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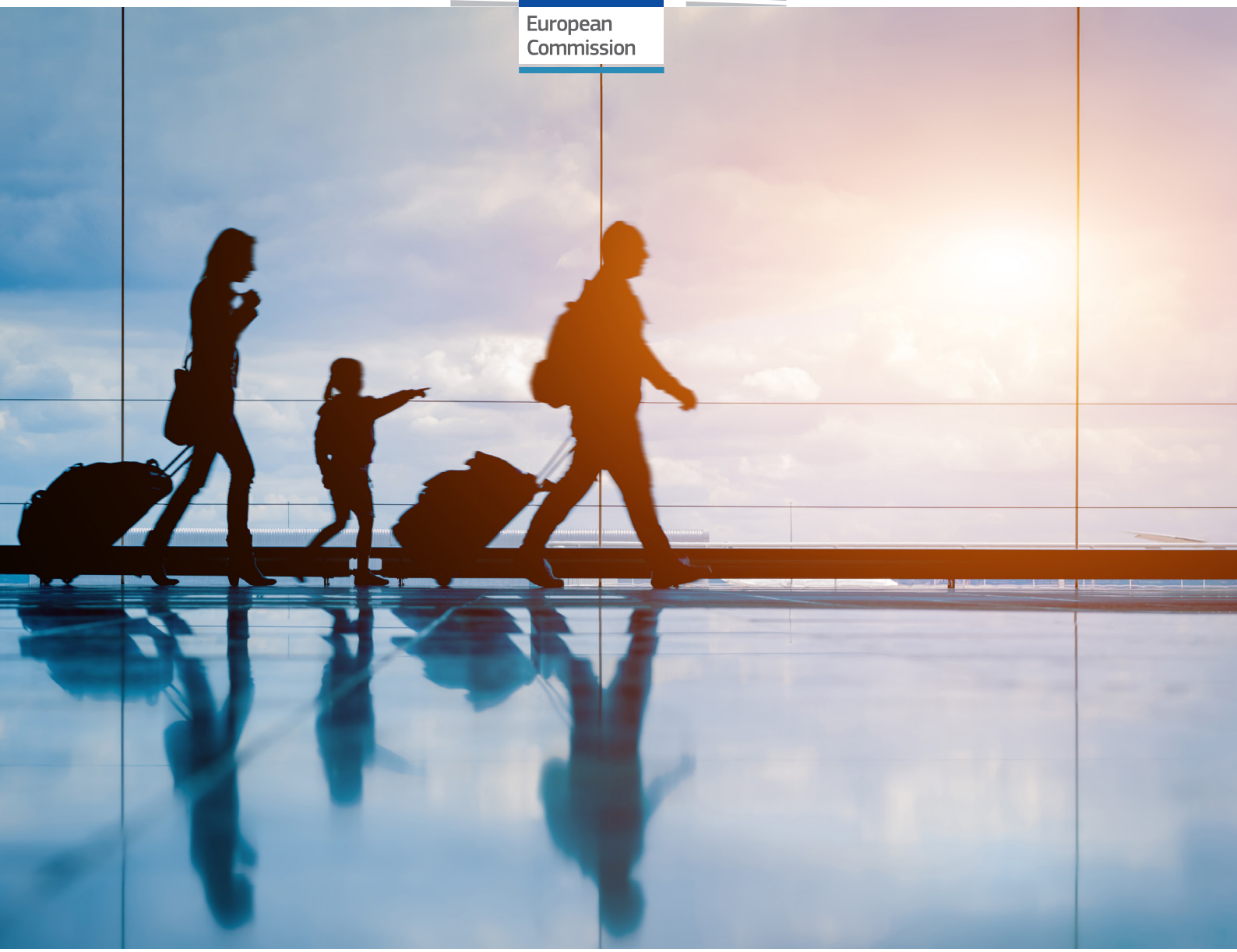

Annual Report on Intra-EU Labour Mobility 2020

Social Europe

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Country codes[1]

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	Czechia	**HR**	Croatia	**MT**	Malta	**SK**	Slovakia
DE	Germany	**HU**	Hungary	**NL**	Netherlands	**UK**	United Kingdom
DK	Denmark	**IE**	Ireland	**NO**	Norway		

Abbreviations and acronyms

AFMP	Agreement on Free Movement of Persons[2] (see box below for definition).
CEE countries	Central and Eastern European Countries (Bulgaria, Czechia, Estonia, Hungary, Lithuania, Latvia, Poland, Romania, Slovenia, Slovakia).
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 Labour Force Survey (EU-LFS).
EU	European Union (refers to the composition at the time the respective text passage refers to; since most reporting is on 2019 and trends before, it mostly refers to EU-28 countries, as on 01 January 2019).
EU-8	Eight of the 10 Member States that joined the EU in 2004 - Czechia, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia.
EU-12	EU-13 countries except Croatia.
EU-13	The countries that joined the EU between 2004 and 2013 - Bulgaria, Cyprus, Croatia, Czechia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia.
EU-15	The countries that joined the EU prior to 2004 - Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, UK.
EU-28	Refers to the EU Member States as on 01 January 2019.
EU-27	Refers to the EU Member States as of 01 February 2020 (excluding the UK).
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 pps.

[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.

TCNs	Third-country nationals: residents of EU and EFTA countries who are neither EU nor EFTA citizens.

Definitions

Absolute length of stay	The time between movers' arrival and departure from the country of destination.
Active	Any person who is either employed or unemployed (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 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	Estonia, Latvia, Lithuania.
Circular mobility	Circular mobility is a repetition of cross-border movements of residence by the same person between two or more countries. This definition is also used by the European Migration Network (EMN, 2011).
Country of citizenship	The country of which a person holds citizenship.
Country of origin	The terms 'country of origin' and 'country of citizenship' are used interchangeably throughout the report.
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	For the purposes of this study, cross-border workers are defined as EU or EFTA citizens who live in one EU or EFTA country and work in another, either as employees or self-employed. Cross-border workers therefore move across borders more or less regularly[5]. Cross-border workers may include the legally defined groups of seasonal[6] and frontier workers[7] and

[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 September 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] 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.
[6] 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 (EU) No 2014/54. For more details on the definition, see Section 2.2.3 of the 2016 Annual Report on intra-EU Labour Mobility.
[7] 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

	may also include some posted workers (Regulation 883/2004)[8]. However, the data measured are not limited to these categories but include all persons who live in one country and work in another. To align with the other parts of the study, data presented here look only at cross-border workers of EU or EFTA nationality. 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 French person lives in Belgium and works in Luxembourg)[9]. Note that figures may differ from those measured by administrative data (PDs S1). This is due to different forms of reporting (one is self-reported (survey-based), the other is based on the issuance of administrative documents).
Eastern European countries	Bulgaria, Czechia, Croatia, Hungary, Poland, Romania, Slovakia, Slovenia, (definition created for the purposes of this study).
Employed	Any person engaged in an activity to produce goods or provide services for pay or profit (International Labour Organization (ILO) definition). Operationally, the concept is measured through specific surveys such as the EU-LFS. In the EU-LFS, a person is defined as employed if, in a reference week, they worked for at least one hour or had a job or business but were temporarily absent.
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). The analysis in Section 2 ('Mobility of workers') focuses on EU-28/EFTA movers who were also born outside their current country of residence.
Foreigner	Any person who is not a citizen of the country in which they reside. This term is used here to refer to both EU-28/EFTA movers and third-country nationals (TCNs).
Inflows	The total number of persons who establish their usual residence[10] in the reference year in a given country for a period expected to be at least 12 months, having previously resided in a different country[11].
Inflow rate	The percentage of inflows of a certain group of people, over the population in the same reference group[12] residing in the country of destination[13].

treatment with nationals, according to Directive (EU) No 2014/54. For more details on the definition, see Section 2.2.3 of the 2016 Annual Report on intra-EU Labour Mobility.

[8] Further explanations on the legislative framework can be found in the specific report on posting: De Wispelaere, F., De Smedt, L. and Pacolet, J. (2019), *Posting of workers. Report on A1 portable documents issued in 2018*, Network Statistics FMSSFE, European Commission, Brussels.

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

[10] 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.

[11] Article 2(1)(c) of Regulation (EC) No 862/2007 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.

[12] For example: inflow rates of EU-28 movers are calculated as inflows of nationals over the total number of nationals residing in the country; total inflow rates are calculated as all inflows over the total population residing in the country.

[13] *ibid.*

Inactive	Any person who is neither employed or unemployed according to ILO definition (see above and below); this group of inactive typically includes, for example, persons in retirement or early retirement, pupils/students/persons in training, homemakers, persons in compulsory military service, persons with permanent disabilities. For a more precise statistical definition please consult the EU-LFS User Guide on the ILOSTAT variable, p. 55[14]).
Mobile worker	Active EU citizens who reside in a Member State or EFTA country other than their country of citizenship.
Mobility	EU or EFTA citizens moving their habitual residence to another Member State/EFTA country other than their country of citizenship and/or working in a different Member State/EFTA country than the one where they reside (cross-border workers).
Nationals	Any person holding citizenship and living in the reported country of residence.
Net intra-EU mobility	Net intra-EU mobility is the difference between inflows and outflows of nationals, EU and EFTA movers from/into a certain EU Member State. It is calculated as the subtraction of outflows from inflows and can be negative (a Member State experiencing higher outflows than inflows) or positive (higher inflows than outflows).
New EU movers	EU movers of working age and with a length of stay of up to two years.
Outflows	The total number of persons in the reference year who cease to have their usual residence[15] in a Member State for a period that is, or is expected to be, at least 12 months[16].
Outflow rate	The percentage of outflows of a certain group of people, over the population in the same reference group[17] residing in the country of origin[18].
Posted worker	Posted workers for the purpose of this report includes persons covered under Articles 12 and 13 of Regulation 883/2004 on the coordination of social security systems. It includes: persons who are employed by an employer that normally carries out its activities in a Member State and who are posted by that employer to another Member State to perform work on its behalf; 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; and such persons who pursue an activity as an employed/self-employed person in two or more Member States[19].
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

[14] This list corresponds to different categories of 'inactive' persons as differentiated in the EU-LFS for the MAINSTAT variable, see: Eurostat (2019a), *EU Labour Force Survey Database User Guide*, Available at: https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf.
[15] 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.
[16] Article 2(1)(c) of Regulation (EC) No 862/2007 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.
[17] 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.
[18] *ibid.*
[19] For further information on the legislative background, see De Wispelaere, F. et al. (2019).

	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 were resident in another Member State in the previous year.
Unemployed	Any person who is not currently employed but who is available for work within two weeks and is actively seeking work (ILO definition).
Unemployment rate	The share of unemployed from all active (unemployed plus employed) persons in a given reference population.
Western European countries	EU-15 countries - Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, UK.
Working age	Persons aged between 20 and 64 years.

EXECUTIVE SUMMARY

The annual report on intra-EU labour mobility provides updated information on labour mobility trends in EU and EFTA countries based on 2019/2018 data. The analysis considers the mobility of all working-age EU citizens (20-64 years) as well as the mobility of the EU citizens in this age group 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.

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.

This year's edition features two specific topics: mobility of high-skilled EU citizens; and the impact of demographic change on prospective mobility flows across the EU.

Main findings

The latest developments confirm that **intra-EU mobility continued to grow, but at a slower pace than in the previous years**. In 2019, there were **17.9 million EU-28 movers**[20] in the EU-28, out of which **13 million were of working age** (20-64 years), according to Eurostat figures.

The stock of EU movers of working-age grew by only 1.2% in 2019, which is considerably less than the 3.4% in 2018. This is largely due to strong decreases of stocks of movers in the UK.

Without looking at data for the UK as a country of residence, the total amount of **working-age EU-28 movers in 2019 was 10.4 million**, a 3.2% increase on 2018.

Just **under half of all EU movers (46%) reside in the UK or Germany**, and a further **28% in France, Italy and Spain**. Of sending countries, **Romania, Poland, Italy, Portugal and Bulgaria** are the **countries of origin for 58% of movers**. Stocks for the two largest countries of origin, Poland and Romania, increased at 4% each compared to 2018.

The EU-LFS indicates a figure of **11.9 million EU-28 movers of working age (20 to 64 years), out of which 9.9 million were active**, an increase of 3% from 2018. The number of active movers has been growing slightly stronger than that of all movers since 2012, but growth has also declined since 2017. **Active EU-28 movers constitute 4.2% of the total labour force in the EU-28**; looking at EU-27 only, there the share of active EU-movers in the total work force is 3.7%.

Net mobility of EU-28 movers remained relatively steady, **decreasing approximately by 1% from 382 000 in 2017 to 379 000 in 2018**[21]. Net mobility for nationals remained negative in most EU countries[22].

Return mobility increased slightly to 738 000 in 2018, constituting 65% of all outflows of nationals, meaning that **for every three people who leave their country of origin, two return**.

[20] This is defined as EU citizens who live in an EU Member State other than their country of citizenship.
[21] This means that 382,000 more EU citizens moved to a country other than their country of citizenship, than left one, continuing the decrease in absolute numbers since 2015.
[22] In other words, where more nationals leave their country of origin than return to it. The exceptions in 2018 were Denmark, Estonia, Hungary, Ireland and Malta.

In 2019 there were **1.5 million cross-border workers within the EU-28** (a decrease of 0.6% in comparison to 2018) and **1.9 million cross-border workers within the EU-28 and EFTA countries** (an increase of 0.9% in comparison to 2018). **The number of posted workers reached 3 million.**

The employment rate of EU-28 movers stood at 78% in 2019 (+1pp compared with 2018), and **unemployment stagnated at 7%.** As in 2018, the employment rate is 3pps higher than for nationals, and the unemployment rate 1pps higher.

For these movers the main sectors of employment in 2019 were manufacturing, wholesale and retail trade, employing 15% and 12% of EU-28 movers, respectively, and 16% and 13% of nationals. EU-28 movers are even more underrepresented in public administration and defense, education and human health and social work activities, whereas they are considerably overrepresented in accommodation and food services, construction and administrative and support services. In terms of occupations, the number of movers working as professionals increased above average since 2011, and in 2019 the share of movers working as professionals (18%) is similar to that of nationals (21%). However, they are still considerably overrepresented in elementary occupations, where 19% of them work (7% among nationals).

High-skilled movers

In 2019, 34% of EU movers had a tertiary level of education, considered 'high-skilled'.

The **most important EU destination countries of high-skilled movers are Germany, Spain, France, Belgium and Austria**. Prior to its exit from the EU, the UK was the destination with the most high-skilled movers. **Major sending countries are Poland, Romania and Italy but also Bulgaria and Portugal**.

The group of high-skilled movers compared to the high-skilled in the country of origin is largest among Romanians (22%), Bulgarians (13%), Portuguese (10%) and Polish (8%).

High-skilled movers work most commonly as professionals, such as in business and administration, science and engineering or teaching. However, **overqualification appears to be quite prevalent,** with around a third (34%) working in an occupation that requires a lower skill level than that of their qualifications (28% in medium-skilled and 6% in low-skilled jobs).

Research suggests that high-skilled movers have better chances of reintegrating into the labour markets upon their return to their countries of origin than low-skilled movers. However, successful reintegration depends on factors, such as social networks, the wider economic context, and the type of job that was held abroad.

Impact of demographic change on intra-EU mobility

Demographic projections indicate a decrease of all age groups below 60 in proportion to the total population, while those above 60 years will see a proportional increase.

Persons of working age are most likely to move at the beginning of their careers, and the likelihood of moving decreases with age. With the younger population also declining in sending countries, this could imply **a decrease in mobility flows**.

However, **population ageing may also affect the economic context in sending and receiving countries**.

With higher education expanding, there will likely be **competition for the increasingly highly educated, but shrinking population of young workers**.

If mobility continues as it has done in the past decade, it will contribute to a fair extent to **considerable population decline in most Eastern[23] European countries and Portugal and a small decline in Italy and Spain**, and **will accelerate increase in several Western European countries**[24], with a particularly strong effect in Germany and Austria. A continued development of increasingly shorter mobility spells, as have been observed over the past decade, may cushion some of the negative effects on sending countries.

[23] Bulgaria, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia.
[24] Austria, Belgium, Germany, the Netherlands.

INTRODUCTION

Aim of the report

This report presents labour mobility flows and patterns in the EU, as per Article 29 of the Regulation on a European network of employment services (EURES)[25]. 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 on intra-EU labour mobility specifically, 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 topics, according to current developments and policy needs.

Specific topics addressed in the Annual Reports include:

- 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.
- 2019 Annual Report: mobility spells.

Structure of the report

For this 2020 report, Section 1 focuses on stocks and flows of EU-28 movers in the EU-28/EFTA countries in 2018/2019 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 2 focuses on active EU-28 movers (or EU-28 mobile workers), defined as employed persons and jobseekers, born outside their current country of residence[26]. As with Section 1, this section provides figures on stocks in 2019 and recent developments, examines the characteristics of these workers (labour status, education structure, occupations, sectors, overqualification) and compares them to nationals in the countries of destination and origin. It also identifies similarities and differences between the gender groups. The section closes with a look at recent trends and foreseeable developments in cross-border mobility.

Section 3 provides details about high-skilled EU-28 movers, defined as those who completed a post-secondary degree. The section shows the main countries of residence and of origin of high-skilled movers and informs about their demographic and educational

[25] Article 29: 'The Commission and the Member States shall monitor and make public labour mobility flows and patterns in the Union on the basis of reports by the European Labour Authority, using Eurostat statistics and available national data'; Regulation (EU) 2016/589 of the European Parliament and of the Council of 13 April only 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.

[26] This allows using EU-LFS data. Movers born in the country of residence constitute a small share in most countries and only 5% across the EU-28. However, in a few Member States their share is higher, namely: Germany (12%), Switzerland (11%), Belgium (14%) and Luxembourg (6%).

background (which field they completed their education in). It also shows the occupations of high-skilled movers, the extent of overqualification and whether there is a link with labour shortages. Where relevant, comparisons are made to EU-28 movers with lower skill levels and to nationals of the countries of residence. Finally, the section provides insights from other studies on the labour integration of high-skilled movers upon their return and whether the stay abroad can be considered beneficial, both for them as individuals and for the countries of origin.

Section 4 focused onto potential impacts of demographic change on labour mobility in the EU. It first explains the differences between the impact of age on an individual level (age-specific likeliness to move) and on a structural level (changing skill-requirements on the labour market). It then discusses how other key determinants of mobility may interact with the age effect. The section proceeds with presenting a possible scenario for mobility flows until 2030 under the assumption that age-specific outflow rates from the main sending countries and inflow rates will remain similar to those of the past decade.

Note regarding Brexit:

As of 1 February 2020, the United Kingdom is no longer part of the European Union. This has a significant consequences (amongst others) on comparability with previous years. In this report for reference years 2019 (stocks) and 2018 (flows) figures for the EU-28 are provided, because during the reference period the UK was still a Member State. In addition, for key indicators, also the values for EU-27 are provided. Unless explicitly excluded, these figures still include movers from the UK to the EU-27.

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). Until 1993, the Treaty rules on free movement of persons 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, while Article 21 gave 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 (EC) No 2004/38 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States[28]. The Directive codified previous legislation that 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 States[29]. Inactive EU citizens have the right to reside in another

[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 (EC) No 2004/38 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, 30.4.2004, pp. 77–123.
[29] Council Directive (EC) No 2004/38 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States.

Member State for more than three months if they have sufficient resources and comprehensive sickness insurance cover[30]. Directive (EU) No 2014/54 on measures facilitating the exercise of rights conferred on workers in the context of freedom of movement for workers aims to ensure 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 that are part of EFTA[31], 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 Federation[32].

Recent developments included:

In Austria, the transitional arrangements of the Act Governing the Employment of Foreign Nationals[33] which determine the labour market access for Croatian workers ended on June the 30th 2020[34].

Regulation (EU) 2020/1054 of 15 July 2020 amending Regulation (EC) No 561/2006 defines new rules as regards minimum requirements on maximum daily and weekly driving times, minimum breaks and daily and weekly rest periods and Regulation (EU) No 165/2014 as regards positioning by means of tachographs.

Until 30 July 2020, Member States had to transpose Directive (EU) 2018/957 amending Directive (EC) No 96/71 into national law and apply the related national measures on the posting of workers[35] from that date.

Overview of key indicators for 2018 and 2019

Different forms of **labour mobility** may be identified:

Long-term labour mobility, where someone moves their residence to a country of which they are not a citizen, *for at least one year*[36], to take up or seek work. This concept of long-term mobility must be distinguished from the legal term 'permanent residence', meaning the right to permanently reside in a ountry after a residence of at least five years[37]. The developments of long-term mobility of all movers, of those of working age, and of active movers (or workers), are presented under points 1. and 2. in the table below, comparing also the data from two sources – the Eurostat population statistics and the EU-LFS.

Short-term mobility, i.e. persons moving to another country for less than one year, is extremely difficult to assess, as there is no European-level data source. Estimations on the extent and evolution of short-term mobility have been made in the 2019 Annual Report on intra-EU labour mobility, which confirmed that short-time mobility is often performed by

[30] Juravle et al. (2013), *A fact-finding analysis of 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, Brussels, 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 (EC) No 94/1 and Decision (EC) No 2002/309. Additional protocols were signed to extend the agreement to 'new' Member States in 2006 and 2009: Council Decision (EC) No 2006/245 and No 2009/392.
[33] Ausländerbeschäftigungsgesetz – AusBIG.
[34] Migration.gov.at, *Transnational Regulatins for workers from Croatia*, https://www.migration.gv.at/fileadmin/downloads/infoblaetter/Transistional_Regulations_for_Workers_from_Croatia.pdf.
[35] European Commission (2020a), *Practical guide on posting* (online), Available at: https://op.europa.eu/en/publication-detail/-/publication/8ac7320a-170f-11ea-8c1f-01aa75ed71a1 [Accessed: 22/07/2020].
[36] The main EU-wide data sources – the EU-LFS and Eurostat population/migration statistics – count persons who live, or intend to live, in a certain country for at least one year.
[37] Directive (EC) No 2004/38.

cross-border workers or posted workers (i.e. persons working in another country without moving the main residence).

Cross-border mobility, where someone resides in one country but is employed or self-employed in another and who moves across borders regularly for this purpose. This concept itself houses different definitions (see Section 2.2.6) and the key trends are presented under point 3. in the table below.

Posting of workers, where persons who are employed by an employer which normally carries out its activities in a Member State are posted by that employer to another Member State to perform work on its behalf for a limited period. It also includes 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. Data on portable documents issued to posted workers is analysed in a separate report[38] and key figures are shown in point 4. in the table below.

Another form of labour mobility is so-called **'return mobility',** i.e. long-term movers returning 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 1.2.3). Return mobility increased in 2018 and amounted to around 738 000 nationals returning to their country of origin. Return mobility had a ratio of 65% to the number of nationals who left their country in 2018.

Table 1: Composition of intra-EU mobility, 2019

Type of mobility	2019 EU-28	2018 EU-28[39]	EU-28 change 2018/19	2019 from EU-28 to EU-27	2019 from EU-27 to EU-27)[40]
1. Long-term movers according to Eurostat demography statistics					
▪ **all ages***	17.9 million	17.5 million	1.8%	14.2 million	13.2 million [41]
▪ **working age** (20-64 years) *	13 million	12.9 million	1.2%	10.4 million	(N/A)
▪ working age movers as share of total working-age population[42]	4.3%	4.2%	0.1pps	3.9%	
2. Long-term movers according to EU-LFS					
▪ **working age** (20-64 years) **	11.9 million	11.6 million	2.4%	9.3 million	8.9 million

[38] De Wispelaere, F. et al. (2019).
[39] Data for 2018 may deviate from the 2019 Annual Report on intra-EU labour mobility because Eurostat data have since been revised/updated.
[40] Data refers to EU-28 movers in EU-27 countries of residence, so EU Member States as of 01 February 2020 (excl.UK); data in brackets refers to movers only from EU-27 countries (excl. UK), residing in another EU-27 country.
[41] Data are not available for CY and MT.
[42] The total working-age population in the EU-28 in 2019 was 304.1 million (EU-27: 265.3 million).

Type of mobility	2019 EU-28	2018 EU-28[39]	EU-28 change 2018/19	2019 from EU-28 to EU-27	2019 from EU-27 to EU-27)[40]
▪ …of which **active movers** (employed or looking for work) **	9.9 million	9.6 million	2.9%	7.6 million	7.3 million
▪ active movers as share of total labour force[43]	4.2%	4.1%	0.1pps	3.7%	3.6%
▪ working age and born outside the country of residence	11.2 million	10.9 million	2.6%	8.6 million	8.2 million
3. Cross-border workers (20-64 years)**	1.5 million	1.5 million	-0.6%	1.4 million[44]	1.3 million[45]
(as share of total employed EU-28 citizens in the EU-28[46])	0.6%	0.7%	-0.1	0.7%	
4. Number of postings[47] (of employed and self-employed), all ages (no. of PDs A1)[48]***	4.6 million	3 million	1.6 million	na	na
…equals approximate number of persons	3.06 million	1.9 million	1.16 million	na	na
5. Annual return mobility (20-64 years) (2018) ****	738 000	723 000	2.1%	677 506	na
(as ratio to EU-28 nationals leaving their country of origin in 2018) *****	65%	72%	-7pps	66%	na

*SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP, ONLINE DATA CODE: MIGR_POP1CTZ (EXTRACTED 07/07/2020)

**SOURCE: EU-LFS 2019, BASED ON SPECIAL EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS; INCLUDES EU-28 CITIZENS LIVING IN ONE EU MEMBER STATE AND WORKING IN ANOTHER.

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

****SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP, ONLINE DATA CODE: MIGR_IMM1CTZ, EXTRACTED ON 30 JUNE 2020; APPROXIMATION BY USING NUMBERS OF NATIONALS MOVING TO THEIR COUNTRY OF CITIZENSHIP.

*****SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP, ONLINE DATA CODE: MIGR_IMM1CTZ AND DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP, ONLINE DATA CODE: MIGR_EMI1CTZ, EXTRACTED ON 30 JUNE 2020;

[43] The total active population (labour force) in the EU-28 countries in 2019 was 236.4 million (EU-27: 205 million).
[44] Excludes UK as country of residence.
[45] Excludes UK as country of work.
[46] The number of total employed EU-28 citizens in the EU-28 in 2019 was 209.5 million (EU-27: 174.0 million). This number includes employed EU-28 nationals working in their country of citizenship, employed EU-28 movers and cross-border workers. The number of cross-border workers used for this calculation only includes cross-border workers who are nationals of their country of residence (EU-28: 1.3 million, EU-27: 1.3 million in 2019); cross-border workers who are not nationals of their country of residence would also be EU-28 movers.
[47] The number indicates the total number of PDs A1 issued by EU-28 Member States and EFTA countries referring to Articles 12 and 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).
[48] The approximate number of persons posted to one Member State (PDs A1, Article 12) in 2018 was 999,863, which made up 0.4% of the total number of employed persons in the EU-28 countries. The approximate number of persons working in two or more Member States (PDs A1, Article 13) is 910,820 – a share of 0.4% of the total number of employed persons aged 20-64 in the EU-28 countries in 2018.

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.

1 MOBILITY OF EU CITIZENS

This section provides an overview of the numbers of EU and EFTA citizens of working age living in a country other than their country of citizenship in 2019 (stocks) and changes since 2018. It also provides a comparison to stocks of third country nationals in the EU. Special attention is paid to those 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.

It also considers the numbers of working-age EU citizens who moved into and out of the Member States in 2018 (latest year for which flow data are available) and compares this with annual movements of previous years, analysing trends since 2009.

Key findings

Destination countries

- In 2019, the stock of working-age EU-28 movers was 13 million, an increase of 1.2% on the previous year. With annual increases in 2015-2017 around 5% and 3.5% in 2018, the growth slowed down further. The total stock of EU-28 movers in the EU-27 countries was 10.4 million, increasing by 2.5-3% per year in 2017 and 2018.
- The UK's annual growth in stocks continued its sharp decline, going from an increase of 14.2% in 2017 to 6.2% in 2018, and to a net decrease of -5.9% in 2019. Smaller net decreases compared with 2018 were seen in Hungary (-4%) and Greece (-0.6%). In Spain, the trend of decreases since 2013 halted, with a 2019 increase in stocks of 1.5%. France rebounds from a -2.1% decrease in 2018 to a 2.9% increase, while Italy continues the trend (since 2016) of ca. 1% increases, with an increase of 0.8% since 2018. In Germany, a 3.8% increase is similar to the level in 2017 but markedly below the higher numbers in the 2012-2016 period.
- In 2019, EU-28 movers constituted 4.3% of the total EU-28 population. Third Country Nationals (TCNs) made up 5.5%, while EFTA nationals accounted for less than 0.1%. Looking only at the EU-27 countries, EU-28 movers made up a smaller portion of the total population at 3.9%, with TCNs making up 5.6%.
- Luxembourg was, again, the country with the highest proportion of EU-28 movers relative to its population (43.6%), followed by Cyprus (17.1%) and Ireland, Austria, Belgium and Malta (all around or just above 10%).
- Movers are generally younger than nationals – 73% of EU-28 movers are of working age while among nationals (who do not live in another country), working-age individuals make up only 58% of the population. The gender distribution of movers stands at 51% women and 49% men, remaining stable since at least 2016. Men are over-represented among movers in Finland (65%) Sweden and Czechia (55% for both), while women are over-represented in Greece (72%) and Italy (59%).
- Net intra-EU mobility of EU-28 movers remained relatively steady, decreasing ca. 1% from 382 000 in 2017 to 379 000 in 2018. This means that 382 000 more EU citizens moved to a country other than their country of citizenship, than left one, continuing the decrease in absolute numbers since 2015.

Countries of origin

- Movers from Romania, Poland, Italy and Portugal continued to make up a majority of European movers, constituting just over six million people or 53% of total EU-28 movers. Germany, Italy and Portugal are the largest countries of origin of movers to EFTA countries.

- Stocks for the two largest countries of origin, Poland and Romania, increased by 4% each compared to 2018. This entailed an increase of 67 000 Polish movers, and 98 000 Romanian movers.
- When comparing the presence of EU movers, EFTA movers and TCN : 43% of those living in a country other than their own were EU-28 movers, 56% were TCNs, and under 1% were EFTA movers. This is a slight decrease in EU-28 citizens and a slight increase in TCNs, of about 1 pps each, compared to 2018.
- Net mobility for nationals (where more nationals leave the country than return) remained negative in most EU countries. In 2018 Denmark, Estonia, Hungary, Ireland and Malta were the only EU countries which saw more nationals returning to their territory than leaving.
- Return mobility remained relatively steady on an EU-28 aggregate level compared to 2017, albeit with a small decrease: nationals made up 21.6% of working-age inflows (including TCN) in 2018, down from 22.1% in 2017. In Romania, Lithuania and Bulgaria, return mobility constituted more than 50% of total inflows.

1.1 Main countries of residence and countries of citizenship of EU-28/EFTA movers in 2019

The total number of EU citizens of working age living in another EU-28 Member State was ca. 13 million in 2019. This meant 1.2% more than in 2018, compared to 3.4% in the previous year and around 5% annually in the years 2014-2017. Indicating that growth of mobility is slowing down. However, looking only at the EU-27 (following the UK's exit from the EU), no such slowdown is visible: the 10.4 million EU-28 movers in the EU-27 countries is a 3.2% increase compared to 2018, and following 2.6% in 2017. Finally, there were 182 000 EFTA citizens of working age living in EU-28 Member States in 2019, an increase of 2% on the previous year.

1.1.1 Annual change in stocks – countries of destination

Figure 1 shows the absolute numbers of EU-28 movers in EU-28 and EFTA countries and their share in relation to the working-age population of the destination country. Luxembourg, Ireland, Iceland and Cyprus have the highest proportion of movers in relation to their own population, in part due to a relatively small national population. Five countries have over a million movers resident: Germany (3.3 million), the UK (2.6 million), Spain (1.4 million) and Italy (1.2 million). France has just under a million at 970 000[49]. Together, these five countries made up 73.4% of EU-28 movers, or 9.5 million people. For the EU-27, the equivalent figure is 6.9 million, or 67% of EU-27 movers. The next tier of destination countries – Austria, Belgium and the Netherlands – have around half a million EU-28 residents.

[49] Outside of the EU-28, Switzerland has around 1 million EU-28 movers.

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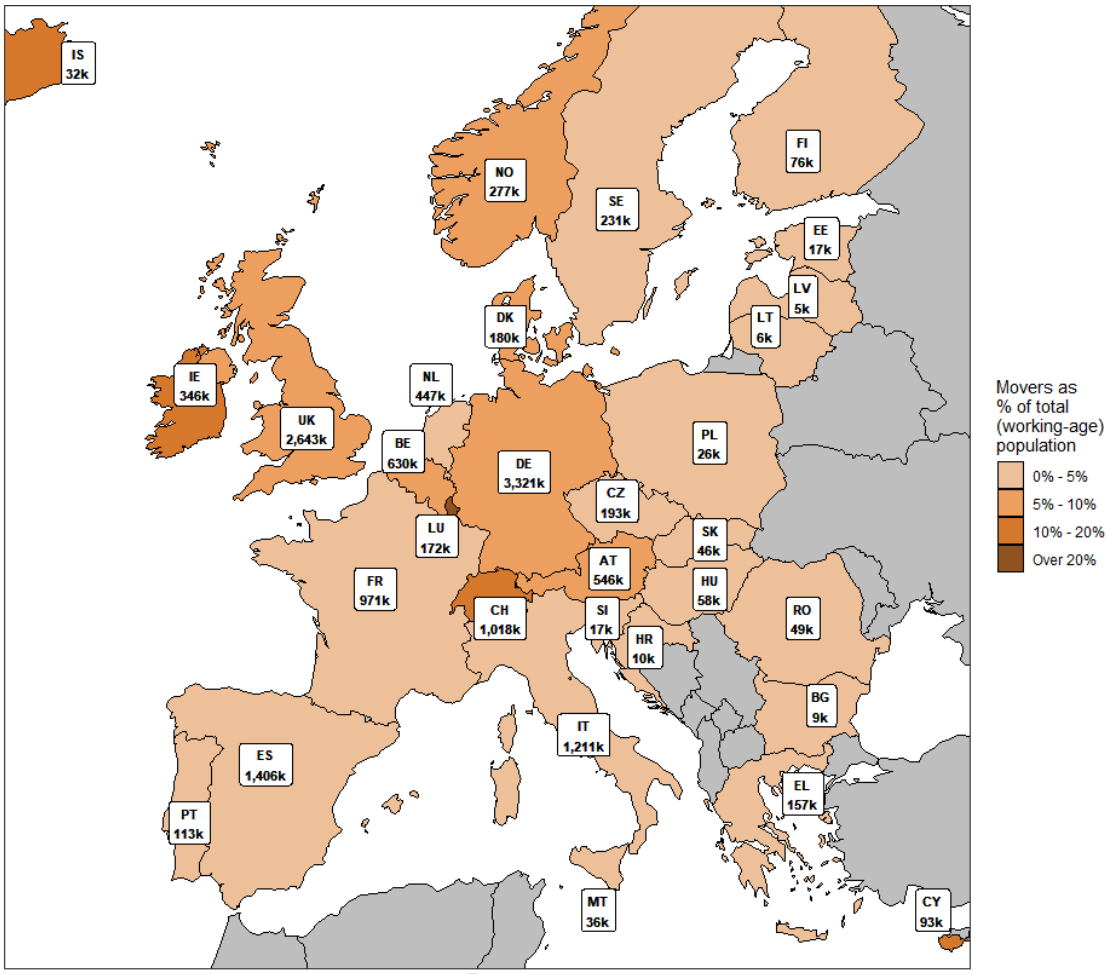
Figure 1: EU-28 movers in EU-28 and EFTA countries in absolute numbers (1 000s) and as percentage of the total working-age population, 2019[50]



THE COUNTRY LABELS DISPLAY THE COUNTRY AND THE ABSOLUTE STOCKS IN 2019 (EXPRESSED IN THOUSANDS). COUNTRIES ARE COLOURED ACCORDING TO HOW LARGE THE STOCKS ARE IN RELATION TO THE TOTAL WORKING-AGE POPULATION IN THE COUNTRY.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

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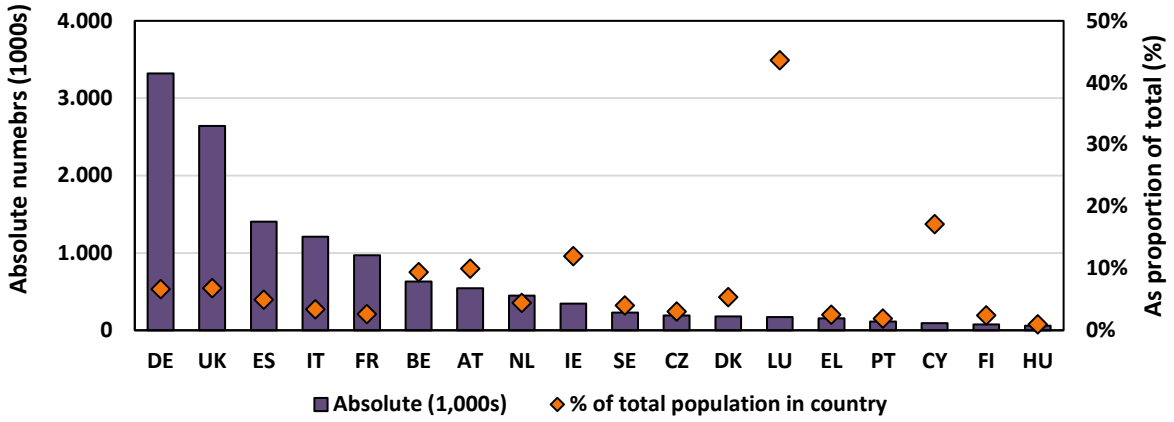
Figure 2 shows the absolute numbers of working-age EU-28 movers in Member States, and also indicates how large this group is in relation to the overall working-age population in the country. Expressed proportionally, the most significant communities of movers are found in Luxembourg (44%), Cyprus (17%) and Ireland (12%). For the largest five destination countries, the proportion is decidedly smaller and ranges from 3% in France to 7% in the UK.

[50] Detailed numbers on the stocks of movers in each country are found in **Table 2 in Annex B.1**.

Figure 2: Stocks of EU-28 movers in individual countries, in absolute numbers (1 000s) and as a percentage of the total working-age population in the country, 2019



PROVISIONAL DATA: FRANCE. ESTIMATED NUMBERS: IRELAND. THE LEFT Y-AXIS DISPLAYS THE SCALE FOR ABSOLUTE NUMBERS OF MOVERS IN 1 000S;THE RIGHT Y-AXIS THE MOVERS AS A PERCENTAGE OF THE TOTAL WORKING-AGE POPULATION IN THE COUNTRY.

TO IMPROVE READABILITY THE FOLLOWING COUNTRIES, WITH STOCKS OF LESS THAN 50 000, ARE OMITTED FROM THE GRAPH: BULGARIA, CROATIA, ESTONIA, LATVIA, LITHUANIA, MALTA, POLAND, ROMANIA, SLOVAKIA AND SLOVENIA,

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Annual growth of the stock of EU-28 movers in the EU-28 continues to slow down, falling from 3.5% to 1.2%. On an EU-27 level, however, increases are steady at ca. 3%.

The stocks of movers in the EU grew by only 1.2% in 2019, the lowest increase in recent years. This continues a general decrease since a high of 7.3% increase in 2014. In 2015-2017, growth remained around 5% but dropped to 3.5% in 2018. As illustrated in **Figure 3**, this picture varied across Europe. Overall, however, stocks of EU-28 movers increased in all countries except the UK and Hungary. The EU-28 decrease is largely due to the decrease in movers in the UK: if looking at the EU-27, the 2019 increase is 3%, i.e. broadly the same as the 2014-2018 average. It is also noteworthy that among the other main destination countries, Germany and Italy's 2019 increases are notably below the previous years' average. A number of countries also see 2019 changes which are larger than previously, with Portugal, Cyprus, Spain, the Netherlands and France all increasing their stocks of movers.

A significant reason for the decreased growth at EU level is the decrease in EU-28 movers resident in the UK. While the number of EU-28 movers resident in the UK increased by 14% from 2016 to 2017, the growth rate went down to 6% in 2017/18 and to -6% in 2018/19. This development was fuelled both by a decrease in inflows (from 229 400 incoming movers in 2015, to only 165 500 in 2018) and an increase in outflows (from 77 900 in 2015 to 112 700 in 2018). To illustrate the impact of the UK decrease in stocks on the EU-28 levels, it is instructive to look at the EU-27 figures: from 2018 to 2019 stocks of movers in the EU-27 increased by 3%, the same as the 2014-2018 average. While Hungary also saw a decrease by 4% from 2018 to 2019, the total decrease in stocks is comparatively small, at ca. 2 500 and therefore has a much smaller impact on EU-wide values.

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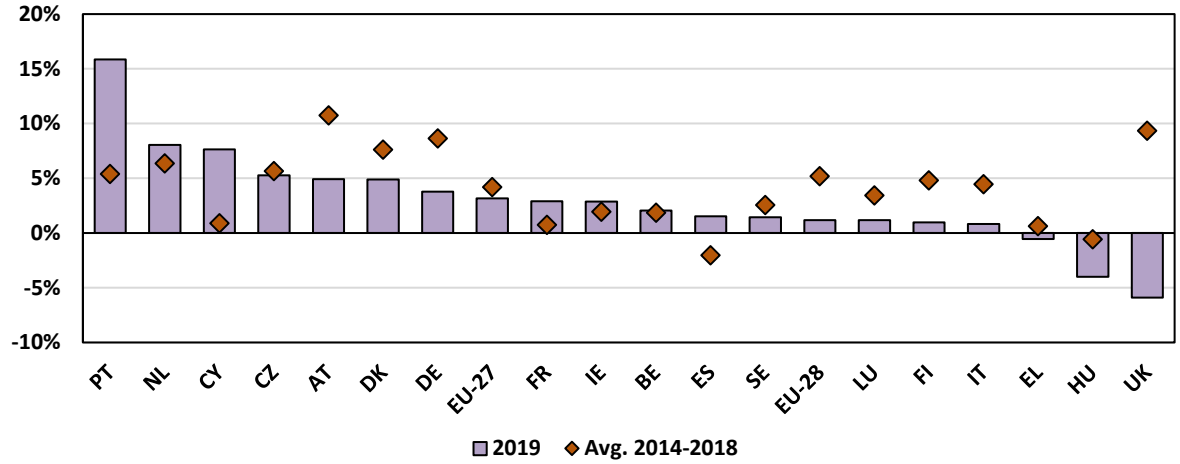
Figure 3: Percentage change in stocks in 2019 compared to 2018, and the average change for the years 2014-2018



MEMBER STATES ARE SORTED IN DESCENDING ORDER OF 2019 CHANGE COMPARED TO 2018.

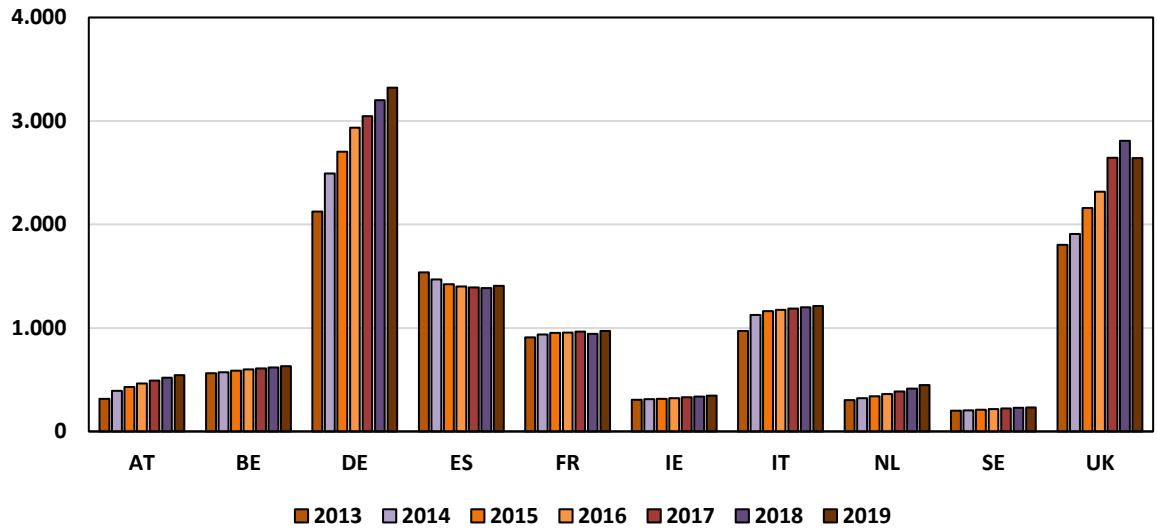
PROVISIONAL DATA FOR POLAND (2014-2018) AND FRANCE (2018-2019). ESTIMATED NUMBERS FOR POLAND (2016-2018) AND IRELAND (2019). BREAKS IN TIME SERIES FOR FRANCE (2014) AND LUXEMBOURG (2017).

TO IMPROVE READABILITY THE FOLLOWING COUNTRIES, WITH STOCKS OF LESS THAN 50 000, ARE OMITTED FROM THE GRAPH: BULGARIA, CROATIA, ESTONIA, LATVIA, LITHUANIA, MALTA, POLAND, ROMANIA, SLOVAKIA AND SLOVENIA,

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

To put the UK figures into context, **Figure 4** displays the development of stocks in the ten largest destination countries from 2014 to 2019. Growth was low but positive in most other main destination countries, with increases over time in Austria, Italy and the Netherlands, and a larger rate of increase since 2014 in Germany. Spain previously saw decreases in stocks from 2014 to 2018, but breaks this trend in 2019 with a small increase – France likewise increases again after a decrease in 2018. In Belgium, Ireland and Sweden, numbers remain relatively steady over time with small increases.

Figure 4: Stocks in the ten countries with highest numbers of EU-28 movers in 2019, 2014-2019[51]



PROVISIONAL DATA FOR FRANCE (2018-2019). ESTIMATED NUMBERS FOR IRELAND (2019).

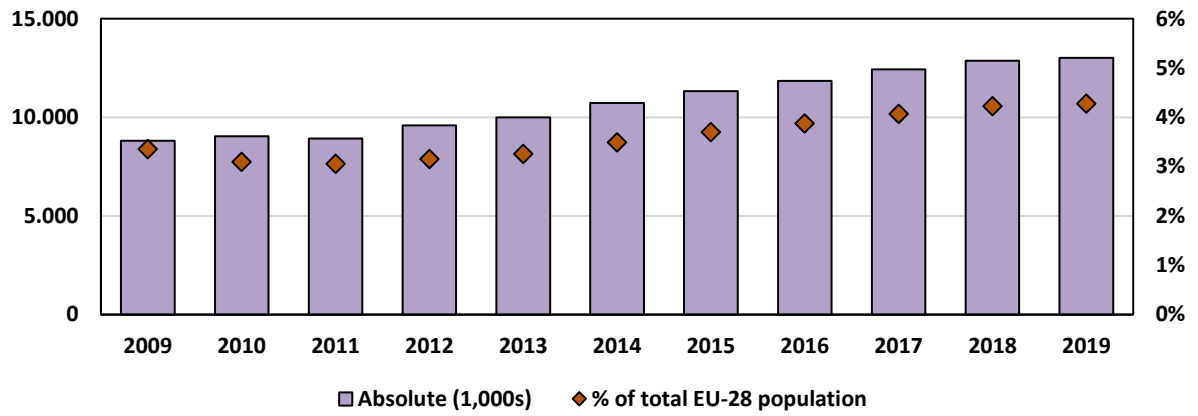
THE FIGURE SHOWS THE DEVELOPMENTS IN STOCKS OVER TIME FOR THE TEN COUNTRIES WITH THE HIGHEST STOCKS IN 2019.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

[51] Numbers on annual stocks and changes on the previous year for all EU-28 countries are presented in **Table A3** in **Annex B.1.**

For the EU-28 as a whole stocks of movers have increased steadily, from 8.9 million in 2011 to 13 million in 2019 – an increase of 46%. The amount of movers as a proportion of the total working-age population in the EU-28 has also increased, although at a more modest rate, from just above 3% in 2011 to 4.3% in 2019. The trend over the whole time period is shown in **Figure 5**. For both absolute and proportional numbers, 2012-2017 saw a higher rate of growth, whereas the increase has largely levelled out in the 2017-2019 period. As discussed above, this is partly due to the recent decreases in UK stocks, and the EU-27 retains a low, but steady and slightly higher rate of growth than the EU-28.

Figure 5: Stocks of EU-28 movers in EU-28, in absolute numbers (1 000s) and as a % of the total EU-28 population, 2011-2019



THE LEFT Y-AXIS DISPLAYS THE SCALE FOR ABSOLUTE NUMBERS OF MOVERS IN 1 000S, AND THE RIGHT Y-AXIS THE MOVERS AS A PERCENTAGE OF THE TOTAL WORKING-AGE POPULATION IN THE COUNTRY.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table 2: Top six countries of residence of EU-28 movers (20-64 years) in total numbers, 2019, foreign population by broad groups of citizenship[52] (totals in thousands and row %[53])

	EU-28		EFTA		TCNs		Total foreign population
EU-28	13 014	43.6%	183	0.6%	16 676	55.8%	29 873
EU-27	10 372	41.1%	159	0.6%	14 731	58.3%	25 262
EFTA	1 327	66.1%	10	0.5%	669	33.4%	2 007
DE	3 321	44.8%	34	0.5%	4 057	54.7%	7 412
ES	1 406	40.3%	16	0.5%	2 067	59.2%	3 490
FR	971	31.0%	29	0.9%	2 129	68.0%	3 129
IT	1 211	31.4%	6	0.1%	2 642	68.5%	3 859
UK	2 643	57.3%	23	0.5%	1 945	42.2%	4 611
CH	1 018	66.2%	3	0.2%	516	33.6%	1 537

MEMBER STATES WITH THE HIGHEST NUMBER OF EU-28 MOVERS IN 2019, EXPRESSED IN THOUSANDS.

FOREIGN POPULATION BROKEN DOWN BY BROAD NATIONAL GROUPS OF EU-28, EFTA AND TCNS.

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

PROVISIONAL DATA: FRANCE. ESTIMATED NUMBERS: IRELAND.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

[52] The full table for all countries can be found in **Table A2** in **Annex B.1**.
[53] The row sum of shares may not equal 100% due to rounding of numbers.

Comparing the number of EU-28 movers with the number of TCNs in EU Member States **EU-28 movers made up 43% of the foreign population in EU-28 in 2019**, remaining at a largely steady level since 2015. TCNs made up 56% and EFTA nationals less than 1%. A breakdown of these proportions is shown in **Table 2** which includes the breakdown for the six EU countries with the highest number of EU-28 movers. As in previous years, Italy and France stand out as having particularly high proportions of TCNs, while the UK and Switzerland are the only countries to have a greater proportion of EU-28 movers. In Germany and Spain the composition is close to the EU-average.

EU-28 movers made up a similar proportion of the whole EU population as in 2018, at 4.3%. TCNs, made up 5.5% (a slight increase from 5.3% in 2018). Looking only at EU-27 countries of residence, EU-28 movers constituted 3.9%. EFTA nationals continued to make up 0.1% of the EU-28 population. **Figure 6** presents a breakdown of the countries' foreign population as a percentage of the total population.

In Luxembourg 44% of the population were EU-28 movers – by far the highest proportion among EU-28 countries. Of these, movers from Portugal (66 500) and France (33 000) together made up 57%. The next-largest shares were found in Cyprus (17%), Malta (12%) and Ireland (12%)[54]. Of the five main destination countries, the UK and Germany have a similar share of 7%. Of the other main destination countries, Spain's share of 5% was also above the EU-28 average, while Italy and France were below the average, at around 3% each.

In Estonia and Latvia, TCNs made up 15% and 13% of the total working-age population, mainly due to substantial Russian minority populations in both countries[55]. Proportionally lower, but still substantial shares of TCNs were seen in Malta (10%), Austria (9%), Germany and Luxembourg (8%), as well as in Switzerland (10%).

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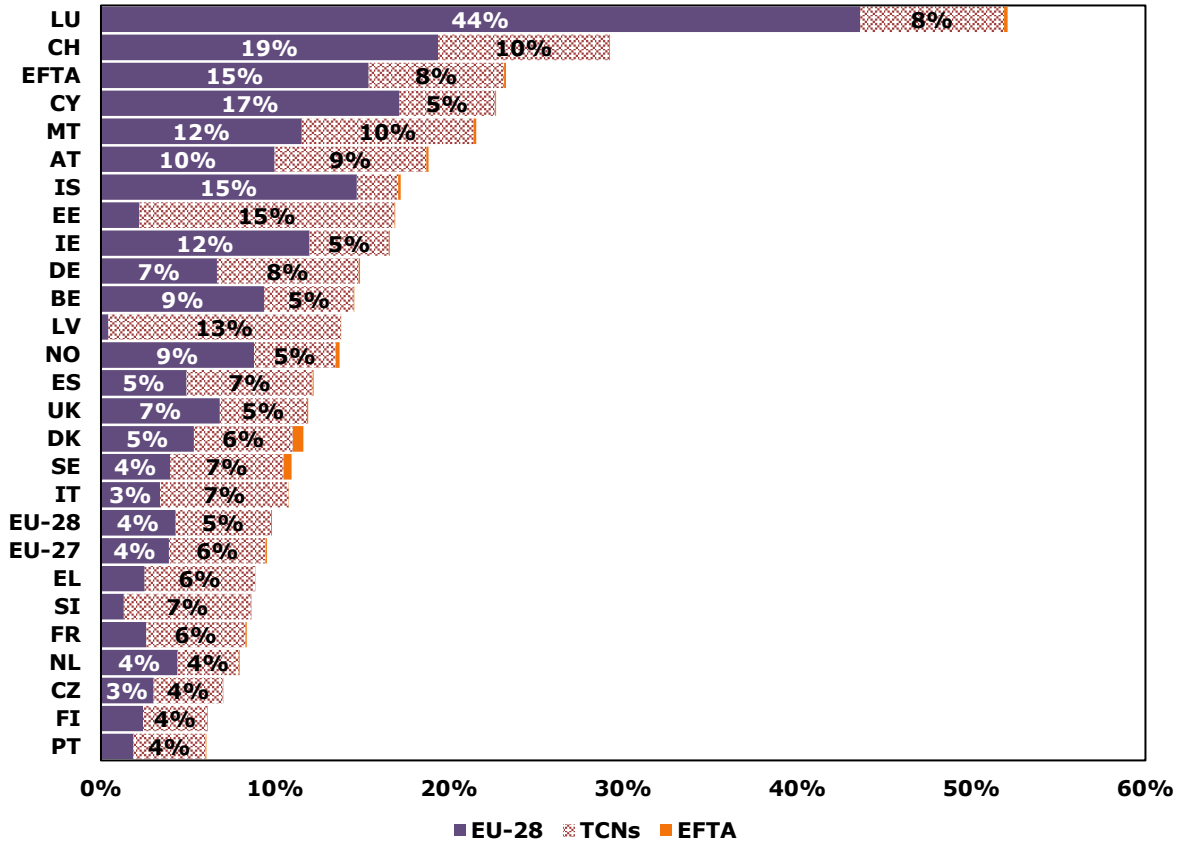
[54] As no detailed data are available on the nationality of EU-28 movers for Cyprus and Malta, there is no further breakdown of figures.
[55] See Eurostat database 'migr_pop3ctb'.

Figure 6: Share of EU-28 and EFTA citizens and TCNs (20-64 years) in the total population of EU-28 and EFTA countries, 2019



SHARE OF EU-28, EFTA AND TCN NATIONALS WITHIN THE TOTAL POPULATION, ONLY COUNTRIES WITH 5% OR MORE FOREIGN POPULATION PRESENTED IN GRAPH, MEANING THAT BULGARIA, CROATIA, HUNGARY, LITHUANIA, POLAND, ROMANIA AND SLOVAKIA ARE OMITTED FROM THE GRAPH.

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

ESTIMATED NUMBERS: IRELAND.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

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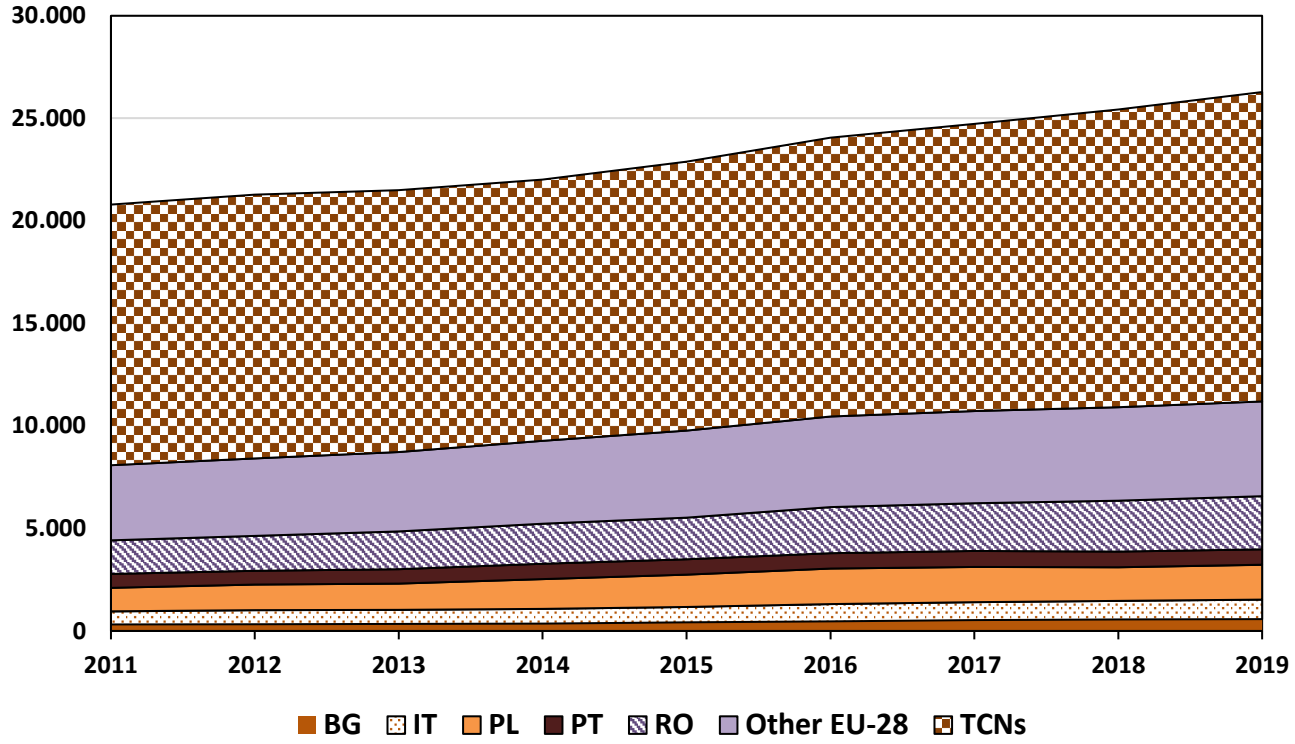
1.1.2 Annual change in stocks – countries of origin

The composition of EU movers in the EU-28 continued to be dominated by a few countries, with movers from Romania, Poland, Italy, Portugal and Bulgaria accounting for 6.9 million of the EU-28 total of 11.9 million. The largest nationality groups for the EFTA countries were German, Portuguese and Italian. **Figure 7** shows the composition over time of mobile workers in the EU-28, highlighting the proportion made up of movers from the main sending countries compared with other EU-28 countries and the proportion of TCN movers. Both the total foreign population and that of EU-28 movers have increased since 2011. The proportion of the individual sending countries have in this case remained relatively constant in the time period. Compared with 2018, the stocks of movers from the five main sending countries remained close to 2018 levels in 2019. Stocks from Romania, Poland and Italy grew by around 4%, Bulgarian stocks grew at just under 3%. The stocks of Portuguese movers saw a decrease of 1%.

Stocks of movers from the main sending countries continued to grow. Romanian and Polish stocks of movers increased by 4%.

Figure 7: Composition of mobile workers over time (2011-2019), EU-28, 1 000s

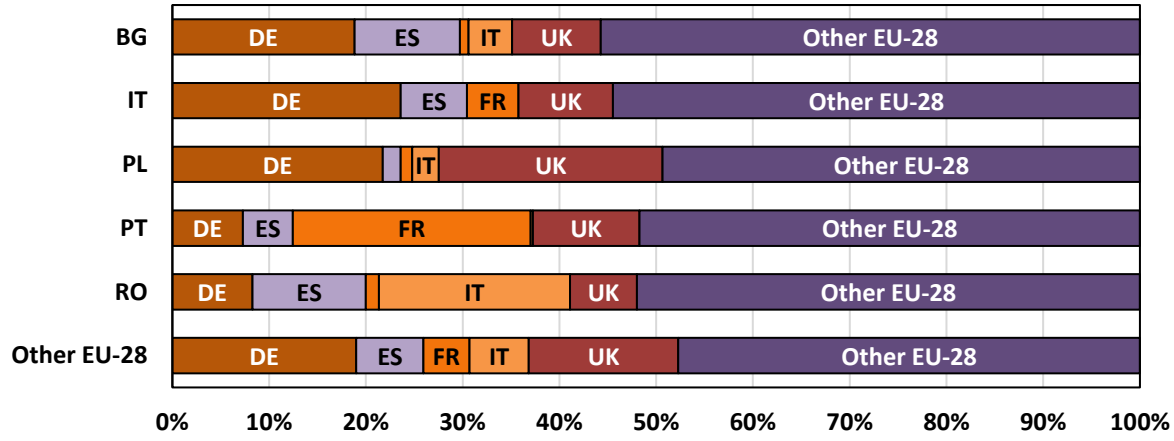


THE FIGURE DISPLAYS THE ANNUAL NUMBER OF EU-28 MOVERS FROM THE MAIN SENDING COUNTRIES, THE REST OF THE EU-28 AND THIRD COUNTRIES OVER TIME.

SOURCE: EU-LFS 2019, SPECIAL EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Germany, Spain, France, Italy and the UK host around half of the movers from the main sending countries, as shown in **Figure 8**. Germany is the largest individual country of destination for movers from Bulgaria, Italy and the other EU-28 countries as an aggregate. The UK receives the most movers from Poland, although less than 40 000 more than does Germany. Finally, the main destinations of Portuguese movers is France, while Romanian movers are most likely to go to Italy.

Figure 8: Main destination countries of movers from main sending countries, 2019



THE FIGURE SHOWS THE MAIN DESTINATION COUNTRIES OF MOVERS FROM THE MAIN SENDING COUNTRIES.

SOURCE: EU-LFS 2019, SPECIAL EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Figure 9 shows the most represented EU-28 nationality groups in the six EU/EFTA countries with the highest proportion of movers resident. This illustrates the variation in

nationality composition and nationality preferences, with some patterns of geographical or linguistic proximity being evident. For example, there is a large proportion of German movers in Switzerland (23%), with whom they share a language, or Romanians in Italy (80%), where the language is at least part of the same language group. Other significant representations are Portuguese in France and Romanians in Spain (both 43% of movers). The two main host countries, the UK and Germany, have a more heterogeneous mix of nationalities than the others, with sending countries outside the top five making up more than 40% of total movers to the country[56].

Looking at the largest destination countries, the number of Romanian movers in Germany continued to grow (+9% or +33 000 individuals, compared to 2018), Italy (+3% or +32 000), Spain (+2% or +12 000), and France (+9% or +7 000). The UK saw a decrease in stocks by -2% (-8 000 individuals), while numbers in Austria remained essentially steady. For mid-sized recipient countries, a significant increase was seen in Belgium (+25% or +13 000), and a slightly smaller increase in Ireland (+5% or +1 500).

Although the overall numbers of EU-28 movers in the UK decreased compared to 2018, some important groups of movers actually saw increases: the number of Polish movers increased in 2019 by +5% or +36 000 individuals. There was also a growth in stocks of Portuguese (+10% or +15 000), French (+12% or +15 000), Bulgarians (+22% or +17 000) and Italians (+2% or +3 000), with Romania being the only large mover nationality that decreased.

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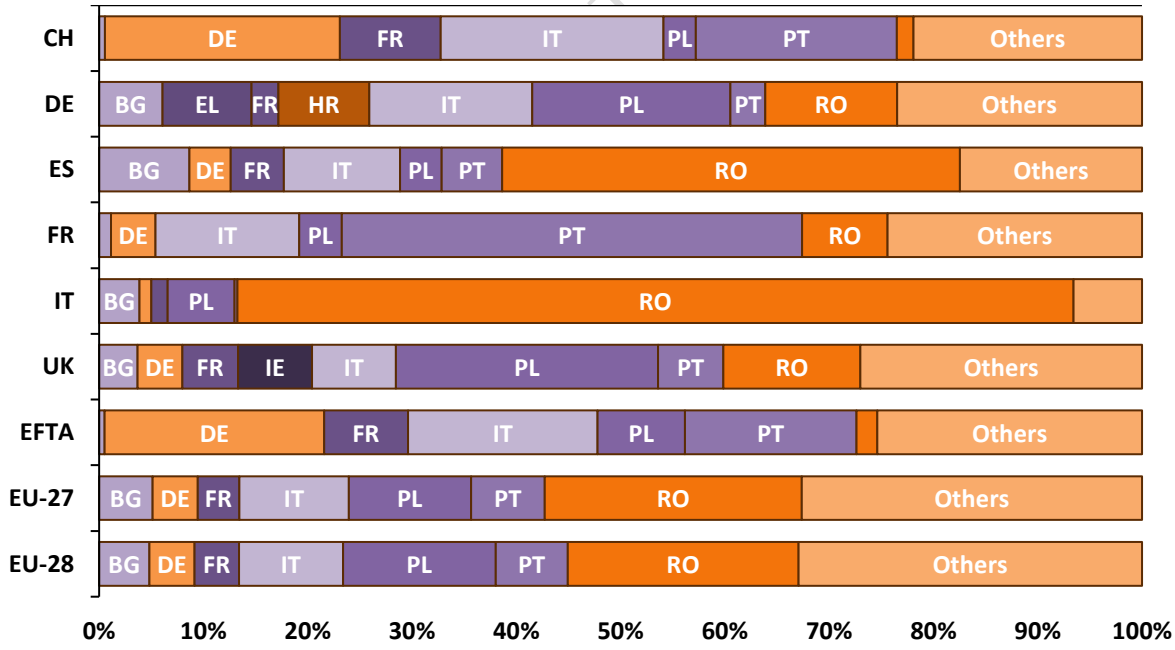
Figure 9: Breakdown by citizenship of EU-28/EFTA movers (20-64 years) in EU-28, EFTA and in the top six countries of residence, 2019[57]



MOST REPRESENTED NATIONALITIES FOR EU-28/EFTA MOVERS IN THE SIX COUNTRIES OF RESIDENCE WITH HIGHEST NUMBERS OF EU-28 MOVERS, AND WITH AGGREGATES FOR EFTA, EU-28, AND EU-27. DATA REFER TO 2019.

SOURCE: EU-LFS 2019, SPECIAL EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

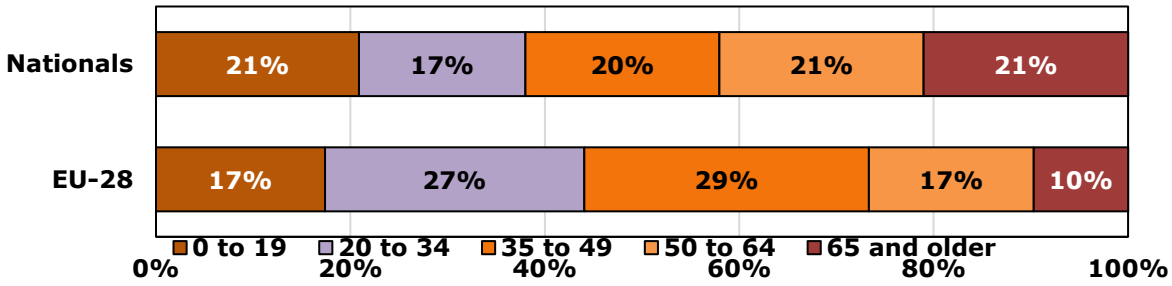
[56] This is also the case in Switzerland, where they make up 54%.
[57] See **Table A5** and **Table A6** in **Annex B.1** for stocks of movers by country of origin for all countries and year-on-year percentage changes against 2018.

1.1.3 Characteristics of EU-28/EFTA movers

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

The demographic structure of the overall population in the EU and of EU-28 movers differs, as is shown in **Figure 10**: the working-age individuals have a 15 pps higher share among EU-28 movers (73%) than in the overall population (58%). In particular, those aged 65 and older are underrepresented in the mobile population.The difference is largest for younger working-age groups, with the proportion of 20-34-year-olds among EU-28 movers being 10 pps higher than among nationals, and 35-49-year-olds 9 pps higher. For those aged 50-64 as with the over-65s, the proportion is smaller than for nationals.

Figure 10: Age structure of EU-28 movers vs. nationals of the host countries, EU-28 aggregate, 2019



AGE STRUCTURE OF EU-28 MOVERS VS. NATIONALS OF THE HOST COUNTRIES, EU-28 AGGREGATE, 2019.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

The gap is also evident at a Member State level, as shown in **Figure 11**. Croatia is the only country where persons of working-age make up a larger proportion among nationals than among EU-28 movers. This is likely due to Croatia's overall low inflows of movers of working age[58] on the one hand, and its attractiveness to retired EU-28 movers on the other[59]. Croatia is also one of three countries where old-age individuals make up a smaller share among the national population among EU-28 movers (21% vs. 33%), together with Bulgaria (21% vs. 27%). In France, the shares of persons aged 65 years and above are almost the same among EU-28 movers and nationals (both around 21%). In addition to France being a popular destination for retirees of some countries[60], this may be due to a weak growth in working-age stocks of movers: there are only 8% more working-age EU movers in France in 2019, than in 2012. The high share of over-65s may therefore reflect previous movers who have stayed in the country into retirement, with relatively fewer new working-age movers taking their place in the labour force. The level of over-65s in France

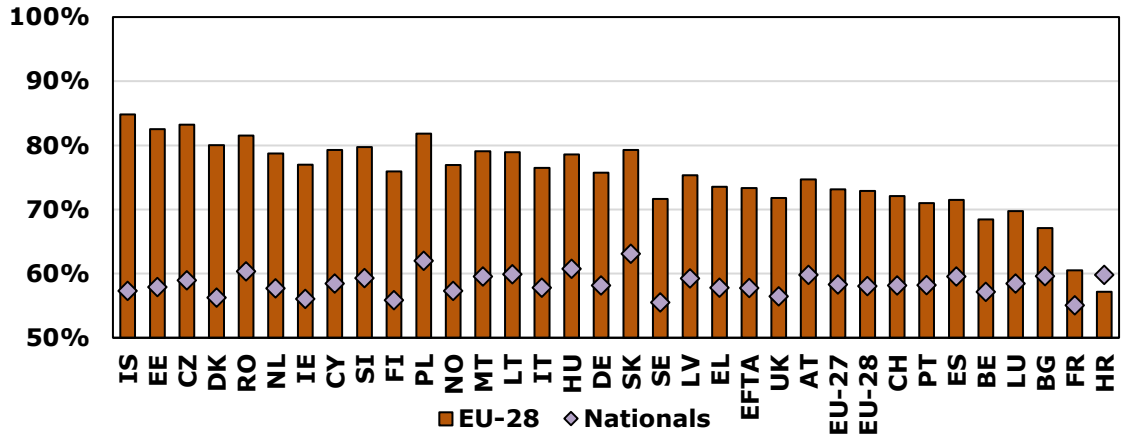
[58] Croatia's 10,000 EU-28 movers are among the lowest in Europe, ahead of Bulgaria, Latvia and Lithuania. See **Table A2** in **Annex B.1** for a full list of country stocks.
[59] See Fries-Tersch, E. et al. (2016), *2016 Annual Report on intra-EU mobility*, Network Statistics FMSSFE, European Commission, Brussels, chapter 3.
[60] France is for instance the third most common country of residence outside of the UK for recipients of British state pension, cf. Office of National Statistics (ONS) (2017), *Living abroad: migration between Britain and France*, Available at:https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/livingabroad/dynamicsofmigrationbetweenbritainandfrance [Accessed 12/10/2020]
Its popularity as a retirement destination has e.g. been discussed by Rallu, J-L. (2017), 'Projection of Older Immigrants in France 2008-2028', *Population, Space and Place*, 23(5), Available at: https://onlinelibrary.wiley.com/doi/full/10.1002/psp.2012.

has been consistent at 21% since 2015, while the share of working-age movers has decreased from 63% in 2015 to 60% in 2019.

There are many possible explanations for these gaps and their different presentation between countries, especially if a country is seen as an attractive destination to find work. Importantly, the variation in these gaps is mainly due to greater variation in the shares of working-age people among EU-28 movers (from 57% in Croatia to 85% in Iceland) than among nationals, where the shares of working-age persons varies less (from 55% in France to 63% in Slovakia).

Countries with smaller gaps may either have seen a large influx some time ago, who have now got older, they may be considered an attractive destination for retirement, or have a significant portion of movers working in sectors requiring prior experience and qualifications. Belgium, Luxembourg and Switzerland, which house many European and international institutions along with significant sectors in law and finance, are clustered just below the EU-wide gap, with comparatively low shares of working-age movers: occupation within such industries is less likely to see entry-level or early-career candidates, driving up the average age of movers to the country. The factors which influence moving decisions at various life stages are further discussed in **Section 4** on the effect of demographic change on mobility.

Figure 11: Shares of 20-64-year-olds among EU-28 movers and nationals of the host country, 2019



NOTE THAT THE Y-AXIS HAS BEEN SCALED TO BEGIN AT 50% FOR IMPROVED READABILITY.

THE SHARE OF 20-64-YEAR-OLDS AMONG EU-28 MOVERS AND NATIONALS OF THE HOST COUNTRY, AT COUNTRY LEVEL AND AS EU-28 AGGREGATE, 2019. DATA HAS BEEN SORTED BY THE GAP BETWEEN THE SHARES AMONG EU-28 MOVERS AND NATIONALS.

PROVISIONAL DATA: FRANCE. ESTIMATED NUMBERS: IRELAND.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Gender distribution of EU-28 movers

The distribution of women and men among EU-28 movers remained at 51% women and 49% men, as in the previous two years. **Figure 12** shows the distribution across all European countries for which data were above reliability limits. The largest proportions of female movers are found in Greece (72%) and Italy (59%), while males constitute the majority in Iceland (68%), Finland (65%) and Switzerland (56%). Most other countries are close to the European average. These patterns are essentially in line with the previous two years and do not show major changes over time, with the exception of Finland, where the proportion of men increased by 8 pps, from 57% in 2018 to 65% in 2019.

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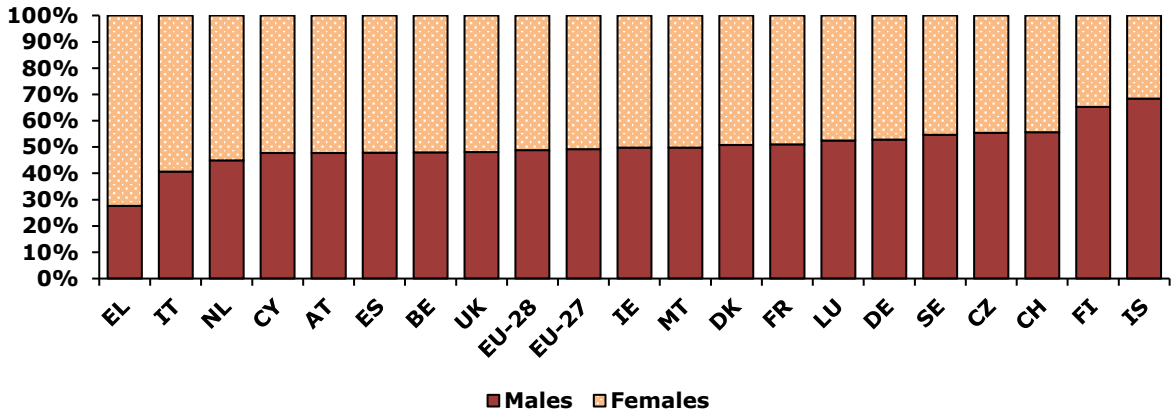
Figure 12: Gender distribution of EU-28 movers (20-64 years), by country of destination, 2019



SHARE OF MALE AND FEMALE MOVERS AND EU-28 AND EFTA AGGREGATES.

DATA SHOWN FOR ALL COUNTRIES WHERE DATA WERE ABOVE RELIABILITY LIMITS.

SOURCE: EU-LFS 2019, SPECIAL EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

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Length of stay

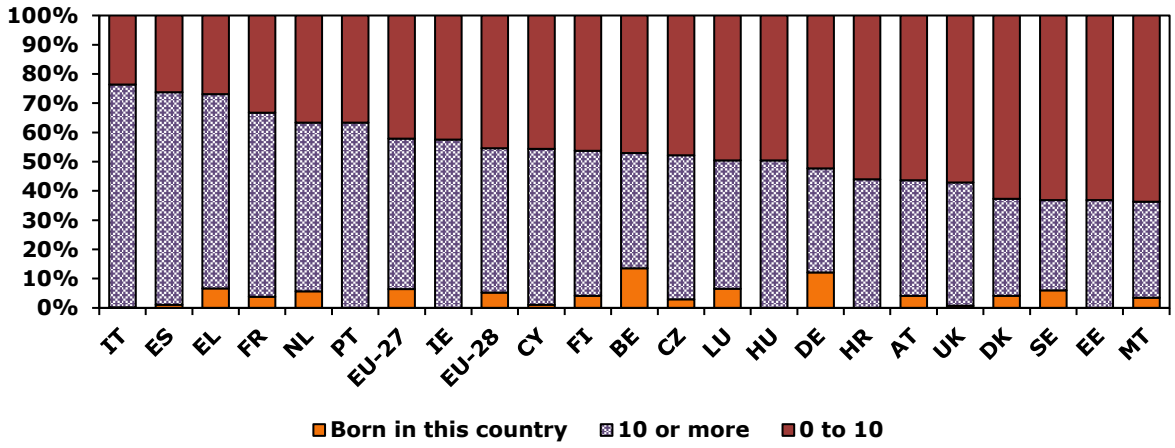
Countries showed extensive variation in the composition of movers based on the time they have spent in the country. **Figure 13** shows the proportion of EU-28/EFTA movers in destination countries who have spent less than 10 years in the country, or 10+ years in the country. At EU-28 level, this is split more or less evenly, with 51% of EU-28 movers having spent 10 years or more in the destination country. The proportion is higher for EU-27 countries, where 54% have spent 10 years or more in the country[61].

Some geographical patterns can be discerned from the data. Among the countries where a significantly larger proportion of movers have spent more than 10 years, southern European countries like Italy (77%), Greece (74%) and Spain (73%) stand out. France (65%), Portugal (64%) and the Netherlands (61%) also have significant shares. While some of these countries – like Greece and Portugal – have low absolute volumes, Italy, France and Spain are all among the EU-28 largest recipients of incoming movers. This indicates that movers to these countries are more likely to be longer-term migrants and less likely to be transient. In countries like Italy and Greece, it is also the result of strong decreases in inflows in the years after the 2008 recession, while in France and Spain, inflows decreased less in the immediate aftermath but outflows increased strongly in the mid-2010s[62].

At the other end of the scale, Malta had the highest proportion of movers who have spent less than 10 years in the country at 68% (albeit with a small total volume). Otherwise, the countries at this end of the distribution tended towards central and northern Europe, with Sweden (68%), Denmark (66%) and Germany (60%) all having proportions of 60% or more, reflecting recent inflow increases to these countries. The UK, the second largest destination country after Germany, has a proportion of 57% of EU-28 movers who arrived within the past ten years.

[61] Especially for longer stays in another country, it is possible that some movers have attained citizenship in their new country of residence. As this study identifies movers as those who hold a different citizenship than the host country, it is therefore possible that a small amount of movers are missed out in the above estimates.
[62] Fries-Tersch, E., et al. (2020), *2019 Annual Report on intra-EU Labour Mobility*, Network Statistics FMSSFE, European Commission, Brussels, pp. 30-31.

Figure 13: EU-28/EFTA movers (20-64 years), by country of residence and years of residence, 2019



EU-28 MOVERS BY COUNTRY OF RESIDENCE AND YEARS OF RESIDENCE, SHARES OF DIFFERENT GROUPS IN PERCENTAGES. COUNTRIES ARE SORTED BY THE LARGEST PROPORTION OF MOVERS NOT BORN IN THE COUNTRY.

ALL EU-28 COUNTRIES FOR WHICH VALUES WERE ABOVE RELIABILITY LIMITS ARE INCLUDED. LOW RELIABILITY FOR HU (LESS THAN 1 TO LESS THAN TEN YEARS).

FIGURES DO NOT INCLUDE EU-28 CITIZENS 'BORN IN THIS COUNTRY'.

SOURCE: EU-LFS 2019, SPECIAL EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

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1.2 Mobility trends of EU-28/EFTA movers: mobility flows

This section discusses the mobility flows (net flows, inflows and outflows) of EU-28 movers, nationals and third country nationals in the individual Member States for the most recently available year of data: 2018. Comparisons are also made with the preceding year, 2017, and with earlier years (to 2009)[63].

1.2.1 Overall outlook – net intra-EU mobility and net migration[64]

'Net mobility' refers to the difference between inflows and outflows of different population groups in a country of residence. Positive net mobility indicates that more individuals in the particular population group are moving into the country than out of it, while negative net mobility means that more people in the group are leaving than are arriving. In the present discussion, 'net intra-EU labour mobility' refers specifically to the net mobility of movers who are either nationals in the country or of an EU-28 or EFTA country. The separate concept of 'net migration' also includes TCNs[65].

For a first look at the situation in 2018, net mobility and net migration flows by country of residence and nationality group are presented in **Figure 14** and **Figure 15**[66]. Overall in

[63] The latest years of study vary between Section 1.1 and Section 1.2 for data availability reasons. Although the latest flow data (migration statistics) are only made available two years after the reference year and the data on stocks (population statistics) one year after the reference year, flow data should be reflected in the stocks as population statistics refer to stocks on 1 January. The most up-to-date stock data presented in Section 1.1 refer to the state of play on 1 January 2019, while flow data refer to mobility flows during the year 2018.

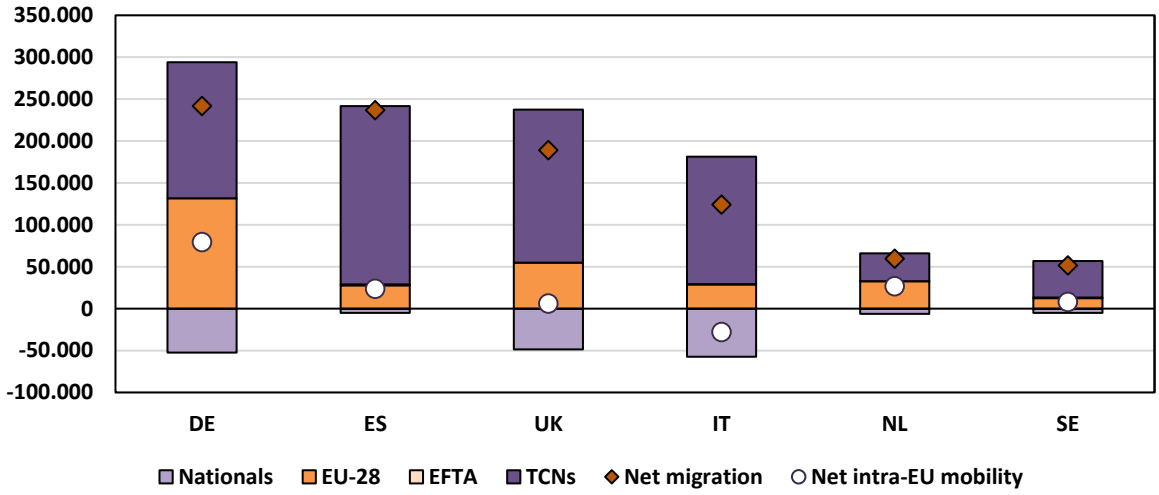
[64] Inflow data are missing for four Member States: CY, EL, FR, PT. The analysis in this section thus excludes these countries, including from aggregate totals.

[65] Note that due to data restrictions, it is not possible to identify whether outgoing movers are going to another EU Member State or to a third country. Likewise, the available statistics does not allow for an identification of whether incoming movers are arriving from a Member State or third country. Aggregate inflows and outflows may therefore not add up exactly.

[66] For both figures, data differ slightly from previous years, in that less data are available on the volumes of EFTA movers in certain countries. While this does not affect the overall conclusions of the figures – the volumes of EFTA movers being consistently rather small – it does affect figures on net mobility, as some of the countries where data are missing include Germany and the UK. In the preceding year, these were two of the main destination countries for EFTA movers (just under 2,000 in Germany and 2,200 in the UK), which should be taken into account when reading net figures.

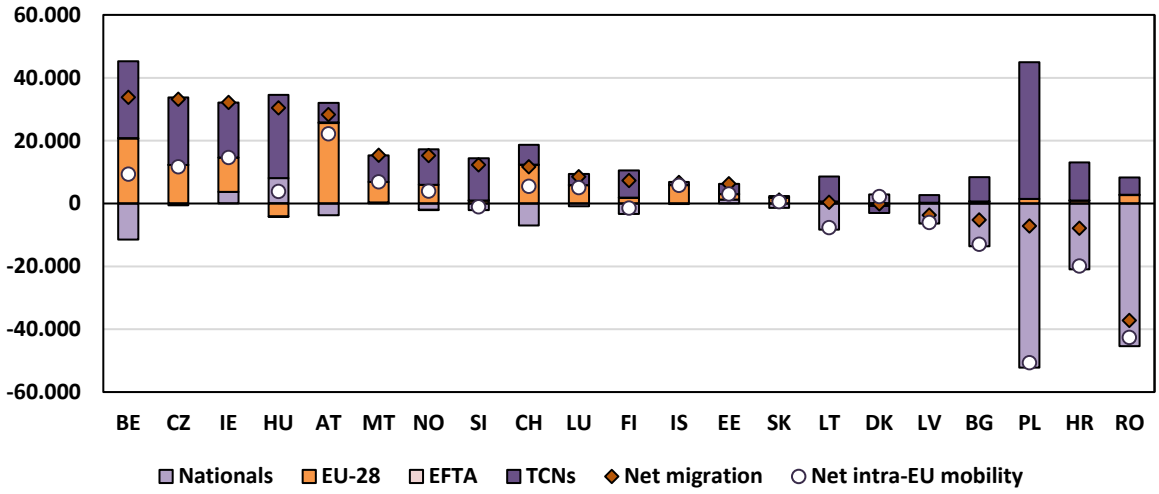
the EU-28, net mobility was +52 000: in other words, 52 000 more nationals, EU-28 and EFTA citizens moved *to* an EU-28 country than away from one.

Figure 14: Net migration and mobility flows, by country of residence, (20-64 years), 2018[67]



FLAGS AND SOURCE ATTRIBUTIONS UNDER FIGURE 15 APPLY.

Figure 15: Net migration and mobility flows, by country of residence, countries with smaller totals, (20-64 years), 2018



'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. NOTE THAT VALUES PER COUNTRY ARE STACKED AND NOT OVERLAPPING AND THAT THE EFTA CATEGORY, DUE TO ITS COMPARATIVELY SMALL SIZE, MAY BE DIFFICULT TO IDENTIFY.

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

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

INFLOWS: PROVISIONAL DATA FOR BG, PL, SK, UK. ESTIMATED NUMBERS FOR DE, PL, RO. BREAK IN TIME SERIES FOR DE.

OUTFLOWS: CY, EL, FR, PT ARE NOT DISPLAYED BECAUSE FIGURES ARE NOT AVAILABLE. PROVISIONAL DATA FOR BG, FR, PL, UK. ESTIMATED NUMBERS FOR DE, PL, RO.

THE LATEST FLOW DATA AVAILABLE ARE FROM 2018.

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

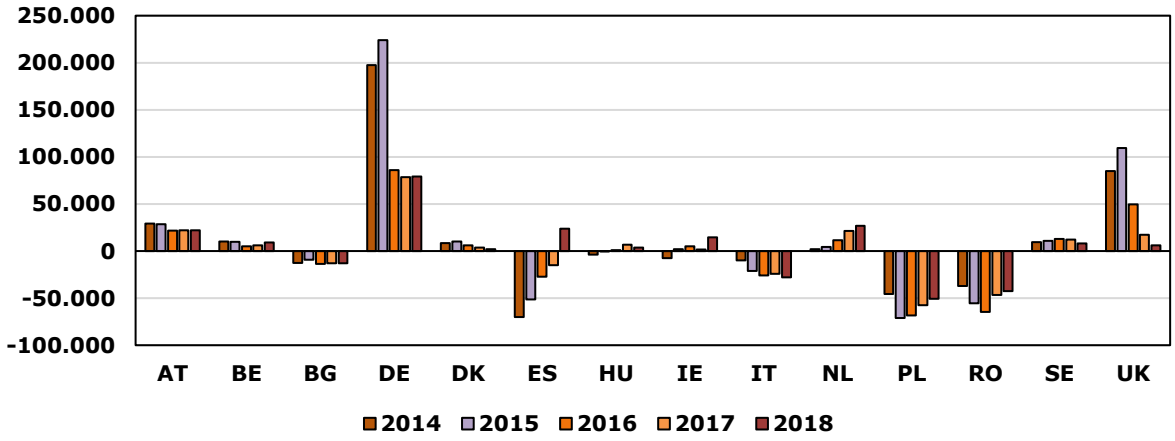
Looking first at net migration, only six countries have net migration flows of above +50 000: Germany, Spain, UK, Italy, the Netherlands and Sweden. Except for Germany,

[67] Data for all countries on inflows, outflows and net flows by group of citizenship can be found in **Table A4** in **Annex B.1**.

where inflows from the two groups are more similar, the group of incoming TCNs is notably larger than incoming EU-28 movers. The situation is a bit more varied when looking only at net intra-EU mobility and excluding the TCN group: Germany still has the largest absolute net mobility, followed by the Netherlands and Spain. For the UK and Italy, large outflows of nationals mean that their net mobility is either very low or negative. In terms of outflows of nationals, Germany, the UK, Italy, Poland and Romania make up a significant majority of EU-wide flows, while Germany, the UK, Italy, Austria, the Netherlands and Spain are the most significant destination countries for EU-28 movers.

To consider changes over time, **Figure 16** shows the net intra-EU mobility of significant destination and sending countries in the 2014-2018 time period. Over the reference period, there are significant decreases in net flows to Germany and the UK. In Germany some of this decrease is due to methodological changes in data processing[68], while in the UK figures have steadily decreased every year since the 2016 vote to leave the European Union. In Italy, which has experienced negative net mobility since 2014, flows have continued to decrease. In the opposite direction, the Netherlands and Spain have seen sustained increases in mobility in the time period, with Spain in particular recovering from a negative net in the aftermath of the economic crisis to a positive net mobility in 2018. Bulgaria, Italy, Poland and Romania remain sending countries, with more leaving than arriving (although negative mobility in Poland and Romania has decreased since 2016).

Figure 16: Net mobility of EU-28, Nationals and EFTA movers for significant sending and destination countries, 2014-2018



INFLOWS: PROVISIONAL DATA FOR BG (2014-2018), PL (2014-2018) AND UK (2018). ESTIMATED NUMBERS FOR DE (2014-2015, 2017-2018), PL (2016-2018), RO (2017). BREAK IN TIME SERIES FOR DE (2016-2018).

OUTFLOWS: CY, EL, FR, PT ARE NOT DISPLAYED BECAUSE FIGURES ARE NOT AVAILABLE. PROVISIONAL DATA FOR PL (2014-2018), UK (2018). ESTIMATED NUMBERS FOR DE (2014-2018), PL (2016-2018), RO (2017-2018).

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

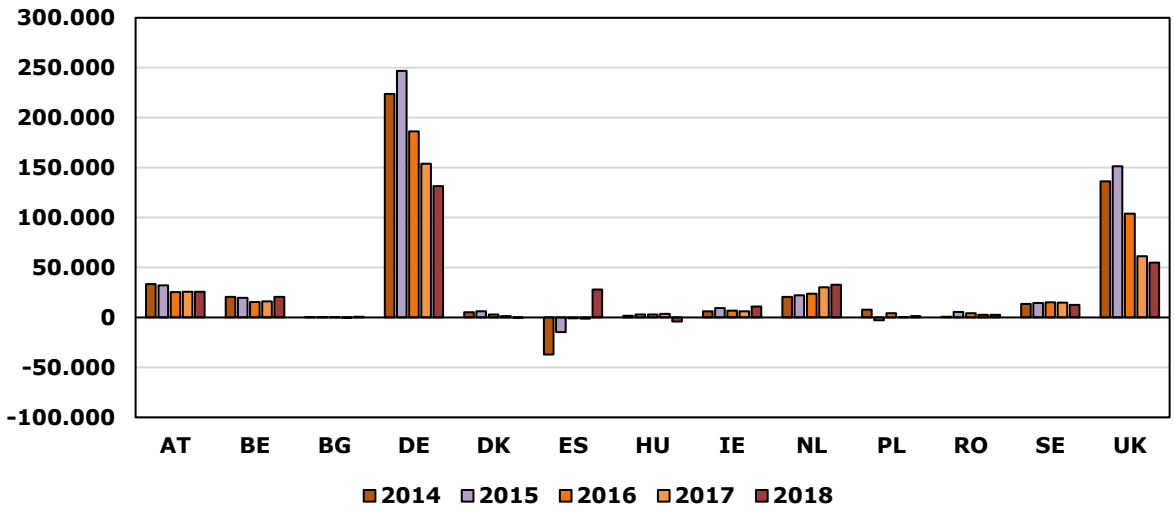
To illustrate the dynamics underlying these changes one needs to look at the net mobility of EU-28 movers[69] and nationals, respectively. Looking first at EU-28 movers, shown in

[68] The significant decrease in flows to Germany between 2015 and 2016 is in part due to methodological changes: changes in data processing and the reported reference period in the German flow statistics meant that data from 2016 were comparatively lower than 2015, and data from 2017 was already reported in 2016. These changes are considered to have affected mainly flows of German citizens (which would still influence overall net mobility figures), with comparability over time of flows of EU/EFTA movers only minimally affected.
Source: reply to written enquiry to the German Statistical Office, 18/11/2019, methodological explanations, Available at Destatis website:https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsstand/Methoden/Erlauterungen/methodische-hinweise-2016.html?nn=209080.

[69] Net mobility of EU-28 movers shows the difference between in-and outflows of EU citizens who are NOT citizens of the country of residence that the number refers to.

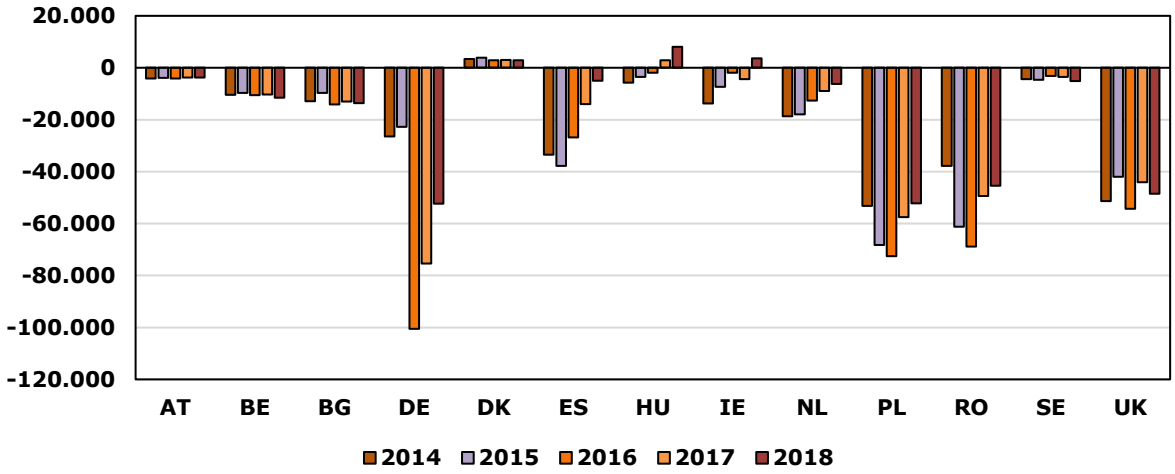
Figure 17, net mobility was positive in all cases except Denmark and Hungary, but the absolute volumes are in both cases small and not indicative of a longer-term, significant trend. This nevertheless means that in almost all countries, more EU-28 movers arrived than returned or left to go to a third country, explaining why the stocks of EU-28 movers continue to increase, albeit at a slower rate than before. Reflecting the changes in net mobility shown in **Figure 16**, Germany and the UK (and to a smaller extent Italy) have seen decreases in flows since 2015.

Figure 17: Net mobility of EU-28 movers in EU-28 for significant sending and destination countries, 2014-2018



FLAGS AND SOURCE ATTRIBUTIONS UNDER FIGURE 18 APPLY.

Figure 18: Net mobility of nationals in EU-28 for significant sending and destination countries, 2014-2018



INFLOWS: PROVISIONAL DATA FOR BG (2014-2018), PL (2014-2018) AND UK (2018). ESTIMATED NUMBERS FOR DE (2014-2015, 2017-2018), PL (2016-2018), RO (2017). BREAK IN TIME SERIES FOR DE (2016-2018).

OUTFLOWS: CY, EL, FR, PT ARE NOT DISPLAYED BECAUSE FIGURES ARE NOT AVAILABLE. PROVISIONAL DATA FOR PL (2014-2018), UK (2018). ESTIMATED NUMBERS FOR DE (2014-2018), PL (2016-2018), RO (2017-2018).

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

In **Figure 18** it is shown that by contrast, most European countries see significant negative mobility of nationals – the only exceptions are Hungary and Ireland (in recent years only) and Denmark (sustained over the time period). The negative net mobility has however decreased in Germany, Poland and Romania since 2016, and in Spain and the Netherlands

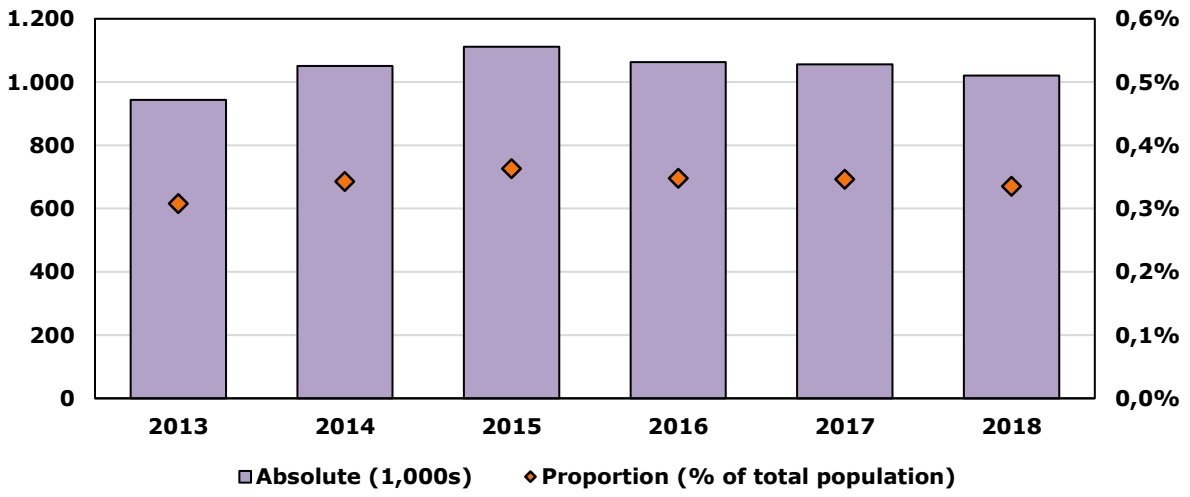
since before that. By comparison, the UK has seen year-to-year variation, but no sustained decrease or increase.

From **Figure 17** and **Figure 18** it is therefore shown that net mobility increases tend to be due to fewer nationals leaving, rather than inflows of EU-28 movers increasing (with Spain a notable exception). Comparing the two largest recipient countries, it is also shown that in Germany, a decrease in EU-28 movers is weighed up by fewer nationals leaving, while in the UK, outflows of nationals remain steady while EU-28 inflows keep decreasing.

1.2.2 Inflows

As shown in **Figure 19**, the inflow of EU-28 movers to other Member States (in other words, those moving to a Member State which is not their country of origin) remained similar to previous years, at 1.02 million. Expressed as a proportion of the EU-28 population, the share has also remained relatively steady at just above 0.3% in recent years. In absolute terms, however, inflows of EU-28 movers have decreased by 8% since 2015 from 1.11 million. Absolute flows of EFTA movers to the EU likewise remained similar, at 15 400, as did EU-28 inflows to EFTA countries, at 90 000. As EU-LFS data from 2019 show an activity rate of 81% for movers who arrived in the past two years, it can be estimated that around 825 000 of the 2019 inflows were active movers.

Figure 19: Inflows of EU-28 movers to the EU-28 in absolute numbers (1 000s) and as a percentage of the total EU-28 population, 2013-2018



INFLOW DATA: PROVISIONAL DATA FOR SK (2015-2018), PL (2014-2018) AND UK (2018). ESTIMATED NUMBERS FOR DE (2014-2015, 2017-2018), PT (2015-2018), PL (2016-2018) AND RO (2017). BREAK IN TIME SERIES FOR DE (2016-2018) AND EE (2015).

POPULATION DATA: PROVISIONAL DATA FOR PL (2013-2019) AND FR (2018). ESTIMATED NUMBERS FOR PL (2016-2018). BREAK IN TIME SERIES FOR EE (2015), FR (2014) AND LU (2017).

THE AGGREGATE COVERS 2013-2018 AS THE 2009-2018 PERIOD LACKS DATA FOR SOME COUNTRIES.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), AND DATA ON POPULATION ON 1 JANUARY BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

If measuring inflows as a proportion of the population changes the main inflow countries of interest. Relative to its population, Luxembourg had the highest percentage of incoming EU-28 and EFTA citizens, at 3.4%, followed by Malta, at 3.3%. The EFTA countries of Iceland (3.6%) and Switzerland (1.3%) were also part of this group, as were Cyprus (1.2%), Austria (1%), Ireland (0.8%) and Belgium (0.7%). Due to their larger populations, shares in Germany and the UK were lower, at 0.6% and 0.4%. **Table 3** compares the

largest inflow countries in absolute and relative terms, and **Figure 20** shows the change in inflows for EU-28 and EFTA countries in 2018 compared to 2017.

Table 3: Main countries of destination of EU-28 movers (20-64 years) in total numbers and in shares of the population, 2018 and % change compared to 2017 (in thousands)[70]

Largest inflows of EU-28 movers in 2018 (% change from 2017)		Largest inflows of EU-28 movers compared to total population (20-64 years) in country	
NL	65.8 (9.0%)	**IS**	3.6%
BE	50.1 (7.1%)	**LU**	3.4%
ES	108.5 (4.4%)	**MT**	3.3%
FR	53.2 (2.7%)	**CH**	1.3%
AT	52.1 (1.2%)	**CY**	1.2%
CH	67.9 (0.4%)	**AT**	1.0%
DE	299.8 (-5.7%)	**IE**	0.8%
UK	167.5 (-13.8%)	**BE**	0.7%

INFLOWS OF EU-28 IN 2018. FIGURES IN COLUMN 2 EXPRESS THE INFLOWS AND NUMBERS IN BRACKETS EXPRESS THE RELATIVE DIFFERENCE IN INFLOWS OF TOTAL EU-28 FOREIGNERS COMPARED TO 2017.

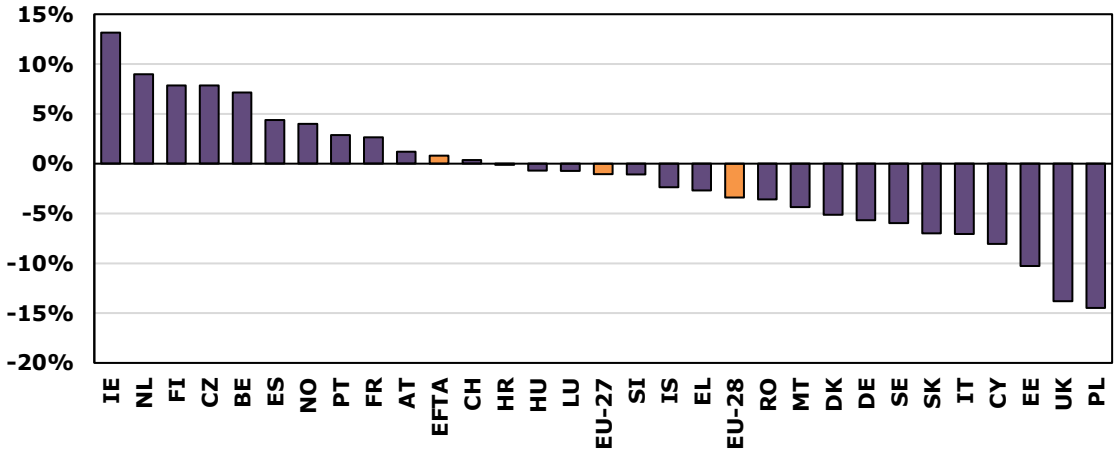
FIGURES RELATE TO EU-28 MOVERS MOVING TO THE COUNTRY INDICATED IN THE ROWS, REGARDLESS OF COUNTRY OF PREVIOUS RESIDENCE. THE FIGURES MAY THEREFORE INCLUDE EU-28 MOVERS PREVIOUSLY RESIDENT IN THIRD COUNTRIES.

LATEST FLOW DATA AVAILABLE ARE FROM 2018.

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

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Figure 20: Percentage change in absolute inflows of EU-28 movers in 2018 compared to 2017, by country of destination



HIGHLIGHTED COLUMNS INDICATES AGGREGATE VALUES.

COUNTRIES WITH ABSOLUTE OUTFLOWS OF LESS THAN 1 000 (BG, LT AND LV) ARE EXCLUDED FROM THE FIGURE.

PROVISIONAL DATA FOR BG, PL, SK AND UK. ESTIMATED NUMBERS FOR DE AND PL.

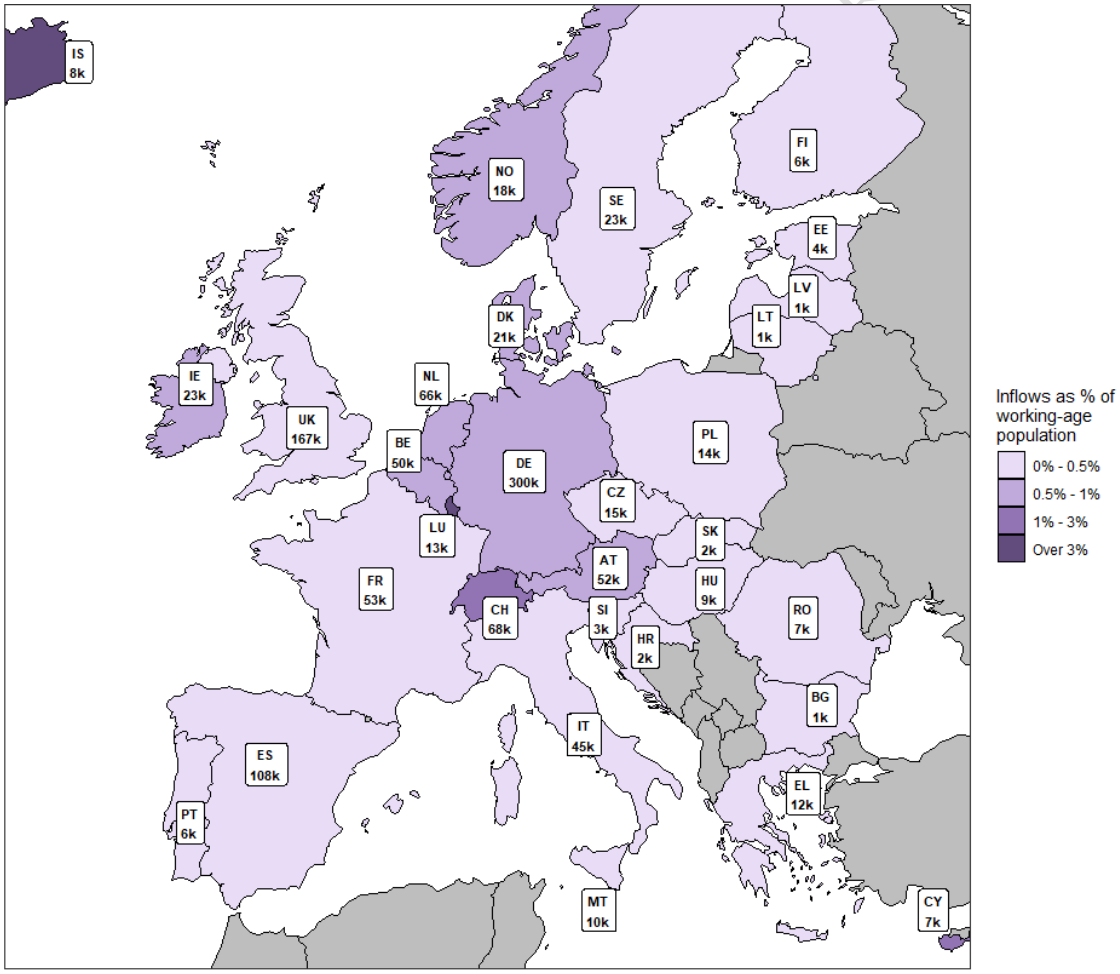
SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

[70] Total figures inflows in absolute terms and as share of total population for all countries can be found in **Table A7** in **Annex B.1**.

Flows between Member States continue to see a preponderance of EU-28 and EFTA movers going to a few Western European countries. Although a decrease compared to 2015 when their combined inflows were 53% of the EU-28 total, Germany (299 800) and the UK (168 000) still receive 46% of movers. The rest of the EU-15 countries make up 47%, for a combined total of 93%. **Figure 21** shows the absolute inflows for selected EU-28 and EFTA countries in 2018. The figure also indicates that, with a few exceptions in the form of smaller countries such as Iceland, Luxembourg, Switzerland and Cyprus, inflows are less than 1% of the size of the working-age population of receiving countries.

EU-27 inflows to the UK continued to decrease strongly (-14%). Smaller decreases seen in Germany (-6%) and Italy (-7%), with increases in France (3%) and Spain (4%).

Figure 21: Distribution of inflows to EU-28/EFTA Member States of nationals of another EU-28 country (20-64 years) in 2018, in total numbers (1 000) and as share from total population for selected EU and EFTA countries[71]



THE COUNTRY LABELS DISPLAY THE COUNTRY AND THE ABSOLUTE INFLOWS IN 2018 (EXPRESSED IN THOUSANDS). COUNTRIES ARE COLOURED ACCORDING TO HOW LARGE THE INFLOWS ARE IN RELATION TO THE TOTAL POPULATION IN THE COUNTRY.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

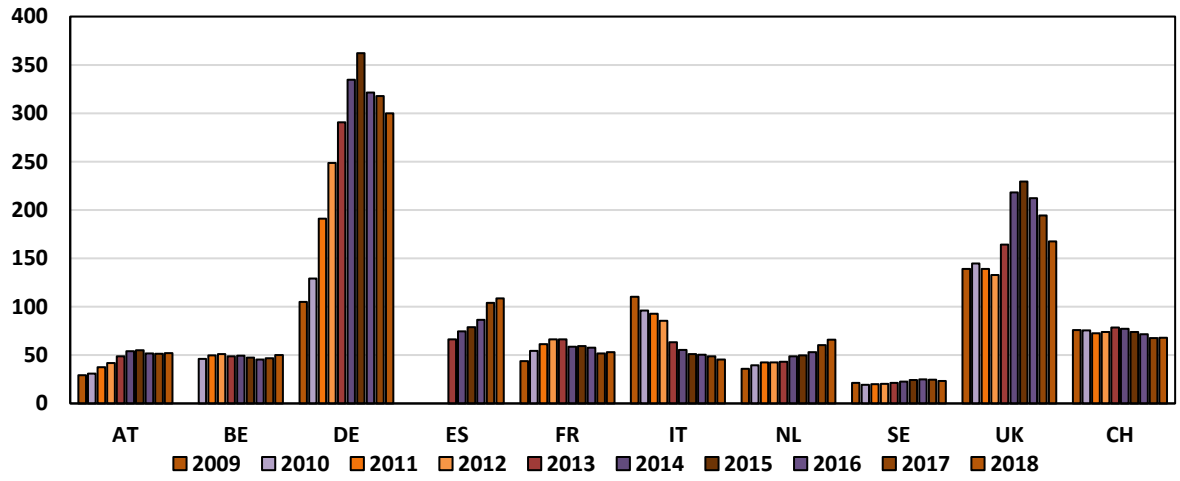
Changes over time for the main receiving countries are shown in **Figure 22**. The largest individual recipient countries are Germany and the UK, although both decrease compared to 2017 (-6% and -14%, respectively). In the longer term, this entails a decrease of 14%

[71] Total figures inflows in absolute terms and as share of total population for all countries can be found in **Table A7** in **Annex B.1**.

for Germany compared to 2015, but -27% for the UK in the same period. Some of Germany's long-term decrease is due to methodological changes in data gathering in 2016[72], but the decrease has since continued rapidly. Meanhwile, the greatest increases in inflows were seen in the Netherlands (+9%) and Belgium (+7%). Spain saw slightly smaller growth (+4%), while France's inflows grew 3%, following a decrease in 2016-2017. The other significant recipient countries showed negative growth, notably in the UK (-14%), Italy (-7%), Sweden and Denmark (-6%). For Sweden and Denmark, this followed a high point in 2017, after rising numbers from 2015 onwards, and net figures remain above the 2014 level in both countries.

Trends over time indicate that EU-wide inflows continue to grow compared to 2009 and the 2008 recession: from 2009 to 2018, aggregate EU-28 inflows have grown by ca. 70%. The decline of Italy as a destination continues, while Spain and the Netherlands continue to increase their inflows. Germany and the UK continue to decline since peaking in 2015. However, for Germany inflows in 2018 were still approximately three times as large as in 2009, whereas for the UK inflows have almost returned to the level of 2009.

Figure 22: Evolution of inflows of foreign EU-28 and EFTA citizens (20-64 years years) in the top 10 countries of destination, 2009-2018 (in thousands)[73]



FIGURES RELATE TO FOREIGN EU-28 AND EFTA CITIZENS, REGARDLESS OF PREVIOUS COUNTRY OF RESIDENCE. FIGURES MAY INCLUDE EU-28 AND EFTA CITIZENS RESIDING IN THIRD COUNTRIES.

FIGURES FOR YEARS 2009-2012 DO NOT INCLUDE HR CITIZENS. DATA ARE NOT AVAILABLE FOR BELGIUM IN 2009 AND SPAIN 2009-2012.

PROVISIONAL DATA: BG, PL, SK, UK. ESTIMATED NUMBERS: DE, PL, RO. BREAK IN TIME SERIES: DE.

EVOLUTION OF INFLOWS OF EU CITIZENS FOR THE YEARS 2009 TO 2018 IN THE 10 TOP RECEIVING COUNTRIES IN THE YEAR 2013.

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

LATEST FLOW DATA AVAILABLE ARE FROM 2018.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

[72] This entailed changes in data processing and reference period in the German reporting of flow statistics, rendering data in 2016 comparatively lower than 2015 (Fries-Tersch, et al., 2020, p. 38).
[73] See **Table A8** in **Annex B.1** for historical inflow data for all countries.

1.2.3 Outflows

Some 930 000 EU-28 citizens left their country of citizenship in 2018, a 7% decrease on 2017, when outflows numbered just above one million (compared to the 2016 peak of 1.03 million)[74]. Outflows of EFTA citizens have remained similar since 2009 at 30 500.

The countries with the highest outflows in 2018 were Romania (163 000), Germany (161 000), the UK (110 000), Poland (106 000) and Italy (89 000). Of these, Romania and Poland's outflow rates decreased most compared to 2017 (-6% and -17%, respectively). The other countries had relatively steady rates compared to the previous year, with changes between -2% (Germany and the UK) and 3% (Italy).

Table 4: Countries with outflows of nationals of more than 50 000 in 2018 (changes compared to 2017)[75]

Country of residence	Outflow of nationals (main sending countries)
RO	163 421 (-5.5%)
DE	160 754 (-1.4%)
UK	109 513 (-1.7%)
PL	106 114 (-16.5%)
IT	88 917 (+2.9%)
ES	56 586 (-8.2%)

PROVISIONAL DATA: PL, UK. ESTIMATED NUMBERS: DE, PL, RO.

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

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Figure 23 shows the rate of outflows of nationals as a proportion of the country's population. This shows that a number of countries exceeded the EU-28 average rate of 0.34%. EU-13 countries dominated the 10 countries with the highest outflow rates relative to population, with Ireland (0.8%) the only EU-15 exception. For 2018, Romania and Lithuania had very similar rates (1.4% and 1.3%, respectively), followed by Croatia (1.1%), Latvia (0.8%), Estonia (0.7%), Bulgaria (0.6%), Poland and Slovenia (both at 0.4%). These countries were generally comparatively small, both in terms of total population and absolute outflow numbers. The exceptions were Romania – which had the highest absolute outflows (although these decreased by 6% since 2017) and Poland.

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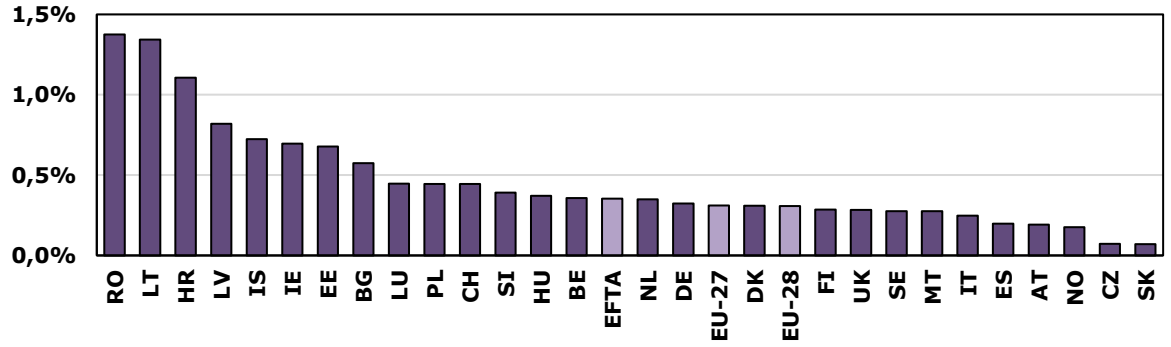
[74] This aggregate outflow is slightly lower than the aggregate inflows in the EU-28 due to missing data on outflows by citizenship for Cyprus, France, Greece and Portugal. Additionally, some movers will be bound for third countries and thus will not appear in the inflow data of other EU-28 countries, or in the EU-28 aggregate inflow, as data by citizenship and next country of residence are not simultaneously available from Eurostat migration statistics. Likewise, inflow figures may contain data on EU-28 movers who have moved from one EU Member State to another, neither of which is their country of citizenship, or from a third country to an EU Member State of which they do not hold citizenship. Neither case would be registered in the outflow data of nationals.

[75] See **Table A9** in **Annex B.1** for numbers on outflows for all countries as a percentage of the population in the country of origin, and **Table A10** for absolute numbers.

Figure 23: Outflow rate of nationals as a percentage of the population in their country of origin, by country of citizenship, 2018



LATEST FLOW DATA AVAILABLE ARE FROM 2018.

CY, EL, FR, PT ARE NOT DISPLAYED BECAUSE FIGURES ARE NOT AVAILABLE. EU-28 AGGREGATE EXCLUDES CY, EL, FR, PT

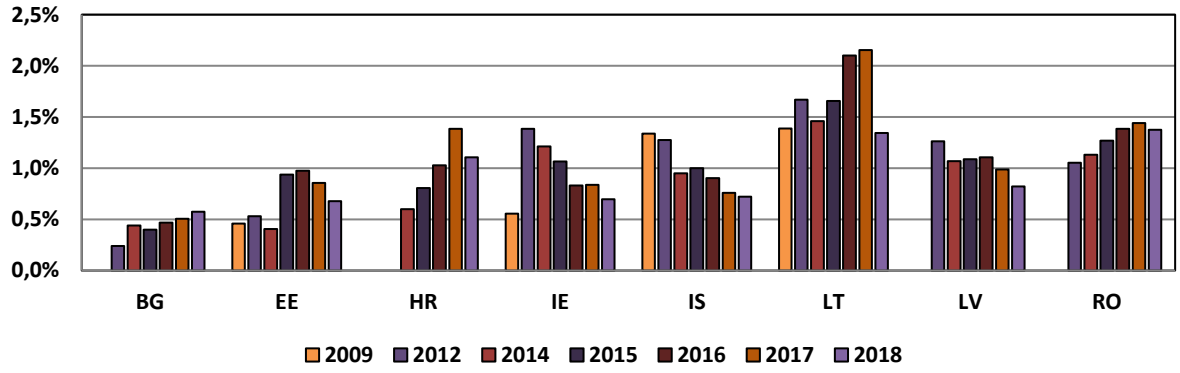
PROVISIONAL DATA: BG, PL, UK. ESTIMATED NUMBERS: DE, PL, RO.HIGHLIGHTED COLUMNS INDICATE AGGREGATE VALUES.

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

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020), AND DATA ON POPULATION ON 1 JANUARY BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

The main outflow countries are more diverse than the main recipient countries, both in terms of geographic diversity, the size of outflows in relation to the population in the country of origin, and in variation over time. As **Figure 23** shows, eight EU-28 countries (as well as Iceland and Switzerland) have outflow rates of more than 0.5% in 2018. The 2009-2018 year-on-year trends of outflow rates from these are shown in **Figure 24**. All except Bulgaria, which has seen a steady increase in outflows as a proportion of its own population, have experienced decreases in 2019. In Romania, Croatia and Lithuania this is in contrast with previous years' increases, while in Ireland, Iceland and Estonia it is part of a longer decline.

Figure 24: Trend of outflow rate of nationals (20-64 years) for main countries of origin, 2009-2018[76]



LEVEL OF OUTFLOWS BY CITIZENSHIP, AS A SHARE OF TOTAL NATIONAL POPULATION IN THE COUNTRY OF ORIGIN, 2009, 2012, AND 2014-2018. LATEST FLOW DATA AVAILABLE ARE FROM 2018.

FIGURE SHOWS COUNTRIES WITH OUTFLOW RATES OF 0.5% OR HIGHER IN 2018.

PROVISIONAL DATA: BG. ESTIMATED NUMBERS: RO.

FIGURES FOR IE AND RO ARE BASED ON AGE DEFINITION 'AGE COMPLETED IN YEARS'.

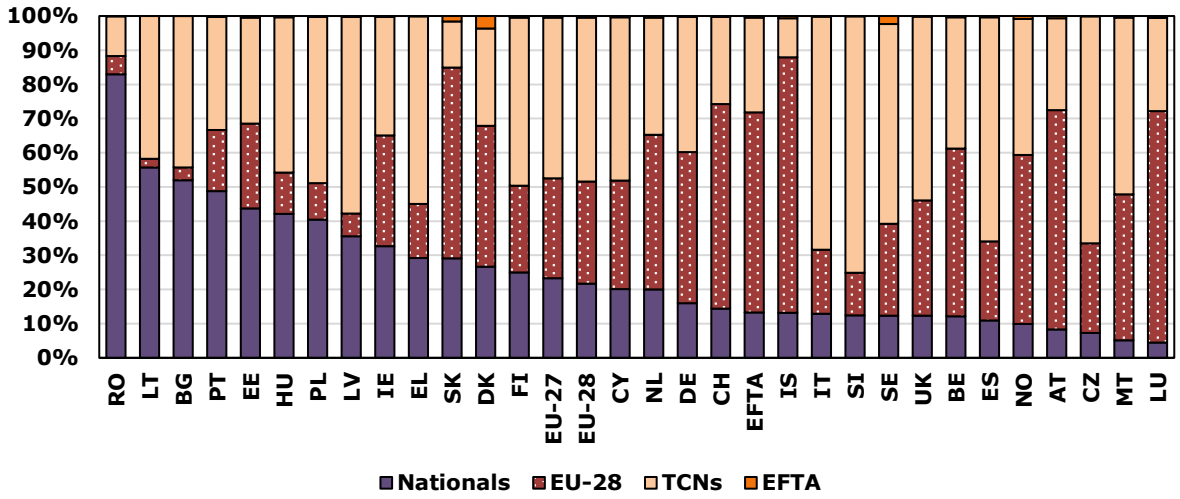
SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020), DATA ON POPULATION ON 1 JANUARY BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

[76] See **Table A8** in **Annex B.1** for all countries.

1.2.4 Return mobility

Return movers – i.e. those moving (back) to their country of nationality after a stay abroad[77] – constitute an important part of intra-EU mobility flows. The total number of returnees in 2018 was around 738 000, up by 2.1% from the previous year and continuing a pattern of annual proportional increases since 2011. As a proportion of all inflows (i.e. nationals, as well as EU-28, EFTA and TCN movers), this remained steady compared to 2017. Looking only at inflows of EU-28 movers and nationals, nationals returning to their country of origin constituted 42% of flows in the EU, and over 50% of inflows in Romania, Lithuania and Bulgaria. Furhtermore, returning movers will generally have gained more work experience during their stay abroad (as discussed in **Section 2.2.1**, the employment rate of movers in the EU-28 is above that of nationals) and may therefore bring both skills and human capital with them upon their return, to the benefit of their country of origin. This section is therefore focused on studying the size of return mobility, its change over time, and how the inflows of nationals compare with outflows.

Figure 25: Composition of inflows (20-64 years) by group of citizenship by country of destination, 2018[78]



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.

LATEST FLOW DATA AVAILABLE ARE FROM 2018.

PROVISIONAL DATA: BG, PL, SK, UK. ESTIMATED NUMBERS: DE, PL, RO.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ], EXTRACTED MAY 2020, MILIEU CALCULATIONS.

The share of returnees among inflows was over 50% in Romania, Lithuania and Bulgaria

Looking at the composition of inflows to individual countries, shown in **Figure 25**, EU-13 countries generally have the highest shares of returnees, with returnees making up more than half of the inflows to Romania (83%), Lithuania (56%) and Bulgaria (52%). Portugal is the only EU-15 country where the share was above 40%, at 49%. These countries' shares of returnees decreased compared to 2017 in most cases, with particularly large drops in Poland (-12 pps), Hungary (-7 pps) and Portugal (-8 pps). While the numbers decreased

[77] Since data by citizenship AND next/previous country of residence are not available, returnees are proxied by persons moving into the country of their citizenship, having previously lived abroad. This means that movers may have been previously resident either in other Member States, or in third countries.
[78] A summary of the inflows per category of citizenship is found in **Table A11** in **Annex B.1**.

significantly in Poland, the absolute numbers of returning nationals to Hungary and Portugal actually increased. – The number of TCN moving to these countries actually grew even faster.

Table 5 shows the return mobility flows on an aggregate level, looking at EU-28, EU-13 and EU-15. On an EU-28 level, return mobility has been on an upward trend since 2015, with a particularly large increase in 2017, possibly in part due to the UK vote to leave the European Union in 2016[79]. Since 2009, the number of returnees have increased by 18%, or circa 110 000 movers. The same pattern is found for EU-15 countries, where the number of returnees have been on an upward trend since 2014, and increased by 33% since 2009. By contrast the trend in the EU-13 is one of stagnation, with the number of returnees in 2018 4% lower than in 2009. If the movers who stay abroad are those with high skills and earning potential, this could be of concern for their countries of origin, who miss out on high-skilled, active-age labour.

Table 5: Return mobility (inflows of nationals), 20-64 years, 2009-2018 (thousands)

	2009 *	2010 **	2011 ***	2012	2013	2014	2015	2016	2017	2018
EU-28										
Total	627.7	607.3	596.1	642.8	617.3	640.9	622.7	663.5	722.6	738.5
Annual Δ		-3.3%	-1.8%	7.8%	-4.0%	3.8%	-2.8%	6.6%	8.9%	2.2%
EU-13										
Total	266.7	236.2	239.0	292.0	268.4	265.1	228.5	240.3	267.8	256.6
Annual Δ		-11.4%	1.2%	22.1%	-8.1%	-1.3%	-13.8%	5.2%	11.5%	-4.2%
EU-15										
Total	361.0	371.1	357.0	350.8	348.8	375.9	394.2	423.2	454.7	481.8
Annual Δ		2.8%	-3.8%	-1.7%	-0.6%	7.7%	4.9%	7.4%	7.4%	6.0%

FIGURES REFER TO INFLOWS OF NATIONALS FROM EU MEMBER STATES AND FROM THIRD COUNTRIES.

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

** EU-28 TOTAL MISSING BG, EU-13 TOTAL MISSING BG.

*** EU-28 TOTAL MISSING BG, EU-13 TOTAL MISSING BG.

FOR 2018: PROVISIONAL DATA: BG, PL, SK, UK. ESTIMATED NUMBERS: DE, PL, RO. BREAK IN TIME SERIES: DE.

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

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Analysis of return mobility can also compare the numbers of returnees to the level of outflows of nationals from a country. This is similar to the exercise in Section 1.2.1, on net mobility of nationals, except the focus here is on the share of returnees-to-outward movers.

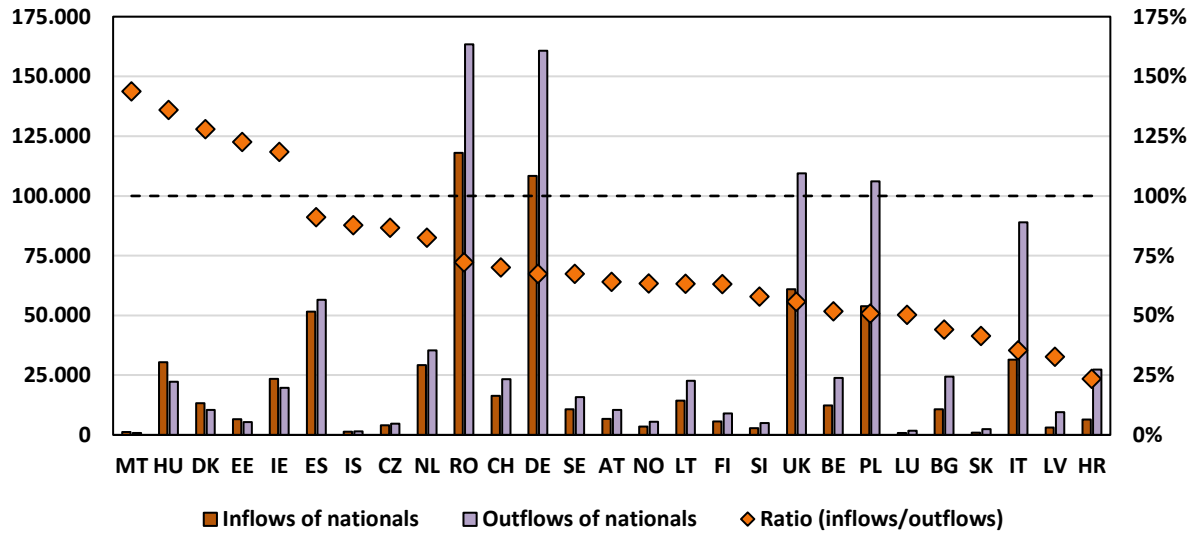
Figure 26 shows the inflows and outflows of nationals to the EU-28 in 2018, and also indicates whether more nationals are leaving or returning. At EU level, the proportion was

[79] While we are not able to investigate the previous country of residence of returnees, it is worth noting that outflows of EU-28 movers in the UK increased by 23% in 2017, from 109,000 to 133,000.

65%, a drop from 72% in 2018. In other words, for every three people that left an EU-28 country, two returned, on average[80].

Five countries have an inflow-to-outflow ratio of more than 100%, indicating that more nationals are returning than are leaving the country: Malta, Hungary, Denmark, Estonia and Ireland. Absolute numbers are generally low, however, especially for Malta and Ireland. At the other end of the scale, the largest outflows in relation to returnees are seen in Italy, Croatia and Bulgaria (as well as in Latvia and Slovakia, but with much lower absolute volumes).

Figure 26: Absolute inflows and outflows of nationals in EU-28 countries, and the ratio of inflows-to-outflows, 2018



THE LEFT AXIS DISPLAYS THE ABSOLUTE NUMBERS OF INFLOWS AND OUTFLOWS. THE RIGHT AXIS DISPLAYS THE RATIO OF INFLOWS TO OUTFLOWS. THIS RATIO ILLUSTRATES (1) WHETHER MORE NATIONALS RETURNED TO THE COUNTRY THAN LEFT IT IN 2018, AND (2) THE MAGNITUDE OF DIFFERENCE BETWEEN INFLOWS AND OUTFLOWS. AT 100%, AN EQUAL AMOUNT OF NATIONALS ARE LEAVING AS ARE RETURNING; BELOW 100%, MORE ARE LEAVING; AND ABOVE 100%, MORE ARE RETURNING. THE DASHED LINE INDICATES THE 100% LEVEL.

HIGHLIGHTED COLUMNS INDICATE AGGREGATES.

INFLOWS: PROVISIONAL DATA FOR BG, PL, SK, UK. ESTIMATED NUMBERS FOR DE, PL, RO. BREAK IN TIME SERIES FOR DE.

OUTFLOWS: CY, EL, FR, PT ARE NOT DISPLAYED BECAUSE FIGURES ARE NOT AVAILABLE. PROVISIONAL DATA FOR BG, FR, PL, UK. ESTIMATED NUMBERS FOR DE, PL, RO.

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

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[80] A full list of countries for 2018 can be found in **Table A12** in **Annex B.1**. Note that this EU-28 aggregate excludes Cyprus, Greece, France and Portugal due to data limitations.

2 MOBILITY OF WORKERS

This section gives an overview of the mobility of **active EU-28 movers**[81] of working age (20-64 years) in 2019, together with key trends in recent years. Unless stated otherwise, figures refer to active persons who live in a different Member State than their country of citizenship and who were born outside their country of residence (95% of all active EU-28 movers). Persons who were born in their current country of residence are quite unlikely to be movers in the sense of having moved their residence and only constitute 5% across the EU-28, although a few Member States have more substantial numbers. The section also 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[82].

Key findings

Stocks of active movers - trends

- In 2019, the growth in stocks of active EU-28 movers was 2.4%, a slightly larger growth than in 2018 but still considerably lower than growth in 2014-2016.
- Germany (25%) and the UK (25%) still host 50% of active EU-28 movers.
- Spain, the Netherlands and Austria saw a large growth in active movers between 2018 and 2019. For Spain, in particular, this growth might indicate an increase in importance as a destination country after the recession.
- Growth in stocks of active movers was smaller in Germany compared to 2018, and are decreasing in France. Growth was small but positive in the UK, contrary to 2018.
- Stocks of Romanian active movers continued their steady growth from previous year, with +5% in 2019. Stocks of Polish active movers had declined in 2017 and 2018, but grew again in 2019, by +4%.
- The stocks of German active movers increased strongly, by 10%, an exceptionally large increase compared to preceding years.
- The number of British active movers decreased further, by 3%.

Economic activity of new movers

- New movers (those who arrived in their new country of residence within the past two years) are less likely to be employed than all movers, at EU level and in most main destination countries. Employment is much less likely, especially in Italy, where only 40% of new movers are employed.
- New movers who are employed are much more likely to work as professionals than movers who arrived longer ago. Almost one-third of new movers work as professionals in their country of destination.

Economic integration

- Employment continued to grow for EU-28 movers in 2019 (+1pp) to 78% and unemployment stagnated at 7%. The difference to nationals remained unchanged since 2018, at +3pps for employment rate and +1pp for unemployment rate.
- Looking more closely at the main countries of residence, EU-28 movers are less likely to be employed than nationals in Germany and France; considerably more likely to be employed in the UK and Italy. In Italy, however, that advantage has declined since 2017.
- Unemployment was higher among movers than nationals in all main countries of destination except the UK. The gap was particularly large in Italy (EU-28 movers:

[81] 'Active' includes employed (including self-employed) and job-seeking individuals.
[82] The data used for this section is derived from the 2019 wave of the EU-Labour Force Survey (EU-LFS). Due to slightly different methods of data collection and aggregation, figures herein may therefore not be fully comparable to data in Section 1, which is derived from demographic statistics.

14%; nationals: 9%) where unemployment among EU-28 movers was the second highest EU-wide. It was by far the highest in Greece, both among EU-28 movers (25%) and nationals (17%).

- In terms of chances of employment, mobility seems to be most promising for Greek, Italian, Croatian and Spanish nationals, whose employment rate was considerably higher and unemployment rate lower than that of nationals in the country of origin. Polish and Hungarian movers are more likely to be employed, but as likely (Hungarians) or even slightly more likely (Polish) to be unemployed than nationals in their country.
- German, UK, Romanian and Bulgarian movers do not have better chances of employment than non-mobile nationals.
- The main sectors of economic activity in 2019 were manufacturing and wholesale and retail trade, employing 15% and 12% of EU-28 movers, respectively, and 16% and 13% of nationals. Among EU-28 movers, manufacturing has retained that position since 2008. Sectors that have seen the most change over the past 10 years in employment of EU-28 movers are construction and activities of households as employers – both decreased in importance, although construction remains the third largest sector, employing 10% of movers. Transport and storage continuously increased in importance since 2012 and in 2019 employed 7% of movers.
- The share of movers working as professionals (18%) was similar to that of nationals (21%), which was also the case for other high-skilled occupations (legislators, senior officials, managers). In absolute numbers, this occupation has seen a constant increase of EU-28 movers since 2011 (+70%), larger than the average increase across all occupations (+52%). Another occupation that has seen an above-average increase in the total number of employed movers is plant and machine operators and assemblers (+90%), possibly reflecting the increase in the transport sector noted above. EU-28 movers remain highly over-represented compared to nationals in elementary occupations and there has been little change since 2011. However, growth in total numbers since 2011 was below average (+43%), with small annual growth in elementary occupations (+1% per year) since 2017.
- Employment was higher among male than female movers throughout the Member States (+15 pps at EU level). The difference in unemployment was much lower, although female movers were in a less favourable situation than males (+2pps). The gap in employment decreased by 1pps between 2018 and 2019, while the gap in unemployment remained the same since 2017.
- The share in highly educated movers increased from 32% to 36% between 2011 and 2019 at EU level, while the shares of movers with medium (42% to 41%) and low education levels decreased (26% to 22%). The share of movers with a high education level increased in most individual Member States for which reliable data are available, except Germany and Portugal. Italy remained the country with substantially the lowest share of highly educated movers, who make up only 13%. Portugal had the EU's highest share of low-educated movers (37%).
- The number of cross-border workers within EU and EFTA countries increased by 0.9% between 2018 and 2019, when it reached just under 1.9 million. Looking at cross-border mobility between EU-28 countries only, the number decreased by 0.6%. This was largely due to a decrease of 3% in cross-border workers working in Germany, the largest country of work.

2.1 Recent developments

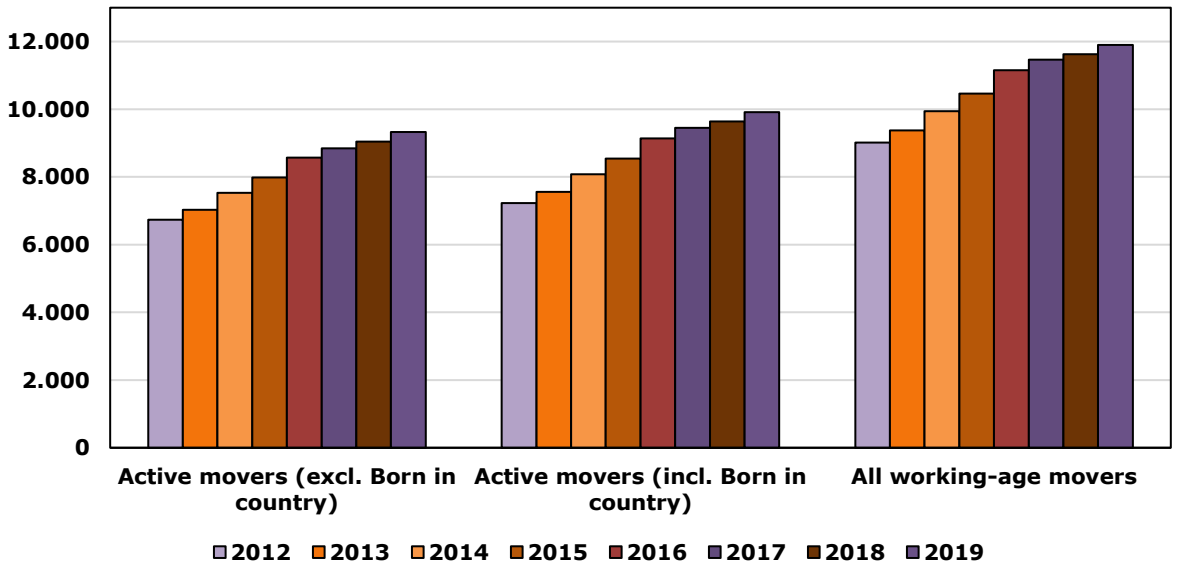
2.1.1 Stocks of active EU-28 movers in 2019

In 2019, there lived 9.8 million active EU-28 citizens outside their country of citizenship. To focus on the 'real' movers, the following section looks only at persons who were not born in their current country of residence. Their number in 2019 was 9.3 million, an

increase of 3.2% on 2018. Without the UK as a country of residence, the number is considerably lower, at 7 million in the EU-27.

The year 2019 showed a slight increase in longer-term growth of stocks of EU-28 movers. **Figure 27** shows the change on previous years for all movers of working age, active movers and active movers born outside their current country of residence. The stocks of all three groups show similar trends – they increased most strongly from 2014 to 2016 (growth of 6-7%), with growth declining in 2017 and 2018, and a slight increase in growth again evident in 2019.

Figure 27: Annual growth in stocks of different groups of EU-28 movers (20-64 years), EU-28 aggregate, 2012-2019



GRAPH SHOWS RELATIVE CHANGE IN STOCKS COMPARED TO THE PRECEDING YEAR.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Spain saw large growth in stocks of active movers, as did the Netherlands and Austria. Germany and the UK continued to host 50% of active EU-28 movers

The main countries of residence of active movers were the same as those of all movers, namely, Germany and the UK, with just over 2 million each, Spain and Italy, with around 1 million each, and France, with around 600 000 active EU-28 movers[83]. Together, these five Member States hosted close to 80% of active movers. Switzerland was also an important country of residence, hosting around 800 000. In a second-tier group of countries of residence with between 100 000 and 500 000 movers were Austria, Belgium, Ireland, the Netherlands, Sweden and Luxembourg.

Generally, the major countries of destination have the same share of active movers as they do of all working-age movers in the EU-28 (see discussion in Section 1.1.1 for a further discussion of the main destination countries). Changes in stocks since 2018 are also similar between the two groups. The main exception to this rule is the UK, where active movers make up 25% of the EU-28 total, and all working-age movers make up 20% of the EU-28 total. It is likely that this is due to the UK's combination of being a large economy with

[83] Data on active movers by country of residence and country of citizenship can be found in **Table A19** in **Annex B.2**.

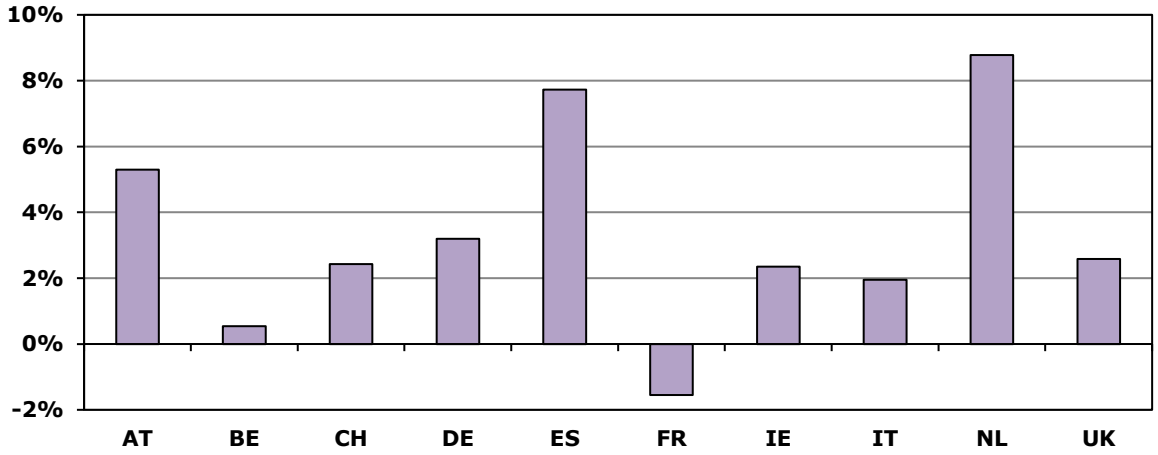
extensive work opportunities, in addition to being English-speaking, meaning movers are able to integrate more easily into the domestic labour market.

Figure 28 presents the growth-rate 2018/19 for active movers in the countries with stocks of more than 100 000. In line with general labour market developments and increased number of EU-28 movers, all countries registered an increase of the number of active EU-28 movers. The changes were greatest in Spain (7.7%), the Netherlands (8.8%) and Austria (5.3%). In Austria and the Netherlands this means largely the continuation of previous developments. For Spain, the growth rate was substantially larger than in previous years and may indicate a slow return in importance as a destination country.

Growth was smaller in the other main countries of residence. In Germany, France, Luxembourg and Ireland growth slowed down compared to the previous year, while the Netherlands and the UK saw an acceleration of growth. For the UK, this small, positive growth followed a decline in stocks in 2018. This stands in contrast to the decline in stocks of movers of working-age (**Figure 1,** Section 1.1.1.).

Smaller countries of residence of active movers that saw large increases were Cyprus (+10%), Malta (+14%) and Hungary (+27%), although in total numbers this meant increases between 3 000 and 5 000 movers per country.

Figure 28: Percentage change between 2018 and 2019 in stocks of active movers (20-64 years) in the 10 Member States hosting the most active movers



TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Number of Polish active movers increased again. Many more active movers from Germany across the EU.

Looking closer at the countries of origin of active movers, **Figure 29** shows the proportion that major sending countries make up of the total amount of active EU-28 movers. Romania and Poland remained the most important countries of origin of active EU-28 movers, together accounting for 39%. While the stocks of Polish movers declined in 2017 and especially in 2018, they grew again by 4.2% in 2019. This is despite the fact that outflows of Polish nationals in 2018 were smaller than in 2017.

The number of Romanian movers continued the steady growth seen in recent years. Other important countries of origin accounting for 3-8% of movers each (IT, PT, BG, FR, ES, UK) saw smaller changes: all of them increased slightly except the UK and Portugal whose numbers decreased. The number of British active movers in the EU Member States decreased further, by -2.6%, compared to -3% in 2018 and an increase of 7% in 2017.

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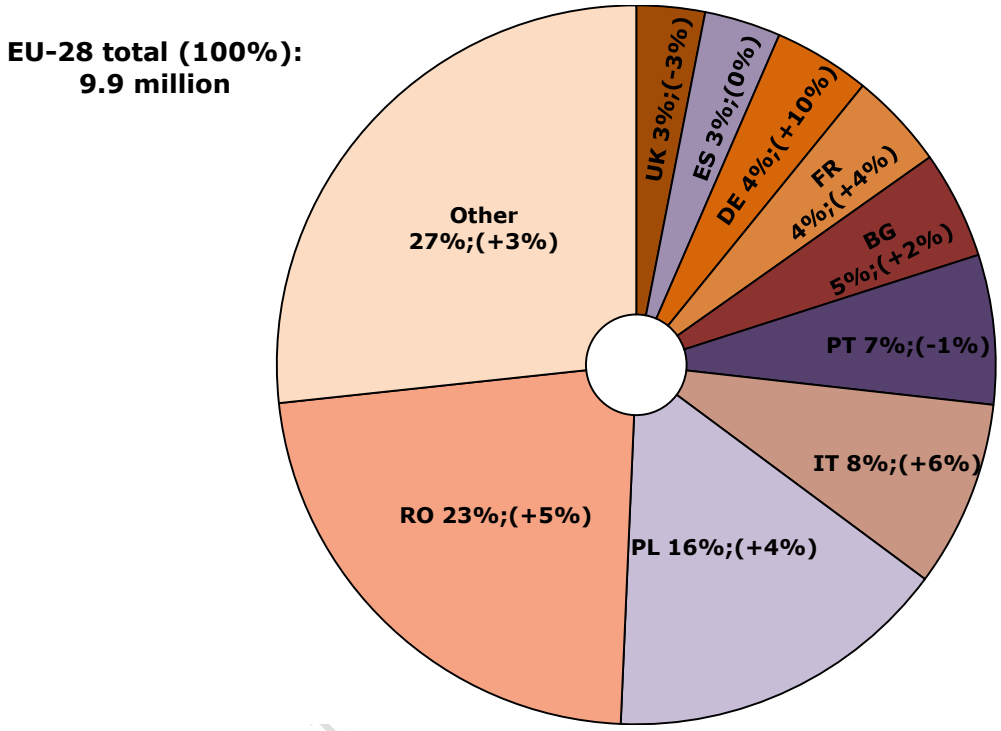
However, this is still a smaller decrease than in 2016 (-7%) of UK movers. The decrease in numbers of Portuguese active movers was very small and was the same as the previous year.

German movers increased by 10% (some 40 000 more people), an exceptionally large increase compared to recent years. The increase is magnified by the decrease in 2018, however: compared with 2017, the stock of German active movers increased by 4%. In 2019, German active movers made up 4% across the EU, with the main countries of residence being Austria, the UK, Spain, France and the Netherlands[84].

Figure 29: Most common countries of origin of EU-28 active movers (20-64 years), 2019 (first number: share from all active movers in 2019; second number: percentage change from 2018)[85]



TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Years of residence

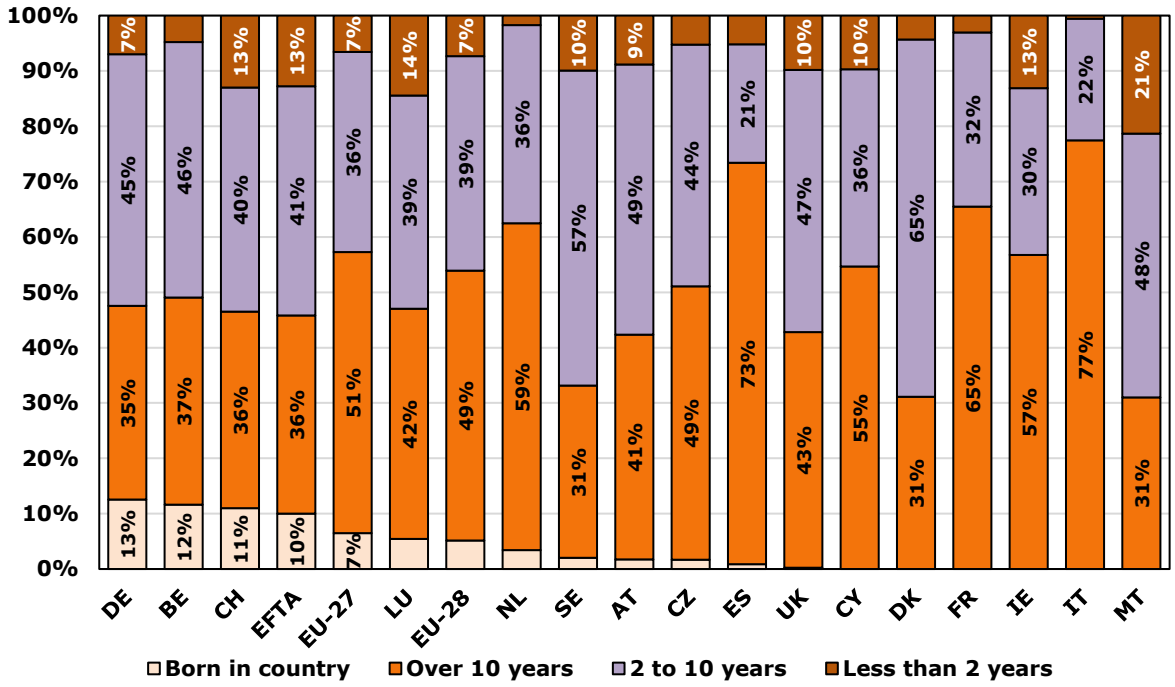
As **Figure 30** below shows, there is great variation between the Member States in the groups of active movers according to the number of years they have resided in the country. Similar to all movers of working age (see **Figure 13** in section 1.1.3), Italy, France and Spain are the most traditional countries of destination, with large shares of active movers who have been residing there for over ten years. Cyprus, Ireland and the Netherlands also have shares of active movers who have been residing there for more than ten years of over 50% - this also corresponds to the picture of all movers of working age. On the other hand, Malta, Sweden, Denmark, Germany, Switzerland, Belgium, Austria, Luxembourg and the UK have been more attractive countries of destination in the past ten years. Worth a look is also the share of active movers who arrived in their country of destination within two years prior the survey (between 2017 and 2019) – these are referred to as 'new movers' in this report. Their shares vary from less than 5% in Denmark, the Netherlands and France over between 5% and 10% in Sweden, Germany, Austria, Czechia, Cyprus and

[84] All sending countries have similar proportions of all working-age movers as they do of active movers, with no difference being higher than 0.5 pps.
[85] Data on active movers by country of residence and country of citizenship can be found in **Table A19** in **Annex B.2**.

Spain to between 11% and 13% in Switzerland, Luxembourg, the UK and Ireland. Malta with 21% of new movers is an outlier.

The only countries where active movers born in the country make up more than 5% of movers are Germany, Switzerland, Belgium and Luxembourg. In all other countries, this group is of a rather negligible size.

Figure 30: Active EU-28 movers (20-64 years), by years of residence, 2019



ONLY COUNTRIES WITH RELIABLE DATA IN ALL CATEGORIES WERE INCLUDED. DATA FOR 'BORN IN THIS COUNTRY' WAS BELOW RELIABILITY FOR CY, DK, FR, IE, IT, MT, BUT THESE COUNTRIES ARE SHOWN NEVERTHELESS FOR THE OTHER CATEGORIES. DATA FOR 'BORN IN THIS COUNTRY' IS OF LOW RELIABILITY FOR CZ, SE AND THE UK; DATA FOR 'LESS THAN ONE TO TWO YEARS' IS OF LOW RELIABILITY FOR DK.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

2.1.2 New movers

New movers are less likely to be employed than all movers, at EU level and in most main destination countries.

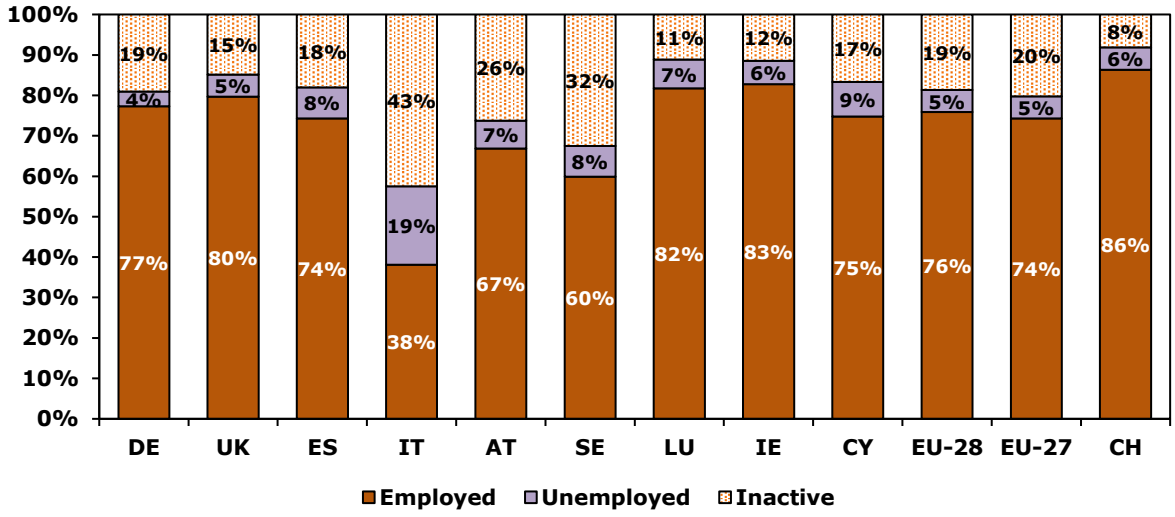
This section looks at how new movers, i.e. persons who moved less than two years before the survey (i.e. between 2017 and 2019), to their country of residence and do not have the citizenship of that country[86,87].

Figure 31 shows that employment among new movers is slightly lower at EU level (76%) than that of all movers (78%). This is because employment is lower among new movers in the two main destination countries, the UK (80% among new movers, 86% among all) and Germany (77% vs. 80%). Austria (67% vs. 77%), Sweden (60% vs. 81%) and Italy (38% vs. 66%) have much lower employment rates among new movers. In Italy, this may be explained by a large percentage of EU movers working in low-skilled occupations and the high volatility in these occupations (around 27% of new movers are employed in elementary occupations, compared to 19% at EU level). It is likely also due to Italy's high share of EU-28 movers with a low education level (see Section 2.2.5).

[86] EU-LFS data are annual averages of quarterly data from 2019.
[87] Persons who moved to the current country of residence within the year prior to the survey are often under-represented in the EU-LFS (see Annex A.2).

In Austria and Sweden, by contrast, it is less clear why new movers are much less active on the labour market. Sweden attracts a large number of highly educated movers, and around 40% of all movers work as professionals[88], which is a very high share compared to the EU average. It is possible that the comparatively low employment is related to inactive accompanying partners. A move in a high-skilled profession might be very demand-driven and planned and allow a partner not to work during the initial settling-in period – likewise, the move may have been triggered by only one person in a couple receiving an employment offer, and a spouse or partner following along in spite of lacking employment offers themselves[89]. For lower-skilled workers as well, family reintegration may be an influence, with recent research finding that for Polish movers to Sweden, regular and steady employment increased the likelihood of family reunification in Sweden[90].

Figure 31: Activity status of new EU-28 movers (20-64 years), by country of residence, 2019



COUNTRIES PRESENTED ARE THE ONLY ONES FOR WHICH DATA ARE RELIABLE ENOUGH FOR PUBLICATION. UNEMPLOYMENT DATA ARE CONSIDERED TO HAVE LOW RELIABILITY FOR: AT, CY, IE, IT, SE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Compared to all movers, new movers are more likely to work as professionals (27% among new movers vs. 19% among all movers). The distribution across the other professions is fairly similar, although new movers are slightly less likely to work as service and sales workers or as craft and related tradespeople.

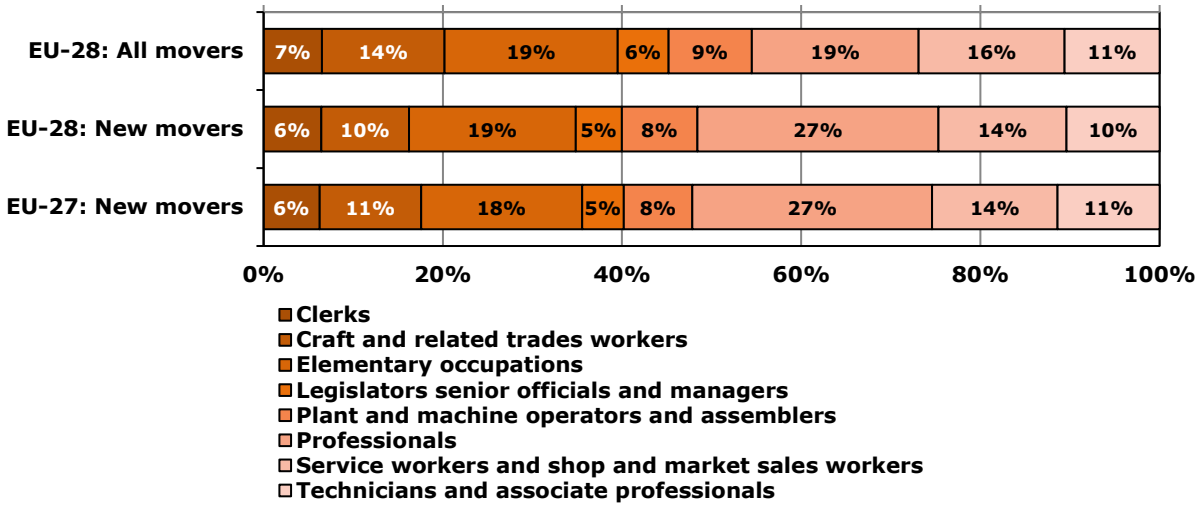
New movers are much more likely to work as professionals than movers who arrived longer ago. Almost one-third of new movers work as professionals in their country of destination.

[88] Based on the ISCO-08 standard classification structure, 'professionals' entails work which would generally be considered 'white-collar', and generally requiring a higher education degree or qualification. The sub-categories of the category are science and engineering professionals; health professionals; teaching professionals; business and administration professionals; information and communications technology professionals; and legal, social and cultural professionals. When discussed in the text, 'professionals' is to be taken to refer to this category, rather than employees more broadly.

[89] E.g. Tzanakou finds this to be the case in academia, with women in academic couples being more likely to follow a male partner to a new country following a job offer, even if none is available to themselves. In Tzanakou, C. (2017), 'Dual career couples in academia, international mobility and dual career services in Europe', *European Educational Research Journal*, 16(2-3), pp. 298-312, Available at: https://journals.sagepub.com/doi/pdf/10.1177/1474904116683185

[90] Ryndyk, O. (2020), 'The role of labour market integration in migrants' decisions about family reunification: a comparative study of Polish migrants in Norway, Sweden and the UK', *Comparative Migration Studies*, 8(17), pp. 1-18, Available at: https://comparativemigrationstudies.springeropen.com/articles/10.1186/s40878-020-00177-2.

Figure 32: New movers by occupation, as share of all employed new movers (20-64 years), EU-28 and EU-27 aggregate, all movers by occupation as comparison, 2019



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

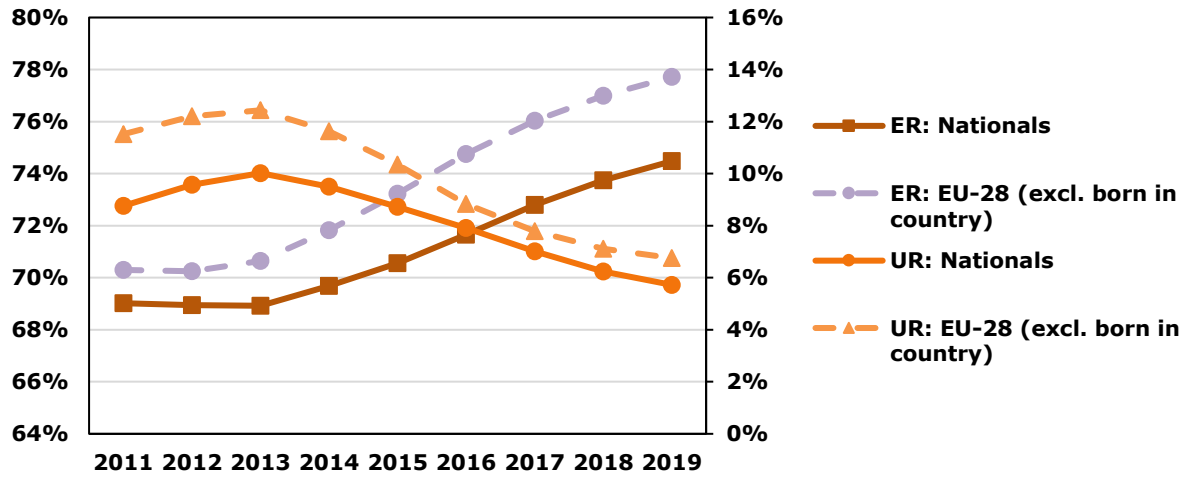
2.2 Economic integration

2.2.1 Employment and unemployment trends

Employment continued to grow for EU-28 movers in 2019 (+1pp) to 78%, while unemployment remained at 7%.

The difference in employment and unemployment between EU-28 movers and nationals changed compared to 2011-2013, in favour of EU-28 movers. This change is shown in **Figure 33**. At EU level, their employment rate is now 3pps higher than that of nationals and unemployment is 1pp higher – an improvement on the 3pps higher unemployment in 2011. In other words, since 2011, EU-28 movers are increasingly more active in the labour market than nationals. In the shorter term, compared to 2018, employment grew by 1pp for both groups, while unemployment stagnated.

Figure 33: Trend in employment (ER) and unemployment rates (UR) for EU-28 movers and nationals, 2011-2019



THE LEFT Y-AXIS SHOWS THE EMPLOYMENT RATE OF WORKING-AGE EU-28 MOVERS AND NATIONALS, WHILE THE RIGHT Y-AXIS SHOWS THE UNEMPLOYMENT RATE. NOTE THAT THE LEFT Y-AXIS BEGINS AT 64%, FOR IMPROVED READABILITY.

EU-28 MOVERS FIGURES EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

VERSION - NOT FOR DISTRIB

As can be seen in **Figure 34**, the differences in employment between EU-28 movers and nationals varied considerably between Member States and over time. It shows how much higher – or lower – the employment rate of movers was, compared to that of nationals, in 2017, 2018 and 2019. It also shows movers' employment rates in 2019.

The differences are largest – in favour of EU-28 movers – in the UK and Luxembourg, a pattern that has changed little over time. The employment situation of movers in the UK has been extremely good, their employment rate of 86% being the highest in the EU-28 and similar to that of Switzerland. One likely explanation is the share of movers with high education levels in the UK. Movers also had considerably higher employment rates than nationals in Ireland and Italy, although in Italy, that difference decreased slightly. Overall, however, movers' employment in Italy is well below the EU average. In Greece, by contrast, movers are much less likely to be employed than nationals, a difference that has increased dramatically in the past three years, reaching -10pps in 2019. Their employment rate is the lowest among all countries, at 51%.

In the largest country of residence of EU-28 movers, Germany, their employment rate, although above the EU average, has been lower (by around 3pps) than that of nationals, similar to Denmark, the Netherlands and Sweden. Interestingly, Germany has had a below-average share of highly educated movers (by roughly 10pps) – the main group being those with medium educational levels – and this has not changed over time. Despite this, their employment situation is quite good and similar to that of movers in most other Member States and unemployment is less frequent than the EU average (**Figure 35** below).

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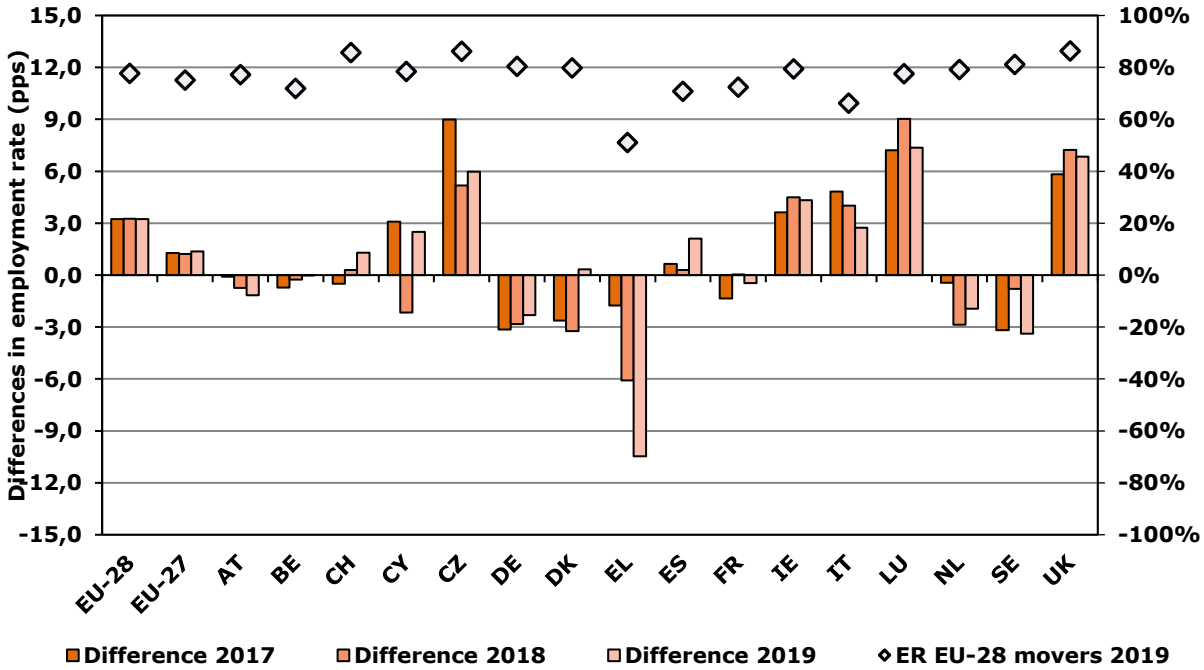
Figure 34: Employment rates (ER) of EU-28 movers (20-64 years) in 2019 and differences in employment rates of EU-28 movers and nationals, 2017-2019, by country of residence



BARS SHOW THE EMPLOYMENT RATE OF EU-28 MOVERS MINUS THE EMPLOYMENT RATE OF NATIONALS; VALUES ARE PRESENTED IN PPS. THE DIAMOND INDICATES THE EMPLOYMENT RATE OF EU-28 MOVERS IN 2019.

ONLY COUNTRIES WHOSE DATA ARE OF GOOD RELIABILITY ARE SHOWN.

TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

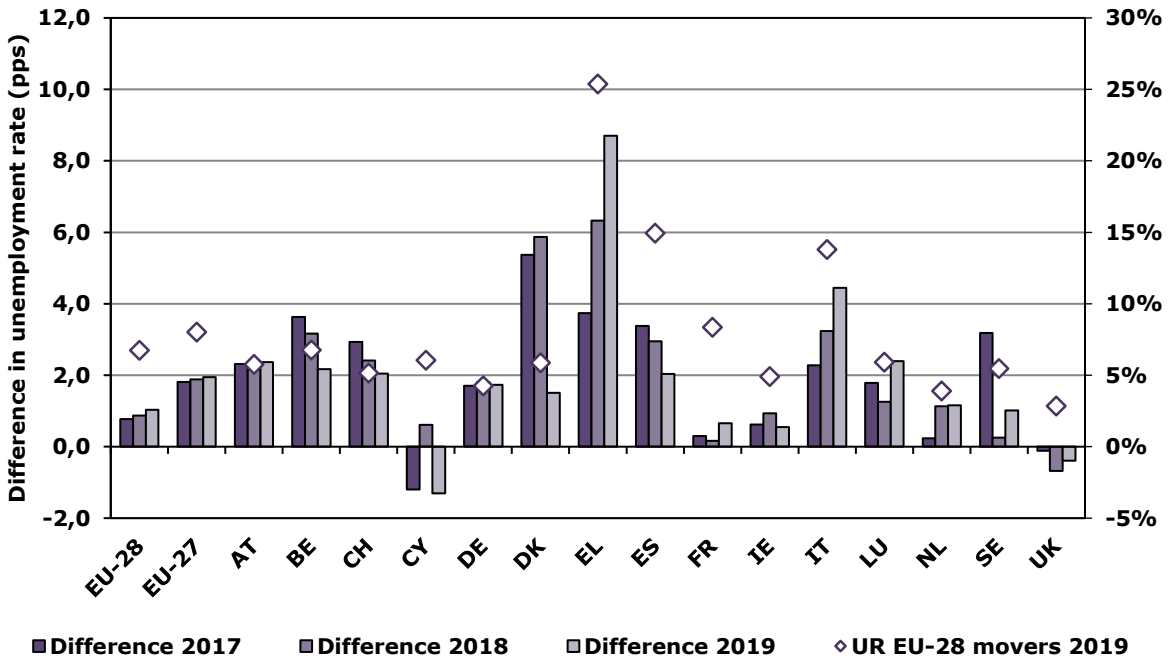
SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

These differences between Member States are also reflected in the unemployment rates.

Unemployment is higher among movers than nationals in all main countries of destination except the UK. The gap is particularly large in Italy and Spain.

Unemployment has been slightly higher among EU-28 movers than among nationals, due to the fact that they are more likely to be active in general. The difference of 2pps is almost unchanged since 2017. In Greece unemployment among movers is more than 10 pps higher than unemployment with nationals, thus reaching an unemployment rate of 25%. The difference was also very large in Denmark but decreased in 2019. In Spain, it also decreased but unemployment among movers was still at 15%, while, in Italy, the difference actually increased and movers reached an unemployment rate of 14% in 2019. With lower unemployment rates in general, Austria, Belgium, Germany, Ireland, the Netherlands, Sweden and Switzerland also show differences of around +2pps between movers and nationals. The only countries where movers' unemployment rate is actually lower than that of nationals are the UK (only 3% of active movers are unemployed) and Cyprus.

Figure 35: Unemployment rates (UR) of EU-28 movers (20-64 years) in 2019 and differences in unemployment rates of EU-28 movers and nationals, 2017-2019 , by country of residence



BARS SHOW THE UNEMPLOYMENT RATE OF EU-28 MOVERS MINUS THE UNEMPLOYMENT RATE OF NATIONALS; VALUES ARE PRESENTED IN PPS. UNEMPLOYMENT RATE =NO. OF UNEMPLOYED/NO. OF ACTIVE PERSONS.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

ONLY COUNTRIES WHOSE DATA ARE OF GOOD RELIABILITY ARE SHOWN. TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

As can be seen in **Figure 36** and **Figure 37**, movers from Greece, Italy and Croatia have an employment rate around 15pps higher than that of nationals in their country of origin. These movers were also less likely to be unemployed than their non-mobile compatriots. For Greek and Spanish movers the unemployment rate was about 10 pps lower. Other national groups for which mobility comes with higher employment and lower unemployment rates (although to a lesser extent) are French and Slovakians.

On a general level, the employment (and unemployment) situation in countries of origin and countries of destination will influence where movers are more likely to go, and from

where[91]. For instance, Polish and Hungarian movers were more likely to be employed but as likely (Hungarians) or even slightly more likely (Polish) to be unemployed than nationals in their country of origin. This is likely because they have a comparatively larger active group among movers than at home and also that those movers have more difficulties in actually securing jobs. The labour market situation of Polish and Hungarian nationals is already at the EU average - this is in contrast to Greece, Italy, Croatia and Spain, where nationals have comparatively more difficulties and movers have better opportunities to succeed.

For Germany, the UK, Romania and Bulgaria, movers do not seem to have a better labour market situation than non-mobile nationals. German and UK movers had lower employment and higher unemployment rates than their non-mobile compatriots. The same was true for Bulgarians, whose unemployment was almost 10pps higher among movers. Romanian movers had a slightly better chance of being employed than nationals in Romania, but their unemployment rate was also almost 10pps higher than that of nationals in the country. It is true that unemployment in Bulgaria and Romania is, in general, slightly below the EU average, but this does not explain these pronounced differences. The latter are most likely due to real difficulties of these groups of movers on the labour market in their country of residence. Similarly, these are the two groups with the most recent full access to the labour market in many EU-15 countries and many new movers are likely to face greater difficulties on the labour market than those who have been in a country for longer. In the case of Romanian movers, high unemployment is certainly linked to the fact that many go to Italy, where unemployment is generally high and many work in low-skilled occupations with high turnover.

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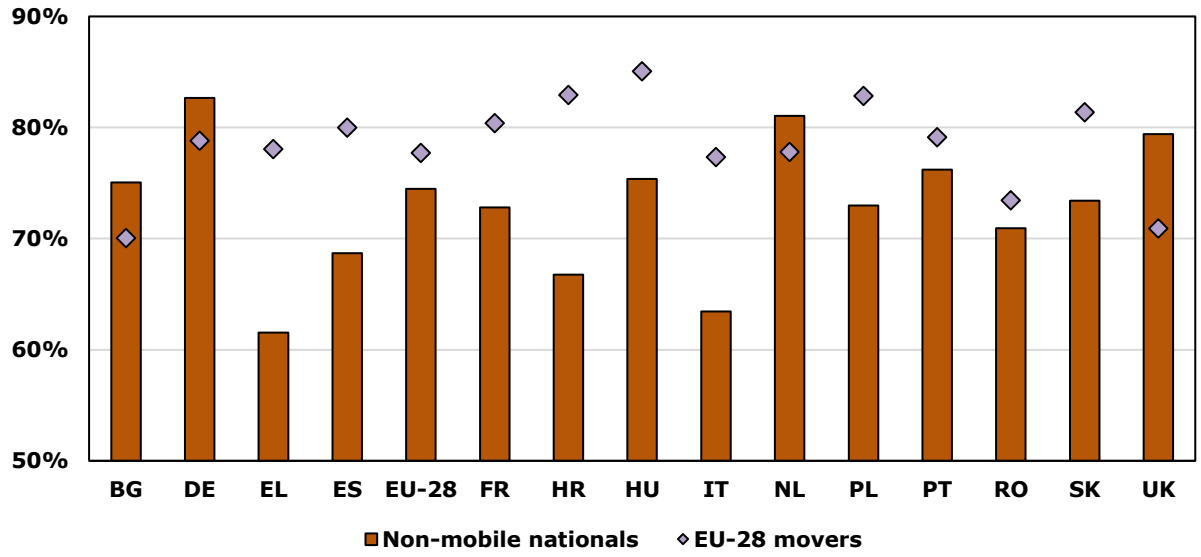
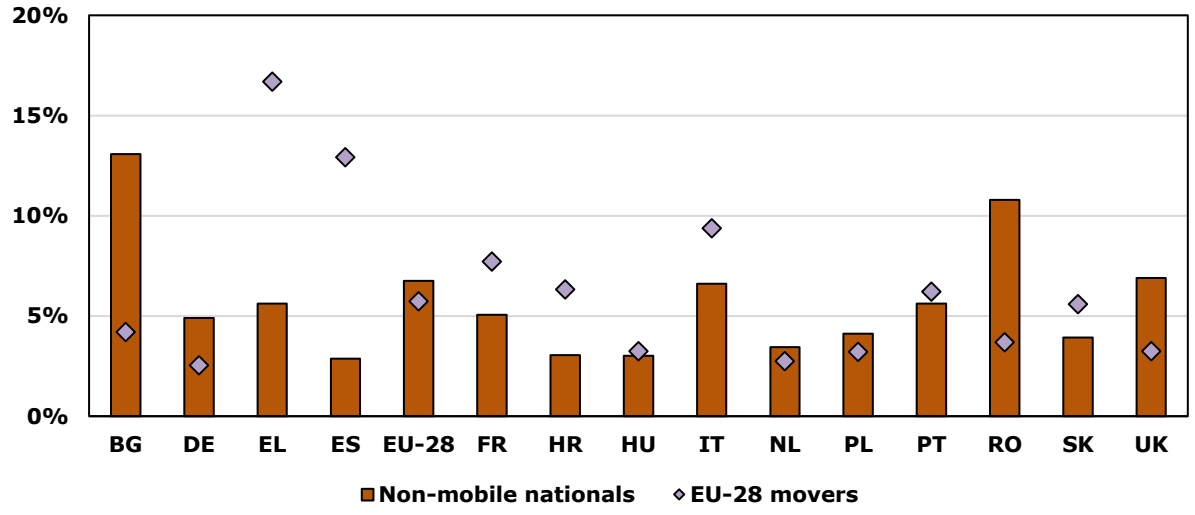
[91] Employment opportunities as a factor in movement is discussed further in **Section 4**.

Figure 36: Employment rates of EU-28 movers and non-mobile nationals (20-64 years) in their country of origin, 2019 (sorted from national group with largest difference to smallest)



FLAGS AND SOURCE ATTRIBUTIONS UNDER FIGURE 37 APPLY.

Figure 37: Unemployment rates of EU-28 movers and non-mobile nationals (20-64 years) in their country of origin, 2019 (sorted from national group with largest difference to smallest)



ONLY COUNTRIES WHOSE DATA ARE OF GOOD RELIABILITY ARE SHOWN. TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

DRAFT

2.2.2 Sectors of activity and occupation

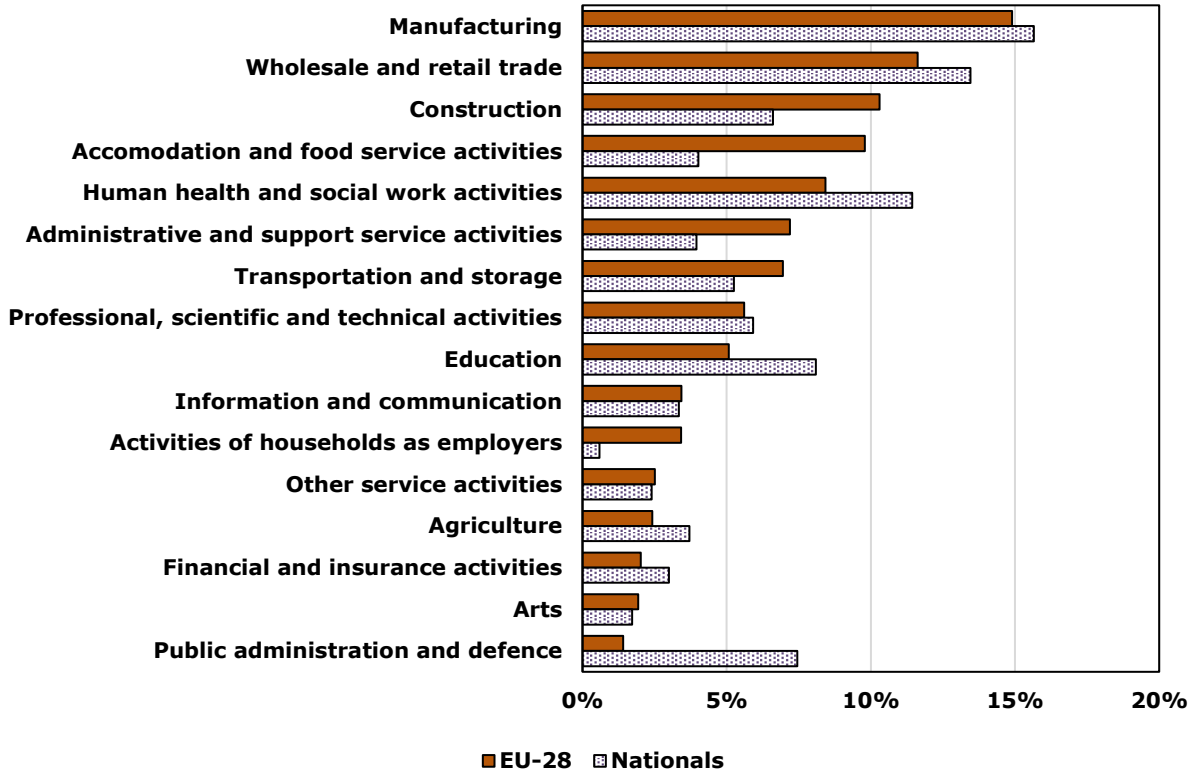
Sectors

In 2019, the main sectors of economic activity were manufacturing and wholesale/ retail trade, among both EU-28 movers and nationals.

As can be seen in **Figure 38**, the main sectors of economic activity in 2019 were manufacturing and wholesale/retail trade, among both EU-28 movers and nationals, with similar shares for each groups.

EU-28 movers were also frequently employed in construction, accommodation and food service activities (10% each). Other sectors employed less than 10% of movers each. The largest differences between EU-28 movers and nationals were in accommodation and food services, where EU-28 movers were overrepresented by 7pps; construction and administrative and support services (overrepresented by 3pps each) and public administration, education, human health and social work, where movers were underrepresented by 6pps, 3pps and 3pps, respectively.

Figure 38: Sectors of activity among EU-28 movers and nationals (20-64 years), EU-28 aggregate, as shares of all sectors, 2019



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

The importance of the different sectors for employment among EU-28 movers has changed somewhat over time, as shown in **Figure 39**. Manufacturing has held first place since 2008. Construction is similarly important, although its importance decreased and it has been overtaken by wholesale/retail trade since 2014. Another sector with some change over time is activities of households as employers – the share of EU-28 movers employed in this sector decreased from 6% to 3% between 2008 and 2019. On the other hand, the share of movers working in transportation and storage increased from 5% to 7% during that time span.

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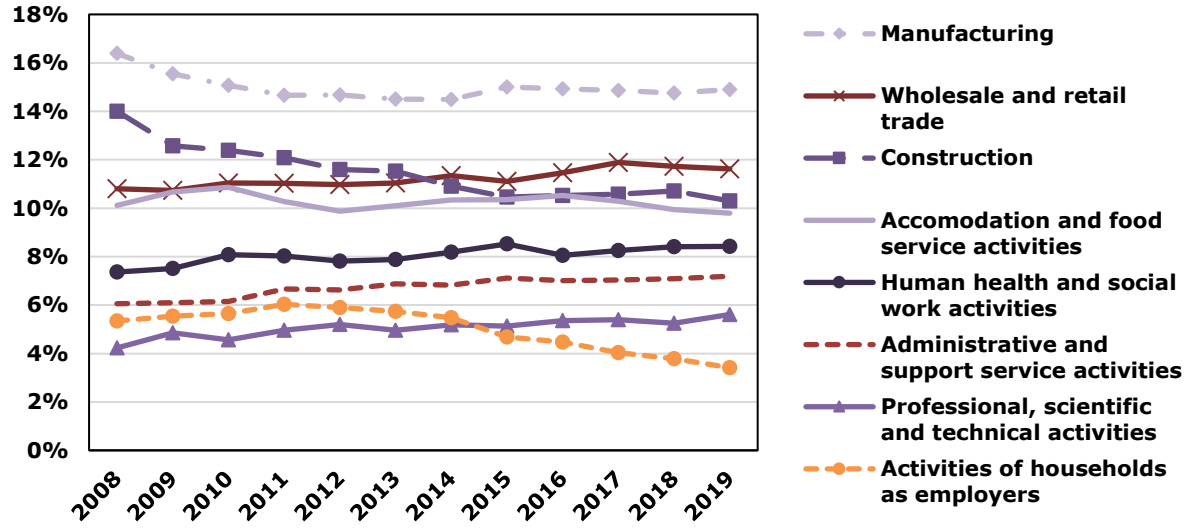
Figure 39: Shares of EU-28 movers (20-64 years) across different sectors, EU-28 aggregate, trend 2008-2019



TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Looking at the main countries of residence, substantial differences are evident in the importance of different sectors for employment of EU-28 movers. This is shown in **Figure 40**. In Germany, manufacturing is the most important sector by far (20%), followed by accommodation and food services, construction, wholesale/retail trade, and human health and social work (each employing 10-12% of movers). The same is true in the UK, although a comparatively higher share of movers work in professional, scientific and technical capacities (8%). France is the only other country sharing this trend (7%). In France, construction stands out as the main employer of movers (20%), followed by wholesale/retail trade and human health and social work. In Spain, most movers work in accommodation and food services (16%), with wholesale/retail trade, manufacturing and construction next in importance. Italy stands out for the high share of movers working in activities of households as employers (19%) – a sector that has been in decline among movers and is of little importance in the other main countries of residence (0% in Germany and the UK; 7% each in Spain and France). However, many movers in Italy also work in manufacturing (18%) and construction (13%).

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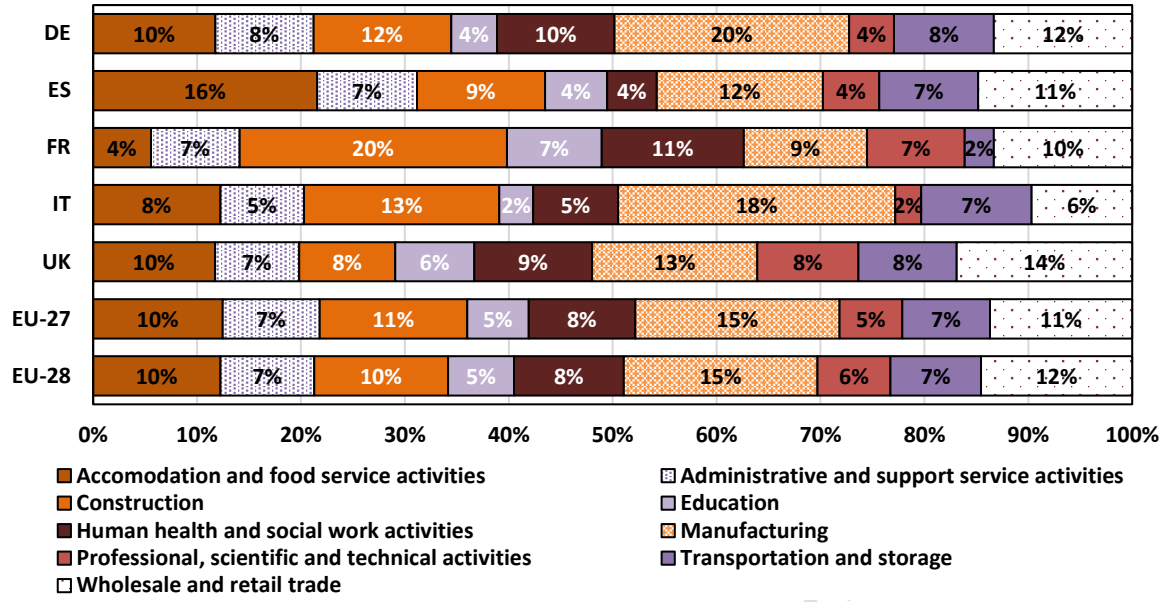
Figure 40: Distribution of EU-28 movers across sectors of activity in main recipient countries, 2019



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Occupational status of movers

Looking at employment by occupations allows for insights into the types of jobs EU-28 movers carry out, according to the skill levels required. Low-skilled still makes up a significant share of labour for movers, although there is evidence of a slow reversal of this trend: compared to 2011, more movers work in high-skilled occupations (i.e. those requiring a tertiary degree or further qualifications), and slightly fewer in elementary or manual work in 2019. The proportion of nationals and movers in different occupations is shown in **Figure 41**.

Structural differences remain in the representation of nationals and movers in different work categories. The most notable gap is found in the proportion of each group working in elementary occupations, where movers are found at more than double the rate (19%) of nationals (7%). Movers are also under-represented among technicians and associate professionals (10% against 17% for nationals), skilled agricultural and fishery work (1% compared to 3%) and clerks (6% compared to 10%).

It is noticeable that the share of movers working as professionals (18%) is similar to that of nationals (21%), which is also true for the other high-skilled occupations of legislators, senior officials and managers. Compared to 2011, a slightly higher share of movers work as high-skilled professionals, a development similar to that of nationals, likely reflecting a general upskilling in the labour market with higher educational attainment across Europe in 2019 than in 2011[92]. In absolute numbers, this occupational category has seen a constant increase of EU-28 movers – their number has grown by 70% between 2011 and 2019, which is above the average growth (53%) across all occupations. Given projected increases in the labour market's need for high-skilled work[93], stemming from further digitalization and the need for a green transition, this upskilling is likely set to continue.

[92] Across the EU-28, educational attainment in the form of a tertiaryeducation increased from 23.7% in 2011 to 29.5% in 2019 in the 15-64 age group (note that Eurostat does not provide a filter for 20-64, hence the different age breakdown). See Eurostat indicator [edat_lfse_03] for further information.
[93] This is for instance discussed in European Commission (2020b), *Employment and Social Developments in Europe 2020*, Publications Office of the European Union, Luxembourg, Available at: https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8342&furtherPubs=yes, pp. 95, 98-102.

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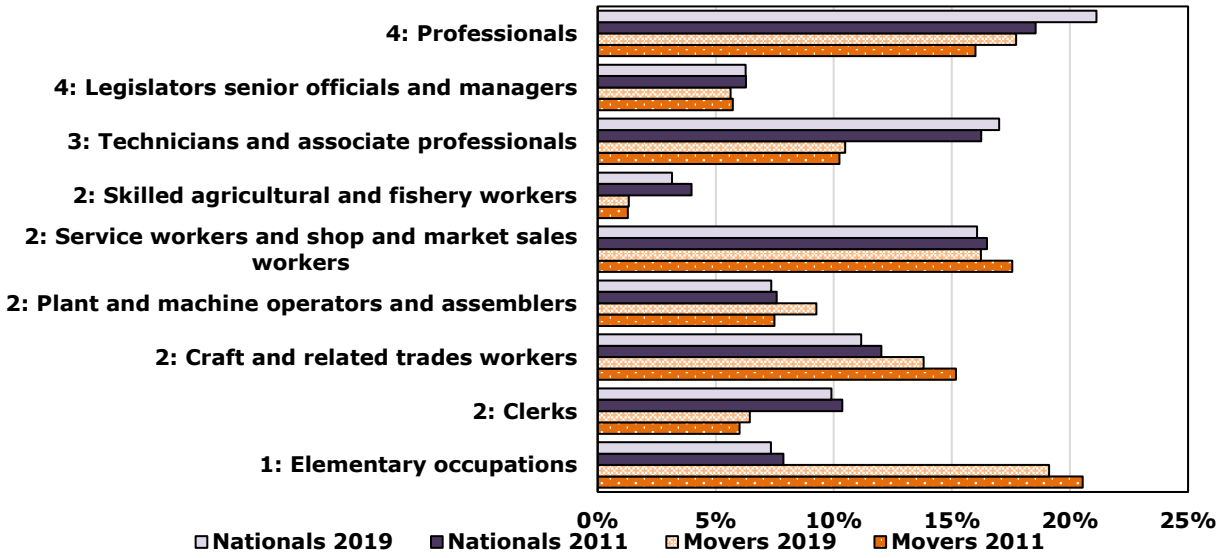
An interesting development over time is among movers working as plant and machine operators and assemblers – the total number of movers working in these occupations grew by 90% between 2011 and 2019, the biggest growth of all occupations and thus gained in importance compared to other occupations. This likely reflects the increase of employed movers in the transport sector, as shown in **Figure 39** above.

Figure 41: Distribution across occupations among nationals and EU-28 movers (20-64 years), in 2011 and 2019



TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

2.2.3 Self-employment

In 2019 at EU-28 level, 12% of employed EU-28 movers were self-employed[94]. The large majority (85%) was self-employed without employees. About 15% of the self-employed also employed other persons. These shares have almost not changed over the past decade (see **Figure 42**). In absolute terms this means that more than 1 million mobile workers are self-employed in their host country. Shares of self-employed among nationals are marginally higher (14%), mainly because there are more who have their own employees (4%). Also among nationals, there was only marginal variation over time.

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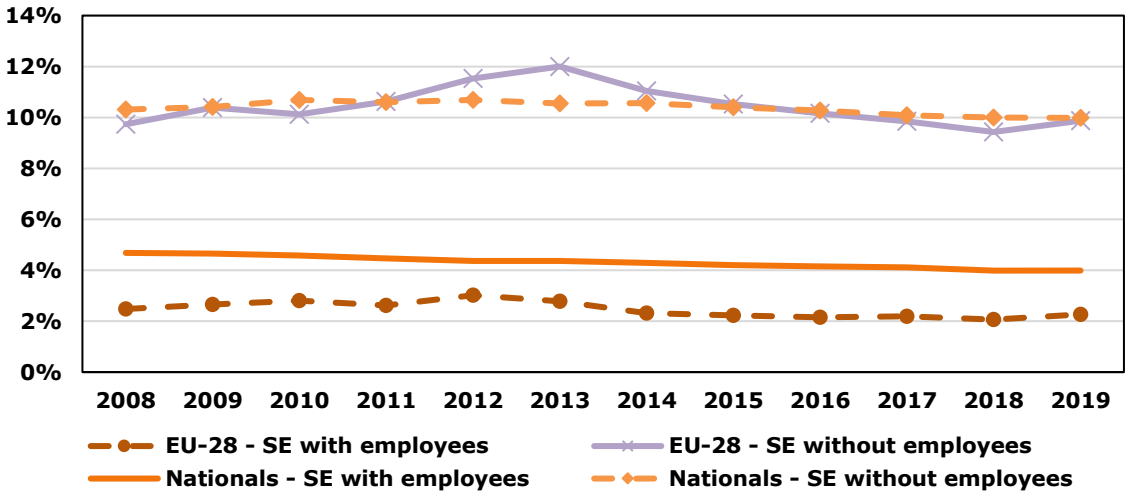
[94] Family workers were excluded from this calculation.

Figure 42: Shares of self-employed (SE), with and without employees, among EU-28 movers (20-64 years), 2008-2019

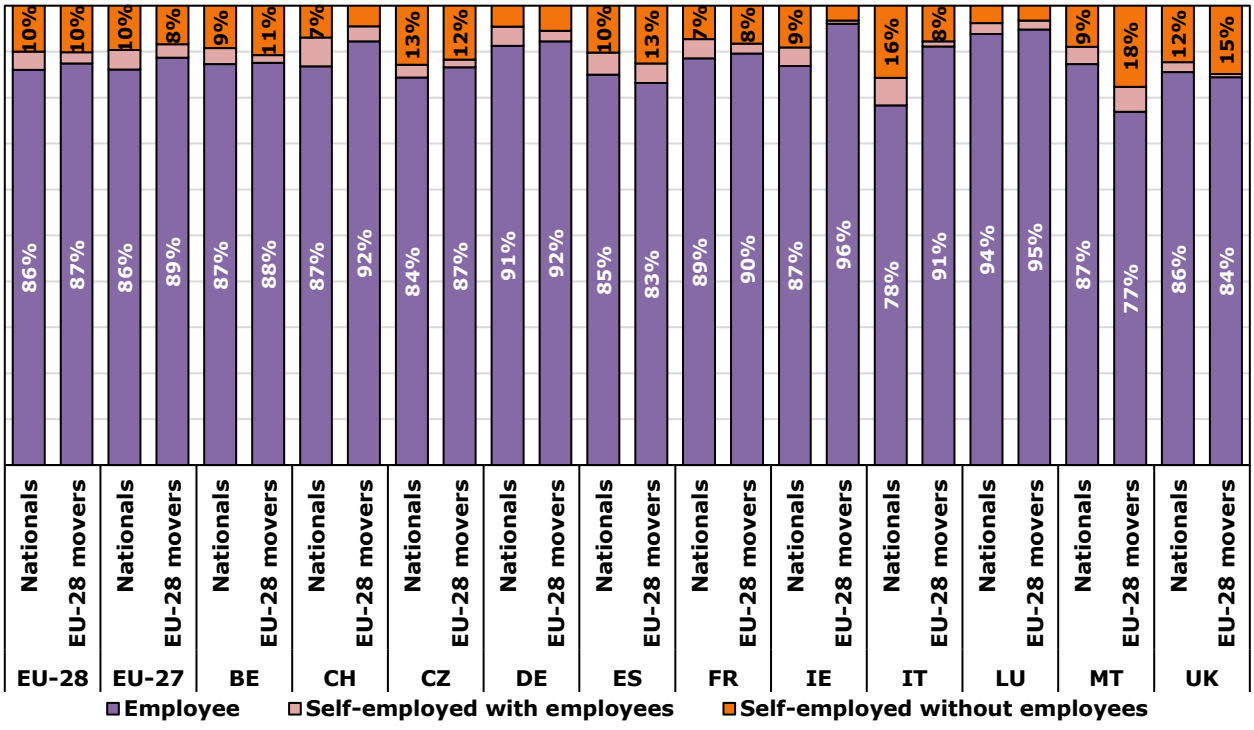


TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

The variations of the shares of self-employed in the individual countries of residence are mostly marginal, as shown in **Figure 43**. Quite strong differences can be seen in the following countries: very low shares of self-employed movers can be found in Germany (6%), France (5%), Italy (8%) and Switzerland (6%). In Germany, the share of self-employed among nationals is also quite low (9%); however, in France and Switzerland it comes close to the EU average and in Italy, it is even very high (22%). Higher shares of self-employed movers than the EU average can be found in Spain (17%) and Malta (18%). In all countries, the shares of self-employed with own employees are much lower than those without employees.

Figure 43: Shares of self-employed EU-28 movers and nationals (20-64 years), 2019



TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE. NOTE THAT ONLY COUNTRIES WHERE RELIABLE DATA WAS AVAILABLE FOR ALL EMPLOYMENT CATEGORIES ARE DISPLAYED.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

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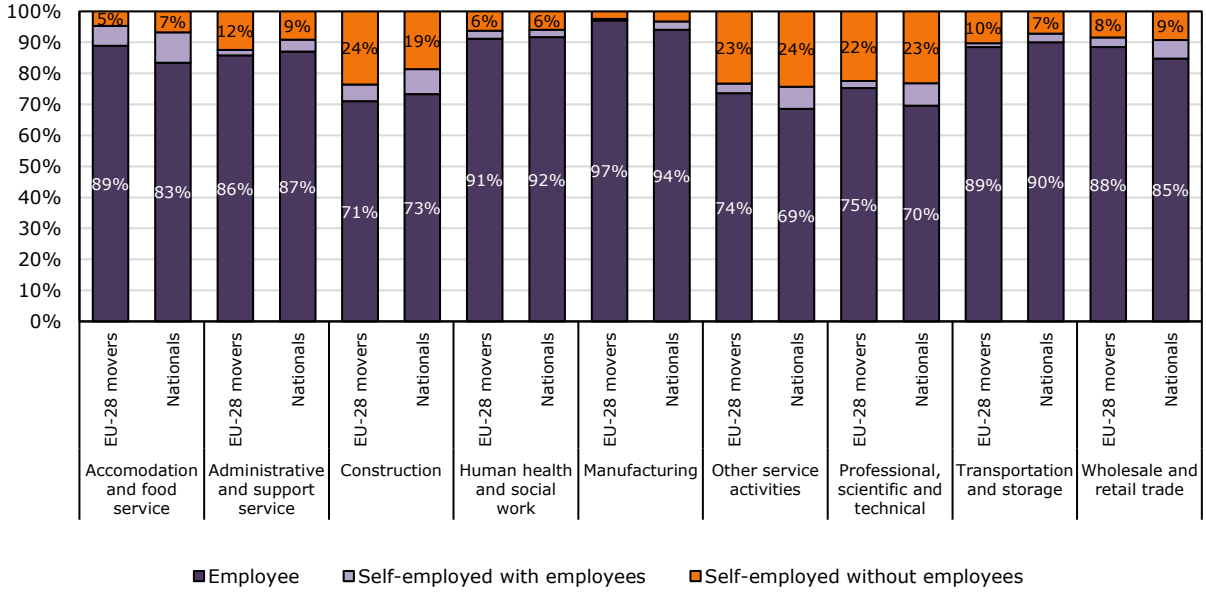
As shown in **Figure 44**, self-employment among EU-28 movers is most frequent in the construction sector (29%), among those engaged in professional, scientific and technical activities (24%) and in other service activities (26%). In these three sectors, self-employment is also similarly high among nationals. Also here, however, the shares of self-employed (nationals or movers) who employ other persons are a lot lower than those who do not. The sector where self-employed employ other persons most frequently (although self-employment overall is not particularly high) is accommodation and food service activities. Here, around half of all self-employed movers employ others and among nationals, the share of those employing other is even higher than those who do not.

Self-employment (among movers and nationals) is particularly low in human health and social work activities (9% among movers, 8% among nationals), and even lower in manufacturing (3% among movers, 6% among nationals).

Figure 44: Shares of self-employed EU-28 movers and nationals, by sector, 2019[95]



ONLY SECTORS FOR WHICH THERE WAS SUFFICIENT RELIABLE DATA FOR ALL EMPLOYMENT CATEGORIES ARE SHOWN.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

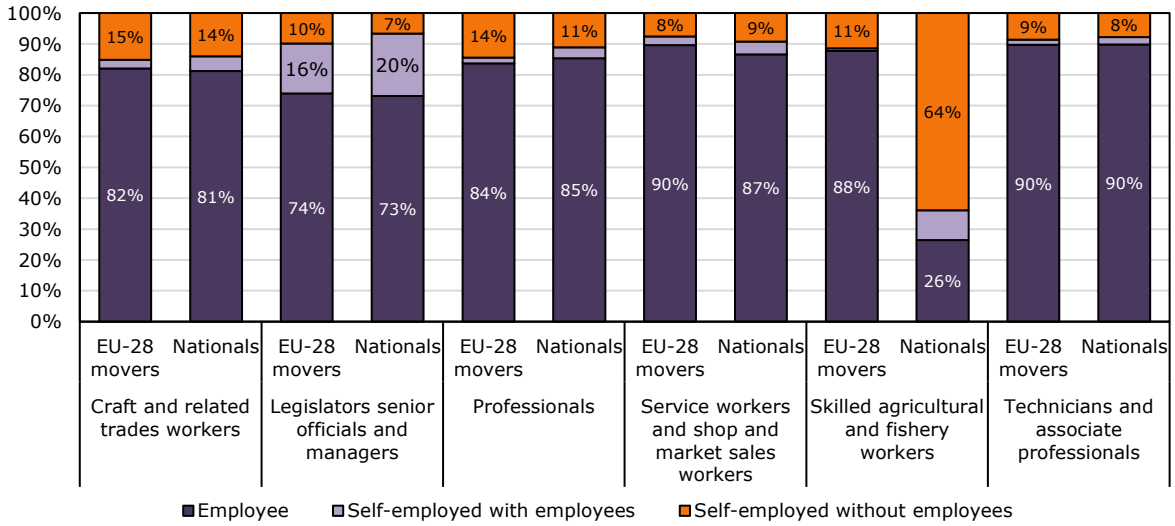
When looking at self-employment in the different occupations with different skill levels, shown in **Figure 45**, one can see that self-employment among EU-28 movers is much more frequent than the average in the following occupations: craft and related trades workers (21% among movers), professionals (16% among movers) and legislators, senior officials and managers (28% among movers). Shares of self-employed among nationals is similar in these occupations. It is therefore quite evident that high-skilled persons in general, and also movers, are more likely to become self-employed than persons with lower skill levels (except for those working in crafts and trades). Furthermore, legislators, senior officials and managers actually create employment – 16% of movers and 19% of nationals working in these occupations are self-employed with their own employees. Worth mentioning is also the skilled agricultural and fishery workers which shows a strong exception among nationals: 73% of nationals who work as skilled agricultural and fishery workers are self-employed. These are very likely to be farmers with their own enterprise;

[95] Full figures on the share of movers and nationals per sector and employment status is found in **Table A17** in **Annex B.2**.

however, only 9% report to have employees which seems low. Since movers are generally underrepresented in these occupations, the share of self-employed is average.

Another observation related to the difference between skill levels can be made: those working in the most low-skilled occupations (elementary occupations) are much less likely to be self-employed (5% among movers). This is also the case for nationals.

Figure 45: Shares of self-employed EU-28 movers and nationals, by occupation, 2019[96]



ONLY OCCUPATIONS FOR WHICH THERE WAS SUFFICIENT RELIABLE DATA FOR ALL EMPLOYMENT CATEGORIES ARE SHOWN.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

2.2.4 Gender dimension

There are considerable differences in the employment rates between women and men among EU-28 movers, although this varies substantially by country. As can be seen in **Figure 46** below, employment was higher among male than among female movers throughout the Member States.

Employment is higher among male movers than female movers throughout the Member States and the difference in unemployment is much lower.

At EU level, the difference was 15pps and reached 16pps when the UK was excluded. The difference was largest in Greece, where employment among movers in general was comparatively low. It was smallest in some countries with higher overall employment, such as Luxembourg, Switzerland, Sweden, the Netherlands and the UK, as well as in France and Austria.

Figure 47 shows that the gap in employment rates between the gender groups reduced between 2018 and 2019, but only by 1pp. The gap in unemployment rates remained at 2pps since 2017, with unemployment in both gender groups decreasing between 2017 and 2018 and then stagnating in 2019. At country level, significant changes from 2018 can be seen in Denmark, where female movers' employment rates increased by almost 10pps, and the gender gap decreased by 9pps. In Greece, employment decreased in both gender groups but more strongly among female movers, increasing the gap by 5pps. In Austria,

[96] Full figures on the share of movers and nationals per occupation and employment status is found in **Table A18** in **Annex B.2**.

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the gap decreased by 4pps because employment among females increased slightly and employment among males decreased slightly.

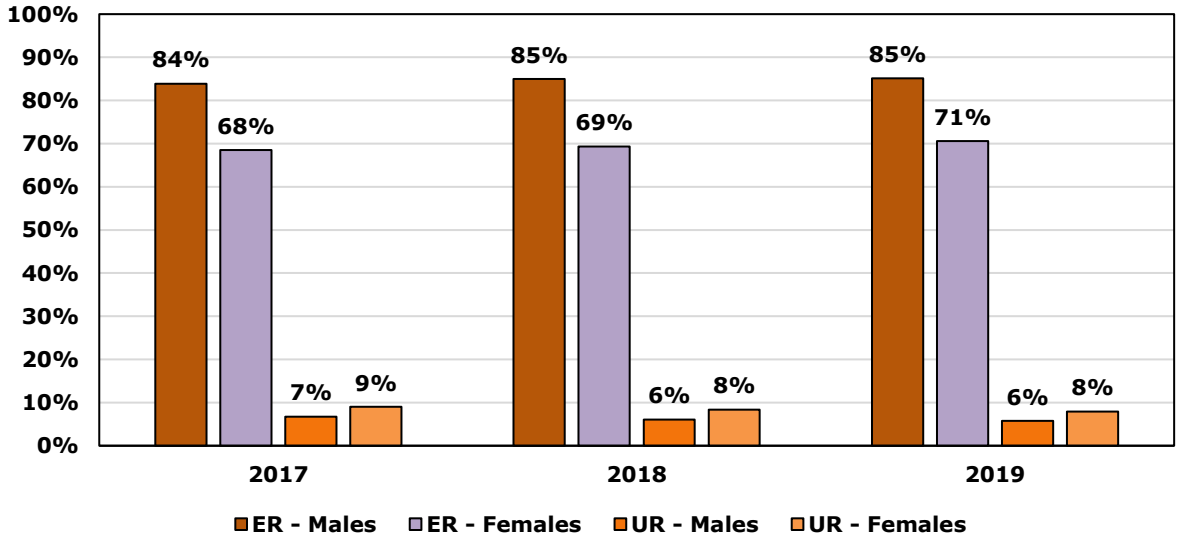
Figure 46: Employment rate of EU-28 movers (20-64 years), by gender and country of residence, 2019

ONLY COUNTRIES WHOSE DATA FOR BOTH GENDER GROUPS ARE ABOVE RELIABILITY LIMIT A A ARE SHOWN. TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

COUNTRIES ARE SORTED BY DIFFERENCE IN EMPLOYMENT RATE, IN DESCENDING ORDER.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Figure 47: Difference in employment (ER) and unemployment rates (UR) between male and female movers (20-64 years), 2017-2019



TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

The difference in unemployment is far lower, although female movers were in a less favourable situation than males. At EU level, their unemployment rate was 2pps higher than that of males and in most Member States the difference was at a similar scale. Exceptions are Italy and Spain, where unemployment among movers was generally higher than the EU average, and the gender difference slightly more pronounced. Greece is an outlier, with unemployment among female movers reaching 40%, compared to 25% among male movers.

Figure 48: Unemployment rate of EU-28 movers (20-64 years), by gender and country of residence, 2019

LOW RELIABILITY: DK (FEMALES AND MALES), EL (MALES), NL (MALES), SE (MALES); ONLY COUNTRIES WHOSE DATA FOR BOTH GENDER GROUPS ARE ABOVE RELIABILITY LIMIT A ARE SHOWN. TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

COUNTRIES ARE SORTED BY DIFFERENCE IN EMPLOYMENT RATE, IN DESCENDING ORDER.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

2.2.5 Education

The share in highly educated active movers increased between 2011 and 2019 at EU level, while the shares of active movers with medium and (especially) low education levels decreased.

At EU level, the share of persons with a high education level was slightly larger among active EU-28 movers than among active nationals (37% vs. 36%, respectively). However, there is a larger difference for those with a medium or low education level: EU-28 are over-represented in the group with a low education level, and under-represented in the medium education level group. In both groups, persons with a medium education level made up the largest share. The distribution across the three education levels was almost unchanged compared to 2018.

It is clearly evident that EU-28 movers with high education levels are attracted to the UK. A number of factors may underlie this tendency, including the lower barrier to entry of an English-language job market, and the fact that the UK has served as a popular destination for international university students, who may have stayed in the country thereafter. When looking only at the EU-27 Member States, therefore, the share of movers with a low education level is larger and the share of movers with a high education level is lower. This is illustrated in **Table 6**.

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Table 6: Distribution across highest education levels achieved, active EU-28 movers and nationals (20-64 years), 2019

		Low	Medium	High
EU-27 *countries of residence*	EU-28 movers	25%	41%	33%
	Nationals	16%	49%	35%
EU-28 *countries of residence*	EU-28 movers	22%	41%	37%
	Nationals	16%	48%	36%

TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

While there are strong differences in the distribution across education level among active EU-28 movers between Member States (see Annual Report on Intra-EU Labour Mobility 2018), there are also strong differences over time. The share in highly educated movers increased substantially between 2011 and 2019 at EU level (by 6pps, in both the EU-28 and EU-27), while the shares of movers with medium and (especially) low education levels decreased (see **Figure 49** below).

The share of movers with a high education level increased in most Member States, with the exception of Germany and Portugal. The share increased most strongly in Austria (+14pps), almost exclusively at the expense of those with medium education level, in France (+13pps), mostly at the expense of those with a low education level, in the Netherlands (+14pps), Sweden (+14pps) and Switzerland (+12pps), where the shares of both low and medium educated movers decreased.

In both Austria and France, the share of high-skilled movers was below the EU average in 2011 – Austria relied mainly on a large pillar of movers with a medium education level (62%) and France on those with a low education level (46%). By 2019, this picture had changed, with Austria above and France close to the average level of high-skilled movers. Switzerland, the Netherlands and Sweden had already in 2011 much larger shares of high-skilled movers than the EU average. This above average share of high-skilled movers increased even further, arriving in 2019 at 66% in Sweden, 55% in the Netherlands, and 50% in Switzerland 50% as compared to the average of 37%.

Italy remained the country with by far the lowest share of highly educated movers, at 13%.

In Germany, the share of high-skilled movers was substantially below the EU average (26% vs. 37%) in 2019, which was already the case in 2011. A strong group of medium-educated movers made up almost 50% but the share of low-educated movers continued to be above EU-level (28% vs. 22% in 2019).

Portugal had the EU's highest share of low-educated movers (37%) and their share increased since 2011. However, it also had an average share of high-skilled movers (31%).

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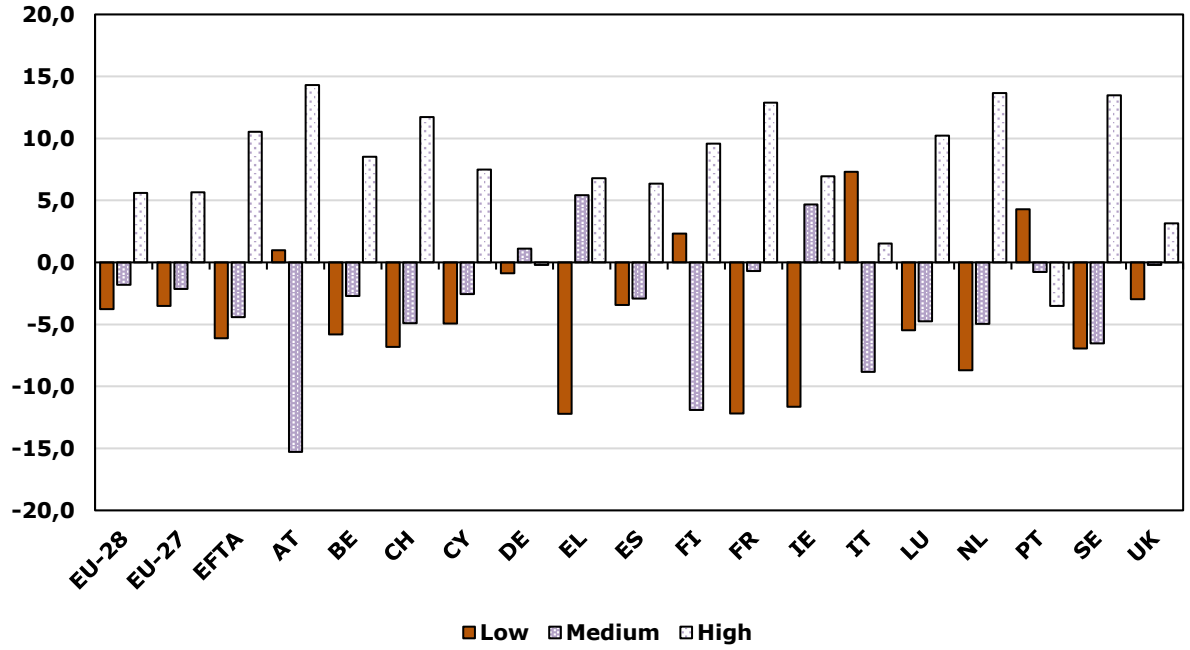
Figure 49: Change over time (2011-2019) in shares of active EU-28 movers (20-64 years) with low, medium and high education levels, in pps



TOTALS EXCLUDE MOVERS BORN IN THEIR COUNTRY OF RESIDENCE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

2.2.6 Cross-border workers

The number of cross-border workers within EU and EFTA countries increased by 0.9% between 2018 and 2019.

The number of cross-border workers in EU and EFTA countries increased by 0.9% between 2018 and 2019 and reached 1.89 million. Looking only at cross-border mobility between EU-28 countries, that number was at 1.5 million and decreased by 0.6%, or ca. 9 000 persons, on 2018. The decrease was slightly larger in the EU-27, with 10 900 or 0.8% fewer than in 2018.

This is largely due to a decrease of 3% in cross-border workers working in Germany (the largest country of work). By far the most cross-border workers in Germany came from Poland (around 30%), a decrease of 3%. The number of French cross-border workers in Germany (around 7%) also decreased considerably, as did the number of Belgian cross-border workers.

The total number of incoming cross-border workers in Germany, the largest country for cross-border workers decreased by roughly 15 000 persons, or 4%. Incoming cross-border workers strongly declined for Ireland, Sweden (-12% each) and Greece (-14%), however, starting from low absolute figures, so that the decline for the three countries together only resulted in 6 200 cross-border workers less.

The number of cross-border workers increased by 6% in Switzerland, the second largest country of work for cross-border workers, and by 2%-5% in the other main destination countries of Luxembourg, Netherlands, UK and Belgium. In Austria incoming cross-border mobility stagnated. Spain, while not one of the main countries of work, saw the largest increase of cross-border workers with a 10% increase, from 31 500 to 34 600.

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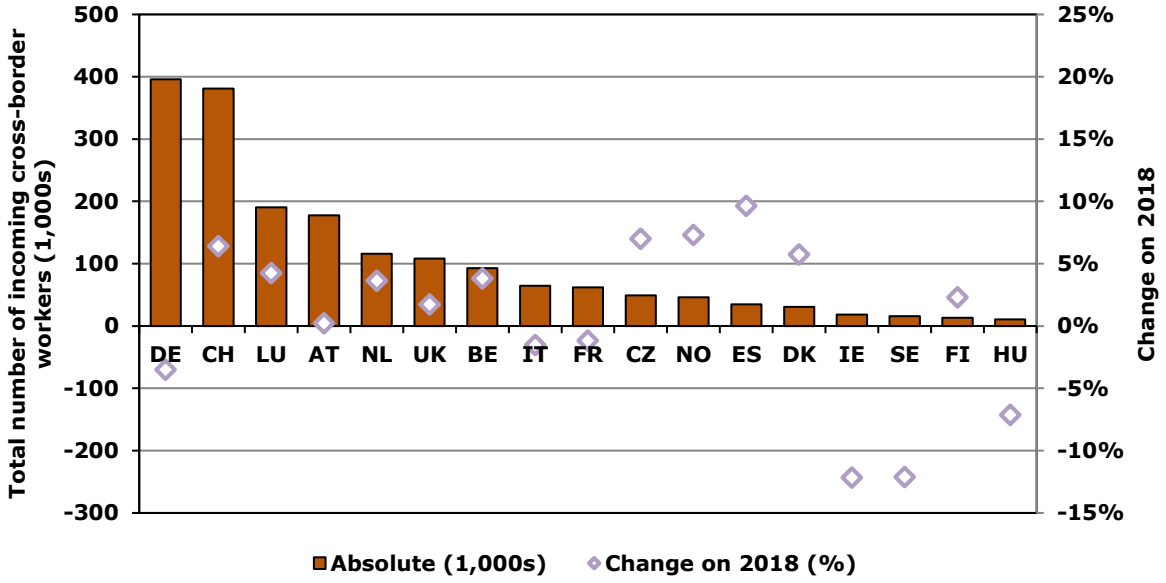
Figure 50: Incoming cross-border workers, total numbers (in 1 000) and change on 2018 (%), by country of work, EU-28 and EFTA nationals (20-64 years), 2019



ONLY COUNTRIES WITH 10, 000 INCOMING CROSS-BORDER WORKERS OR MORE ARE INCLUDED. THIS MEANS THAT GREECE AND PORTUGAL ARE OMITTED FROM THE FIGURE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

France accounted for the largest number of outgoing cross-border workers, and their number increased by 2%. The vast majority of these, at around two-thirds, work in Switzerland. German residents were the second largest group of outgoing cross-border workers, mainly to Switzerland and Luxembourg. However, their number decreased slightly (-3%). The group of Polish outgoing cross-border workers was almost as large. While the number of Polish residents working in Germany declined, their total number increased by 8%, as a result of increases in all other main countries of work (the Netherlands, the UK, Czechia, Austria, Denmark). A large increase can also be seen among Romanian outgoing cross-border workers (+15%), who mainly worked in Italy and Germany, and among Hungarian cross-border workers, who worked primarily in Austria and Germany. Other comparatively small groups of outgoing cross-border workers whose numbers increased considerably were Latvia (+17%), Denmark (+21%) and Luxembourg (+11%). Large decreases are evident among cross-border workers from the UK (-23%) and Estonia (-10%).

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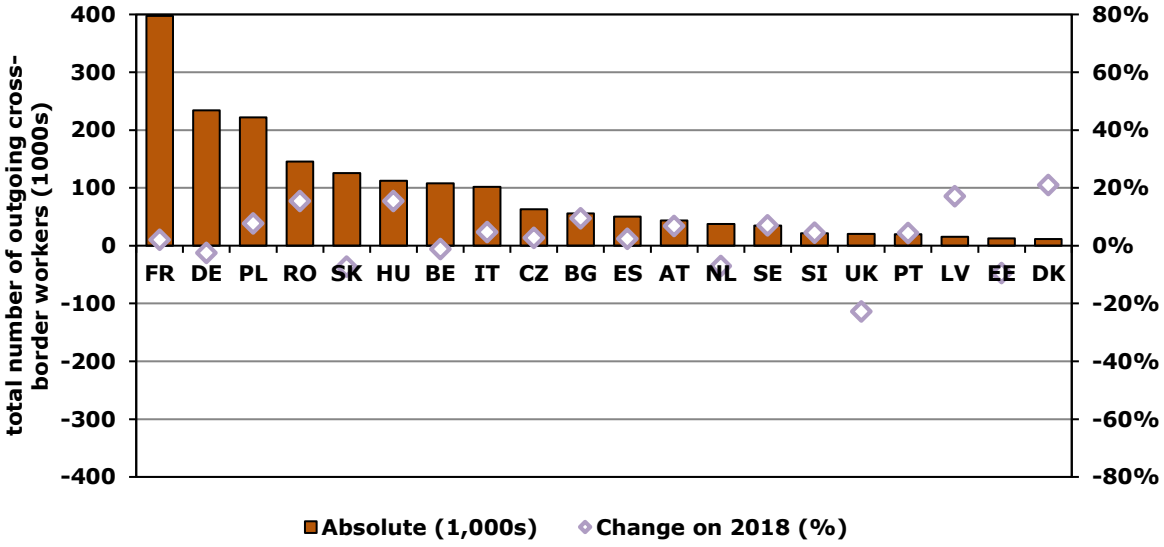
Figure 51: Outgoing cross-border workers, total numbers and change on 2018 (%), by country of work, EU-28 and EFTA nationals (20-64 years), 2019

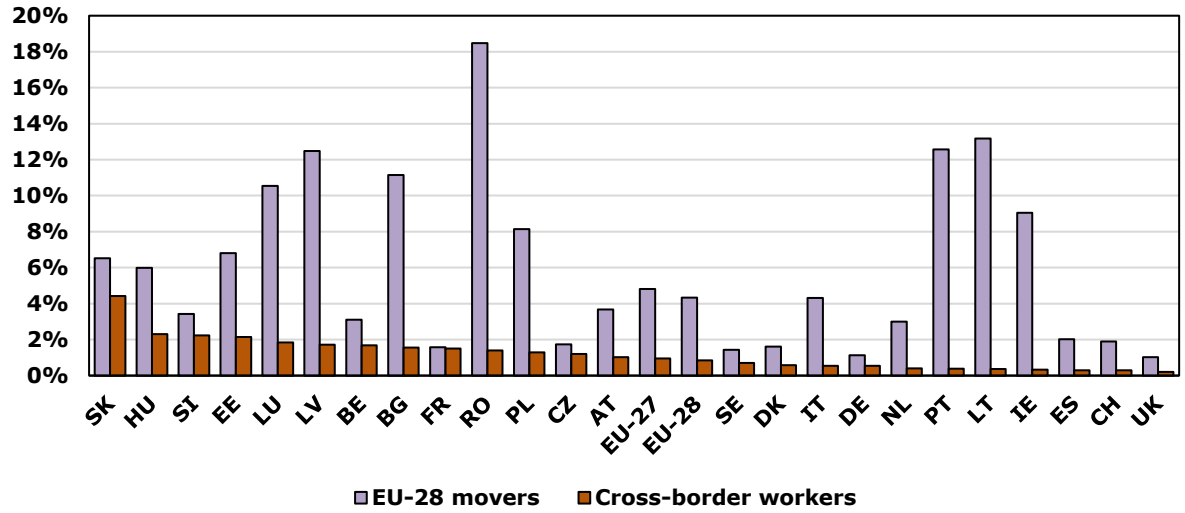


ONLY COUNTRIES WITH MORE THAN 10 000 OUTGOING CROSS-BORDER WORKERS OR MORE ARE INCLUDED. THIS MEANS THAT SWITZERLAND, CROATIA, LUXEMBOURG, IRELAND, LITHUANIA AND MALTA ARE OMITTED FROM THE FIGURE.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Comparing the economic relevance of cross-border workers and movers, for the country of origin, it is clear (**Figure 52**), that movers made up larger shares (and in most countries, much larger shares) than cross-border workers. Cross-border workers are relatively important in Slovakia, Slovenia, Belgium, Czechia, Finland, Sweden, Denmark, and even France and Germany, where the share of cross-border workers was only between 0 and 2pps smaller than that of movers (at EU-28 level, the difference was +4pps).

Figure 52: (National) Cross-border workers and EU-28 movers as % of all employed nationals, by country of origin, 2019



SHARES ARE CALCULATED FROM NATIONALS OF A CERTAIN COUNTRY WHO ARE EITHER EMPLOYED IN THEIR COUNTRY OF NATIONALITY OR IN ANOTHER EU CALCULATIONS.-28 COUNTRY (AS CROSS-BORDER WORKERS OR AS MOVERS).

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU

2.3 Foreseeable trends of intra-EU labour mobility

Whether the trends discussed in Sections 1 and 2 will hold in the near future is open to a number of factors, both on a national and EU-wide level. The sections therefore generally

look at past trends where there is data available, rather than try to extrapolate whether this is a trend that will hold in the future and over time. However, two phenomena in particular may serve (to varying extents) to disrupt mobility and employment in the EU, and should therefore briefly be discussed. The first concerns the UK's withdrawal from the European Union, and the second the possible consequences of the novel coronavirus (COVID-19) pandemic in 2020.

2.3.1 Withdrawal of the UK from the European Union

One event that will affect the shape and nature of intra-EU labour mobility in the near future is that the freedom of movement of workers between the UK and the EU-27 will cease on 31 December 2020.

Nevertheless, the rights of the existing EU 27 movers who work in UK and the existing UK workers in EU 27 will be further protected, in line with the provisions of the Withdrawal Agreement. As from 31 December 2020 the perspective of new EU-27 movers to go to the UK and vice versa will depend on the respective rules on migration in the UK and the Member States.

However, as demonstrated in section 1 of this report, mobility to the UK has steadily decreased since the vote to leave the EU in 2016, even with free movement still in place. Whatever the future migration regime holds, it is highly likely to increase regulation, creating barriers to inflows and outflows of both skilled and unskilled workers[97]. New EU-27 movers in the UK will be subject to a new migration regime, which the UK government has stated will seek to even out differences between EU movers and TCNs. While new EU-27 movers are offered the ability to enter the UK labour market under that regime if they fulfil certain English language and salary requirements, the removal of the protection of EU law will also entail restrictions on family reunification and a general decrease in rights and entitlements[98]. In all likelihood, this will make the UK a less attractive destination for skilled EU movers, who may instead choose to move to other large destination countries.

2.3.2 The COVID-19 pandemic

The COVID-19 crisis has shed a new light on the importance of labour mobility for our economies and societies. The COVID-19 crisis and the associated effect on public economies and labour markets in Europe and elsewhere can be expected to have significant effects on future mobility. In terms of the damage to economies and the labour market, the Commission's Spring 2020 Economic Forecast notes the significant effect on both demand and supply, and the short and medium-term negative effect of wide-ranging containment measures[99]. Additional questions posed by the crisis are when current restrictions on travelling within Europe will be phased out, whether pre-crisis mobility patterns will hold, and whether EU-27 movers living in another country who have lost their job will return to their home country or remain abroad[100].

In terms of immediate impacts, the restrictions in travelling – both domestically and internationally – will lead to a large decline in outflows in 2020, and with it a decrease in

[97] Portes, J. (2016), 'Immigration after Brexit', *National Institute Economic Review*, vol. 238, no. 1, pp. R13-R21.
[98] D'Angelo, A. and Kofman, E. (2018), From Mobile Workers to Fellow Citizens and Back Again? The Future Status of EU Citizens in the UK, Cambridge University Press pp. 331-343.
[99] European Commission (2020c), *European Economic Forecast: Spring 2020*, Institutional Paper 125, pp. 65-72.
[100] COM(2020) 241 final, Section 2.5.

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inflows as well. There will likely also be sector-specific effects. For instance, a recent report from the Commission highlighted the shortage of healthcare workers in many countries and advised how best to enable their free movement in the crisis[101]. If severe shortages of healthcare workers are revealed by the crisis, this may lead to Member States further increasing recruitment from other EU Member States, risking shortages in their countries of origin. Challenges were also faced by the agricultural sector where seasonal workers from other parts of the EU are important, prompting the Commission to issue Guidelines[102] concerning the exercise of the free movement of workers during COVID-19 outbreak and Guidelines[103] on seasonal workers in the EU in the context of the COVID-19 outbreak.

In the longer term, the economic hardship faced by many industries – especially, but not limited to, hospitality and tourism – will likely lead to increased unemployment in many countries, which in turn may increase the propensity of people to move and seek employment elsewhere in the EU. This will at least in part be contingent on the recovery in major destination countries, and whether sufficient job opportunities exist. Regional and national variation is also likely, with countries that either were less severely impacted, or otherwise were able to avoid large-scale lockdowns of industries, likely facing a slightly easier readjustment to normal. Individual countries' support programmes in terms of furlough schemes, compensation for those forced to self-isolate and unable to travel to work, and stimulus programmes directed at various sectors of the economy will also play a role in shaping this regional variation.

Mobility patterns may themselves be changed over time as well. Throughout the pandemic, workers in the EU and elsewhere have generally been advised to work remotely or from home, and avoid public transport. This shift is unlikely to be permanent, but it appears likely that some parts of the labour force will remain in remote working either through their own preference, or in the face of companies downscaling their office presence in cities as a cost-saving measure. Where people are able to adapt to this remote working regime and find it rewarding, and where it is possible to find a new career opportunity remotely, it may decrease their propensity to move in the first place.

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[101] Communication from the Commission on Guidance on free movement of health professionals and minimum harmonisation of training in relation to COVID-19 emergency measures – recommendations regarding Directive 2005/36/EC, C(2020) 2072 final.
[102] Communication from the Commission Guidelines concerning the exercise of the free movement of workers during COVID-19 outbreak C/2020/2051.
[103] Communication from the Commission Guidelines on seasonal workers in the EU in the context of the COVID-19 outbreak C/2020/4813.

3 MOBILITY OF HIGH-SKILLED WORKERS

Key findings

Extent of mobility of high-skilled workers

- In 2019, 4.1 million of the 11.9 million EU movers of working age were high-skilled (34%). The group of medium-skilled movers was larger (41%) and the group of low-skilled movers smaller (24%).
- The share of high-skilled EU-28 movers increased over time: in 2019, one in three EU-28 movers was high-skilled, compared to one in four in 2008. This mirrors increases in the share of high-skilled people in the general population.

Main countries of destination

- In 2019, the UK hosted the largest total number of high-skilled EU-28 movers (1.2 million), followed by Germany (790 000), Spain (459 000), France (279 000), Belgium (225 000) and Austria (217 000). Ireland, Italy and the Netherlands each had between 100 000 and 200 000 EU-28 movers.
- The share of high-skilled EU-28 movers also depends on the country of destination. In the UK, almost half of all EU-28 movers are high-skilled, in France and Spain, this share is one-third, and in Germany only one-quarter.
- Over the past decade, the strongest increase in the share of high-skilled movers was in Austria, Belgium, France, the Netherlands and the UK.

Main countries of origin

- The main countries of origin of high-skilled movers, in absolute numbers, are Poland, Romania, Italy, France and Germany.
- High-skilled movers make up over 50% of movers from France, Germany, Spain and the UK, with a lower share among Romanian, Polish, Bulgarian and Portuguese movers (17-31%).

Demographic background of high-skilled movers

- In 2019, 55% of high-skilled movers EU level were women. This proportion has not changed since 2014. Similar to the main countries of origin, it varied from 51% high-skilled women movers in Spain to 61% in France.
- At EU level and in the main countries of residence (Germany, UK, Spain, France, Switzerland), most high-skilled movers are 30-39 years old. They constitute between 35% and 40% of all movers of working age. Compared to movers of all skill levels, high-skilled movers are slightly overrepresented in this age group and underrepresented in the group of 20-29-year olds.
- High-skilled movers are slightly less likely to be married than nationals of the countries of destination, whereas movers with lower skill levels are slightly more likely to be married.

Educational background of high-skilled movers

- The most common highest level of education achieved among high-skilled movers is Master's level or equivalent (46%), with only 4% holding a doctorate or equivalent. Higher shares of movers with a doctorate or equivalent are found in Switzerland and France.
- The largest number of high-skilled movers have an education in business, administration and law, at EU level as well as in Spain, France, Switzerland and the UK. In Germany, the largest numbers of high-skilled movers have a background in engineering, manufacturing and construction.
- Comparing EU-28 movers to nationals of the country of residence, business, administration and law is the most common field in both groups. However, high-skilled nationals are more likely to have a background in health and welfare (almost

as many as in engineering, manufacturing and construction), with the opposite true for movers.

Overqualification of high-skilled movers

- High-skilled movers have more favourable labour market outcomes than movers as a whole: they are more likely to be employed than movers in general (+7pps), more likely to be active (+5pps) and less likely to be unemployed (-2pps).
- However, high-skilled movers have slightly less favourable labour market outcomes than the high-skilled part of the general population of the country of residence.
- High-skilled movers are most likely to work as professionals[104] (41%). Much lower shares work as technicians and associate professionals (15%) and as legislators, senior officials and managers (9%).
- 11% of high-skilled movers work as service workers and shop and market sales workers, a category of occupations that, according to ILO definitions, do not require a tertiary degree.
- In 2019, one-third (34%) of all high-skilled movers were working in an occupation below their skill level. Most of these overqualified high-skilled movers worked in an occupation requiring only upper secondary education, while a smaller share (6%) worked in elementary occupations requiring a lower secondary education degree.
- The extent of overqualification is considerably different among high-skilled nationals of the destination countries, around 22% of whom are working in an occupation below their skill level.
- At country level, overqualification among high-skilled movers is highest in Spain (around 47%), followed by the UK (37%). In Germany (32%), and especially in Switzerland (16%) and France (10%), overqualification among high-skilled movers is lower than at EU level.
- Most overqualified movers between 15 and 34 years old[105] or who completed their highest degree in the past 15 years have degrees in engineering, manufacturing and construction (for movers to Austria), social sciences, business or law (Spain and Italy) or services (UK).
- Several occupations ranking among the top 30 shortage occupations in 2019 are relevant for high-skilled movers, especially in the occupational group 'professionals'; furthermore, several occupations in which there is potential for better shortage-surplus matching between countries require high skill level, such as nurses, doctors, civil engineers, accountants, marketing professionals, electrical engineers, ICT Managers and Secondary School Teachers.

Labour market integration of high-skilled returnees

- High-skilled movers have better chances of reintegrating into the labour markets upon return to their countries of origin than returnees with lower skill levels. However, successful reintegration depends on several additional factors, in particular: social networks in the country of origin, the state of the economy in the country of origin, and whether one worked in a job matching one's skill levels while working abroad.

[104] This category includes professionals from all kinds of fields: science and engineering, health, teaching, business and administration, information and communications technology, legal, social and cultural professionals.
[105] Refers to medium-skilled and high-skilled movers; the question of field of education was asked only to 15-34-year-olds or those who completed their degrees in the past 15 years.

3.1 Introduction

3.1.1 Context

In 2019 34% of EU movers had a tertiary level of education, considered 'high-skilled'. This figure has increased by nine percentage points over the ten year period since 2009, which is similar to the increase in the proportion of high-skilled people in the general population.[106] This is consistent with the EU's efforts over recent years to promote the development of economies based on knowledge and innovation through flagship policies such as the EU2020 program for smart, sustainable and inclusive growth[107].

Greater movement of high-skilled movers can help to develop the knowledge-based economy and be beneficial to the mover, the receiving country and the country of origin through matching of supply of skills with demand[108].

34% of movers have a high education level

On the other hand, failure to match high-skilled movers with jobs that are commensurate with their ability can mean that talent is wasted, and too great a loss of high-skilled workforce from certain countries can hamper development of those countries' knowledge-based economy[109].

Intra-EU labour mobility can be a means of resolving labour shortages in one EU Member State with labour from other Member States, essentially improving resource allocation[110]. Movers can benefit from finding a job and potentially earning a higher wage and expanding their skillset in another country[111].

From the point of view of the sending country, mobility of its citizens can be useful in times of high unemployment because it reduces expenditure on unemployment benefits and other social assistance. Movers may also be a source of income to their country of origin whilst abroad if they transfer money back to their own country, for example to family members through remittances, which will then be spent in the country of origin.

Skills gained by movers whilst working abroad can strengthen the workforce of their country of citizenship when they return[112]. Business, scientific and political networks linking movers with their home country can facilitate the flow of knowledge and goods from

[106] EU-LFS. See section 3.2 for further detail.
[107] Communication from the Commission on Europe 2020, A strategy for smart, sustainable and inclusive growth, COM(2010) 2020.
[108] Belmonte, M. et al. (2020), *Foreign Degrees, Region of Birth and Under-Utilisation of Tertiary Education in the EU*, JRC Technical Report.
[109] Garcia Pires, A. (2015), 'Brain drain and brain waste', *Journal of economic development,* 40(1), March 2015, Available at http://www.jed.or.kr/full-text/40-1/1.pdf;
Todisco, E. et al. (2003), 'Skilled migration: a theoretical framework and the case of foreign researchers in Italy', *Flinders University Languages Group Online Review*, Vol. 1(3) December 2003, Available at: https://dspace2.flinders.edu.au/xmlui/bitstream/handle/2328/175/fulgor_v1i3_todisco.pdf?sequence=1&isAllowed=y.
[110] Kahanec, M. and Guzi, M. (2016), 'How Immigrants Helped EU Labor Markets to Adjust during the Great Recession', *IZA Discussion Paper No. 10443*, Available at: http://ftp.iza.org/dp10443.pdf.
[111] Barslund, M. et al (2015), *Labour Mobility in Europe: An untapped resource*?, CEPS, Available at: https://www.ceps.eu/ceps-publications/labour-mobility-europe-untapped-resource/.
[112] ESPON (2017), *The Geography of New Employment Dynamics in Europe*, Final Report 09.03.2018, Available at:
https://www.espon.eu/sites/default/files/attachments/1.%20ESPON%20EMPLOY_Final%20report_Main%20Report.pdf.

movers to their country of origin[113]. Labour mobility that leads to the development of 'primary relationships' with people of other nationalities has been found to be a central factor in people thinking of themelves as European, and therefore the development of a European identity[114].

However, mobility of high-skilled workers includes a number of challenges, which need to be managed. This applies for the person who is moving, who may have difficulty finding employment in a country where her or his skills are imperfectly transferable[115]. And it applies for the country of origin, which might, temporarily or not, lose an active and skilled member of the workforce, trained at the expense of the sending country but not subsequently reinvested in the country by the person's labour[116].

Indeed, governments have attempted to use policy-making to attract high-skilled workers from other countries and to encourage their high-skilled citizens who are working abroad to come home or to not leave in the first place[117]. Whilst traditional theories on 'brain drain' have suggested that departure of high-skilled migrants has a negative effect on those left behind[118], more recent theory argues for a 'brain gain'. Here, the possibility of emigration and its potential personal benefits being accessible through education works as an incentive for more people to pursue higher education, not all of whom will migrate, and so the origin country still ends up with more high-skilled workers than if it was closed to emigration[119].

High-skilled migration has been defined as being more greatly conditioned by pull factors than push factors[120], as opposed to mass migration which is conditioned more by push factors. Pull factors describe the attractivity of the destination, such as greater availability of work, availability of jobs corresponding to the field and level of education of the mover, or other socio-economic conditions of the country such as the economic growth, higher wages or quality of social security[121]. That said, it has also been noted that since the economic crisis push factors have played a greater role, notably the unemployment rate encouraging high-skilled workers to move[122].

Moving may not result in high-skilled workers finding a job that matches their skills. Around a third of movers (34%) work in an occupation that requires an inferior educational level to theirs, i.e. they are overqualified for the job they do[123]. Empirical studies have also looked at this phenomenon[124]. Overqualification may occur because of imperfect

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[113] Docquier, F. and Rapoport, H. (2011), 'Globalization, brain drain and development', *Discussion paper no. 5590*, Available at https://www.researchgate.net/publication/228252193_Globalization_Brain_Drain_and_Development.
[114] European Commission (2012) *The development of european identity/identities: Unfinished business. A policy review,* Available at: https://ec.europa.eu/research/social-sciences/pdf/policy_reviews/development-of-european-identity-identities_en.pdf.
[115] Garcia Pires, A. (2015).
[116] Todisco, E. et al. (2003).
[117] ESPON (2017);
Milio et al (2012), *Brain drain, brain exchange and brain circulation. The case of Italy viewed from a global perspective*, Aspen Institute Italia, March 2012.
[118] Bhagwati and Hamada (1974).
[119] Beine, M., Docquier, F. and Rapoport, H. (2001), 'Brain drain and economic growth: theory and evidence', *Journal of Development Economics*, Vol. 64 2001, pp. 275–289.
[120] Todisco, E. et al (2003).
[121] Fries-Tersch, E. et al. (2019), *2018 Annual Report on Intra-EU Labour Mobility*, Network Statistics FMSSFE, Brussels: European Commission.
[122] ESPON (2017);
Rosini, S. and Markiewicz, R. (2020), 'Efficiency allocation of EU movers and third country nationals in the European Union*', Employment and Social Developments in Europe Working Paper,* 2020/03, European Commission, Brussels.
[123] Calculated for this report. See section 3.3.2 for discussion and explanation of this figure.
[124] Cancedda, A. et al. (2015), *Socio-economic inclusion of migrant EU workers in 4 cities: Synthesis Report*, RAND Europe;
Fries-Tersch, E. et al. (2019).

transferability of skills, such as language gaps, which mean that it is hard for a mover to get a job in their destination country[125]. Alternatively it could be that a lower-skilled job is a stepping stone to something better, or simply that the lower-skilled job offers higher wages than available work in the home country. Movers may advance from this position of overqualification over time, potentially undertaking educational courses in their host country in order to facilitate access to higher-skilled jobs.

Whilst governments have taken steps to encourage their high-skilled citizens to stay in the country, or to come back if they have left, there is a recognition that brain circulation can have a positive effect on the country of origin[126]. Movers gain skills and experience whilst living and working abroad and then bring those skills and additional knowledge back to their country of origin[127]. This can help to develop the stature of the sending country's own knowledge economy.

This section looks at the different attributes of high-skilled movers and at their profiles as workers. More specifically, it explores the proportion of movers with a high skill level, the principal receiving and sending countries for high-skilled movers, how long high-skilled movers stay in their country of choice, and their demographic and educational background. It then looks at the labour status and occupations of high-skilled workers. Comparing occupations of movers with their education level allows an assessment of the degree of overqualification of movers. The statistics are put into context with comparisons to (1) high-skilled nationals and (2) movers of all skill levels. Finally, the chapter looks at the integration of movers when returning to their country of citizenship from a period of working abroad.

3.1.2 Data sources

The main data source is the EU-LFS. The complexity of the analysis means that data for many countries are below reliability limits and the analysis thus focuses on a selection of countries for which reliable data were available. These were the five European countries receiving the most EU movers with a high level of education[128]: Germany (789 000 high-skilled movers), Spain (459 000) and France (279 000) in the EU, Switzerland (465 000) and the UK (1 242 000). Even within these five countries, the level of detail available can be inhibited by the reliability of the data, particularly in the case of France.

In order to distinguish between the skills levels of movers, the study uses the education level variable from the EU-LFS, HATLEV1D[129]. This variable distinguishes three categories for the highest completed level of education: low, for lower secondary; medium, for upper secondary; high, for tertiary education.

The 'high' category of this variable is compared with a range of other variables to build a picture of traits and trends of high-skilled movers in the EU. These results are then compared with outcomes for high-skilled nationals, and movers of all skill levels.

A literature review complemented the research and provides further understanding of the context.

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[125] Garcia Pires, A.(2015).
[126] ESPON (2017).
[127] Milio, S. et al (2012).
[128] According to the variable HATLEV1D (see methodology sub-section).
[129] More information about the variable can be found in the Eurostat (2019a).

3.1.3 Definition of key terms

High-skilled movers

High-skilled movers are defined as having achieved a tertiary education level. Education level is measured in the EU-LFS through the UNESCO International Standard Classification of Education (ISCED) system. Using this system, high education levels (ISCED levels 5-8) are defined as short-cycle tertiary, Bachelor or equivalent, Master or equivalent and Doctoral or equivalent[130]. The ISCED level is given through the HAT11LEV variable in the EU-LFS. This more detailed variable for education level is used to give a precise snapshot of education levels of EU movers in Section 3.2, while the simpler HATLEV1 variable is used to distinguish between movers' education level.

High-skilled occupations

The measurement of occupations is organised according to the ISCO (International Standard Classification of Occupations) system. The ISCO system defines four broad skill levels and each occupation category is associated with a skill level. **Table 1 in Annex A.3** shows how the skill levels correspond to the major occupation groups of the ISCO classification system[131].

For the purposes of this study, occupations with skill levels three and four on a scale from one (lowest) to four (highest) are considered high-skilled. This corresponds to the ISCO major occupation groups of managers, senior officials and legislators[132] (1), professionals[133] (2), and technicians and associate professionals[134] (3)[135].

Overqualified

Overqualified workers are carrying out a job below their skill level. This situation occurs when high-skilled movers are working in occupational groups requiring only an intermediate or elementary skill level (skill levels 1 and 2 according to ISCO definitions; see Annex A.3).

3.2 Characteristics of high-skilled movers

3.2.1 Main countries of residence

In 2019, 4.1 million of the 11.9 million EU movers of working age were high-skilled, 34% of all movers. There were 4.9 million medium-skilled movers (41%) and 2.9 million low-skilled movers (24%) of working age. It shoul be noted that these shares differ slightly from the ones presented in section 2.2.5. This is due to a necessary change of

[130] Eurostat (2019b), *International Standard Classification of Education (ISCED)*, Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/International_Standard_Classification_of_Education_(ISCED)#Implementation_of_ISCED_2011_.28levels_of_education.29.
[131] International Labour Office (2012), *International Standard Classification of Occupations: Structure, group definitions and correspondence tables*, Available at: https://www.ilo.org/public/english/bureau/stat/isco/docs/publication08.pdf.
[132] This includes: Chief Executives, Senior Officials and Legislators; Administrative and Commercial Managers; Production and Specialized Services Managers; Hospitality, Retail and Other Services Managers.
[133] This includes: Science and Engineering Professionals; Health Professionals; Teaching Professionals; Business and Administration Professionals; Information and Communications Technology Professionals; Legal, Social and Cultural Professionals.
[134] This includes: Science and Engineering Associate Professionals; Health Associate Professionals; Business and Administration Associate Professionals; Legal, Social, Cultural and Related Associate Professionals; Information and Communications Technicians.
[135] 'High-skilled occupations' would also include some armed forces occupations (0), but this category will not be considered for this study (Eurostat, 2019a).

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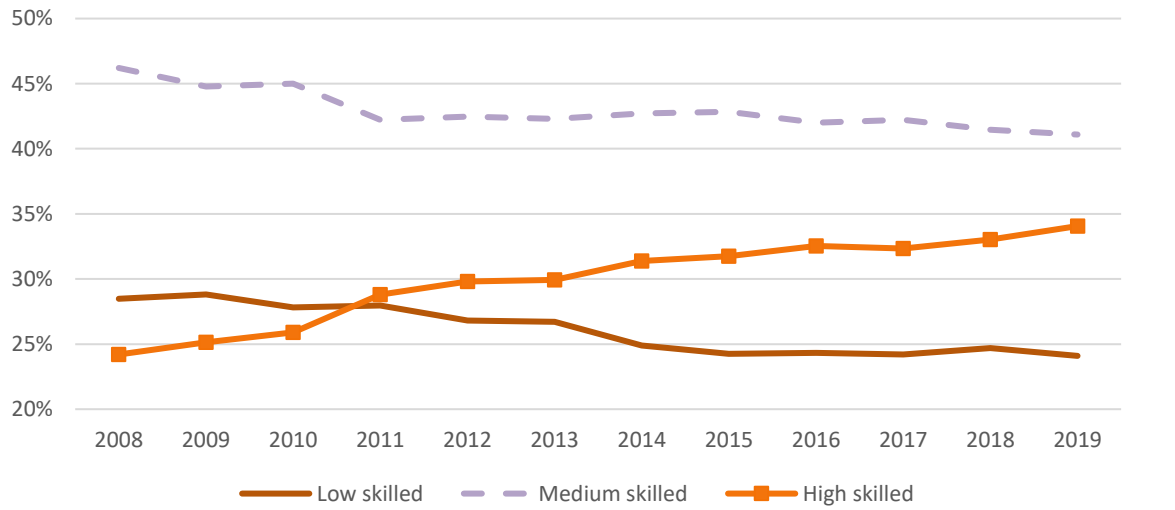
methodology: in order to have sufficiently large datasets for this section to avoid statistical error, data include EU-28 movers born in the country of residence, whereas the figures in Section 2 exclude those born in the country of residence.

In 2019, one in three EU-28 movers was high-skilled, compared to one in four in 2008.

Figure 53 shows the development of skills levels of movers since 2008. The proportion of high-skilled movers has steadily increased, from just under 25% in 2008 to 34% in 2019. In parallel, the proportions of medium-skilled and of low-skilled movers decreased (from 46% to 41% and from 28% to 24% respectively).

Figure 53: Proportion of EU-28 movers, by skill level, 2008-2019 (%)



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

In the UK, almost half of all EU-28/EFTA movers are high-skilled. This share is one-third in France and Spain and one-quarter in Germany.

The 10 countries with the highest stocks of high-skilled movers are presented in **Table 7**, ordered by number of high-skilled EU movers. At country level, the UK has by far the largest total number, as well as the largest share of high-skilled movers (47% of all movers). EU countries with the largest stocks of high-skilled movers are Germany, Spain, France, Belgium and Austria. In Belgium and Austria, shares of high-skilled movers are almost as large as in the UK (41%), compared to one-third in Spain and France and one-quarter in Germany. Of the 10 countries with the largest numbers of high-skilled movers, Italy has by far the lowest share (12%).

Switzerland also has a large number and share of high-skilled EU movers.

Table 7: High-skilled EU movers in European countries, 2019, in absolute numbers and as a percentage of all EU movers in the country

Country	Number of high-skilled movers	Percentage of high-skilled movers in the country
EU-28	4 054 000	34%
UK	1 242 000	47%
DE	789 000	24%
CH	465 000	46%
ES	459 000	35%
FR	279 000	32%
BE	225 000	41%
AT	217 000	41%
IE	158 000	45%
IT	145 000	12%
NL	142 000	47%

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

The proportion of high-skilled movers in stocks of movers has changed over time at individual country level. **Figure 54** demonstrates these trends in selected countries between 2008 and 2019. These are all countries that have seen significant increases in the proportion of high-skilled EU movers over this period, as well as increases in absolute numbers of high-skilled movers. Belgium saw a steady increase in the proportion of EU movers (+10pps), France had a steady increase until 2016, before a small drop and then indications of a return to growth (+12pps). Austria saw a large increase, particularly between 2013 and 2015 (+17pps). This is an interesting development and may be related to the end of transitional arrangements for movers from Romania and Bulgaria – indeed, Romanian movers were the second-largest group of movers in Austria, after Germans. However, the share of high-skilled among Romanian movers is quite small (**Table 8** in section 3.2.2 below), so a clear association cannot be made.

In the Netherlands, the trend is erratic, with a large increase in 2019 (+10pps overall). A closer look suggests that the share of EU-28 movers working as professionals – already quite high at 22% in 2018 – increased to 26% in 2019.

The UK showed a very strong year-on-year increase between 2010 and 2011, followed by a period of gradual increases to 2019 (+22pps between 2008 and 2019).

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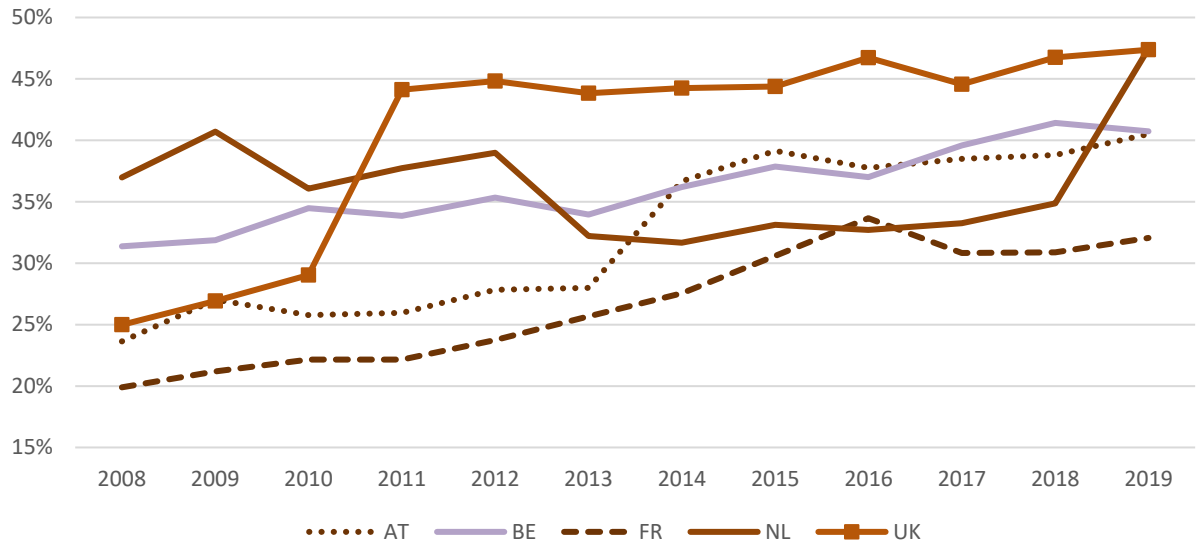
Figure 54: Trends in proportion of high-skilled EU movers in selected countries, 2008-2019



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

3.2.2 Main countries of origin

One-third of all high-skilled movers across the EU are Polish, Romanian or Italian.

The main countries of origin of high-skilled movers, in absolute numbers, are Poland, Romania, Italy, France and Germany. Other important sending countries of high-skilled movers are shown in **Table 8** below, with the number of high-skilled movers from those countries and the high-skilled movers as a percentage of all movers from that country.

The proportion of high-skilled movers of all movers of a given nationality varies considerably between countries. For several western European countries, high-skilled movers make up the majority of movers: France (68%), Germany (60%), Spain (56%) and the UK (55%). At the other end of the scale, the countries that have the most movers overall, Romania and Poland, have smaller proportions of high-skilled movers (17% and 31%, respectively). Other major sending countries for movers, such as Bulgaria and Portugal, also have relatively low proportions of high-skilled movers (26% and 18%, respectively).

High-skilled persons make up over 50% of movers from France, Germany, Spain and the UK.

Looking at high-skilled movers as a proportion of high-skilled citizens still living in their country of origin, some interesting patterns emerge. The proportion is highest in Romania, where high-skilled Romanian movers are equal to 22% of the number of high-skilled citizens in Romania. Second highest is Bulgaria (13%) followed by Portugal (10%) and Poland (8%). It should be noted for context that for all of these countries, the equivalent figure for low-skilled movers (as a proportion of low-skilled citizens in the country of origin) is higher. This is not the case for the other EU countries in the table, all of which have a higher proportion of their high-skilled workforce abroad than they do for other skill levels of their workforce. This is particularly notable in Italy, where high-skilled movers are equivalent to 7% of the stock of high-skilled Italians residing in Italy, compared to 3% for the other two skill levels.

Table 8: High-skilled movers, by country of origin, 2019, in absolute numbers, as a percentage of all movers from the country, and as a percentage of high-skilled citizens living in the country of origin

Country	Number of high-skilled movers	Percentage of high-skilled movers from the country	High-skilled movers from the country as a percentage of high-skilled citizens living in the country of origin[136]
PL	530 000	31%	8%
RO	456 000	17%	22%
IT	416 000	36%	7%
FR	344 000	68%	3%
DE	305 000	60%	3%
ES	245 000	56%	3%
UK	211 000	55%	1%
NL	150 000	50%	4%
BG	148 000	26%	13%
PT	145 000	18%	10%

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

3.2.3 Demographic background

Gender

Overall, the distribution of high-skilled movers at EU level shows more women than men movers. At EU level, in 2019, 55% of high-skilled movers were women. This is the same proportion as in 2014. A majority of female movers was found in four of the five European countries hosting the most EU movers, except Switzerland (46%).

At EU level, 55% of high-skilled movers are women, a slightly higher share than among movers of all skill levels (52%).

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Table 9: High-skilled movers, by gender, in major receiving countries, 2014 and 2019

Country	2014		2019	
	Men	Women	Men	Women
EU-28	45%	55%	45%	55%
DE	52%	48%	50%	50%
ES	49%	51%	49%	51%
FR	43%	57%	39%	61%
CH	56%	44%	54%	46%
UK	41%	59%	43%	57%

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

[136] Calculated as a percentage of high-skilled citizens living in the country of origin.

The gender difference is most evident in France, where 61% of high-skilled movers are women. In the UK, there is also a strong majority of female high-skilled movers. In France, this majority has increased by 4pps since 2014, while decreasing by 2pps in the UK. In Germany, the difference between the sexes was negligible in 2019 (50.4% women, 49.6% men), but there was a change from 2014, when the difference was 48.2% women and 51.8% men. In Switzerland, the majority of male high-skilled movers decreased by 2pps compared to 2014.

The selected countries also show a clear difference in favour of female high-skilled movers when compared to the share of women and men among movers of all skill levels. At EU level, 48% of all movers were male and 52% female but when looking at only high-skilled workers, 55% are female. In all of the selected countries except Spain, women were better represented when looking only at high-skilled movers rather than all skill levels[137].

It should be noted that women have a higher skill level than men in the general EU population. Compared to the gender division of high-skilled movers, the gender division in the high-skilled general population is almost identical (women movers account for a slightly higher proportion than women non-movers). At national level, in Spain and Switzerland, a greater share of women in the general population have a high skill level than the share of women movers with a high skill level. In Germany, France and the UK, a greater share of women movers have a high skill level compared to women in the general population[138].

It appears that the prevalence of female high-skilled EU movers is particularly high in Germany, France and the UK, compared to high-skilled women in the general population or women as a proportion of all movers.

Age

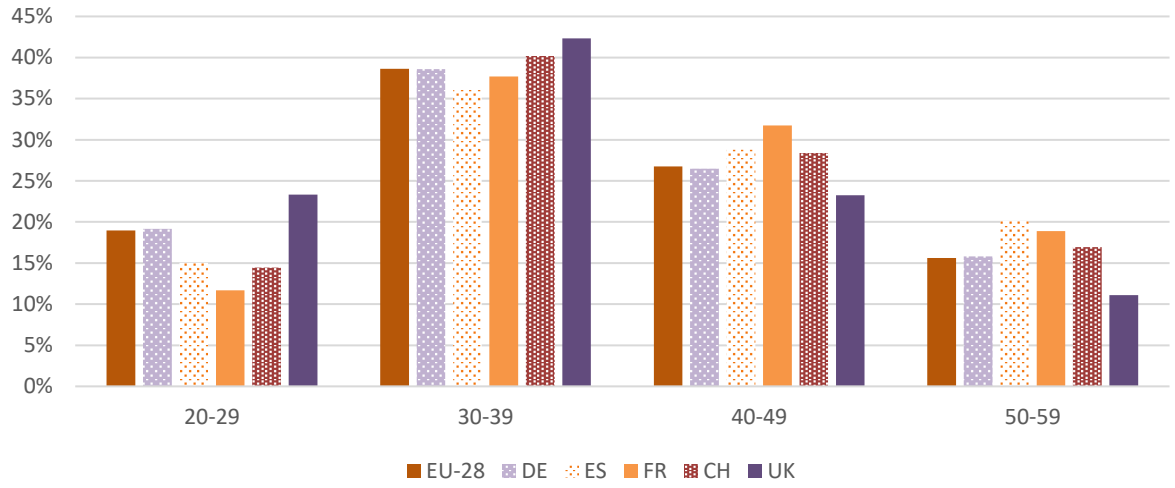
Most high-skilled movers are 30-39 years old. Compared to movers of all skill levels, high-skilled movers are slightly overrepresented in this age group and underrepresented among 20-29 year olds.

The most common age category for high-skilled movers is 30-39 years, at EU level and in the five selected countries of Germany, Spain, France, Switzerland and the UK. It should also be noted that the 20-29 age bracket is not directly comparable with the others given that tertiary education would generally not be finished until at least the age of 21, and in many cases not until 23-24 because the most common level of education of high-skilled movers is master level (see section on Educational background). Aside from the 20-29 age bracket, all countries show the same pattern between the different categories.

The 30-39 bracket is the largest, followed by the 40-49 bracket and then the 50-59 bracket. Nevertheless, the degree of difference between the age brackets does vary between countries. In France and Spain there is a more gradual decrease between the different categories, pehaps suggesting that movers stay longer in these countries. In the UK, the distribution of high-skilled movers is skewed towards the three youngest age brackets, with 23% in both the 20-29 bracket and the 40-49 bracket, and only 11% in the oldest age bracket.

[137] See **Table A21** in **Annex B.3** for figures for these selected countries on movers by gender in 2019.
[138] See **Table A21** in **Annex B.3** for figures for these selected countries for high-skilled workers, by gender, in the general population in 2019.

Figure 55: Distribution of high-skilled movers across different age categories at EU level and within five selected countries, 2019



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

Compared to figures for movers of all skill levels, at overall EU level there is a greater concentration of high-skilled movers in the 30-39 age bracket (+4pps), compensating for a smaller proportion within the 20-29 age bracket (-4pps). Again, the lower proportion in the youngest age bracket is probably accounted for by the fact that people are unlikely to leave tertiary education before the age of 21 or 22, or older. Compared to the proportions of high-skilled movers in the general population, there is also a greater concentration of high-skilled in the 30-39 age bracket (+9pps), with a lower concentration in the 50-59 age bracket (-7pps).

Marital status

High-skilled EU movers are slightly less likely to be married than high-skilled nationals, at 50.5% and 52.9%, respectively. 42.3% of high-skilled EU movers are single and 6.6% are divorced. This is different from the situation for movers in general, who are more likely to be married than nationals. High-skilled movers are therefore the least likely of these groups to be married.

3.2.4 Educational background

The ISCED system provides a more nuanced understanding of education level than the low/medium/high classification used elsewhere in this section. The four levels that correspond to the 'high' level of classification are ISCED 5-8, tertiary education, going from short cycle[139] to Bachelor's to Master's to Doctoral level.

Table 10 breaks down the ISCED educational level of movers at EU level and in the selected countries. It shows that the most common level of education for high-level movers is Master's level or equivalent (ISCED 7).

Most high-skilled movers (46%) have a Master's degree or equivalent.

[139] The UNESCO (2011) *ISCED 5* system describes short-cycle tertiary education as 'typically practically based, occupationally-specific, [they] prepare students to enter the labour market. However, these programmes may also provide a pathway to other tertiary education programmes.'
Available at: http://uis.unesco.org/en/glossary-term/isced-5-short-cycle-tertiary-education.

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This is the case at EU level but also at national level in all selected countries other than the UK, where short-cycle tertiary education is very common[140]. The second most common at EU level is Bachelor's or equivalent (ISCED 6), as in Germany, France and Switzerland, but not in Spain, where short-cycle tertiary education is more common. Switzerland and France both have a higher proportion of Doctoral or equivalent level movers (ISCED 8), at 12% and 9%, respectively.

Table 10: Detailed education level of high-skilled movers at EU level and in selected destination countries, 2019, in absolute numbers and as a percentage of high-skilled movers in the country

Country	ISCED 5 Short-cycle tertiary education	ISCED 6 Bachelor's or equivalent level	ISCED 7 Master's or equivalent level	ISCED 8 Doctoral or equivalent level
EU-28	923 000	1 113 000	1 850 000	162 000
	23%	27%	46%	4%
DE	8 000	339 000	402 000	36 000
	1%	43%	51%	5%
ES	143 000	99 000	209 000	9 000
	31%	22%	45%	2%
FR	62 000	81 000	109 000	25 000
	22%	29%	39%	9%
CH	0	162 000	249 000	54 000
	0%	35%	54%	12%
UK	575 000	150 000	485 000	31 000
	46%	12%	39%	2%

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

Field of education

The most common field of highest education attainment for high-skilled EU movers is business, administration and law (407 000), followed by engineering, manufacturing and construction (277 000), then arts and humanities (246 000). The least common field of highest education attainment for high-skilled EU movers is agriculture, forestry, fisheries and veterinary (20 000).

This is calculated using the HATFIELD (field of education) variable of the EU-LFS. The question is asked of medium and high-skilled respondents aged 15 to 34 years, or those who achieved their highest level of education within the 15 years preceding the survey. The variable distinguishes 11 different fields of education[141].

[140] May reflect assessment or counting differences in the UK.
[141] Contains only 10 fields, as 'Generic programmes and qualifications' is not used at EU level.

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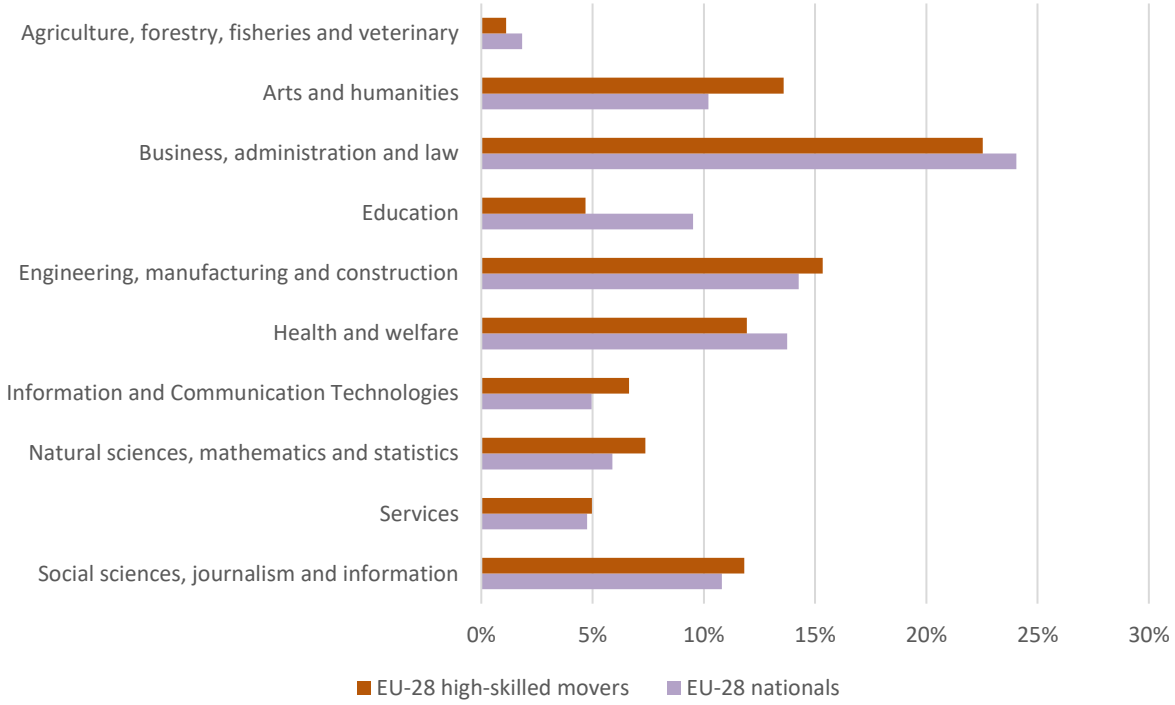
Figure 56: Field of highest educational attainment of high-skilled EU movers, 2019



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

NOTE: THIS FIGURE DOES NOT INCLUDE FIELDS 'UNKNOWN OR UNSPECIFIED' OR 'NOT APPLICABLE', WHICH TOGETHER ACCOUNT FOR 54% OF HIGH-SKILLED MOVERS IN 2019 AND 49% OF HIGH-SKILLED NATIONALS. THIS IS MAINLY BECAUSE THE VARIABLE ONLY APPLIES TO RESPONDENTS UNDER THE AGE OF 34 OR WHO ATTAINED THEIR HIGHEST LEVEL OF EDUCATIONAL IN THE 15 YEARS PRECEDING THE SURVEY, THEREBY EXCLUDING LARGE NUMBERS.

A similar pattern is found at for high-skilled movers national level in the five selected countries (DE, ES, FR, CH, UK). Business, administration and law is most common field of highest education attainment for high-skilled movers in all of these countries except Germany, where engineering, manufacturing and construction is most common.

In the general high-skilled population, business, administration and law is also the most common field of education. Health and welfare is a more common field of study in the general population (14% for nationals, 12% for movers), as is education (10% for nationals, 5% for movers). Arts and humanities is notably more common amongst movers (14% for movers, 10% for nationals).

3.3 High-skilled movers' labour market integration in the country of destination

3.3.1 Labour status

High-skilled movers have more favourable labour market outcomes than movers in general, but less favourable labour market outcomes than high-skilled nationals.

High-skilled movers' labour status is characterised by a high employment rate and activity rate and a low unemployment rate.

Comparisons with other categories of the population show that high-skilled movers have more favourable labour market outcomes than movers as a whole, and slightly less

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favourable labour market outcomes than the high-skilled in the general population of the country of residence.

Table 11 shows the employment rate, unemployment rate and activity rate for high-skilled movers at EU level and in five selected countries. It also shows the percentage point difference with (1) all movers and (2) the highly skilled in the general population in the country of residence.

Table 11: Employment rate, unemployment rate and activity rate of high-skilled movers in selected countries, 2019 (pps difference with movers of all skill levels and with high-skilled in the general population)

	Employment rate	Unemployment rate	Activity rate
EU high-skilled compared to all movers compared to high-skilled in general population	84% (+7pps) (-2pps)	5% (-2pps) (+1pps)	88% (+5pps) (-1pps)
DE high-skilled compared to all movers compared to high-skilled in general population	86% (+5pps) (-5pps)	3% (-1pps) (+2pps)	88% (+4pps) (-4pps)
ES high-skilled compared to all movers compared to high-skilled in general population	75% (+5pps) (-6pps)	12% (-3pps) (+5pps)	86% (+3pps) (-2pps)
FR high-skilled compared to all movers compared to high-skilled in general population	76% (+9pps) (-9pps)	9% (-2pps) (+4pps)	83% (+8pps) (-6pps)
CH high-skilled compared to all movers compared to high-skilled in general population	89% (+4pps) (-2pps)	4% (-1pps) (+2pps)	93% (+3pps) Same
UK high-skilled compared to all movers compared to high-skilled in general population	89% (+4pps) (+3pps)	3% Same Same	92% (+3pps) (+3pps)

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

High skilled movers are considerably more likely to be employed than movers in general at EU level (+7pps). They are also more likely to be active on the labour market (+5pps), and less likely to be unemployed (-2pps). This is also the case at national level in the five countries. The difference is particularly evident in France, where the employment rate for high-skilled movers is 9pps higher than for movers of all skill levels and the activity rate is 8pps higher.

Compared to high-skilled people in the general population, high-skilled movers are slightly less likely to be employed or to be active on the labour market, and slightly more likely to be unemployed. In France, Spain and Germany, the employment rate of high-skilled movers is notably smaller than high-skilled nationals (-9pps, -6pps and -5pps, respectively). The difference in unemployment rate is fairly similar to the EU average. The exception to this trend is the UK, where high-skilled movers have a higher employment rate and higher activity rate than high-skilled nationals in the country (+3pps for both). The unemployment rate is the same.

3.3.2 Occupations and overqualification

This section looks at which occupations high-skilled movers work in and at the degree to which their skills might be underutilised. Overqualification is assessed in two ways. The first considers whether high-skilled movers carry out occupations that would require a lower skill level according to the corresponding ISCO levels (see Annex A.3). However, it has to be noted that a degree is only a very rough estimation of a person's skills.

Particularly in the case of movers with a degree gained in another country from where they are working, skills that could be strongly related to the country of work could be very important, such as language skills and familiarity with social codes.[142] Therefore, overqualification is also assessed through data from a question in the EU-LFS ad-hoc module 2014 on whether respondents feel they are carrying out a job below their skill level. This indicator has its limitations, too, as there is no EU aggregate data because several countries lack data, and the subjective nature of the estimation is an imperfect assessment.

Occupations are measured at different levels of definition by the EU Labour Force Survey; this chapter uses the first and second levels (ISCO1D and ISCO2D), defined as the major occupation groups and the sub-major occupation groups. Furthermore, the occupation groups are assigned a skill level that can be translated back into ISCED levels, the level of the highest education degree. For correspondence between occupations and skill levels see Annex A.3.

Of the nine major occupation groups, three are considered to correspond to a high-skill level (see methodology):

- Legislators, senior officials and managers;
- Professionals;
- Technicians and associate professionals.

These high-skill level occupation groups are, respectively, the fourth, first and second most common occupation groups for high-skilled movers.

By far the most common major occupation type for high-skilled movers is 'professionals' (41%). Some distance behind professionals is the group 'technicians and associate professionals' (15%), followed by 'service workers and shop and market sales workers' (11%) and 'legislators, senior officials and managers' (9%). Jobs included in the 'service and sales workers' category are not considered to require tertiary education level but more movers work in these jobs than as legislators, senior officials and managers.

[142] Belmonte, M. et al. (2020), p.18.

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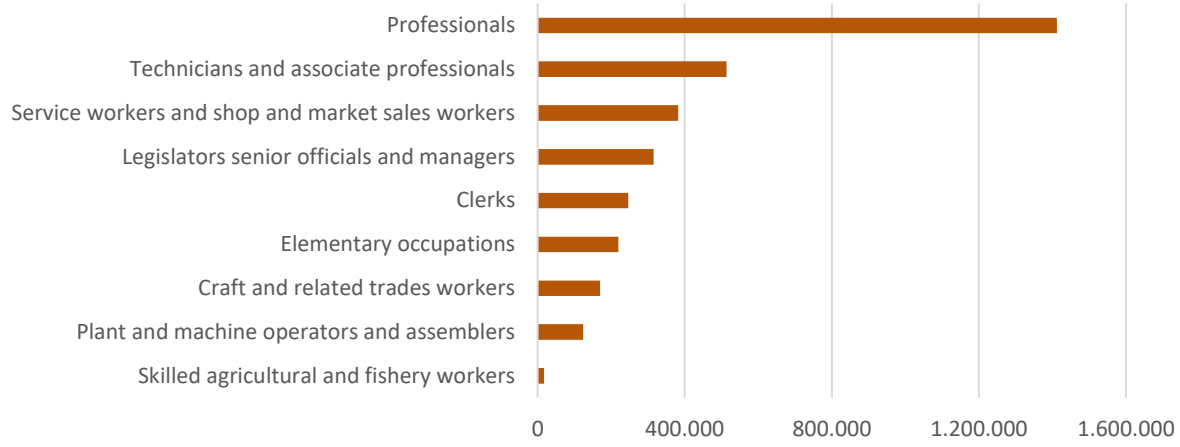
Figure 57: Occupations of high-skilled EU movers, 2019



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

At EU level, 66% of employed high-skilled movers work in jobs classed as corresponding to a high skill level, 28% work in jobs of intermediate skill level and 6% in jobs of elementary skill level.

34% high-skilled movers work in a job below their skill level, compared to 26% high-skilled nationals.

According to this classification, one-third of high-skilled EU movers work in occupations below the skill level commensurate with their level of education.

There is a significant difference here compared to figures for high-skilled nationals. At EU-level, only 1% of high-skilled nationals work in jobs of elementary skill level (compared to 6% of high-skilled movers), 20% work in jobs of intermediate skill level (compared to 28% of movers) and 78% work in jobs of high skill level (compared to 66% of movers). Overall, high-skilled movers are more likely (34%) to work in occupations below their skill level than high-skilled nationals (26%).

Looking at individual countries, **Table 12** shows that overqualification of high-skilled movers is highest in Spain, where 47% of them carry out jobs below their skill level (compared to 35% at EU level); this corresponds fairly well to high-skilled movers' own perception (in Spain, 60% of them feel overqualified), see **Figure 58**. Overqualification is also quite widespread in the UK (37%) – again, corresponding more or less to the 33% of high-skilled movers who report being overqualified in the UK; and Germany (although below the overall EU level, at 33%) – no data on self-reported overqualification is available for Germany. In Spain, overqualification is also quite widespread among high-skilled nationals (35%), whereas in Germany it is very low (17%). In France and Switzerland, over-qualification is quite low, especially among high-skilled movers, but also among high-skilled nationals.

No data on self-reported overqualification is available for France and Switzerland. Further comparison with Austria and Italy (the other two countries for which data on self-reported qualification is available) shows that self-reported overqualification for high-skilled movers in Spain is by far the highest, although it reaches 40% in Italy.

Figure 58 shows that high and medium-skilled movers are considerably more likely to feel overqualified in Spain and Italy than low-skilled workers. The gap is larger than for the UK and Austria.

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Table 12: Occupations of high-skilled movers and high-skilled nationals, by skill level required for their occupation, in row percentages, 2019

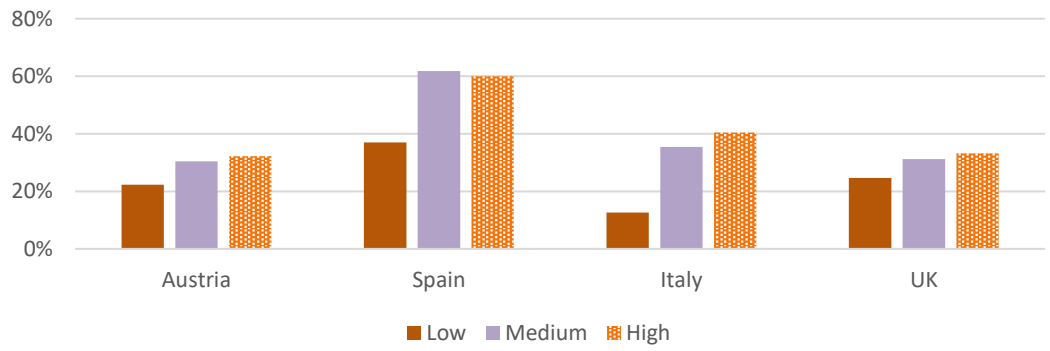
Country	Elementary-level occupations		Intermediate-level occupations		High-level occupations	
	Movers	Nationals	Movers	Nationals	Movers	Nationals
EU-28	6.4%	0.6%	27.6%	20.0%	65.8%	78.1%
DE	6.5%	0.4%	25.6%	15.6%	67.9%	83.1%
ES	6.8%	0.6%	40.5%	32.7%	52.7%	64.6%
FR	0.0%*	0.7%	9.6%*	19.8%	90.4%	78.0%
CH	1.0%	0.0%	15.4%	19.5%	83.6%	79.9%
UK	7.9%	0.2%	29.1%	22.0%	63.0%	75.9%

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

*FOR FR, NO DATA WAS AVAILABLE FOR ELEMENTARY-LEVEL OCCUPATIONS OR FOR FOUR OF THE FIVE INTERMEDIATE-LEVEL OCCUPATIONS, BECAUSE NUMBERS WERE TOO LOW TO BE RELIABLE.

**SOME ASPECTS BELOW RELIABILITY LIMITS

Figure 58: Self-perceived overqualification among EU-28 movers (20-64 years), by highest level of education achieved, 2014



SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

The ISCO2D variable gives more detail about the occupations of movers. Within the three major occupation groups associated with requiring a high-skill level, there are 15 sub-major occupation groups.

Table 13 lists the 10 sub-major occupation groups that were most common among high-skilled workers at EU level, in 2019, ranked by prevalence. The most common sub-major groups in which movers work are 'business and administration professionals', 'science and engineering professionals' and 'teaching professionals' – all belonging to the major group of 'professionals', classed as demanding a high skill-level.

In Spain, the most common profession for high-skilled movers is 'personal services workers', classed as an occupation requiring an intermediate skill level (10.5% of high-skilled movers in Spain). In the other selected countries, the most common occupation groups were associated with a high skill level: in Germany, 'science and engineering professionals' (10.2%); in France, 'teaching professionals' (14.8%); in Switzerland, 'science and engineering professionals (13.2%); and in the UK, 'business and administration professionals (10%).

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Table 13: Share of EU high-skilled movers in the 10 most common sub-major occupation groups, 2019[143] (percentage refers to the share of high-level movers within each country working in the indicated occupation)

ISCO2D	EU	DE	ES	FR	CH	UK
Business and administration professionals (4)	8.89%	6.76%	5.80%	6.98%	8.95%	10.05%
Science and engineering professionals (4)	8.25%	10.23%	4.55%	14.32%	13.28%	7.92%
Teaching professionals (4)	7.22%	7.45%	8.99%	14.80%	4.68%	4.93%
Business and administration associate professionals (4)	6.62%	7.37%	6.32%	10.18%	5.34%	5.44%
Legal, social and cultural professionals (4)	6.25%	6.90%	5.02%	7.67%	4.09%	5.10%
Health professionals (4)	5.78%	5.62%	3.29%	9.31%	9.28%	6.79%
Information and communications technology professionals (4)	5.05%	5.45%	3.39%	3.24%	10.00%	5.12%
Personal services workers (2)	4.56%	4.03%	10.46%	5.86%	2.59%	4.28%
Sales workers (2)	3.49%	3.25%	4.87%	3.70%	1.67%	3.45%
Production and specialised services managers (4)	3.36%	1.78%	2.88%	10.17%	4.44%	4.40%

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

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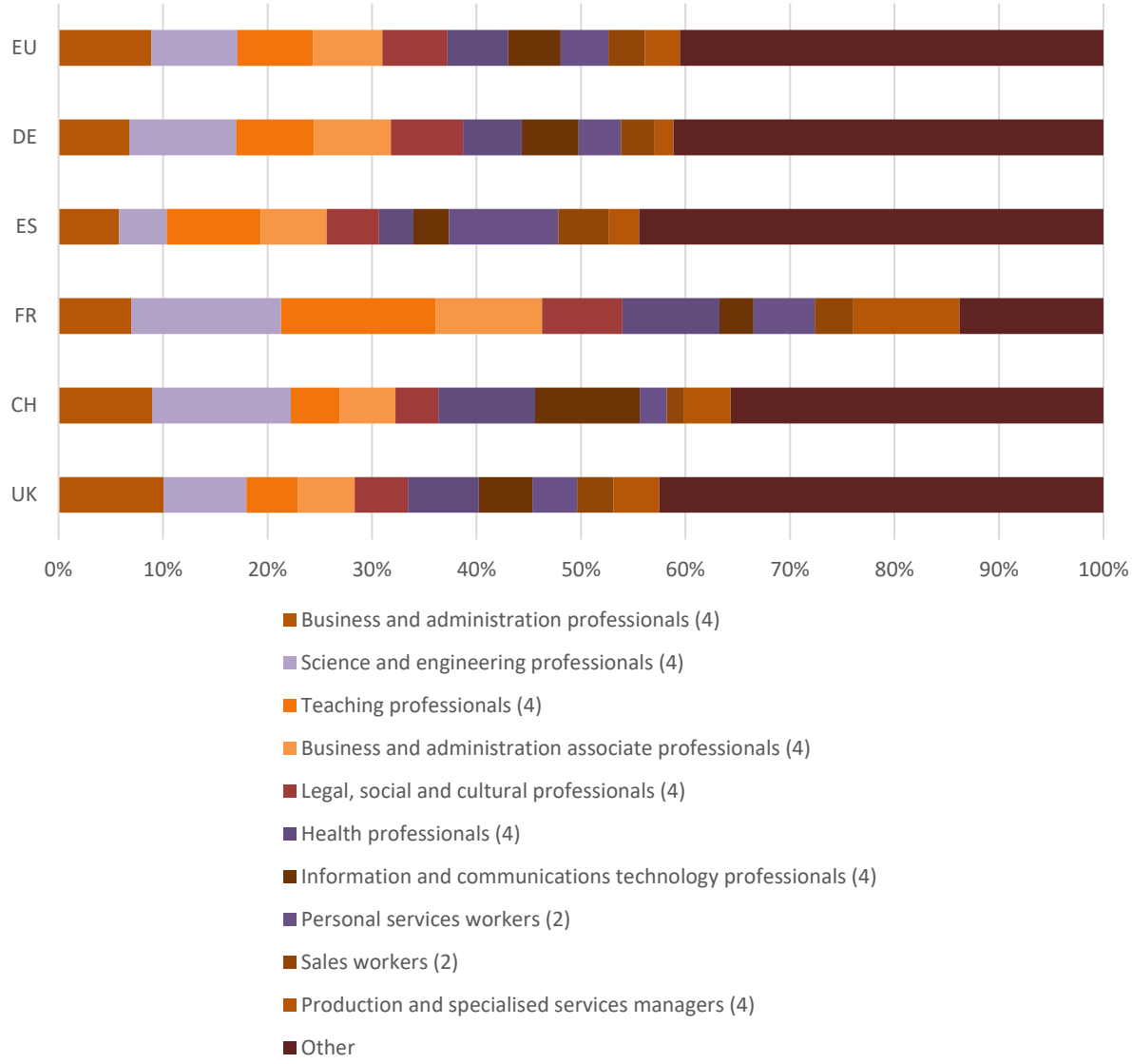
[143] Full data for all occupations for these countries is in **Table A22** in **Annex B.3**.

Figure 59: Share of EU high-skilled movers in the 10 most common sub-major occupation groups, 2019, selected countries (figures available in Table 13)



Of the occupations that are not classed as high-skilled, the most common at EU level are 'personal services workers' (4.6% of high-skilled movers) and 'sales workers' (3.5%), both of which require an intermediate skill-level. The elementary occupations with the highest proportions of high-skilled movers are 'cleaners and helpers' (2.6%) and 'labourers in mining, construction, manufacturing and transport' (2.2%).

At country level, the most common intermediate or elementary occupations for high-skilled movers vary. In Germany, the pattern is similar to EU level, with 'personal services workers' being the most common (4% high-skilled movers) followed by 'sales workers' (3%) and 'numerical and material recording clerks' (3%). In Spain, 'personal services workers' (10.5%) is the most common occupation for high-skilled movers, while 'sales workers' (5%) and 'customer services clerks' (5%) are also common. France follows the same pattern, with 'personal services workers' (6%), followed by 'sales workers' (4%). Notably, nearly all high-skilled movers residing in France work in one of these ten professions; this corresponds with the calculation that only 9.5% of movers in France work in occupations below their skill-level. Switzerland is similar to Germany, with 'personal services workers' (3%) followed by 'general and keyboard clerks' (2%) and 'sales workers' (2%). The UK varies in the importance of the group of 'personal care workers' (4%), the

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joint most common non-high-skilled occupation group, together with 'personal services workers' (4%). They are followed by 'sales workers' (4%) and 'labourers in mining, construction, manufacturing and transport' (3%). This last group is particularly interesting in that it is an elementary level occupation group that occupies 37 000 high-skilled movers in the UK, which is more than twice the number of movers it occupies in Germany, the next highest in absolute terms.

Further data from the Eurofound Working Counditions Survey found that foreign-born people were 18% more likely to feel overqualified for their work than native workers. This also includes third-country nationals.[144]

The JRC has found that 'over the last two decades, the phenomenon of over-education among people in the EU with a tertiary education has steadily risen, albeit with strong regional variations'[145]. For example, the report calculates that in certain Member States (AT, CZ, FR, IT, SK, UK) over 33% of high-skilled workers are mismatched, whilst in others the less than 20% are mismatched (ES, FI, IE, LT, LU, LV, PL). These differences depend on several factors, such as variation in labour market institutions and demographic trends.

Regarding overqualification of EU movers, the study finds that in a group of Central and Eastern European countries high-skilled nationals are more likely to be mismatched than high-skilled movers (PL, SI, CZ, LT, LV, EE, SK), plus Greece and Luxembourg. In remaining EU countries movers were more likely to be mismatched than nationals. The study finds that for EU movers, overqualification is not linked to holding a foreign degree, which they attribute at least in part to steps taken at EU level towards recognition of qualifications across Member States. They say this is not the case for third-country nationals.

A recent report on the role of institutions in the determinants of skills matching found that movers from most recent members of the EU were more likely to be overqualified. High-skilled movers from Romania and Bulgaria were four times more likely to be working in a job that was below their skill level than native workers. Those from countries that joined the EU in 2004 were 2.5 times more likely to be overqualified for their job, whilst movers from EU-15 countries were less likely to be overqualified than natives[146].

3.3.3 Overqualification and educational training

The EU-LFS asks medium and high-skilled respondents[147] for the field of their highest level of education. Additionally, the ad hoc module from 2014 asked respondents whether they believe themselves to be carrying out a job below their skill level. This allows for an analysis of the fields of education in which EU movers are most likely to be overqualified. It is not possible to analyse this only for high-skilled movers[148] and even when including movers with a medium skill level, the available data are extremely patchy; data were not available for Germany, France and Switzerland and so results for Austria and Italy are shared here.

In Austria, the largest share of overqualified movers was among those with a degree in a general programme (41%). Around one-third of movers trained in engineering, manufacturing and construction reported carrying out work below their skill level, as did

[144] Reiff, J. and Peschner, J. (2020), 'Determinants of skills matching – The role of institutions', *Employment and social developments in Europe working paper 02/2020*, European Commission, Brussels.
[145] Belmonte, M. et al. (2020), p.12.
[146] Reiff, J. and Peschner, J. (2020).
[147] Aged 15-34 years; or those who achieved their highest level of education within the 15 years preceding the survey.
[148] Data become too low to be reliable.

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around one-quarter of movers with a degree in social sciences/business/law[149]. In Italy, those with a degree in engineering, manufacturing or construction or in services were overqualified at 23% and 30%, respectively. Overqualification among movers who completed a general programme or a social science/business/law degree was high, at 60% each.

Most overqualified movers have degrees in: engineering, manufacturing and construction; social sciences, business or law; services.

Looking at the type of education most overqualified movers have, reveals that Austria's largest numbers were in engineering, manufacturing and construction and in social sciences/business/law (around 10 000 each). In Italy, it was in social sciences/business/law with 21 000 overqualified movers. In the UK, most overqualified movers had a degree in services (27 000). Although the numbers are low and the figures of low reliability, the low non-response rate suggests that these give at least an idea of the real trends.

These areas do correspond to some of the areas where movers are more prevalent, so one possible explanation could be that overqualification is not linked to specific fields of qualification of high-skilled movers, but just reflects the fields where the majority of movers have qualifications. More detailed data would be necessary in order to draw any reliable conclusion.

Reasons for movers not finding a suitable job to match their skill levels are numerous, with lack of language skills being most frequently mentioned[150]. Lack of recognition of qualifications is the second most important reason. A recent European Parliament study[151] found that the system of recognition for regulated professions generally works well, especially for those professions for which the recognition procedure is automatic. However, the latter only applies to a limited number of professions, primarily health professions[152] and architects. This may explain the comparatively low overqualification among movers with degrees in health and welfare (for most countries mentioned above, the numbers of movers with this degree who feel overqualified are below reliability, thus quite small)[153].

Recent findings from a study from the European Commission's Joint Research Centre also indicate that recognition of qualifications within Europe should not constitute a major reason for overqualification: accordingly, EU mobile workers with a degree from a different country than their host country are only slightly more likely (37%) to be over-educated than the whole group of EU mobile workers (33%). On the other hand, for non-EU born workers, the impact of a foreign degree on being overqualified is much larger[154].

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3.3.4 High-skilled movers' potential to respond to labour shortages

A detailed assessment of occupational shortages and surpluses in the EU Member States can be found in the European Commission's Annual 'Analysis of shortage and surplus

[149] In the 2014 EU-LFS, social sciences, business and law were combined in a single category.
[150] Fries-Tersch, E. et al. (2018), *2017 Annual Report on Intra-EU Labour Mobility*, Network Statistics FMSSFE, European Commission, Brussels.
[151] Adamis-Cászár, K. et al. (2019), *Labour mobility and recognition in the regulated professions*, European Parliament, Study requested by the EMPL Committee, Available at: https://www.europarl.europa.eu/RegData/etudes/STUD/2019/631056/IPOL_STU(2019)631056_EN.pdf, p. 69.
[152] Nurses, doctors, dental practitioners, pharmacists.
[153] Adamis-Cászár, K. et al. (2019), p. 69.
[154] Belmonte, M. et al. (2020), p.16.

occupations'. The latest report from 2020[155] shows that 11 of the 30 occupations reported most frequently by public employment services as being in shortage in 2019 are occupations that require high skill levels (skill levels 3 and 4)[156]. These include, in order of the number of EURES National Coordination Offices that report a shortage in the area: Nursing Professionals; Applications Programmers; Generalist Medical Practitioners; Software Developers; Web and Multimedia Developers; Civil Engineers; Electrical Engineers; Software & Applications Developers and Analysts not elsewhere classifed; Systems Analysts; Accountants; Nursing Associate Professionals. Quite a range of areas is covered, including engineering, health, accounting and IT.

Several of the top 30 shortage occupations also require lower skill levels, and additionally, quite a few are related to services such as cooks or waiters. Shortages in these areas may explain to a certain extent why so many high-skilled movers work in these types of occupations, despite them not corresponding to their skill levels.

Occupations in the shortages and surpluses report are reported at a more precise level of detail (for example cooks, civil engineers or systems analysts) than is possible for data on high-level movers, for whom data on occupations is only available in broader groups (teaching professionals, sales workers, etc.)[157]. Nevertheless, by looking at the number of high-skilled movers working in the broader occupation group that houses the specific shortage occupations, it is possible to see if high-skilled movers work in the occupational groups to which the high-skilled shortage occupations belong.

The most common broad occupation group for movers is Business and Administration Professionals, which contains one of the more detailed shortage occupations mentioned above: Accountants. The second-largest broad occupational group in which high-skilled movers are employed is Science and Engineering Professionals: this group contains two of the shortage occupations (Electrical Engineers and Civil Engineers). The broad groups 'Health Professionals' and 'Information and Communications Technology Professionals' are also areas with large numbers of movers; these groups contain three and five shortage occupations respectively.

Adding these groups together shows that 28% of high-skilled movers work in a broad occupation group where narrower occupations do have shortages; in some cases upskilling may help here, but given that the areas remain quite broad usefulness could be limited. The report also looks at matching potentials and finds that this is quite limited. Matching potentials are assessed as occupations that reportedly have surplus in some countries and shortages in others. Some of these occupations would be relevant for high-skilled movers, namely doctors, civil engineers and healthcare professionals. It should be noted that only some countries report this information; therefore naming those countries here would not give a full picture of the situation and suggest that solutions are simpler than they are in reality, which could be misleading.

3.4 Return mobility of high-skilled movers

A crucial matter – both for individual movers and for sending countries' labour markets and economies – is the question of whether high-skilled movers return to their countries of origin and how they then fare in that labour market. It is important to know whether

[155] McGrath, J. (2020), Analysis of shortage and surplus occupations based on national and Eurostat Labour Force Survey data', *Shortages and surpluses 2020*, European Commission.
[156] Note that these are occupations in the fourth levels of subgroups, so they are not directly comparable with those in the sections above.
[157] More detailed occupations are reported at 4D level; the broader occupation groups referred to are reported at 2D level.

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and how they apply the skills or education gained abroad. This is more important as mobility spells within the EU have shortened and movers tend to return and re-emigrate more frequently (see 2019 Annual Report on intra-EU Labour Mobility).

There is little quantitative, EU-wide comparable data on returning movers. The number of returnees can be approximated with Eurostat migration statistics (see section 1.2.3) but this gives no information about returnees' labour status, education or skills. EU-LFS data may be used to approximate the group of returnees[158], as in the 2016 Annual Report on intra-EU labour mobility.

This analysis provided initial insights into the education levels and labour status of returnees: EU-28 movers who returned to their country between 2010 and 2015 were more likely to be high-skilled (44%) than nationals in the country of origin (27%)[159]. This was the case for both EU-13 returnees and EU-15 returnees, although EU-15 returnees had a particularly high share of high-skilled returnees (50%). This plays out in practice the notion put forward by Todisco that high-skilled migration is more likely to be temporary[160].

The analysis also showed that most returnees (of all education levels) who were employed before returning also found employment in the year after their return, but nevertheless had lower activity and employment rates than non-mobile nationals in the first year after return, with the exception of some Eastern European Member States (including Poland and Romania)[161].

Another finding was that in the EU-15 countries, returnees were much more likely to carry out high-skilled occupations (59%) than non-mobile nationals (44%), but in the EU-13 countries, shares of those working in high-skilled occupations were similar among returnees and non-mobile nationals (around 30% each). This difference is likely due to the fact that among most EU-15 countries, the highly skilled are more likely to move in the first place, whereas in several EU-13 countries, high-skilled workers have lower or similar mobility rates to those with lower skill levels (exceptions are Czechia, Croatia, Hungary, Cyprus and Slovakia)[162] (see section 3.2.2).

Looking more closely at high-skilled returnees, EU-LFS data become too small to be reliable and cannot be analysed. This section therefore provides an overview of findings from important studies, usually studied qualitatively, with local examples. The issue of high-skilled returnees and their integration into the labour market has drawn attention since the 1990s[163]. There are few comparative studies on highly skilled returnees and their labour market integration.

Research findings overall seem to support the argument that emigration does not always cause brain-drain, and those who go abroad can contribute to the development of their country upon their return[164]. However, the reintegration of high-skilled returnees into the labour market and the ways in which they can use the skills acquired abroad depend on a range of factors. Among the most important factors mentioned in the studies reviewed are the types of occupations carried out in the destination countries and whether they carried out jobs matched to their skill levels or which underutilised their skills. Other factors

[158] Only those movers who returned within the year preceding the survey were captured.
[159] Fries-Tersch et al. (2017), p. 103.
[160] Todisco, E. et al. (2003).
[161] *ibid.*
[162] Fries-Tersch, E. et al. (2014), *2014 Annual Report on Intra-EU Labour Mobility*, Network Statistics FMSSFE, European Commission, Brussels, p. 38.
[163] Glorius, B. et al. (2013), 'Introduction'. In Glorius B., Grabowska-Lusinska I., and Kuvik A. (Eds.), *Mobility in Transition: Migration Patterns after EU Enlargement* (pp. 7-18). Amsterdam University Press, Amsterdam, Available at: https://www.jstor.org/stable/j.ctt46mwhx, pp. 7-18.
[164] *ibid.*

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included whether returnees managed to maintain or recreate social networks or ties in the country of origin, the state of the country of origin's economy, which may or may not create possibilities for returnees (see Poland, below) and previous work experience in the country of origin. One study on the knowledge economy and mobility notes that some Southern and Eastern European countries have national and regional strategies for incentivising high-skilled movers from the country to return, through developing networks with citizens abroad, known as diaspora strategies[165].

3.4.1 Acquisition of (further) education and skills abroad

Pursuing education abroad plays a much less significant role in the decision to move to another country than work or family reasons, when looking at all movers of working-age[166]. However, this depends on the age group and destination country. Among movers aged 15-24 living in Greece, the Netherlands, Belgium or Austria in 2008, for example, education was mentioned far more often than work or family (except for Greece, where looking for work was quite often mentioned). Among movers of the same age group in Ireland, Spain, Italy or the UK, work and family were more important than education[167]. This indicates that mobility among young EU citizens is clustered, with certain countries of destination attracting movers intending to acquire higher education while others attract larger groups of young movers seeking to work and who are likely to have lower educational qualifications.

A large part of student short-term mobility is carried out through the European Erasmus[168] exchange programme, which has supported over four million students in the past 20 years to carry out part of their studies in another EU country[169].

However, EU citizens do not only move to study abroad, but to advance their careers. Pursuing professional development or career opportunities is among the top three reasons for EU citizens to consider working in another Member State, mentioned by 28%[170] (see section 4.5.4).

EU-wide data on the numbers of (high-skilled) returnees who went abroad for the purpose of career advancement or study are not available, but studies conducted with Polish returnees, for example, showed that their level of education increased while they were abroad[171], especially if the main reason for migration was university education[172].

A recent online survey of 1 523 Latvian returnees found that 25% had acquired a unique or scarce job skill partially or completely abroad and this led to 14% more earnings upon return. One-third reported using the knowledge acquired abroad in their current job, leading to higher earnings, especially among the returnees who completed some tertiary

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[165] ESPON (2017).
[166] Fries-Tersch, E. et al. (2018) , p. 92.
[167] Eurostat (2020), EU-LFS AHM 2008, 'Percentage distribution of main reason for migration, by country of birth, sex and age (% of total migrants)' [lfso_08cobr], extracted in July 2020.
[168] European Community Action Scheme for the Mobility of University Students.
[169] Strey, A. et al. (2018), *Determinants of migration flows within the EU. Literature review*, Maastricht University, Maastricht, p. 33.
[170] *ibid*., p. 28, based on results from EB79.2, 2013.
[171] Klagge, B. and Klein-Hitpaß, K. (2007), 'High-skilled return migration and knowledge-based economic development in regional perspective. Conceptual considerations and the example of Poland', *Centre of Migration Research No: 19/77*, Available at: http://www.migracje.uw.edu.pl/wp-content/uploads/2016/12/poprawiony019_77.pdf.
[172] Glorius, B. et al. (2013), pp. 7-18.

education abroad (up to 26%)[173]. When the study compared returnees who completed some tertiary education abroad with those who followed their studies in Latvia, it found that the first group were more likely to use their acquired skills in their current job and to have higher earnings[174].

There is also evidence that some high-skilled movers may choose to go abroad for the primary motive of having an experience of working abroad, more than finding a job that matches their qualifications. A study of movers and returnees in Greece found that, along with the prospect of better career prospects, returnees put a greater emphasis on the experience of working abroad itself as a motivating factor for going abroad than on a lack of opportunities in their field or at their level of studies in Greece. It also found that a minority of this group of returnees had been on permanent contracts whilst abroad (20%), with 40% employed on hourly contracts. This could be indicative of working in jobs that are not commensurate with their level of education. The authors interpret this as being representative of a group that may be (relatively) economically privileged and searching for a life experience abroad, which could also offer opportunities to improve proficiency in other languages and might be combined or be a continuation of an experience studying abroad. They note that 85% of those returnees interviewed consider themselves to come from a high socio-economic background, and suggest that this could facilitate their search for a job when returning to Greece.[175]

An OECD study looking at international mobility specifcally of doctorate holders found that academic factors were the most common reason given for wanting to move abroad (ten of the eleven nationalities surveyed were countries[176])[177]. The same study also found that among returnees holding a doctorate, academic factors were also the most important reason for returning to their country of citizenship. The proportion moving for family reasons was higher amongst returnees than for nationals leaving. This data comes from the Careers of Doctorate Holders dataset, a joint project by the OECD, UNESCO Institute for Statistics and Eurostat.

3.4.2 Labour market integration of high-skilled returnees

Findings from different studies indicate that high-skilled movers have better chances of reintegrating into the labour markets upon return to their countries of origin than returnees with lower skill levels[178]. However, most studies reviewed support the argument that successful reintegration cannot be attributed to any single factor.

The **economic situation** and the labour market in the country of origin at the time of return plays a role. In the Central and Eastern European countries, where profound transformations occurred in the 1990s, it might have been comparatively easier for high-

[173] Hazans, M. (2018), 'What drives earnings of return migrants? Evidence from Latvia', presentation at *New Challenges of Economic and Business Development – 2018: Productivity and Economic Growth conference*, 10-12 May 2018, Riga.
[174] *ibid.*
[175] Labrianidis, L. and Vogiatzis, N. (2012), 'Highly Skilled Migration: What Differentiates the 'Brains' Who Are Drained from Those Who Return in the Case of Greece?', *Population, Space and Place*, Vol. 19(5), Available at: https://doi.org/10.1002/psp.1726.
[176] These were BE, BG, HU, LV, LT, MT, NL, PT, RO, ES.
[177] Auriol, L., Misu M. and Freeman, R. (2013), 'Careers of Doctorate Holders: Analysis of Labour Market and Mobility Indicators', *OECD Science, Technology and Industry Working Papers*, No. 2013/04, OECD Publishing, Paris, https://doi.org/10.1787/5k43nxgs289w-en.
[178] Polish returnees: Coniglio, ND. and Brzozowski, J. (2016), 'Migration and development at home: Bitter or sweet return? Evidence from Poland', *European Urban and Regional Studies*, Vol. 25(1), pp. 85-105. Available at: https://journals.sagepub.com/doi/10.1177/0969776416681625;
Hungarian returnees: Lados and Hegedus, G. (2016), 'Returning Home: An Evaluation of Hungarian Return Migration', *Hungarian Geographical Bulletin*, 65-2016 (4).

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skilled movers to find work upon returning from Western Europe. For instance, according to Klagge and Klein-Hitpaß (2007), opening the Polish market to western companies created a need for expertise on Western markets, their functioning, knowledge of their working culture, as well as language skills acquired abroad. This made employment conditions very favourable for returning Polish movers.

The same study reported that the returnees were working as high-level management staff in international corporations, finance institutions, banking and educational sector, along with others who started their own businesses[179]. That does not mean there was no demand for unskilled labour: western companies targeted CEE countries to set up production plants, creating employment for the latter as well. However, this has evolved into a more sophisticated marketplace, requiring more high-skilled labour, for instance with the arrival of knowledge intensive businesses[180].

Glorius et al. suggested a more complex picture, stating that the success of returning Polish high-skilled movers as innovators is clear but this depends on their soft skills and networks[181]. Others propose an even wider framework: they argue that in order to successfully understand the process of reintegration in the home country, the analysis should take into account the entire experience of the individual abroad, including their failures, mistakes, expectations and other experiences[182].

A 2013 study of high-skilled Greek migrants and returnees found that the contemporary crisis in the Greek economy could have have a dissuasive effect on Greek citizens living abroad returning to the country.[183] They say that the economic crisis has worsened a situation where the Greek economy was already unable to absorb the quantity of high-skilled human capital available. Impacts of the crisis such as cuts in public spending would lead to lesser opportunities for high-skilled people and therefore reduce incentive to return to Greece, or stay in the first place.[184]

Overqualification while working abroad might hamper successful reintegration into the labour market upon return, because if the returnee has been working in jobs below their education level, they will lack relevant experience on which to build their desired career[185]. This was found to be the case, for example, among Polish returnees in the Silesia region[186] and Estonians previously working in Finland[187]. This phenomenon was observed for all education levels, but it was particularly significant for returnees with tertiary education[188].

Others focus on **the work experience acquired before leaving the home country** and its impact on market reintegration upon return. For instance, some researchers argued that new graduates with tertiary education leaving Poland without work experience were more likely to be overqualified for the jobs they find abroad and also at home upon their return. This argument was supported by empirical evidence in later studies[189]. However, it was noted that soft skills learnt whilst abroad could lead to a competitive advantage for

[179] Klagge, B. and Klein-Hitpaß, K. (2007).
[180] Glorius, B. et al. (2013), pp. 7-18.
[181] *ibid.*
[182] Coniglio, ND. (2016).
[183] Labrianidis, L. and Vogiatzis, L. (2012).
[184] *ibid.*
[185] Kurekova, M. and Zilincikova, Z. (2018), 'What is the value of foreign work experience for young return migrants?', *International Journal of Manpower*, Available at: https://doi.org/10.1108/IJM-04-2016-0091.
[186] Coniglio, ND. (2016).
[187] Kurekova, M. and Zilincikova, Z. (2018).
[188] *ibid.*
[189] Coniglio, ND. (2016).

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the returnee compared to non-mobile workers over time. Other studies found that returnees with tertiary education experienced far less skill waste upon return[190].

Another important factor is **how well connected the migrant was to their home country while they were living abroad** and how their length of stay affected those connections[191]. Constant argues that 'While there may be a core/periphery dichotomy, migrants return because of nostalgia'. The migrant might face difficulties upon return if, for instance, they are not well prepared or did not maintain strong ties with their home country[192]. This can also apply to professional networks. Studies focusing on highly educated scientists and academics offer an interesting example. The mobility and migration of this group is almost invisible in the statistics due to their small numbers[193]. Existing studies show that scientists going abroad without securing a 'way back' into the research community at home can face substantial difficulties and fail to utilise the skills gained abroad. One study of Italian scientists found that personal contacts and maintaining networks in academia were very important in arranging a successful return[194].

It can also be argued that returnees can make choices that maximise their chances in the job market. For instance, they might select areas where economic activity is concentrated, rather than going back to their previous place of residence. This was observed in the case of Hungary, where about two-thirds of returnees chose to settle in the greater Budapest area[195].

The afore-mentioned OECD study on careers of doctorate holders who had returned to their country of origin found that international moblity was often one-off and short-term. However, they also found evidence of repeated periods abroad being not uncommon in some countries. At least 30% of returnees in Hungary, Bulgaria, Romania, Spain and Malta had lived or stayed abroad between two and four times in the previous ten years.[196] As the researchers note, this might reflect the implementation of education and research policies designed to attract those with highest qualifications, as well as the 'globalisation of education and research systems', and therefore would be particular to this elite group.[197]

3.4.3 High-skilled returnees' contributions to the country of origin's economy

There is abundant literature on the impact of migrants on the economy of the receiving country, but there is little knowledge of their contribution to their home country once they return. The impact of their time abroad on career development and professional prospects is equally understudied[198]. Available studies suggest complex interdependencies between multiple factors. For instance, one study on Poland found that the extent to which the home country benefitted from returnees' newly acquired skills depended on the region[199].

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[190] *ibid.*
[191] Apsite-Berina, E. et al. (2019), 'The ambiguity of return migration: prolonged crisis and uncertainty in the life strategies of Romanian and Latvian Returnees', *International Migration,* Vol. 58(1).
[192] Constant, A. (2019), 'Return, Circular, and Onward Migration Decisions in a Knowledge Society', *GLO Discussion Paper*, No. 411. Available at: https://www.econstor.eu/bitstream/10419/204509/1/GLO-DP-0411.pdf.
[193] Gill, B. (2005), 'Homeward Bound? The experience of return mobility for Italian scientists', *The European Journal of Social Science Research*, 18(3), 319-341. Available at: http://dx.doi.org/10.1080/13511610500186698, pp. 319-341.
[194] *ibid.*
[195] Lados, G. and Hegedus, G. (2016).
[196] Auriol, L., et al. (2013).
[197] *ibid.*
[198] Apsite-Berina, E. et al. (2019).
[199] Coniglio, ND. (2016).

Martin and Radu (2012) cited studies that identified similar patterns, such as highly skilled migrants earning 25% more upon return (e.g. in Romania) and a study that found that the positive impact was more significant among returnees with higher education[200]. Another study with 6 120 returnees from CEE and Central Asia found that length of stay, knowledge of the host country and on-the-job skills acquired abroad had a positive impact on earnings on return[201].

Policies aimed at incentivising return mobility have been adopted in several Central, Eastern and Southern European countries. Typically these policies offer tax incentives or employment opportunities in the country of origin.[202] There have also been 'diaspora strategies' designed for maintaining a contact with movers whilst they are abroad. These strategies both encourage return mobility and inform movers about ways that they can contribute to their home country, such as through remittances or investment, knowledge networks or social investments in charities[203].

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[200] Martin, R. and Radu, D. (2012), 'Return Migration: The Experience of Eastern Europe', *International Migration* Vol. 50 (6) 2012.
[201] *ibid.*
[202] ESPON (2017). For a list of examples of such policies from EU countries, see pp. 52-53 of the ESPON study.
[203] *ibid.*

4 MOBILITY AND DEMOGRAPHIC CHANGE

Key findings

Upcoming demographic change

- According to demographic projections from both Eurostat and IIASA, the EU as a whole will experience its population getting older in the future.
- All age groups below 60 see a decrease in their size as a proportion of the whole population, especially those between 20 and 39 years. Older age groups see large proportional increases, from previously low shares.

Age as a determinant of the likelihood to move

- Evidence based on EU-wide representative and comparable data and a broad literature review on determinants of intra-EU labour mobility show that there is a significant association between age and the likelihood to move and that persons of young working age (20 to 39 years) are the most likely to move.
- This is confirmed by a comparison of outflow rates (the shares of those leaving in each age group) across ten-year age groups between 2009 and 2019. Throughout the past decade, in all major sending countries[204], people aged 20 to 29 and 30 to 39 have had higher annual outflow rates than other age groups.

Projections of mobility flows of EU movers

- When taking into account past outflow rates for different age groups, an estimate can be made of how demographic ageing affects the size of future European labour mobility flows, all other factors held constant.
- All other factors kept aside, based on the above-mentioned outflow rates population ageing would result in the following change in flows until 2030: a small increase in outflows of nationals aged 70 and above, and for most countries also for the 60 to 69 group; flows of working-age movers (20 to 59 years) would see a decrease of 109 600 movers in total, most strongly among the younger working age groups.
- These changes are then reflected in inflows to three important destination countries (Austria, the Netherlands and Spain), where there is a general decrease in incoming working-age movers and an increase in those of older age.

Impact of demographic change on key drivers of mobility

- Economic disparities between Member States are a major driver for mobility as they translate into differences in salaries, job opportunities and living conditions. Convergence, especially between the Eastern and Western Member States has been progressing over the past decade, but slowly. Adverse economic effects of demographic ageing may put further growth and convergence at risk, especially because it affects the size of the labour force.
- Projecting key economic indicators as a function of, among other, population changes, shows that economic growth is expected to decline constantly in the Eastern European key sending countries (Bulgaria, Romania and Poland), while it is expected to increase further (after a dip until 2030) in the main Western receiving countries, including Italy and Spain.
- Eastern European countries especially might therefore see a reinforcing effect between population ageing and outward mobility, if labour market developments would not incite more young persons to stay or return to the country. On the other hand, Italy and Spain might see a further reduction in outflows and might grow in importance as destination countries again.

[204] Romania, Bulgaria, Italy, Spain, Germany, Poland.

- One strategy to face increasing dependency ratios is the further labour participation of women. In terms of mobility, this is likely to lead to an increase in the activity rate of women who have already moved in the past, but also to increased outflows of female workers from sending countries.
- Persons with higher education levels are more likely to move to another country. Furthermore, more and more persons are projected to acquire high education levels with largest increases in some important sending countries like Italy, Romania, Poland and Bulgaria. Furthermore, as mobility is more frequent among younger citizens, that means that the proportion of young people who move to another country might increase substantially.
- One economic sector that will clearly be affected by population ageing is the health and long-term care sector. Movers already constitute an important part of its labour force and increased demand is likely to constitute an important pull factor from countries with higher salaries, also in future. Furthermore, women of middle or older working age are an important pillar of the long-term care workforce, whose size is likely to grow with population ageing also in the sending countries.

Impact of demographic change on forms of short-term mobility

- Data on cross-border workers by age group indicates that cross-border work is also most frequent among persons of young working age and the likelihood decreases with age. Thus, similar inferences may be made about the effects of demographic change as those described above for mobility in general.
- Furthermore, posting might increase particularly in the health and long-term care sector, triggered by the rise in demand described above.
- Return mobility is also most frequent among young persons and decreases with age until retirement, after which the likelihood to return increases again. Return mobility therefore seems crucial in dampening the circular effect of population ageing and outward mobility in sending countries, since it may dampen the negative economic effects of both.

Impact of changing mobility flows on sending and receiving countries

- A continuation of mobility flows at similar rates as over the past decade in combination with population ageing will result in population declines of up to 40% in the Eastern European Member States. In the absence on mobility, these declines would be considerably smaller.
- In Spain and Italy, only small population decreases are projected, although also slightly stronger if mobility flows continue as at present.
- In the main Western receiving countries, mobility is expected to contribute to the net foreseen population growth.

4.1 Introduction

European countries are experiencing demographic changes, with the population predicted to age considerably. According to the European Commission's 2018 Ageing Report, the population of the EU-27 will decrease from 445 million in 2016 to 439 million in 2070, and the working age population (15-64 years) will decrease, from 291 million in 2016 to 246 million in 2070[205]. This is mainly the result of increased longevity and a sharp decrease in fertility rates in the decades between the 1960s and 2010, after the post-war 'baby boom' peak until the second half of the 1960s[206].

[205] European Commission (2018b), *The 2018 Ageing Report. Economic and Budgetary Projections for the EU Member States (2016-2070)*, Directorate-General for Economic and Financial Affairs, Institutional Paper 079, p. 3.
[206] *ibid.*, p. 16;

Although fertility rates have increased between 2010 and 2015 in almost all Member States[207] and are expected to rise in almost all Member States, the Joint Research Centre (JRC) notes that 'neither high fertility nor more migration will stop population ageing'[208]. Due to the decline in the working-age population, the share of persons older than 64 years will continuously increase until 2060, going from 21% of the population in the EU-27 to 30%[209].

Population ageing is likely to affect the labour market and the pension systems – areas that have increasingly been investigated in the past years. However, population ageing may also have an impact on intra-EU labour mobility in different ways. Important demographic projections usually take into account assumptions and scenarios for prospective migration flows when estimating population changes[210], accounting for its importance (next to fertility and life expectancy) as a driver for such changes. Nevertheless, the JRC notes that studies usually focus on the impact of migration on population ageing, rather than on the impact of population ageing on mobility (or migration) flows[211]. Furthermore, estimations of future migration usually refer to migration as a whole (including from and to third countries and including third country nationals).

Therefore, this thematic chapter looks at potential effects of population ageing specifically on intra-EU mobility (mobility of EU citizens within the EU). It aims to shed light on the following questions:

- How is age linked to the likelihood to move? What evidence is there on age as a driver of mobility?
- As shown in previous research, young persons tend to be more mobile[212] which leads to the assumption that a declining group of young persons in traditional sending countries would lead to reduced mobility flows overall – does data confirm this and if yes, what is the magnitude of such a decline?
- How might demographic change affect other key drivers of labour mobility, especially those linked to sending and receiving countries' macro-economic contexts?
- How might demographic change affect mobility spells, and especially, different types of short-term mobility, such as cross-border work or posting?
- If mobility flows change due to population ageing, how might that affect sending and receiving countries?

Section 4.2 starts the analysis by sketching out the upcoming demographic change over the next decades. Subsequently, section 4.3 summarises existing evidence on how a person's age influences their likelihood to move, concluding that people of young working age are in general more likely to move; part of the indications of this are the differences in age-specific mobility rates. Based on these age-specific mobility rates, section 4.4. shows to what extent the change in the age structure of the population of key sending countries would affect mobility flows, all other factors left aside. Section 4.5 then discusses possible effects of demographic change on other key drivers of mobility, especially related

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Lutz et al. (2019), *Demographic Scenarios for the EU: Migration, Population and Education*; EUR 29739, EU Publications Office, Luxembourg, p.19.

[207] European Commission (2018b), p.16.

[208] Lutz, W. et al. (2019).

[209] European Commission (2018c), *The 2018 Ageing Report. Economic and Budgetary Projections for the EU Member States (2016-2070)*, Annex 'Country fiches'

[210] E.g. European Commission (2018b); Eurostat data code 'proj_19np'; Lutz, W. et al. (2019).

[211] For example, Bijak, J. et al. (2007), 'Population and labour force projections for 27 European countries, 2002-2052: impact of international migration on population ageing', *European Journal of Population*, 21(1), pp. 1–31.

[212] Zaiceva, A. (2014), 'The impact of aging on the scale of migration', *IZA World of Labor 2014*: No. 99.

to the economic context in the Member States. Section 4.6 discusses what demographic change might mean for more short-term forms of mobility. Section 4.7 closes the chapter by briefly discussing what the changes in mobility due to demographic changes might imply for sending and receiving countries.

4.2 Upcoming demographic change

Useful simulations of demographic change in the EU are produced by Eurostat. In addition to data on the demographic structure of European countries, going back to the 1960s[213], Eurostat produces projections of population size by sex and age group[214]. These are produced annually, covering the time period from the current year to 2100, based on a set of assumptions on fertility, mortality and migration[215]. The model acknowledges that 'special events', most recently the COVID-19 pandemic and Brexit, will affect these projections in an unforeseen manner.

Demographic projections indicate an ageing of European countries, all age groups below 60 see a decrease in their size as a proportion of the whole population

Two projection scenarios are presented by Eurostat. The first takes into account projections relating to migration and the mobility of people, while the second is a sensitivity check in the form of a no-migration scenario, where only fertility and mortality are included in the population projection. The scenario is explicitly one of gradual socioeconomic convergence between EU Member States, based on this being an expressed long-term goal of many EU policies. Partial convergence is therefore also expected for the components of demographic change (fertility, mortality and international migration)[216]. Inevitably, such projections are imperfect. Assumptions need to be made for all components and projections only hold true if those assumptions are met. Nevertheless, demographic projections present the best prediction based on available data and illustrate how demographic structures may differ, depending on how certain variables change, if all other components are held equal.

The historical demographic age structure and the age structure predicted until 2050 by Eurostat are presented in **Figure 60**, expressed as a percentage of the total population of that year. Here the baseline scenario is presented, i.e. including assumptions on immigration and emigration (hence TCNs too), to illustrate how the projected population structure compares with the recent past. To facilitate comparison of the 2010 and 2050 totals per age group, **Figure 61** presents the pps difference in population per group.

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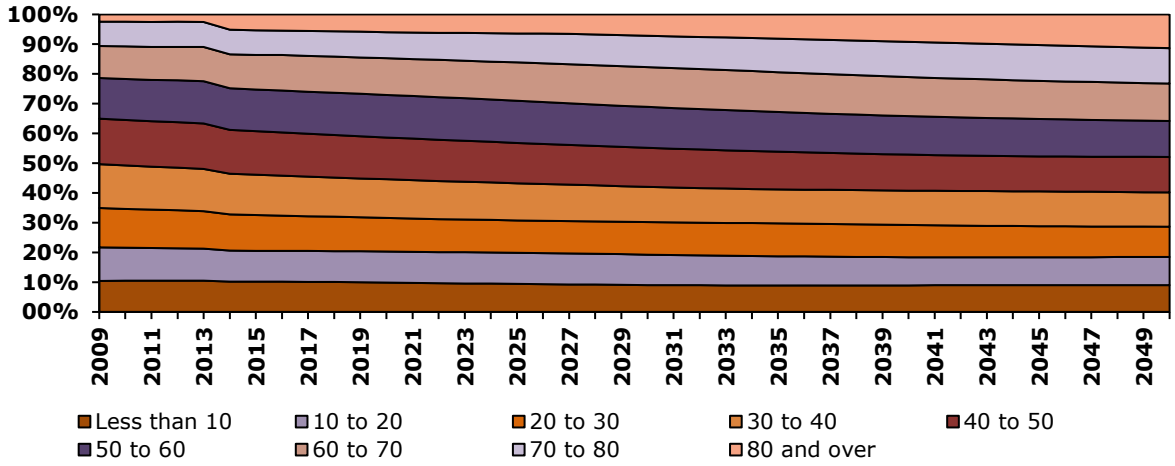
[213] Eurostat, data code 'demo_pjan'.
[214] Eurostat, data code 'proj_19np'.
[215] The 2019 methodology is described in full in Lanzieri, G. (2020), *Technical Note: Methodology of the Eurostat population projections 2019-based (EUROPOP2019)*, Eurostat, ESTAT/F-2/GL, Available at: https://ec.europa.eu/eurostat/cache/metadata/Annexes/proj_esms_an1.pdf.
[216] *ibid.*, p. 2.

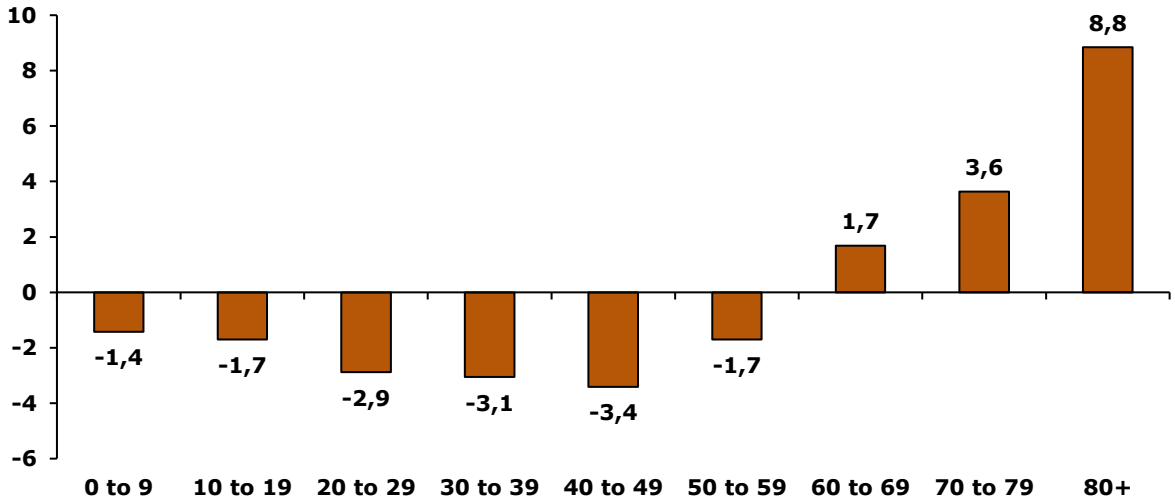
Figure 60: Demographic structure, by age group, using historic (2018 and earlier) and projected (2019 and forward) data, EU-27, groups expressed as % of total population, 2010-2050.



BOTH HISTORIC AND PROJECTED POPULATIONS INCLUDE TCNS. AS EUROSTAT PROJECTIONS CANNOT BE FILTERED BY CITIZENSHIP, THESE ARE ALSO INCLUDED IN PRE-2019 DATA TO FACILITATE COMPARISON.

SOURCE: EUROSTAT DATA ON POPULATION ON 1 JANUARY BY AGE AND SEX [DEMO_PJAN] (EXTRACTED JUNE 2020), AND POPULATION ON 1 JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020), MILIEU CALCULATIONS.

Figure 61: Difference in population size, by age group, EU-27, pps change in share of total population, 2010-2050.



INDICATED PERCENTAGE CHANGES MEASURE THE RELATIVE DIFFERENCE BETWEEN 2050 AND 2010 COHORT SIZES.

SOURCE: 2018 AND EARLIER: EUROSTAT DATA ON POPULATION ON 1 JANUARY BY AGE AND SEX [DEMO_PJAN] (EXTRACTED JUNE 2020); 2019 ONWARD: POPULATION ON 1 JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); MILIEU CALCULATIONS.

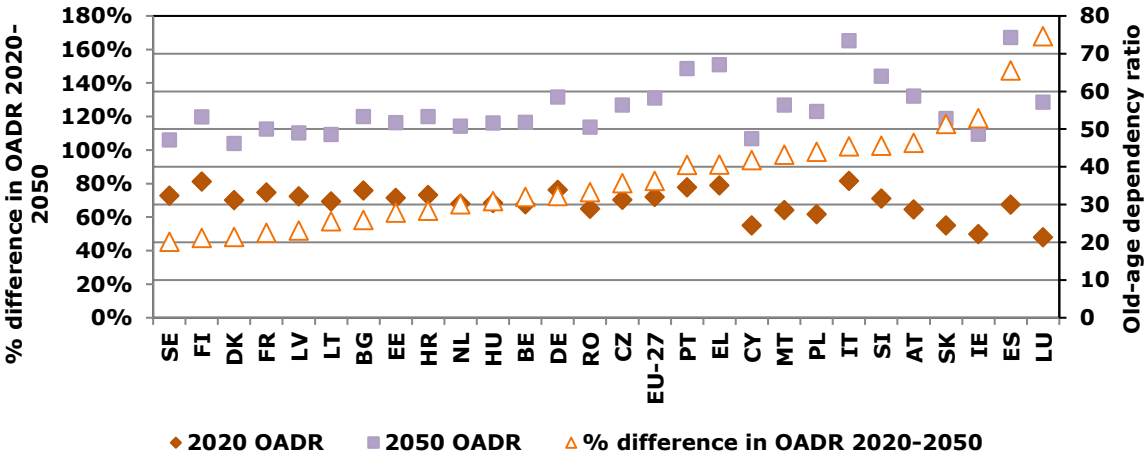
The projections show a slow but steady decrease in younger age groups and a strong increase in older age groups, stemming from overall increases in lifespan. These patterns will be of varying severity for different countries, depending on a range of factors such as current age composition and migration flows. A high level of inward migration or mobility is generally associated with a younger population, as migrants and movers tend to be younger. Likewise, countries already experiencing population ageing may see less dramatic changes than countries that today still have a comparatively low share of an older population.

A compact and widely used indication of population ageing can be obtained from the old-age dependency ratio (OADR) in the Member States (i.e. the ratio of citizens aged 65 and above, to citizens aged 15-64 when they are more likely to be active). This indicates

whether a country's population is, on balance, leaning towards the 'productive' (tax-paying, wage-earning) or the ageing (pensions, social payments) population. Capturing the situation in a single figure, the OADR allows a quick comparison of demographic changes across countries.

As an illustrative example, **Figure 62** uses the Eurostat population size projections to illustrate the projected percentage change in Member States' OADR from 2020 to 2050[217]. To put this into perspective, the EU-27 OADR is 32 in 2020, rising by 82% to 58 in 2050. This means that in 2020, there are three persons of working age for every person above 64 years, while in 2050, there will be closer to two persons of working age for every person above 64 years. For the main sending countries, the picture varies in severity. France has among the lowest increases at 51%, but their OADR is already comparatively high. Spain and Poland, by contrast, see some of the highest increases in Europe, while Romania (75%) and Germany (73%) are closer to the EU-27 average. In absolute terms, Germany and Poland are assumed to have a 2050 ratio around the EU-27 average of 55, while France and Romania will be below this level. On the other hand, Spain (74) and Italy (74), are estimated to have the highest OADR in the EU-27 by 2050.

Figure 62: Projected percentage increase in the OADR of EU-27 Member States, 2020-2050, and absolute values for 2020 and 2050[218]



THE LEFT Y-AXIS SIGNIFIES THE PROPORTIONAL INCREASE IN VALUES FROM 2020 TO 2050. THE RIGHT Y-AXIS DISPLAYS THE OADR IN A GIVEN YEAR (2020 OR 2050), EXPRESSED AS THE NUMBER OF NON-WORKING-AGE PEOPLE TO 100 WORKING-AGE PEOPLE. THE PROJECTION USES THE NO-MIGRATION SCENARIO PROVIDED BY EUROSTAT.

SOURCE: POPULATION ON 1 JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); MILIEU CALCULATIONS.

4.3 Age as a determinant of the likelihood to move

The key element of demographic change is that in the future there will be more old people, and fewer young people. Looking at the implications for mobility, one aspect to examine is: are certain age groups more likely to move than others? Do age groups differ in the types of mobility they engage in? And how would, therefore, a change in the proportion of the age groups in the EU Member States, affect future mobility flows?

[217] The exercise uses the no-migration scenario of the projections data to be in line with the quantiative estimates in Seciton 4.4. The projections should therefore be seen as illustrative, as they do not assume any population change due to in- or outflows to the countries.
[218] For a full list of Member State ratios in 2020 and 2050, as well as absolute increases, see Table A24 in Annex B.4.

This section first briefly summarises empirical evidence from previous studies on age as a determinant for mobility. It then presents calculations of age-specific outflow rates in the past as a first indication of the different mobility behaviours between the age groups.

Both the age-specific outflow rates and evidence from literature show that there is a link between age and the likelihood to move to another country and, more specifically, that persons of young working age are most likely to move.

One key reference for determinants of intra-EU mobility is a literature review from 2018 on the 'Determinants of migration flows within the EU'[219], produced in the framework of the EU-funded REMINDER project[220], which reviews recent empirical studies on determinants of mobility within Europe. Due to its specific focus on intra-EU mobility, this review covers much of the literature relevant for the questions of interest here. Further studies referenced were chosen on the basis that they provide a quantitative, comparative analysis of different drivers of intra-EU labour mobility, which are considered the most reliable for conclusions on EU-wide drivers. However, cross-national, multivariate studies focusing solely on intra-EU mobility (i.e. not looking at migration in general) are very rare.

A regression analysis based on EU-LFS data quantified the effect of different drivers of intra-EU mobility and found that 'higher age strongly reduces the odds of crossing borders within the EU'[221]. In 2014, the IZA reviewed quantitative evidence from previous studies and found that 'many studies (using individual data) show that the highest probability for migrating is between the ages of 20 and 30 years old'[222]. Similarly, the REMINDER literature review found that 'young and highly educated are more inclined to move within Europe' and that 'among those with high future mobility intentions, 75% are below 35 years'[223]. According to Eurobarometer results, 25-39-year olds 'are most likely to have worked or currently work in another European country (12%), compared to those in the 40-54 age group (9%) and those older than 55 years (7%)'[224].

A study on the 'effect of age on sensitivity to migration stimuli' from the UK found that the importance of certain determinants of mobility are highly age-specific. It found that young people are particularly responsive to labour market disparities, while these effects 'decline through the lifecycle'. As people age, the more significant disparities in housing prices and amenities become[225].

Nevertheless, the same study also found that '(…) after a decline at the age of 30 there might be another peak of migration at the older age and, in particular, following retirement, reflecting return migration'[226]. While those moving after retirement is not the most significant group of movers at EU level, they are numerous in some destination countries (HR, MT, PT, ES, EL), especially in the smaller countries[227]. A large proportion of these mobile pensioners come from the UK and this kind of retirement mobility might decline after the end of 2020. Nevertheless, demographic changes may result in an increase of

[219] Strey, A. et al. (2018), *Determinants of migration flows within the EU. Literature review*, Maastricht University, Maastricht.
[220] REMINDER (Role of European Mobility and its impacts in narratives, debates and EU reforms) was funded under Horizon 2020 and included 12 Work Packages, one of which was on 'determinants of migration', www.reminder-project.eu.
[221] European Commission (2016), *Employment and Social Developments in Europe 2015*. Available at: https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7859, p. 170.
[222] Zaiceva, A. (2014), p. 4.
[223] Strey, A. et al. (2018), p.16.
[224] *ibid.*
[225] Millington, J. (2000), 'Migration and Age: The Effect of Age on Sensitivity to Migration Stimuli', *Regional Studies*, Vol. 34(6), pp. 521-533.
[226] Zaiceva, A. (2014).
[227] Fries-Tersch, E. et al. (2017), *2016 Annual Report on Intra-EU Labour Mobility*, Network Statistics FMSSFE, European Commission, Brussels, p. 14.

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inflows of retired persons and may have effects on the destination countries' healthcare and long-term care systems.

The greater likelihood to move at a younger age is reflected in age-specific mobility rates. The following describes the age structure of mobility in the past 10 years. It looks at age-specific outflow rates from the main countries of origin, which feed into the projections in section 4.4 reflecting how demographic changes in countries of origin will affect mobility. The 10-year time span was chosen because Eurostat provides comparable data on outflows from the main countries of origin in the EU (BG, DE, ES, IT, PL, RO) since 2009. It also mirrors different phases of the economy, starting from early in the economic crisis to improvements in recent years.

Comparing outflow rates[228] of those six main countries of origin shows clear age group differences in the likelihood of moving, with those aged 20-39 being by far the most mobile.

For the six main sending countries in the EU, those aged 20-39 are significantly more mobile than other age groups.

Outflow rates are particularly skewed towards the group of 20-29 year olds in **Romania**, where the outflow rates were generally higher than in the other sending countries. In the period following the end of the transitional arrangements for citizens from Romania and Bulgaria (after 2014), the outflow rates of these young workers from Romania increased strongly, to at least double those of any other age group. A similar development is evident in **Bulgaria**, although the difference between 20-29-year olds and the other age groups is not as pronounced and outflow rates are generally lower than those of Romania. Interestingly, in both countries, the outflow rates of 10-19-year olds came close to those of 30-39 year olds in recent years, especially in Romania. In both countries, there was a marked decrease in the shares of 20-29-year olds among the total population between 2012 and 2019, which seems to be a combined effect of demographic changes and outward mobility.

In **Poland**, workers of a slightly higher age (30-39 years) were most likely to move, especially since 2011, followed by 20-29-year olds and 40-49-year olds. Since 2013, outflow rates of 20-29-year olds approached those of 40-49-year olds. Overall, there was a slight decrease in outflow rates from Poland since 2013.

In **Italy** and **Spain**, outflow rates among 20-29-year olds and 30-39-year olds were similar, and substantially higher than those of other age groups (in Italy, almost three times as high, with a smaller difference in Spain). Outflow rates in Italy increased strongly between 2011 and 2016 and have since remained stable. In both Spain and Italy, the outflows of the younger working-age groups (20-39 years) became visible in the total population, as their shares declined markedly over the past decade, while the shares of all other groups remained stable or increased.

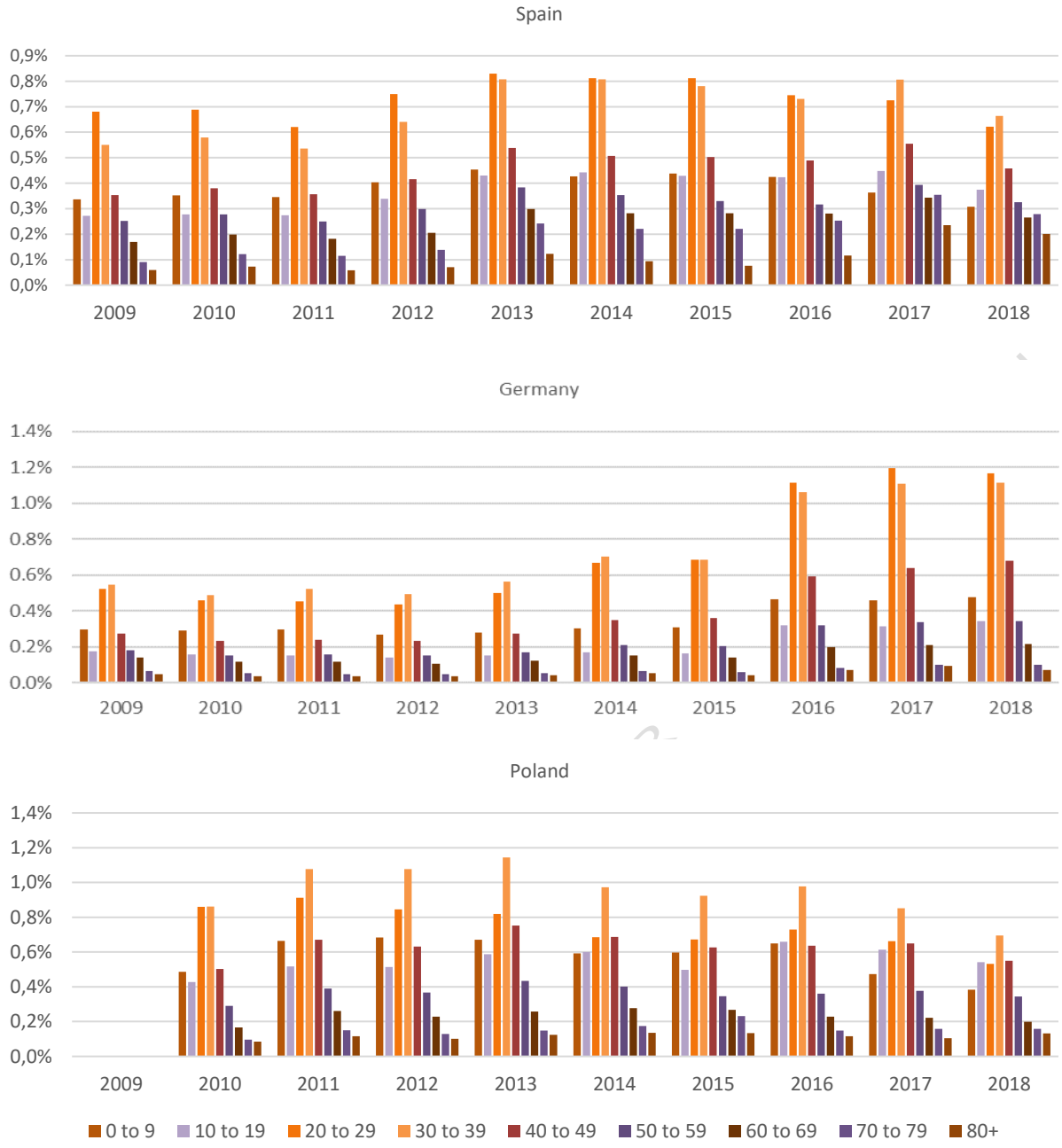
In **Germany**, outflows of persons of young working age (20-29 years and 30-39 years) were similar, and almost twice as high as those of other age groups since 2009. Overall, there was an increase in outflow rates from Germany in recent years, especially since 2016. This increase is likely amplified by methodological changes[229]. Although outflow rates were

[228] Outflow rates are calculated as those EU-28 nationals leaving or arriving in a certain country in a specific year, as a share of the total population in the origin country in the same age group.
[229] Changes in data processing and the reported reference period in the German flow statistics meant that data from 2016 were comparatively lower than 2015, and data from 2017 was already reported in 2016. These changes are considered to have affected mainly flows of German citizens (which would still influence overall net mobility figures), with comparability over time of flows of EU/EFTA movers only minimally affected. Source: Reply to written enquiry to the German Statistical Office, 18/11/2019; methodological explanations, Available

highest among 20-39-year olds, the share of these groups in the total population remained stable, while 40-49-year olds decreased strongly. This is likely to have other causes, such as the ageing of the so-called 'baby boom' generation (those born after the second World War up until the late 1960s).

Figure 63: Outflow rates of nationals and EU-27 movers from main sending countries, by age group

at Destatis website: https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Bevoelkerungsstand/Methoden/Erlauterungen/methodische-hinweise-2016.html?nn=209080



OUTFLOW RATES ARE CALCULATED AS THOSE EU-28 NATIONALS LEAVING OR ARRIVING IN A CERTAIN COUNTRY IN A SPECIFIC YEAR, AS A SHARE OF THE TOTAL POPULATION IN THE ORIGIN COUNTRY IN THE SAME AGE GROUP.

MISSING DATA FOR PL FOR 2009 AND FOR RO FOR 2009-2011

BREAKS IN SERIES: BG (2012), DE (2009, 2016, 2017), PL (2009)

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

4.4 Projections of mobility outflows and inflows for selected countries

Section 4.3 above showed that younger persons are more likely to move. This leads to the assumption that if outflow rates remain similarly age-specific, but the younger population in significant countries of origin declines, this would lead to a decrease in flows. This section therefore presents a projection of how flows of movers in Europe may change over the next decade, if the age-based mobility rates of the past years shown above remain constant. Changes in outflows from key sending countries (Bulgaria, Germany, Italy,

Poland, Romania and Spain) and in inflows to three key destination countries (Austria, the Netherlands and Spain[230]) were calculated, based on average age-specific outflow rates over the past ten years as presented above and the projected change in the age composition in the countries of origin (for data and methodology, see Annex A.4).

Quantifying estimations of the future scale of labour migration is very challenging. The European Commission's Ageing Report 2018 acknowledges that 'net migration projections typically are the most methodologically difficult, with high volatility across time and countries'[231]. Three methods are used by scholars to forecast future migration (or to forecast future migration from new countries to EU Member States).

The first – the so-called survey-based approach – estimates migratory potential on the basis of the responses of a representative sample of the population to a set of questions about their propensity to migrate. The second method is based on simple extrapolations from previous trends, particularly those similar in nature. The third method uses econometric models and links migration processes to a set of socioeconomic factors in countries of origin and destination[232].

A recent joint publication of the JRC and the International Institute for Applied Systems Analysis (IIASA) is one of very few exercises to develop future scenarios for intra-EU mobility, with a focus on the effect of changes in intra-EU mobility on total population sizes[233]. Projections were made up to 2060. As the results on the flows are not included in the publication (only the impact on population size), they cannot be compared to the projections below.

4.4.1 Sending countries – steady increase in outflows

At an EU-27 aggregate level, there is an expected pattern of **large absolute decreases in working-age outflows and small increases in old-age outflows** in the 2020-2030 period. This can be observed both for outflows in absolute numbers and as shares of the national population in the same age group in the sending country (**Figure 64** and **Table 15** below). This trend is also broadly the case in the main sending countries, as described in more detail below.

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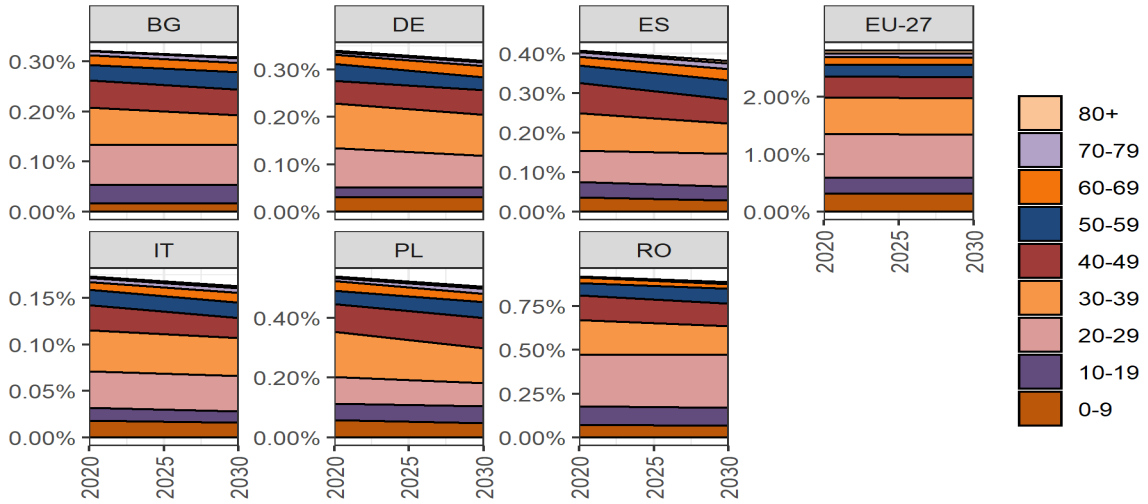
[230] These countries were chosen because they are among the countries of destination and for which the necessary data was available, namely data on inflows by age AND individual nationality, since estimations are based on changes in defined countries of origin.
[231] European Commission (2018b), p. 19.
[232] Bauer, K. and Zimmerman, K.F. (1999), 'Assessment of Possible Migration Pressure and its Labour Market Impact Following EU Enlargement to Central and Eastern Europe', *IZA Research Report*, IZA, Bonn;
Boeri, T. and Brücker, H. (2001), 'Eastern Enlargement and EU Labour Markets: Perceptions, Challenges and Opportunities', *IZA Discussion Paper*, Series No. 256, IZA, Bonn;
Fertig M. and Kahanec, M. (2015), 'Projections of potential flows to the enlarging EU from Ukraine, Croatia and other Eastern Neighbors', *IZA Journal of Migration*, 4(6).
[233] Lutz, W. et al. (2019).

Figure 64: Outflows from main sending countries 2020-2030, expressed as % of national population, by age group[234]



PREDICTED FLOWS ARE BASED ON AVERAGE OUTFLOWS BY AGE GROUP AND THE AVERAGE YEAR-TO-YEAR CHANGES IN OUTFLOWS BY AGE GROUP FOR THE 2009-2018 PERIOD, OR AS FAR BACK AS DATA WERE AVAILABLE.

SOURCE: EUROSTAT DATA ON POPULATION ON 1 JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Across all age groups, this results in an absolute decrease of annual outflows of 119 000 EU-27 nationals (or 8%) between 2020 and 2030 (**Figure 65** and **Table 15** below). In 2020, the outflows of EU-27 nationals was 1.49 million, while the outflows in 2030 are projected to be 1.37 million.

With demographic ageing, lower total outflows are expected in 2030 compared to 2020.

It should be kept in mind that the decreases refer to differences in annual outflows between 2020 and 2030, both in total numbers as well as in shares of the total national population. The absolute decreases in outflows vary from -2 400 in Bulgaria to -26 700 in Germany. Given that this refers to annual outflows, the cumulative effect over 10 years that will show in the stocks is envisaged to be larger.

A projected absolute decrease in annual flows across the EU as a result of an ageing population was also mentioned in a modelling exercise by the JRC for the purpose of estimating effects of changes in intra-EU mobility on the population in sending and receiving countries. For this purpose, three scenarios of intra-EU mobility were calculated. The central scenario[235] of flows also shows that if 'intra-EU mobility rates are held constant, (this will) lead to fewer emigrants from the main sending Member States, due to their smaller and ageing populations. For example, emigration to other EU countries from Poland is projected to decline from 903 000 in 2015-2019 to 604 000 in 2055-2060 under this assumption of constant age-specific emigration rates'.

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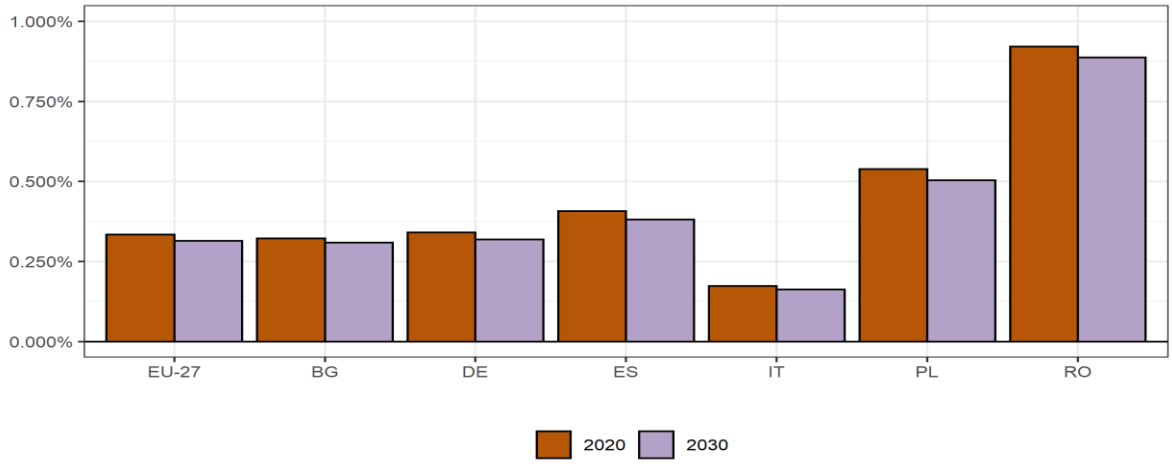
[234] Table A25 in Annex B.4 shows the data for all countries.
[235] Lutz, W. et al. (2019), chapter 4. Three scenarios were developed for estimating this prospective impact on the EU population: 1) a 'central scenario' where intra-EU mobility rates were held constant; 2) a 'no intra-EU mobility scenario', assuming no mobility between Member States; 3) a 'double intra-EU mobility scenario' where the intra-EU mobility rates used in the central scenario were doubled.

Figure 65: Total projected outflows from main sending countries as a percentage of the national population, 2020-2030



PREDICTED FLOWS ARE BASED ON AVERAGE OUTFLOWS BY AGE GROUP AND THE AVERAGE YEAR-TO-YEAR CHANGES IN OUTFLOWS BY AGE GROUP FOR THE 2009-2018 PERIOD, OR AS FAR BACK AS DATA WERE AVAILABLE.

SOURCE: EUROSTAT DATA ON POPULATION ON 1 JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

A more detailed analysis of the developments by age groups in the individual countries shows the following (see **Table 15** and **Figure 66** below):

- All countries have increases in **outflows of persons of retirement age** (**70 years or above**). The outflows of this age group are in general very small – in 2020, they were around 40 000 at EU-27 level and are projected to increase to around 48 000 in 2030 (see **Table A26 in Annex B.4** for all absolute numbers). This is an **increase of 20%** which, in relative terms, is not so small. In all the countries analysed, the total outflows of this age group remained and will remain below 10 000.
- Another group which will see an increase in outflows is the **60 to 69-year-olds**. This is an interesting group, because due to prolonged working time and delayed retirement in the future, it **may include both retired persons and older workers**. This group makes up roughly 5% (or 72 000) of all outflows in 2020. At EU level, the outflows are **projected to increase by 8%** to 78 000 in 2030. However, this trend is not observed in all the countries – only Germany, Spain and Italy see a similar pattern of increases for 60-69-year olds, while outflows of this age group grom the Eastern European countries (where they are already very small) are projected to decrease.

On an EU level, outflows in all age groups under 60 are expected to decrease – most notably so for 30-39-year-olds and 20-29-year-olds.

- Changes in **outflows of working age (20 to 60 years)** are somewhat bigger, with **decreases in most age groups and countries**. At EU-27 level, outflows of all age groups below the age of 60 decrease; the total outflows of 20-49-year olds decrease by -105 200 (or -11%), with over half of those losses in the 30-39-year old category. In Bulgaria, Spain, Poland and Romania, between 20% and 30% fewer EU citizens aged 30-39 years would leave in 2030 than in 2020. In Germany and Italy, the decrease is smaller but in Germany it is still considerable in total numbers (-8 900). Outflows of 20-29-year olds would be around 20% less for Germany and Poland (amounting to a decrease of -14 400 in Germany). In the other countries, the decrease remains below 10%.

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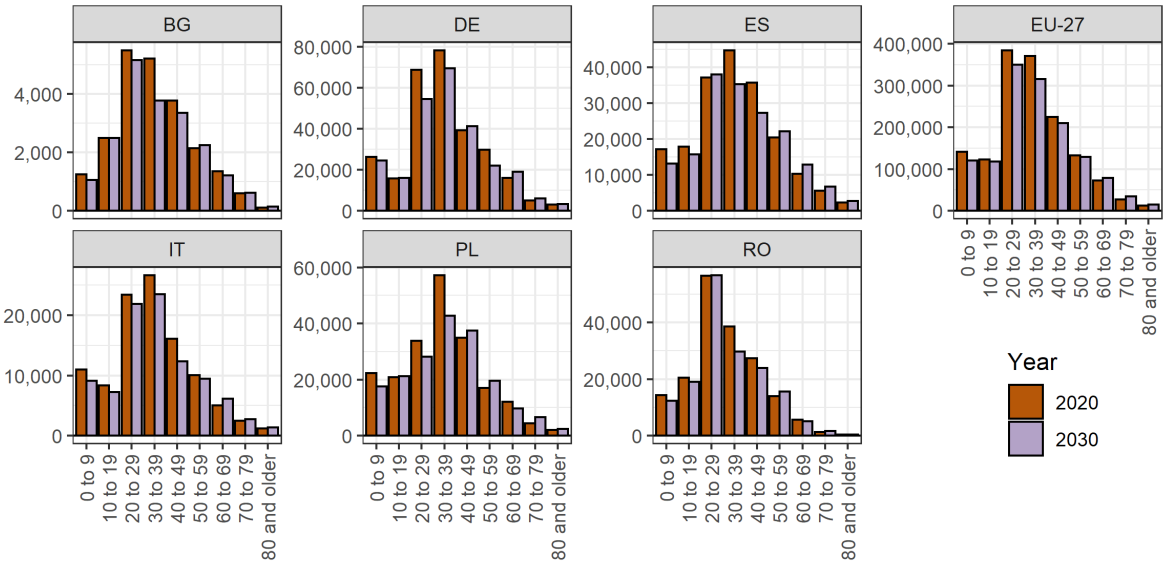
- Some deviations from the trend are found in individual countries: for 20 to 29-year olds, small increases are projected for Spain (+2% or +900) and Romania (+1% or +300). For the older working-age groups, slightly larger changes are found: for 40 to 49-year olds, both Germany (+5% or +1 900) and Poland (+7% or +2 500) increase, and for 50 to 59-year olds, Bulgaria, Spain, Poland and Romania all see different degrees of increase. However, this should be compared with a decrease of -26% (or -7 800) in Germany for this age group.

Figure 66: Projected outflows from main sending countries, by age group, 2020-2030, absolute figures, average change scenario



SOURCE: EUROSTAT DATA ON POPULATION ON 1ST JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

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Table 14: Absolute (thousands) and relative differences (%) in projected outflows 2020-2030, EU-27 aggregate and main EU sending countries

		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	Total
EU-27	Δ	-20.0	-4.7	-35.4	-55.6	-14.2	-4.4	6.0	6.4	2.6	-119.3
	%	-14.2%	-3.9%	-9.2%	-15.0%	-6.3%	-3.3%	8.3%	23.5%	21.4%	-8.0%
BG	Δ	-0.2	0.0	-0.3	-1.5	-0.4	0.1	-0.1	0.0	0.0	-2.4
	%	-15.3%	0.0%	-6.2%	-27.9%	-10.9%	5.6%	-10.0%	2.8%	23.7%	-10.6%
DE	Δ	-1.8	0.1	-14.4	-8.9	1.9	-7.8	3.1	1.0	0.2	-26.7
	%	-7.0%	0.8%	-21.0%	-11.3%	4.7%	-26.3%	19.6%	19.4%	8.3%	-9.5%
ES	Δ	-4.1	-2.2	0.9	-9.5	-8.4	1.8	2.6	1.1	0.5	-17.2
	%	-23.7%	-12.1%	2.4%	-21.2%	-23.4%	9.0%	25.0%	19.3%	23.1%	-9.0%
IT	Δ	-1.9	-1.2	-1.5	-3.2	-3.8	-0.7	1.1	0.2	0.2	-10.6
	%	-16.9%	-13.8%	-6.5%	-12.0%	-23.5%	-6.5%	22.1%	9.6%	17.2%	-10.2%
PL	Δ	-4.8	0.4	-5.6	-14.5	2.5	2.5	-2.4	2.2	0.5	-19.2
	%	-21.4%	1.8%	-16.6%	-25.3%	7.1%	15.0%	-19.6%	50.7%	24.3%	-9.4%
RO	Δ	-2.0	-1.3	0.3	-9.0	-3.4	1.8	-0.5	0.3	0.0	-13.8
	%	-13.9%	-6.3%	0.6%	-23.2%	-12.6%	12.7%	-9.6%	27.3%	9.2%	-7.7%

NOTE: INCREASES ARE UNDERLINED FOR VISIBILITY.

WHERE FIGURES INDICATE 0, THE TOTAL OUTFLOWS WERE LESS THAN 100.

PREDICTED FLOWS ARE BASED ON AVERAGE OUTFLOWS BY AGE GROUP AND THE AVERAGE YEAR-TO-YEAR CHANGES IN OUTFLOWS BY AGE GROUP FOR THE 2009-2018 PERIOD, OR AS FAR BACK AS DATA WERE AVAILABLE.

SOURCE: EUROSTAT DATA ON POPULATION ON 1 JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

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4.4.2 Destination countries

Demographic ageing in sending countries leads to lower inflows of working-age movers in Austria, the Netherlands and Spain.

Due to methodological challenges[236], this section presents projected inflows for three key destination countries with the most complete data on inflows for the past years by citizenship and age: Austria, the Netherlands and Spain.

While this group does not include all the main destination countries, those countries are nevertheless important receiving countries. Spain is the second largest receiving country (when excluding the UK) and hosted 14% of all movers across the EU-27 in 2019; Austria and the Netherlands are the 6th and 7th most important receiving countries, hosting 5% and 4% of working-age movers, respectively. Mobility in Austria, particularly, is significant, as EU movers constitute 10% of the country's working-age population. Furthermore, the selection covers geographical differences and differences of typical countries of origin.

The estimations refer to projected inflows from key sending countries[237], reflecting future demographic changes in those sending countries. Further explanations on the calculations can be found in Annex A.4.

Figure 67 below presents the changes in inflows by age group, country of origin and destination country. **Table A27 in Annex B.4** presents the proportional differences in inflows over time, by age group and sending country[238], and **Table A28 And Table A29 in Annex B.4** show the absolute differences by sending and receiving countries.

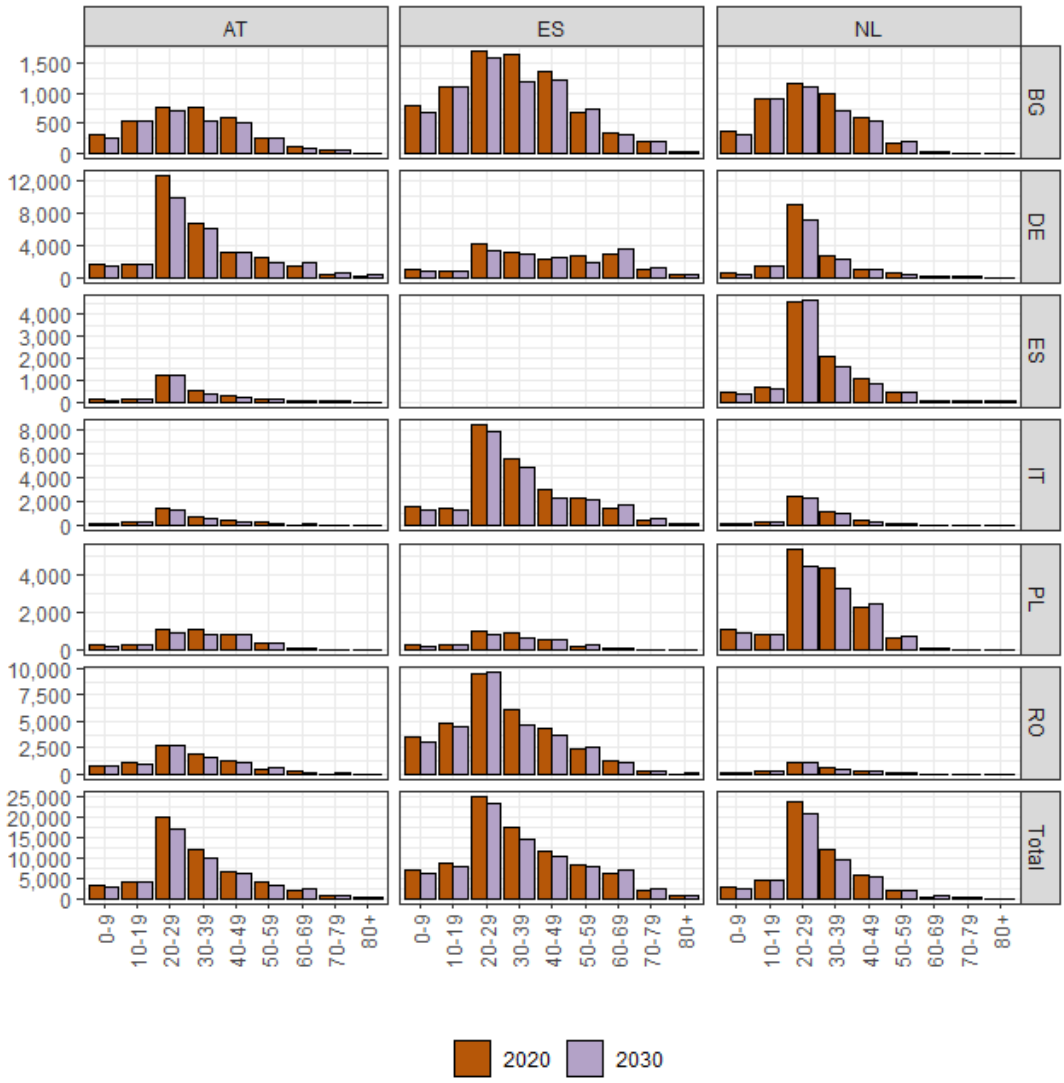
The proportional changes in inflows from the main sending countries reflect the findings in the section above. There is a general tendency towards **increases in older age groups, small proportional increases or major decreases for working-age age groups below 50, and some increases for the 50-59-year olds group**. While all three destination countries will see the same general pattern of changes, the extent of this change will depend on the size of previous inflows.

[236] Predicting the effect of demographic change in sending countries on the inflows to main destination countries presents some methodological challenges. One crucial problem is that not all main destination countries have detailed data on the age group and citizenship of incoming movers. This limits the amount of cases that can be investigated and means that EU-27 aggregates cannot be estimated with any accuracy. As there are no data on movers' citizenship and previous country of residence, it is possible that movers of a certain nationality are arriving from another country.

[237] Bulgaria,Germany, Spain, Italy, Poland and Romania.

[238] As the calculations use the same base population (i.e. the total outflows of nationals from the main sending countries), the proportional difference in the size of inflows is the same for all destination countries. The discussion therefore focuses on changes in total inflows by age and country, rather than sub-categories.

Figure 67: Predicted absolute change in annual inflows from main sending countries to Austria, the Netherlands and Spain, 2020-2030.



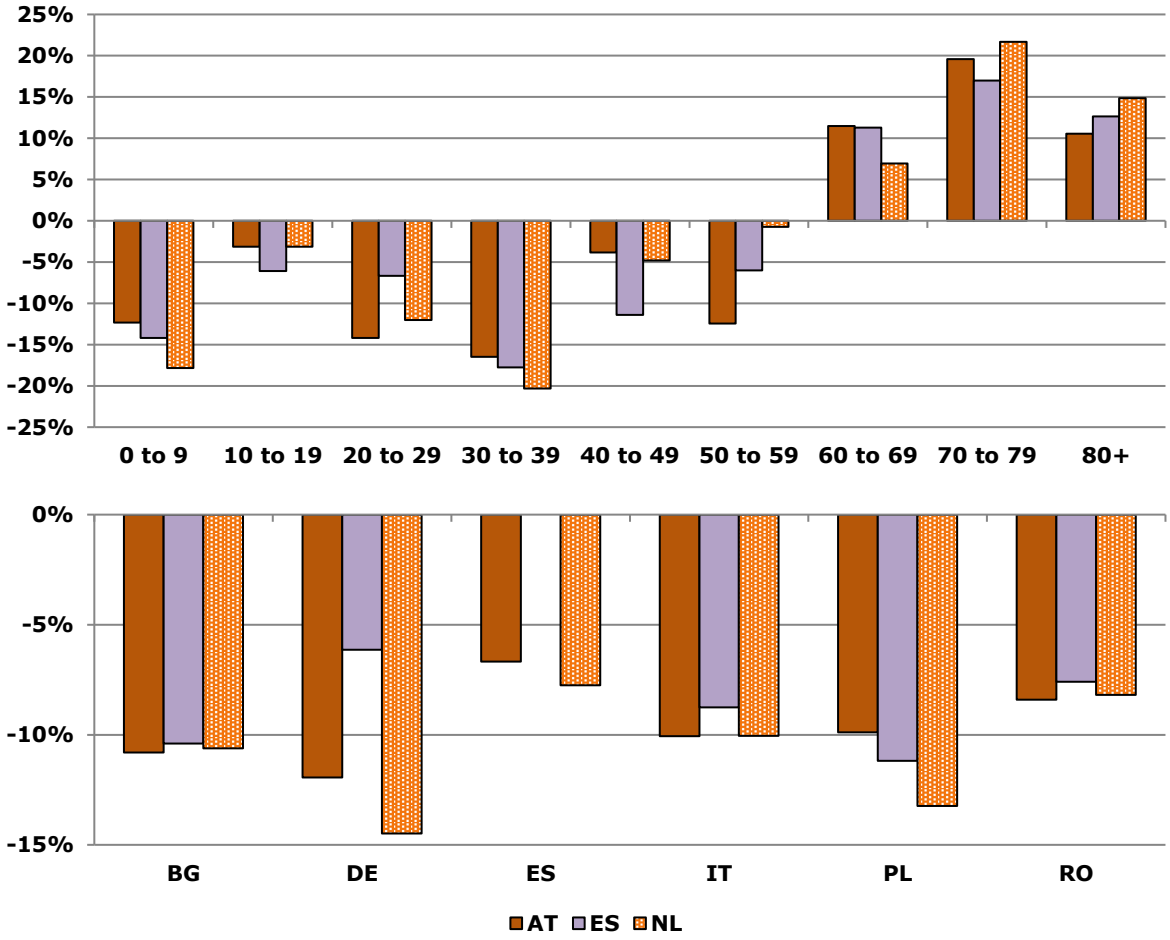
INFLOWS OF SPANISH MOVERS TO SPAIN ARE NOT INCLUDED IN THE TABLE AS NO PREDICTIONS ARE MADE ON RETURN MIGRATION.

SOURCE: EUROSTAT DATA ON POPULATION ON 1 JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

In all three destination countries, the total inflows from main sending countries are predicted to decrease between 2020 and 2030, with -5 900 (-11%) in Austria, -6 400 (-12%) in the Netherlands, and -6 800 (-8%) in Spain. **Figure 68** presents the changes from 2020-2030, giving a closer look at differences in total inflows by age group and country of origin. Despite the overall predicted decrease in inflows, the **tendency of inflows of older age groups to increase** is pronounced, with all three countries seeing increases for the 60+ age groups. The Netherlands skews older, with higher increases for 70-79-year olds and above, while Austria sees its highest increases for 60-79-year olds. As mentioned above, the group of movers aged 60 years or above is likely to mostly include persons who already retired, but might also include older mobile workers.

All countries see a **decrease in working-age inflows**, with the Netherlands in particular experiencing strong drops in both 20-29-year olds (-2 900 or -12%) and 30-39-year olds (-2 500 or -20%). In terms of total flows by country of origin, the Netherlands sees the highest or joint-highest decreases for all countries of origin, although differences here are smaller.

Figure 68: Proportional decreases of total inflows to three main destination countries from six main sending countries, by age group (top) and country of origin (bottom), 2020 to 2030.



INFLOWS OF SPANISH MOVERS TO SPAIN ARE NOT INCLUDED IN THE FIGURE AS NO PREDICTIONS ARE MADE ON RETURN MIGRATION.

SOURCE: EUROSTAT DATA ON POPULATION ON 1 JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

There are caveats to these findings, which are illustrative rather than exhaustive and look only at inflows from the main destination countries. It could be that shortfalls are made up by inflows from elsewhere (although as demonstrated in the section on sending countries, aggregate EU-27 movements of working-age people are projected to decrease markedly).

Likewise, it is difficult to compare the proportional effect of these inflows on the total population of the country, as this would need to take into account both outflows of nationals and other EU-27 movers, inflows of EU-27 movers from countries other than the main six sending countries, and year-on-year changes. Data availability issues further complicate such analysis.

Nevertheless, in summary, these projections demonstrate how demographic changes in countries of origin have knock-on effects for destination countries. It also suggests that the previously discussed trend towards proportional working-age decreases and old-age increases will hold.

As mentioned above already, these projections do not account for changes of other driving forces of mobility, above all, macro-economic changes and political developments. The following section therefore discusses potential impacts of demographic change on key drivers, especially the economic context in sending and receiving countries.

4.5 Impact on demographic change on key drivers of mobility

As explained in section 4.3, age per se has a certain effect on the likelihood to move. A change in the age structure of sending countries therefore is likely to have a certain effect on mobility (section 4.4). However, there are also other key drivers and obstacles of mobility. This section explores how these might be affected by demographic change and what, in return, this could mean for the extent and the nature of intra-EU mobility.

The REMINDER literature review concluded that 'work-related motivations' and 'personal relationships' were the most important drivers for intra-EU mobility identified in the studies, although evidence on which is more important is contradictory and depends on the specific group of movers[239]. Looking at EU citizens who were born in another country and then moved to a country other than their citizenship, **employment-related reasons are the single most frequent driver to move**[240]. This is based on the LFS ad-hoc module from 2014 that showed that 51% of the mentioned group moved for employment-related reasons (35% without having previously found a job, 16% with having found a job), 37% moved for family reasons and 6% for study[241].

The section therefore mainly discusses the effect of demographic change on work-related factors which are largely influenced by the macroeconomic context of sending and receiving countries, but also by education and skills.

4.5.1 Labour participation

A key impact of demographic change in the coming decades will likely lead to a reduction of the total labour force[242]. The estimated decline ranges from 8.2% (for 20-64-year-old)[243], over 9.7%[244] to 18%[245] until 2060/2070, depending on the sources. Also when extending the age group to 20 to 74-year-olds, the total labour force is predicted to decrease[246]. This is despite the fact that labour participation rates overall are expected to increase slightly, and especially strongly among older workers (by 12.5 pps among 55 to 64-year old, compared to 2.3 pps among 20 to 70-year old; 2016-2070)[247]. This might affect mobility in various ways:

Demographic ageing will lead to a decline in the labour force which might increase labour demand for movers

First, a general decline in the labour force is likely to increase labour demand, leading to lower competition and better opportunities for persons in their own country which might reduce the motivation to move. However, demand for workers will also increase in traditional receiving countries. Therefore, the impact on mobility flows will depend on the different rates at which labour forces decline in potential sending and

[239] Strey, A. et al. (2018), p. 20.
[240] Fries-Tersch, E. et al. (2018), p. 92.
[241] Rosini, S., Markiewicz, R. (2020), p. 8.
[242] European Commission (2018b); European Commission (2020c); Lutz, et al. (2019).
[243] Council of the European Union (2020), Council Conclusions on demographic challenges, 2020/C 205/03, ST/8668/2020/INIT, p.3, quoting: European Parliament, in-depth analysis: "Demographic outlook for the European Union 2019".
[244] European Commission (2018b), p.4.
[245] European Commission (2020c), p.15.
[246] European Commission (2018b).
[247] *ibid*., p.4.

receiving countries, but also on how labour participation rates will develop, e.g. through the employment of women and older workers.

A regression model from 2015 analysing bilateral flows between individual old and new Member States from 2000 to 2012 found that a decrease in the activity rate in (potentially) receiving countries encourages mobility flows, although with a certain time lag[248]. This likely reflects the fact that a decrease in the activity rate reflects a decrease in the host country's labour force, whose economy is then more reliant on active immigrants and movers.

Looking at individual receiving countries, the labour force of 20 to 74-year-olds in Germany is projected to first increase slightly until 2030, but then continuously decrease until 2050[249]; similar trends can be observed in Italy and Spain although the delay until an eventual decrease is a bit longer. The decreases between 2016 and 2050 in these three countries are at around 10%. Only in the Netherlands and Austria will the labour force constantly increase, by around 10% until 2050. Activity rates of 20 to 74-year-olds are expected to increase (in Italy and the Netherlands) and remain more or less constant in Spain and Austria. In Germany, however, the activity rate is projected to drop by around 2 pps until 2030 and then only increase slightly.

Therefore, at least the developments in Germany indicate that there will likely be continuous demand for workers from other countries, but also the declining labour force in Spain and Italy point to this. This being noted, the projected decline in the labour force in sending countries (Bulgaria, Romania, Poland) is continuous and even larger, at 25% to 30% in each country[250].

A decline in the labour force might prompt a further increase of labour participation of female movers

Second, an overall decline in the labour force and increasing OADR may prompt a further increase of labour participation of women, including female movers. The key political strategy to face increasing dependency ratios will be to increase labour participation, including among women[251]. In fact, at EU-27 level, the labour market participation rate among women (20 to 74 years) is expected to *increase* by 0.8 pps by 2030 and by 2.3 pps by 2050, whereas the same rate among men is expected to *decrease* by 0.9 pps until 2030 and by 1.2 pps until 2050[252].

The same tendency in prospective trends (increasing participation rate among women, decreasing among men) can be observed in key receiving countries (IT, NL, ES) and in Austria and Germany, where women's participation rates are projected to first decrease until 2030, but to a smaller extent than men's, and then increase to 2050.

On the other hand, in key Eastern European sending countries, women's participation rates are projected to decrease, even if at a slightly lower level than men's. For Romania and Poland, this is likely due to the fact that these countries will see a particularly strong increase in the OADR (see section 4.2), and so overall labour participation will drop. It also

[248] Landesmann, M. et al. (2015), 'Intra-EU Mobility and Push and Pull Factors in EU Labour Markets: Estimating a Panel VAR Model', *wiiw, Working Paper*, No. 120, The Vienna Institute for International Economic Studies (wiiw), Vienna.
[249] European Commission (2018c).
[250] *ibid*.
[251] Lutz, W. et al. (2019), European Commission (2020c).
[252] European Commission (2018c).

has to be noted that these projections of course cannot take into account any effects of policy measures that will be adopted to promote further employment of women.

At present, female movers' activity rates are still considerably lower than those of male movers, at EU level and in the key destination countries. However, looking at the past decade, they increased to a stronger extent than men's, at EU level and in all the main destination countries (DE, ES, NL, AT) except Italy, where their activity rate decreased a little bit stronger than men's.

The expected developments described above are therefore likely to lead to a continuation of that trend which may mean further labour market participation of female movers who are already in the destination countries, but maybe also increased movements of female citizens for working reasons. This is likely to be, among other factors, exacerbated by the rising labour demand in the health sector in which important professions (especially nurses and long-term care workers) are female-dominated (see section 4.5.5).

Increased activity among older persons is likely to also apply to persons who already moved and may also incite more older persons to move for work-related reasons.

4.5.2 Economic convergence between the Member States

Economic disparities between Member States are a major driver of intra-EU mobility. Macroeconomic divergence translates, among other, into very different salary levels for similar jobs, different job opportunities, income and living conditions. While projections by Eurostat and by the JRC[253] include an assumption of gradual socioeconomic convergence, where 'socioeconomic differentials among EU Member States are expected to be fading out in the very long term', the persistence of high outflows from different Southern and Eastern European countries over the past decade demonstrates the differences that remain in terms of labour markets and earning potential[254]. Discussing estimations of future mobility flows, the JRC highlights that greater convergence in living standards, reduced regional disparities and stronger EU integration would likely lead to a reduction in mobility flows from the South and East of the EU to the West. If, however, there turns out to be a 'deepening gap' between the Member States, that would likely lead to increased intra-EU mobility[255].

Improving one's salary is a stronger motivator for moving than other factors, such as family reasons or improved work conditions.

As one aspect of economic convergence or divergence, salary differences between the origin and destination country are a key, if not the main, driver of mobility among those who move for job-related reasons[256]. According to a 2013 Eurobarometer, EU citizens who consider working in another Member State most frequently mention 'to get a better salary' (50%)[257]. This share is higher among citizens from EU-13 countries (80%) and

[253] Lutz, W. et al. (2019).
[254] Ortega, F. and Peri, G. (2009), 'The Causes and Effects of International Migrations: Evidence from OECD Countries 1980-2005', *NBER Working Papers*;
Galgoczi, B., Leschke, J. and Watt, A. (eds.) (2012), EU Labour Migration in Troubled Times: Skills Mismatch, Return and Policy Responses, Aldershot, Ashgate.
[255] Lutz, W. et al. (2019), p. 47.
[256] Strey, A. et al. (2018), p. 28;
Heinz and Ward-Warmedinger (2006), Cross-border labour mobility within an enlarged EU', *Occasional paper Series No. 52/October 2006*, European Central Bank, p. 16.
[257] Strey, A. et al. (2018), p. 28.

lower among those from EU-15 countries (42%). Even among the latter, however, it outweighs professional development, better working conditions, or family reasons[258].

An econometric analysis of determinants of net mobility flows between EU Member States 2000-2012 found that a reduction in the wage differential between sending and potential host countries leads to a reduction in net flows[259]. Therefore, convergence in wage levels between the Member States is likely to reduce mobility flows[260].

Adverse economic effects of demographic ageing might put further convergence at risk.

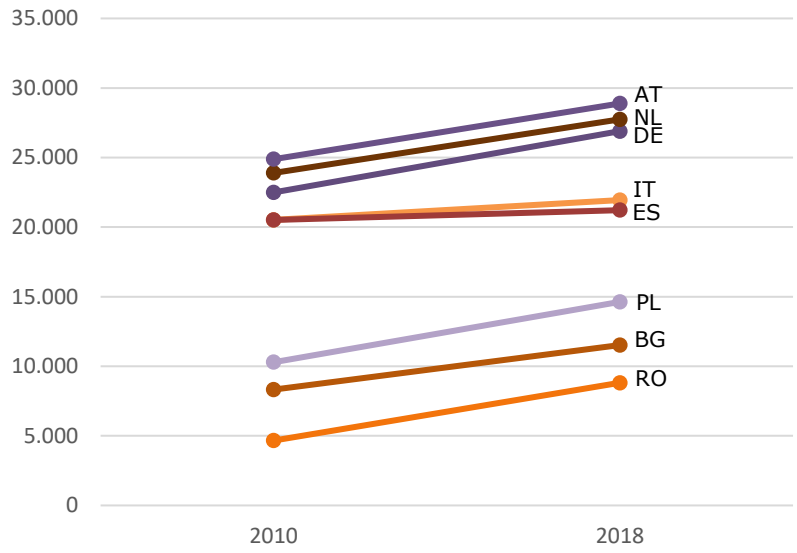
Concerns have been raised that the adverse economic effects of demographic ageing may put further growth and convergence at risk[261]. One of the key publications in this regard is the European Commission's 2018 Ageing Report which sets out long-term budgetary projections (until 2070) based on Eurostat's population projections. This work includes projections of macroeconomic variables, as a function of the demographic change and population ageing[262]. GDP growth is seen as being largely influenced by a) labour input and b) labour productivity[263]. Demographic change directly impacts the first factor, labour input, as explained above, by leading to a reduction in the labour force. Thereby, demographic change may affect economic convergence between the Member States. The projected figures discussed below largely stem from this report.

Economic convergence between the EU-15 and EU-13 Member States has progressed over the past decade, particularly due to large economic growth in some Eastern European Member States. However, this process has been slow[264] (see Figure 69 below). While severe material deprivation has decreased across the EU and the rate shows some convergence, the shares of persons at risk of poverty continue to differ substantially between the Member States, with no real reduction over the past decade[265].

In 2019, there were considerable differences in rates of middle-class people reporting 'that making ends meet is difficult'. Looking at the key sending and receiving countries, this rate ranged from 90% (BG), 80% (RO) and over 70% (IT), to 55% (PL) and below 30% (AT, NL). Germany had the lowest rate, at below 10%[266]. A comparison of differences of mean net income among employed persons (in PPS) also shows that while income increased in the selected Eastern Member States, it also increased in the selected Western Member States and stagnated in Italy and Spain. This translates into minor changes in differences between key sending and receiving countries, except for the difference between Southern countries and Western countries which increased, but is still considerably smaller than the difference with Eastern European countries.

[258] *ibid.*, p. 29.
[259] Landesmann, M. et al. (2015), p. 1.
[260] Heinz, F.F. and Ward-Warmedinger, M. (2006), p. 17.
[261] Żuk, P. and Savelin, L. (2018), 'Real convergence in central, eastern and south-eastern Europe', *ECB Occasional Paper*, No. 212, Available at: https://www.econstor.eu/bitstream/10419/192960/1/ecb.op212.en.pdf.
[262] European Commission (2018b), p. 1 and graph 1, p.2.
[263] *ibid*, p.5.
[264] Lutz, W. et al. (2019), p. 49.
[265] European Commission (2019), 'Employment and Social Developments in Europe 2019'. Available at: https://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=8219 [Accessed 30/10/2020], p. 51.
[266] *ibid*, p. 54.

Figure 69: Mean equivalised net income among employed persons (in PPS), 2010 and 2018, 16-64 years



SOURCE: EUROSTAT MEAN AND MEDIAN INCOME BY MOST FREQUENT ACTIVITY STATUS - EU-SILC SURVEY [ILC_DI05], EXTRACTED 07/10/2020

Table 15: Differences in mean equivalised net income among employed persons aged 16-64 years (in PPS), 2010 and 2018

	2010	2018
difference PL-DE	12 202	12 267
difference RO-IT	15 861	13 129
difference IT-DE	1 971	4 954

SOURCE: EUROSTAT MEAN AND MEDIAN INCOME BY MOST FREQUENT ACTIVITY STATUS - EU-SILC SURVEY [ILC_DI05], EXTRACTED 07/10/2020

A comparison of mean hourly earnings in purchasing power standard[267] between Bulgaria, Poland and Spain as origin countries and Germany and Spain as destination countries shows that differences are higher in manufacturing than in construction and services, but that overall, the magnitude of the difference between the selected countries corresponds very roughly to the magnitude of difference in GDP.

Table 16: Differences in mean hourly earnings (in PPS), by sector, all ages

	manufacturing	construction	services
difference DE-BG	16	10	11
difference DE-ES	7	3	4
difference DE-PL	11	6	5
difference ES-BG	9	7	7

SOURCE: EUROSTAT MEAN HOURLY EARNINGS BY SEX, AGE AND ECONOMIC ACTIVITY [EARN_SES14_13], EXTRACTED 11/07/20.

According to projected GDP per capita growth of the 2018 Ageing Report[268], convergence between the Member States is likely to occur very slowly (see paragraph below). Other estimates from 2016 of projections of GDP per capita to assess prospective income

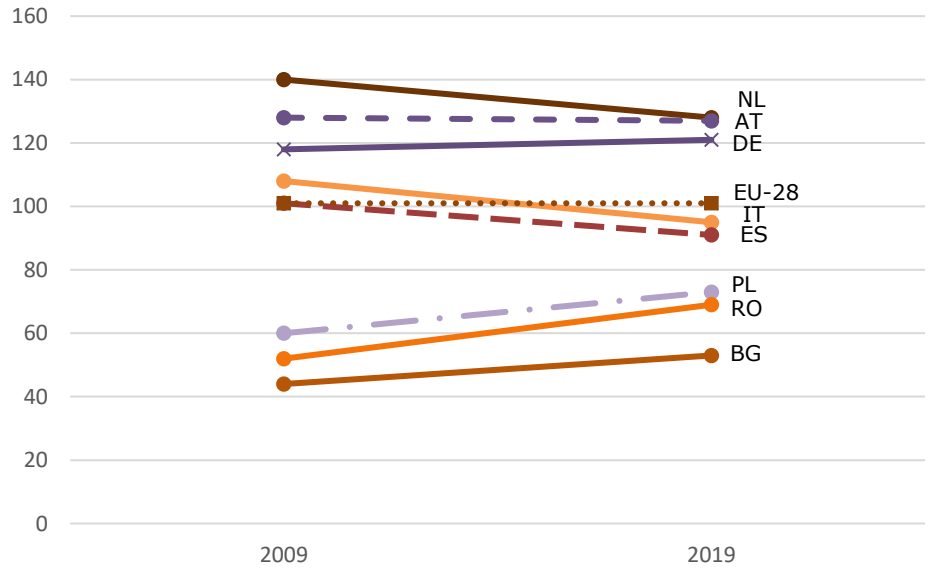
[267] Heinz, F.F. and Ward-Warmedinger, M. (2006), p. 16, consider that wage levels at purchasing power standard are the most appropriate measure of labour mobility flows, as they also account for differences in living costs.
[268] European Commission (2018c).

convergence between the Member States show that, depending on the scenario, it would take Bulgaria between 39 and 54 years, Poland between 16 and 20 years and Romania between 31 and 33 years to reach the average level of GDP per capita in the EU-15 countries[269].

GDP per capita as per the Ageing Report is projected to grow more strongly in Bulgaria, Romania and Poland than at EU level in 2016, and growth will continue to be higher until around 2040 (Figure 71 below). However, since 2016 growth in these three countries has already declined and will continue to decline until 2030 and further until 2050, especially in Romania, meaning that the growth rate in 2050 will be at EU level. Italy's growth rate is projected to be positive – although very low and expected to only really grow between 2040 and 2050, while Spain's growth rate would slowly increase to reach the EU average level by 2030. Austria's growth rate is also expected to increase to the EU average, while Germany and the Netherlands are expected to remain more or less stable, at the EU average.

Looking at the differences between the countries in the real GDP per capita in 2019 (Figure 70 below), declining growth in the Eastern European Member States and continuing growth in the Western and Southern European Member States means that differences will remain and convergence will happen only very slowly. This is especially the case because in Italy and Spain GDP has actually decreased over the past decade, so the difference to the EU average and to Germany, Austria and the Netherlands, for example, increased and prospective growth will mean that their GDP will first catch up with the 2009 level. GDP per capita in the three Eastern European Member States, despite having increased a lot since 2009, is still quite a lot lower than in the five other Member States, and especially Austria, Germany and the Netherlands. This suggests that full economic convergence between the Member States remains some way off.

Figure 70: Change in GDP per capita (in PPS), 2009 to 2019

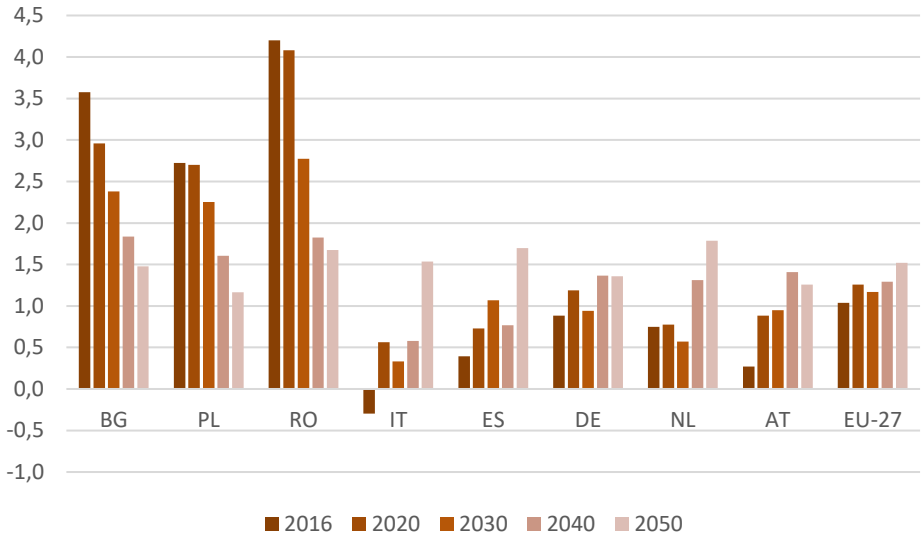


VOLUME INDICES OF REAL EXPENDITURE PER CAPITA (IN PPS_EU27_2020=100)

SOURCE: EUROSTAT GDP PER CAPITA IN PPS [TEC00114], EXTRACTED 07/10/2020

[269] Matkowski, Z. et al. (2016), 'Real Income Convergence between Central Eastern and Western Europe: Past, Present and Prospect', *Ekonomista*, No. 6. Available online: http://www.pte.pl/pliki/1/8905/Ekonomista2016-6-pages-84-123.pdf, p. 25.

Figure 71: Potential GDP per capita growth



SOURCE: EUROPEAN COMMISSION (2018C).

If these developments indeed materialise, there is a real chance that outflow rates of the key Eastern European sending countries will remain at current levels, or even increase. Spain's economy seems to be recovering fairly well, which may attract increasing flows of persons from lower income countries and well-established networks, especially Romania and Bulgaria. The same could be true for Italy, given that unemployment is declining, although it remains higher than in the Eastern European sending countries. Lastly, Germany, the Netherlands and Austria are likely to continue to attract large volumes of movers (also from Italy and Spain). Again, well-established networks (e.g. Italians and Polish in Germany and Austria, Polish in the Netherlands) will facilitate mobility for those who envisage better economic chances in the destination country.

4.5.3 Unemployment

Related to economic convergence, another important driver is the chance of actually finding a job and avoiding long periods of unemployment by moving to another country. Not being able to find a job in one's country was the second most frequently mentioned reason (28%) in the 2013 Eurobarometer survey. Findings from two Commission reports[270] confirmed that employment possibilities are key drivers for intra-EU mobility. A multivariate analysis of EU-LFS data found that unemployment or inactivity was a much stronger factor associated with mobility than gender, education, marital status, being child free or not having older people in the household[271].

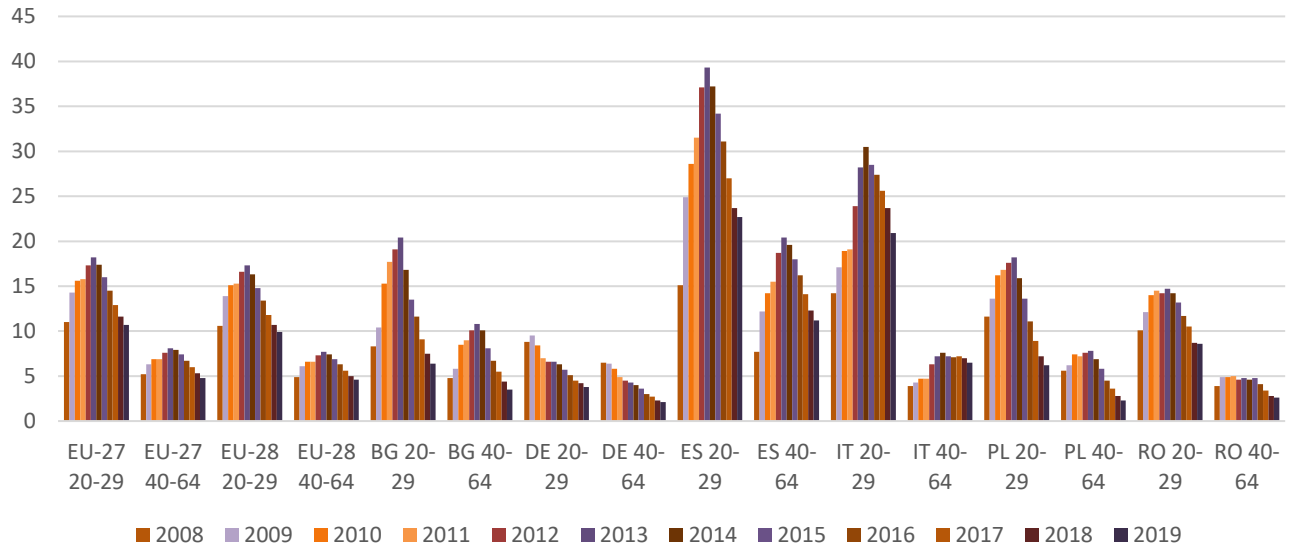
Unemployment is a particular threat for young workers. Across the EU, unemployment is greatest among the very young (15-25-year olds), and then gradually decreases with age. The differences are particularly large among 15-19 year olds, 20-24-year olds and 25-29-year olds. After the age of 30, the likelihood of being unemployed continues to decrease, albeit at a slower rate[272].

[270] European Commission (2015), p. 168.
[271] *ibid*, p. 169.
[272] Eurostat dataset 'lfsa_urgan'.

Throughout 2008 to 2019, unemployment rates among 20-29-year olds were a lot higher than those of a higher working age (40-64-year olds), both for the EU-27 and EU-28 aggregates, as well as in all main sending countries (BG, DE, ES, IT, PL, RO) (see Figure 72 below). This has not changed over the past decade, although the scale of the difference has changed in some countries (see Figure 73 below).

Between 2008 and 2013, at EU level and in all countries key sending and receiving countries (except Germany), unemployment of young workers increased more strongly than that of older workers. After 2013/2014, unemployment among both groups decreased and the difference between the age groups became smaller. At the peak of unemployment (around 2010-2013), the rates of young workers were approximately 10pps higher than those of older workers.

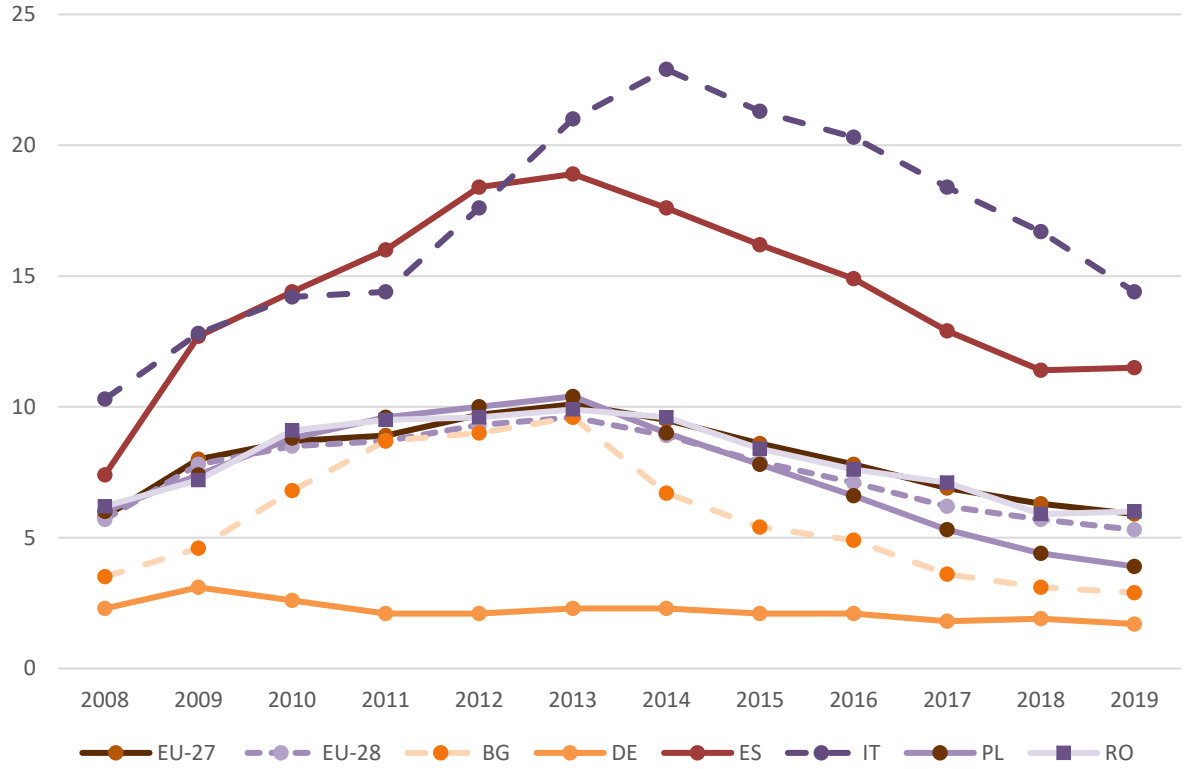
Figure 72: Unemployment rates among 20 to 29-year-olds vs. 40 to 64-year-olds, nationals, 2008-2019



BREAKS IN SERIES: BG (2008, 2010, 2011), DE (2010, 2011), PL (2010), RO (2010)

SOURCE: EUROSTAT, UNEMPLOYMENT RATES BY SEX, AGE AND CITIZENSHIP (%) [LFSA_URGAN], EXTRACTED ON 10/07/20

Figure 73: Difference in unemployment rates between 20 to 29-year-olds and 40 to 64-year-olds, nationals, 2008-2019



SOURCE: EUROSTAT, UNEMPLOYMENT RATES BY SEX, AGE AND CITIZENSHIP (%) [LFSA_URGAN], EXTRACTED ON 10/07/20

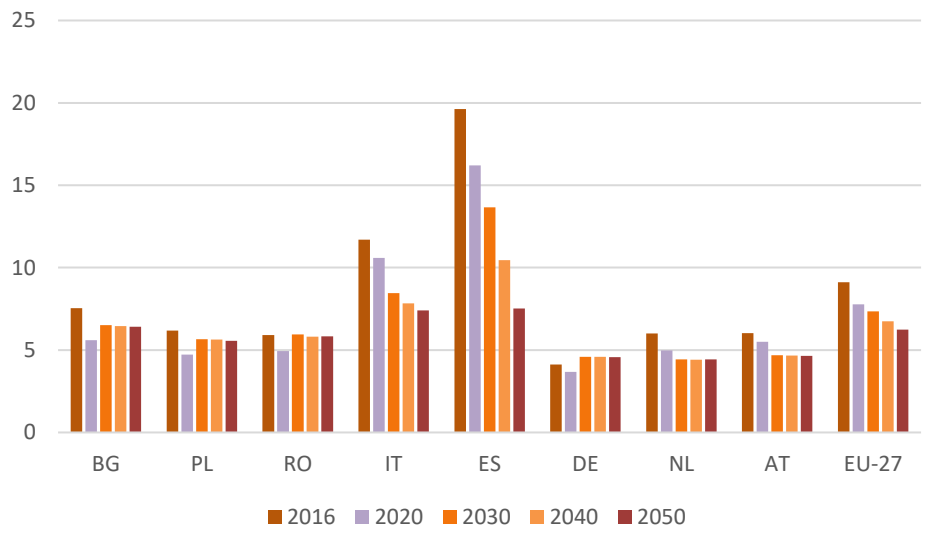
Unemployment rates might increase slightly in Bulgaria, Poland and Romania which in return might trigger further outflows.

The inverse is true for Spain and Italy which might increase in importance as destination countries again.

According to the 2018 Ageing Report[273], unemployment rates decreased in Bulgaria, Poland and Romania between 2016 and 2020 (and were even slightly below EU average), they are expected to increase again (even if only slightly) until 2030 (**Figure 74** below)[274]. By contrast, Italy and Spain's very high unemployment rates should continue to decrease. Unemployment is already below the EU average in the Netherlands and Austria and is expected to decrease further until 2030, while it is expected to increase slightly in Germany.

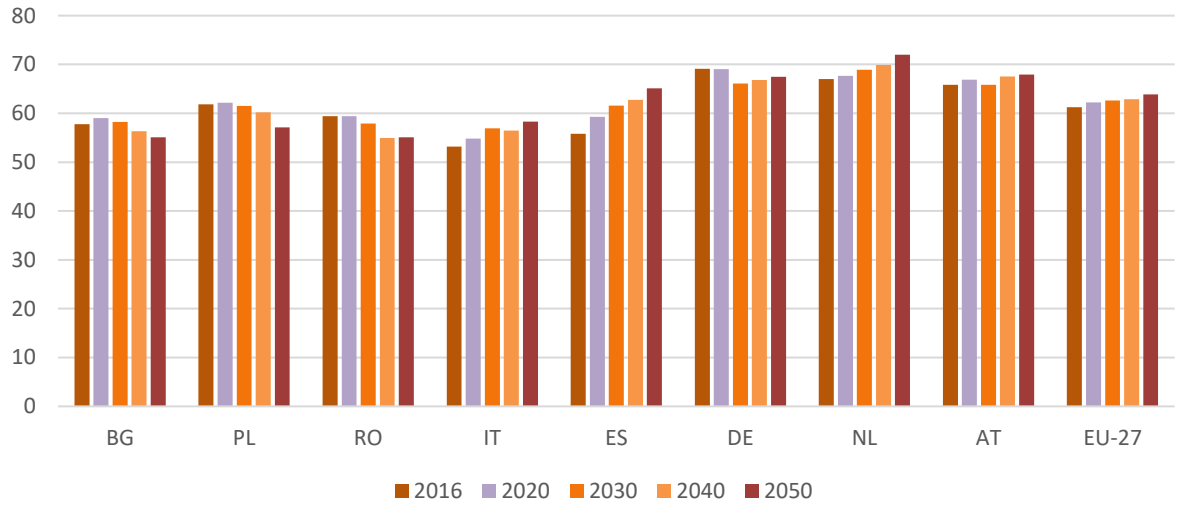
[273] European Commission (2018c).
[274] *ibid.*

Figure 74: Projections Unemployment rate 15-74 years (in %)



SOURCE: EUROPEAN COMMISSION (2018C).

Figure 75: Projections Employment rate 20-74 years (in %)



SOURCE: EUROPEAN COMMISSION (2018C).

4.5.4 Education and professional development

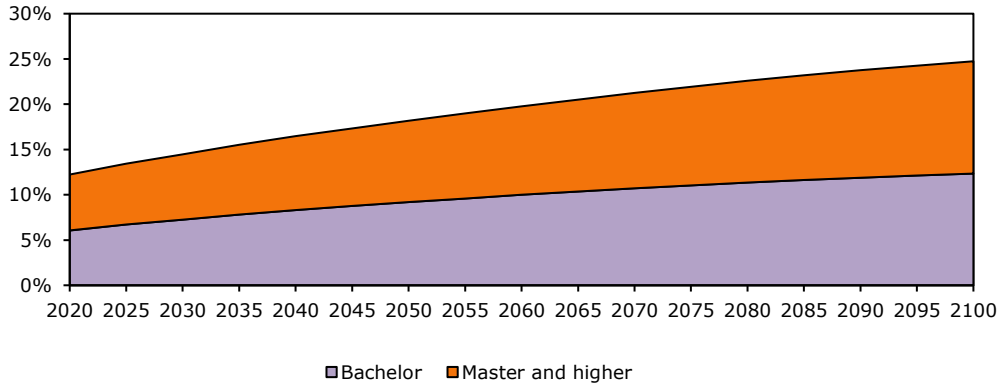
Highly educated EU citizens are more likely to move than those with lower educational degrees. According to the cross-national regression analysis based on EU-LFS data, those with a high education level[275] are twice as likely to move than persons with a low or medium education level. A similar effect was found in a regression analysis with Eurobarometer data from 2011 and 2013 on the intention to move to another EU country[276].

[275] High education levels (ISCED levels 5-8) are defined as short-cycle tertiary, Bachelor or equivalent, Master or equivalent and Doctoral or equivalent.
[276] Eichhorst, W. et al. (2017), 'People to Jobs, Jobs to People. Global Mobility and Labor Migration', *IZA Research Report*, No.74, IZA, Bonn.

Education in general has improved over the past decade, with more and more EU citizens accessing and completing higher education degrees. This trend is very likely to continue[277].

Figure 766 shows IIASA projections of educational attainment for working-age (20-64 years) individuals in the EU-27 from 2020 to 2100, indicating an expected significant rise in the stocks of working-age movers with a Bachelor or higher degree. At EU level, this might influence the absolute decrease in flows among younger age groups indicated in the projections above.

Figure 76: Projected educational attainment for working-age (20-64 years) individuals, 2020-2100, IIASA projections[278]



DATA PRESENTED ARE FOR THE MEDIUM (SSP2) SCENARIO, INDICATING A MIDDLE-OF-THE-ROAD SCENARIO WHICH CAN BE SEEN AS THE MOST LIKELY PATH FOR EACH COUNTRY. OTHER AVAILABLE SCENARIOS, WHICH WILL LEAD TO DIFFERENT FIGURES AND PROPORTIONS, ARE RAPID DEVELOPMENT (SSP1), STALLED DEVELOPMENT (SSP3) AND TWO SCENARIOS MODELLING EITHER ZERO (SSP2-ZM) OR DOUBLE MIGRATION (SSP2-DM)[279].

SOURCE: WITTGENSTEIN CENTRE FOR DEMOGRAPHY AND GLOBAL HUMAN CAPITAL, 2018

The constant improvement and increased spread of tertiary education means that for at least a few more decades, younger workers will be more likely to have higher levels of education than older ones. Given that the highly educated are more likely to move, an ageing society may have severe consequences for movement within Europe, with a smaller group of young working-age, highly educated citizens becoming increasingly prone to consider moving, especially if earnings or job opportunities in their country of origin are not seen to be adequate for their education level.

The country breakdown in **Table A30** in **Annex A.4** indicates that some of the largest increases in highly educated citizens are expected in significant sending countries such as Italy (14.3pps), Romania (10.7pps), Poland (10.2pps) and Bulgaria (9.9pps). Unless there is a marked improvement in labour markets and economic prospects in these countries, or other initiatives to incentivise educated, working-age individuals to stay, the demographic ageing may increase further. Further economic coherence is of course one of the primary goals of the EU and strongly promoted, for example, through the Structural Funds[280]. In addition to economic objectives, promoting social development has become more and more important throughout the past decade, also in the allocation of funds[281].

[277] Spielvogel, G. and Meghnagi, M. (2018), 'Assessing the role of migration in European labour force growth by 2030', *OECD Social, Employment and Migration Working Papers*, No. 204, OECD Publishing, Paris, p. 17.
[278] Country-specific proportions of working-age individuals with Bachelor degree or higher are presented in **Table A30 in Annex B.4**.
[279] Lutz, W. et al. (2019), pp. 14-15.
[280] For example, the European Regional Development Fund (ERDF), the Cohesion Fund (CF) and the European Social Fund (ESF).
[281] McGuinn, J. et al. (2020), *Social Sustainability. Concepts and Benchmarks*, European Parliament.

Together with unemployment, professional development is the second most popular reason for EU citizens to consider working in another Member State, mentioned by 28% of respondents to the Eurobarometer survey[282]. It is more important among movers from EU-15 (31%) than those from EU-13 countries (18%). The regression model by Landesmann et al. (2015) found that differences in human capital between the origin and receiving country were a significant driver for mobility between the EU-15 countries, but not between EU-15 and EU-13 countries. For the latter, other drivers (differences in real wages, productivity rates and activity rates) prevail[283].

In general, older workers are seen as having accumulated more 'origin or firm-specific human capital'[284] and 'are more likely to have found a good employee-employer match'[285]. A multivariate analysis looking at several influential factors on job-to-job mobility in Europe showed that age has the strongest significant effect on the likelihood of changing jobs, which decreases with age[286]. If older workers move jobs, it is more likely to be a 'forced' than a voluntary change.

The increased difficulties for job-to-job mobility may constitute an obstacle to mobility for older workers, together with accumulated social capital and social ties (see section 4.5.6).

The combined effect of better education and population ageing may lead to increased mobility among young persons.

The combined effect of better education and population ageing may lead to increases in outflows among young persons, especially from countries which are not competitive in terms of salaries and living or professional conditions. However, much is likely to also depend on policies promoting employment and job-to-job mobility among older workers. The EU's Strategic Framework on Health and Safety at Work 2014-2020 acknowledges population ageing as one of three key challenges and addressing those has been one of its strategic objectives[287]. Many countries have already put policies and programmes in place to promote working at a higher age and to prevent early retirement and long-term sick leave due to work-related health problems[288]. Such measures may, among others, facilitate job-to-job mobility. Together with an increasingly better education (which will eventually also apply to the older population cohorts) this may allow also for increased cross-border mobility among older workers. For this to happen, company and public policies need to be designed in a way that reduces the cost of moving for older workers, especially facilitating moving entire families and to benefit from social rights gained in another country (transfer of benefits, etc.).

[282] Strey, A. et al. (2018), p. 28.
[283] Landesmann, M. et al. (2015), p. 31.
[284] Zaiceva, A. (2014), p. 2.
[285] Andersen, T. et al. (2008), *Job mobility in the European Union: Optimising its Social and Economic Benefits. Final Report*, Danish Technological Institute, p.57.
[286] *ibid*.
[287] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions on an EU Strategic Framework on Health and Safety at Work 2014-2020, COM (2014) 332 final.
[288] Belin, A. et al. (2016), *Analysis report on EU and Member State policies, strategies and programmes on population and workforce ageing*, EU-OSHA, Available at: file:///C:/Users/eft/Downloads/Analysis_report_EU_Member_State_policies.pdf.

4.5.5 Labour demand in the health and long-term care sector

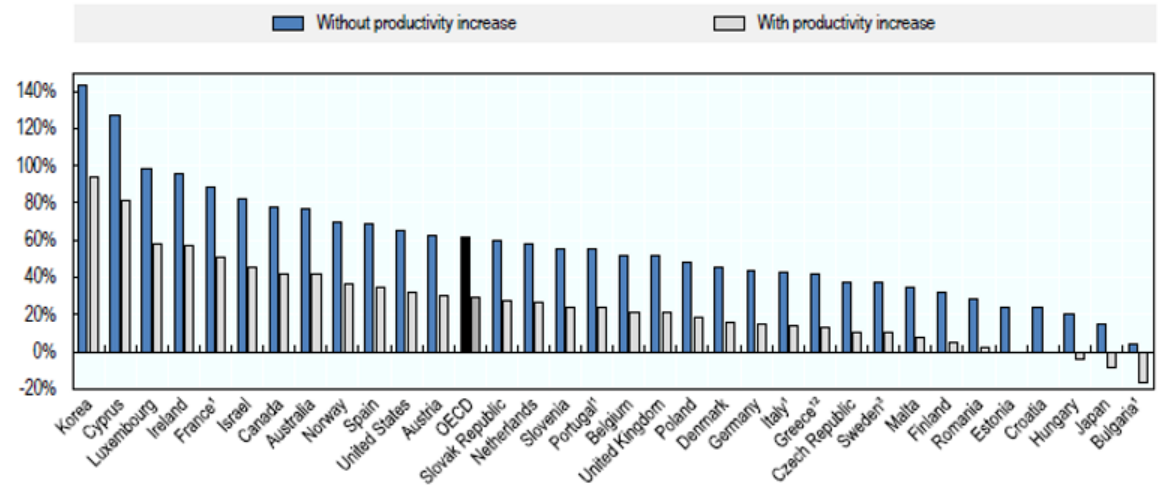
Recent documents by the European Commission, the Council, the European Economic and Social Council (EESC) and the OECD have highlighted that population ageing will increase the need for expanding healthcare and long-term care (LTC) systems in Europe and that the demand for professional staff in these fields is expected to rise[289]. The OECD stressed that there are already indications of labour shortages in this sector and the EESC already in 2016 alerted that 'labour market shortages in the healthcare sector are a ticking bomb'[290]. The 'growth in the LTC sector has been outpaced by the growth in numbers of elderly people between 2011 and 2016'[291]. Keeping the current ratio of five LTC workers for every 100 people aged 65 and older across OECD countries would imply that the number of workers in the sector will need to increase by 13.5 million by 2040[292].

In Germany, Austria, the Netherlands, Spain and Italy, for example, the number of additional LTC workers needed by 2040 to keep the ratio at 2016 levels would need to increase by between around 20% (Germany) and 40% (Spain) *with* productivity increases and by between around 40% (Germany) and 70% (Spain) *without* productivity increases (see fig. 10 below)[293]. In the key sending countries Poland, Romania and Bulgaria, figures are slightly lower, but the reason for this is clearly that their ratios are already among the lowest across the OECD. In 2016, these three countries had a ratio of less than 2 LTC workers per 100 elderly people, while the OECD average was around 5 and the main receiving countries mentioned above had ratios between 4 and 5, the Netherlands even reached 8, being among the five highest across the OECD countries[294].

One group that often does not show up in the statistics due to high level of informal employment, but that is crucial for care of elderly people are live-in care workers (living in their clients' residencies for the purpose of carrying out the work), whose number was found to also be 'rapidly expanding'[295].

[289] OECD (2020), 'Who cares? Attracting and retaining care workers for the elderly', *OECD Health Policy Studies*. OECD Publishing, Paris, Available at: *https://doi.org/10.1787/92c0ef68-en*, p.12.;
Rogalewski, A. and Florek, K. (2020) *The future of live-in care work in Europe. Report on the EESC country visits to the United Kingdom, Germany, Italy and Poland following up on the EESC opinion on "The rights of live-in care workers"*, European Economic and Social Committee;
European Commission (2020c), p.17;
Council of the European Union (2020), Council Conclusions on demographic challenges, 2020/C 205/03, ST/8668/2020/INIT, p.4.
[290] European Economic and Social Committee (2016), *The rights of live-in care workers, Own-initiative opinion*, SOC/535, 21/09/2016.
[291] OECD (2020), p.16.
[292] *ibid*.
[293] *ibid*.
[294] *ibid*.
[295] European Economic and Social Committee (2016).

Figure 77: Number of additional LTC workers needed by 2040 to keep the ratio constant as a share of the total number of workers in 2016



Note: OECD is the unweighted average of the 28 OECD countries shown in the chart.
1. Data are based on ISCO 3-digit and NACE 2-digit codes. 2. Data must be interpreted with caution, as sample sizes are small. 3. Data refer only to the public sector.
Source: EU-Labour Force Survey and OECD Health Statistics 2018, with the exception of the Quarterly Labour Force Survey for the United Kingdom and ASEC-CPS for the United States; Eurostat Database for population demographics (data refer to 2016 or nearest year).

Mobile EU citizens are an important group of healthcare and long-term care professionals and live-in care workers. However, reliance on movers (so, the share of movers from all workers in that profession in a country) varies a lot, between countries, and even more between different types of healthcare work. Based on EU-LFS data, among professions that are largely regulated and are for statistical purposes summarised as health professionals[296] and health associate professionals[297], EU-28 movers made up around 3% EU-wide in 2016, whereas the share is higher in Austria (around 8%) and lower in Italy (1% for health professionals), for example[298]. However, in professions that require lower skill levels, the shares are higher: across the EU, the share of movers among personal care workers[299] was around 5%, but in Italy it reached 17% and in Austria 9%.

According to OECD estimates, 'foreign-born workers represent over 20% of the LTC workforce in OECD countries'[300], although this includes persons born in third countries, and migrants are also seen as crucial in the supply of live-in care work, which is particularly widespread in southern Europe[301]. For example, 'Poland supplies many live-in care workers to other countries, despite a depleted domestic care workforce'[302]. The shortages in this field have been identified as important pull factors for migrants from third countries and movers. Key sending countries are Poland, Romania, but also Italy. Often, migrants or EU movers provide live-in care work which is highly unregulated and they often face situations

[296] ISCO-2D code 220; this includes: medical doctors, nursing and midwifery professionals, traditional and complementary medicine professionals, paramedical practitioners, veterinarians, other health professionals.
[297] ISCO-2D code 320; this includes: medical and pharmaceutical technicians, nursing and midwifery associate professionals, traditional and complementary medicine associate professionals, veterinary technicians and assistants, other health associate professionals.
[298] Adamis-Cászár, K. et al. (2019), p. 53.
[299] ISCO-3D code 532: Personal care workers in health services provide personal care and assistance with mobility and activities of daily living to patients and elderly, convalescent and disabled people in healthcare and residential settings.
[300] OECD (2020), 'Who cares? Attracting and retaining care workers for the elderly', *OECD Health Policy Studies*, OECD Publishing, Paris, Available at: https://doi.org/10.1787/92c0ef68-en, p.33-34.
[301] European Economic and Social Committee (2016).
[302] *ibid*.

of labour exploitation[303]. Also in the LTC sector, migrants are in high demand, because 'they stay longer and work more hours than natives'[304].

Many Member States have already adopted policy measures to attract healthcare professionals from other Member States. Germany, for example, set up a transnational cooperation project for vocational and educational nursing training institutions between Poland and Germany, aiming to reduce the shortage of skilled workers in the sector of care for the elderly[305].

The increased demand in the health and long-term care sector is likely to lead to increases in labour mobility in that sector.

The expected rise in demand of this type of workers in many Member States is likely to lead to an increase of mobility and the trend of flows from Eastern Member States to key Western and Southern European destination countries is likely to continue, although Eastern Member States face important shortages themselves. In this regard, there seems to be a chain effect on mobility, with shortages in Poland, for example, being filled to a certain extent by healthcare workers coming from the Ukraine.

Another aspect is that many of the professions of healthcare work are dominated by women and often carried out by persons of a higher working age. According to the OECD, over 90% of long-term care workers are women and most of them are middle-aged, the medium age being 45 years[306]. The combination of this with the expected increase in activity among women in the coming years and decades described above (section 4.5.1) is likely to exacerbate the increase in mobility in this field.

Furthermore, the age component is also likely to become very relevant. The Labour Mobility Initiative[307], for example, pointed out that care work through posting 'allows hiring people who are at an age where it is difficult to find a job'[308]. On the one hand, older workers (including movers) may face fewer challenges to find a job in the future, simply because the labour supply of younger workers will shrink. On the other hand, the fact that the hiring of elderly workers in this field seems to be frequent, together with an increasingly old workforce and high demand, points to an increase in this trend.

4.5.6 Social ties

Social networks and family ties might be an underestimated determinant of EU-mobility, as noted in the REMINDER (2018) literature review on determinants of mobility.

It seems certain that the presence of children or old people in the household lowers the chances of moving to another country, although the effect is smaller than that of unemployment or a high education level. The multivariate analysis of the EU-LFS yielded some interesting findings on several aspects of the family situation. Firstly, those who are

[303] Rogalewski, A. and Florek, K. (2020).
[304] OECD (2020), p.33-34.
[305] European Commission (2018a), *Study on the movement of skilled labour (Final report), Annex 3 – Case Study: Germany*, p. 169.
[306] OECD (2020), p.42.
[307] Labour Mobility Initiative since 2013 brings together the employers, scholars, workers and public administration and creates the only Polish and European forum for exchange of knowledge on the posting of workers within the freedom to provide services. Association activities are funded by the membership fees and donations.
[308] Labour Mobility Initiative (2017), 'LMI at the EP at Seminar on Posting of Workers in the Care Sector'. Available online: https://www.mobilelabour.eu/11555/lmi-ep-seminar-posting-workers-care-sector/.

widowed or divorced are 1.5 times as likely to move than single or married people. Secondly, those without children in the household are twice as likely to move, while the number of children makes little or no difference. Thirdly, people who do not share a household with older people are more than 1.5 times more likely to move than those who do.

Furthermore, older people have higher human capital in their origin country, less time to recover the cost of migrating and may face cultural barriers (e.g. language). As Zaiceva (2014) pointed out, the 'psychological cost of separating with family and friends and a larger social capital' is higher among older individuals[309].

For middle-aged people, the presence of children and a spouse may make matters more complicated in terms of cost, harmonising the needs and wants of all family members and ensuring that everyone in the household can integrate into the new society[310]. Those with strong family ties in the country of origin may prefer alternative ways to benefit from employment opportunities in other countries, such as posting or cross-border mobility[311].

Young people meanwhile have fewer such ties, more often constitute one-person households and are more likely to have higher education[312]. It could thus be assumed that a decline in the number of younger people will reduce mobility. Furthermore, the increase in the OADR may also mean that more people will need to take care of their older family members, not least because they do not have many siblings – like a few decades ago when families were still more numerous – and because there might be shortages and therefore high prices on external care services.

4.6 Impact of demographic change on mobility spells

The 2019 Annual Report on intra-EU Labour Mobility found that different forms of labour mobility, including moving to another country for a short period (less than one year), or only working in another country without changing habitual residence (posting or cross-border work) were on the rise. Although reliable data is extremely limited, there are indications that short-term and circular forms of mobility, such as moving for less than one year, posting and cross-border work have been on the rise in past years[313]. This section looks at potential impacts of a demographic change on this trend.

4.6.1 Short-term and return mobility

Short-term mobility was defined in the 2019 Annual Report on Labour Mobility as mobility of less than one year – in contrast to long-term mobility, which is when movers change their habitual place of residence for at least one year (which is the form that sections 1 and 2 mainly refer to). Return mobility means long-term movers, returning to their country of origin ('returnees' in the following).

[309] Zaiceva, A. (2014), p. 2.
[310] Belot, M.and Ederveen, S. (2012), note that as a two-income household may make it more difficult to coordinate migration decisions, countries with higher labour market participation rates of women may see less propensity to migrate. In Belot, M. and Ederveen, S. (2012), 'Cultural barriers in migration between OECD countries', *Journal of Population Economics*, 25(3), pp. 1077–1105.
[311] Fries-Tersch, E. et al. (2020), *2019 Annual Report on Intra-EU Labour Mobility, Network Statistics FMSSFE, Brussels: European Commission*, p. 93.
[312] Hauvette, M. (2010), 'Temporary Youth Migration and European Identity'. In Cairns, D. (Ed.) *Youth on the Move: European Youth and Geographical Mobility*, VS Verlag, Wiesbaden.
Lutz et al. (2019), p.25.
[313] Fries-Tersch, E. et al. (2020), section 3.

Due to a lack of data, no precise estimates regarding the age composition of short-term movers can be made. EU-wide comparable data on short-term mobility is not available, because both migration and population statistics and the EU Labour Force Survey only capture persons who move for at least one year, or at least intend to do so (see methodological notes in Annex A.2). The national data from the UK and Germany that show actual length of stay of movers which was used on the 2019 Report is also not available by age.

Data on annual flows of persons moving to the country of citizenship is used to approximate the flows of returnees, although the country they come from is unknown (see also section 1.2.3). Carried out for last year's report, an analysis of this data on returnees to key sending countries in the EU showed that the largest groups of returnees are of young (20 to 29 years) or middle (30 to 39 years) working age in several countries (LT, RO, UK, PL) and also for other countries (DE, IT, BG) there is a tendency that shares get smaller at a higher age, but only after the age of 30 years[314]. This is also illustrated by the numbers of Polish returnees from the UK in 2017, of which 90% were between 20 and 39 years old[315].

However, in most countries, there is a clear increase again in returnees, after the age of 65 years[316]. This indicates that workers are less likely to move back during the later stage of their professional life, but then become more likely to return for retirement. A prolonged duration of economic activity in the future and later retirement may mean that even fewer older workers will return, or, that those who return eventually for retirement, will become older and older.

4.6.2 Cross-border work and posting

Cross-border work and posting are forms of mobility where the workers do not move their habitual residence to another country but go there solely for work purposes. There are of course various different forms and, depending on the extent of the stay in the country of work, the worker may consider this as a second country of residence, e.g. if the posting period is several months or even more than one year.

In several large countries of origin, cross-border work is carried out to a larger extent by young workers and the likelihood becomes less with age. Therefore, a decrease in the population of young working age might lead to an overall decrease in cross-border work, similarly as the effect shown for long-term mobility in section 4.4. For posting, this analysis could not be made, because data on posted workers by age is not available.

Cross-border work and posting allow avoiding or reducing some of the costs implied in a permanent move. Cross-border work is also mainly maintained by young workers.

Cross-border work or posting usually allow avoiding or reducing some of the costs implied in a permanent move (loss of social network and ties, higher living costs, etc.)[317]. Therefore, one may assume that persons who have strong social ties in the country of origin, especially persons with

[314] *ibid*., p. 107-109.
[315] *ibid*. , p.91, based on data from the UK Office for National Statistics (ONS).
[316] *ibid*., p. 107-109.
[317] Andrijasevic, R. and Sacchetto, D. (2016) 'From labour migration to labour mobility? The return of the multinational worker in Europe', *Transfer: European Review of Labour and Research*, Vol. 22, No. 2, pp. 219-231. Available at: https://journals.sagepub.com/doi/10.1177/1024258916635975 [Accessed 30/10/2020]; Scholten, P. and van Ostaijen, M. (2018), 'Between mobility and migration: The multi-level governance of intra-European movement', *IMISCOE research series*, University of Amsterdam Press, Amsterdam.

dependent children or elderly in the same household, are more likely to undertake these types of mobility.

EU-wide data on posted workers by age group is not available. EU-LFS data was used to analyse, first, the age structure of cross-border workers, and second, whether age is likely to affect the probability to work as a cross-border worker, rather than as a long-term mover.

The table below shows the numbers of employed persons from a certain country who moved to another EU Member State during the last two years with the purpose of staying long-term[318] and the numbers of cross-border workers from that country, both as a share of total employed in the country. The results indicate that in most countries, the share of cross-border workers (those who work in another country) of all employed decreases with age. This indicates that, similarly to long-term mobility, the likeliness to engage in cross-border work, decreases with age.

This is quite clearly the case for workers from Spain, Italy, Romania and Slovakia, where there is a fairly strong and linear decrease in shares of cross-border workers with age. These results are corroborated by survey results from 2012/2013 on commuters from Czechia, Slovakia and Hungary to Austria, which showed that 50% of the commuters were between 21 and 35 years old, 36% between 36 and 50 years old and 14% between 51 and 65 years old.

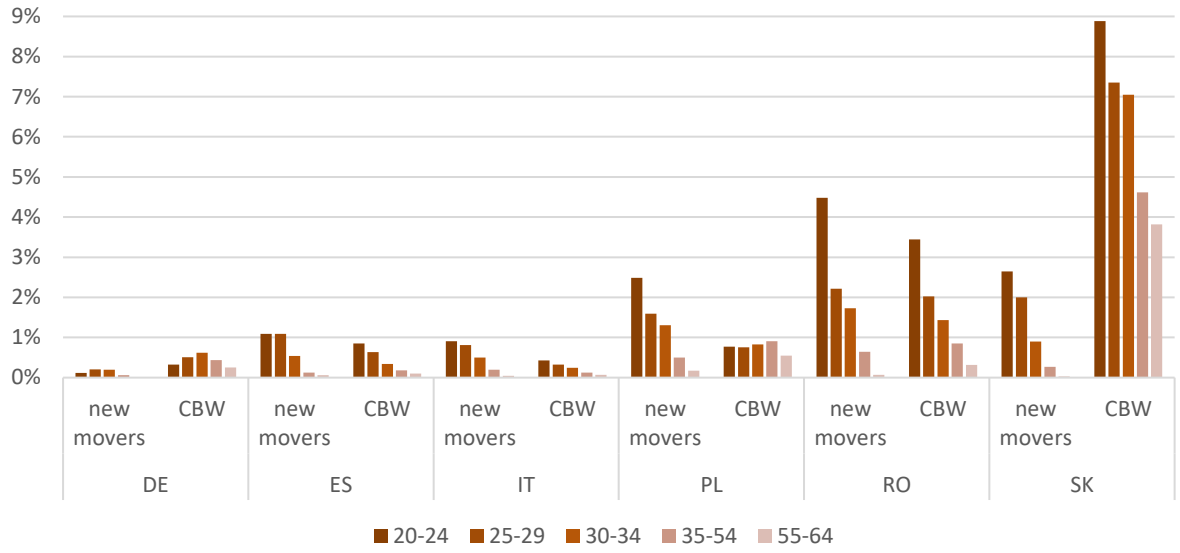
The decrease in shares with age is also visible among movers; however, figures indicate that the connection with age is possibly slightly stronger among movers than among cross-border workers, meaning that the likeliness to move decreases more strongly with age than that to engage in cross-border work.

Exceptions are Germany and Poland, where the likelihood to engage in cross-border work does not seem to decrease with age. In Germany, the share even increases slightly with age and is highest among 35 to 54-year-olds, and only decreases after that age. Here, it has to be noted that the shares of movers also do not decrease with age. In Poland, the link between age and (long-term) mobility is quite clear, the shares of new movers decreasing linearly and quite strongly with age. However, the shares of cross-border workers remain farily similar across the age groups. This indicates that in Poland and Germany, older workers are just as likely to engage in cross-border work as younger workers.

Furthermore, the above-mentioned increase in labour demand in the health and long-term care sector is likely to lead to an increase in cross-border work and posting, including among older (female) workers.

[318] 'Long-term' is defined as at least one year.

Figure 78: Shares of employed new movers and of cross-border workers from all employed in the country, by age group, 2014



NEW MOVERS: PERSONS WITH THE NATIONALITY OF THE INDICATED COUNTRY WHO MOVED TO ANOTHER EU COUNTRY WITHIN THE PAST TWO YEARS AND WORK THERE.

CBW: CROSS-BORDER WORKERS WITH EU NATIONALITY WHO RESIDE IN THE INDICATED COUNTRY, BUT WORK IN ANOTHER EU COUNTRY.

DATA REFERS TO PERSONS OF EU AND EFTA NATIONALITY ONLY.

SOURCE: EU-LFS 2014, DATA PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

4.7 Impact of changing mobility flows on sending and receiving countries

The link between mobility flows and population ageing is not a one-way street, because mobility (outgoing and incoming) obviously also affects demographic change in a country. Furthermore, both mobility and population ageing impact a country's economic development, which in return, as explained above, is a key driver to mobility.

Countries of origin, chiefly in the South and East already experienced population decline through a combination of low fertility and outflows, leading to concerns that emigration may lead to a worsening of the demographic outlook in the country of origin[319]. Most notably, the population in Bulgaria and the Baltic States declined by between 16% and 26% over the past 25 years[320]. A modelling exercise from 2019[321] showed how different scenarios of intra-EU mobility would affect the population sizes in the Member States. The central scenario assumes that mobility rates would persist as they have since 2009 (similar to what has been projected in section 4.4). If this was the case, Romania would lose 30% of its population by 2060 (2015 is used as the baseline). In absence of intra-EU mobility, the loss would be considerably smaller (-15%) and if mobility flows were twice as large as over the past decade, the decrease would be 40%. This illustrates the impact that mobility

[319] Institut Montaigne et Terra Nova (2020), *Les trois Europes migratoires*, Institut Montaigne Blog, Available at: https://www.institutmontaigne.org/blog/les-trois-europes-migratoires;
Elsner (2012), 'Does Emigration Benefit the Stayers? Evidence from EU Enlargement', *IZA Discussion Paper*, Series No. 6843, IZA, Bonn;
Lafleur, J.-M. et al. (2017), 'South-North Labour Migration Within the Crisis-Affected European Union: New Patterns, New Contexts and New Challenges'. In J.-M. Lafleur & M. Stanek (Eds.), *South-North Migration of EU Citizens in Times of Crisis*, Springer, pp. 193–214.
[320] Lutz, W. et al. (2019), p. 9.
[321] Lutz, W. et al. (2019), chapter 4.

has on the population size. Similar developments can be observed for most Eastern European countries, although the decline varies from 10% in Poland to 38% in Lithuania and Latvia when applying the central mobility scenario. Spain and Italy are also projected to see a population decline (although in Italy this is almost 0) which would also here be smaller in the absence of mobility.

Large outflows from sending countries would therefore negatively contribute 'to slowing the convergence between Member States, and impacting areas such as infrastructure, education and even population ageing', because movers 'tend to be early career adults'[322]. If high outflows of younger people from countries in Southern and Eastern Europe persist amid natural population ageing, those countries may face significant problems in financing welfare programmes and providing for the elderly through public pensions. Skills shortages may also intensify as a result of high outflows of young people, presenting problems in the wider economy[323].

Return mobility would, of course be important in cushioning these effects of mobility. As mentioned further above, in 2019, the amount of persons who moved (back) to their countries of origin was around two thirds compared to those who left their countries of origin. However, it has to be noted that the projected impacts of intra-EU mobility on population size described above already factors in return mobility. The effect of return mobility on the economy of course also depends on the characteristics of returnees. As mentioned above, most returnees are of younger working age[324], so they would most likely become part of the origin country's labour force and contribute their experience gained abroad.

Regarding **typically receiving countries**, one may distinguish between two groups: Scandinavia and the Benelux countries experienced population increases, as beneficiaries of mobility inflows[325]. Another group, including Italy and Germany, combined low fertility rates in the past (and high outflows following the economic crisis, in the case of Italy) with comparatively high levels of inflows from other European and third countries, thus remaining closer to the status quo[326]. The impact of continued mobility on Italy and Spain is already mentioned above. For Austria, Germany, Belgium, the Netherlands and France, continued mobility as it was would positively contribute to population growth – growth would be smaller in the absence of intra-EU mobility. The largest effect can be noticed in Austria and Germany, where population growth would be around 10 pps lower.

For recipient countries, benefits may accrue from an influx of labour that may fill both higher and lower-skilled positions in the labour market. Intra-EU mobility can alleviate the consequences of economic shocks, as it did in the aftermath of the economic crisis from 2008. However, for receiving countries, mobility is in general not seen as a remedy for negative economic consequences of population ageing, because flows are not large enough in volume, and because mobility is often long-term and thus movers will age in the destination country as well. Therefore, increasing labour force participation is seen as the main remedy to consequences of population ageing[327].

[322] Lutz, W. et al. (2019), p.7.
[323] Lutz, W. et al. (2019), ch. 5.
[324] See also Fries-Tersch, E. et al. (2016), p.13.
[325] Institut Montaigne et Terra Nova (2020).
[326] *ibid.*
[327] Lutz, W. et al. (2019), p.5.

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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[328].	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 *(stocks)*, or who moved their usual residence to a Member State other than their country of citizenship in a given period of time *(flows).* 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[329]. 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[330]. 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	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

[328] 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.

[329] 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.

[330] 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
workers under certain conditions, or move to the status of jobseekers[331]. 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[332].	temporarily absent. The group of 'unemployed' 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[333].
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'[334]. 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 also include persons who commute at a longer interval than once a week and seasonal workers who only work in another country for part of the year.

A.2. Main data sources for Sections 1-3: EU Labour Force Survey (EU-LFS) and Eurostat population and migration 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)[335]. 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.

[331] Ibid.

[332] 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.

[333] Eurostat 'EU-LFS database user guide. Version November 2016', p.55; description of variables WSTATOR and SEEKWORK.

[334] Regulation (EC) No 883/2004, Article 1(f).

[335] 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)

Comparability of figures is ensured by using the same concepts and definitions especially 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.

The EU-LFS has the following distinct advantages:

- For some countries, it seems to be simply the only source with the suitable frequency 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 workers[336].

However, estimations of 'EU foreigners' can suffer the following limitations:

- Higher non-response rate among foreigners, due to higher mobility, lack of language knowledge and potentially illegal residence or employment status[337];
- Under-coverage of recently arrived foreigners due to delay in entering the reference sample frame[338];
- Small sample sizes of EU movers in many countries reduce the possibility of providing detailed analysis of data[339].

As a result, EU-LFS estimations of stocks of EU foreigners are consistently lower than figures from migration statistics, as has been noted over the past years.

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

[336] 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.

[337] Limitations are described in Employment in Europe, 2008 (Chapter 2, p. 103).

[338] Employment in Europe, 2008 (Chapter 2, p. 103); 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').

[339] Employment in Europe, 2008 (Chapter 2, p. 103).

of citizenship, groups of country of birth, age and sex are collected based on Regulation (EC) No 862/2007 [340] and related Implementing Regulation.

The Eurostat database of population statistics provides data on the *stocks* of foreigners/foreign-born persons on 1 January of the reference year[341]. For the purpose of harmonisation, Eurostat recommends the definition of 'population on 1 January' to refer to the 'usually resident population' and defines this as persons who either 'have lived in their place of usual residence[342] for a continuous period of at least 12 months before the reference time; or those who arrived in their place of usual residence during the 12 months before the reference time with the intention of staying there for at least one year'[343].

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 residence[344]. 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/date[345]. Data on inflows and outflows equally refers to persons moving their place of usual residence to another country with the intention of staying at least for one year.

According to Regulation (EC) No 862/2007, 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. Over the years, more and more Member States reported data by individual country of citizenship. In 2018, only Cyprus and Malta, and Spain for some countries of citizenship, do not report break-downs by individual EU citizenship. However, when only selecting a specific age group (15 to 19 and 15 to 64, to calculate 20 to 64 years as working age), the number of Member States reporting the break-downs by citizenship decreases to 21.[346]

The additional variables available include citizenship, age group and sex. However, this source provides 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. The practical necessity to be registered for further administrative services (e.g. to open a bank account, to rent a flat) make data on arrivals more complete than data on departures.[347] 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.

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[340] Regulation (EC) No 862/2007 of the European Parliament and of the Council of 11 July 2007 on 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.

[341] Data sets: migr_pop1ctz and migr_pop2ctz, migr_pop3ctb, migr_pop4ctb, migra_pop5ctz, migr_pop6ctb.

[342] Usual residence means the place where a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage. Source: Eurostat, Reference Metadata on datasets 'Population' (demo_pop), available at: https://ec.europa.eu/eurostat/cache/metadata/en/demo_pop_esms.htm.

[343] Eurostat, Reference Metadata on datasets 'Population' (demo_pop), available at: https://ec.europa.eu/eurostat/cache/metadata/en/demo_pop_esms.htm.

[344] Data sets: migr_immi, migr_emi and respective subsets.

[345] 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.

[346] Eurostat, dataset: Population on 1 January by age group, sex and citizenship (migr_pop1ctz), extracted on 23/09/2019.

[347] Fajth, V., Siegel, M., Bruni, V., Gelashvili, T. (2018), Monitoring migration within the EU with existing data, REMINDER project, p. 13.

The fact that under-coverage is less likely for arriving movers, but that many movers may not deregister, explains why data on stocks from population statistics are usually higher than those estimated by the EU-LFS.

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.

A.3 Methodological notes for Section 3

A.3.1 Classification of occupations

Occupations are organised according to the ISCO system (International Standard Classification of Occupations). This system was developed by the International Labour Organization and was most recently updated in 2008. The system looks at skill through two dimensions: skill level and skill specialisation. Skill level measures the difficulty of the actions performed and therefore reflects the amount of education or training required to reach a certain standard. Skill specialisation takes into account the field and range of the tasks performed[348].

At the first level of ISCO classification, ten major groups are defined mainly corresponding to the skill level. Skill specialisation on the other hand is used to define the sub-major groups, minor groups and unit groups (second, third and fourth levels of classification). For the purposes of this section, the major and sub-major occupation groups will be studied[349].

The ISCO system defines four broad skill levels. Table 1 below shows how the skill levels correspond to the major occupation groups of the ISCO classification system[350].

In general terms, skill level one would correspond to a primary level of education, skill level two to secondary, skill level three to university or tertiary, and skill level four to graduate education. It should however be noted that the system provides for the possibility that skills can be obtained outside of formal education and rather through informal training and experience.

Table A17: ISCO 1D and 2D major and sub-major occupation groups, with corresponding skill levels

ISCO 1D major occupation groups and corresponding skill level	ISCO 2D sub-major occupation groups
Legislators senior officials and managers	Chief Executives, Senior Officials and Legislators
	Administrative and Commercial Managers

[348] Christopher R. Parsons, Sebastien Rojon, Farhan Samanani and Lena Wettach, 2014, 'Conceptualising International High-Skilled Migration', Working Papers, Paper 104, November 2014, International Migration Institute https://pdfs.semanticscholar.org/89ee/f20c6a283ffd0c6882e0b99d90f6cff41385.pdf

[349] Variables ISCO1D and ISCO2D. For more information please see Eurostat 2019, 'EU Labour Force Survey Database User Guide', https://ec.europa.eu/eurostat/documents/1978984/6037342/EULFS-Database-UserGuide.pdf

[350] International Labour Office 2012, 'International Standard Classification of Occupations: Structure, group definitions and correspondence tables', https://www.ilo.org/public/english/bureau/stat/isco/docs/publication08.pdf

ISCO 1D major occupation groups and corresponding skill level	ISCO 2D sub-major occupation groups
Skill levels 3 and 4	Production and Specialized Services Managers
	Hospitality, Retail and Other Services Managers
Professionals Skill level 4	Science and Engineering Professionals
	Health Professionals
	Teaching Professionals
	Business and Administration Professionals
	Information and Communications Technology Professionals
	Legal, Social and Cultural Professionals
Technicians and associate professionals Skill level 3	Science and Engineering Associate Professionals
	Health Associate Professionals
	Business and Administration Associate Professionals
	Legal, Social, Cultural and Related Associate Professionals
	Information and Communications Technicians
Clerks Skill level 2	General and Keyboard Clerks
	Customer Services Clerks
	Numerical and Material Recording Clerks
	Other Clerical Support Workers
Service workers and shop and market sales workers Skill level 2	Personal Services Workers
	Sales Workers
	Personal Care Workers
	Protective Services Workers
Skilled agricultural and fishery workers Skill level 2	Market-oriented Skilled Agricultural Workers
	Market-oriented Skilled Forestry, Fishery and Hunting Workers
	Subsistence Farmers, Fishers, Hunters and Gatherers
Craft and related trades workers Skill level 2	Building and Related Trades Workers (excluding Electricians)
	Metal, Machinery and Related Trades Workers
	Handicraft and Printing Workers
	Electrical and Electronic Trades Workers
	Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers
Plant and machine operators and assemblers Skill level 2	Stationary Plant and Machine Operators
	Assemblers
	Drivers and Mobile Plant Operators
Elementary occupations Skill level 1	Cleaners and Helpers
	Agricultural, Forestry and Fishery Labourers
	Labourers in Mining, Construction, Manufacturing and Transport
	Food Preparation Assistants
	Street and Related Sales and Services Workers
	Refuse Workers and Other Elementary Workers

SOURCE: INTERNATIONAL LABOUR OFFICE 2012, 'INTERNATIONAL STANDARD CLASSIFICATION OF OCCUPATIONS: STRUCTURE, GROUP DEFINITIONS AND CORRESPONDENCE TABLES', HTTPS://WWW.ILO.ORG/PUBLIC/ENGLISH/BUREAU/STAT/ISCO/DOCS/PUBLICATION08.PDF

A.4 Methodological notes for Section 4

The approach followed here extrapolates from previous trends, using Eurostat projection data by age groups[351] along with data on inflows and outflows of individual Member States by age group, over the past 10 years, where available[352]. The study is restricted to mobility of EU-27 nationals (excluding UK and EFTA citizens)[353]. As detailed information on mobility history is not available, the projected mobility rates necessarily include outflows to non-EU countries and inflows from non-EU countries. The calculation also assumes that the territory of the EU will remain the territory of the EU-27 Member States as they are in 2020.

Eurostat provides a baseline scenario that includes assumptions on migration in general (TCNs and EU nationals together, but not separately) and a no-migration scenario. To avoid double-counting, the no-migration scenario of the Eurostat demographic projections is used in this analysis[354]. Applying age-specific outflow and inflow rates from the past to these projections, scenarios were developed showing a) outflows from the main sending countries and b) inflows to the main destination countries from key sending countries. All else remaining equal, outflows and inflows are predicted by applying the average outflow/inflow rates since 2009[355] for each age category to the population in the same age category and sending country. The estimation of inflows is similar but based on further calculations (see **Annex A.4**).

No stipulations are made in respect of other demographic factors, partly due to data availability[356]. The present investigation should therefore be viewed as a possible scenario of future movements, **all else remaining constant**. Net mobility in the previous year was not included in the estimation of the reference population of each year because projections of age-specific net mobility for each country were too imprecise for methodological reasons[357].

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[351] Eurostat datasets migr_emi1ctz and migr_imm1ctz.

[352] Due to legislative changes and a harmonisation in migration statistics collected by Eurostat in 2008/2009, data from many Member States has breaks in series around that period, and Eurostat data are, in general, less comparable to previous years. Data for some countries are only available for more recent years (RO and BG from 2012 onwards; PL from 2010 onwards).

[353] Despite that, the outflow rates (from the key sending countries) from the past decade that are used as a basis for the projections include outflows to the UK, which are likely to be affected by Brexit (see end of this section). While it is beyond the scope of this study to produce quantified estimations of the effect of Brexit on mobility, the outflow rates used as the basic parameter already include some of the effects (flows to the UK decreased since 2016).

[354] As the projections do not offer breakdowns by citizenship, TCNs cannot be omitted from the base population used for calculations and are therefore indirectly considered nationals.

[355] For some countries (e.g. BG), data are only available from 2013. Additionally, in years when total volumes were below reliability limits, individual countries' figures may be missing.

[356] Variables such as educational attainment can be associated with the propensity to move. However, in the absence of data combining breakdowns on age and educational level, average movement rates per educational group cannot be established nor forecasts made.

[357] This is because the approach used here to estimate flows is based on changes of age structure in the countries of origin. To estimate total inflows to certain countries from other EU countries, changes in the overall EU population's age structure would provide the basis to modulate these inflows. However, many EU countries are irrelevant as countries of origin, meaning that EU-wide estimations are extremely imprecise. For the estimations of inflows, the study focused on several important destination countries and estimated the inflows only from the main origin countries. Outflows were not considered because, again, only outflows to the same origin countries

Method for calculating prospective outflows from key *sending countries*:

The average annual outflow rate of nationals and EU-27 citizens per age group from each main sending country (Bulgaria, Germany, Italy, Poland, Romania and Spain) (and the EU-27 as a whole) for the period 2009-2018, or as close to it as data availability allows, as shown in section 4.1;

To predict the future outflows, the Eurostat projected population per each age group and country and year is then multiplied with the average annual outflow rate for 2009-2018 – i.e. the amount of people per age group who would be expected to move elsewhere, if previous rates are held constant.

Method for calculating prospective inflows to key *destination* countries

Two sets of calculations are used to calculate prospective inflows to Austria, the Netherlands and Spain[358]:

- The projected outflow rates per age group from the main sending countries, taking into account the average outflows per age group in the recent past, as calculated and presented above;
- The average proportion of outflows from main sending countries that reached main destination countries in the 2009-2018 period.

The projected inflows are calculated by multiplying the average proportion of inflows from a specific sending country to a specific destination country in 2009-2018 with the projected outflows in the 2020-2030 period. This is calculated separately for each combination of destination country, country of origin and age group.

As the available data does not allow for a breakdown by age, nationality and previous country of residence at the same time, some broader assumptions have needed to be made. While the outflow rates are calculated based on the outflows of EU-27 nationals and nationals of the reporting country, in order to gain an understanding of overall EU-27 movements as well as that of individual countries, this is not possible when estimating inflows: there is no way of seeing which specific country an EU-27 national moved from. Thus, inflows are based on the number of nationals of main sending countries arriving in the destination country, without making further assumptions about EU-27 nationals who may also be arriving from that country.

should be taken into account, but Eurostat does not provide data by citizenship and next country of residence. Net mobility was thus excluded from the scenarios.

[358] These countries are chosen based on data availability, as not all main destination countries have available data on both the age and citizenship of movers.

ANNEX B - DATA ANNEX

B.1 Section 1 – Mobility of EU citizens

Table A18: Stocks of working-age (20-64) foreigners, by EU/EFTA country of residence and broad groups of citizenship, totals in thousands and row %, 2019

	EU-28		EFTA		TCNs		Total
EU-28	13 014	43.6%	183	0.6%	16 676	55.8%	29 873
EU-27	10 372	41.1%	159	0.6%	14 731	58.3%	25 262
EFTA	1 327	66.1%	10	0.5%	669	33.4%	2 007
AT	546	53.0%	7	0.6%	477	46.3%	1 029
BE	630	64.4%	3	0.3%	345	35.3%	978
BG	9	13.8%	0	0.2%	57	86.0%	66
CY	93	75.6%	0	0.3%	30	24.2%	124
CZ	193	43.0%	1	0.2%	256	56.8%	450
DE	3 321	44.8%	34	0.5%	4 057	54.7%	7 412
DK	180	46.0%	20	5.2%	191	48.9%	391
EE	17	13.0%	0	0.2%	115	86.8%	133
EL	157	28.2%	1	0.2%	399	71.7%	556
ES	1 406	40.3%	16	0.5%	2 067	59.2%	3 490
FI	76	39.3%	1	0.6%	116	60.1%	193
FR	971	31.0%	29	0.9%	2 129	68.0%	3 129
HR	10	21.6%	0	0.5%	37	77.8%	48
HU	58	40.3%	2	1.2%	85	58.6%	145
IE	346	72.2%	1	0.3%	132	27.5%	479
IT	1 211	31.4%	6	0.1%	2 642	68.5%	3 859
LT	6	16.1%	0	0.3%	31	83.6%	37
LU	172	83.7%	1	0.4%	33	15.9%	205
LV	5	3.1%	0	0.1%	152	96.8%	157
MT	36	53.5%	0	0.7%	31	45.8%	67
NL	447	55.3%	5	0.6%	356	44.1%	808
PL	26	10.6%	1	0.3%	218	89.1%	245
PT	113	30.7%	2	0.5%	253	68.8%	367
RO	49	52.6%	1	0.8%	43	46.6%	93
SE	231	36.4%	27	4.2%	377	59.5%	635
SI	17	15.2%	0	0.1%	92	84.8%	109
SK	46	78.1%	1	1.8%	12	20.2%	59
UK	2 643	57.3%	23	0.5%	1 945	42.2%	4 611
CH	32	85.4%	0	0.9%	5	13.8%	37

	EU-28		EFTA		TCNs		Total
IS	277	64.1%	7	1.6%	148	34.3%	432
NO	1 018	66.2%	3	0.2%	516	33.6%	1 537

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

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

PROVISIONAL DATA FOR FR. ESTIMATED NUMBERS FOR IE.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A19: Stocks of EU movers in EU-28 countries and changes on previous year, 2013-2019

	2013	2014	2015	2016	2017	2018	2019
EU-28	10.0	10.7 (+7%)	11.3 (+6%)	11.8 (+5%)	12.4 (+5%)	12.9 (+4%)	13.0 (+1%)
EU-27	8.2	8.8 (+8%)	9.2 (+4%)	9.5 (+4%)	9.8 (+3%)	10.1 (+3%)	10.4 (+3%)
AT	0.3	0.4 (+24%)	0.4 (+10%)	0.5 (+8%)	0.5 (+6%)	0.5 (+6%)	0.5 (+5%)
BE	0.6	0.6 (+2%)	0.6 (+2%)	0.6 (+2%)	0.6 (+1%)	0.6 (+1%)	0.6 (+2%)
BG	0.01	0.01 (+1%)	0.01 (+0.1%)	0.01 (+2%)	0.01 (+0.3%)	0.01 (-5%)	0.01 (+3%)
CY	0.1	0.1 (-1%)	0.08 (-5%)	0.08 (+3%)	0.1 (+2%)	0.1 (+5%)	0.1 (+8%)
CZ	0.1	0.1 (7%)	0.2 (+6%)	0.2 (+5%)	0.2 (+6%)	0.2 (+5%)	0.2 (+5%)
DE	2.1	2.5 (+17%)	2.7 (+9%)	2.9 (+9%)	3.0 (+4%)	3.2 (+5%)	3.3 (+4%)
DK	0.1	0.1 (+9%)	0.1 (+8%)	0.2 (+9%)	0.2 (+7%)	0.2 (+5%)	0.2 (+5%)
EE	0.01	0.01 (+0.3%)	0.01 (+101%)	0.01 (+7%)	0.01 (+8%)	0.02 (+17%)	0.01 (+11%)
EL	0.2	0.1 (-3%)	0.2 (+2%)	0.2 (+3%)	0.2 (-1%)	0.2 (+2%)	0.2 (-1%)
ES	1.5	1.5 (-4%)	1.4 (-3%)	1.4 (-2%)	1.4 (-1%)	1.4 (-1%)	1.4 (+2%)
FI	0.1	0.1 (+9%)	0.07 (+7%)	0.07 (+4%)	0.08 (+3%)	0.08 (+1%)	0.08 (+1%)
FR	0.9	1 (+3%)	1.0 (+2%)	1.0 (+1%)	1.0 (+1%)	1.0 (-2%)	1.0 (+3%)
HR	0.01	0.01 (+11%)	0.007 (+19%)	0.01 (+14%)	0.01 (+10%)	0.01 (+8%)	0.01 (+7%)
HU	0.1	0.06 (+0.2%)	0.06 (-1%)	0.07 (+6%)	0.06 (-8%)	0.06 (-0.4%)	0.1 (-4%)
IE	0.3	0.3 (+2%)	0.3 (+2%)	0.3 (+2%)	0.3 (+3%)	0.3 (+1.5%)	0.3 (+3%)
IT	1.0	1.1 (+16%)	1.2 (+3%)	1.2 (+1%)	1.2 (+1%)	1.2 (1.2%)	1.2 (+1%)
LT	0.002	0.003 (+17%)	0.003 (+18%)	0.004 (+20%)	0.004 (+14%)	0.004 (+11%)	0.006 (+21%)
LU	0.1	0.1 (+4%)	0.2 (+4%)	0.2 (+3%)	0.2 (+4%)	0.2 (+2%)	0.2 (+1%)
LV	0.001	0.01 (+11%)	0.005 (+9%)	0.004 (-11%)	0.004 (-1%)	0.005 (+5%)	0.005 (+5%)
MT	0.01	0.01 (+21%)	0.01 (+29%)	0.02 (+29%)	0.02 (+30%)	0.03 (+33%)	0.04 (+20%)

	2013	2014	2015	2016	2017	2018	2019
NL	0.3	0.3 (+5%)	0.3 (+7%)	0.4 (+6%)	0.4 (+7%)	0.4 (+7%)	0.4 (+8%)
PL	0.02	0.02 (+6%)	0.02 (+7%)	0.02 (-14%)	0.02 (+14%)	0.02 (+12%)	0.03 (+5%)
PT	0.1	0.08 (-2%)	0.07 (-2%)	0.08 (+3%)	0.09 (+12%)	0.1 (+16%)	0.1 (+16%)
RO	0.02	0.02 (+4%)	0.03 (+67%)	0.04 (+42%)	0.04 (+9%)	0.05 (+5%)	0.05 (+5%)
SE	0.2	0.2 (+2%)	0.21 (+2%)	0.2 (+3%)	0.2 (+2%)	0.2 (+3%)	0.2 (+1%)
SI	0.01	0.01 (148%)	0.01 (+5%)	0.01 (+2%)	0.02 (+6%)	0.02 (+4%)	0.02 (+5%)
SK	0.05	0.04 (-20%)	0.04 (+4%)	0.04 (+7%)	0.04 (+6%)	0.04 (+4%)	0.05 (+4%)
UK	1.8	1.9 (+6%)	2.2 (+13%)	2.3 (+7%)	2.6 (+14%)	2.8 (+6%)	2.7 (-6%)

PERCENTAGES INDICATE CHANGE ON THE PREVIOUS YEAR. AS 2013 IS THE FIRST YEAR OF THE TIME SERIES, NO CHANGE IS INDICATED.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A20: Inflows, outflows and net mobility by groups of nationality (1 000s), citizens of working age (20-64), 2018

Country of residence	Nationals			EU-28			EFTA			TCNs			Total		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
EU-28	738.5	-936.1	-329.1	1,020.2	-563.3	379.0	15.4	-6.5	2.1	1,633.1	-453.5	997.1	3,407.2	-1959.4	1,447.8
EU-27	677.5	-826.6	-280.5	852.7	-450.5	324.3	14.7			1,366.4	-369.4	814.5	2,911.3	-1646.5	1,264.8
EFTA	21.2	-30.3	-9.2	93.0	-68.9	24.1	0.7	-0.7	0.05	44.2	-25.7	18.5	159.0	-125.5	33.5
AT	6.7	-10.5	-3.8	52.1	-26.5	25.6	0.5	-0.3	0.2	21.8	-15.6	6.2	81.1	-52.8	28.3
BE	12.4	-23.9	-11.5	50.1	-29.4	20.7	0.4	-0.3	0.1	39.2	-14.7	24.5	102.0	-68.2	33.8
BG	10.7	-24.4	-13.6	0.8	-0.1	0.6	0.01	-0.002	0.003	9.1	-1.4	7.7	20.7	-25.9	-5.3
CZ	4.1	-4.7	-0.6	14.6	-2.4	12.3	0.1	-0.02	0.03	37.0	-15.5	21.5	55.8	-22.6	33.2
DE	108.4	-160.8	-52.4	299.8	-168.2	131.6	2.1			268.2	-105.8	162.3	678.4	-434.8	243.6
DK	13.3	-10.4	2.9	20.5	-20.9	-0.4	1.8	-2.3	-0.4	14.2	-16.5	-2.3	49.9	-50.1	-0.2
EE	6.5	-5.3	1.2	3.7	-2.0	1.8	0.1	-0.02	0.1	4.6	-1.5	3.2	14.9	-8.8	6.2
ES	51.6	-56.6	-5.0	108.5	-80.6	27.9	1.9	-1.0	0.9	308.4	-95.4	213.0	470.3	-233.6	236.7
FI	5.6	-9.0	-3.3	5.7	-4.0	1.8	0.1	-0.1	0.03	11.1	-2.4	8.7	22.6	-15.4	7.2
HR	6.4	-27.3	-20.9	1.5	-0.6	0.9	0.04	-0.01	0.03	14.2	-2.1	12.1	22.2	-30.1	-7.9
HU	30.4	-22.3	8.0	8.8	-12.9	-4.1	0.3	-0.4	-0.1	32.8	-6.3	26.5	72.1	-41.8	30.3
IE	23.4	-19.8	3.7	23.3	-12.3	10.9	0.2			24.9	-7.4	17.5	71.8	-39.5	32.3
IT	31.5	-88.9	-57.4	45.4	-16.3	29.1	0.4	-0.1	0.2	166.0	-13.9	152.2	243.3	-119.2	124.1
LT	14.4	-22.7	-8.3	0.7	-0.1	0.6	0.0	-0.001	0.01	10.7	-2.7	8.0	25.8	-25.5	0.3
LU	0.9	-1.7	-0.9	13.2	-7.3	5.8	0.1	-0.1	0.03	5.3	-1.8	3.5	19.4	-10.9	8.5
LV	3.1	-9.5	-6.4	0.6	-0.3	0.2	0.0	-0.01	0.01	5.0	-2.6	2.4	8.7	-12.4	-3.7
MT	1.2	-0.8	0.4	9.9	-3.4	6.5	0.1			11.9	-3.5	8.4	23.1	-7.7	15.4
NL	29.2	-35.3	-6.2	65.8	-33.1	32.7	0.7	-0.6	0.2	49.7	-16.8	33.0	145.5	-85.8	59.6
PL	53.9	-106.1	-52.2	14.3	-12.8	1.5	0.4			64.9	-21.4	43.5	133.5	-140.4	-6.9
RO	118.0	-163.4	-45.4	7.5	-4.8	2.7	0.1	-0.1	0.1	16.6	-11.1	5.5	142.2	-179.4	-37.2

Country of residence	Nationals			EU-28			EFTA			TCNs			Total		
	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net	In	Out	Net
SE	10.7	-15.9	-5.2	23.2	-10.6	12.7	2.0	-1.4	0.6	50.5	-7.1	43.4	86.5	-35.0	51.5
SI	2.9	-4.9	-2.1	2.9	-1.9	0.9	0.0	-0.003	0.01	17.3	-3.9	13.4	23.0	-10.7	12.3
SK	1.0	-2.4	-1.4	1.9	-0.02	1.9	0.1		0.1	0.5	-0.01	0.5	3.5	-2.5	1.0
UK	61.0	-109.5	-48.5	167.5	-112.7	54.8	0.7			266.7	-84.1	182.6	495.9	-306.4	189.5
CH	16.3	-23.3	-7.0	67.9	-55.7	12.3	0.4	-0.3	0.1	28.9	-22.6	6.3	113.5	-101.8	11.7
IS	1.3	-1.5	-0.2	7.5	-1.7	5.9	0.1	-0.04	0.03	1.2	-0.2	0.9	10.1	-3.5	6.6
NO	3.5	-5.5	-2.0	17.5	-11.5	6.0	0.3	-0.4	-0.1	14.1	2.8	11.3	35.4	-14.6	20.8

FIGURES RELATE TO PERSONS MOVING TO AND FROM THE COUNTRY INDICATED, REGARDLESS OF COUNTRY OF PREVIOUS RESIDENCE. FIGURES MAY INCLUDE CITIZENS MOVING TO OR FROM THIRD COUNTRIES.

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

INFLOWS: PROVISIONAL DATA FOR BG, PL, SK, UK. ESTIMATED NUMBERS FOR DE, PL, RO. BREAK IN TIME SERIES FOR DE. OUTFLOWS: CY, EL, FR, PT ARE NOT DISPLAYED BECAUSE FIGURES ARE NOT AVAILABLE. PROVISIONAL DATA FOR BG, FR, PL, UK. ESTIMATED NUMBERS FOR DE, PL, RO.

LATEST FLOW DATA AVAILABLE ARE FROM 2018.

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A21: Stocks of EU movers, by country of citizenship, 2018 and 2019

Country of citizenship	2018	2019	Percentage change
EU-28	11 629	11 906	2%
EU-27	11 214	11 511	1%
EFTA	155	154	-1%
AT	159	165	3%
BE	175	188	7%
BG	553	569	3%
CY	11	16	48%
CZ	111	111	0.3%
DE	492	511	4%
DK	56	49	-12%
EE	57	52	-9%
EL	416	400	-4%
ES	437	446	2%
FI	55	54	-1%
FR	484	506	5%
HR	378	396	5%
HU	310	339	9%
IE	242	223	-8%
IT	1 134	1 175	4%
LT	238	238	-0.3%
LU	22	24	9%
LV	128	135	6%
NL	340	308	-9%
PL	1 663	1 730	4%
PT	824	815	-1%
RO	2 515	2 614	4%
SE	85	80	-5%
SI	37	40	8%
SK	197	231	17%
UK	415	395	-5%
IS	7	7	4%
NO	49	52	6%
CH	90	78	-13%

MALTA IS EXCLUDED FROM THE TABLE DUE TO MISSING DATA.

SOURCE: EU-LFS, 2018, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A22: Stocks of EU movers (20-64 years), by country of citizenship and country of residence, 2019

COUNTRY OF CITIZENSHIP	EU-28	EU-27	EFTA	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	CH	IS	NO
EU-28	11906	9281	1279	536	553		64	83	3263	106	5	64	1307	51	871	(4)	26	351	1219	(1)	177		32	299	17	39		181	8	(3)	2624	1008	9	262
EU-27	11511		1237	531	544		58	81	3198	98	5	62	1203	49	830	(4)	26	274	1207	(1)	173		22	276	17	39		173	8	(3)	2624	9	251	983
EFTA	154	127							27	16			14		20				3					3				25			27			
AT	165	160	27						129				6						3		(1)							(2)			(5)	29		
BE	188	171	6						19				21		73				(2)		19			24				(2)			17	8		
BG	569	474	6	22	21		10	3	194	4		21	112		(9)			3	47		1		3	9				(2)	(2)		94	6		
CY	16	11										(3)																			(5)			
CZ	111	80	7	9					44				6					(2)	4		1										31	8		
DE	511	401	248	146	26			(1)		15		(1)	52		35		(3)	9	14		9		(1)	53				18			111	225		16
DK	49	34	11						6				(2)								(1)			(2)				15			15	(1)		11
EE	52	46												26														4			(6)			
EL	400	354	10		12		27		273				(4)						6		3		1	5				5			45	10		
ES	446	311	65	(4)	38				120	(2)					64			16	16		5		(1)	18				7			134	63		
FI	54	41											(4)								(1)							23			13	(2)		
FR	506	368	95	8	109			(1)	82	(2)		(2)	66					11	19		38			11				4			137	97		
HR	396	396	17	59				(1)	279				(3)					9	15		(1)							11	(3)			20		
HU	339	263	11	65				(2)	138	(2)			9					9	5		3		1	11				6			76	14		
IE	223	41			(2)				5				10								(1)		(0)	(2)							182	(3)		
IT	1175	968	214	23	94				499	(3)		(1)	145		112			15			16		6	21				6			207	213		
LT	238	109	28				(1)		34	4			12					32	(2)		1		(0)	3				8			128	(2)		26
LU	24	24							11																									
LV	135	66	7				(1)		27		(2)		(4)					17										(2)			69	(2)		(7)
MT																																		
NL	308	251	14	(4)	73				91	(3)			26		21			(3)	5		2		(0)					7			58	13		
PL	1730	1083	99	45	43		(1)	8	607	14		5	52		33			85	77		4		(1)	68				22			646	31	4	63
PT	815	654	194		27			(1)	107				75		360			8	3		55			10				(2)			161	192		
RO	2614	2276	24	73	68		13	4	404	13		14	571		67		7	30	963		4		2	10		8		13			338	16		(8)
SE	80	48	48						12	8			9						(2)				(1)	(2)							32	(5)		38
SI	40	40		13				(1)	14				(1)			(2)																(4)		
SK	231	171	8	32	(3)			56	36				6					7	7		(1)		(1)	(2)							59	10		
UK	395	395	41	(4)	9		6	(2)	64	9		(2)	104	(2)	41			77	12		4		10	22				8				25		11
CH	78	7							23				8		19				3					(2)							(10)			
IS	(7)	39								(3)																		(2)						
NO	52	69								10			6															20			14			

SOURCE: EU-LFS, 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A23: 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, 2018

Country of destination	Citizenship					
	EU-28		EFTA		Total	
EU-28	1 020	0.3%	15	0.01%	1 036	0.3%
EU-27	853	0.3%	15	0.01%	867	0.3%
EFTA	93	1.1%	0.7	0.01%	94	1.1%
AT	52	1.0%	0.5	0.01%	53	1.0%
BE	50	0.7%	0.4	0.01%	50	0.8%
BG	1	0.0%	0.01	0.0001%	1	0.02%
CY	7	1.2%	0.1	0.01%	7	1.2%
CZ	15	0.2%	0.1	0.00%	15	0.2%
DE	300	0.6%	2.1	0.00%	302	0.6%
DK	21	0.6%	1.8	0.05%	22	0.7%
EE	4	0.5%	0.1	0.01%	4	0.5%
EL	12	0.2%	0.1	0.001%	12	0.2%
ES	108	0.4%	1.9	0.01%	110	0.4%
FI	6	0.2%	0.1	0.004%	6	0.2%
FR	53	0.1%	3.1	0.01%	56	0.2%
HR	2	0.1%	0.04	0.002%	2	0.1%
HU	9	0.1%	0.3	0.004%	9	0.1%
IE	23	0.8%	0.2	0.01%	24	0.8%
IT	45	0.1%	0.4	0.001%	46	0.1%
LT	1	0.0%	0.01	0.001%	1	0.0%
LU	13	3.4%	0.1	0.03%	13	3.4%
LV	1	0.1%	0.02	0.002%	1	0.1%
MT	10	3.3%	0.1	0.03%	10	3.4%
NL	66	0.6%	0.7	0.01%	67	0.7%
PL	14	0.1%	0.4	0.002%	15	0.1%
PT	6	0.1%	0.1	0.002%	6	0.1%
RO	7	0.1%	0.1	0.001%	8	0.1%
SE	23	0.4%	2.0	0.03%	25	0.4%
SI	3	0.2%	0.01	0.001%	3	0.2%
SK	2	0.1%	0.1	0.002%	2	0.1%
UK	167	0.4%	0.7	0.002%	168	0.4%
CH	8	3.6%	0.1	0.03%	8	3.6%
IS	18	0.6%	0.3	0.01%	18	0.6%
NO	68	1.3%	0.4	0.01%	68	1.3%

PROVISIONAL DATA FOR BG, PL, SK, UK. ESTIMATED NUMBERS FOR DE, PL RO. BREAK IN SERIES FOR DE.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A24: Evolution of the inflows of foreign EU and EFTA citizens of working age (20-64) by EU/EFTA country of destination, 2009, 2012 and 2014-2018 (1,000s)

	Inflows 2009		Inflows 2012		Inflows 2014		Inflows 2015		Inflows 2016		Inflows 2017		Inflows 2018	
	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA
EU-28	599 (0.2%)	13 (0%)	814 (0.3%)	16 (0%)	1051 (0.3%)	15 (0%)	1111 (0.4%)	20 (0%)	1111 (0.4%)	20 (0%)	1111 (0.4%)	20 (0%)	1111 (0.4%)	20 (0%)
EU-27	460 (0.2%)	12 (0.0%)	681 (0.3%)	13 (0.0%)	833 (0.3%)	13 (0.0%)	882 (0.3%)	13 (0.0%)	851 (0.3%)	14 (0.0%)	862 (0.3%)	14 (0.0%)	853 (0.3%)	15 (0.0%)
EFTA	100 (1.3%)	1 (0%)	107 (1.3%)	1 (0%)	109 (1.3%)	1 (0%)	100 (1.2%)	1 (0%)	100 (1.2%)	1 (0%)	100 (1.2%)	1 (0%)	100 (1.2%)	1 (0%)
AT	29 (0.6%)	0 (0%)	42 (0.8%)	0 (0%)	54 (1.0%)	0 (0%)	55 (1.0%)	0 (0%)	55 (1.0%)	0 (0%)	55 (1.0%)	0 (0%)	55 (1.0%)	0 (0%)
BE			51 (0.8%)	0 (0%)	49 (0.7%)	0 (0%)	47 (0.7%)	0 (0%)	47 (0.7%)	0 (0%)	47 (0.7%)	0 (0%)	47 (0.7%)	0 (0%)
BG			3 (0.1%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)
CY	9 (1.8%)	0 (0%)	9 (1.6%)	0 (0%)	3 (0.5%)	0 (0%)	5 (0.9%)	0 (0%)	5 (0.9%)	0 (0%)	5 (0.9%)	0 (0%)	5 (0.9%)	0 (0%)
CZ	14 (0.2%)	0 (0%)	10 (0.2%)	0 (0%)	12 (0.2%)	0 (0%)	12 (0.2%)	0 (0%)	12 (0.2%)	0 (0%)	12 (0.2%)	0 (0%)	12 (0.2%)	0 (0%)
DE	105 (0.2%)	2 (0%)	248 (0.5%)	2 (0%)	335 (0.7%)	2 (0%)	362 (0.7%)	2 (0%)	362 (0.7%)	2 (0%)	362 (0.7%)	2 (0%)	362 (0.7%)	2 (0%)
DK	13 (0.4%)	2 (0.1%)	16 (0.5%)	2 (0.1%)	20 (0.6%)	2 (0.1%)	21 (0.6%)	2 (0.1%)	21 (0.6%)	2 (0.1%)	21 (0.6%)	2 (0.1%)	21 (0.6%)	2 (0.1%)
EE	1 (0.1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3 (0.4%)	0 (0%)	3 (0.4%)	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%)	12 (0.2%)	0 (0%)	12 (0.2%)	0 (0%)
ES		1 (0%)		2 (0%)	74 (0.3%)	1 (0%)	79 (0.3%)	1 (0%)	79 (0.3%)	1 (0%)	79 (0.3%)	1 (0%)	79 (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%)	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%)	59 (0.2%)	3 (0%)	59 (0.2%)	3 (0%)	59 (0.2%)	3 (0%)
HR	1 (0%)	0 (0%)	1 (0%)	0 (0%)	2 (0.1%)	0 (0%)	2 (0.1%)	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%)	8 (0.1%)	0 (0%)	8 (0.1%)	0 (0%)
IE	17 (0.6%)	0 (0%)	17 (0.6%)	0 (0%)	21 (0.8%)	0 (0%)	24 (0.9%)	0 (0%)	24 (0.9%)	0 (0%)	24 (0.9%)	0 (0%)	24 (0.9%)	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%)	51 (0.1%)	0 (0%)	51 (0.1%)	0 (0%)
LT	0 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (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 (3.6%)	0 (0%)	13 (3.6%)	0 (0%)	13 (3.6%)	0 (0%)
LV			0 (0%)	0 (0%)	1 (0.1%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)	1 (0%)	0 (0%)

	Inflows 2009		Inflows 2012		Inflows 2014		Inflows 2015		Inflows 2016		Inflows 2017		Inflows 2018	
	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA	EU-28	EFTA
MT	2 (0.8%)	0 (0%)	2 (0.8%)	0 (0%)	5 (1.9%)	0 (0%)	6 (2.4%)	0 (0%)	6 (2.4%)	0 (0%)	6 (2.4%)	0 (0%)	6 (2.4%)	0 (0%)
NL	36 (0.4%)	0 (0%)	42 (0.4%)	0 (0%)	49 (0.5%)	1 (0%)	50 (0.5%)	1 (0%)	50 (0.5%)	1 (0%)	50 (0.5%)	1 (0%)	50 (0.5%)	1 (0%)
PL	10 (0%)	0 (0%)	19 (0.1%)	0 (0%)	21 (0.1%)	0 (0%)	23 (0.1%)	0 (0%)	23 (0.1%)	0 (0%)	23 (0.1%)	0 (0%)	23 (0.1%)	0 (0%)
PT	3 (0%)	0 (0%)	1 (0%)	0 (0%)	3 (0%)	0 (0%)	5 (0.1%)	0 (0%)	5 (0.1%)	0 (0%)	5 (0.1%)	0 (0%)	5 (0.1%)	0 (0%)
RO	4 (0%)	0 (0%)	3 (0%)	0 (0%)	1 (0%)	0 (0%)	7 (0.1%)	0 (0%)	7 (0.1%)	0 (0%)	7 (0.1%)	0 (0%)	7 (0.1%)	0 (0%)
SE	21 (0.4%)	2 (0%)	20 (0.4%)	2 (0%)	23 (0.4%)	2 (0%)	24 (0.4%)	2 (0%)	24 (0.4%)	2 (0%)	24 (0.4%)	2 (0%)	24 (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%)	2 (0.2%)	0 (0%)	2 (0.2%)	0 (0%)	2 (0.2%)	0 (0%)
SK	4 (0.1%)	0 (0%)	2 (0.1%)	0 (0%)	2 (0%)	0 (0%)	3 (0.1%)	0 (0%)	3 (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%)	229 (0.6%)	7 (0%)	229 (0.6%)	7 (0%)	229 (0.6%)	7 (0%)
IS	2 (0.9%)	0 (0%)	2 (0.8%)	0 (0%)	2 (1.3%)	0 (0%)	3 (1.4%)	0 (0%)	3 (1.4%)	0 (0%)	3 (1.4%)	0 (0%)	3 (1.4%)	0 (0%)
NO	22 (0.8%)	1 (0%)	31 (1.0%)	1 (0%)	29 (1.0%)	1 (0%)	23 (0.7%)	1 (0%)	23 (0.7%)	1 (0%)	23 (0.7%)	1 (0%)	23 (0.7%)	1 (0%)
CH	76 (1.6%)	0 (0%)	74 (1.5%)	0 (0%)	77 (1.5%)	0 (0%)	74 (1.4%)	0 (0%)	74 (1.4%)	0 (0%)	74 (1.4%)	0 (0%)	74 (1.4%)	0 (0%)

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

FIGURES FOR 2009-2012 DO NOT INCLUDE HR CITIZENS.

PROVISIONAL DATA: BG, PL, SK, UK. ESTIMATED NUMBERS: DE, PL, RO. BREAK IN TIME SERIES: DE.

BREAKS IN TIME SERIES IN PREVIOUS YEARS: DE (2009, 2016, 2017), BE (2010), BG (2012) CZ (2013), CY (2009), FR (2010), HU (2010), CH (2010), EE (2015), EL (2015, 2016).

NO FIGURES ARE PROVIDED FOR BE AND BG IN 2009.

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

LATEST FLOW DATA AVAILABLE ARE FROM 2018.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A25: Outflows of nationals of working age (20-64) as a percentage of the population in the country of origin, 2009, 2012 and 2014-2018

Country of residence	Outflow rate among nationals							Total outflow rate						
	2009	2012	2014	2015	2016	2017	2018	2009	2012	2014	2015	2016	2017	2018
EU-28	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.6%	0.6%	0.6%	0.6%	0.7%	0.7%	0.6%
EU-27	0.4%	0.4%	0.4%	0.4%	0.5%	0.5%	0.4%	0.6%	0.5%	0.6%	0.6%	0.6%	0.7%	0.6%

Country of residence	Outflow rate among nationals							Total outflow rate						
	2009	2012	2014	2015	2016	2017	2018	2009	2012	2014	2015	2016	2017	2018
EFTA	0.4%	0.5%	0.4%	0.4%	0.5%	0.5%	0.5%	1.1%	1.3%	1.4%	1.4%	1.5%	1.5%	1.5%
AT	0.3%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.8%	0.8%	0.8%	0.8%	0.9%	1.0%	1.0%
BE		0.4%	0.4%	0.4%	0.4%	0.4%	0.4%		1.1%	1.1%	1.0%	1.1%	1.0%	1.0%
BG		0.2%	0.4%	0.4%	0.5%	0.5%	0.6%		0.3%	0.5%	0.5%	0.6%	0.6%	0.6%
CZ			0.1%	0.1%	0.1%	0.1%	0.1%			0.4%	0.3%	0.5%	0.4%	0.4%
DE	0.2%	0.2%	0.2%	0.2%	0.4%	0.4%	0.4%		0.4%	0.5%	0.5%	0.8%	0.9%	0.9%
DK	0.3%	0.4%	0.3%	0.3%	0.4%	0.4%	0.3%		1.1%	1.1%	1.1%	1.3%	1.4%	1.5%
EE	0.5%	0.6%	0.5%	1.1%	1.2%	1.0%	0.8%		0.6%	0.4%	1.3%	1.5%	1.3%	1.1%
ES	0.1%	0.2%	0.2%	0.3%	0.3%	0.2%	0.2%	1.0%	1.2%	1.1%	0.9%	0.9%	1.0%	0.8%
FI	0.2%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%		0.3%	0.4%	0.4%	0.4%	0.4%	0.5%
HR			0.6%	0.8%	1.0%	1.4%	1.1%			0.6%	0.8%	1.1%	1.5%	1.2%
HU	0.1%	0.2%	0.5%	0.5%	0.5%	0.4%	0.4%		0.3%	0.6%	0.7%	0.6%	0.6%	0.7%
IE	0.7%	1.6%	1.4%	1.3%	1.0%	1.0%	0.8%	2.1%	2.3%	2.0%	1.9%	1.7%	1.7%	1.4%
IT	0.1%	0.2%	0.2%	0.2%	0.3%	0.3%	0.3%	0.2%	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%
LT	1.4%	1.7%	1.5%	1.7%	2.1%	2.2%	1.4%	1.6%	1.8%	1.6%	2.0%	2.3%	2.3%	1.5%
LU	0.8%	0.7%	0.7%	0.9%	0.8%	0.9%	0.9%		2.4%	2.5%	2.7%	2.9%	2.9%	2.8%
LV		1.5%	1.3%	1.3%	1.3%	1.2%	1.0%		1.6%	1.2%	1.3%	1.4%	1.2%	1.1%
MT	0.4%	0.4%	0.4%	0.3%	0.3%	0.3%	0.3%	1.2%	1.2%	1.6%	2.1%	2.4%	2.0%	2.6%
NL	0.4%	0.4%	0.4%	0.5%	0.4%	0.4%	0.4%		0.8%	0.9%	0.9%	0.8%	0.8%	0.9%
PL		0.6%	0.6%	0.5%	0.6%	0.5%	0.4%		0.9%	0.8%	0.8%	0.7%	0.7%	0.6%
RO		1.1%	1.1%	1.3%	1.4%	1.5%	1.4%		1.1%	1.1%	1.3%	1.4%	1.6%	1.5%
SE	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%		0.7%	0.7%	0.8%	0.6%	0.6%	0.6%
SI	0.2%	0.5%	0.5%	0.5%	0.6%	0.6%	0.4%		0.9%	0.9%	0.9%	1.0%	1.1%	0.9%
SK	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%

Country of residence	Outflow rate among nationals							Total outflow rate						
	2009	2012	2014	2015	2016	2017	2018	2009	2012	2014	2015	2016	2017	2018
UK	0.3%	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.9%	0.8%	0.7%	0.7%	0.8%	0.8%	0.8%
IS	1.5%	1.4%	1.0%	1.1%	1.0%	0.9%	0.9%	2.9%	1.8%	1.6%	1.5%	1.6%	1.4%	1.6%
NO	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.5%	0.6%	0.7%	0.7%	0.9%	0.8%	0.6%
CH	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	1.4%	1.6%	1.7%	1.8%	1.8%	1.9%	1.9%

NUMBER OF OUTFLOWS OF NATIONALS AS A SHARE OF TOTAL NATIONAL POPULATION IN THE COUNTRY, 2018.

LATEST FLOW DATA AVAILABLE ARE FROM 2018.

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

MISSING DATA IN 2009 ON TCNS BY AGE. MEAN TOTAL RATES ARE NOT AVAILABLE FOR CZ, DE, DK, EE, FI, HU, LU, NL, SE, SI, PL, RO, HR, LV, BE, BG.

PROVISIONAL DATA: BG, PL, UK. ESTIMATED NUMBERS FOR DE, PL, RO.

EU-28 AGGREGATES EXCLUDE CY, EL, FR, PT.

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

SOURCE: EUROSTAT DATA ON EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A26: Outflows of nationals (20-64) from EU and EFTA countries, 2009, 2012, 2014-2018 (numbers in thousands of citizens)

Country of residence	Outflow of nationals							Total outflow						
	2009	2012	2014	2015	2016	2017	2018	2009	2012	2014	2015	2016	2017	2018
EU-28	744	816	883	887	1,030	1,006	936	1,619	1,722	1,821	1,798	1,994	2,081	1,953
EU-27	627	695	767	782	918	895	827	1,293	1,443	1,547	1,540	1,697	1,762	1,653
EFTA	28	30	27	29	30	30	30	86	102	113	117	124	124	126
AT	13	11	11	11	11	11	10	43	41	42	44	51	52	53
BE		25	22	22	23	23	24		72	73	69	72	68	68
BG		11	20	18	21	22	24		14	24	22	24	26	26
CZ			8	6	6	5	5			24	21	31	23	23
DE	87	73	84	79	175	163	161	223	188	261	270	419	448	435
DK	10	11	10	10	11	11	10	33	36	37	37	44	47	50
EE	3	4	3	7	8	7	5	4	5	4	11	12	11	9

Country of residence	Outflow of nationals							Total outflow						
	2009	2012	2014	2015	2016	2017	2018	2009	2012	2014	2015	2016	2017	2018
ES	24	40	58	69	65	62	57	306	357	313	266	250	279	234
FI	6	7	8	7	8	8	9	10	11	12	11	13	13	15
HR	6	8	16	21	26	35	27	8	10	17	22	27	36	30
HU	4	13	30	32	28	26	22	9	21	40	40	37	36	42
IE	16	38	34	30	23	24	20	60	65	56	52	48	47	40
IT	37	52	66	75	86	86	89	62	81	101	108	118	117	119
LT	27	30	26	29	37	37	23	31	33	29	36	40	39	25
LU	1	1	1	2	2	2	2	7	8	9	10	10	11	11
LV		16	13	13	13	12	9		20	15	16	17	14	12
MT	1	1	1	1	1	1	1	3	3	4	6	7	6	8
NL	39	41	42	43	40	37	35	72	84	90	86	84	84	86
PL	140	155	146	123	141	127	106	179	211	203	194	173	164	140
RO	195	132	141	157	169	173	163	195	133	142	159	169	190	179
SE	15	18	18	18	16	15	16	30	39	39	43	34	34	35
SI	3	6	6	6	7	7	5	17	11	11	12	12	14	11
SK	1	1	3	3	3	3	2	2	2	3	3	3	3	2
UK	117	121	116	105	112	111	110	332	286	280	263	303	327	306
IS	3	2	2	2	2	2	2	5	3	3	3	3	3	3
NO	5	5	4	6	6	6	6	13	17	23	23	27	25	20
CH	21	22	21	22	22	23	23	67	81	87	91	94	97	102

NUMBER OF OUTFLOWS OF NATIONALS AS A SHARE OF THE TOTAL NATIONAL POPULATION IN THE COUNTRY, 2018.

THE LATEST FLOW DATA AVAILABLE ARE FROM 2018.

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

PROVISIONAL DATA: BG, PL, UK. ESTIMATED NUMBERS FOR DE, PL, RO.

EU-28 AGGREGATES EXCLUDE CY, EL, FR AND PT.

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 MAY 2020), MILIEU CALCULATIONS.

Table A27: Inflows by citizen group as percentage of total inflows, 2018

Country	Nationals	EU-28	EFTA	TCNs
EU-28	22%	30%	0.5%	48%
EU-27	23%	29%	1%	47%
EFTA	13%	58%	0.5%	28%
AT	8%	64%	1%	27%
BE	12%	49%	0.4%	38%
BG	52%	4%	0.0%	44%
CY	20%	32%	0.4%	48%
CZ	7%	26%	0.1%	66%
DE	16%	44%	0.3%	40%
DK	27%	41%	4%	28%
EE	44%	25%	0.5%	31%
EL	29%	16%	0.1%	55%
ES	11%	23%	0.4%	66%
FI	25%	25%	1%	49%
FR	34%	20%	1%	45%
HR	29%	7%	0.2%	64%
HU	42%	12%	0.4%	45%
IE	33%	32%	0.3%	35%
IT	13%	19%	0.2%	68%
LT	56%	3%	0.04%	42%
LU	4%	68%	1%	27%
LV	36%	7%	0.3%	58%
MT	5%	43%	0.4%	52%
NL	20%	45%	1%	34%
PL	40%	11%	0.3%	49%
PT	49%	18%	0.3%	33%
RO	83%	5%	0.1%	12%
SE	12%	27%	2%	58%
SI	12%	12%	0.1%	75%
SK	29%	56%	2%	13%
UK	12%	34%	0.1%	54%
IS	13%	75%	1%	11%
NO	10%	49%	1%	40%
CH	14%	60%	0.3%	25%

PROVISIONAL DATA FOR BG, PL, SK, UK. ESTIMATED NUMBERS FOR DE, PL RO. BREAK IN SERIES FOR DE.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A28: Return mobility – inflows of nationals as a proportion of outflows of nationals, 2018

Country of citizenship	Outflows of nationals	Inflows of nationals	Inflows of nationals as a proportion of outflows
EU-28	936	738	79%
EU-27	827	678	82%
EFTA	30	21	70%
AT	10	7	64%
BE	24	12	52%
BG	24	11	44%
CZ	5	4	87%
DE	161	108	67%
DK	10	13	128%
EE	5	7	123%
ES	57	52	91%
FI	9	6	63%
HR	27	6	23%
HU	22	30	136%
IE	20	23	118%
IT	89	31	35%
LT	23	14	63%
LU	2	1	50%
LV	9	3	33%
MT	1	1	144%
NL	35	29	82%
PL	106	54	51%
RO	163	118	72%
SE	16	11	67%
SI	5	3	58%
SK	2	1	41%
UK	110	61	56%
IS	2	1	88%
NO	6	4	63%
CH	23	16	70%

NO PROPORTIONS ARE PRESENTED FOR CY, EL, FR AND PT DUE TO MISSING OUTFLOW DATA.

MIGR_EMI1CTZ: PROVISIONAL DATA: BG, PL, UK. ESTIMATED NUMBERS: DE, PL, RO.

MIGR_IMM1CTZ: PROVISIONAL DATA: BG, PL, SK, UK. ESTIMATED NUMBERS: DE, PL RO. BREAK IN TIME SERIES: DE.

SOURCE: EUROSTAT DATA ON IMMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), EUROSTAT DATA ON EMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

B.2 Section 2 – Mobility of workers

Table A29: Employment rate of EU-28 movers (20-64 years) and nationals in the country of residence, 2019

	EU-28 movers	Nationals	Difference (pp)
EU-28	78%	74%	3
EU-27	75%	74%	1
AT	77%	78%	-1
BE	72%	72%	0
BG		75%	
CY	78%	76%	3
CZ		80%	6
DE	80%	83%	-2
DK	80%	79%	0
EE		81%	
ES	71%	69%	2
FI		78%	7
FR	72%	73%	0
EL	51%	62%	-10
HR		67%	
HU		75%	5
IE	79%	75%	4
IT	66%	63%	3
LT		78%	
LU	78%	70%	7
LV		79%	
MT		76%	12
NL	79%	81%	-2
PL		73%	
PT		76%	
RO		71%	
SE	81%	85%	-3
SI		77%	15
SK		73%	
UK	86%	79%	7
CH	86%	84%	1,3
IS		86%	
NO		80%	

SOURCE: EU-LFS, 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A30: Employment rate of EU-28 movers (20-64 years) and nationals in the country of origin, 2019

	EU-28 Movers	Nationals	Difference (pp)
EU-28	78%	74%	3
EU-27	78%	74%	4
AT	82%	78%	4
BE	76%	72%	4
BG	70%	75%	-5
CZ	84%	80%	4
DE	79%	83%	-4
DK		79%	
EE		81%	
EL	78%	62%	17
ES	80%	69%	11
FI	86%	78%	8
FR	80%	73%	8
HR	83%	67%	16
HU	85%	75%	10
IE	83%	75%	8
IT	77%	63%	14
LT	88%	78%	9
LU		70%	
LV	89%	79%	11
NL	78%	81%	-3
PL	83%	73%	10
PT	79%	76%	3
RO	73%	71%	3
SE	90%	84%	6
SI		77%	
SK	81%	73%	8
UK	71%	79%	-9
CH	81%	84%	-4
NO	85%	80%	5

SOURCE: EU-LFS, 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A31: Unemployment rates of EU-28 movers (20-64 years) and nationals in the country of residence, 2019

	EU-28 movers	Nationals	Difference (pp)
EU-28	6.8%	5.7%	1
EU-27	8.0%	6.1%	2
AT	5.8%	3.4%	2
BE	6.8%	4.6%	2
BG		4.2%	
CY	6.0%	7.4%	-1
CZ	(1.6%)	2.0%	0
DE	4.3%	2.5%	2
DK	5.9%	4.4%	2
EE		3.8%	
EL	25.4%	16.7%	9
ES	14.9%	12.9%	2
FI		5.8%	
FR	8.4%	7.7%	1
HR		6.4%	
HU		3.3%	
IE	4.9%	4.4%	1
IT	13.8%	9.4%	4
LT		6.4%	
LU	5.9%	3.7%	2
LV		6.2%	
MT		2.6%	
NL	3.9%	2.8%	1
PL		3.2%	
PT		6.3%	
RO		3.7%	
SE	5.5%	4.5%	1
SI		4.2%	
SK		5.6%	
UK	2.8%	3.2%	0
CH	5.2%	3.1%	2
IS		3.0%	
NO		2.7%	

SOURCE: EU-LFS, 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A32: Unemployment rates of EU-28 movers (20-64 years) and nationals in the country of origin, 2019

	EU-28 movers	Non-mobile nationals	Difference (pp)
EU-28	7%	6%	1
EU-27	8%	6%	2
AT		3%	0
BE		5%	0
BG	13%	4%	9
CY		7%	0
CZ		2%	0
DE	5%	3%	2
DK		4%	0
EE		4%	0
EL	6%	17%	-11
ES	3%	13%	-10
FI		6%	0
FR	5%	8%	-3
HR	3%	6%	-3
HU	3%	3%	0
IE		4%	0
IT	7%	9%	-3
LT		6%	0
LU		4%	0
LV		6%	0
MT		3%	0
NL	4%	3%	1
PL	4%	3%	1
PT	6%	6%	-1
RO	11%	4%	7
SE		5%	0
SI		4%	0
SK	4%	6%	-2
UK	7%	3%	4
CH		3%	0
IS		3%	0
NO		3%	0

SOURCE: EU-LFS, 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A33: Shares of self-employed EU-28 movers and nationals, by sector, 2019

	Employment status	EU-28	Nationals
Accommodation and food service activities	Employee	89%	83%
	Self-employed with employees	6%	10%
	Self-employed without employees	5%	7%
Administrative and support service activities	Employee	86%	87%
	Self-employed with employees	2%	4%
	Self-employed without employees	12%	9%
Construction	Employee	71%	73%
	Self-employed with employees	5%	8%
	Self-employed without employees	24%	19%
Human health and social work activities	Employee	91%	92%
	Self-employed with employees	3%	2%
	Self-employed without employees	6%	6%
Manufacturing	Employee	97%	94%
	Self-employed with employees	1%	3%
	Self-employed without employees	2%	3%
Other service activities	Employee	74%	69%
	Self-employed with employees	3%	7%
	Self-employed without employees	23%	24%
Professional, scientific and technical activities	Employee	75%	70%
	Self-employed with employees	2%	7%
	Self-employed without employees	22%	23%
Transportation and storage	Employee	89%	90%
	Self-employed with employees	1%	3%
	Self-employed without employees	10%	7%
Wholesale and retail trade; repair of motor vehicles and motorcycles	Employee	88%	85%
	Self-employed with employees	3%	6%
	Self-employed without employees	8%	9%

ONLY SECTORS FOR WHICH THERE WAS SUFFICIENT RELIABLE DATA FOR ALL EMPLOYMENT CATEGORIES ARE SHOWN.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A34: Shares of self-employed EU-28 movers and nationals by occupation, 2019

	Employment status	EU-28	Nationals
Craft and related trades workers	Employee	82%	81%
	Self-employed with employees	3%	5%
	Self-employed without employees	15%	14%
Legislators senior officials and managers	Employee	74%	73%
	Self-employed with employees	16%	20%
	Self-employed without employees	10%	7%
Professionals	Employee	84%	85%
	Self-employed with employees	2%	3%
	Self-employed without employees	14%	11%
Service workers and shop and market sales workers	Employee	90%	87%
	Self-employed with employees	3%	4%
	Self-employed without employees	8%	9%
Skilled agricultural and fishery workers	Employee	88%	26%
	Self-employed with employees	1%	10%
	Self-employed without employees	11%	64%
Technicians and associate professionals	Employee	90%	90%
	Self-employed with employees	2%	2%
	Self-employed without employees	9%	8%

ONLY OCCUPATIONS FOR WHICH THERE WAS SUFFICIENT RELIABLE DATA FOR ALL EMPLOYMENT CATEGORIES ARE SHOWN.

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A35: Active EU-28 movers (20-64 years), by country of residence and country of citizenship, 2019

COUNTRY OF RESIDENCE	COUNTRY OF CITIZENSHIP																														
	EU-28	EU-27	EFTA	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
EU-28	9331	9040	108	112	130	458		89	410	40	40	265	324	42	411	285	294	180	792	198	16	111		223	1467	635	2136	65	33	192	29
EU-27	7033	6742	88	104	117	376		63	306	27	34	225	205	29	287	279	224	33	616	84	15	52		172	876	492	1838	39	31	138	29
AT	421	421				15		(4)	112						7	39	53		18						33		58		10	24	
BE	368	362				14			22			5	19		78				32					51	36	19	52			3	
BG																															
CY	53	49				9						23													(1)		11				
CZ	70	68				(3)			(1)						(1)		(2)								5		3		(1)	47	(2
DE	2376	2329	23	87	16	152		35		6		160	73		64	199	116		281	28	8	22		58	500	72	338		7	30	4
DK	85	78	12			3			12						(2)		(2)		(3)	(3)				(3)	10		10	7			
EE	4	4																				(1)									
EL	41	41				16																			(1)		11				
ES	1077	1007	7	(3)	12	94		(4)	37	(1)		(3)		(3)	55	(2)	8	7	127	10		3		22	43	60	488	8	(1)	(5)	7
FI	39	39									21																				
FR	662	634	(9)		52				27				44						82					13	22	273	46				2
HR	3																												(2)		
HU	19	19																									3				
IE	288	229				(3)			8				13		9	8	7		13	24		13		(2)	71	6	24			4	5
IT	921	912	(2)	3	(2)	33		3	8			3	10		13	11	2							5	56	(2)	734			7	
LT																															
LU	133	131			14	1		1	7	(1)		2	4	(1)	32	(1)	2		10	1				2	3	37	3				
LV																															
MT	27	19				3			(1)			1	(0)				1		6	(0)					(0)		2	(1)		(1)	
NL	227	211	3		16	7			38	(2)		4	13		9		9	(2)	14						55	9	8				1

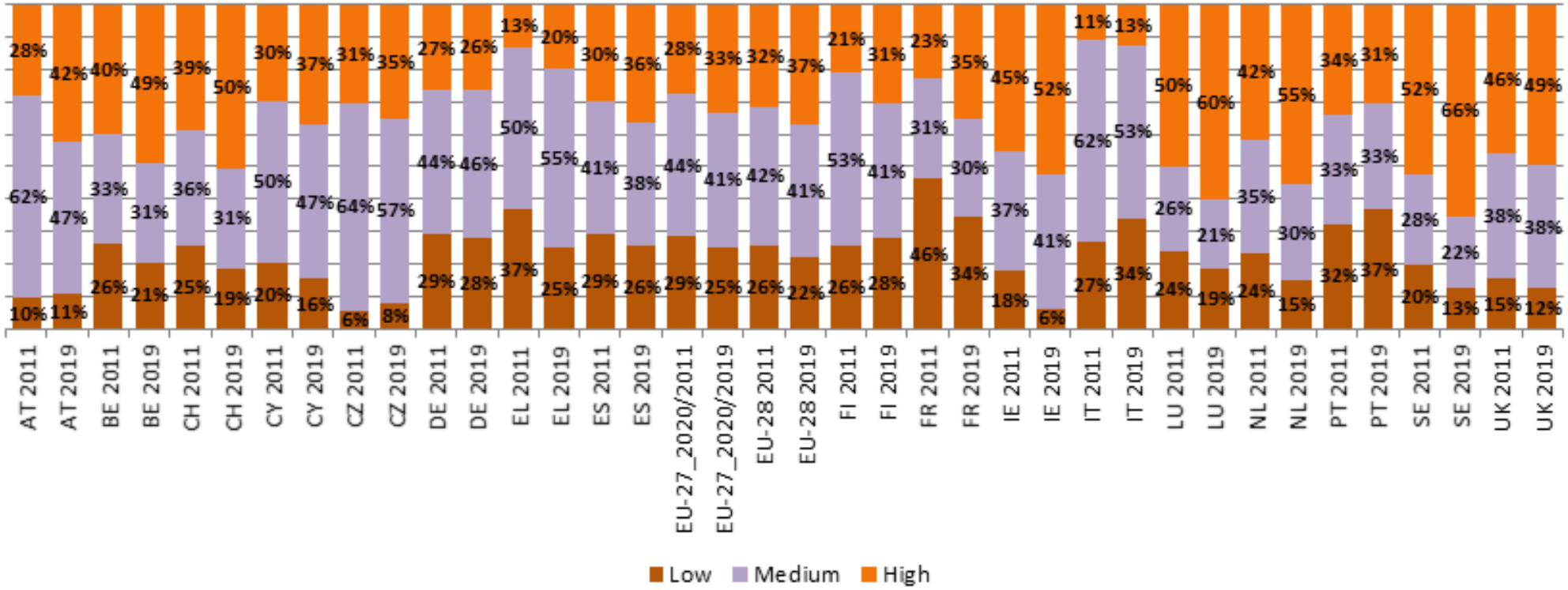
PL	13	13																														
PT	31	31																										7				
RO																																
SE	146	138	17	(2)	(2)				14	9	4	3	6	12	4	9	5		3	7				7	19		9					
SI	6	6				(1)										3																
SK																																
UK	2298		21	(4)	13	80		26	93	13	(5)	39	118	13	120		69	147	174	114		60		43	591	139	297	26		47		
CH	809	788		23	7	(5)		7	202			9	41	(2)	85	13	11	(1)	134	(2)		(1)		11	28	160	13	(4)	(3)	9	2	
IS	8	8																							4							
NO	58	58																		6					9			5				

NUMBER REFER TO EU AND EFTA CITIZENS WHO RESIDE IN ONE EU/EFTA COUNTRY AND WORK IN ANOTHER ONE.

THE TABLE EXCLUDES COUNTRIES FOR WHICH ALL DATA WAS BELOW RELIABILITY.

SOURCE: EU-LFS, 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Figure A79: Active EU-28 movers, by highest level of education, 2011 and 2019



NUMBER REFER TO EU AND EFTA CITIZENS WHO RESIDE IN ONE EU/EFTA COUNTRY AND WORK IN ANOTHER ONE.

THE TABLE EXCLUDES COUNTRIES FOR WHICH ALL DATA WAS BELOW RELIABILITY.

SOURCE: EU-LFS, 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

Table A36: Cross-border workers (20-64 years), by country of residence (rows) and country of work (columns), 2018

COUNTRY OF RESIDENCE

COUNTRY OF WORK	EU-28	EU-27	EFTA	AT	BE	BG	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK
EU-28	1456	1437	6	35	108	56	61	161	9	11		48	2	188	(8)	108	7	37	3	7	13	0)	37	202	20	145	25	22	120	16
EU-27	1348	1329																												
EFTA	432	427		9			(2)	73	(3)	(2)		(2)		210		(4)		65	3		3			20			10		6	(4)
AT	177	177					11	27							(1)	55								(10)		(7)		17	41	
BE	93	92					(1)					(1)		49				3		(1)			15			(7)				
BG																														
CY																														
CZ	49	49																						(12)					29	
DE	396	393		27	12	19	42		(2)			(4)		27	(4)	33		7		3	2		17	121		41		(1)	23	
DK	30	30						7																9			16			
EE																														
EL	9	9				(6)																								
ES	35	34				(4)												3							8	(10)				
FI	13	13								9																				
FR	62	61			16	(3)	(1)					6						7		1					5					
HR																														
HU	11	11																											9	
IE	18	12										(2)																		(6)
IT	65	63										(3)														47		(3)		
LT																														
LU	190	190			43		(1)	53						90																
LV																														

COUNTRY OF RESIDENCE

	EU-28	EU-27	EFTA	AT	BE	BG	CZ	DE	DK	EE	EL	ES	FI	FR	HR	HU	IE	IT	LT	LU	LV	MT	NL	PL	PT	RO	SE	SI	SK	UK	
MT																															
NL	116	115			34		(1)	37				(2)									2)			18					6		
PL												(1)																			
PT	8	8										(4)																			
RO																															
SE	16	16							3												2)										
SI															(1)																
SK							(1)																								
UK	108	108				12	(1)					19				6	6	6			2		(2)	(13)		17	(2)		(4)		
CH	381	380		9			(2)	72				(1)		210		(4)		65											(4)		
IS																															
NO	46	43								(1)									(2)		3			17			10				
TOTAL	1887	1865	6	44	108	56	63	234	11	13	0	50	2	398	8	112	7	102	5	7	15	0	37	222	20	145	35	22	125	20	

NUMBER REFER TO EU AND EFTA CITIZENS WHO RESIDE IN ONE EU/EFTA COUNTRY AND WORK IN ANOTHER ONE.

THE TABLE EXCLUDES COUNTRIES FOR WHICH ALL DATA WAS BELOW RELIABILITY.

SOURCE: EU-LFS, 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS.

B.3 Section 3 – Mobility of high-skilled workers

Table A37: Movers, high-skilled movers and high-skilled people in the general population, by gender in major receiving countries, 2019

Country	All movers		High-skilled people in reporting country		High-skilled movers	
	Men	Women	Men	Women	Men	Women
EU-28	48.31%	51.69%	45.79%	54.21%	45.41%	54.59%
DE	52.70%	47.30%	54.42%	45.58%	49.63%	50.37%
ES	48.27%	51.73%	45.70%	54.30%	49.33%	50.67%
FR	47.94%	52.06%	44.84%	55.16%	38.95%	61.05%
CH	55.95%	44.05%	53.65%	46.35%	54.42%	45.58%
UK	46.58%	53.42%	47.11%	52.89%	42.60%	57.40%

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

Table A38: Numbers of high-skilled EU movers in different occupations at EU level and in selected countries, 2019

Major occupation group	Sub-major occupation group	EU	DE	ES	FR	CH	UK
Legislators senior officials and managers	Chief Executives, senior officials and legislators	31 972	14 492	(1 055)		8 277	
	Administrative and commercial managers	101 200	15 055	8 272	(8 614)	26 367	34 666
	Production and specialised services managers	114 501	11 654	9 937	18 005	18 182	48 017
	Hospitality, retail and other services managers	67 682		7 633		(3 328)	34 652
Professionals						5 840	
	Science and engineering professionals	281 237	67 042	15 695	25 361	54 413	86 497
	Health professionals	196 861	36 846	11 364	16 487	38 027	74 099

Major occupation group	Sub-major occupation group	EU	DE	ES	FR	CH	UK
	Teaching professionals	246 032	48 815	30 997	26 208	19 195	53 835
	Business and administration professionals	303 038	44 334	19 996	12 365	36 697	109 712
	Information and communications technology professionals	172 116	35 749	11 687	(5 738)	40 986	55 894
	Legal, social and cultural professionals	212 854	45 191	17 323	13 576	16 778	55 719
Technicians and associate professionals						11 173	
	Science and engineering associate professionals	98 240	35 117	5 565	(6 271)	19 128	25 653
	Health associate professionals	61 180	16 596	(2 914)		7 352	11 787
	Business and administration associate professionals	225 740	48 305	21 810	18 026	21 879	59 406
	Legal, social, cultural and related associate professionals	89 122	25 512	7 762	(9 520)	11 492	26 886
	Information and communications technicians	39 580		9 878		(3 594)	10 721
Clerks	General and keyboard clerks	51 807	15 822	10 323		9 519	
	Customer services clerks	78 858	6 776	16 009		(4 497)	33 645

Major occupation group	Sub-major occupation group	EU	DE	ES	FR	CH	UK
	Numerical and material recording clerks	75 075	21 048	6 522		5 267	25 974
	Other clerical support workers	41 258	8 674			(3 645)	24 537
Service workers, shop and market sales workers	Personal services workers	155 243	26 397	36 092	10 376	10 631	46 691
	Sales workers	118 880	21 299	16 798	(6 545)	6 850	37 654
	Personal care workers	91 413	8 549	(3 770)		5 670	46 641
	Protective services workers	16 683		(1 020)			(9 395)
Skilled agricultural and fisheries workers	Market-oriented skilled agricultural workers	17 455		(2 223)		(1 487)	
	Market-oriented skilled forestry, fisheries and hunting workers						
	Subsistence farmers, fishers, hunters and gatherers						
Craft and related tradespeople	Building and related tradespeople (excluding electricians)	59 491	14 374	13 373		(2 952)	12 607
	Metal, machinery and related trades workers	46 856	11 768	10 077		(2 853)	13 562

Major occupation group	Sub-major occupation group	EU	DE	ES	FR	CH	UK
	Handicraft and printing workers	(8 310)				(1 363)	
	Electrical and electronic tradespeople	23 676	9 328	5 393		(1 963)	
	Food processing, woodworking, garment and other craft and related tradespeople	31 231	5 141	3 762		(1 358)	11 729
Plant and machine operators and assemblers	Stationary plant and machine operators	37 403	7 233	3 212		(1 496)	13 919
	Assemblers	17 252					(9 239)
	Drivers and mobile plant operators	69 087	11 341	11 195		(3 727)	32 005
Elementary occupations	Cleaners and helpers	87 795	18 742	11 337		(3 899)	23 210
	Agricultural, forestry and fisheries labourers	(8 260)		(3 809)			
	Labourers in mining, construction, manufacturing and transport	76 335	18 812	6 022			36 906
	Food preparation assistants	34 427	5 342	(2 122)			19 876
	Street and related sales and service workers						

Major occupation group	Sub-major occupation group	EU	DE	ES	FR	CH	UK
	Refuse workers and other elementary workers	(12 572)					(6 749)

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

Table A39: Marital status of high-skilled EU movers, 2019

Country	Divorced or legally separated	Married	Single	Widowed	Total
EU-28	260 477	1 998 942	1 673 345	26 314	3 959 078
DE	48 039	430 625	301 934	6 797	787 395
ES	36 436	233 091	170 663	(4 102)	444 292
FR		121 271	133 590		254 861
CH	30 396	219 918	211 145	(1 526)	462 985
UK	72 309	541 494	553 210		1 167 014

SOURCE: EU-LFS 2019, SPECIFIC EXTRACTIONS PROVIDED BY EUROSTAT, MILIEU CALCULATIONS

B.4 Section 4 – Demographic change and intra-EU mobility

Table A40: Old-age dependency ratio of EU-27 Member States in 2020 and 2050, and differences expressed in absolute and percentage terms.

Country	2020	2050	Δ 2020-2050	% difference
EU-27	32	58	26	82%
AT	29	59	30	104%
BE	30	52	22	72%
BG	34	53	20	58%
CY	24	47	23	94%
CZ	31	56	25	80%
DE	34	58	25	73%
DK	31	46	15	48%
EE	32	52	20	63%
EL	35	67	32	91%
ES	30	74	44	148%
FI	36	53	17	48%
FR	33	50	17	51%
HR	33	53	21	64%
HU	30	52	21	70%
IE	22	49	26	119%
IT	36	73	37	102%
LT	31	49	18	58%
LU	21	57	36	168%
LV	32	49	17	52%
MT	29	56	28	97%
NL	30	51	21	68%
PL	27	55	27	99%
PT	35	66	32	91%
RO	29	51	22	75%
SE	32	47	15	45%
SI	32	64	32	103%

Country	2020	2050	Δ 2020-2050	% difference
SK	25	53	28	116%

SOURCE: POPULATION ON 1ST JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); MILIEU CALCULATIONS.

Table A41: Average outflow rates of nationals and EU-27 citizens, 2009-2018.

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+
AT	0.0050	0.0028	0.0110	0.0098	0.0051	0.0032	0.0024	0.0011	0.0010
BE	0.0056	0.0037	0.0124	0.0112	0.0065	0.0039	0.0033	0.0015	0.0009
BG	0.0019	0.0038	0.0079	0.0054	0.0036	0.0022	0.0014	0.0008	0.0003
CY	0.0005	0.0006	0.0030	0.0018	0.0010	0.0006	0.0004	0.0003	0.0005
CZ	0.0034	0.0021	0.0072	0.0073	0.0039	0.0022	0.0015	0.0007	0.0005
DE	0.0049	0.0035	0.0207	0.0094	0.0041	0.0022	0.0010	0.0004	0.0002
DK	0.0052	0.0042	0.0137	0.0106	0.0076	0.0054	0.0016	0.0007	0.0007
EE	0.0040	0.0037	0.0078	0.0075	0.0046	0.0029	0.0019	0.0014	0.0008
EL	0.0024	0.0016	0.0059	0.0046	0.0023	0.0012	0.0008	0.0004	0.0002
ES	0.0065	0.0065	0.0124	0.0122	0.0095	0.0056	0.0039	0.0023	0.0011
FI	0.0005	0.0006	0.0080	0.0055	0.0032	0.0017	0.0006	0.0006	0.0004
FR	0.0081	0.0100	0.0429	0.0172	0.0100	0.0041	0.0035	0.0027	0.0027
HR	0.0022	0.0015	0.0038	0.0038	0.0018	0.0011	0.0007	0.0004	0.0003
HU	0.0131	0.0127	0.0430	0.0257	0.0116	0.0059	0.0013	0.0005	0.0005
IE	0.0176	0.0115	0.0320	0.0307	0.0185	0.0130	0.0108	0.0051	0.0044
IT	0.0093	0.0090	0.0237	0.0173	0.0102	0.0064	0.0022	0.0009	0.0012
LT	0.0054	0.0041	0.0178	0.0155	0.0085	0.0048	0.0031	0.0023	0.0017
LU	0.0051	0.0026	0.0125	0.0097	0.0047	0.0029	0.0019	0.0008	0.0004
LV	0.0058	0.0055	0.0075	0.0095	0.0063	0.0037	0.0023	0.0015	0.0012
MT	0.0073	0.0097	0.0271	0.0144	0.0091	0.0055	0.0023	0.0008	0.0004
NL	0.0047	0.0029	0.0088	0.0073	0.0038	0.0022	0.0015	0.0007	0.0004
PL	0.0043	0.0030	0.0086	0.0078	0.0049	0.0030	0.0026	0.0016	0.0013
PT	0.0007	0.0004	0.0006	0.0012	0.0006	0.0002	0.0002	0.0001	7.0155
RO	0.0050	0.0028	0.0110	0.0098	0.0051	0.0032	0.0024	0.0011	0.0010
SE	0.0056	0.0037	0.0124	0.0112	0.0065	0.0039	0.0033	0.0015	0.0009
SI	0.0019	0.0038	0.0079	0.0054	0.0036	0.0022	0.0014	0.0008	0.0003
SK	0.0005	0.0006	0.0030	0.0018	0.0010	0.0006	0.0004	0.0003	0.0005

FIGURES INDICATES ANNUAL OUTFLOWS OF NATIONALS AND EU-27 CITIZENS PER AGE GROUP AND COUNTRY FOR THE 2009-2018 PERIOD, OR AS CLOSE TO IT AS DATA AVAILABILITY ALLOWED.

MEMBER STATES WITH DATA AVAILABILITY ISSUES: BELGIUM AND POLAND, 2010-2018; LATVIA, 2011-2018; BULGARIA AND ROMANIA, 2012-2018; CZECH REPUBLIC AND CROATIA, 2013-2018; LUXEMBOURG, ALL YEARS EXCEPT 2011.

SOURCE: EUROSTAT DATA ON POPULATION BY CITIZENSHIP AND AGE GROUP [MIGR_POP1CTZ] AND EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A42: Projected outflows in 2020 and 2030 by age group, in absolute numbers (1 000s).

		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	Total
EU-27	2020	140.7	122.8	385.0	371.2	224.7	132.8	72.4	27.3	12.0	1 489.0
	2030	120.7	118.0	349.7	315.6	210.5	128.4	78.4	33.7	14.6	1 369.7
AT	2020	4.3	2.4	12.2	11.8	6.0	4.5	2.4	0.9	0.5	45.0
	2030	3.9	2.4	9.4	10.7	6.1	3.7	3.1	1.0	0.6	41.0
BE	2020	7.1	4.8	17.4	16.7	9.8	6.3	4.5	1.4	0.6	68.5
	2030	6.1	4.7	16.1	15.6	9.6	5.8	5.0	1.7	0.7	65.2
BG	2020	1.2	2.5	5.5	5.2	3.8	2.1	1.4	0.6	0.1	22.4
	2030	1.0	2.5	5.2	3.8	3.4	2.3	1.2	0.6	0.1	20.0
CZ	2020	0.6	0.6	3.4	2.7	1.8	0.8	0.5	0.3	0.2	11.0
	2030	0.5	0.7	3.2	2.0	1.5	1.1	0.5	0.3	0.3	10.1
DE	2020	26.2	15.8	68.8	78.3	39.3	29.7	15.9	5.0	2.9	282.0
	2030	24.4	15.9	54.4	69.4	41.2	21.9	19.1	6.0	3.1	255.3
DK	2020	3.0	2.4	16.1	6.5	3.1	1.8	0.7	0.2	0.0	33.8
	2030	3.1	2.2	14.0	7.3	2.8	1.6	0.8	0.2	0.1	32.1
EE	2020	0.7	0.6	2.0	2.1	1.4	0.9	0.3	0.1	0.1	8.0
	2030	0.6	0.6	1.9	1.5	1.4	1.0	0.3	0.1	0.1	7.4
ES	2020	17.2	17.8	37.1	44.8	35.7	20.4	10.3	5.6	2.2	191.2
	2030	13.1	15.7	38.0	35.3	27.3	22.2	12.9	6.7	2.7	174.0
FI	2020	1.3	1.0	3.9	3.3	1.5	0.9	0.6	0.2	0.1	12.8
	2030	1.0	0.9	3.5	3.1	1.6	0.8	0.6	0.2	0.1	11.8
HR	2020	2.5	2.6	5.9	6.5	5.2	3.2	2.2	0.9	0.3	29.2
	2030	2.2	2.5	5.0	5.8	5.0	3.0	2.1	1.1	0.3	26.8
HU	2020	0.5	0.6	9.4	7.0	5.1	2.1	0.8	0.5	0.2	26.0
	2030	0.5	0.6	7.9	6.4	4.0	2.5	0.7	0.6	0.2	23.3
IE	2020	5.3	6.7	25.3	12.1	7.4	2.5	1.7	0.9	0.5	62.2
	2030	4.5	6.5	28.6	10.1	7.0	3.0	2.0	1.1	0.7	63.5
IT	2020	11.0	8.4	23.4	26.7	16.1	10.1	5.1	2.5	1.2	104.3

		0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80+	Total
	2030	9.1	7.2	21.9	23.5	12.3	9.4	6.2	2.7	1.4	93.7
LT	2020	3.8	3.4	14.6	9.1	4.2	2.4	0.5	0.1	0.1	38.2
	2030	3.3	3.7	11.4	8.6	4.0	2.0	0.5	0.2	0.1	33.7
LU	2020	1.2	0.8	2.6	2.9	1.7	1.2	0.7	0.2	0.1	11.3
	2030	1.0	0.7	2.1	2.5	1.8	1.2	0.9	0.3	0.1	10.6
LV	2020	1.9	1.7	4.8	4.6	2.6	1.7	0.5	0.2	0.1	18.2
	2030	1.5	1.8	4.6	3.4	2.7	1.5	0.5	0.2	0.1	16.4
MT	2020	0.2	0.2	1.3	1.3	0.6	0.3	0.2	0.1	0.0	4.1
	2030	0.2	0.2	0.8	1.1	0.7	0.3	0.2	0.1	0.1	3.6
NL	2020	9.0	5.1	27.5	20.6	10.4	7.3	4.0	1.3	0.3	85.4
	2030	8.6	4.6	24.7	21.2	9.9	6.2	4.5	1.5	0.5	81.8
PL	2020	22.3	20.8	33.8	57.3	35.0	16.9	12.1	4.3	2.0	204.5
	2030	17.5	21.2	28.1	42.8	37.5	19.5	9.8	6.5	2.4	185.3
RO	2020	14.3	20.4	56.4	38.6	27.4	13.9	5.7	1.2	0.3	178.3
	2030	12.3	19.1	56.7	29.6	23.9	15.7	5.2	1.6	0.4	164.5
SE	2020	5.7	3.4	11.5	9.9	4.9	2.8	1.6	0.7	0.2	40.7
	2030	5.1	3.5	10.3	9.5	5.0	2.8	1.8	0.7	0.3	39.0
SI	2020	0.9	0.6	1.8	2.2	1.5	0.9	0.7	0.3	0.1	9.1
	2030	0.7	0.6	1.7	1.6	1.4	0.9	0.7	0.4	0.2	8.2
SK	2020	0.4	0.2	0.4	1.0	0.5	0.2	0.1	0.03	0.01	2.8
	2030	0.3	0.2	0.3	0.8	0.5	0.2	0.1	0.04	0.02	2.5

WHERE ABSOLUTE FIGURES INDICATE 0, THIS MEANS THAT OUTFLOWS WERE BELOW 1 000.

SOURCE: EUROSTAT DATA ON POPULATION ON 1ST JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A43: Proportional changes in predicted inflows from main sending countries to Austria, the Netherlands and Spain, 2020-2030.

BG	-15.3%	0.0%	-6.2%	-27.9%	-10.9%	5.6%	-10.0%	2.8%	23.7%
DE	-7.0%	0.8%	-21.0%	-11.3%	4.7%	-26.3%	19.6%	19.4%	8.3%
ES	-23.7%	-12.1%	2.4%	-21.2%	-23.4%	9.0%	25.0%	19.3%	23.1%
IT	-16.9%	-13.8%	-6.5%	-12.0%	-23.5%	-6.5%	22.1%	9.6%	17.2%
PL	-21.4%	1.8%	-16.6%	-25.3%	7.1%	15.0%	-19.6%	50.7%	24.3%
RO	-13.9%	-6.3%	0.6%	-23.2%	-12.6%	12.7%	-9.6%	27.3%	9.2%

Table A44: Absolute changes in predicted inflows from main sending countries to Austria, the Netherlands and Spain, 2020-2030.

AT										
	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+	Total (c.o.o.)
BG	-55.3	0.0	-50.3	-244.4	-74.6	16.3	-13.3	2.2	3.1	-416.3
DE	-107.9	13.1	-2624.5	-755.9	136.9	-662.4	297.0	93.3	21.2	-3589.1
ES	-30.8	-19.5	31.9	-124.1	-72.6	11.9	16.4	1.6	1.6	-183.5
IT	-46.6	-58.2	-110.1	-96.3	-118.0	-19.9	24.6	3.3	2.3	-418.8
PL	-62.6	4.7	-199.1	-280.6	62.4	55.4	-32.6	18.7	4.6	-429.1
RO	-141.6	-78.2	17.1	-525.1	-197.3	75.1	-29.2	21.5	2.7	-855.0
Total (age)	-444.8	-137.9	-2934.9	-2026.4	-263.2	-523.7	263.0	140.6	35.4	-5891.8
ES										
	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+	Total (c.o.o.)
BG	-117.5	0.0	-96.7	-435.6	-145.3	36.8	-34.8	5.5	7.8	-779.7
DE	-65.6	6.4	-848.1	-362.0	104.9	-698.6	548.7	188.6	25.5	-1100.1
IT	-296.1	-228.2	-580.3	-714.9	-798.9	-172.3	354.1	57.1	38.5	-2341.1
PL	-61.2	4.1	-152.7	-223.4	38.0	31.1	-29.9	22.7	4.8	-366.5
RO	-456.2	-275.1	49.3	-1379.1	-540.0	292.4	-131.5	89.1	7.4	-2343.7
Total (age)	-996.6	-492.8	-1628.5	-3115.0	-1341.2	-510.7	706.6	363.0	84.2	-6931.1
NL										
	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+	Total (c.o.o.)
BG	-58.9	0.0	-71.9	-274.3	-69.8	10.8	-4.4	0.5	0.6	-467.3
DE	-34.4	12.7	-1889.1	-298.4	46.7	-173.7	42.9	12.3	3.0	-2278.1
ES	-121.3	-94.4	113.5	-459.7	-286.2	40.3	18.3	6.5	3.4	-779.7
IT	-44.7	-69.2	-179.9	-150.0	-110.9	-13.3	9.6	1.4	1.7	-555.5

PL	-240.5	15.1	-923.2	-1156.8	171.8	106.8	-26.4	12.5	2.5	-2038.2
RO	-20.0	-24.3	6.5	-168.6	-43.2	11.8	-2.5	2.5	0.5	-237.3
Total (age)	-460.9	-160.1	-2872.2	-2233.6	-221.9	-28.1	41.8	35.2	11.0	-5888.8

POSITIVE DIFFERENCES ARE UNDERLINED FOR CLARITY

INFLOWS OF SPANISH MOVERS TO SPAIN ARE NOT INCLUDED IN THE TABLE AS NO PREDICTIONS ARE MADE ON RETURN MIGRATION.

SOURCE: EUROSTAT DATA ON POPULATION ON 1ST JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A45: Projected inflows in 2020 and 2030 by age group, in absolute numbers (1 000s).

	AT																
	2020									2030							
	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+
BG	361.0	601.6	812.5	877.0	683.8	292.7	133.4	78.7	13.1	305.7	601.5	762.2	632.6	609.2	309.0	120.1	80.8	16.2
DE	1533.7	1678.0	12517.7	6664.4	2892.3	2516.3	1513.1	481.6	254.9	1425.8	1691.2	9893.2	5908.5	3029.2	1853.9	1810.1	574.9	276.0
ES	130.0	161.0	1351.3	584.9	310.2	132.7	65.7	8.3	6.8	99.2	141.5	1383.2	460.9	237.6	144.6	82.1	9.9	8.3
IT	276.3	420.3	1696.4	799.8	501.4	305.6	111.3	34.5	13.2	229.7	362.2	1586.3	703.5	383.3	285.7	136.0	37.8	15.5
PL	291.8	270.8	1196.7	1110.3	877.3	368.2	165.8	36.9	19.0	229.2	275.5	997.6	829.7	939.7	423.5	133.2	55.5	23.6
RO	1017.7	1238.5	3085.5	2261.9	1566.3	593.1	304.1	78.6	29.1	876.1	1160.3	3102.6	1736.9	1369.0	668.1	274.9	100.1	31.7

	ES																
	2020									2030							
	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+
BG	767.7	1027.2	1560.3	1563.4	1331.3	661.8	349.2	200.7	33.1	650.2	1027.2	1463.6	1127.8	1186.0	698.5	314.4	206.3	40.9
DE	932.6	814.6	4045.1	3191.3	2216.8	2654.0	2795.2	972.9	307.3	867.0	821.0	3197.0	2829.3	2321.7	1955.4	3343.9	1161.5	332.8
IT	1754.7	1649.0	8944.8	5939.7	3393.5	2650.0	1600.2	594.2	224.6	1458.6	1420.8	8364.5	5224.8	2594.6	2477.7	1954.3	651.3	263.2
PL	285.2	232.6	918.0	883.7	534.5	206.6	152.3	44.7	19.9	224.1	236.7	765.3	660.4	572.5	237.6	122.4	67.4	24.8
RO	3278.6	4358.9	8906.4	5940.9	4288.1	2310.4	1369.9	325.9	80.6	2822.4	4083.8	8955.7	4561.8	3748.1	2602.8	1238.3	415.0	88.0

	NL																
	2020									2030							
	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+	0 to 9	10 to 19	20 to 29	30 to 39	40 to 49	50 to 59	60 to 69	70 to 79	80+
BG	384.8	970.5	1160.9	984.5	639.4	195.1	43.9	19.8	2.5	325.9	970.5	1089.0	710.2	569.6	205.9	39.5	20.3	3.0
DE	488.6	1626.5	9010.4	2631.0	985.8	659.9	218.3	63.5	35.6	454.2	1639.2	7121.3	2332.5	1032.5	486.2	261.1	75.8	38.6
ES	512.4	780.7	4805.3	2167.1	1223.2	449.8	73.1	33.5	14.6	391.0	686.3	4918.9	1707.4	937.0	490.1	91.4	40.0	18.0
IT	265.0	500.3	2772.8	1246.6	471.2	204.6	43.3	14.1	10.1	220.3	431.1	2592.9	1096.5	360.3	191.3	52.8	15.5	11.8
PL	1121.4	860.8	5549.5	4576.8	2416.3	710.4	134.3	24.6	10.1	880.9	875.9	4626.4	3420.0	2588.1	817.2	107.9	37.1	12.5
RO	143.5	385.8	1165.9	726.2	343.1	93.6	26.3	9.3	5.0	123.5	361.4	1172.3	557.6	299.9	105.5	23.8	11.9	5.5

NOTE THAT INFLOWS OF SPANISH MOVERS TO SPAIN ARE NOT INCLUDED IN THE TABLE, AS NO PREDICTIONS ARE MADE ON RETURN MIGRATION.

SOURCE: EUROSTAT DATA ON POPULATION ON 1ST JANUARY BY AGE, SEX AND TYPE OF PROJECTION [PROJ_19NP] (EXTRACTED JUNE 2020); EMIGRATION BY AGE GROUP AND CITIZENSHIP [MIGR_EMI1CTZ] (EXTRACTED MAY 2020) AND DATA ON IMMIGRATION BY AGE GROUP, SEX AND CITIZENSHIP [MIGR_IMM1CTZ] (EXTRACTED MAY 2020), MILIEU CALCULATIONS.

Table A46: Working-age (20-64) individuals with Bachelor degree or higher, as % of total national working-age population, IIASA projections.

	2020	2025	2030	2035	2040	2045	2050	2055	2060	2065	2070	2075	2080	2085	2090	2095	2100	Δ (p.p.s)
EU-27	12%	13%	14%	16%	16%	17%	18%	19%	20%	21%	21%	22%	23%	23%	24%	24%	25%	12.53
AT	6%	7%	7%	8%	8%	9%	9%	10%	10%	10%	11%	11%	11%	12%	12%	12%	13%	6.45
BE	5%	5%	5%	6%	6%	6%	7%	7%	7%	8%	8%	8%	8%	8%	9%	9%	9%	4.20
BG	13%	13%	14%	15%	15%	16%	17%	18%	18%	19%	19%	20%	21%	21%	22%	22%	23%	9.94
CZ	9%	9%	10%	10%	11%	12%	12%	13%	13%	14%	14%	15%	16%	16%	17%	17%	17%	8.94
DE	11%	12%	12%	13%	13%	14%	14%	15%	15%	15%	16%	16%	17%	17%	17%	17%	18%	6.50
DK	13%	14%	15%	15%	16%	16%	17%	18%	18%	19%	19%	20%	20%	21%	21%	21%	22%	8.88
EE	12%	13%	13%	14%	14%	14%	15%	15%	15%	16%	16%	16%	17%	17%	17%	17%	18%	5.63
EL	8%	9%	9%	9%	10%	10%	10%	11%	11%	11%	12%	12%	12%	12%	12%	13%	13%	4.34
ES	12%	13%	13%	14%	15%	15%	16%	16%	17%	17%	17%	18%	18%	19%	19%	19%	19%	7.52
FI	14%	16%	17%	18%	18%	19%	20%	20%	21%	22%	22%	23%	23%	23%	24%	24%	25%	10.65
FR	9%	10%	10%	11%	11%	12%	12%	13%	13%	13%	14%	14%	14%	14%	15%	15%	15%	6.20
HR	7%	8%	9%	9%	10%	11%	11%	12%	12%	13%	14%	14%	15%	15%	16%	16%	16%	9.15
HU	11%	12%	12%	13%	13%	14%	14%	15%	15%	15%	16%	16%	17%	17%	17%	18%	18%	6.90
IE	12%	13%	13%	14%	15%	15%	15%	15%	15%	16%	16%	16%	16%	16%	16%	16%	17%	4.79
IT	9%	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	21%	21%	22%	23%	23%	24%	14.27
LT	14%	15%	16%	17%	17%	18%	18%	18%	19%	19%	19%	19%	19%	20%	20%	20%	20%	6.11
LU	13%	14%	15%	15%	16%	17%	17%	18%	18%	19%	20%	20%	21%	21%	22%	22%	22%	9.63
LV	10%	10%	11%	12%	12%	13%	13%	14%	14%	15%	15%	16%	16%	16%	17%	17%	18%	7.80
NL	15%	16%	17%	18%	19%	20%	21%	22%	22%	23%	24%	24%	25%	25%	25%	26%	26%	11.51
PL	13%	15%	16%	17%	17%	18%	19%	19%	20%	20%	21%	21%	22%	22%	23%	23%	23%	10.17
PT	2%	3%	3%	3%	3%	3%	3%	4%	4%	4%	4%	4%	4%	4%	4%	5%	5%	2.29
RO	11%	12%	13%	14%	15%	15%	16%	17%	17%	18%	18%	19%	20%	20%	21%	21%	21%	10.66
SE	12%	12%	13%	14%	14%	14%	15%	15%	16%	16%	16%	17%	17%	17%	18%	18%	18%	6.69
SI	7%	8%	8%	9%	9%	10%	10%	11%	11%	11%	12%	12%	13%	13%	13%	14%	14%	6.98
SK	11%	12%	13%	13%	14%	15%	16%	17%	17%	18%	19%	19%	20%	20%	21%	21%	22%	10.99

THE DATA PRESENTED IS FOR THE MEDIUM (SSP2) SCENARIO, INDICATING A MIDDLE-OF-THE-ROAD SCENARIO WHICH CAN BE SEEN AS THE MOST LIKELY PATH FOR EACH COUNTRY.

SOURCE: WITTGENSTEIN CENTRE FOR DEMOGRAPHY AND GLOBAL HUMAN CAPITAL, 2018, *WITTGENSTEIN CENTRE DATA EXPLORER VERSION 2.0 (BETA)*, AVAILABLE AT HTTP://WWW.WITTGENSTEINCENTRE.ORG/DATAEXPLORER

ANNEX C – BIBLIOGRAPHY

C.1 Bibliography for the Introduction

EU legislation

- Decision (EC) No 94/1 on the conclusion of the Agreement on the European Economic Area between the European Communities, their Member States and the Republic of Austria, the Republic of Finland, the Republic of Iceland, the Principality of Liechtenstein, the Kingdom of Norway, the Kingdom of Sweden and the Swiss Confederation
- Decision (EC) No 2002/309 as regards the Agreement on Scientific and Technological Cooperation, of 4 April 2002 on the conclusion of seven Agreements with the Swiss Confederation
- Decision (EC) No 2006/245 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 Czechia , 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 (EC) No 2009/392 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
- Directive (EC) No 2004/38 on the right of citizens of the Union and their family members to move and reside freely within the territory of the Member States
- Directive (EU) No 2014/54 on measures facilitating the exercise of rights conferred on workers in the context of freedom of movement for workers Text with EEA relevance
- Regulation (EC) No 96/71 concerning the posting of workers in the framework of the provision of services
- Regulation (EC) No 883/2004 on the coordination of social security systems
- Regulation (EU) No 492/2011 on freedom of movement for workers within the Union
- Regulation (EU) No 2019/1149 of the European Parliament and of the Council of 20 June 2019 establishing a European Labour Authority.
- Regulation (EU) No 2016/589 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
- Regulation (EEC) No 1408/71 on the application of social security schemes to employed persons and their families moving within the Community
- Regulation (EC) No 862/2007 on Community statistics on migration and international protection and repealing Council Regulation (EEC) No 311/76 on the compilation of statistics on foreign workers

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