				(10)						49														(11)	123		123	
SE								15																15							(1)	21	15	36	
SI	12						(1)										(2)															16		16	
SK	53			4		36	24							9			4							5							4	142	5	146	
UK															(7)																	21		23	
EU-28	175	80		387		53	386	33		(9)	35	15	62	(14)	19		74	(10)		186				118	49	(10)	(8)		21	(7)	(9)	114	1,443	449	1,892
EFTA							5						2				2	11														10	11	21	
Total	175	80		387		53	391	33		(9)	35	15	64	(14)	19		76	21		186			118	49	(10)	(8)		21	(7)	(9)	114	1,453	460	1,913	

NUMBERS REFER TO EU AND EFTA CITIZENS WHO RESIDE IN ONE EU/EFTA COUNTRY AND WORK IN ANOTHER ONE.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Figure 68 Gender distribution of cross-border workers, by country of residence, 2017



THE FIGURES REFER TO EU-28 AND EFTA CITIZENS RESIDING IN AN EU-28 OR EFTA COUNTRY AND WORKING IN ANOTHER, AGED 20 TO 64 YEARS.

LOW RELIABILITY FOR CATEGORY 'WOMEN' : EE, HR, UK.

SOURCE : EU-LFS, 2017, MILIEU CALCULATIONS.

Table 40 EU level: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	5%	9%	2.0	69%	
Accommodation and food services activities	11%	18%	2.9	75%	Qual. Shortage, high reliance on movers
Construction	7%	9%	2.5	88%	Qual. Shortage, reliance on movers
Activities of households as employers	28%	13%	n.a.	107%	Qual. Shortage, very high reliance on movers
Administrative and support service activities	8%	12%	3.3	78%	Qual. Shortage, reliance on movers

Table 41 EU level: NACE shortage sectors with average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	5%	9%	2.0	69%	

NACE	Share of EU-28 movers in	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Information and communication	4%	9%	2.8	52%	Quant. Shortage, low reliance on movers
Professionals	4%	8%	2.5	51%	Quant. Shortage, low reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 42 Germany: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in DE	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	8%	7%	1.8	35%	
Accommodation and food services activities	25%	13%	4.2	41%	Qual.shortage, reliance on movers
Construction	11%	7%	4.2	50%	Qual.shortage, reliance on movers
Activities of households as employers	19%	9%	n.a.	below reliability	Quant.shortage, reliance on movers
Transportation and storage	10%	8%	3.6	41%	Qual.shortage, reliance on movers
Information and communication	6%	9%	3.7	28%	Quant.shortage, partial reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 43 Germany: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in DE	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	8%	7%	1.8	35%	
Education	4%	8%	1.7	15%	Quant.shortage, low reliance on movers
Professionals	4%	8%	3.0	33%	Quant. Shortage, low reliance on movers

NACE	Share of EU-28 movers in DE	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Human health and social work	4%	7%	2.5	21%	Quant. Shortage, low reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 44 UK: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in UK	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	8%	11%	2.5	32%	
Wholesale and retail trade	8%	11%	2.9	39%	Qual. shortage
Accommodation and food service activities	18%	20%	3.9	29%	Quant. Shortage, high reliance on movers
Activities of households as employers	(19%)	43%	n.a.	n.a.	Shortage/ high turnover, high reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 45 UK: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in UK	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	8%	11%	2.5	32%	
Water supply and sewerage	5%	10%	1.8	(42%)	Qual. Shortage, low reliance on movers
Professional	8%	10%	2.7	40%	Qual. Shortage, low reliance on movers
Financial/insurance activities	5%	8%	3.4	39%	Qual. Shortage, low reliance on movers
Electricity, gas, steam and air condition supply	Below reliability	Below reliability	2.9	11%	Quant. Shortage, low reliance on movers

NACE	Share of EU-28 movers in UK	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Other service activities	3%	10%	3%	20%	Quant. Shortage, low reliance on movers
Human health and social work activities	5%	8%	2.9	29%	Quant. Shortage, low reliance on movers
Communication and information	6%	10%	3.2	27%	Quant. Shortage, low reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2], EXTRACTED ON 28/05/2018

Table 46 Spain: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in ES	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	5%	12%	0.7	159%	
Activities of households as employers	23%	15%	n.a.	206%	Qual shortage, high reliance on movers
Accommodation and food services	9%	20%	0.5	132%	Quant. Shortage, high reliance on movers
Construction	6%	15%	0.3	197%	Qual shortage/ high turnover, high reliance on movers
Agriculture	6%	14%	n.a.	224%	Qual shortage, high reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2], EXTRACTED ON 28/05/2018

Table 47 Spain: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in ES	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	5%	12%	0.7	159%	
Public administration	Below reliability	7%	3.4	302%	Qual. shortage, low reliance on movers
Administrative and support service activities	4%	11%	0.7	186%	Qual. shortage, low reliance on movers

NACE	Share of EU-28 movers in ES	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Electricity, gas, steam and air conditioning supply	Below reliability	6%	0.8	(211%)	Qual. shortage, low reliance on movers
Communication and information	2%	10%	1.1	110%	Quant. Shortage, low reliance on movers
Professional	1%	10%	0.8	99%	Quant. Shortage, low reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 48 Italy: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in IT	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	4%²²⁹	7%	n.a.	120%	
Activities of households as employers	84%	14%	n.a.	163%	Qual. shortage, very high reliance on movers
Accommodation and food services	6%	16%	n.a.	115%	Quant. Shortage, high reliance on movers
Construction	8%	7%	n.a.	224%	Qual. shortage, high reliance on movers
Administrative and support service activities	5%	9%	n.a.	140%	Qual. shortage, high reliance on movers
Other service activities	4%	8%	n.a.	100%	Quant. Shortage, high reliance on movers
Agriculture	7%	10%	n.a.	99%	Quant. Shortage, high reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

²²⁹ Average without 'activities of households as employers', as this is a strong outlier.

Table 49 Italy: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in IT	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	4% ²³⁰	7%	n.a.	120%	
Arts	3%	10%	n.a.	121%	Quant. Shortage, low reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 50 France: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in FR	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	3%	9%	n.a.	90%	
Activities of households as employers	14%	8%	n.a.	Below reliability	Quant. Shortage, high reliance on movers
Accommodation and food services	5%	20%	n.a.	80%	Quant. Shortage, high reliance on movers
Real estate activities	4%	12%	n.a.	31%	Quant. Shortage, high reliance on movers
Agriculture	3%	8%	n.a.	76%	(Quant. Shortage), high reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 51 France: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above)

NACE	Share of EU-28 movers in FR	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	3%	9%	n.a.	90%	
Arts	Below reliability	15%	n.a.	57%	Quant. Shortage, low reliance on movers

²³⁰ Average without 'activities of households as employers', as this is a strong outlier.

NACE	Share of EU-28 movers in FR	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Other service activities	(1%)	11%	n.a.	105%	Qual. Shortage, low reliance on movers
Wholesale and retail trade	2%	11%	n.a.	95%	Qual. Shortage, low reliance on movers
Professionals	2%	10%	n.a.	55%	Quant. Shortage, low reliance on movers
Transportation and storage	1%	10%	n.a.	98%	Qual. Shortage, low reliance on movers

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 52 Poland: NACE sectors with a high ratio of Polish citizens working in another EU country, compared to nationals working in the same sector in Poland, 2017

NACE	Ratio of Polish movers abroad	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	10%²³¹	7%	1.0	39%	
Activities of households as employers	142%	0%	n.a.	Below reliability	No indications for shortage, very high share of movers
Accommodation and food services	30%	14%	1.5	61%	(qual.) shortage
Administrative and support services	29%	11%	1.0	57%	Possible (qual.) shortage
Construction	16%	11%	2.4	71%	(qual.) shortage
Other service activities	14%	9%	1.7	(61%)	Possible (qual.) shortage
Transportation and storage	11%	8%	1.4	36%	Quant. Shortage, possibly linked to mobility
Wholesale and retail trade	10%	9%	0.8	55%	Possible (qual.) shortage
Manufacturing	9%	7%	1.1	53%	Possible (qual.) shortage
Human health and social work	12%	5%	0.5	34%	Possible (quant.) shortage, possibly linked to mobility
Information and communication	6%	8%	2.1	(37%)	Quant. shortage, possibly linked to mobility

²³¹ Average without 'activities of households as employers', as this is a strong outlier (142%)

NACE	Ratio of Polish movers abroad	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Professionals	8%	7%	1.2	(24%)	Quant. shortage, possibly linked to mobility

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

Table 53 Romania, NACE sectors with a high ratio of Romanian citizens working in another EU country, compared to nationals working in the same sector in Romania, 2017

NACE	Ratio of Romanian movers abroad	Ratio of new hires to employed (nationals)	Job vacancy rate	Ratio of unemployed to new hires (nationals)	Conclusions
Average across sectors	26%²³²	2%²³³	1.3	44%	
Activities of households as employers	404%	21%	n.a.	Below reliability	Shortage/ high turnover, possibly related to mobility
Accommodation and food services	95%	6%	0.5	(54%)	Possible (qual.) shortage, very high share of movers
Administrative and support service activities	56%	0%	1.0	Below reliability	No indications for shortage, very high share of movers
Transportation and storage	27%	2%	1.3	(79%)	Possible (qual.) shortage, possibly linked to mobility
Other service activities	33%	0%	2.5	Below reliability	Quant. shortage, possibly linked to mobility
Human health and social work activities	27%	3%	2.8	(0%)	Quant. shortage, possibly linked to mobility
Construction	40%	8%	0.5	47%	Possible shortage, possibly linked to mobility

FIGURES IN BRACKETS ARE OF LOW RELIABILITY

SOURCE: EU-LFS 2017, MILIEU CALCULATIONS; EUROSTAT JOB VACANCY RATE BY NACE REV. 2 ACTIVITY - ANNUAL DATA (FROM 2001 ONWARDS) [JVS_A_RATE_R2] , EXTRACTED ON 28/05/2018

²³² Average excludes activities of households as employers, because it is a strong outlier (404%).

²³³ Average excludes activities of households as employers, because it is an outlier (21%).

Table 54 Shares of EU-28 movers and nationals (20-64 years), by number of persons living in their households, 2016 (row percentages)

COUNTRY		Number of persons in the household			
		one	two	three to five	six and more
AT	movers	19%	28%	51%	3%
	nationals	18%	27%	51%	3%
	Difference (pps)	0.8	0.1	-0.6	-0.4
BE	movers	17%	26%	51%	5%
	nationals	13%	28%	55%	4%
	Difference (pps)	4.0	-2.0	-3.6	1.6
CY	movers	11%	30%	56%	3%
	nationals	8%	18%	69%	5%
	Difference (pps)	3.2	11.3	-13.0	-1.6
CZ	movers	16%	34%	48%	:
	nationals	12%	31%	56%	2%
	Difference (pps)	4.6	3.6	-7.8	:
DE	movers	23%	31%	44%	2%
	nationals	21%	35%	43%	1%
	Difference (pps)	1.2	-3.6	1.8	0.6
EL	movers	20%	30%	49%	:
	nationals	11%	26%	61%	2%
	Difference (pps)	9.5	4.0	-12.4	:
ES	movers	10%	25%	60%	5%
	nationals	10%	23%	65%	2%
	Difference (pps)	0.6	2.0	-4.8	2.1
FR	movers	11%	33%	53%	3%
	nationals	16%	31%	50%	3%
	Difference (pps)	-5.0	1.8	3.4	-0.2
HU	movers	22%	39%	35%	:
	nationals	12%	27%	56%	5%
	Difference (pps)	10.0	11.7	-21.5	:
IT	movers	22%	23%	54%	2%
	nationals	10%	20%	68%	2%
	Difference (pps)	11.7	2.8	-13.9	-0.5
LU	movers	20%	21%	55%	4%
	nationals	15%	25%	57%	3%
	Difference (pps)	5.0	-3.8	-2.1	0.9
MT	movers		33%	67%	:
	nationals	5%	15%	74%	5%
	Difference (pps)	-5.1	18.0	-7.7	:
NL	movers	18%	32%	49%	1%
	nationals	19%	31%	48%	2%

COUNTRY		Number of persons in the household			
		one	two	three to five	six and more
	Difference (pps)	-1.1	1.1	1.0	-1.0
UK	movers	12%	29%	54%	5%
	nationals	13%	31%	52%	3%
	Difference (pps)	-1.8	-1.7	1.5	2.0
EU-28	movers	17%	29%	51%	3%
	nationals	14%	28%	55%	4%
	Difference (pps)	2.7	0.8	-3.6	-0.2

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

COUNTRIES NOT DISPLAYED HAVE TOO MANY NUMBERS BELOW RELIABILITY. FIGURES BETWEEN BRACKETS HAVE LOW RELIABILITY.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

DATA REFER TO EU-28 CITIZENS OF WORKING AGE (20-64 YEARS)

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Table 55 EU-28 movers and nationals (20-64 years), by marital status, 2016 (row percentages)

Country		no answer	widowed, divorced or legally separated	single	married
AT	EU-28 mover		11.3%	38.9%	49.8%
	national		11.1%	39.6%	49.2%
	Difference (pps)		0.2	-0.8	0.6
BE	EU-28 mover		10.0%	40.6%	49.4%
	national		12.7%	41.7%	45.6%
	Difference (pps)		-2.7	-1.1	3.9
CY	EU-28 mover		9.8%	27.9%	62.3%
	national		8.0%	28.8%	63.2%
	Difference (pps)		1.8	-0.9	-0.9
CZ	EU-28 mover		9.6%	42.5%	47.9%
	national		13.8%	31.2%	55.0%
	Difference (pps)		-4.2	11.3	-7.1
DE	EU-28 mover		10.4%	33.0%	56.6%
	national		10.7%	36.8%	52.5%
	Difference (pps)		-0.3	-3.8	4.1
EL	EU-28 mover		13.5%	25.7%	60.8%
	national		7.3%	32.4%	60.3%

Country		no answer	widowed, divorced or legally separated	single	married
	Difference (pps)		6.2	-6.7	0.5
ES	EU-28 mover		11.5%	34.1%	54.4%
	national		9.3%	37.7%	53.0%
	Difference (pps)		2.2	-3.6	1.4
FR	EU-28 mover		10.0%	36.9%	53.2%
	national		10.2%	45.9%	43.9%
	Difference (pps)		-0.3	-9.0	9.3
HU	EU-28 mover		13.0%	47.8%	39.1%
	national		14.9%	35.8%	49.2%
	Difference (pps)		-1.9	12.0	-10.1
IT	EU-28 mover		11.8%	31.0%	57.2%
	national		8.1%	35.4%	56.5%
	Difference (pps)		3.6	-4.4	0.8
LU	EU-28 mover	3.1%	8.6%	28.4%	59.9%
	national	2.8%	8.4%	33.1%	55.6%
	Difference (pps)	0.3	0.2	-4.8	4.3
MT	EU-28 mover		25.0%	25.0%	50.0%
	national		6.3%	36.5%	57.1%
	Difference (pps)		18.7	-11.5	-7.1
NL	EU-28 mover		11.2%	32.1%	56.6%
	national	0.0%	8.9%	38.0%	53.1%
	Difference (pps)		2.3	-5.8	3.5
PT	EU-28 mover			35.3%	52.9%
	national			33.9%	55.6%
	Difference (pps)			1.4	-2.7
SI	EU-28 mover			(28.6%)	71.4%
	national		5.7%	46.1%	48.2%
	Difference (pps)		-5.7	-17.5	23.3

Country		no answer	widowed, divorced or legally separated	single	married
SK	EU-28 mover			(33.3%)	66.7%
	national		9.4%	35.3%	55.3%
	Difference (pps)		-9.4	-1.9	11.3
UK	EU-28 mover		8.9%	44.7%	46.5%
	national		12.1%	37.5%	50.3%
	Difference (pps)		-3.3	7.1	-3.9
EU-28	EU-28 mover	(0.1%)	10.3%	36.8%	52.8%
	national	0.0%	10.2%	36.6%	53.2%
	Difference (pps)	0.1	0.1	0.2	-0.4

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

COUNTRIES NOT DISPLAYED HAVE TOO MANY NUMBERS BELOW RELIABILITY. FIGURES BETWEEN BRACKETS HAVE LOW RELIABILITY.

DATA REFER TO EU-28 CITIZENS OF WORKING AGE (20-64 YEARS)

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

2018 Annual Report on intra-EU Labour Mobility – Final Report

Table 56 Household composition of adult EU-28 movers and nationals at EU level, 20-64 years, 2016

Adult EU-28 movers								Difference to nationals							
	adult without children	adult with children	couple without children	couple with children	2+ adults without children	2+ adults with children	Total		adult without children	adult with children	couple without children	couple with children	2+ adults without children	2+ adults with children	
AT	19%	2%	21%	31%	18%	8%	100%	AT	1%	0%	-1%	8%	-5%	-2%	
BE	18%	4%	21%	35%	13%	10%	100%	BE	4%	0%	-2%	3%	-5%	0%	
CY	12%	3%	23%	32%	17%	13%	100%	CY	3%	1%	9%	-1%	-9%	-3%	
CZ	17%	(3%)	29%	38%	10%	(4%)	100%	CZ	4%	(-1%)	4%	6%	-9%	(-4%)	
DE	23%	3%	24%	28%	15%	7%	100%	DE	1%	0%	-4%	4%	-2%	1%	
EL	20%	(3%)	20%	35%	16%	5%	100%	EL	9%	(1%)	1%	6%	-14%	-3%	
ES	10%	4%	19%	37%	14%	15%	100%	ES	1%	2%	3%	7%	-15%	2%	
FR	11%	4%	28%	33%	13%	11%	100%	FR	-5%	-1%	3%	-1%	0%	4%	
HU	22%	4%	35%	22%	9%	9%	100%	HU	10%	2%	15%	-4%	-17%	-5%	
IT	23%	3%	18%	35%	13%	9%	100%	IT	12%	1%	4%	4%	.	-3%	
LU	20%	3%	18%	37%	11%	11%	100%	LU	5%	-1%	-3%	6%	-7%	0%	
MT		0%	33%	33%	33%	0%	100%	MT	:	-2%	(23%)	7%	-4%	.	
NL	18%	3%	29%	39%	7%	5%	100%	NL	-1%	0%	1%	5%	-4%	-1%	
PT	6%	3%	27%	33%	15%	15%	100%	PT	-1%	0%	12%	1%	-13%	1%	
UK	12%	4%	21%	34%	18%	11%	100%	UK	-2%	-1%	-3%	6%	-3%	2%	
EU-28	17%	4%	22%	33%	15%	10%	100%	EU-28	3%	0%	1%	3%	-6%	-1%	

NUMBERS REFER TO WORKING AGE 'ADULTS' = PERSONS AGED BETWEEN 25 AND 64 YEARS OR PERSONS AGED BETWEEN 20 AND 24 YEARS WHO ARE SOCIALLY AND ECONOMICALLY INDEPENDENT OF THEIR PARENTS (EU-LFS DEFINITION²³⁴); COUNTRIES NOT DISPLAYED HAVE TOO MANY FIGURES BELOW RELIABILITY. FIGURES BETWEEN BRACKETS HAVE LOW RELIABILITY.

EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

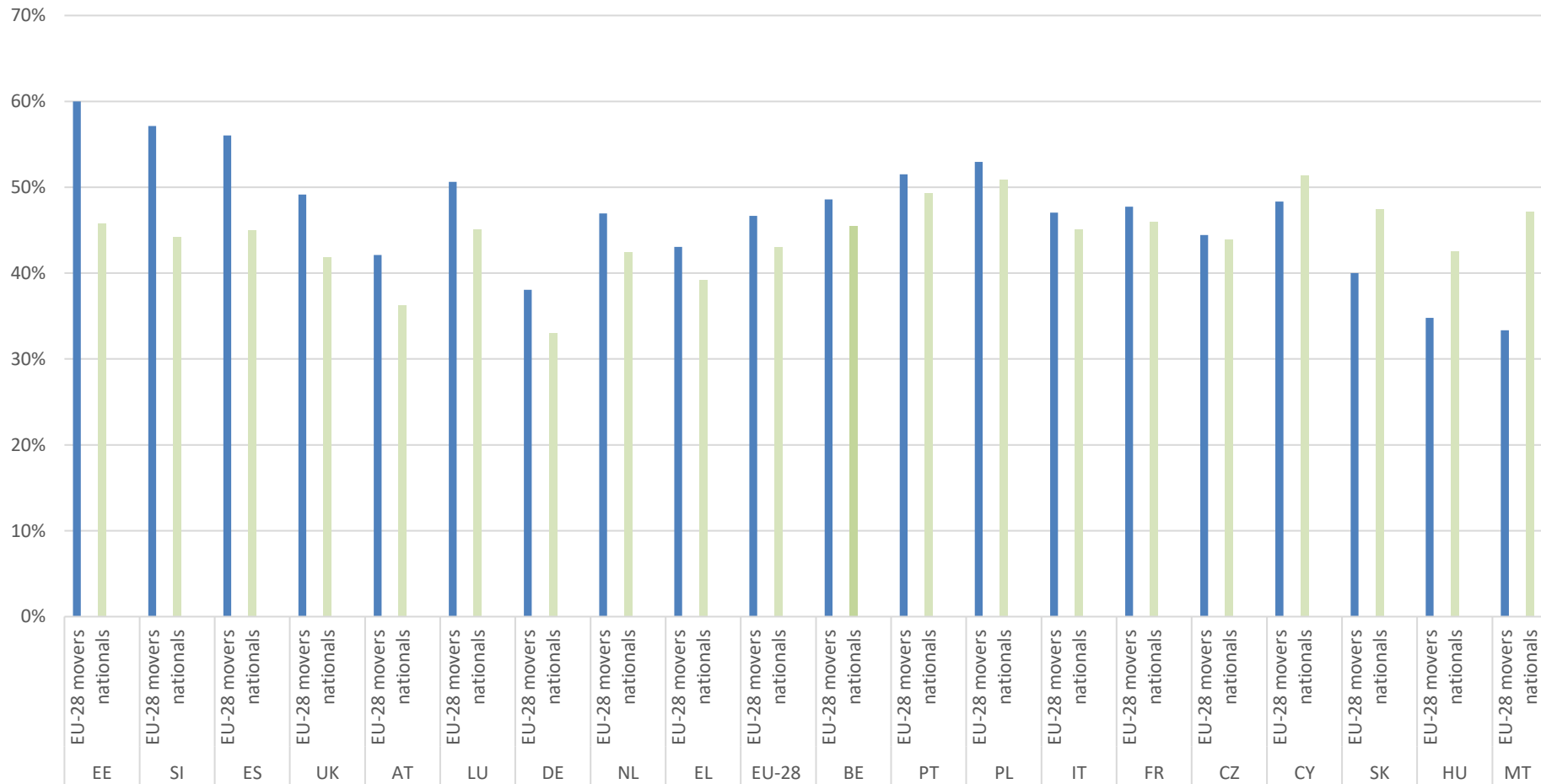
DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

DATA REFER TO EU-28 CITIZENS OF WORKING AGE (20-64 YEARS)

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

²³⁴ Eurostat, EU-LFS User Guide, p. 42, available at: <https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf>

Figure 69, Shares of EU-28 movers and nationals living in a household with at least one child²³⁵ aged 24 years or less, by country of residence, 2016



Low reliability (data for EU-28 movers): PL, SI, SK

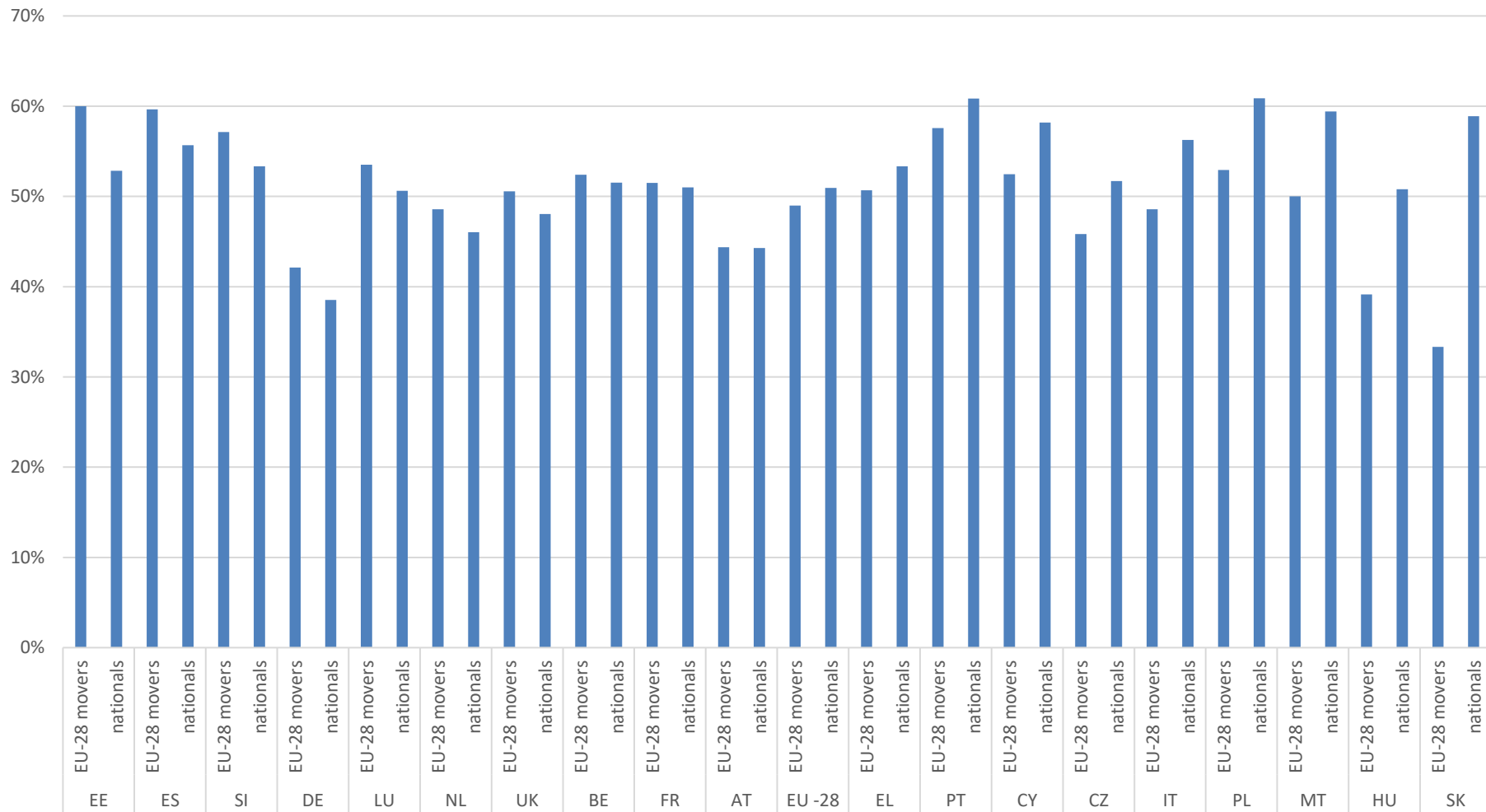
EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

DATA REFER TO EU-28 CITIZENS OF WORKING AGE (20-64 YEARS)

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

Figure 70, Shares of adult EU-28 movers and nationals living in a household with at least one child²³⁶ aged 24 years or less or a person aged 65 years and above, by country of residence, 2016



EU-28 AGGREGATE EXCLUDES BG, DK, FI, HR, IE, LT, LV, RO, SE.

DATA REFER TO PERSONS LIVING IN PRIVATE HOUSEHOLDS.

DATA REFER TO EU-28 CITIZENS OF WORKING AGE (20-64 YEARS)

SOURCE : EU-LFS, MICRODATA (2016 YEARLY DATA SETS), MILIEU CALCULATIONS

2018 Annual Report on intra-EU Labour Mobility – Final Report

PES indicator 1, Top shortages occupations mentioned by most PES, 2016, ISCO-3D		PES indicator 2: Top 10 occupational groups facing bottlenecks at EU level, 2015 ISCO -2D		LFS Indicator 1 new hires/employed, LFS 2017, (above average) (8%)		LFS Indicator 2 unemployed/new hires (below average 67%)	
210	Engineering professionals	210	Science and engineering professionals 22 48	240	Business and administration professionals		110
215	Electro-technology engineers	220	Health professionals 21 45	250	Information and communication technology professionals		120
221	Medical doctors ✓	250	ICT professionals 20 47	340	Legal, social, cultural and related associate professionals		130
222	✓ Nursing and midwifery professionals	310	Science and engineering associate professionals 14 29	350	Information and communication technicians		210
226	Other health professionals	510	Personal services workers 22 32	420	Customer services clerks		220
233	Secondary education teachers	520	Sales workers 13 14	440	Other clerical support workers		230
241	Finance professionals	710	Building and related trade workers, excluding electricians 18 41	520	Sales workers		240
251	Software and applications developers and analysts ✓	720	Metal, machinery and related trade workers 23 53	530	Personal care workers		250
252	Database and network professionals	750	Food processing, wood working, garment and other	540			260
263	Social and religious professionals	830	Drivers and mobile plant operators 16 21	630			310
311	Physical and engineering science technicians			720	Metal, machinery and related trade workers 23 53		320
322	Nursing and midwifery associate professionals			830	Drivers and mobile plant operators 16 21		330
332	Sales and purchasing agents and brokers			920			340
350	Information and communication technicians			930			350
512	Cooks			940			430
522	Shop salespersons			950			440
524	Other sales workers			999			720
532	Personal care workers in health services						740
711	Building frame and related trades workers						940
712	Building finishers and related trades workers ✓						
713	Painters, building structure cleaners and related trades ✓						
721	Sheet and structural metal workers, moulders and welders						

722	Blacksmiths, toolmakers and related trades workers					
723	√ Machinery mechanics and repairers					
741	Electrical equipment installers and repairers√					
751	Food processing and related trades workers					
820	Assemblers √					
833	Heavy truck and bus drivers					
834	Mobile plant operators					

Legend:

new hires/employed, validated with PES indicator 2
new hires/employed, validated with PES indicator 1
new hires/employed, validated with both PES indicators
unemployed/new hires, validated with PES indicator 2
unemployed/new hires, validated with PES indicator 1
unemployed/new hires, validated with both PES indicators
occupation mentioned in all indicators
occupation mentioned in both our indicators

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- Decision 2002/309/EC as regards the Agreement on Scientific and Technological Cooperation, of 4 April 2002 on the conclusion of seven Agreements with the Swiss Confederation
- Decision 2006/245/EC on the conclusion, on behalf of the European Community and its Member States, of a Protocol to the Agreement between the European Community and its Member States, of the one part, and the Swiss Confederation, of the other, on the free movement of persons, regarding the participation, as contracting parties, of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia and the Slovak Republic, pursuant to their accession to the European Union
- Decision 2009/392/EC on the conclusion, on behalf of the European Community and its Member States, of a Protocol to the Agreement between the European Community and its Member States, of the one part, and the Swiss Confederation, of the other, on the free movement of persons regarding the participation, as contracting parties of the Republic of Bulgaria and Romania pursuant to their accession to the European Union
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Table of figures

Figure 1 Distribution of EU-28 movers aged 20 to 64 years across the EU-28 and EFTA, and the change in stocks compared to 2016	24
Figure 2 Share of working age (20-64) EU-28 and EFTA citizens and TCNs in the total population of EU-28 and EFTA countries, 2017	27
Figure 3 Breakdown by citizenship of EU-28/EFTA movers of working age (20-64) in EU-28, EFTA and in the top six countries of residence, 2017	28
Figure 4 Age structure of EU-28 movers vs. nationals of the host countries, EU-28 aggregate, 2017	29
Figure 5 Shares of 20-64-year-old among EU-28 movers and among nationals of the host country, 2017 (sorted in descending order by difference between EU-28 movers and nationals).....	30
Figure 6 Gender distribution of EU-28 movers, by country of residence, 2017	31
Figure 7 Gender distribution of EU-28/EFTA movers by country of origin	31
Figure 8 EU-28/EFTA movers of working age (20-64) by country of residence and years of residence, 2017	32
Figure 9 Stocks of recent EU-28 movers of working age (20-64) at EFTA and EU level, main nationalities (in thousands), 2017	33
Figure 10 Stocks of recent EU-28 movers of working age (20-64) in the five main countries of residence, main nationalities (thousands), 2017	34
Figure 11 Net migration and mobility flows by the country of residence, working age (20-64), 2016	37
Figure 12 Net migration and mobility flows by the country of residence, countries with smaller totals, working age (20-64), 2016	38
Figure 13 Distribution of inflows to EU-28/EFTA Member States of nationals of another EU28 country in 2016, 20-64 years.....	39
Figure 14 Evolution of inflows of foreign EU-28 and EFTA citizens of working age (20-64) in the top 10 countries of destination 2009-2016, (in thousands)	41
Figure 15 Outflow rate of nationals of working age (20-64), by country of citizenship, 2016	44
Figure 16 Trend of outflow rate of nationals of working age (20-64) for main countries of origin, by country of origin, 2009-2016.....	45
Figure 17 Composition of inflows of working age (20-64) movers, by group of citizenship, by country of destination, 2016	46
Figure 18 Increase in number of active EU-28 movers (20-64 years), in % compared to previous year, 2008-2017 (figures include EU-28 movers born in the country of residence)	49
Figure 19 Annual changes 2016-2017 in stocks of active EU-28 movers (20-64 years), by country of residence.....	50
Figure 20 Stocks of active EU-28 movers (20-64 years) at EU and EFTA level, main nationalities, 2017	52
Figure 21 Years of residence of active EU-28 movers (20-64 years), by country of residence, 2017	53
Figure 22 Activity rates of EU-28 movers and of nationals (20-64 years), by country of residence, 2017	57

Figure 23 Activity status of <i>new EU-28 movers</i> (20-64 years), by country of residence, 2017	57
Figure 24 Difference in employment rates between EU-28 movers and nationals (20-64 years), by country of residence, 2017 and 2016.....	59
Figure 25 Difference in unemployment rates between EU-28 movers and nationals (20-64 years), by country of residence, 2017 and 2016.....	60
Figure 26 Employment and unemployment rates of EU-28 movers and nationals of working age (20-64), EU-28 aggregate, 2011-2017	63
Figure 27 Employment rates of EU-28 movers (20-64 years), EU-28 aggregate and in main countries of residence, 2011-2017	64
Figure 28 EU-28 movers, EFTA movers and nationals (20-64 years), by sector of employment, 2017 (<i>bars from left to right correspond to sectors in legend from top to bottom</i>).....	66
Figure 29 New movers (20-64 years), by occupation according to ISCO skill levels 1-4, 2017, <i>bars from left to right correspond to occupations from top to bottom in legend</i>	68
Figure 30 EU-28 movers (20-64 years) by occupation according to ISCO skill levels 1-4 in EU-28, EU-15, EU-13 and EFTA countries of residence, compared to nationals, 2017	69
Figure 31 Shares of self-employed with employees, self-employed without employees and employees among EU-28 movers in employment (20-64 years), by country of residence, 2017 (sorted by share of EU-28 self-employed movers in descending order).....	70
Figure 32 Activity rate of EU-28 movers (20-64 years), by gender, 2017, by EU-28/EFTA country of residence and EU-28 aggregate, sorted by difference in activity rate, in ascending order	71
Figure 33 Employment rate of EU-28 movers (20-64 years), by gender, 2017, by EU-28/EFTA country of residence and EU-28 aggregate, sorted by difference in employment rate, in ascending order	72
Figure 34 Unemployment rate of EU-28 movers (20-64 years), by gender, 2017, by EU-28/EFTA country of residence and EU-28 aggregate, sorted by difference in activity rate, in ascending order.....	73
Figure 35 Share of EU-28 movers* (20-64 years) in employment who feel overqualified for their job, by years of residence, 2014	75
Figure 36 Main obstacle to getting a suitable job, among EU-28 movers (20-64 years), 2014 – specific obstacles mentioned.....	76
Figure 37 Main obstacle to getting a suitable job, among EU-28 movers (20-64 years), 2014 – all answer possibilities, except ‘no answer’, ‘unknown’ and ‘not applicable’	77
Figure 38 Share of employed EU-28 movers and cross-border workers from all employed nationals of country of origin, by country of origin, 2017, 20-64.....	78
Figure 39 Distribution of where cross-border workers are working by their country of residence, 2017	79
Figure 40 Share of EU-28 movers to nationals in the country of residence (15 years and above) according to different educational levels, by country of residence, 2017.....	85
Figure 41 Share of movers to nationals in 2017 compared to 2011 (15 years and above).....	87
Figure 42 Share of movers from selected countries of origin populations according to education levels (15 years and above)	88
Figure 43 Shares of EU-28 movers and nationals with different education levels in ISCO 1D occupations (15 years and above) 2014.....	90

Figure 44 Subjective opinion about overqualification according to ISCO sectors, EU-28 movers vs. nationals (15 years and above), 2014	91
Figure 45 Main reasons for migration among EU-28 movers and TCNs (15 years and above), 2014	92
Figure 46 Main reasons for migration among EU-28 movers, by country of residence, (15 years and above), 2014.....	93
Figure 47 Main reason for migration among EU-28 movers (15 years and above), by education level, 2014	94
Figure 48 Main reason for migration among EU-28 movers, by ISCO occupation, (15 years and above), 2014.....	95
Figure 49 Shares of EU-28 movers to nationals: EU-15 vs. EU-13 movers, 2017 and 2011 (15 years and above)	99
Figure 50 Share of Germans working in another EU country compared to Germans working in Germany according to ISCO-1D occupations, 2011 and 2017 (15 years and above)	105
Figure 51 Share of Italians working in another EU country compared to Italians working in Italy according to ISCO-1D occupations, 2011-2017 (15 years and above).....	109
Figure 52 Share of Spanish movers among Spanish nationals working in Spain according to ISCO-1D occupations, 2011 and 2017 (15 years and above)	112
Figure 53 Share of Polish movers among Polish nationals working in Poland according to ISCO-1D occupations, 2011-2017 (15 years and above)	112
Figure 54 Share of Romanian movers among Romanian nationals working in Romania according to ISCO-1D occupations, 2017 (15 years and above)	114
Figure 55 Share of working age EU-28 movers and nationals, by number of persons living in their household, EU-28 aggregate and main countries of residence.....	124
Figure 56 Household composition of adult EU-28 movers and nationals at EU level, 20-64 years, 2016	125
Figure 57 Shares of EU-28 movers (30-50 years), with and without children in the same household, by years of residence, EU-28 aggregate, 2016.....	126
Figure 58 Adult EU-28 movers with and without dependent household members, by years of residence, EU-28 aggregate, 2016 (<i>bars from left to right correspond to answer categories from left to right, first line and then second line in the legend</i>).....	127
Figure 59 Shares of adult EU-28 movers and nationals (20-64 years) who share a household with none or with one or more inactive adults, EU-28 aggregate and main countries of residence, 2016	128
Figure 60 Shares of adult EU-28 movers and nationals (20-64 years) who share a household with none or with one or more unemployed adults, EU-28 aggregate and main countries of residence, 2016	129
Figure 61 Labour status of men and women (30-49 years) in different types of couples living in the same household, EU-28, 2016	132
Figure 62 Education status of partners (30-49 years) in different types of couples living in the same household, EU-28, 2016	133
Figure 63 Different types of couples (30-49 years), with or without one or more children living in the household, EU-28, 2016	134
Figure 64 Active EU-28 movers of working age (20-64), by country of residence (over 100,000), 2017 (in thousands).....	161

Figure 65 Active EU-28 movers of working age (20-64), by country of residence (below 100,000), 2017 (in thousands).....	161
Figure 66 Difference in employment rates between EU-28 movers and non-mobile nationals of country of origin, by country of origin, 2017.....	162
Figure 67 Difference in unemployment rates between EU-28 movers and non-mobile nationals of country of origin, by country of origin, 2017.....	163
Figure 68 Gender distribution of cross-border workers, by country of residence, 2017	166
Figure 69, Shares of EU-28 movers and nationals living in a household with at least one child aged 24 years or less, by country of residence, 2016	180
Figure 70, Shares of adult EU-28 movers and nationals living in a household with at least one child aged 24 years or less or a person aged 65 years and above, by country of residence, 2016.....	181

Table of tables

Table 1 Composition of intra-EU mobility by different types, EU-28 citizens in the EU-28, 2017....	19
Table 2 Top six countries of residence of EU-28 movers of working age (20-64) in total numbers, 2017, foreign population by broad groups of citizenship (totals in thousands and row %)	25
Table 3 Main countries of destination of EU-28 movers of working age (20-64) in total numbers and in shares from the population, 2016 and % change compared to 2015, (total numbers in thousands).....	40
Table 4 Main sending countries (with outflows of nationals of more than 50,000) in 2016 and changes compared to 2015.....	43
Table 5 Return mobility (inflows of nationals), age group 20-64, 2009-2016 (in thousands)	46
Table 6, Educational attainment levels among employed EU-28 movers (20-64 years), by years of residence in the host country, and nationals, EU-28 aggregate, 2017 (row percentages)	74
Table 7a, Main countries of residence of cross-border workers in the main six countries of work, 2017	80
Table 8 ISCO-2D shortage occupations with above-average shares of movers, 2017 (15 years and above).....	100
Table 9 ISCO-2D shortage occupations with below-average share of movers, 2017 (15 years and above).....	101
Table 10 ISCO-2D shortage occupations with above-average share of movers in Germany, 2017 (15 years and above).....	102
Table 11 ISCO-2D shortage occupations with below average share of movers, Germany, 2017 (15 years and above).....	103
Table 12 ISCO-2D shortage occupations with above-average share of movers in the UK, 2017 (15 years and above).....	105
Table 13 ISCO-2D shortage occupations with below average share of movers, UK, 2017 (15 years and above)	106
Table 14 ISCO-2D shortage occupations with above-average share of movers in Italy, 2017, (15 years and above).....	107
Table 15 ISCO-2D shortage occupations with above-average share of movers in France, 2017 (15 years and above).....	109

Table 16 ISCO-2D shortage occupations with below average share of movers, France, 2017 (15 years and above)	110
Table 17 ISCO-2D shortage occupations with above-average share of movers in Spain, 2017 (15 years and above)	110
Table 18 ISCO-2D shortage occupations with below average share of movers, UK, 2017 (15 years and above)	111
Table 19 Shares of adult EU-28 movers and nationals (20-64 years) living in a household with one or more dependent household members, by type, EU-28 aggregate, 2016	123
Table 20 Labour status of partners in different types of couples (20 years and above) living in the same household, EU-28 aggregate, 2016	130
Table 21 Partners in different types of couples, by age group, EU aggregate*, 2016	130
Table 22 Labour status of partners in different types of couples (30-49 years) living in the same household, EU-28, 2016	131
Table 23 Different types of couples (30-49 years), with or without one or more persons aged 65+ living in the household, EU-28, 2016	134
Table 24 Different types of couples (30-49 years) in the same household, by number of persons in the household, EU-28, 2016	135
Table 25 Different types of couples (30-49 years) in households of four persons, by number of inactive adults in the household, EU-28, 2016	135
Table 26 Cross-border workers* (20-64 years) in four main countries of work, 2016	138
Table 27 Estimation of number of EU-28 movers (20-64 years) who moved within the past 10 years with a child born outside the country of residence and whose partner joined them at a later date, EU aggregate*, 2016	139
Table 28 Stocks of working age (20-64) foreigners, by EU/EFTA country of residence and broad groups of citizenship, totals in thousands and row %, 2017	148
Table 29 Stocks of working age (20-64) foreigners by broad groups of citizenship, as shares of the total population in countries of residence, by broad groups of citizenship, 2017	149
Table 30 Stocks of EU-28/EFTA movers of working age (20-64), by citizenship and by EU-28/EFTA country and EU-28/EFTA aggregates, total numbers (in thousands), 2017	150
Table 31 Inflows of EU-28 and EFTA movers of working age (20-64) by country of destination, total numbers and shares of the total working-age population in country of destination, 2016 ...	152
Table 32 Evolution of the inflows of foreign EU and EFTA citizens of working age (20-64), by EU/EFTA country of destination, 2009, 2012, 2014, 2015 and 2016	153
Table 33 Outflows by groups of nationality, people of working age (20-64), 2016	155
Table 34 Outflows of nationals (20-64) from EU and EFTA countries, 2009, 2012, 2014, 2015 and 2016	156
Table 35 Outflows of nationals of working age (20-64) as a percentage of the population in the country of origin, 2009, 2012, 2014, 2015 and 2016	157
Table 36 Outflows of EU-27/28 citizens of working age (20-64) and total outflows as a percentage of the reference population in the host country, 2009, 2012, 2014, 2015 and 2016	158
Table 37 Net mobility by groups of nationality, people of working age (20-64), 2016	159
Table 38 Correspondence between EU-LFS codes and ISCED codes on level of education with ISCO codes on occupations	160

Table 39 Cross-border workers (20-64 years), by country of residence (rows) and country of work (columns), 2017	164
Table 40 EU level: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above).....	166
Table 41 EU level: NACE shortage sectors with average shares of movers, 2017 (15 years and above)	166
Table 42 Germany: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above)	167
Table 43 Germany: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above)	167
Table 44 UK: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above).....	168
Table 45 UK: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above).....	168
Table 46 Spain: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above).....	169
Table 47 Spain: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above).....	169
Table 48 Italy: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above).....	170
Table 49 Italy: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above).....	171
Table 50 France: NACE shortage sectors with above-average shares of movers, 2017 (15 years and above).....	171
Table 51 France: NACE shortage sectors with below-average shares of movers, 2017 (15 years and above).....	171
Table 52 Poland: NACE sectors with a high ratio of Polish citizens working in another EU country, compared to nationals working in the same sector in Poland, 2017	172
Table 53 Romania, NACE sectors with a high ratio of Romanian citizens working in another EU country, compared to nationals working in the same sector in Romania, 2017	173
Table 54 Shares of EU-28 movers and nationals (20-64 years), by number of persons living in their households, 2016 (row percentages).....	174
Table 55 EU-28 movers and nationals (20-64 years), by marital status, 2016 (row percentages).....	175
Table 56 Household composition of adult EU-28 movers and nationals at EU level, 20-64 years, 2016	178
Table of boxes	
Box 1 Legal and statistical definitions of mobile citizens	141

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