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COVID-19 and migrants across cities and regions

This chapter examines the impact of COVID-19 on migrants across regions and cities, and sheds light on the contribution of migrants to ensure the continuity of essential services during the pandemic. The chapter assesses the health and employment vulnerability of migrants during the pandemic and it presents evidence on the potential capacity of migrant workers to shift to remote working amid lockdowns and social distancing measures. Finally, the chapter analyses the contribution of migrants to local economies as key workers in essential services.

In Brief

Migrants played a crucial role as key workers during the pandemic, yet were more exposed to health and employment consequences of COVID-19

- **Migrants faced a higher risk of COVID-19 compared to the native-born population.** In addition to being over-represented in dense areas which accelerated the spread of the virus, migrants also faced added exposure risk due to their socio-economic conditions, which affected their work and living conditions.
- **Migrants living in cities are more likely to experience poor housing conditions, making them more vulnerable to the crisis's health consequences.** In most European Union (EU) OECD countries, migrant households are more likely to live in overcrowded dwellings than native-born households. Moreover, overcrowded dwelling is more frequent among migrants living in cities and especially those from non-EU countries.
- **Migrants located in all areas tend to have jobs that are less amenable to remote working compared to native-born workers.** Lockdowns and social distancing measures shifted work from offices to homes. Migrant workers, however, have a lower remote working potential which exposes them to job and income losses in the short run and increased exposure to the virus. The native-migrant gap in remote working potential exists in all types of areas (e.g. cities or rural) and is roughly the same size. Across all areas, non-EU migrants have lower remote working potential compared to the native-born population and other migrants from EU countries.
- **The health crisis has triggered attention to essential services and to the people that work in them.** While large sections of the workforce had to stay home due to lockdowns, some essential functions, such as food processing, delivery or healthcare, were performed to keep citizens healthy, safe and fed during the pandemic. This has highlighted an important role of migrant workers as “key workers” in these services, especially in cities.
- **Migrants play an important role in essential services, accounting for 14% of key workers across European regions.** In most countries, capital regions have the highest share of migrant key workers, with migrants accounting for an average of 20% of all key workers in the region. However, the share of migrants among key workers and their countries of origin varies significantly across European countries, reflecting the presence of migrants in the local workforce.
- **Migrants of all education levels contribute to key worker occupations.** Migrants play an important role in occupations requiring low skills, such as domestic workers, hotel and office cleaners, but also in the healthcare system, especially in cities. Migrants make around 23% of medical doctors and 14% of nurses. While EU doctors and nurses are evenly spread across space, non-EU countries are more likely to work in cities.

The health and labour market impact of COVID-19 on migrants

The global pandemic has caused an unprecedented health emergency in OECD countries. The health impact of the crisis has been unevenly distributed across places within countries, with some regions – often with high population density – being hit particularly hard, especially during the first wave (OECD, 2020^[1]).

These differences across space also reflect an unequal impact of the crisis across different groups. For instance, the type of occupations and the housing conditions expose migrants to the health effect of the pandemic more than native-born residents. This section shows that migrants are more vulnerable to the adverse health and economic effects of the COVID-19 crisis as they are more likely to live in overcrowded housing and be employed in occupations with lower remote working potential.

The health impact of COVID-19 in regions

The health impact of the COVID-19 pandemic has been uneven within countries. From February to June 2020, large regions in 30 OECD countries with available data registered on average 6% more deaths than in the same months of the previous 2 years (average of 2018-19) (OECD, 2020^[1]).¹ While significant differences were observed across regions, in most cases, regions with high population density and proximity to metropolitan areas were affected more than other regions.

Several correlated and complex regional factors can drive differences in the spread of the virus and excess mortality. In regions where keeping social distance was relatively harder due to the industrial or occupational composition of the economy and to local living conditions (e.g. people living in larger households or care homes), the virus spread significantly faster (Ascani, Faggian and Montresor, 2020^[2]; Fadinger and Schymik, 2020^[3]). Furthermore, regional healthcare infrastructure (e.g. hospital beds, doctors, etc.) and the region's demographic structure played a vital role in regions' capacity to treat their infected population and reduce the overall health impact (Diaz Ramirez and Veneri, 2021^[4]). A higher population share of the elderly or those with chronic diseases is likely to increase the vulnerability to severe virus infections, thus influencing regional resilience to the virus. The next section examines some of these factors that have contributed to the crisis's health impact by distinguishing the migrant and native-born population across regions.

Socio-economic conditions and the uneven health costs of the pandemic

Migrant communities, as well as ethnic minorities, have suffered higher health consequences compared to the rest of society. While death rates have increased for the overall population during the pandemic, the increase was more considerable for ethnic groups and migrants.² Other recent studies on a limited group of countries with available data confirm that ethnic groups were affected more severely by the pandemic (Perkin et al., 2020^[5]; Rossen et al., 2020^[6]). While higher vulnerability results from a complex set of factors, it is mainly driven by socio-economic characteristics (e.g. type of occupation, household structure, demographics) and location characteristics (e.g. urban areas) where migrants are more likely to live. Overall, ethnic minorities and migrants are more likely to live in areas with high rates of COVID-19 and thus increased vulnerability to the pandemic.

Box 3.1. Geographic areas and regional classifications

The chapter features analysis using administrative regions and the degree of urbanisation depending on data availability and the objective of the analysis.

Administrative regions

Most of the regional policy analysis uses data collected for administrative regions, that is, the regional boundaries within a country as organised by governments. Data on administrative regions have the advantage of referring to areas that are often under the responsibility of a certain subnational government. They also correspond to the geographical scale targeted by a specific policy implemented

at the national or subnational level. Regions are classified into two scales: large (Territorial Level 2, TL2) and small (Territorial Level 3, TL3), ensuring comparability across countries.

Classification of local units by degree of urbanisation

The degree of urbanisation definition acknowledges the urban-rural continuum and proposes three classes of settlements instead of the traditional urban vs. rural dichotomy. The three classes are: i) cities (or densely populated areas); ii) towns and semi-dense areas (or intermediate density areas); and iii) rural areas (or thinly populated areas).

Source: Eurostat (2013^[7]), *Urban-Rural Typology*, <http://ec.europa.eu/eurostat/web/rural-development/methodology>; OECD (2020^[11]), *OECD Regions and Cities at a Glance 2020*, <https://doi.org/10.1787/959d5ba0-en>.

Significant spatial differences in migrants' exposure to the virus exist even across neighbourhoods within cities. Recent evidence focusing on the prevalence of COVID-19 across neighbourhoods in New York City at the outset of the pandemic confirms this point (Borjas, 2020^[8]). The study combines data on the number of tests and infections at the postal code level to examine the importance of demographic and socio-economic characteristics on the number of tests administered and the infection rates. Two important results emerge. First, individuals living in disadvantaged neighbourhoods or with a high share of ethnic minorities were less likely to get tested for the virus. Second, conditional on taking the test, individuals living in such neighbourhoods had a much higher probability of testing positive.

Housing conditions, occupations and the health crisis

Housing conditions play an important role in people's standard of living and access to good-quality housing is essential for the successful integration of migrants (OECD, 2018^[9]). For instance, good housing conditions are linked to higher educational outcomes, lower risks of social exclusion and health-related issues (Salvi del Pero et al., 2016^[10]). Across the OECD countries, migrants are less likely to own their homes (Gobillon and Solignac, 2019^[11]) and are more likely to live in poor housing conditions than the native-born population (OECD/EU, 2018^[12]). In general, housing costs correspond to a larger share of the income of migrant households, which forces them to cut back spending on other needs, including healthcare (Salvi del Pero et al., 2016^[10]).

In the context of the COVID-19 pandemic, housing conditions gained further importance as they can affect the spread of the virus. According to Brandily et al. (2020^[13]), French municipalities with a higher share of overcrowded housing suffered more from COVID-19, as overcrowding facilitated transmission among household members. Furthermore, in multi-generational households, living in overcrowded housing exacerbated the risk of transmission of COVID-19 to older individuals, especially if one household member worked outside of the home during the lockdown period. Overall, housing and intergenerational living account for up to 60% of the difference observed in the number of COVID-19 cases between rich and poor municipalities.

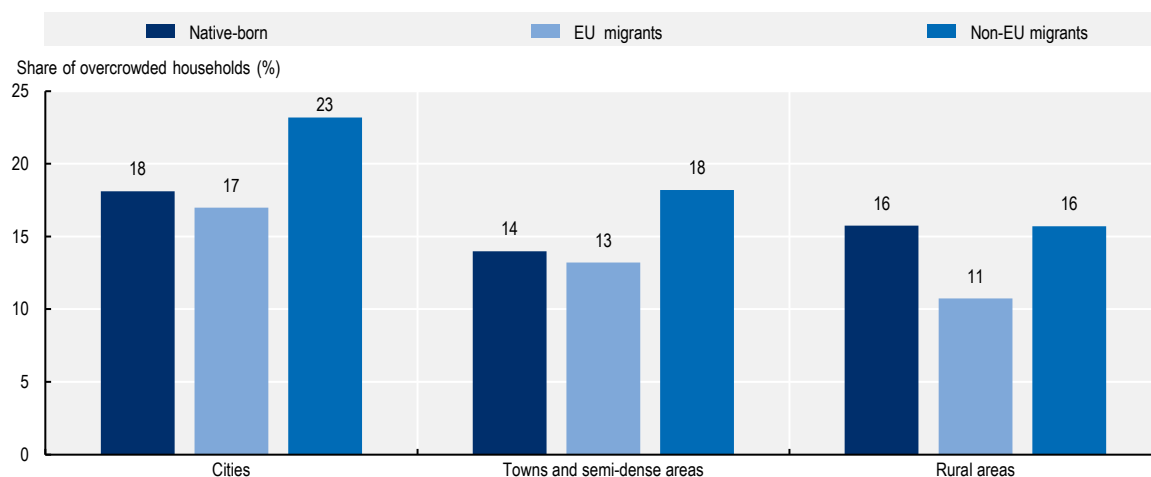
Non-EU migrants are more likely to live in overcrowded housing, especially in cities

Migrants, especially those living in cities, often live in overcrowded dwellings. As a result, compared to native-born residents, migrants are more likely to live in poor housing conditions, affecting their well-being negatively. In most European OECD countries, households including at least one migrant adult are more likely to live in overcrowded dwellings compared to households with only native-born individuals. While this difference exists in all types of areas, overcrowded households tend to be more frequent among migrants in cities than in other areas.

Across all degrees of urbanisation, overcrowded housing is particularly severe among non-EU migrants. For instance, while 17-18% of native-born and EU migrant households in cities suffer from overcrowding, the share jumps to 23% for non-EU migrants, indicating a large disparity in terms of living conditions. Similarly, the share of non-EU migrants living in overcrowded housing conditions in towns and semi-dense areas (18%) is 4-5 percentage points higher than those of the native-born population (14%) or EU migrants (13%).

Figure 3.1. Migrant households are more likely to be overcrowded, 2019

Share of households that are overcrowded in the total number of households by the degree of urbanisation in European countries



Note: Data include OECD-EU countries for which data are available. Households are considered migrant if at least one adult member is a migrant. See OECDEU (2015^[14]) for a detailed definition of overcrowding.

Source: Eurostat, EU Statistics on Income and Living Conditions, 2019 (accessed in December 2020).

While risk of poverty for non-EU migrants is highest in cities, for native-born it is greatest in rural area

Prior to the pandemic, migrant households were already more vulnerable to poverty risk compared to native-born households. Households where at least one adult is a migrant face significantly higher risk compared to native-born households. Across the regions of 26 European OECD countries, 15% of native-born households face the risk of poverty, a much lower risk compared to EU and non-EU migrants, with 22% and 35% respectively.³ Furthermore, poverty risks are higher for migrant households across all types of areas along the degree of urbanisation.

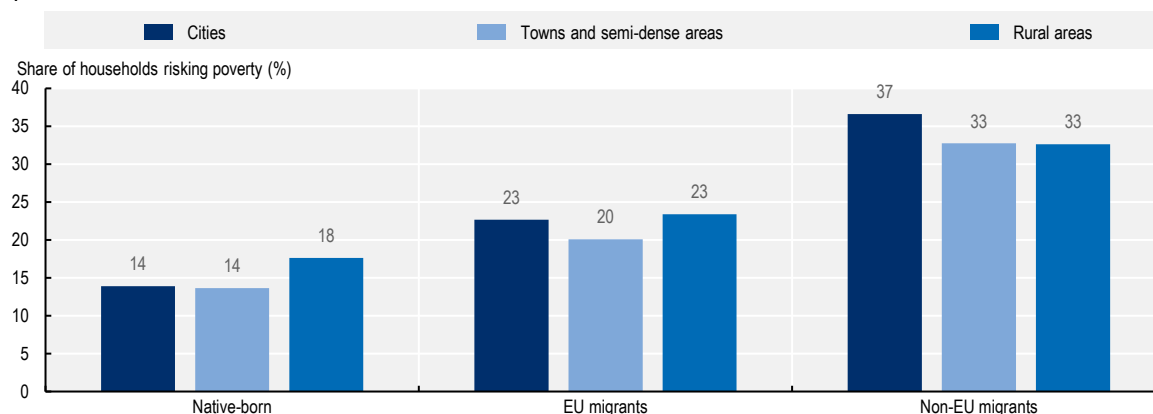
In Europe, non-EU migrants in cities face a higher risk of poverty compared to those located in other types of areas. For non-EU migrants, the share of households at risk of poverty reaches 37% in cities (settlements above 50 000 inhabitants), compared to 33% in towns and semi-dense areas and rural areas. For EU migrants, the picture is more nuanced, as the share of households at risk of poverty is practically consistent across all types of settlement (close to 23%).

While a clear understanding of these spatial differences requires further investigation, the importance of cities for migrants can partially explain the observed spatial differences in terms of poverty risk. First, cities, especially large ones or capitals, serve as entry points to countries, as newcomers and working-age migrants at earlier stages of their career are more likely to live in cities. Due to a large number of migrants living in cities, newly arrived migrants can tap into their origin country networks, which enables them to find a job more easily. Second, cities have a higher share of low-income service jobs that employ migrant

workers. On the other hand, cities in advanced economies attract native-born workers with higher education levels and ambition (Combes, Duranton and Gobillon, 2008^[15]; De la Roca and Puga, 2017^[16]; Özgüzel, 2020^[17]). As a consequence, while the average levels of skills of native-born workers in cities tend to be higher relative to the rest of the country, such patterns are less likely to hold for migrants.

Figure 3.2. Migrants face a significantly higher risk of poverty, 2019

Number of households risking poverty as a share of all households by nationality and degree of urbanisation in European countries



Note: A household is considered risking poverty if the equivalised disposable income is below 60% of the median of equivalised disposable income. Equivalised disposable income is calculated using total disposable household income multiplied by a within-household non-response inflation factor and divided by equivalised household size.

Source: Eurostat, EU Statistics on Income and Living Conditions, 2019 (accessed in December 2020).

During the pandemic, many started working remotely. Before the COVID-19 outbreak, remote work was considered a work alternative that was used very little. Suddenly, the pandemic turned it into an urgent solution to reduce contagion risk and ensure economic continuity. While some workers maintained their jobs and income by working remotely during the pandemic, some did not have the same opportunity and thus suffered employment and income losses. The following section presents evidence on the degree to which migrants could shift to remote work amid lockdowns and social distancing measures.

Why does remote working potential matter for migrants?

Remote working is an important determinant for regions' capacity to function under lockdowns while reducing individuals' exposure to the virus. By working from home, workers can maintain their economic activity and reduce economic disruption due to lockdown measures (OECD, 2020^[18]). As importantly, it allows workers to stay healthy by avoiding public spaces or commute to the office.

Not all workers have the possibility to work remotely. Remote working potential depends on the nature of the tasks carried out by workers. Workers who only need a computer and Internet connection to work (e.g. financial analysts) can easily shift work from office to home, while those who need to use heavy machines (e.g. construction) or who have occupations requiring physical presence (e.g. restaurant staff) cannot work from home. Workers' specific tasks (i.e. occupations) are more important than the specific workplace characteristics or the sector of economic activities in which a job is classified to determine the capacity to work remotely. For example, academic researchers in universities can continue working during a lockdown or under social distancing requirements, while canteen staff working in the same university cannot.

During the pandemic, workers who could work from home faced lower risks of job and income losses. Evidence from the US indicates that workers who were able to work remotely during the pandemic were affected less severely by the negative labour market effects (OECD, 2021^[19]). Specifically, workers with high remote work potential were less likely to drop out of the labour force or face unemployment during the crisis than those with low remote work potential. The contrary occurred for workers whose occupation relies on physical proximity to other people. Moreover, while the demand for labour dropped dramatically across European capitals during the pandemic, the decrease was more tempered for jobs with high remote working potential (Adrian and Kleine-Rueschkamp, 2021^[20]).

Beyond the employment advantages, remote working also helped workers stay healthy (Alipour, Fadinger and Schymik, 2021^[21]). Working from home enabled workers to avoid face-to-face contact in offices and public transportation, which reduced their probability of contracting the virus. Consequently, workers who could work remotely faced lower exposure and COVID-19 infection risk compared to those who could not work from home (Angelucci et al., 2020^[22]).

The following section presents evidence on the degree to which migrants could shift to remote working and how it compares to native-born residents. It does so by taking a nuanced look at socio-demographic conditions along the urban-rural continuum, when relevant. It uses the most recent European Labour Force Survey (EU-LFS) wave and measures workers' remote working capacity based on their occupations, as explained in Box 3.2. Assessing the remote working potential of migrants provides insights into the socio-economic vulnerability of migrants during the COVID-19 crisis. If migrants worked in occupations less prone to remote working, they were also more vulnerable in terms of health and unemployment risks under lockdowns. Understanding the extent of such vulnerability could inform policy makers on income losses in the short term as well as other negative effects in the medium and long terms to adapt possible measures to the specificities of places and needs of people.

Box 3.2. Assessing the remote working potential of migrants

While it is possible to measure the remote working potential of workers and firms using surveys, collecting such information is costly and suffers from small sample sizes, which could raise issues regarding representativeness or flexibility in the analysis due to statistical power and make international comparisons very difficult.

An alternative method is to measure the remote working potential through workers' occupation. It classifies each occupation based on the tasks required and according to the degree to which those tasks can be performed remotely (Dingel and Neiman, 2020^[23]; Saltiel, 2020^[24]; Gottlieb, Grobovsek and Poschke, 2020^[25]). For example, occupations requiring workers to be outdoors (e.g. food delivery person) or to use heavy equipment (e.g. a vehicle) are considered to have a low potential of remote working. In contrast, occupations requiring only a laptop and an Internet connection (e.g. an accountant, finance specialist, etc.) will have a high potential to work remotely. This method allows the use of the most recent administrative datasets that have broad coverage and allows international comparisons.

The analysis in this chapter classifies occupations based on a recent study by Dingel and Neiman (2020^[23]) which is built from the O*NET surveys conducted in the US. As the occupations are classified according to the US Standard Occupational Classification system (SOC), this note uses a crosswalk to the International Standard Classification of Occupations (ISCO) to associate each occupation to a level of remote working potential in other countries (OECD, 2020^[18]).

The occupation level information is then merged with labour force surveys that allow assessing the remote working potential of migrant and native-born populations overall, but also by specific socio-economic or demographic characteristics.

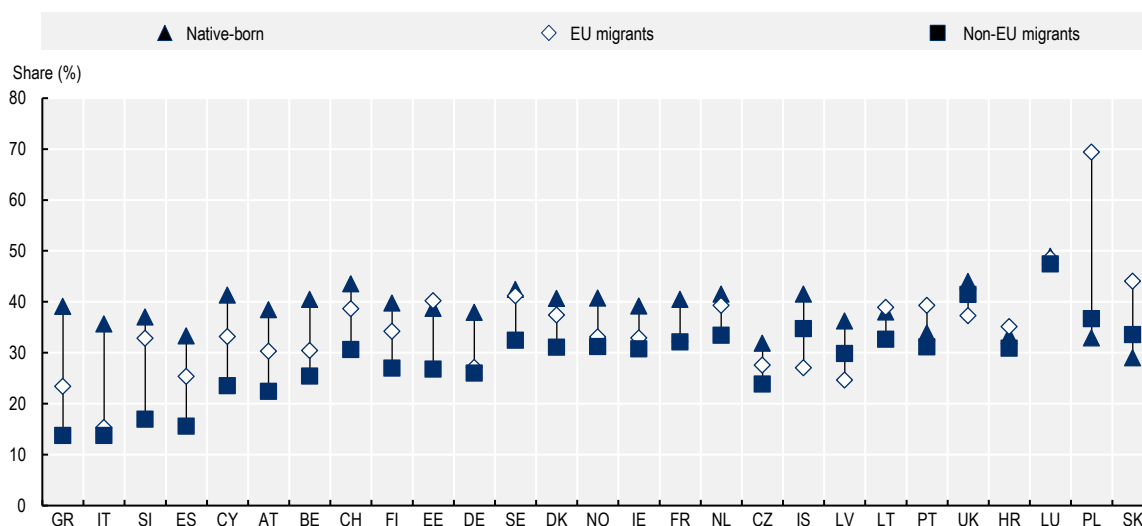
Source: Dingel, J. and B. Neiman (2020^[23]), "How many jobs can be done at home?", *Journal of Public Economics*, Vol. 189, p. 104235; Gottlieb, C., J. Grobovsek and M. Poschke (2020^[25]), "Working from home across countries", *Covid Economics: Vetted and Real-Time Papers*, No. 8; OECD (2020^[18]), "Capacity for remote working can affect shutdowns' costs differently across places", <https://www.oecd.org/coronavirus/policy-responses/capacity-for-remote-working-can-affect-lockdown-costs-differently-across-places-0e85740e/>; Saltiel, F. (2020^[24]), "Home working in developing countries", *Covid Economics: Vetted and Real-Time Papers*, Vol. 6.

Migrants in all areas are more likely to be employed in occupations that have lower remote working potential

Across European OECD countries, the native-born population has a higher remote working potential than migrants (OECD, 2020^[26]). While the share of jobs amenable to remote working varies greatly between European countries, there is a significant gap between migrant and native-born workers in all countries with large migrant populations (Figure 3.3). Furthermore, in most countries, non-EU migrants fare worse than those originating from EU countries. Greece, Italy, Slovenia and Spain record the widest gaps between native-born residents and non-EU migrants in the share of jobs amenable to remote working, reaching differences of more than 20 percentage points.

Figure 3.3. Native-born workers have higher remote working potential than migrants, 2019

Share of jobs that can potentially be performed remotely (%) in European countries



Note: The number of jobs in each country or region that can be carried out remotely as the percentage of total jobs. Countries ranked according to decreasing difference between the remote working potential of native-born residents and non-EU migrants.

Source: OECD calculations based on European Labour Force Survey and Occupational Information Network data (accessed in February 2021).

The gap between native-born and migrant workers is wider among lower-income workers

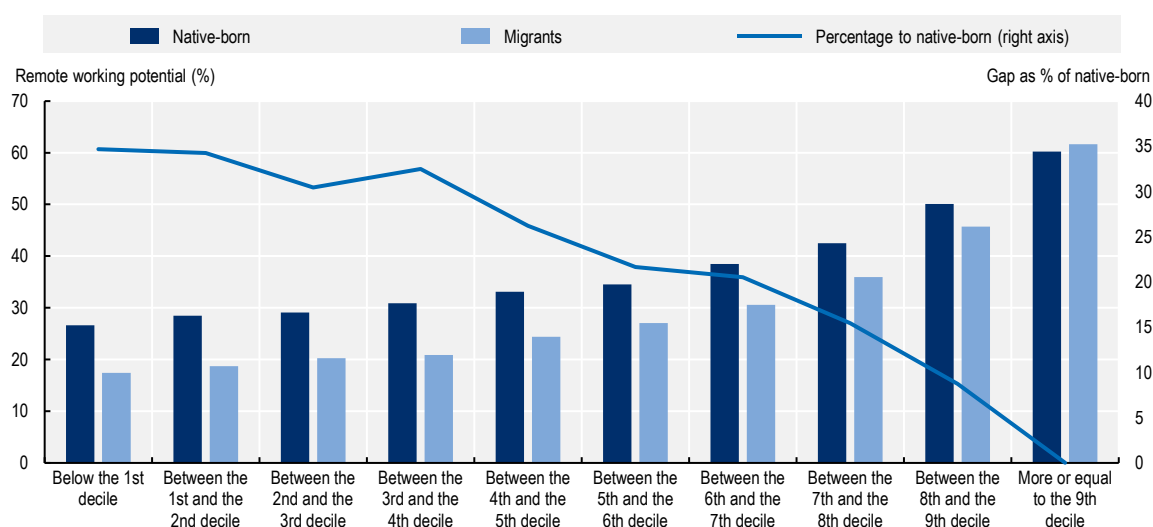
Compared to native-born, migrants have lower remote working in almost all income groups, especially in lower-income groups (Figure 3.4).⁴ For example, migrant workers in the 1st income decile (i.e. among the 10% of the population with the lowest income) have 35% lower remote working potential than their native-born peers within the same income group. The relative remote working gap declines gradually as the average income increases and disappears completely among the highest decile workers.

The remote working potential is higher in cities for all workers

Cities offer a larger share of jobs amenable to remote working for both migrant and native-born workers, compared to other areas. This advantage of cities is driven by their industry structure and the presence of a larger share of the high-skilled labour force. OECD evidence (2020^[18]) demonstrates that cities (settlements above 50 000 inhabitants) have a 13 percentage point higher share of jobs amenable to remote working than rural areas. While cities have the highest potential for remote working, towns and semi-dense areas seem to be somewhat closer to rural areas than cities.

Figure 3.4. The remote working potential gap is higher for lower-income groups, 2019

Share of jobs that can be done remotely (left axis) and the migrant-native gap (right axis) in European countries

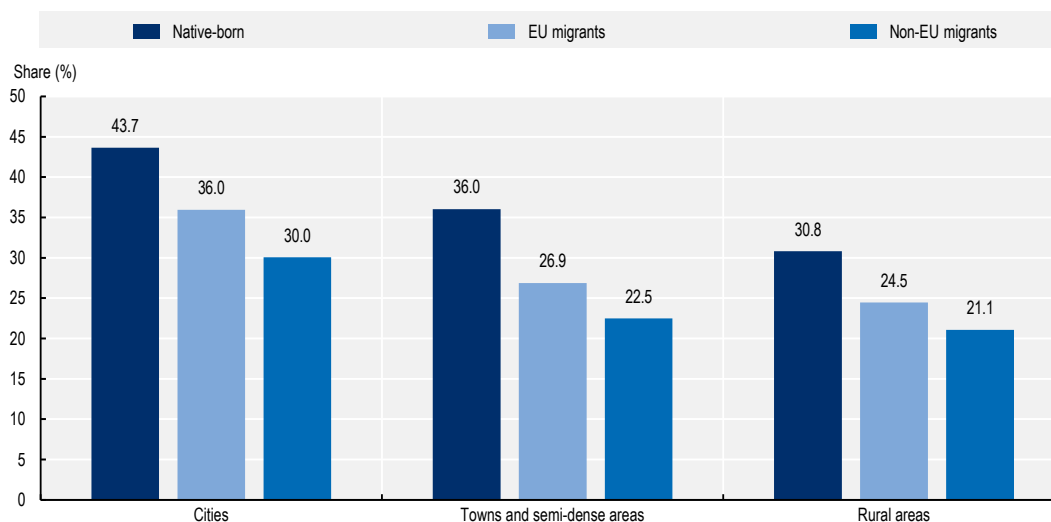


Note: The figure plots the remote working potential for migrant and native-born workers (left axis), and the gap between two groups relative to the native-born population's remote working potential within the income group (right axis).

Source: OECD calculations based on European Labour Force Survey and Occupational Information Network data (accessed in December 2020).

Figure 3.5. The remote working potential is highest in cities for all groups, 2019

Remote working potential by the degree of urbanisation in European countries



Note: The figure plots the share of workers who can work remotely by the degree of urbanisation and origin.

Source: OECD calculations based on European Labour Force Survey and Occupational Information Network data (accessed in January 2021).

The native-migrant gap in remote working potential tends to be consistent across all types of areas. In cities and towns and semi-dense areas, the remote working gap between native-born residents and migrants is around 11 percentage points compared to around 8 percentage points in rural areas. While the gap is nominally smaller in rural areas, the gap relative to the native-born population's remote working potential remains roughly the same along the city-rural continuum. Across all areas, non-EU migrants have lower remote working potential than native-born residents and other migrants from EU countries. On average, non-EU migrants are 30% less likely to work in jobs that can be done remotely than native-born workers and 16% less likely than EU migrants.

Migrants are likely to suffer consequences of the crisis both in the short and long terms

COVID-19 could lead to deepening divides within labour markets at the national and local levels. In many countries, the low-skilled, low-wage workers, migrants and young people have been the most vulnerable to COVID-19-related job losses (OECD, 2021^[19]). The initial negative impact on employment was larger for women, minorities, those with high school or less education, and the young, even after accounting for the industries and occupations they worked in (Lee, Park and Shin, 2021^[27]).

Job loss during an economic crisis can have a negative long-term effect on labour market outcomes. Such effects are also known as the “scarring effect”, according to which an individual who lost employment during a crisis is more likely to suffer from negative labour market experiences in the future (e.g. shorter contracts, lower hourly wages, etc.), compared to an otherwise identical individual who has stayed in employment (Davis and Von Wachter, 2011^[28]).

Migrants and other vulnerable groups are exposed to higher risks of facing long-term consequences during crises. The evidence presented in this section indicates that migrants worked in occupations with lower remote working potential. As individuals with low remote working potential faced a higher risk of unemployment during the pandemic, the economic consequences of the crisis may have been more severe for migrants. Evidence from past crises indicates that workers, including migrants, who lost their jobs during this are also more likely to leave the labour market and become inactive. To minimise the risk of persistently

lower employment rates for migrants in the medium term, necessary policies must be developed with a specific aim to promote a quick return to the labour market of all affected groups, including migrants and help them find good-quality jobs.

What role do migrants play as essential (key) workers in OECD regions?

The unprecedented economic and social challenges emerging from the COVID-19 pandemic have cast a new light on those services that are at the core of functioning local economies. Sectors such as food processing, delivery or healthcare are vital for the continuity of economic activity and are often taken for granted. During the pandemic, these sectors were defined as “essential” and the people that work in them have been called “key workers”. This section assesses the contribution of migrants as key workers in EU cities and regions by taking a nuanced look at differences across space. In doing so, it complements country-level analyses that describe the contribution migrants played in key sectors for regions’ capacity of coping with the crisis (OECD (2020^[29]) or Fasani and Mazza (2020^[30])).

While forced shutdowns confined large sections of the workforce at home during the COVID-19 pandemic, some essential functions still needed to be performed to keep citizens healthy, safe and fed during the pandemic. Consequently, key workers have been at the frontline during the pandemic and local COVID-19 responses and, in many cases, helped the economy run amid far-reaching lockdown measures. Key workers cover a wide range of tasks, extending from highly skilled (e.g. doctors or medical researchers) to low-skilled (e.g. supermarket cashiers or delivery drivers) occupations. Across European countries, migrants constituted around 14% of all key workers and have contributed to the economy by sharing the responsibility and burden of delivering essential services alongside the native-born population.

The need to ensure the continuity of health services and provisions of goods amid the risk of labour shortages during the COVID-19 crisis has pushed countries to facilitate the entrance into the labour market of migrants (OECD, 2020^[31]). For example, Italy granted temporary work permits to undocumented migrants employed in agriculture, fishing, care and domestic work sectors,⁵ while the United Kingdom (UK) government extended the visas of healthcare and social care officials for a year free of charge (OECD, 2020^[32]).

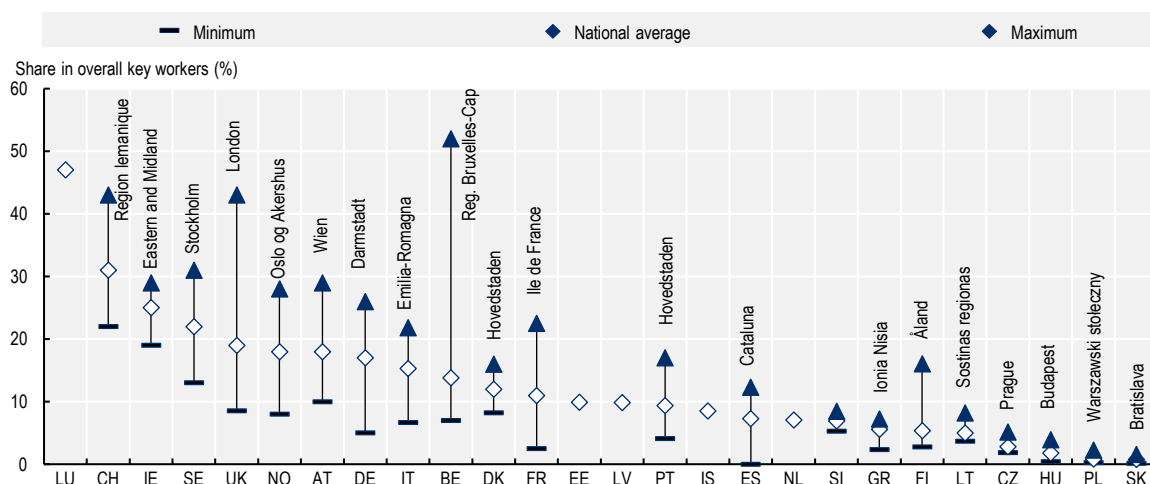
The share of migrant key workers varies significantly across and within countries

Migrants account for 14% of key workers across European OECD regions, on average.⁶ Yet, both the share of migrants among key workers and their countries of origin varies significantly across European countries. For instance, migrants account for up to 47% of key workers in Luxembourg but less than 2% in Poland and the Slovak Republic (Figure 3.6). Overall, the majority of migrant key workers come from non-EU countries. Non-EU migrants make up 7.5% of key workers across regions, compared to around 5% of key workers from EU28 countries (see Annex Figure 3.A.1).⁷ However, in a few countries with a relatively larger share of high-skill immigration, such as Ireland, Luxembourg or Switzerland, two-thirds of migrant key workers or more come from EU countries.

The share of migrants among the total key workers tends to reflect the presence of migrants in the local workforce. Across European regions, the share of migrants as of total key workers ranges from almost 50% in Brussels or the Lake Geneva region to 1% or less in other regions (Figure 3.6). The share of migrants among key workers is roughly proportional to their share in the regional working-age population.⁸ However, some regions and countries offer exceptions to this pattern (see Annex Figure 3.A.2). In North East England (UK) or Stockholm (Sweden), for example, migrants are highly over-represented in key professions, while they are significantly underrepresented in other places such as Andalusia (Spain).⁹

Figure 3.6. The share of migrant key workers varies significantly across and within countries, 2019

The number of migrant key workers as a share of total key workers, TL2 regions



Note: The number of migrant key workers as a share of total key workers in the region. Countries appear in descending order by the share of migrant key workers in the total key workers at the national level. Regions correspond to TL2 regions depending on data availability. Occupations are classified following the key worker definition, as explained in Box 3.3. In countries and regions with a very small migrant population, the sample sizes of migrant key workers might be small and thus estimates might not be fully accurate.

Source: OECD calculations based on the European Labour Force Survey (accessed in November 2020).

The importance of migrant key workers also differs significantly within countries. On average, there is a 13-percentage point difference between the regions with the highest and lowest shares of migrant key workers (Figure 3.6). In most EU-OECD countries, capital regions have the highest share of migrant key workers. Migrants correspond to 17% of all key workers in capital regions, on average, which is roughly 5 percentage points higher than the national averages in their respective countries. Moreover, the share of migrants among key workers varies significantly between capital regions going from a very low 1.6% in Bratislava up to 48% in Brussels.

Some regions rely more on EU key workers, other on non-EU key workers. In regions like Lake Geneva, Luxembourg or Zurich, key workers from EU countries correspond to more than 28% of all key workers, while non-EU migrants only less than 13%. In contrast, non-EU migrants constitute more than 30% of key workers in London and 20% in Ile-de-France, while EU migrants accounted for 13.1% and 4.4% respectively. In Belgium and the UK, regional differences in the share of non-EU migrant key workers exceed 30 percentage points, driven by Brussels' and London's capital regions, concentrating large migrant communities and very high shares of migrant key workers.

Unsurprisingly, migrants account for a larger share of key workers in cities, which is explained by larger migrant populations in densely populated areas. The share of migrants among all key workers is 17.5% in cities, while it is 12% in towns and semi-dense areas and 7% in rural areas (Annex Figure 3.A.3).¹⁰ These numbers broadly reflect the distribution of migrants across the degree of urbanisation, as migrants make up 18%, 13% and 7% of the workforce in cities, towns and semi-dense areas, and rural areas respectively. In all of the 26 European OECD countries, except Greece and Lithuania, migrant key workers in cities tend to constitute a more significant share of total key workers than other types of areas (Annex Figure 3.A.5).

Box 3.3. Assessing the share of key workers

This chapter uses a two-step process to assess migrants' importance as key workers in regions. First, it defines whether a worker is a key worker or not using the key profession based on the European Commission communication on guidelines concerning the exercise of the free movement of workers during COVID-19 (see Fasani and Mazza (2020^[30]) for a similar approach). According to this definition, there are 45 key occupations (out of 181 occupations in total), including occupations such as personal care workers, teachers, travel attendants, medical doctors or food processing workers, among many others.

Second, the share of migrants in key professions at the regional level is measured through the most recent wave of the European Labour Force Survey (EU-LFS) and subsequently merged with the key worker definition for each occupation based on ISCO-occupations at three digits. Combining the two data sources allows assessing the number of migrants working in key professions as a share of the total key workers in regional economies.

Additionally, key workers can be further classified into three skill levels based on occupations (OECD, 2019^[33]):

- *Low-skilled*: Jobs in sales and services and elementary occupations (ISCO 5 and 9).
- *Medium-skilled*: Jobs as clerks, craft workers, plant and machine operators and assemblers (ISCO 4, 7 and 8).
- *High-skilled*: Jobs in managerial, professional, technical and associated professional occupations (ISCO 1, 2 and 3).

It is important to note this definition groups workers by the skill requirement of their occupations and do not necessarily reflect the actual skill levels defined by workers' formal education. As shown in the literature, migrants often downgrade in the labour market, meaning that they work in occupations that are below their skill levels. This effect is possibly stronger for migrants arriving from non-EU countries as they face additional difficulties in degree recognition or residence permits.

Sample

The analysis uses the most recent wave of EU Labour Force Survey (EU-LFS, 2019). The sample is restricted to employed workers in the 15 to 64 age group. Migrants are defined as those individuals born in a foreign country. Migrants are further split into two groups based on their country of birth: those born in another European Union (EU) member country than the one where they currently work and reside (i.e. EU migrants) and those born in a country outside of the EU (i.e. non-EU migrants). Finally, anyone who was born in their country of residence is considered native-born.

Source: Fasani, F. and J. Mazza (2020^[30]), "Immigrant key workers: Their contribution to Europe's COVID-19 response", <https://www.iza.org/publications/pp/155/immigrant-key-workers-their-contribution-to-europes-covid-19-response>; OECD (2019^[33]), *Under Pressure: The Squeezed Middle Class*, <https://ec.europa.eu/social/main.jsp?langId=en&catId=89&furtherNews=yes&newsId=9630>.

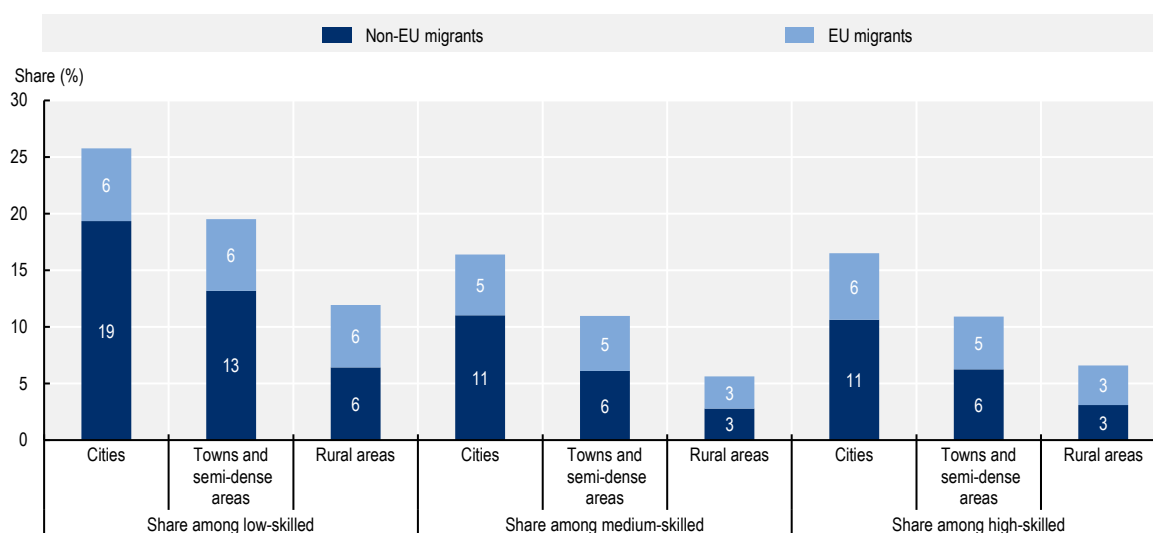
One-fourth of low-skilled workers in essential occupations are migrants in cities, twice as high as in rural areas

Migrants of all skill groups played an essential role as key workers (Figure 3.7). However, migrants take on a particularly important role in key worker occupations requiring low skills, such as domestic workers, hotel and office cleaners. For example, in 2019, migrants constituted 25% of all low-skilled workers in cities, 19% and 12% in towns and semi-dense areas and rural areas respectively. While low-skilled

migrants have a higher tendency to concentrate in cities, it is less likely to be the case for higher skill groups.

Figure 3.7. Migrants of all skill groups contribute to key occupations in all types of areas, 2019

The number of migrant key workers as a share of all key workers by skill level, origin and degree of urbanisation in European countries

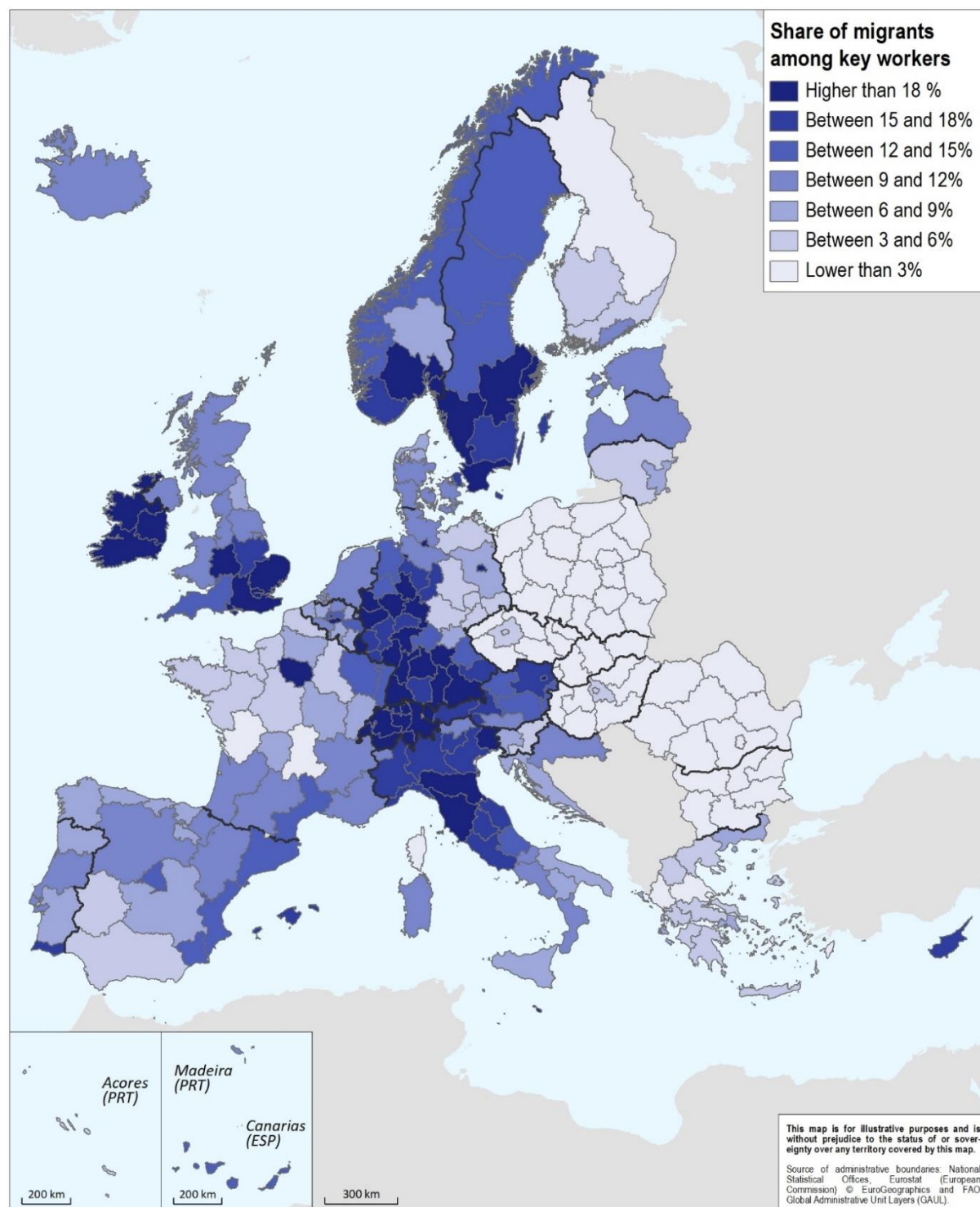


Note: The number of migrant key workers as a share of all key workers by skill group and by the degree of urbanisation. The residual from each bar corresponds to native-born workers. Population weighted averages of OECD26. Occupations are classified following the key worker definition, as explained in (Box 3.3).

Source: OECD calculations based on the European Labour Force Survey (accessed in November 2020).

Figure 3.8. Migrant key workers across European regions, 2019

Percentage values, TL2 regions



Note: The figure displays the share of migrants among key workers in regions. Key workers are defined as detailed in Box 3.3. In countries and regions with a very small migrant population, the sample sizes of migrant key workers might be small and thus estimates might not be fully accurate.

Source: OECD calculations based on the EU Labour Force Survey, September 2020.

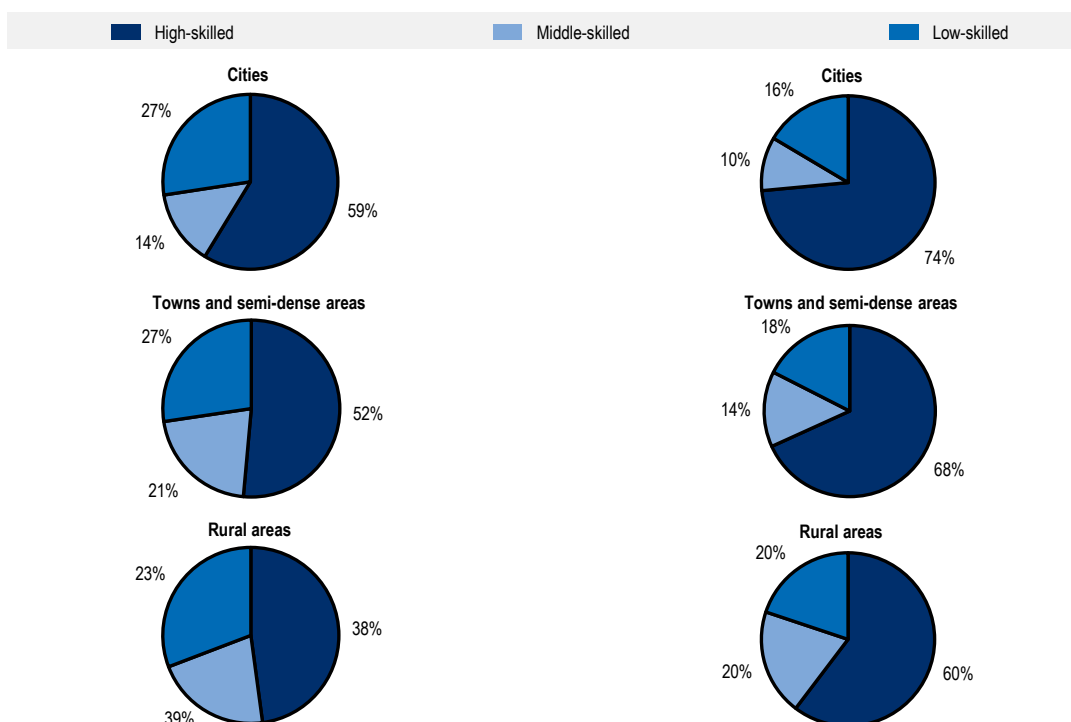
Non-EU migrant key workers are more likely to live in cities

In European countries, the place where migrant key workers settle is strongly associated with their origin (EU vs. non-EU). EU migrants of all skill groups are spread across all territories, corresponding to 3-8% of all local key workers. In contrast, non-EU migrants, especially those who are low-skilled, are concentrated in cities (Figure 3.7). For example, while non-EU migrants make up 5% of all low-skilled key workers in rural areas, their share rises to 20% in cities. Similarly, the share of non-EU migrants among medium-skilled key workers ranges from 3% in rural areas up to 15% in cities. High-skilled non-EU migrants are also more likely to be concentrated in cities than rural areas, while this is less likely to be the case for low- and medium-skilled workers. For example, while there is an 8-percentage points difference in the share of high-skilled non-EU migrants between cities and rural areas, this difference is 13 percentage points for low-skilled non-EU migrants.

Compared to their native-born peers, migrant key workers are more likely to be low-skilled (Figure 3.9), a pattern observable across all types of areas. Two facts stand out. While EU migrant key workers resemble native-born key workers in terms of their skill levels, non-EU migrants are much less likely to work in high-skilled jobs and twice as likely to work in low-skilled jobs. Part of the difference is due to the lower average formal skills of migrants compared to native-born. However, migrants often work in occupations that are below their skill levels. While there are ample reasons for working in jobs below one's qualification, migrants arriving from non-EU countries can face additional difficulties in the recognition of their foreign degrees or constraints related to their residence permits.

Figure 3.9. Migrant key workers are more likely to be low-skilled than native-born workers, 2019

Migrant key workers (left panel) and native-born key workers (right panel) by the degree of urbanisation and skill level in European countries



Note: The share of migrant (left panel) and native-born (right panel) key workers by skill group as a share of total key worker occupations by the degree of urbanisation. Population-weighted averages of 26 European OECD member countries. Occupations are classified following the key worker definition, as explained in Box 3.3.

Source: OECD calculations based on the European Labour Force Survey (accessed in November 2020).

Essential sectors under lockdown

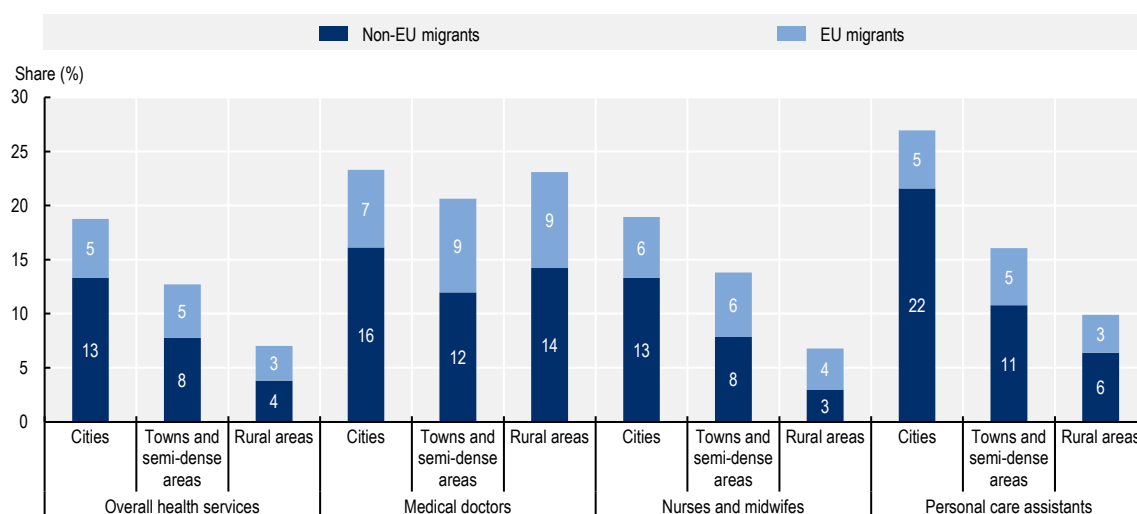
The three sectors of health services, distribution, wholesale and retail trade were crucial for the continuity of economic activity and essential services during the COVID-19 lockdowns across EU and OECD countries.¹¹ Migrants have contributed to each of those key sectors across cities and other areas, though to different degrees. This section focuses on the contribution of migrant workers to these three essential sectors across regions.

Health sector

Across the degrees of urbanisation, the share of migrant key workers in healthcare follows the share of migrants in the workforce.¹² For example, migrant workers constituted 19% of all employees in the health services in cities. This share was significantly lower in towns and semi-dense areas or rural areas, where they accounted for 13% and 7% of the sectorial employment respectively (Figure 3.10).

Figure 3.10. Migrants play an important role in critical parts of the health system, 2019

The share of migrants among key workers in the sectors health services in European countries



Note: The number of migrant workers as a share of total workers in health services or occupation by the degree of urbanisation and country of origin. Industries include occupations that are considered as essential as well as those that are not. The values are population-weighted averages of OECD26. Occupations are classified following the key worker definition as explained in Box 3.3.

Source: OECD calculations based on European Labour Force Survey (accessed in August 2020).

While the share of migrant key workers in healthcare follows the share of migrants in the workforce across all types of areas, migrants play a disproportionately important role in critical parts of the healthcare system. On average, around 21-23% of medical doctors are migrants in all types of areas. Whereas non-EU migrant doctors tend to concentrate more in cities (decreasing from 16% in cities to 14% in rural areas), medical doctors originating from EU countries do the opposite and locate mostly outside of cities. In most EU-OECD countries, capital regions have the highest share of migrant key workers. On average, migrants account for almost 20% of all key workers in capital regions, which is roughly 6 percentage points higher than the respective national average.

The concentration of migrant health workers in cities, especially those from non-EU countries, is even more striking for nurses and personal care assistants. For example, while 19% of nurses and 27% of personal care assistants in cities are migrants, their share drops to 7% and 9% in rural areas respectively. Moreover,

the share of non-EU migrants among nurses and personal assistants is significantly higher in cities than in rural areas.

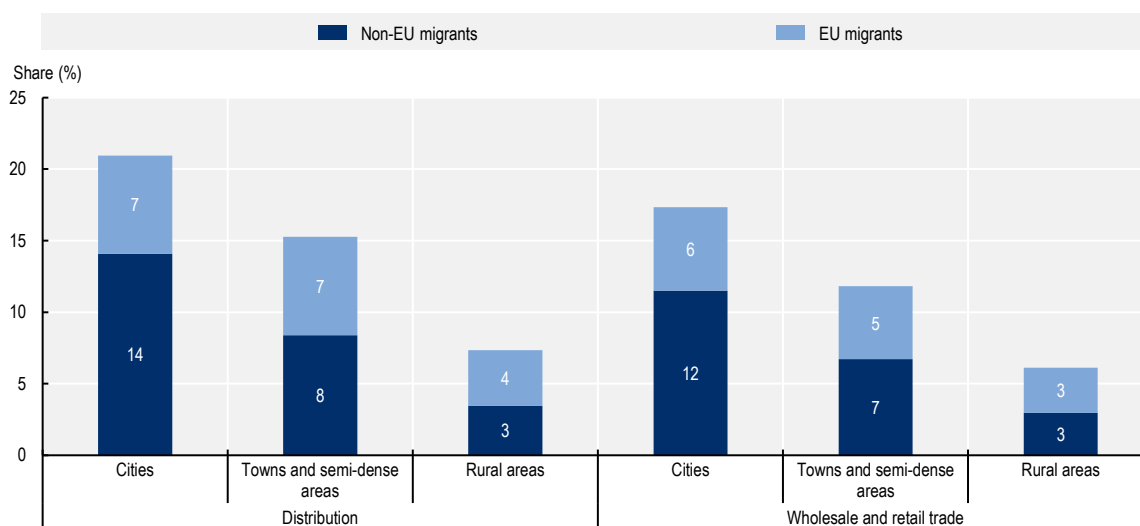
Distribution, transportation, wholesale and retail trade

The distribution of goods and transportation of people across cities, regions and countries are crucial components of the current global economy. Migrant workers play an important role in this sector,¹³ covering a wide range of services related to the mobility of people, including taxis, rail or air travel, transportation of goods through freight transport, and postal services and activities related to the storage of goods. Migrants constituted 21% of all workers in this sector in cities and 15% and 7% in towns and semi-dense areas and rural areas respectively. The share of non-EU migrants is particularly high in denser areas. For example, non-EU migrants represented 14% of all workers in the sector in cities (or two-thirds of all migrant workers) and their share falls to 3% in rural areas. While EU migrant workers constitute a higher share of workers in this sector in cities, the difference is much smaller.

Wholesale and retail trade are the final steps in the distribution of goods to consumers. It corresponds to a large set of activities involving the sale or resale of goods without any transformation and involves physical effort in assembling, sorting and grading goods in large lots, breaking bulk, repacking and redistributing in smaller lots. It involves merchants, distributors, exporters, importers, sales branches or sales offices. The fact that migrants work in many low-skill occupations means that they are even more concentrated in this sector, requiring physical effort. Migrants constituted 17% of the sector in cities, 12% in towns and semi-dense areas, and 6% in rural areas. Similar to other essential services, non-EU migrants show a strong gradient for denser areas. While non-EU migrants represent 12% of all workers in this sector in cities, their share drops to 3% in rural areas. Although EU migrants constitute a larger share of the sector in cities than in rural areas, the difference remains smaller.

Figure 3.11. Migrant key workers contribute to all sector essential under lockdowns, 2019

The share of migrants among key workers in the sectors distribution, wholesale and retail trade in European countries



Note: The number of migrant workers as a share of total workers in each industry by the degree of urbanisation and country of origin. Industries include occupations that are considered as essential as well as those that are not. The values are population-weighted averages of OECD26. Occupations are classified following the key worker definition as explained in Box 3.3.

Source: OECD calculations based on European Labour Force Survey (accessed in August 2020).

While migrants of all skills contribute to the continuity of essential services, especially in cities, they remain particularly exposed to the impact of the pandemic

Migrants were affected severely by the health and economic consequences of the COVID-19 crisis. Migrants tend to concentrate in urban areas or dense regions that have experienced stronger mortality increases during the first wave. Furthermore, as migrants tend to have lower average incomes and poorer living conditions, they were even more exposed to the health and economic consequences of the crisis compared to native-born residents living in the same region. Lockdowns and social distancing measures shifted work from offices to homes. Migrant workers, however, have a lower remote working potential which exposes them to job and income losses in the short run and increased exposure to the virus. Alongside the overall effects of COVID-19, this represents a double setback that could make migrants more vulnerable to the impact of the current health and economic crisis.

The unprecedented economic and social challenges emerging from the COVID-19 pandemic have cast a new light on essential services that are at the core of functioning local economies. Sectors such as food processing, delivery or healthcare are vital for the continuity of economic activity and are often taken for granted. The role of migrants who often work in low-paid but vital occupations has been crucial in all types of areas. The importance and working conditions of key workers and the contribution of migrants to essential services are topics that will extend beyond the current crisis and have already resulted in a new discourse on policies that ensure fair pay, facilitated access to jobs and better recognition of professional qualifications in those sectors.

Around 14% of key workers in European regions are foreign-born and this share tends to be even higher in specific countries, in cities and certain sectors. Migrants assume significant parts of low-skill and low-pay jobs in sectors such as distribution or food processing. In terms of occupations, more than a third of cleaners and helpers, more than a quarter of workers in the construction sector, and one in five workers in food processing are migrants. However, migrants also contribute to the labour supply in high-skill key occupations, as shown by the fact that they account for up to 23% of medical doctors.

Amid the labour shortages faced in many key occupations ranging from agricultural workers to medical doctors, migrants provided additional labour supply and ensured the provision of essential services and goods in European regions. The fight against COVID-19 has unveiled their relevance, which is otherwise often overlooked in a migration debate predominantly focused on the importance of attracting high-skilled migrants.

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Notes

¹ Beyond the count of fatalities directly reported due to the COVID-19 infection, the increase in the number of total deaths in a region relative to previous years provides a more precise indication of the current pandemic’s overall health impact. The excess mortality during the pandemic – the increase in deaths as a percentage of deaths in previous years – avoids problems of misreporting caused by low testing levels.

² Migrants, on average, are younger than the native-born population. This difference renders the migrant population less likely to develop serious health effects from COVID-19. In that sense, the increase in the mortality rates for migrants was slowed down by this demographic advantage. On the contrary, migrants, especially those in an irregular situation, may be less inclined to get tested or go to a hospital, which could increase their mortality rates (OECD, 2020_[26]).

³ Following the definition of Eurostat, a household is considered risking poverty if the equivalised disposable income is below 60% of the median of equivalised disposable income. Equivalised disposable income is calculated using total disposable household income multiplied by a within-household non-response inflation factor and divided by equivalised household size.

⁴ Migrants are more likely to be employed in occupations with lower remote working potential. At the same time, remote working potential differs substantially across occupations. For instance, it reaches as high as 65% for managers and professionals, while it is less than 10% for elementary occupations, skilled agricultural, forestry and fishery workers, and craft and related trades workers. Migrants constitute around 10-12% of workers in occupations with high remote working potential (above 40%). In contrast, they account for around twice as many workers (16-30%) in occupations with low remote working potential (below 20%).

⁵ For more information, see <https://ec.europa.eu/migrant-integration/news/italian-government-adopts-targeted-regularisation-for-migrant-workers>.

⁶ The EU labour force survey contains information on NUTS 1 or NUT 2 regions depending on the country. These regions correspond to TL2 regions, according to the OECD Territorial Grid (<http://www.oecd.org/cfe/regional-policy/territorial-grid.pdf>).

⁷ The analysis in this chapter relies on microdata collected prior to Brexit which groups UK nationals as part of the EU28. As such it is impossible to distinguish migrants originating from the UK from those that originate from other member countries. Due to this data limit, the analysis in this chapter also considers migrants of UK origin as part of the EU28.

⁸ In roughly half of the regions in the sample (101 out of 247 TL2 regions), the share of migrants among key workers is proportional to their share in the overall regional workforce (the ratio is between 0.9 and 1.1).

⁹ Migrants can be over-represented (or under-represented) in key occupations if their share in the overall workforce is very small (or large).

¹⁰ The share of key workers among the local workforce remains roughly constant across the degree of urbanisation and corresponds to around 30% of the total workforce. The higher share of migrants among key workers in cities compared to rural areas is thus not due to higher demand of such jobs in cities, but due to larger migrant population in cities. As can be seen in Annex Figure 3.A.4, the share of migrant key workers among the total regional workforce is 5% in cities, while this share is 4% and 2% in towns and semi-dense areas and in rural areas respectively.

¹¹ Agriculture is another essential sector that is crucial for the survival of the society and which employ foreign-born workers. Despite the importance of this sector, it is an activity that is primarily done in rural areas, making it of little interest from the perspective of a spatial analysis as in this chapter.

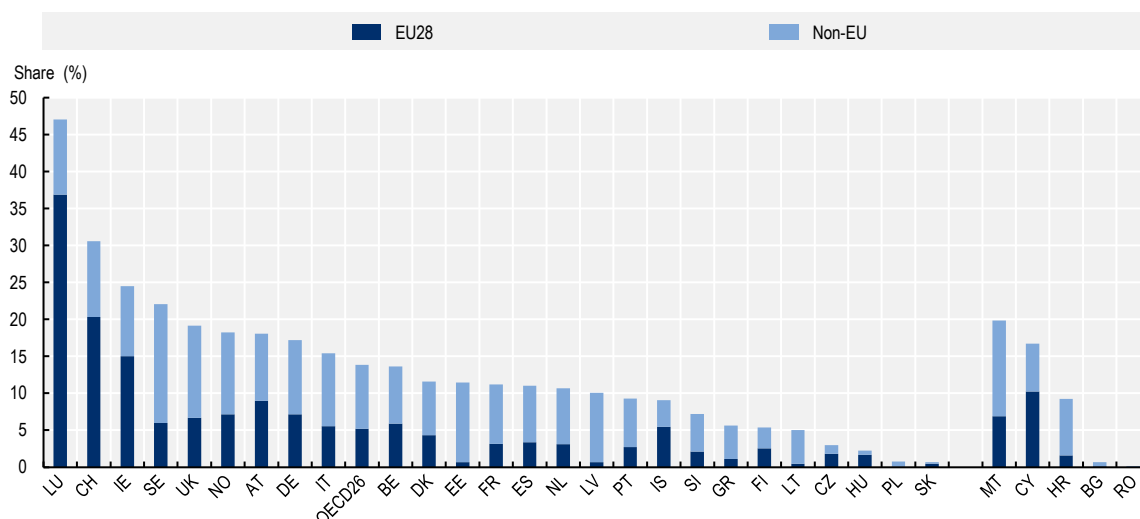
¹² The health services cover all of the activities that correspond to Statistical Classification of Economic Activities in the European Community (NACE) industry grouping Q (Nace Rev.2). The medical doctors correspond to ISCO-88 code of 221 while nurses and midwives correspond to 222 and 322. Personal care workers in health services correspond to ISCO-88 code 532 and include healthcare assistants that work at hospital or clinics as well as private homes.

¹³ The distribution sector (NACE code H) corresponds to the provision of passenger and freight transport by rail, pipeline, road, water or air, and all associated activities such as terminal and parking facilities, cargo handling, warehousing of goods, renting of transport equipment with driver or operator, as well as postal services.

Annex 3.A. Migrants across European countries

Annex Figure 3.A.1. Share of EU and non-EU migrants among all key workers, 2019

Percentage of migrant key worker in all key workers in European countries by origin

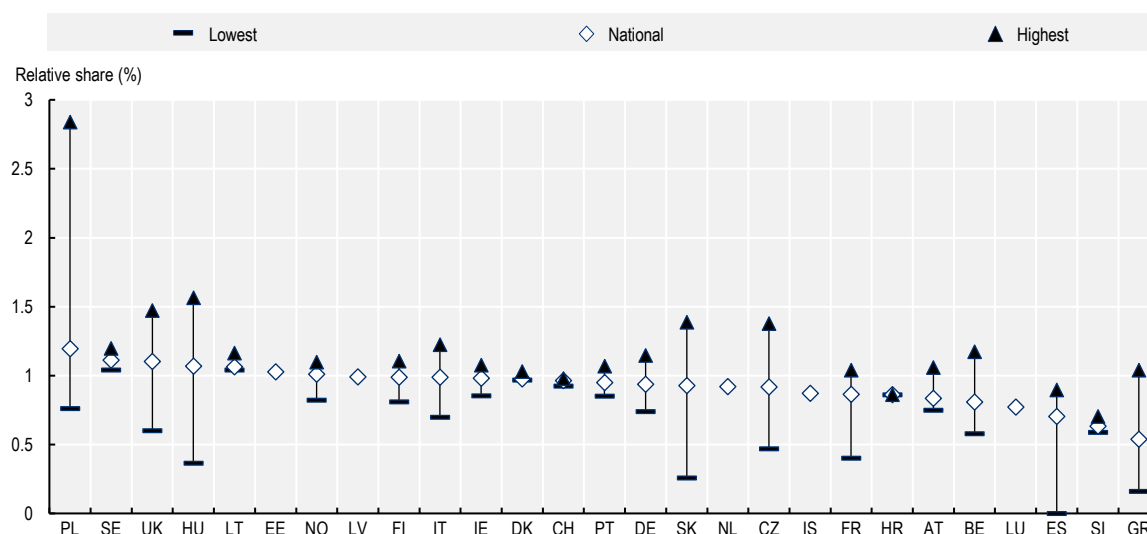


Note: The average number of migrant key workers as a share of total key worker occupations at the national level. Countries appear in descending order by the share of migrant key workers in the total key worker occupations at the national level. OECD26 corresponds to the population-weighted average of 26 European OECD member countries. Occupations are classified following the key worker definition, as explained in Box 3.3.

Source: OECD calculations based on the European Labour Force Survey (accessed in November 2020).

Annex Figure 3.A.2. Share of migrants in key occupations relative to their overall labour force presence

The relative share of migrant key workers relative to overall employment in 2019, TL2 regions

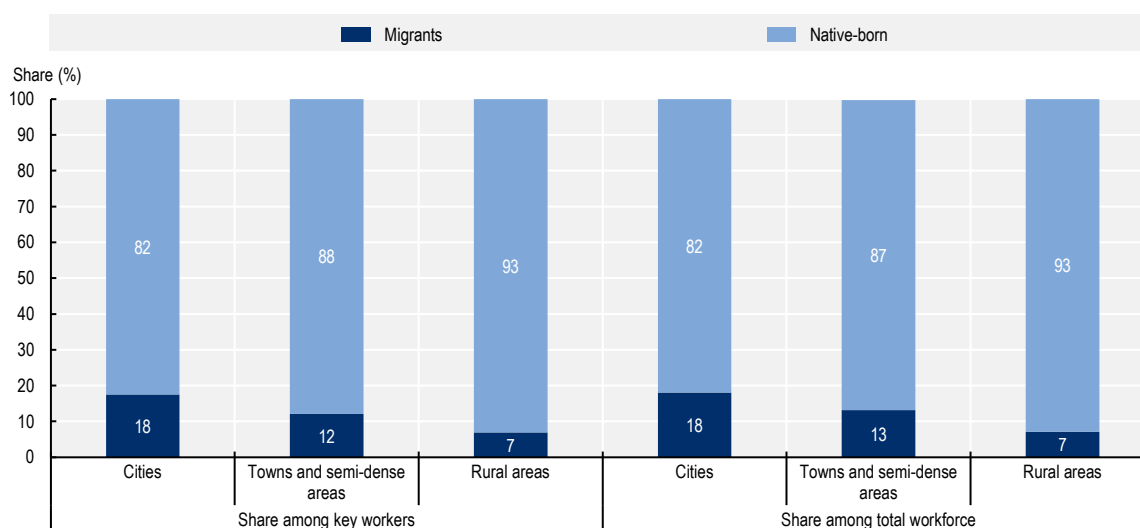


Note: The figure plots the share of migrant workers in key occupations relative to migrant share in overall employment in the region. Countries are ranked in descending order according to the national average. Occupations are classified following the key worker definition as explained in Box 3.3.

Source: OECD calculations based on European Labour Force Survey (accessed in November 2020).

Annex Figure 3.A.3. Workforce and key workers by the degree of urbanisation and country of birth, 2019

Share of native-born and migrant workers among key workers and the total workforce by the degree of urbanisation in European countries

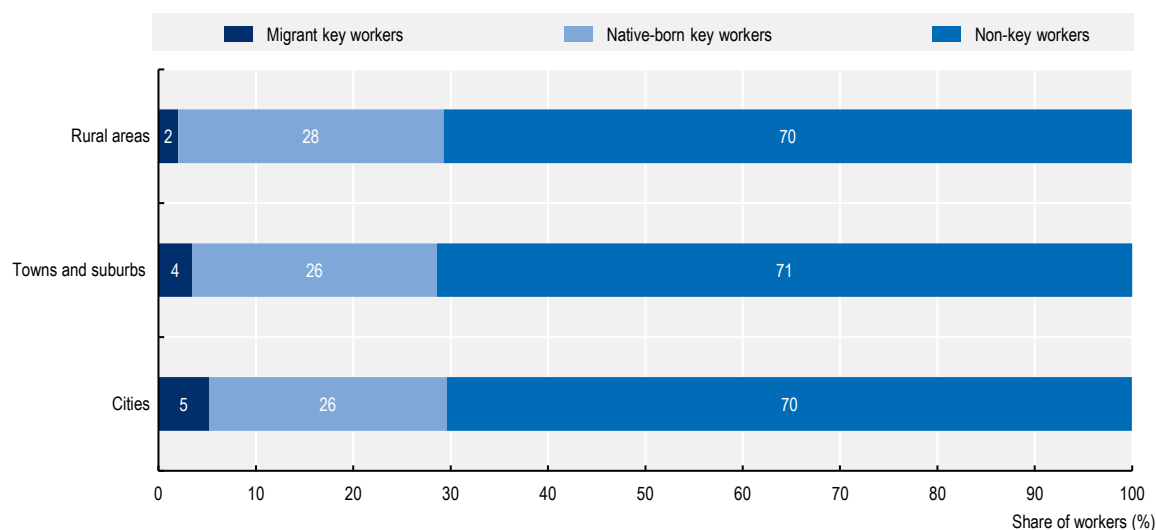


Note: The share of native-born and migrant workers among key workers (left side) and all workforce (right side) by the degree of urbanisation. Population weighted averages of OECD26 countries. Occupations are classified following the key worker definition, as explained in Box 3.3.

Source: OECD calculations based on the European Labour Force Survey (accessed in November 2020).

Annex Figure 3.A.4. Distribution of key workers by the degree of urbanisation and nationality, 2019

Number of workers as a share of total workers by the degree of urbanisation in European countries

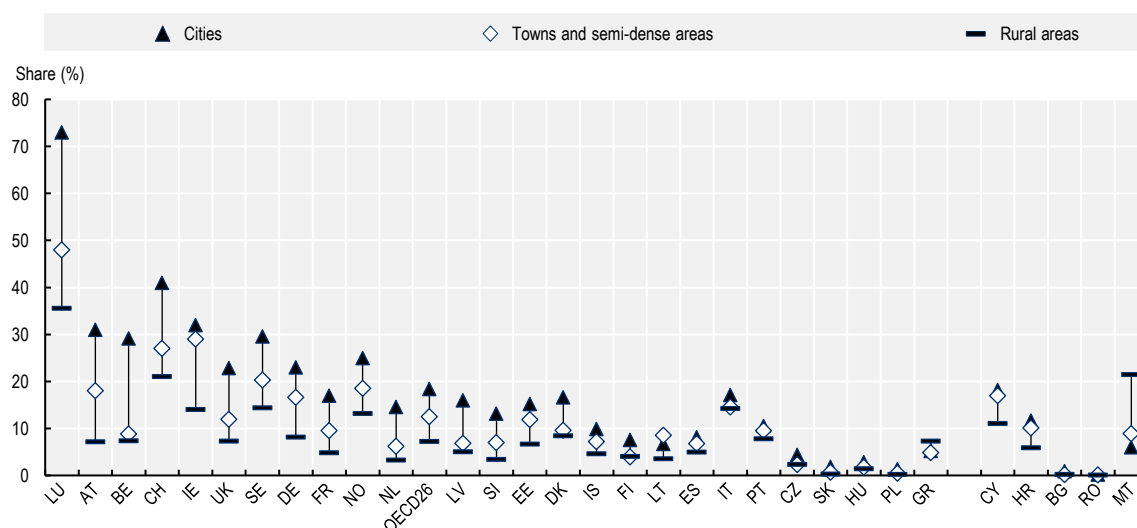


Note: The number of workers as a share of total workers by type of region for native-born and migrants. Population weighted averages of OECD26 countries. Occupations are classified following the key worker definition as explained in Box 3.3.

Source: OECD calculations based on European Labour Force Survey (accessed in November 2020).

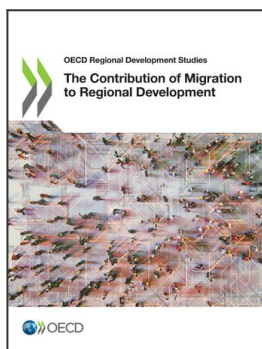
Annex Figure 3.A.5. Differences in migrant key workers across the degree of urbanisation, 2019

The number of migrant key workers as a share of total key workers in European countries



Note: The number of migrant key workers as a share of total key worker occupations by type of region. Countries appear in descending order of difference in the share of migrant key workers in total key worker occupations between cities and rural areas. OECD26 corresponds to the population-weighted average of 26 European OECD member countries. Occupations are classified following the key worker definition as explained in Box 3.3. In countries and regions with a very small migrant population, the sample sizes of migrant key workers might be small and thus estimates might not be fully accurate.

Source: OECD calculations based on the European Labour Force Survey (accessed in August 2020).



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