



4

**Specific challenges
faced by the eight
key occupational
groups**

Main findings



Food systems workers regularly face high levels of working poverty, endure OSH risks, and are poorly covered by labour and social protection, both in law and in practice.



Care work is characterized by gender segregation, low remuneration and pay gaps.



Most key retail workers in developing countries are self-employed, and they often lack social protection coverage and work long or irregular hours.



Security workers face elevated risks of violence and harassment, and more than a third of them work excessive hours.

The broad global assessment of the working conditions of key workers given in Chapter 3 demonstrated an undervaluation of these workers, both in terms of earnings and with respect to other working conditions. Key workers have lower rates of unionization overall, higher incidence of temporary and multi-party employment arrangements that at times aggravate deficits in other working conditions, long and irregular working hours and, on average, lower wages, even after accounting for differences in educational attainment and other observable characteristics between key and other employees. Key workers tend to also have more limited social protection coverage, especially in low-income countries. In addition, relatively few key employees receive training, a problem that is again more acute in low-income countries. Overall, the analysis revealed strong interconnections between working conditions, with deficiencies in one area reverberating across other areas. The problems are most acute among self-employed and informal workers who do not benefit from any form of labour and social protection in many parts of the world.

While these conclusions apply to key workers in general, who as a group share common features, including exposure to hazards such as those arising from their work during the COVID-19 pandemic, some of the insecurities are particularly worrisome for specific categories of key workers. This chapter thus analyses the working realities of key workers in the eight broadly defined key occupational groups: food systems, health, retail, security, manual, cleaning and sanitation, transport, and technicians and clerical support. Within these categories, a zoom on selected, more detailed key occupations is undertaken to illustrate the challenges that specific jobs faced during the pandemic. These case studies investigate the pandemic-related experiences of agricultural workers, community health workers, street vendors, warehouse workers, waste pickers, seafarers and postal workers. They help identify policy conclusions for improving general working conditions, but also with a view to making workers, and hence societies, more resilient during future crises.



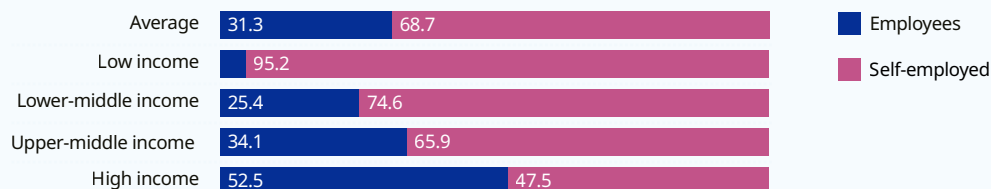
4.1. Food systems workers: Unprotected and low-paid

Food production, distribution and delivery are economic activities that must continue even during extraordinary times, such as wars, pandemics and natural disasters. Given the importance of agriculture and global food chains for the survival of societies, it is no surprise that key food systems workers make up a very large part of all key workers (35 per cent). This share ranges from 13.2 per cent in high-income countries to 60.4 per cent in low-income countries. In low-income countries, agriculture is a dominant sector and source of employment, and although subsistence farmers account for nearly 40 per cent of agricultural employment in these countries, the share excluding subsistence farmers is 44 per cent. On average, more than 68 per cent of key food systems workers are self-employed and the share increases to 95 per cent in low-income countries, while in high-income countries employment status is more evenly distributed (see figure 4.1).

Another distinguishing feature of key food systems workers is the high share of migrant workers (see figure 4.2). On average, 7.3 per cent of key food systems workers are born abroad but this proportion reaches 63 per cent in Jordan and more than 41 per cent in Brunei Darussalam. In countries where agriculture makes up a small share of the workforce, such as Switzerland and the United States, migrant workers constitute an important source of labour (36.3 per cent of food systems workers in the United States and 19 per cent in Switzerland). Yet despite the importance of foreign workers for agriculture in many countries, international migrant workers faced mobility restrictions as a result of the pandemic, in addition to a deterioration in their working conditions (see box 4.1).¹

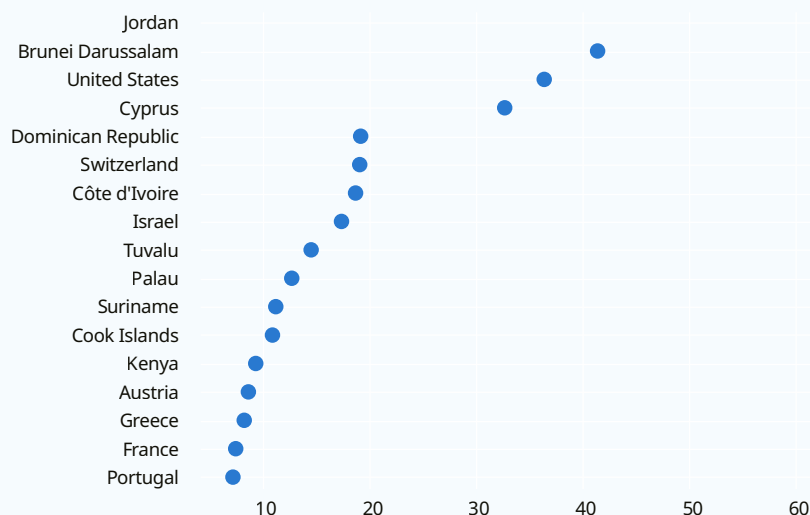
Key food systems workers make up 35 per cent of all key workers worldwide.

▶ **Figure 4.1. Employment status of key food systems workers, by country income group (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

▶ **Figure 4.2. Share of migrant key food systems workers (percentage)**



Note: Migration status is based on being born in a foreign country.

Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

Box 4.1. Key workers in agriculture: A migration lens

In many parts of the world, and especially in industrialized countries, the agriculture sector is dependent on migrant workers, both international and national.¹ Border closures, mobility restrictions and the suspension of economic activities as a result of the COVID-19 pandemic had significant consequences for primary production worldwide, but also for the movement of migrant agricultural workers, many of whom have unstable residency and citizenship status. In countries such as China and India, where internal migration is an important feature of the sector, local restrictions on mobility created disruptions that affected workers’ livelihoods. The recession induced by the COVID-19 pandemic in India forced the mass return of millions of circular migrants who, in the absence of social protection, were supported by rural households of women who acted as safety nets during the pandemic.² In the case of international agricultural migrants to OECD countries, concerns arose over potential labour shortages as a result of mobility restrictions that impeded the entrance of foreign agricultural workers, triggering exceptions to allow their entrance under calls for food security.

In Spain, border restrictions had serious implications for short-term contracted migrant workers from Morocco. The Moroccan government banned the return of the (mostly female) workers

Box 4.1. (cont'd)

who consequently remained “immobilized” in the Spanish fields with no means of subsistence. In addition, the pandemic meant an intensification of work in Spain as more hours were needed to cover larger harvests per person, resulting in overtime and reported abusive practices.³ The Spanish government encouraged the recruitment of young, third-country nationals in the agri-food sector through the Royal Law Decree No. 13/2020 of April 2020, which extended the validity of migrants’ residence permits due to expire during the lockdown period. In addition, young third-country nationals were allowed to work in agriculture and, through two-year extensions of residence and work permits, they could potentially access long-term residence.⁴

In Canada, the challenges faced by migrant workers in agriculture under temporary labour migration programmes were further strained by the pandemic.⁵ One of the characteristics of such programmes is their “embedded deportability”, meaning that migrant workers are subject to short-term contracts that determine their duration of stay in the host country, and limit the workers’ potential to raise concerns over working conditions out of fear of not being selected for future seasons. Yet, working conditions became more difficult due to the pandemic for many reasons. First, in seeking to mitigate the risks of contagion, the use of masks, disinfectants, gloves and physical distancing made work more difficult to perform on the one hand, while the enforcement of measures was not always guaranteed on the other hand. Second, fears of deportation for medical reasons and loss of income made workers avoid testing and monitoring. Third, confinement to employer-provided housing made the costs of isolation higher, with mental health implications. Finally, access to the community was limited, exacerbating feelings of isolation and exclusion (see discussion in section 2.2). The case of Canada also shows how gaps in labour protection emerge because of jurisdictional differences: the federal government has primacy over immigration and negotiations of Memoranda of Understanding and standard employment contracts with countries of origin, while provinces have the power to enact and enforce labour laws (except for workers falling under the federal jurisdiction). The provinces are also responsible for the regulation and the provision of health insurance, while housing and public health measures are within the jurisdictional domain of municipalities.⁶

Another important dimension revealed by the pandemic is the situation of housing for migrant agriculture workers, in particular those subject to temporary schemes who are dependent on their employers for accommodation. As was the case in many countries, the agriculture sector in Israel was designated as “essential” during the pandemic. Around 32,000 workers in the sector in Israel, mostly from Thailand, continued working during this period. Most employers house workers on farms but owing to land use regulation in the country, structures on farms are only built for agricultural use, such as sheds and haylofts. Thus, migrant workers usually reside in temporary structures not well suited for long-term housing, and especially problematic with regard to the fulfilment of quarantine measures. Upon border closures, the “shortage of workers” triggered the agriculture employer sector to demand special entry into the country for these workers; various problems emerged regarding where to house workers in order to comply with quarantine requirements. Hotels were expensive and no one wanted to face the costs. After various negotiations, Thailand was removed from the list of countries requiring quarantine. At some point, consideration was given to hosting workers in a remote detention facility, though the idea was dropped due to human rights concerns.⁷

The experience from various countries shows the persistent challenges that migrant workers face in securing labour protection under temporary schemes and divergent migration statuses, as well as the recurring insecurities and vulnerabilities that migrant farm workers endure.

¹ Bauer, Rodrigues and Leichsenring, 2018.

² Rapp, Ronchetti and Sicsic, 2021.

³ Banerjee et al., 2008.

⁴ Braedley et al., 2018.

⁵ ILO, 2020c.

⁶ Trapmann et al., 2022.

⁷ Buchan, Catton and Shaffer, 2022.

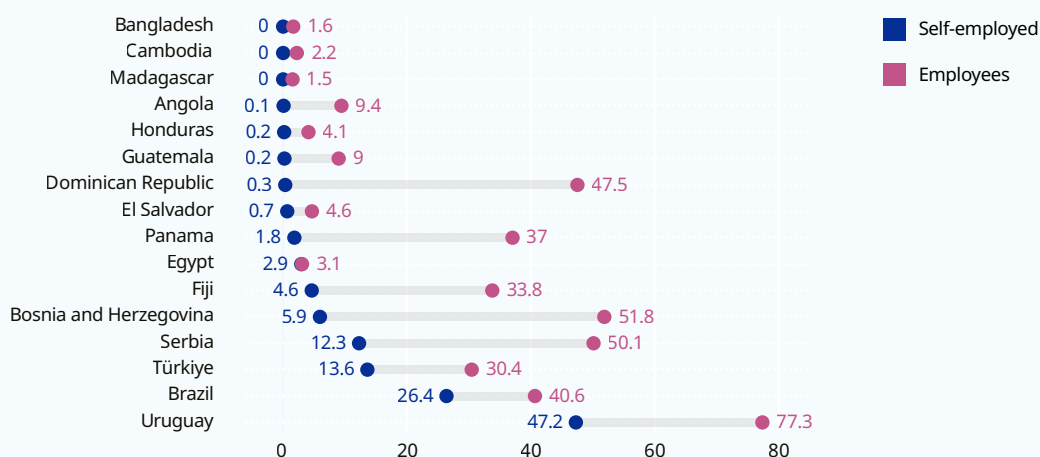
In most countries where data are available, both key employees and self-employed workers in food systems often lack any form of social protection.

Social protection coverage is extremely low among key food systems workers. As can be observed from figure 4.3, in most countries where data are available, both key employees and self-employed workers in food systems frequently lack any form of social protection. The low coverage rate for employees is distinct from other occupational groups, and makes evident the elevated use of informal, casual work in agriculture. For example, in El Salvador, nearly 45 per cent of all key employees have social protection whereas only 4.6 per cent of key food systems employees have such protection. While the coverage is better in a few high- and upper-middle-income countries like Bosnia and Herzegovina, Brazil, Panama, Serbia, Türkiye and Uruguay, key food systems wage workers are nonetheless protected at lower rates than all other key workers. For instance, in Uruguay, more than 90 per cent of key employees have access to either pension or paid sick leave. However, for key food systems employees, this share is 77 per cent.

There are multiple barriers to including food systems workers in social protection systems. To begin with, agricultural workers are sometimes legally excluded from social security systems. In Lebanon, for example, labour legislation excludes agricultural, forestry and fishery workers from social insurance schemes.² In other cases, administrative constraints and difficulties with registration and monitoring in rural areas prevent workers from accessing benefits.³ Additionally, informational and organizational obstacles are greater for food systems workers as they work and live in remote places and are less aware of policies or benefits. In the case of migrant workers under temporary labour migration schemes, even if some provisions to secure social security benefits are reflected in bilateral agreements (for example, Canada–Mexico under the Seasonal Agricultural Worker Program), in practice, the temporary nature of seasonal work prevents migrants from effectively accessing comprehensive social protection coverage.⁴ To overcome some of the impediments described, several countries, such as Algeria and Brazil, have developed special social security legislation for rural workers. In other cases, such as Ecuador, the main social security institution oversees the Peasants' Social Insurance Scheme, which is directed at rural farm workers and subsidized by the State.⁵

A high share of key employees working in food systems are low-paid, meaning that their wage is below two thirds of the median of the wages in the country. Across countries where data are available,

▶ **Figure 4.3. Share of key food systems workers with social security, selected countries (percentage)**



Note: Social protection is proxied by two types of entitlement: eligibility and access to either pensions or paid sick leave.

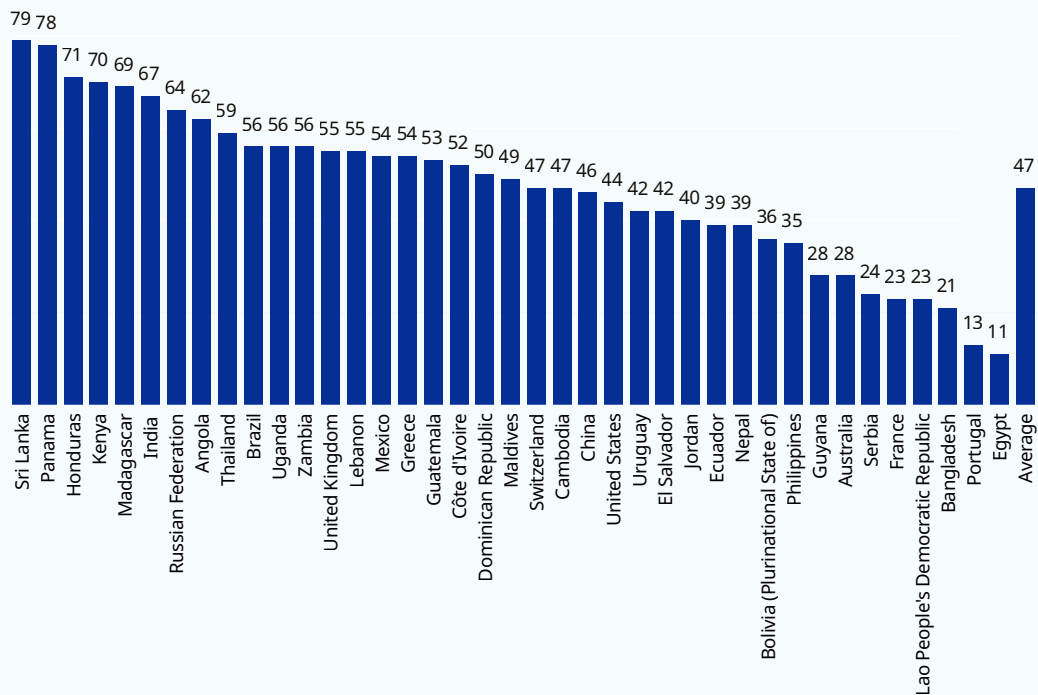
Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

on average half the key wage employees are paid below this threshold (figure 4.4). However, the share varies considerably across countries, reaching for instance 79 and 78 per cent in Sri Lanka and Panama, respectively, whereas it is only 13 and 11 per cent in Portugal and Egypt, respectively.

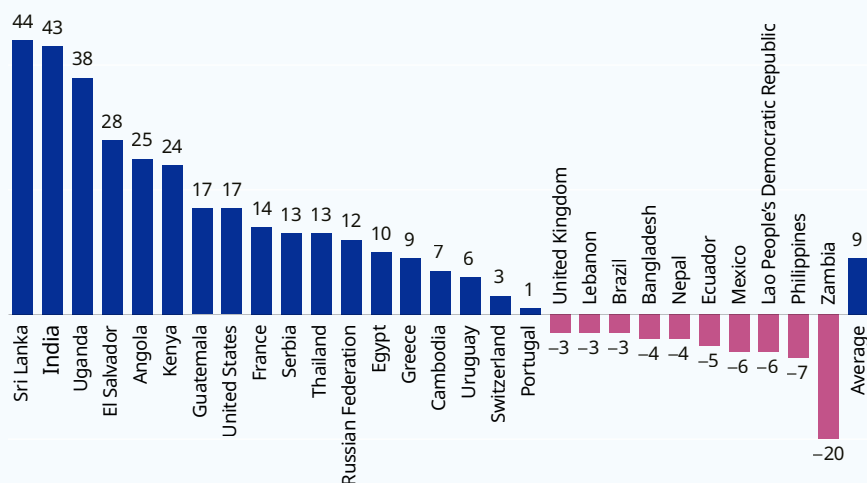
The low wages received by key food systems employees in many countries may partly reflect the lower productivity in the agricultural sector, especially in those areas where agriculture is a principal source of employment. A global study finds a substantial agricultural productivity gap in comparison to the non-agricultural sector, even after taking into account various measurement issues.⁶ More specifically, for low- and middle-income economies in Asia, recent evidence has also shown that non-agricultural and agricultural labour productivity do not grow at the same pace; the former has grown faster over the five studied years, causing the gap to increase significantly over time.⁷ In this context, key wage employees in the food systems industry are at risk of receiving lower wages than those paid to other employees. Policies that support productivity gains in agriculture can help mitigate this risk.

Yet the low wages of key food systems employees cannot only be attributed to productivity. Institutional deficits in wage-setting processes also help explain them. For instance, key food systems employees are largely excluded from the legal coverage of the minimum wage in many countries. A global review of minimum wage policies found that, in 2020, 29 countries had a statutory minimum wage that excluded agricultural or domestic workers, or both, from minimum wage regulations.⁸ Twelve countries excluded all or some agricultural workers, while possibly including domestic workers. When not excluded, these categories of wage earners may nonetheless be subject to specific minimum wage rates, which are often lower than those applied to other workers. Poor enforcement of minimum wage regulations, especially in remote rural areas, also helps to explain the low earnings of food systems workers. Inadequately regulated piece rates systems may also increase the risk of workers being paid unfair wages, sometimes below the existing minimum wage level.⁹ Overall, the

► **Figure 4.4. Share of low-paid workers among key food systems wage employees (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

► **Figure 4.5. Gender pay gap among key food systems wage employees, selected countries (percentage)**

Note: Positive values indicate that the pay gap favours men; negative values indicate the pay gap favours women.

Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

share of food systems employees paid below the minimum wage testifies to the low protection of minimum wages for this group of workers. Across countries where a minimum wage is implemented, on average 52 per cent of key food systems employees are paid below that wage.

Finally, the variation across countries is in part due to differences in employment status of agricultural workers. In some countries, large shares of agricultural workers are classified as self-employed or contributing family workers and are thus not included in the calculation of wages, which concerns only employees. In Egypt, for instance, 15 per cent of key food systems workers are self-employed and 30 per cent are contributing family workers. In Bangladesh, more than half of key food systems workers are self-employed.

In most cases, the lower wages earned by key food systems workers are received by women. The gender gap in pay among key food systems wage employees reaches 9 per cent on average across countries for which this indicator can be estimated (figure 4.5). However, key female food systems employees receive wages that are higher on average than those paid to their male counterparts in a few countries, such as Ecuador, Mexico, the Philippines or Zambia. Nonetheless, as highlighted earlier, an average gender pay gap in favour of women does not necessarily preclude the existence of pay discrepancies in favour of men when looking more specifically at the level of occupations or activities. For instance, a study carried out in 2018 specifically on the population of agricultural workers in four major crops (palay, corn, coconut and sugar cane) in the Philippines confirmed the presence of wage differences for workers performing the same agricultural activity, with a wage bias against women of 21 per cent.¹⁰

In addition, in many instances, women working in the food systems sector are unpaid. In India, unpaid work on family agricultural enterprises accounts for one third of women's informal employment, and in Egypt, it accounts for an astonishing 85 per cent.¹¹ Though not reflected in the figures presented here, women often contribute to agricultural work in addition to performing unpaid domestic tasks that ensure the productivity of the rest of the household.

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4.2. Health workers: Risking safety and health with limited collective representation

There were infectious diseases before COVID, we had that risk. Apart from that, we are going to the houses. No one knows what kind of psychology patients at home have. Some are living in desperate conditions, some are very irritable, some are very agitated... These risks are normal to our job.

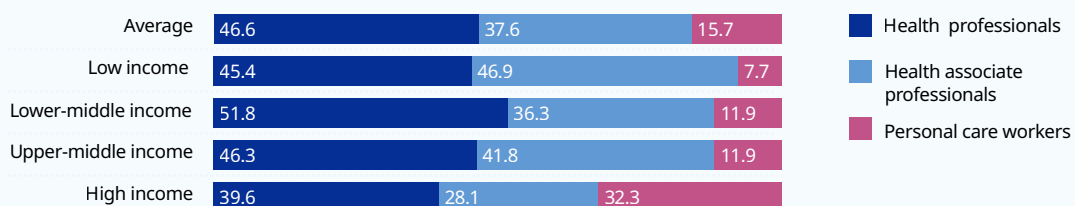
Elderly care unit worker, Türkiye¹²

In the first months of the pandemic, across the world, the public applauded health workers in recognition of their contribution to society's health and well-being, and in gratitude of the risks they were taking. But while this gesture was appreciated by health workers, it did not address the multitude of long-standing challenges that they face. Though ensuring healthy lives is one of the United Nations (UN) Sustainable Development Goals, and access to quality healthcare is a basic human right,¹³ healthcare is underfunded, especially in middle- and low-income countries, with significant consequences for the share of employment in the sector as well as working conditions. In high-income countries, one out of every five key workers is a health worker. However, in low-income countries, this ratio falls to less than one in 50.

In many parts of the world, there is rampant underinvestment in healthcare. For example, in 2017 public expenditure on health in India as a percentage of GDP was only 1 per cent, while in the same year the proportion was nearly 14 per cent in the United States and 9.6 per cent in Germany.¹⁴ Even when all expenditures (including the private sector and out-of-pocket) are considered, there is still a big gap between low- and high-income countries. While section 6.1 discusses in greater detail the underinvestment in healthcare, this section focuses on working conditions that are related to underinvestment.

In addition to differences in the budget allocated to healthcare, there is also variation with respect to the vocational composition of key health workers across countries. As can be seen in figure 4.6, on average more than 46 per cent of key health workers are health professionals, such as doctors, nurse and midwifery professionals, paramedical professionals and veterinarians, while almost 38 per cent are technicians and associates in the same occupations. The remaining 15.7 per cent are personal care workers (ISCO category 53), which includes healthcare assistants and home-based health workers, in addition to childcare

► **Figure 4.6. Composition of key health workers, by country income group (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

workers and teachers' aides. Personal care workers comprise a small proportion of key health workers in low-income countries (less than 8 per cent), a proportion which rises to 32.3 per cent in high-income economies, reflecting the growing demand for care work in these countries. In particular, due to social and demographic changes, the demand for the services of long-term care workers (LTCWs) – including formal and informal paid personal health carers, both in institutionalized settings and in private homes, who look after people with limited abilities to manage their daily life – is increasing in both middle- and high-income countries.¹⁵ For example, in Japan, for every 100 people aged over 65 at home in 2000 there was 1 LTCW, rising to 3.2 LTCWs in 2019.¹⁶ LTCWs (also commonly referred to as home health aides or social care workers) work in one of the most feminized occupations. In the OECD, for example, 90 per cent are women (see box 4.2 for information on the conditions of employment of personal care workers).¹⁷

As discussed in section 3.1, health workers are subject to physical and psychosocial risks due to their exposure to infectious materials, carrying heavy loads, work in strenuous positions, and emotional burdens. These risks are aggravated by long and irregular working hours as well as disproportionate incidences of violence and harassment on the job. Since health workers form the backbone of any health system, addressing these deficits is critical.

LTCWs, in particular, face significant occupational safety and health (OSH) challenges. For example, in European Union countries, 33 per cent report that they have been subject to adverse behaviour (such as verbal abuse, humiliating behaviour, physical violence and threats), whereas this number among all other occupations is 16 per cent.¹⁸ In Austria, 68 per cent of residential care workers and 41 per cent of home care workers report that they experience constant physical exhaustion.¹⁹ In Germany, formal LTCW workers are likely to report more negative health compared to workers in other sectors.²⁰ In Canada, LTCWs are subject to high levels of violence and racial discrimination by the elderly, in addition to often working long hours with a heavy workload.²¹ The situation is worse among Canadian LTCWs on temporary and multi-party contracts, who, in addition, report higher levels of stress.²² The initial phases of the pandemic intensified OSH risks among LTCWs with many experiencing a lack of access to testing and personal protective equipment (PPE).²³

As highlighted in section 2.2, during the pandemic there were multiple protests by healthcare workers across the world to raise concerns about lack of staff and insufficient measures to ensure the safety of workers and patients.²⁴ The high turnover rates of nurses – a concern for many countries' healthcare systems prior to the pandemic – intensified during the pandemic.²⁵ Evidence across countries, such as Egypt,

Peru and the Republic of Korea, suggest that nurses who had to work in more intense conditions during the pandemic were more likely to indicate an intention to quit their job.²⁶ Increases in nurse turnover are costly for healthcare systems and can jeopardize the quality of health services.²⁷ According to a 2020 estimate for the United States, a 1 per cent increase in nurse turnover costs an average hospital in the country approximately US\$328,400.²⁸ Thus, the well-being of nurses and other key health workers not only benefits the individual workers, but the healthcare system overall.

These issues have an important gender dimension. First, given the highly gendered nature of long-term care and nursing, the working conditions of key workers in these professions to a large extent reflect the situation faced by women workers generally around the world, which is characterized by gender segregation and segmentation, low remuneration and gender pay gaps.²⁹ Second, these issues have broader implications for society and economic efficiency, since the services of LTCWs are decisive in allowing the family members – particularly women – of older persons or persons with disabilities to participate in the labour market.³⁰

In many developing countries, the working conditions of key health workers are especially poor, with low pay, job insecurity and high workplace safety and health risks. In India, the situation of Accredited Social Health Activists (ASHAs) is of particular concern (see box 4.3). ASHAs are female community health workers appointed under the National Health Mission, a programme that

In many developing countries, the working conditions of key health workers are especially poor, with low pay, job insecurity and high workplace safety and health risks.

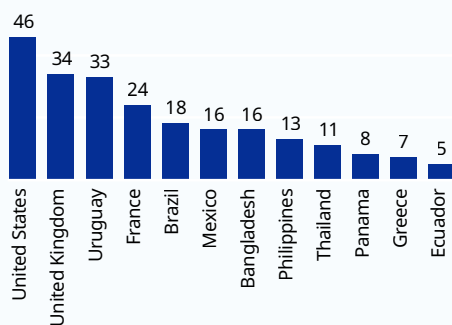
Box 4.2. Conditions of employment of key personal care workers

Personal care occupations, which include personal care in health services and childcare, are highly feminized, with women accounting for 76 per cent on average across countries, and an even higher proportion in high-income countries (85 per cent on average).

The working conditions of personal care workers are highly uneven across countries. In low- and middle-income countries, personal care workers have, on average, slightly better conditions in terms of contractual security and social protection coverage than other key workers. For example, while the share of personal care employees with a temporary contract is similar across countries to that observed for other key workers, 34 per cent of personal care employees are on temporary contracts in lower-middle-income countries, which is 16 percentage points less than the average for the whole population of key employees.¹ In addition, personal care employees appear to be better covered by social protection schemes than other key workers in developing countries. On average across low-, lower-middle- and upper-middle-income countries, 54 per cent of personal care employees have some form of social protection, whereas the social protection coverage rate for the population of key workers in these countries is 43 per cent.²

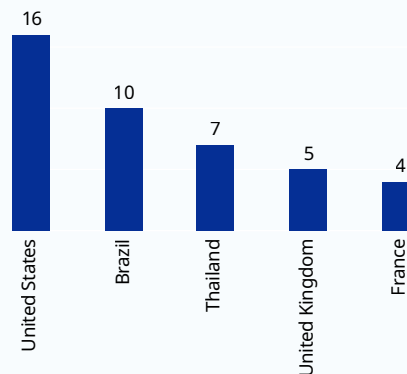
The situation is less positive in high-income countries, as exemplified by the data on relative earnings of personal care employees in 12 selected countries with available data (figure B4.2.1). Across high-income countries, the share of low-paid employees ranges from 7 per cent in Greece to 34 per cent in the United Kingdom and 46 per cent in the United States. Furthermore, though women hold most of the jobs in this occupation, female personal workers seem to fare worse than their male counterparts. In a sub-selection of countries for which this indicator can be estimated (figure B4.2.2), the gender pay gap ranges from 4 per cent (France) to 16 per cent (United States).

► **Figure B4.2.1. Share of low-paid personal care employees (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT). See Appendix for more details.

► **Figure B4.2.2. Gender pay gap, personal care employees (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT). See Appendix for more details.

¹ The share of personal care workers on temporary contracts is estimated for the same set of countries as in section 3.3, except the following: Egypt, El Salvador, Fiji, Gambia, Georgia, Ghana, Islamic Republic of Iran, Mozambique, Russian Federation, Samoa, Ukraine.

² The share of personal care workers covered by social protection is estimated for the same set of countries as in section 3.6, except the following: Egypt, El Salvador, Fiji, Gambia, Georgia, Ghana, Kenya, Lao People's Democratic Republic, Liberia, Madagascar, Maldives, Mozambique, Nepal, Samoa, Sierra Leone, Timor-Leste.



Box 4.3. ASHA workers in India

ASHAs are female community healthcare workers appointed and trained by the National Rural Health Mission of India.¹ Workers are selected among women in the community, aged 25–45, with completed secondary studies.² They carry out various tasks, including providing first-contact healthcare and information on diseases and infections, and bringing patients to hospitals if necessary.³ Even though ASHAs are appointed by the government they are not recognized as employees and are only paid “incentives” that are linked to achieving

certain targets. Following protests by these workers, several states introduced a fixed wage component and the central government also increased the incentives that it contributes.⁴ The average pay of ASHAs amounts to 10,000 Indian rupees a month (approximately US\$120),⁵ and ASHAs report that they sometimes pay the transportation costs of the patients they bring to hospitals from their own income,⁶ so even the little money they make sometimes goes to job-related costs. Furthermore, many ASHA workers report that they receive their payments with delays.⁷

ASHAs face other occupational challenges besides low and delayed payments. One of them is a heavy workload. For example, more than a third of community workers in rural areas are responsible for more than 2,000 people.⁸ Reaching this many people in rural areas is also logistically challenging, especially as many report a lack of buses and rickshaws in the areas in which they work.⁹ ASHAs also face violence and harassment, with many reporting verbal and physical assaults.¹⁰ The lack of cooperation from the communities they work in and the scarcity of resources, such as waiting areas or photocopy machines, are some of the other problems ASHA workers highlight.¹¹ Additionally, these workers do not have formal communication channels and access to supervisors to raise their concerns and seek solutions.¹² It has been argued that many of these problems are linked to the ambiguous status of ASHA workers, who are seen as voluntary workers or *bahus* (daughters-in-law) rather than employees.¹³

During the COVID-19 crisis, the workload of ASHAs increased considerably. ASHAs played a decisive role, taking care of contact tracing, testing and isolation, conducting door-to-door surveys, distributing medicines and sometimes bringing food to patients in isolation, answering distress calls and organizing hospital transfers. They were also in charge of keeping records of vaccination progress and motivating people to get vaccinated. In parallel with these demanding new tasks, ASHAs continued to undertake their usual antenatal and postnatal care duties, including monitoring infant health. While most ASHAs were provided with masks and sanitizers, these were often insufficient in terms of quantity and quality, with many reporting that they had to purchase PPE at their own expense.¹⁴

¹ Government of India, Ministry of Health and Family Welfare, n.d.

² Government of India, Ministry of Health and Family Welfare, n.d.

³ Government of India, National Health Mission, 2019.

⁴ Sinha, Gupta and Shriyan, 2021.

⁵ Siddharth, 2022.

⁶ Sarin et al., 2016.

⁷ Sinha, Gupta and Shriyan, 2015.

⁸ Gohel et al., 2015.

⁹ Brahmhatt and Sheth, 2017.

¹⁰ The Pioneer, 2021; Brahmhatt and Sheth, 2017, 188.

¹¹ Bhardwaj, 2017.

¹² Sinha, Gupta and Shriyan, 2021.

¹³ Pandey, 2021.

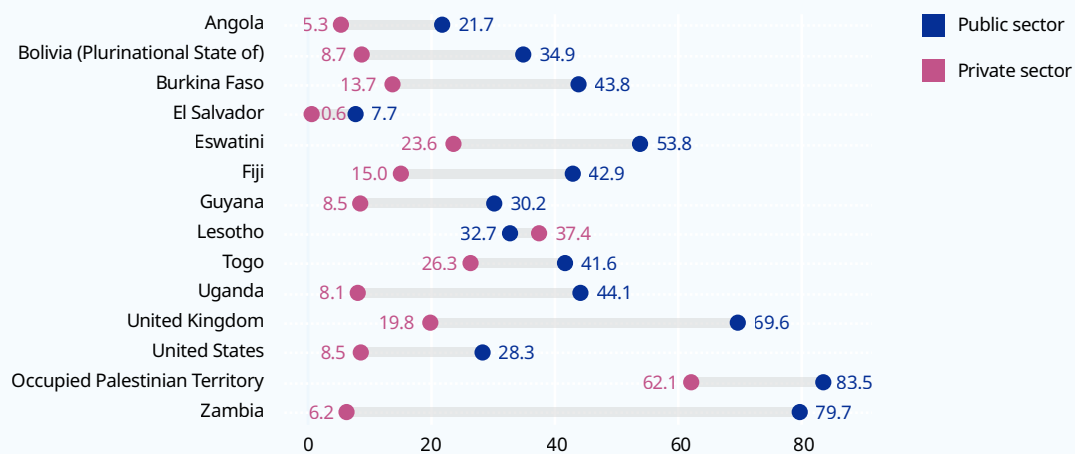
¹⁴ D. Singh, forthcoming.

was introduced in 2005. Over a million women across the country work as ASHAs, bridging the gap between the community and the health system. They are responsible for a range of public healthcare services addressing maternal and child health, and communicable and non-communicable diseases.³¹ The important role of ASHAs is documented by their positive impact on communities: in the localities where they work, immunization rates are higher and mortality rates have declined.³² During the COVID-19 pandemic, ASHA workers raised awareness about the virus and safety protocols, tracked positive cases and assisted with vaccinations in addition to their usual responsibilities of providing maternal care, immunization for children and community healthcare. In 2022, the WHO Director-General awarded ASHAs the title of Global Health Leaders.

In addition to OSH risks, a growing concern is the increase in the use of alternative contractual arrangements, temporary contracts, or agency workers, who often have different conditions of employment. In the United Kingdom in 2016, 17 per cent of all zero-hour contracts were found in the “care assistants and personal care workers” occupation, making it the largest occupation with this form of employment arrangement,³³ much of it delivered through private agencies.³⁴ In the OECD, approximately 20 per cent of LTCWs have temporary contracts, compared to 11 per cent of healthcare workers in hospitals. Close to 45 per cent of LTCWs work part-time, twice the average rate of other occupations.³⁵

Healthcare is a relatively unionized sector (as discussed in section 3.2), with 35 per cent of key health workers belonging to a trade union in those countries and territories for which data are available. Nonetheless, there are major differences between the private and public sectors (see figure 4.7), and among different occupations within healthcare. For example, in Angola, a little over 5 per cent of key health employees in the private sector have collective representation through unions, compared to almost 22 per cent of public sector workers. With the exception of Lesotho, key health employees in the private sector are much less unionized than their public sector counterparts. Given the high shares of private sector employment in many countries (ranging from 50 per cent in high-income countries to 38 per cent in lower-middle-income countries), low unionization affects the working conditions of a substantial number of key health workers. Moreover, in most countries, including EU countries like Germany and Portugal, workers who work for private care providers are often not unionized or covered by collective agreements.³⁶ In some countries, such as Poland, LTCWs can engage in collective bargaining only at the firm level,³⁷ and the coverage of collective agreements varies substantially across EU countries, with nearly 100 per cent of LTCWs in Denmark and Spain covered by such agreements as opposed to 5 per cent in Greece.³⁸ In many countries, such as Estonia and the United Kingdom, the coverage of collective agreements is lower for LTCWs than for hospital workers.³⁹

► **Figure 4.7. Share of unionized key health employees by public and private sector employment, selected countries and territories (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

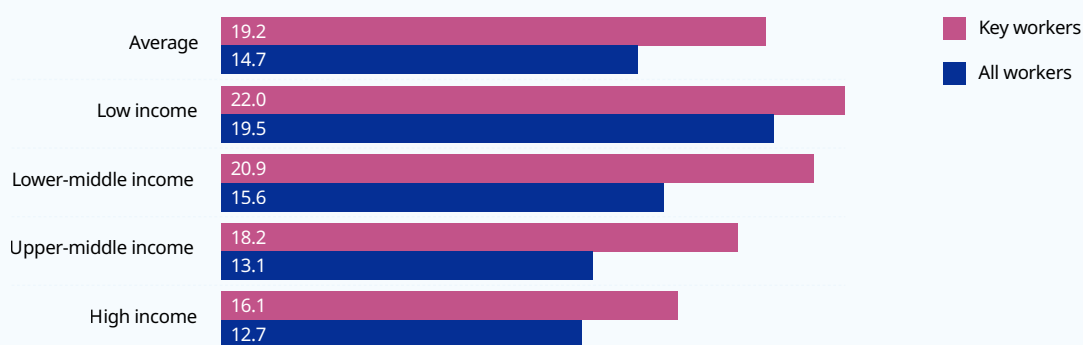
The above findings suggest that, on average, the bargaining mechanisms of key health workers in the private sector are relatively weak given the low rates of unionization, especially among LTCWs. A major reason is that many key health workers, especially in the private sector, are in non-standard employment arrangements, making it more difficult for them to bargain collectively.⁴⁰ In addition, some are employed as independent contractors, which, in most jurisdictions, means they are not entitled to the right to unionize and bargain collectively. Further reasons for the low rates of collective organization and lower bargaining power of LTCWs are the highly competitive nature of the long-term care market and its relatively low profit margins, as well as high fragmentation, and a lack of coordination and of a comprehensive regulatory framework.⁴¹

When workers are organized, however, working conditions clearly improve. Unionized nursing home workers in the United States demonstrated both higher wages and higher productivity, making it a win-win situation for employees and employers.⁴² Unionization also had a positive effect during the pandemic as the mortality rate among patients in unionized nursing homes was approximately 30 per cent lower than in non-unionized nursing homes.⁴³ This is likely because of the better opportunities for voice and participation, which are fundamental in enabling workers, employers and other stakeholders to adequately respond to crisis situations such as the COVID-19 outbreak.⁴⁴ As discussed in Chapter 2, unionized workers were able to convey their work problems through unions, who bargained with the management to address issues, especially as related to OSH, in a more timely and effective manner.

4.3. Key retail workers: Minimal protection and irregular schedules

Throughout the pandemic, key retail workers continued to work behind the counters at pharmacies, stocking shelves in grocery store aisles, operating the cash register at local convenience shops or chain stores, and selling food on the street. This chapter defines a key retail worker as a worker in sales and related services occupations across industries that continued to operate during the pandemic. Hence, both workers employed in retail establishments and own-account workers selling food on the street are included.⁴⁵ As can be seen in figure 4.8, almost 15 per cent of all workers globally are employed in

▶ **Figure 4.8. Share of retail workers among all workers and key workers, by country income group (percentage)**

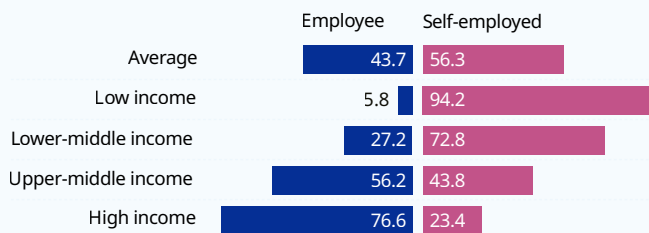


Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

retail, with an even higher share in lower-income countries. Furthermore, nearly one out of every five key workers is in retail, performing functions necessary for society's daily existence, which makes retail the second-largest key occupational group in all income categories.

Even though the overall proportion of key retail workers is similar across countries, significant differences exist with regard to the employment status of individuals in these jobs. Figure 4.9 shows the share of employees and self-employed workers among key retail workers. As can be seen, in low-income countries, they are almost exclusively self-employed. On average, 94 per cent of all key retail workers are self-employed

► **Figure 4.9. Employment status of retail workers, by country income group (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

Box 4.4. Street vending

Economic downturns are difficult for street vendors as such downturns typically raise the cost of inputs, decrease consumer spending and push newly unemployed people to take up street vending, intensifying competition among sellers.¹ During the COVID-19 pandemic, in addition to these risks, government-mandated restrictions further worsened the conditions for street vendors. As a result of lockdowns, the demand for their goods fell precipitously and, at the same time, they suffered from higher transport costs as well as shortages in raw materials.² Inevitably, their already low earnings further deteriorated.

Street vendors' working conditions are characterized by low incomes, low levels of social protection, long working hours, and OSH risks. For example, two out of three street food vendors in Dhaka, Bangladesh, are estimated to live below the poverty line.³ Being largely informal, most street vendors cannot access formal financial markets and rely on informal loans with high interest rates. It is thus not surprising that, in Colombia, street vendors who earn above-average incomes are not able to improve their living conditions due to high levels of indebtedness.⁴ Additional concerns for street vendors are their exposure to outdoor pollution, extreme weather events, physical risks from lifting and transporting heavy merchandise, as well as violence.⁵ Street vendors also routinely lack access to hygiene facilities.

Abuse by authorities is another common problem. Evidence from several cities, including Accra (Ghana), Lima (Peru), Mumbai (India) and Nakuru (Kenya), shows that many workers are compelled to pay informal fees to local officers or police in order to continue operating.⁶ During COVID-19 lockdowns, street vendors were sometimes subject to harassment by the police, despite being classified as key workers.⁷

¹ Roever, 2014; WIEGO, n.d.(a).

² Singh, forthcoming.

³ Etzold, 2014.

⁴ Martinez and Rivera-Acevedo, 2018.

⁵ Ko Ko et al., 2020.

⁶ Rosales, 2020.

⁷ Roever and Skinner, 2016; Saha, 2011.

⁸ Dev and Rahul, 2022.

▶ **Figure 4.10. Percentage of key retail workers with social protection coverage, low- and middle-income country income groups**



Note: Social protection is proxied by two types of entitlement: eligibility and access to either pensions or paid sick leave. Data are limited to low- and middle-income countries.

Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

in low-income countries, ranging from 89 per cent in Uganda to 99 per cent in Sierra Leone. In contrast, wage employees in various retail establishments make up more than 76 per cent of all key retail workers in high-income countries. In the United States, for example, 95 per cent of key retail workers are wage employees.

The importance of self-employment among key retail workers in developing countries is a reflection of the lack of formal employment opportunities and the ease of entry into the occupation. In Angola, more than 32 per cent of key retail workers are street vendors selling food and various other items, and they are exclusively self-employed. Survey evidence indicates that street vendors are often primary household income providers, with work as their only means of survival.⁴⁶ This type of economic activity is vital for maintaining livelihoods in developing countries, especially among rural immigrants.⁴⁷ Informal street vending has also been an important buffer during times of economic crisis – a pattern that re-emerged during the COVID-19 pandemic, as food vendors across countries experienced greater competition from new entrants as many people turned to street vending as a means of survival (see box 4.4).

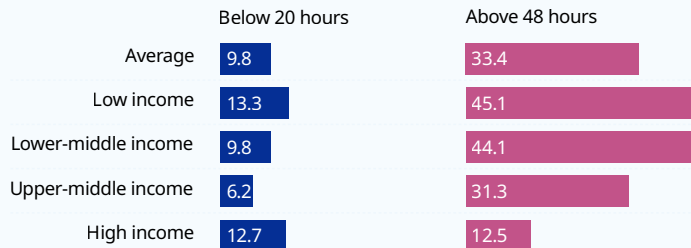
Among the working conditions analysed in Chapter 3, key retail workers suffer the most from lack of social protection and from long and unpredictable working hours. Figure 4.10 displays the share of key retail workers with social security entitlements like pensions and paid sick leave. On average, just 22 per cent of key retail workers enjoy such coverage. While only 37 per cent of the key retail workforce benefits from social protection in upper-middle-income countries, in low-income countries the share is

extremely low, at just 5 per cent. This is due to the high levels of self-employment, as discussed above, which means that in most cases these workers would have to voluntarily contribute to the system, which is often an unrealistic burden given their generally low-income levels. Countries have been slow to develop more comprehensive systems that can include self-employed workers. Even in countries such as Brazil and Türkiye, where social protection systems have made efforts to include self-employed workers, 41 per cent and 33 per cent of key retail workers, respectively, still do not have social protection coverage.

Unfortunately, the lack of social protection among key retail workers is not unique to developing countries. In the United States, in 2020, nearly 50 per cent of service workers, including in retail, did not have access to paid sick leave,⁴⁸ less than half of low-wage service workers had employer-based health insurance and 21 per cent had no health insurance.⁴⁹ These numbers indicate that many key retail workers cannot afford to take sick leave, and thus continue to work when they are ill or injured, with consequences for their own recovery and, during the COVID-19 pandemic, for spreading the virus.

Most key retail workers around the globe have very long working weeks, with an average of one third working more than 48 hours a week.

► **Figure 4.11. Percentage of key retail workers with short or long hours, by country income group**



Note: Short working hours are defined as less than 20 hours per week, while more than 48 hours per week is considered excessive.

Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

Long and unpredictable work schedules are another major source of insecurity for key retail workers. Except in high-income countries, key retail workers around the globe have very long working weeks, with an average of one third working more than 48 hours a week, whereas the share is nearly 45 per cent in lower-middle- and low-income countries (see figure 4.11). Street vendors in developing countries often work 10–12 hours a day, as their earnings depend on the number of hours they work. Many do not take days off and rely on family members to contribute when they are obliged to be absent.⁵⁰ Long hours are not, however, limited to self-employed workers, with many employees in developing countries also working long hours. In Bangladesh, for example, 81 per cent of wage workers and almost 76 per cent of self-employed workers in key retail occupations have working weeks longer than 48 hours.

In contrast to long working hours for key retail workers in low-income countries, in some high-income countries, irregular scheduling is the main concern of retail workers. On average, almost 10 per cent of key retail workers work short hours, defined as fewer than 20 hours per week, with nearly 13 per cent reporting short hours in high-income countries. While these short hours are sometimes voluntary and can accommodate students or persons with care responsibilities, the practice is, in general, a reflection of the industry trend towards shift work and de-standardization of working times.⁵¹ In the United States, just-in-time scheduling is a common practice, with most of the flexibility in working schedules borne by employees. Total labour hours are closely monitored by the retailers who try to match labour “on the floor” with real-time customer flow and shelf-stocking requirements.⁵² Similarly, irregular or non-standard schedules are common practices in service work in the United States, pushing key retail workers to be present in the evenings and at weekends.⁵³ For instance, a survey among service workers in New Jersey estimates that 28 per cent of them work in varying shifts, 21 per cent in rotating shifts, and 18 per cent in night and evening shifts.⁵⁴ The expansion of evening and weekend opening hours has resulted in permanent changes to shopping patterns and consumer attitudes, and increased expectations that retail workers should be at work at all times.⁵⁵ This flexible way of assigning shifts makes it hard for workers to balance family demands as well as education or training.

In Europe, just-in-time shift schedules are not as common due to fewer financial incentives surrounding the use of part-time work given the principle of equality of treatment embedded into national legislation, as well as stricter regulation of shift patterns and contracts. Nevertheless, irregular work schedules are still prevalent in some European countries. According to the European Working Conditions Survey, more than 15 per cent of key retail workers state that their work schedules change either on the same day or the day before the work is undertaken. Nevertheless, there is significant variation across countries. While in Ireland, more than 28 per cent of respondents report that their work schedules are changeable at the last moment (on the same day or the day before), the proportion is less than 2 per cent in Italy.

4.4. Key security workers: Long and risky hours

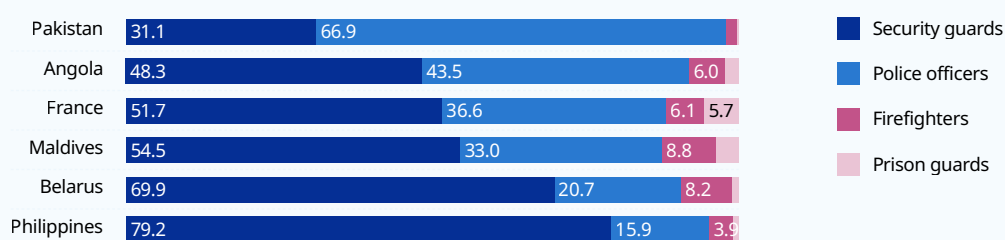
Security workers help to maintain order and public safety. During the COVID-19 pandemic, they assumed another important role: enforcing pandemic-related regulations. Globally, security workers constitute almost 6.5 per cent of all key workers, though the proportion is slightly higher in upper middle-income countries (8.8 per cent) and high-income countries (7.7 per cent). Among key security workers, police officers account for the greatest share of key security workers, followed by private security guards. The share of security guards ranges from 31.1 per cent in Pakistan to 79.2 per cent in the Philippines. Conversely, the share of police officers ranges from 15.9 per cent in the Philippines to 66.9 per cent in Pakistan (figure 4.12).

There are important distinctions between the working conditions of security guards, police officers and firefighters. A main distinguishing feature is the higher rate of unionization among police officers,⁵⁶ whereas security guards – who are often employed privately through subcontractors and dispersed throughout establishments – are generally not unionized. Police officers and firefighters are almost exclusively employed in the public sector and typically have favourable job security. Police unions tend to have high membership rates and are largely successful in negotiating improved training and equipment.⁵⁷ For example, during the COVID-19 pandemic, police unions successfully pushed for enhanced OSH protections and access to PPE.⁵⁸

Regarding the working conditions of security guards, in contrast, subcontracting is common, and there is high flexibility with respect to the number of employees, working time and the activities they perform.⁵⁹ A study in South Africa finds low unionization rates in addition to a high prevalence of temporary contracts, low wages, long hours of work, difficulties of reconciling work and personal life, and limited access to social protection. Moreover, South African security guards reported a lack of recognition for their work and a feeling of being stigmatized.⁶⁰ A study in China similarly mentions the stigma associated with the work of security guards, and describes how the occupation disproportionately employs male rural-to-urban migrants and former soldiers, who tend to work for low pay.⁶¹ In Zimbabwe, private security workers face long working hours, poor remuneration, under- and non-payment, illegal dismissals, unhealthy working conditions and sexual harassment. There has also been a growth in fly-by-night security operators acting as labour brokers, which provide insufficient training and may not be fully compliant in respecting workers' rights and entitlements.⁶²

Even though public and private security workers have different collective representation, they do share some common insecurities, especially the possibility of high-risk and stressful situations while performing their jobs. As can be seen in figure 4.13, many key security workers experience physical violence during

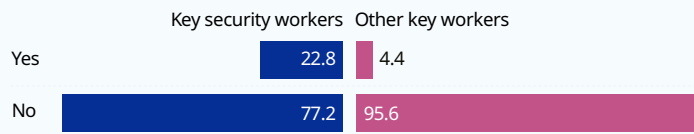
▶ **Figure 4.12. Distribution of key security workers across more detailed occupations, selected countries with available data (percentage)**



Note: The graph shows countries with information on occupations at the four-digit level, excluding unclassified cases.

Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

► **Figure 4.13. Share of workers who experienced physical violence during the course of their work in the past year, key security workers versus other key workers in 2015 (percentage)**



Source: Analysis based on the European Working Conditions Survey (2015). See Appendix for more details.

► **Figure 4.14. Share of key security workers with excessive hours, by country income group (percentage)**



Note: Excessive hours are defined as more than 48 hours per week.

Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

the course of their work. For example, compared with fewer than 5 per cent of other key workers who were subject to physical violence while doing their jobs in the preceding year, almost 23 per cent of key security workers suffered from such violence in 2015, according to data from the European Working Conditions Survey.

Besides these OSH issues, which are common in normal times, key security workers faced even greater risks during the COVID-19 pandemic. In many countries, private security guards were used to quarantine refugees and overseas travellers in secure facilities and to maintain order in COVID-19 testing centres.⁶³ Security personnel working at hospitals had to interact with patients infected with the virus. Key security workers stationed at residential and commercial buildings were also directly in contact with many people and were given the responsibility of ensuring that government-mandated social distancing protocols were adhered to as much as possible. This sometimes led to tensions, and security guards became the target of attacks over mask and other protocols related to COVID-19.⁶⁴

In addition to exposure to the above-mentioned risks, the other job-related stressors for security workers are long hours, asocial hours, a climate of fear, tension and constant pressure, abusive behaviour by superiors and work overload.⁶⁵ Besides these concerns, private security workers sometimes have to contend with an inadequate supply of protective equipment and uniforms, and non-payment of wages.⁶⁶ In Kenya, for example, security officers in Nairobi and Kiambu reported not having sufficient warm clothing at night and having to use unheated guard houses. Security officers in the country report that the work they do is highly risky, and they are not sufficiently equipped to feel safe at their jobs.⁶⁷

As a result of the above-mentioned stressors, security workers are at risk of developing physical health issues. Various studies indicate that there is a relationship between the stressors experienced by the security workers and cardiovascular diseases,⁶⁸ high blood pressure, cholesterol and temporary work incapacity.⁶⁹ Key security workers are also more prone to having difficulties with mental well-being. Mental health problems, such as depression, post-traumatic stress disorder, generalized anxiety disorder, suicidal ideation, alcohol dependence and hazardous drinking, are more widespread among security personnel.⁷⁰

Key security workers often work excessive hours (see figure 4.14), with, on average, 34.5 per cent working more than 48 hours per week. In low-income countries, the share is as high as 57.4 per cent. In

Bangladesh and Uganda, more than 73 per cent of key security work excessive hours. Even in high-income countries, where regulation is stricter and enforcement is more effective, more than 15 per cent of key security workers work longer than 48 hours. During the pandemic, working hours were further extended as a result of staff shortages and increased demand to ensure compliance with pandemic protocols.

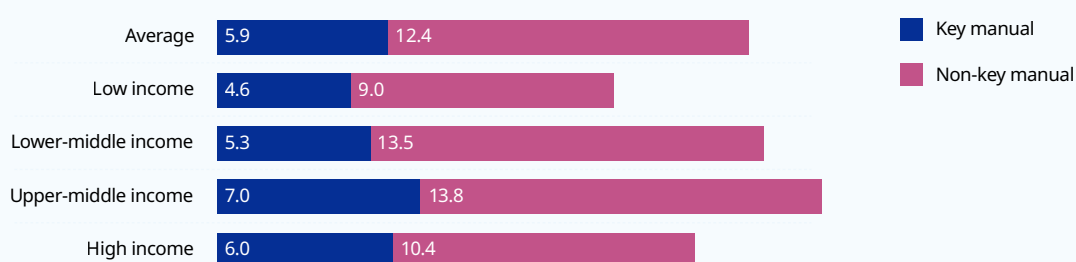
4.5. Manual workers: Non-standard forms of employment and a lack of training

Manual workers account for an estimated 18.3 per cent of all employment globally (figure 4.15). The bulk of manual workers are employed in the manufacturing and construction sectors. Within manufacturing, manual workers produce clothes and other textiles or handicrafts, process food, or work as manufacturing labourers. In construction, manual workers are employed as mining and construction labourers, in residential construction, or as house painters and electrical equipment installers and repairers. A third, and growing, sector is warehousing.

During the COVID-19 pandemic, containment measures significantly disrupted production in the industries that employ manual workers and negatively affected supply chains. This was especially the case in the earlier phases of the pandemic and led to a notable reduction in the hours worked by manual workers and outright job losses for this group. At the same time, as is the case for all other key workers, those manual workers who continued working were exposed to disproportionate health risks by interacting with others in their workplaces.⁷¹

Because of the inability of manual workers to telework, the criteria determining whether these were key or non-key workers depended on the goods they produced. Some industries were considered essential for the functioning of societies during the pandemic, such as the “manufacture of food products” or the “manufacture of pharmaceuticals, medicinal chemical and botanical products”. These account for around one third of all manual workers globally (figure 4.15). In contrast, the other two thirds were, for the most part, not classified as producing essential goods and therefore did not fall under the key worker category. Examples include manual workers in “manufacture of textiles” or “manufacture of tobacco products”.⁷² Given the industries that employ key versus non-key manual workers, key manual workers do not necessarily have less favourable labour market outcomes and working conditions than non-key manual workers.

▶ **Figure 4.15. Share of key manual workers and non-key manual workers out of total employment, by country income group (percentages)**



Source: Analysis based on ILO Harmonized Microdata (ILOSTAT) and supplementary surveys. See Appendix for more details.

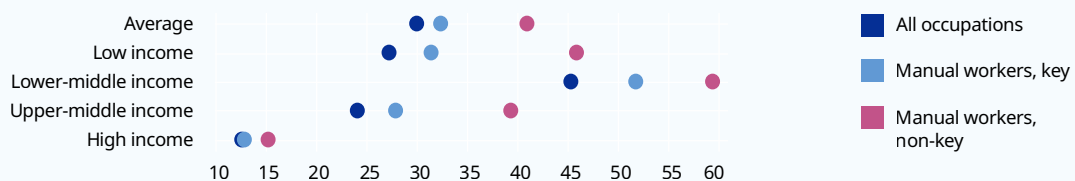
Low-income countries have the lowest share of manual workers (13.6 per cent in total), compared with 20.8 per cent in upper-middle-income countries and 18.8 per cent in lower-middle-income countries. The low share in low-income countries reflects their underdeveloped manufacturing sector, and results in workers shifting from agricultural employment into urban services that have a limited potential for stimulating sustainable economic growth.⁷³ Evidence from Ethiopia suggests that when there is a notable shift towards manufacturing, these transitions are often into small and informal firms, and imply a lack of labour and social protection. In contrast, larger and more productive firms in the formal sector rely more heavily on capital and labour-saving technologies that were initially developed in higher-income countries, which restricts the options of low-skilled Ethiopian workers to access better employment opportunities.⁷⁴

At the other end of the spectrum, manual work in high-income countries has undergone systematic changes. Evidence from the United States, for example, shows that manufacturing employment has declined due to import competition.⁷⁵ Moreover, technological change has shifted the emphasis away from manual tasks that can be routinized and thus performed by machines, towards non-routine manual as well as cognitive and interactive activities, which require human labour. This transformation has negatively affected some traditionally middle-skilled jobs in production, as these disproportionately rely on routine manual activities.⁷⁶ However, despite these changes, manual work is still important in high-income countries, where it accounts for 16.4 per cent of total employment (figure 4.15).

The contractual status of manual workers has important implications for their working conditions, including their access to training. Manual workers are more likely than workers in other occupations to have temporary contracts. This is true for all manual workers, although non-key manual workers, especially in construction, tend to have higher rates of temporary contracts than key manual workers (figure 4.16). In Colombia, manufacturing workers experienced an increase in temporary contracts from 20 per cent in 2000 to 35 per cent in 2014, with temporary contracts especially widespread in apparel, leather and textiles production.⁷⁷

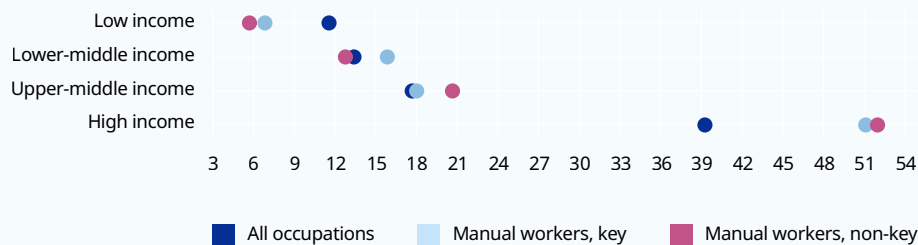
Another issue for manual workers is access to training. The question of how to best improve the skills of manual workers is important, given that some manual workers work in low-productivity employment and that technological change transforms the nature of certain areas of manual work. TVET and other forms of work-based learning are important for improving the skills of manual workers.⁷⁸ In high-income countries, more than half of all manual workers have attended TVET at some point in their lives. This is more than 10 percentage points above the TVET share of all occupations combined and there is little difference by key worker status (figure 4.17). Nevertheless, within high-income countries, there are other types of manual work, such as warehouse work, for which few formal skills are required. Warehouse workers prepare and gather delivery orders, load and unload the vehicles transporting such orders, and electronically collect and organize information on warehouse inventory. Even in a country like Switzerland, where dual apprenticeships have a long tradition, warehouse workers need to meet few formal requirements, except for specialized driving licences. They are expected to perform physically demanding tasks, communicate

► **Figure 4.16. Share of employees with temporary contracts for all occupations versus manual workers, by country income group (percentage)**



Source: Analysis based on ILO Harmonized Microdata (ILOSTAT). See Appendix for more details.

▶ **Figure 4.17. Share of workers who had attended technical and vocational education and training (TVET) at some point in their working lives, all occupations versus manual workers, by country income group (percentage)**



Source: Analysis based on ILO Harmonized Microdata (ILOSTAT) and supplementary surveys. See Appendix for more details.

well and possess basic IT skills.⁷⁹ As a result, warehouse workers are easily replaceable and suffer from poor working conditions (see box 4.5).

In upper-middle-income countries, 20.7 per cent of key manual workers have attended TVET, compared with 12.8 per cent in lower-middle-income countries (the corresponding shares for non-key manual workers are 18.0 and 15.9 per cent, respectively). This shows that there is still significant room for increasing the relevance of TVET in middle-income countries. This conclusion is even more important in low-income countries, where only 5.7 (key workers) and 6.8 per cent (non-key workers) of individuals employed in manual occupations have attended TVET. These shares are significantly below the TVET attendance rate across occupations, which suggests that manual workers in low-income countries are falling behind in terms of their qualifications and labour market opportunities.

Box 4.5. Warehouse workers and the COVID-19 pandemic

The lockdowns imposed to mitigate the COVID-19 pandemic resulted in the closure of shops over an extended period. These closures, coupled with customers' fears of infection from in-person contact, intensified the already ongoing shift towards e-commerce.

China, for example, had seen a significant growth of e-commerce before the pandemic, and a strategic focus on efficient logistics and delivery which had been associated with strong competition between companies. During the pandemic, e-commerce platforms took on the additional role of distributing essential products, such as medical supplies and food. From the end of January to mid-February 2020, home delivery by the major Chinese platform JD increased by 450 per cent overall, and even more so for the categories of meat products and vegetables.¹ As part of the Xi'an and Shanghai lockdowns, many e-commerce platforms became the only way for residents to purchase food and other necessities. In addition to the increased consumer demand, the restrictions on movement affected warehousing and delivery. According to a survey conducted by the China Federation of Logistics and Purchasing, 74 per cent of the companies surveyed reported that they were facing major challenges because of the restrictions on transportation.² In short, policy changes and increased consumer demand during the COVID-19 pandemic translated into increased unpredictability and pressure on warehousing and warehouse workers.

Across the world, the working conditions of warehouse workers tend to be poor. Evidence from France and the United Kingdom shows that warehouse work typically entails comparatively low pay, a high prevalence of temporary contracts, high worker turnover, few prospects

Box 4.5. (cont'd)

for training and career progression, workplaces located in remote areas that are difficult to reach, and deficits in OSH conditions. As a result, some employers are confronted with labour shortages and ageing workforces.³ In China, the e-commerce industry increasingly relies on external companies that employ day labourers.⁴ Warehouse workers on online forums reported that they worked long hours, with rotation between day and night shifts, lifting heavy products throughout, and sometimes not receiving their pay.⁵ During the Xi'an and Shanghai lockdowns, the official communication channel of a major logistics and supply chain company praised its warehouse workers who needed to live on warehouse premises to guarantee the smooth operation of logistics and distribution of all essential goods. For their daily PCR tests, these workers had to wait in line for long hours during winter.⁶

In some cases, technological innovations make the situation of warehouse workers more precarious. A study in the United States portrays warehousing as an industry with low profit margins and a resulting reluctance to invest in new technologies.⁷ Therefore, in the short and medium term, no massive job losses among warehouse workers are expected and fully automated warehouses – such as those developed by the Chinese logistics and supply chain company Cainiao⁸ – are still the exception. Nevertheless, “just-in-time” product delivery of many smaller goods is already associated with automated picking processes and other attempts to reduce the demand for labour. Technology is likewise used to simplify the more complex tasks so far performed by workers, implying that their activities become more routine, and hence less well remunerated.⁹ Technology is also employed to monitor and sanction workers. Large international employers in e-commerce are criticized for constantly measuring the speed of their warehouse workers and recording any error that they make. This electronic information is then used for standardized performance management, thereby creating a work atmosphere of pressure and alienation.¹⁰

Investments in skills are one way to improve the situation of warehouse workers. Modern technology requires workers who can employ such technology, and this, in turn, necessitates cognitive and socio-emotional skills in addition to manual skills. Such skills demand could be associated with possibilities for warehouse workers to attend additional training and thus access higher-skilled and better-protected jobs. At the same time, there are various examples of technology in warehousing being used to reduce labour and deskill work requirements. The monitoring and maintenance of robots is often performed remotely and not by the warehouse workers themselves.¹¹ If warehouse workers were better organized to defend their collective interests, they could bargain for more employer-provided investments in their skills. In Denmark, for example, the Collective Agreement on Warehouse Work for 2020 to 2023 fosters skills development and training with a view to improving the skills of warehouse workers and the competitiveness of their employers. Employers contribute a yearly fee for each full-time worker to a fund that finances such training activities.¹²

¹ LYW, 2020.

² China Federation of Logistics and Purchasing, 2020.

³ Briken and Taylor, 2018; Hocquelet, 2020.

⁴ Song et al., 2020.

⁵ 李家阿华, 2021; Zhihu, 2020.

⁶ Cainiao, 2021.

⁷ Gutelius and Theodore, 2019.

⁸ Yang, 2021.

⁹ Gutelius and Theodore, 2019.

¹⁰ Briken and Taylor, 2018.

¹¹ Gutelius and Theodore, 2019.

¹² Danish Chamber of Commerce Employers and the United Federation of Danish Workers Transport Group, 2020.

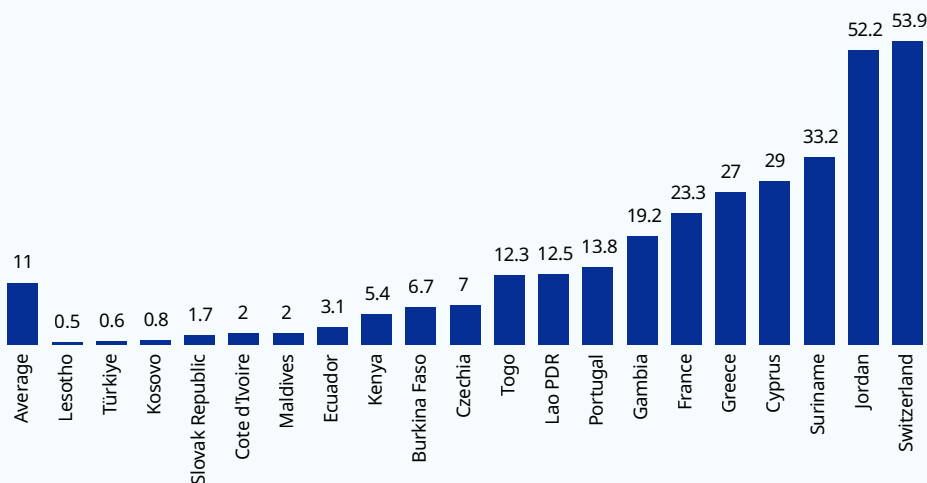
4.6. Cleaning and sanitation: Temporary and low-paid

Cleaning and sanitation workers keep streets, buildings and other common areas liveable and healthy. They include janitors, building cleaners, waste management operators, waste pickers and those who empty pits and septic tanks;⁸⁰ they may work formally or informally, as employees or as own-account workers. On average, cleaning and sanitation workers in key economic sectors represent 5.4 per cent of all key workers, with the proportion slightly greater in high-income countries (7.1 per cent). A distinguishing feature of this occupational group is the presence of international migrant workers. At nearly 11 per cent on average, the share of immigrants among key cleaning and sanitation workers was higher than in any other key occupation. However, there are major variations across countries and territories, with the share of international migrant workers among key cleaning and sanitation workers ranging from less than 1 per cent in Lesotho, Türkiye and Kosovo to more than 50 per cent in Switzerland and Austria (figure 4.18).

A distinguishing characteristic of the cleaning and sanitation sector is the elevated use of temporary contracts, including by public institutions such as municipalities.⁸¹ Figure 4.19 shows the proportion of key cleaning and sanitation employees with temporary contracts. On average, one out of every three cleaning and sanitation employees in key economic activities has a temporary contract, and in many cases they are hired through a subcontractor. The share of temporary work is lower in high-income countries at 17 per cent, but in lower-middle-income economies, the share of temporary contracts among key cleaning and sanitation employees reaches 41 per cent. There are significant differences across countries with regard to the proportion of temporary employment. For example, it is less than 2 per cent in Georgia, whereas it is around 82 per cent in Botswana.⁸²

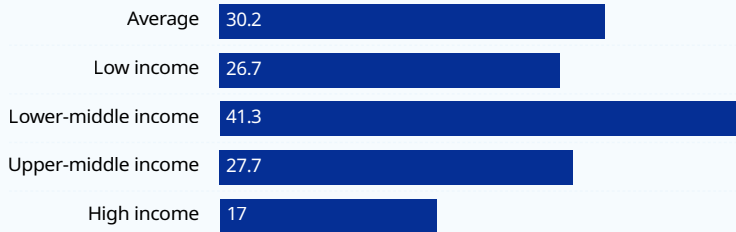
While the conditions of temporary employment vary across countries, in most cases temporary contracts, especially for activities that are continuous in nature, are used as a means of lowering labour costs since temporary workers often do not receive the same level of pay and benefits as workers on open-ended

▶ **Figure 4.18. Share of international migrant workers among key cleaning and sanitation workers (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

► **Figure 4.19. Share of key cleaning and sanitation employees with temporary contracts, by country income group (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

contracts.⁸³ As mentioned, temporary employment in cleaning and sanitation often occurs through subcontracting, with contractors in turn relying on temporary labour. For example, in Greece and India, municipalities hire sanitation workers through subcontractors, use temporary contracts and keep renewing temporary contracts after each contract ends instead of giving permanent jobs to workers.⁸⁴ In India, although there are several court decrees which state that municipalities should give permanent jobs to sanitation workers instead of renewing their temporary contracts,⁸⁵ the problem has not been fully addressed.⁸⁶

While temporary contracts do not necessarily imply bad working conditions and the contracts can serve as a stepping-stone into the labour market,⁸⁷ there are several negative outcomes, as discussed in Chapter 3. Typically, temporary employment is associated with wage penalties, and these penalties are greater for low-paid workers.⁸⁸ In the cleaning and sanitation occupations, India is a prototypical example of wage inequalities between temporary and permanent workers. It is estimated that the wages of cleaning workers with a temporary contract in India are less than half those of their permanent counterparts, and below levels that can sustain their basic needs.⁸⁹ Similarly, in Malaysia, hospital cleaners are contract workers hired by companies subcontracted by the government. As contract workers, the cleaners usually receive only the minimum monthly wage and are not entitled to employment benefits such as an annual pay raise, paid public holidays, bonuses and severance pay.⁹⁰

In general, workers in temporary positions tend to face greater health and work accident risks than employees on permanent contracts.⁹¹ This is also true in the cleaning and sanitation sector, due to a lack of training as well as the high-risk working environment.⁹² Cleaning workers suffer industrial accidents from handling chemical substances, such as cleaning agents, and exposure to contamination by pathogens, dust and gas during their work. Owing to their working environment – in which they use cleaning chemicals, and frequently enter into contact with the secretions of an unspecified number of people, such as in bathrooms – cleaning workers are also more likely to suffer from respiratory diseases. In India, numerous work accidents happen among temporary workers in the sanitation sector, especially in manual sanitation work.⁹³ During an outbreak of COVID-19 in a Chinese airport, cleaning staff who were employed by subcontractors on temporary contracts were the initial sufferers and transmitters of the virus. They experienced OSH vulnerability on both individual and contextual levels, including workplace hazards and insufficient training on appropriate protocols.⁹⁴

Evidence across developing countries suggests that work insecurities are especially high for waste pickers, who empty and collect refuse and discarded items.⁹⁵ Waste pickers are one of the main sources of recycling in the developing world.⁹⁶ It is estimated that waste pickers constitute 0.7 per cent of urban employment in South Africa and 0.1 per cent in India.⁹⁷ While the share of waste pickers in

Cleaning and sanitation workers are at risk of industrial accidents and exposure to contamination from handling chemical substances during their work.

Box 4.6. Waste pickers

Informal waste pickers suffer from poor working conditions. In Nakuru, Kenya, 72 per cent of the waste pickers interviewed for a study indicated that the lack of access to a formal market affected their work negatively.¹ Even in countries where waste pickers are mostly registered, such as South Africa, their incomes are much lower than the average income in the country.² Consequently, many waste pickers report that they rely on their social networks to sustain their basic needs, including food consumption.³ Furthermore, workers collecting solid waste are subject to numerous disease and viral infections, including COVID-19. The lack of education and training, limited access to sanitation and hygiene, and high exposure to contaminated refuse increase the health risks of waste pickers.⁴

In addition, waste pickers are, in some instances, exposed to discrimination and violence, especially when they belong to religious or ethnic minorities or certain castes. For example, responses to a recent survey carried out in Ahmedabad, India, highlighted that social exclusion and violence tend to affect women waste pickers when working in areas occupied by residents and businesses perceived to be of higher castes and class statuses.⁵

Organizing can be a means of improving the working conditions of waste pickers.⁶ In Belo Horizonte, Brazil, waste pickers are highly organized and have relatively greater earnings than other workers with informal sector jobs, as they receive a share of the recycling bonuses (*Bolsa Reciclagem*) given to each cooperative based on the number of recyclables they collect.⁷ In Bogotá, Colombia, the municipal government officially recognized waste pickers as legal workers, granting them the right to bid on municipal contracts.⁸ In contrast, in Türkiye, where waste pickers are not allowed to incorporate formally into waste collection and recycling services, waste pickers face highly difficult working conditions and those with migrant status risk deportation.⁹

¹ Dias and Samson, 2016.

² Yu, Blaauw and Schenck, 2020.

³ Schenck and Blaauw, 2011.

⁴ Alvarado-Esquivel et al., 2008.

⁵ Wittmer, 2021.

⁶ WIEGO, n.d.(c).

⁷ Dias, 2016; Centre For Public Impact, 2016; Dias, 2011.

⁸ Parra, 2020.

⁹ Bouscaren, 2022.

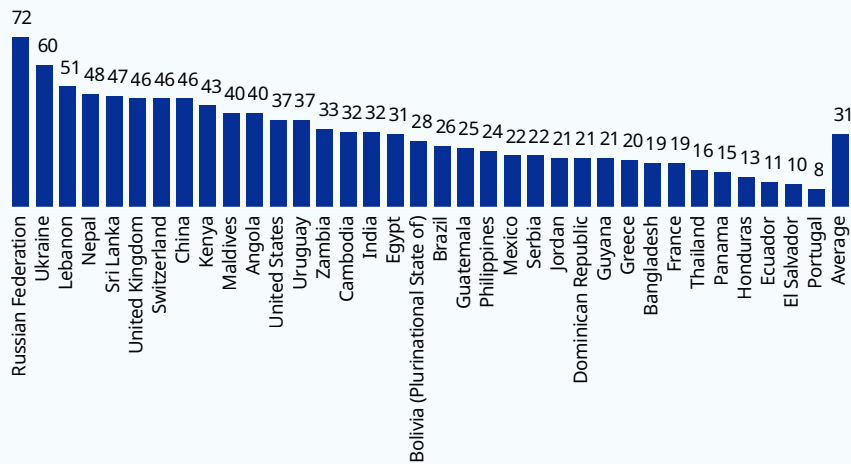
total employment is small, they nonetheless represent large numbers of people, especially in populous countries. In India, it is estimated that there were 2.2 million waste pickers in 2018–19, and this number is likely a lower bound given the difficulties of gathering data.⁹⁸

In some developing countries, waste picking is the dominant form of solid waste collection, playing a critical role in ensuring public health and safety as well as environmental sustainability. Nevertheless, waste pickers have poor working conditions and low social status, and receive little support from governments (see box 4.6).

In terms of earnings, a substantial number of key cleaning and sanitation wage employees are low-paid, meaning that their earnings are less than two thirds of the median hourly wage. Across the subsample of countries for which information on hourly earnings is available, 32 per cent of key cleaning and sanitation employees are low-paid. This share varies little across the countries' income per capita groups, as 29 per cent of key cleaning and sanitation employees in high- and upper-middle-income countries are low-paid workers, as are 33 per cent in lower-middle-income countries.⁹⁹ However, looking at the situation of individual countries, important geographical disparities can be observed. The share of low-paid key cleaning and sanitation employees reaches 72 per cent in the Russian Federation and 60 per cent in Ukraine, whereas it is only 10 and 8 per cent in El Salvador and Portugal, respectively (figure 4.20).

In the Latin American and Caribbean countries for which information is available, only 22 per cent of key cleaning and sanitation employees, on average, are low-paid. This relatively low level may be partly explained by the recent attention in the region to the working conditions of domestic workers,

► **Figure 4.20. Share of low-paid workers among key cleaning and sanitation wage employees, selected countries (percentage)**



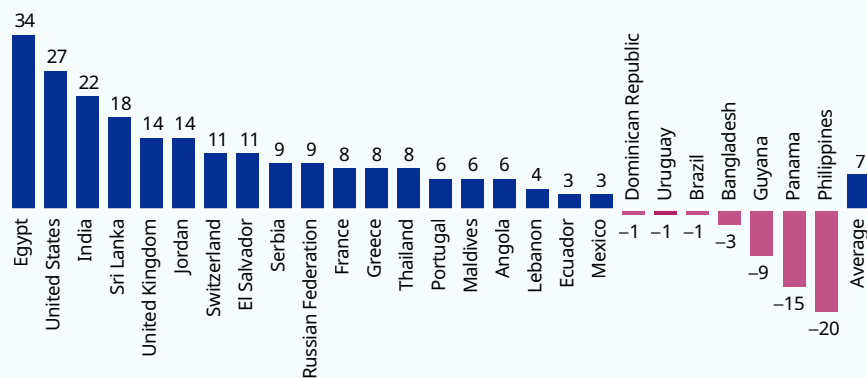
Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

which in turn possibly contributed to raising the standards for the whole occupational category of cleaners and helpers, even when the workplace is not a household.¹⁰⁰ In 2019, among the 32 countries that had ratified the ILO Domestic Workers Convention, 2011 (No. 189), 18 were from Latin America and the Caribbean. The Convention provides guidance on guaranteeing rights and social protection for domestic workers, including ensuring “that domestic workers enjoy minimum wage coverage, where such coverage exists, and that remuneration is established without discrimination based on sex” (Article 11). In this context, several countries in the region have implemented reforms in their labour legislation to bring it into compliance with the principles set out in the Convention.¹⁰¹ For instance, in the Plurinational State of Bolivia, Brazil, Ecuador and Guatemala, the existing laws equate the minimum wage for paid domestic workers to the national minimum wage. In these countries, their maximum working hours are also equal to those of other paid employees. Finally, the wages of Latin American cleaning and sanitation employees might also have been supported by a higher demand for these workers in the labour market. Indeed, cleaning and maintenance personnel is the job category in which employment increased the most between 2000 and 2015 in Latin America and the Caribbean, in a context of decreasing employment in manual occupations that can be automated and increasing demand for low-skill service sector jobs.¹⁰²

Within countries, key cleaning and sanitation wage employees may experience different situations with regard to earnings, including across gender. Though women account for nearly half of key cleaning and sanitation paid employees (46 per cent on average in the subsample of countries with available information on the earnings of this occupational group), their hourly wages are generally below those received by their male counterparts. Among countries with data that allow estimates to be made of the difference in pay between male and female key cleaning and sanitation employees, the gender pay gap favours women in only a few countries (figure 4.21). The Philippines is one of the exceptions, with key female cleaning and sanitation employees earning on average 20 per cent more than key male employees in the same occupational category. In Guyana and Panama, the pay gap is respectively 9 and 15 per cent, also in favour of women. At the other extreme, men fare better than women on average in Egypt and the United States, where the pay gap amounts to 34 and 27 per cent, respectively.

Though women account for nearly half of key cleaning and sanitation paid employees, their hourly wages are generally below those received by their male counterparts.

▶ **Figure 4.21. Gender pay gap among key cleaning and sanitation employees, selected countries (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

4.7. Transport workers: Long working hours and poor occupational health and safety

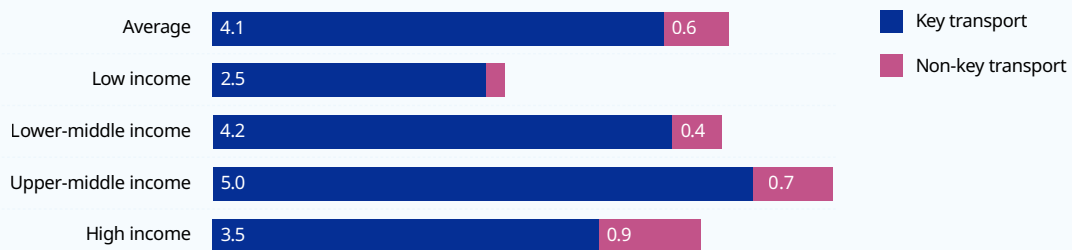
I heard nothing mentioned about truck drivers getting the vaccine. I'm like, wow, we're frontline, front and center. If it wasn't for us, you wouldn't even have the vaccine.

Truck driver, United States¹⁰³

Transport workers are essential to society as they ensure the daily transport of goods and people. Although it is hard to generalize transport work as one type of labour, broadly speaking transport workers include all drivers and operators who are involved in the transport of goods, persons or animals, such as railway workers, truck drivers, seafarers, bus drivers, subway workers, motorcycle, car, taxi and van drivers, mobile plant operators and those carrying out other forms of urban transport. Globally, the average employment share of transport workers is 4.7 per cent (figure 4.22). Most transport workers were considered key workers during the pandemic.

The share of transport workers is largest in upper-middle-income countries (at 5.7 per cent), followed by lower-middle-income countries (at 4.6 per cent). This is because there is strong demand for transport services in middle-income countries, especially in large cities, and because it is relatively easy for workers to enter the sector. Urban transportation, often informally provided, has traditionally been an important source of employment, especially for young men and internal migrants from rural areas.¹⁰⁴ In low-income countries, the employment share of transportation is lower, at 2.7 per cent (figure 4.22).¹⁰⁵ In these countries, working relationships are varied, including both informal employees and informal own-account workers,¹⁰⁶ with urban transport comprising nearly 90 per cent of urban transport in many African cities.¹⁰⁷

► **Figure 4.22. Share of key transport workers and non-key transport workers out of total employment, by country income group (percentage)**



Source: Analysis based on ILO Harmonized Microdata (ILOSTAT). See Appendix for more details.

In Uganda, bicycle and motorcycle taxi transport is the second largest source of employment after agriculture.¹⁰⁸ In contrast, for high-income countries, where on average 4.1 per cent of all workers are employed in transportation, most transport workers are bus and heavy truck drivers.¹⁰⁹

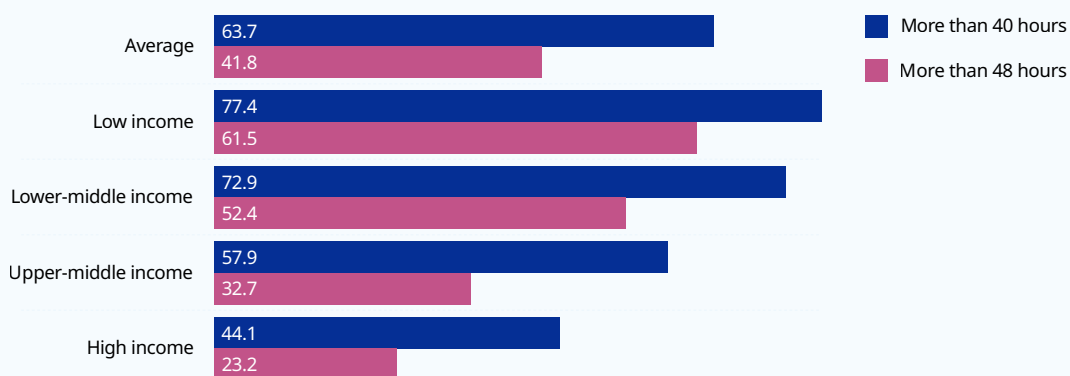
A distinguishing feature of the transportation sector is the high level of sex segregation. Only 2.7 per cent of key transport workers are women, which is well below any of the other categories analysed in this report. The closest is security with 12.6 per cent of key workers being female. There are slightly more women working in this sector in high-income countries, but even there the share remains low at 5.3 per cent. Various factors deter employers from hiring women, ranging from additional hygiene facilities required to underlying gender stereotypes. For example, companies with relatively large shares of female transport workers in the Republic of Korea nonetheless had to institute training on gender sensitivity in the workplace to overcome severe gender bias.¹¹⁰ Another concern is the elevated level of violence and sexual harassment in the sector, with women at greater risk.¹¹¹

Long working hours are a common problem in both formal and informal forms of transportation.¹¹² Globally, 63.7 per cent of transport workers work more than 40 hours per week and 41.8 per cent work more than 48 hours (the official definition of excessive hours¹¹³). This phenomenon is most prevalent in low-income countries, where 61.5 per cent of transport workers work excessive hours, and in lower-middle-income countries, where this is true for 52.4 per cent of transport workers (figure 4.23). Even in high-income countries, 23.2 per cent of transport workers work more than 48 hours weekly. When looking at mean working hours for key transport workers, these are also particularly long in countries with low income levels. For example, they amount to 63.4 hours per week in Gambia and approximately 61 hours in both Liberia and Uganda. Even more worrisome, informal taxi and minibus drivers usually work between 60 and 80 hours per week in developing countries.¹¹⁴ For example, minibus drivers in Luanda, Angola, have reported that they start working around 5 a.m. without any fixed hours or limit.¹¹⁵

What are the reasons behind the long working hours of key transport workers? One of them is the nature of transportation work in poorer countries. The lack of social protection measures and low incomes often force these workers to work long hours.¹¹⁶ In Africa, most informal transport workers rent their vehicles from an owner. These own-account workers work long hours to make sufficient income to cover the high leasing rates and other operating costs.¹¹⁷ Even rickshaw drivers in Nepal who own their vehicle usually have to borrow money to buy the vehicle and thus work long hours to be able to pay their debts, cover fuel costs and still make a profit.¹¹⁸

Similar industry dynamics can be found in some high-income countries. One example is long-haul trucking in the United States, which has seen a trend over recent decades of shifting workers to independent contractor status. This practice means that the drivers commonly work the equivalent of two full-time jobs to cover leasing costs and additional operating costs, while their earnings remain below the minimum wage level. Not surprisingly, the sector suffers from high turnover and chronic labour shortages.¹¹⁹

▶ **Figure 4.23. Share of key transport workers with more than 40 and more than 48 working hours per week, by country income group (percentage)**



Source: Analysis based on ILO Microdata Repository (ILOSTAT), 2019 or latest year. See Appendix for more details.

Key workers employed in app-based transportation also work long hours. Evidence from online forums of app-based drivers suggests that once the drivers log in to the system, they cannot reject customers, as they risk being blocked from the platform if they do. The technology is designed to keep drivers working as long as there are customers, thus encouraging long hours.¹²⁰ ILO survey data from India show that app-based taxi drivers work on average 82 hours per week, with 41 per cent working seven days per week.¹²¹ In Indonesia, app-based motorcycle taxi drivers report that they work for very long hours due to their low income. These financial pressures are exacerbated by their need to cover the costs of private insurance as a result of their self-employed status.¹²² Worldwide, most app-based drivers are in similar situations.

Almost all transport workers face several health and safety risks. For example, truck drivers are subject to accidents, potentially due to long working hours. In 2019, there were 123,000 crashes with heavy truck involvement in the United States, and 5,000 of these were fatal.¹²³ Additionally, evidence from US truck drivers suggests that workers who drive for longer hours have a higher probability of having cardiovascular diseases.¹²⁴ Similarly, findings from Colombia indicate that transport workers who experience job-related stress are more likely to be involved in an accident.¹²⁵

Not surprisingly, health and safety issues are even worse for key transport workers in the developing world, where these workers frequently have to drive unsafe vehicles on unsafe roads without having received any formal training. Such work environments lead to high accident rates¹²⁶ and are associated with a high exposure to heat, dust and noise.¹²⁷ Evidence from India indicates that many rickshaw drivers report constant headaches, injuries and eye problems as a result of exposure to unhealthy working conditions.¹²⁸

In this regard, seafarers are worth highlighting, as they tend to face fatigue-related diseases and accidents, chronic diseases like metabolic disorders, and higher morbidity.¹²⁹ Seafarers work in confined spaces for 10 to 12 hours a day, where they are often exposed to high levels of stress. They tend to have contracts that last between four and six months, followed by a period of leave.¹³⁰ It is common for shift work to be organized based on a watch system, with either two four-hour shifts per day or two six-hour shifts per day, to ensure that vessels are continually crewed. As a result, workplace fatigue is common. Data from the United Kingdom suggest that there were 1,192 accidents in 2019 involving UK ships alone.¹³¹ These accidents can potentially be traced back to fatigue caused by long working hours;

In the developing world, key transport workers frequently have to drive unsafe vehicles on unsafe roads without having received any formal training.

Box 4.7. Working conditions of seafarers and the COVID-19 pandemic

With more than 90 per cent of global trade moved by sea, the world's 2 million seafarers played a critical role during the pandemic. Their work ensured the smooth and uninterrupted operation of supply chains, including the transport of food, medicines and vital medical supplies.

Yet the COVID-19 pandemic upended the lives of seafarers. The inability to socially distance on ships and the shortage of PPE increased seafarers' likelihood of exposure to the virus. Seafarers were also at the mercy of the ever-changing policy decisions made by a multitude of jurisdictions that governed their access to repatriation, medical attention and shore leave. As a result, protections of seafarers governed by the Maritime Labour Convention, 2006, as amended (MLC, 2006) regarding repatriation, access to medical care ashore and shore leave were not respected. Under the MLC, 2006, the maximum period of service on board is limited, in principle, to 11 months, to ensure that seafarers' well-being is protected. The MLC, 2006, also establishes minimum standards regarding pay, working hours and other working conditions.

When the pandemic began, immediate needs concerned managing active cases on board; this included the use of PPE and the implementation of social distancing to reduce the spread of the virus. At the time, however, access to PPE was limited and advice on its use conflicting. For example, a seafarer on a cruise ship recalled how the sales crew asked to wear masks, but the company did not allow it for two reasons. First, the company was adhering to the Centers for Disease Control and Prevention (CDC) advice, which did not recommend the use of masks at the time. Second, the use of masks would "affect [sales workers'] smile service".¹ Shortages of PPE were also reported among seafarers, alongside failure to use PPE by onshore staff during visits onboard the ship.² The contagious nature of the virus, coupled with the limited ability to socially distance manifested most publicly on cruise ships. For example, of the 3,711 passengers and crew on the *Diamond Princess*, which arrived in Japan in February 2020, 712 (19 per cent) contracted the virus and 13 people died.³ On the *MS Artania*, which arrived in Western Australia in March 2020, of 1,335 crew and passengers, 85 (6 per cent) contracted COVID-19 and 4 people died.⁴

Access to medical attention was an additional factor compounding the impact of the pandemic on seafarers' lives. While infected seafarers with mild cases could recover onboard, those with more serious conditions often faced difficulties accessing medical care ashore.⁵ Numerous seafarers in need of urgent assistance as a result of other illnesses or dental problems were also denied medical care. At the peak of the crisis, 400,000 seafarers were unable to leave their ships.⁶ By July 2021, this number had declined to about 250,000.⁷ Over the course of the pandemic, some seafarers remained on ships for more than 18 months.⁸

From the beginning of the pandemic, the ILO, together with the International Maritime Organization (IMO) and the International Civil Aviation Organization called on governments to facilitate crew changes and designate seafarers as key workers providing essential services.⁹ This call was later echoed by the UN Secretary-General and stated in important resolutions adopted by the UN General Assembly,¹⁰ the ILO Governing Body¹¹ and several IMO bodies.¹² Similarly, the ILO Committee of Experts on the Application of Conventions and Recommendations strongly encouraged governments to recognize seafarers as key workers and to put in practice the consequences of such a qualification, in order to restore the respect of their rights as provided for in the MLC, 2006.¹³ Nevertheless, by May 2022, only 68 of the 178 IMO Member States and Associate Members had recognized seafarers as key workers. This lack of recognition across the globe severely hampered the ability of ships to effect crew changes, resulting in an increase in the number of seafarers required to stay on board for long periods following the conclusion of their contracts.¹⁴

¹ Shan, 2021.

² Shan, 2021.

³ Codreanu et al., 2021.

⁴ Codreanu et al., 2021.

⁵ ILO, 2020d.

⁶ Tang, 2022.

⁷ IMO, n.d.

⁸ Shan, 2021.

⁹ See IMO, ILO and ICAO, 2020. See also ILO, 2021j.

¹⁰ See United Nations General Assembly resolution 75/17 on International cooperation to address challenges faced by seafarers as a result of the COVID-19 pandemic to support global supply chains.

¹¹ See 2020k.

¹² See IMO, 2020.

¹³ See ILO, 2020h.

¹⁴ BIMCO and International Chamber of Shipping, 2021.

it has been estimated that one in four seafarers falls asleep on duty because of exhaustion.¹³² There are studies which have linked long-term fatigue to many diseases, including cancer.¹³³ The sector also makes regular use of temporary contracts and third-party recruiting agencies. These trends have become more pronounced over time as the employment of workers from developing countries has surpassed that of seafarers from developed economies.¹³⁴ Because the lives of seafarers were upended by the COVID-19 pandemic, a more detailed discussion of their situation is given in box 4.7.

But being a key transport worker does not have to be synonymous with health and safety risks, as there are intensifying or mitigating mechanisms. Job-related stress can be mitigated with regulations on working time and schedules. For example, EU laws put a nine-hour limit on the maximum hours a transport worker can drive per day to minimize the accident risk.¹³⁵ Moreover, regulatory interventions can mitigate the adverse effects of transportation on OSH. With regard to violence, for instance, it is argued that safety training can minimize the violence transport workers face, or at least teach them how to deal with violent actions.¹³⁶ Companies and countries can also reduce the negative health consequences of the work for key transport workers. For example, a company in Belgium provides training and brochures to its new truck drivers to help them avoid various types of muscular diseases while driving.¹³⁷

4.8. Technicians and clerical support workers: The challenges of postal work

The eighth and final occupational group consists of two remaining occupations that employ a small share of key workers: “science and engineering associate professionals” and “other clerical support workers”. Many of these workers perform essential activities during crises and were thus considered to be key workers during the COVID-19 pandemic.

Science and engineering professionals account for 1.5 per cent of all employed persons across countries. This share declines with countries’ income levels, ranging from 3.1 per cent in high-income countries to 0.5 per cent in low-income countries (figure 4.24). Globally, 54.8 per cent of all science and engineering professionals are key workers. Similarly to manual workers, the key worker status of these technicians depends on whether their industry provides services that were deemed essential during the pandemic. This was the case, for example, if they were responsible for overseeing essential work activities or repairing basic utilities as manufacturing supervisors and electrical or civil engineering technicians.

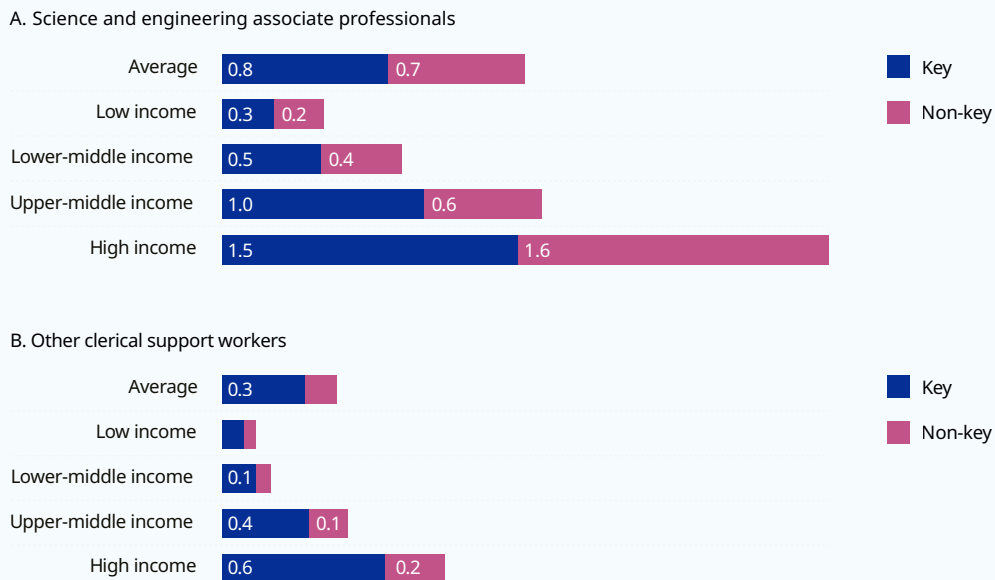
Science and engineering professionals have higher formal educational levels than the average. Across countries of all income levels, 44.2 per cent have completed secondary education and 28.1 per cent hold

a university degree (that is, a bachelor’s degree or higher). Not surprisingly, these shares are highest in high-income countries, in which 72.9 per cent of science and engineering associate professionals hold a university degree, and lowest in low-income countries, where the university completion rate is only 4.5 per cent.¹³⁸

The category “Other clerical support workers” includes 0.4 per cent of all employment on average across



► **Figure 4.24. Share of selected technicians and clerical support workers out of total employment, key versus non-key workers by country income group (percentage)**



Note: The two occupational groups with the two-digit ISCO-08 occupations “31 – Science and engineering associate professionals” and “44 – Other clerical support workers” were selected because they include a meaningful share of key workers.

Source: Analysis based on ILO Harmonized Microdata (ILOSTAT). See Appendix for more details.

countries. Again, this figure tends to be higher in countries with higher income levels. Most clerical support workers (72.6 per cent) were considered to be key workers during the pandemic. This is largely because postal workers fall under this category. Given their experience and importance to society during the COVID-19 pandemic, postal workers are the focus of the remainder of this section.

The experience of postal workers during the pandemic

During the COVID-19 pandemic, postal workers were limited in their ability to socially distance, given their roles in sorting mail, interacting directly with the public at postal offices and delivering mail to individuals' homes. The treatment of postal workers during the pandemic, however, varied across countries, influencing both the degree of disruption of postal services and workers' exposure to the virus.

Some countries, such as Australia, Canada, Germany, India, Italy, the United Kingdom and the United States, moderately changed operations during the pandemic.¹³⁹ In these countries, additional safety precautions were introduced to protect workers and minimize exposure, but only limited restrictions were imposed on the provision of postal services. In Australia, split shifts and protective screens were introduced in post offices.¹⁴⁰ The United States Postal Service (USPS) supplied protective equipment and required staff members to wear face masks when they could not socially distance. In Mexico, while some offices closed, for those which remained open hand sanitizer and masks were provided to employees.¹⁴¹ In contrast, in countries such as France, Spain and New Zealand, postal operations were more substantively interrupted. At the beginning of the pandemic, France closed most post offices and reduced deliveries from six to three days per week. Spain also cut its postal workforce to a quarter the size of normal levels.¹⁴² New Zealand closed all postal outlets for three weeks in March 2020.¹⁴³

The COVID-19 pandemic underscored the importance of postal networks as well as the role of postal workers in society.

Irrespective of a country's approach, however, the pandemic expanded the remit of services provided by postal workers, underscoring the importance of postal networks as well as the role of postal workers in society. In Mexico, for example, a postal worker described how people on his route valued his work during the pandemic and how he was satisfied because he and his colleagues had managed to maintain their services despite the challenges the pandemic had imposed.¹⁴⁴ In Argentina, Italy and Uruguay, postal workers ensured COVID-19 vaccine distribution.¹⁴⁵ The delivery of home-school materials and laptops for students was carried out by postal workers in Argentina, France, Georgia and the United States. In Australia, Colombia and El Salvador, postal workers delivered food parcels to households in need. In India, to minimize the exposure of older persons to the virus, postal workers delivered social payments (normally distributed in bank accounts) directly to individuals. While this was also done prior to COVID-19 outbreaks, it increased tenfold once the pandemic began.¹⁴⁶

Data have yet to reveal the pandemic's overall health impact on postal workers, but news reports and qualitative evidence suggest that they have been adversely affected. In the above-mentioned interview, for example, the Mexican postal worker explained that distancing was not possible on his way to work. While his employer was supportive when it came to sanitary measures at his workplace (that is, providing the required equipment), initiatives to work in shifts were only suggested by the workers themselves and could have been introduced more systematically. Also, infected workers isolated at home (and continued to be paid), but their colleagues who had been in contact with them continued to go to work. The overall situation implied an increase in psychological stress.¹⁴⁷

Limited – or, in some cases, virtual – labour inspections also seem to have contributed to postal workers' concerns over insufficient protection. In the United States, for example, following the outbreak of the pandemic, USPS employees filed more than 1,000 complaints alleging hazards related to COVID-19. Following those complaints, as of July 2021 the Occupational Safety and Health Administration had issued citations for four violations, all of which the USPS contested.¹⁴⁸ Meanwhile, many countries introduced contactless deliveries that changed signature requirements, minimizing workers' exposure to the virus.¹⁴⁹ Other countries, such as Japan, introduced new technologies, including robots to perform some tasks of postal workers, in response to increased demand for contactless deliveries and to address labour shortages.¹⁵⁰

The pandemic also affected postal workers by accelerating already ongoing structural changes to the sector. With lockdowns imposed, consumers and businesses increased their use of e-commerce. The number of parcels to be delivered thus skyrocketed and this changed the composition of mail to larger and heavier parcels (see also the previous discussion on warehouse workers). This drastic change presented logistic challenges for postal operators since heavy parcels required new and more costly transport options.¹⁵¹ Similar developments were identified by a country study on the Republic of Korea (see box 4.8). The Korean case further demonstrates how the working conditions of postal workers are affected by their contractual arrangements, indicating a deterioration of workers' rights.

Box 4.8. Postal workers in the Republic of Korea

The delivery industry in the Republic of Korea operates across the public and private sectors with a segmented labour force composed of three types of workers: employees with standard and permanent contracts; employees with non-standard fixed-term contracts; and workers in “special employment types under consignment contracts”. As the delivery industry expanded alongside the growth in e-commerce, so did the share of workers hired under a consignment contract. These workers, employed as independent contractors – often on daily contracts – lack access to social security, accident insurance and other employment protection to which their employee counterparts are entitled.

The pandemic exacerbated existing inequalities across the different groups of workers as the demand for parcel delivery skyrocketed. Parcel delivery not only requires larger vehicles for transport, but also additional time to load and unload parcels at distribution centres, post offices and delivery addresses. For employees, the additional hours of work required to meet the increased demand for deliveries went unpaid, since their wage-setting arrangements lacked contractual entitlements to overtime pay. The increased demand for parcel delivery resulted in at least 16 workers’ deaths due to overwork, and this led an eight-day strike.

For consignment contract workers, who are often paid on a per-delivery basis, the pandemic reduced their income in two ways. First, delivery fees for such contract workers are partially set as a function of labour supply. As many workers became unemployed during the pandemic, they turned to consignment contract work in the delivery industry as a source of revenue. This boosted labour supply in the sector, reducing the unit delivery fee. Second, the increase in labour supply resulted in a smaller allocation of packages to each driver. As a result, these workers’ incomes decreased during the period of greatest financial difficulty.

The pandemic also increased postal workers’ exposure to the virus. Without a mechanism to identify households in self-quarantine and inform postal workers, the delivery of registered mail and parcels to individuals in quarantine increased the likelihood of exposure to the virus. At the onset of the pandemic, the exclusion of postal workers from priority vaccination groups, as well as limited supplies and distribution of masks, also contributed to heightened exposure. Staff shortages due to COVID-19 exposure and the absence of additional paid sick leave to compensate workers for their heightened occupational risks, added insult to injury by requiring workers to take unpaid sick leave (reducing their pay further) if they had exhausted all paid leave.

In response to the adverse working conditions faced by postal workers, labour unions in the public sector agitated for change, which eventually led to the introduction of measures reducing face-to-face contact for registered deliveries and granting priority vaccination for the occupation. The Government also introduced various worker protection and support measures, with mixed impacts. For example, occupational accident and insurance coverage was extended to include delivery workers in online and offline distribution industries. Another measure aimed at limiting late-night deliveries by blocking apps at night. This latter measure, however, resulted in unintended consequences, with workers bypassing the late-night delivery prohibition. Finally, the Life Logistic Delivery Service Industry Development Act was introduced to fill legislative gaps that had existed since 1997. However, since the law defined delivery workers as those engaged in “cargo collection and delivery”, it excluded the often unpaid labour undertaken by postal workers who sort and classify letters and parcels prior to delivery.

¹ Seung-yoon Lee et al., 2022.

² McGrath, 2021.

Source: Seung-yoon Lee et al., 2022.

Notes

- 1 ILO, 2020f.
- 2 Sato, 2021.
- 3 ILO and FAO, 2021.
- 4 See Van Panhuys, Kazi-Aoul and Binette, 2017.
- 5 ILO and FAO, 2021.
- 6 Gollin, Lagakos and Waugh, 2014.
- 7 Imai, Gaiha and Bresciani, 2019.
- 8 ILO, 2020i.
- 9 ILO, 2016b.
- 10 Briones, 2018.
- 11 ILO, FAO and IFAD, 2010.
- 12 Unpublished background study on key workers in Türkiye.
- 13 United Nations, n.d.; OHCHR, n.d.
- 14 OECD, n.d.(a), accessed 7 November 2022.
- 15 Addati, Cattaneo and Pozzan, 2022.
- 16 WHO, n.d.(b), accessed 7 November 2022.
- 17 OECD, n.d.(b), accessed 21 May 2022.
- 18 Eurofound, 2020.
- 19 Bauer, Rodrigues and Leichsenring, 2018.
- 20 Rapp, Ronchetti and Sicsic, 2021.
- 21 Banerjee et al., 2008.
- 22 Braedley et al., 2018.
- 23 ILO, 2020c.
- 24 Trapmann et al., 2022.
- 25 Buchan, Catton and Shaffer, 2022.
- 26 Falatah, 2021.
- 27 Buchan, Catton and Shaffer, 2022.
- 28 Shaffer and Curtin, 2020.
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- 32 Mane Abhay and Khandekar Sanjay, 2014.
- 33 Koumenta and Williams, 2019.
- 34 Rubery and Urwin, 2010.
- 35 OECD, 2020e.
- 36 OECD, 2020e: 11.
- 37 OECD, 2020e: 11.
- 38 Eurofound, 2020: 51–53.
- 39 Eurofound, 2020: 54.
- 40 ILO and OECD, 2019; ILO, 2016c.
- 41 Sojourner et al., 2010.
- 42 Sojourner et al., 2015.
- 43 Dean et al., 2022.
- 44 ILO, 2020e.
- 45 These occupations are 52: sales workers, and 95: street and related sales and services workers, based on ISCO-08 2-digit classification. For methodological details, see Appendix.
- 46 WIEGO, n.d.(a).
- 47 Bhowmik, 2019.
- 48 Schneider and Harknett, 2020.
- 49 Loustaunau et al., 2021.
- 50 Darkwah, 2022.
- 51 Carré and Tilly, 2017.
- 52 McCrate, 2018.
- 53 Henly and Lambert, 2014.
- 54 Schneider, Harknett and Collins, 2020.
- 55 Smith and Elliott, 2012.
- 56 Note, however, that the ILO Right to Organize and Collective Bargaining Convention, 1949 (No. 98), mentions the police as one of the few groups that a country may exclude from the right to collective bargaining (see ILO, 2022l).
- 57 Berry et al., 2008.
- 58 ILO, 2022l.
- 59 Munar Suard and Lebeer, 2004.
- 60 Sefalafala and Webster, 2013.
- 61 Choi and Li, 2021.
- 62 Mariwo, 2008.
- 63 White, 2022.
- 64 Mosendz, Bhasin and Melin, 2021.
- 65 Paese et al., 2014; Schneider, Signorelli and Gomes Pereira, 2017.
- 66 Paese, 2014.
- 67 Unpublished background study prepared for the ILO.
- 68 Shaidah, 2016.
- 69 Jovanović et al., 2020.
- 70 Syed et al., 2020.
- 71 ILO, 2020s; Okorie et al., 2020; Vyas, 2022.
- 72 Some countries, however, classified apparel production as essential. This includes countries with important garment industries, like China, India and Indonesia.
- 73 Rodrik, 2022.
- 74 Diao et al., 2021; see also Kruse et al., 2021.
- 75 Autor, Dorn and Hanson, 2021.
- 76 Autor, 2022; Atalay et al., 2020.
- 77 Castellani, Lotti and Obando, 2020.
- 78 Bennett et al., 2022.
- 79 Berufsberatung.ch, n.d.
- 80 World Bank et al., 2019; United States Bureau of Labor Statistics, 2022.
- 81 Eichhorst and Marx, 2015.
- 82 There are many more key workers in this occupational group in Botswana, with nearly 20 per cent working in cleaning and sanitation jobs.
- 83 ILO, 2016c.
- 84 *Agencia EFE*, 2017; Johari, 2014.
- 85 TNN, 2020.
- 86 Tirodkar, 2021.
- 87 Gebel, 2013.
- 88 Duman, 2019; Cirillo and Ricci, 2022.
- 89 Mhaskar, 2019.

- 90 Lim, 2022.
- 91 Virtanen et al., 2005; Pirani and Salvini, 2015; Kompier et al., 2009.
- 92 Bruno Fabiano et al., 2008.
- 93 Johari, 2014.
- 94 Liu et al., 2021.
- 95 Wittmer, 2021; Schenck, Viljoen and Blaauw, 2021.
- 96 WIEGO, n.d.(b).
- 97 Dias and Samson, 2016.
- 98 WIEGO, n.d.(c).
- 99 The subsample of countries with available information on the wages of key cleaning and sanitation employees does not include any low-income country.
- 100 On average, cleaners and helpers (with “91” as ISCO code) account for 52 per cent of the key cleaning and sanitation wage employees across the Latin American and Caribbean countries in the subsample.
- 101 Salvador and Cossani, 2020.
- 102 Altamirano et al., 2019.
- 103 Sperry et al., 2022.
- 104 Cervero and Golub, 2011.
- 105 Malhotra et al., “2021; Poumanyong, Kaneko and Dhakal, 2012.
- 106 UITP, 2021.
- 107 UITP, 2021.
- 108 ITF, 2017.
- 109 ITF, 2017.
- 110 Unpublished background study prepared for the ILO.
- 111 Spooner, 2011.
- 112 ILO, 2021i.
- 113 ILO, 2018g.
- 114 Spooner, 2011.
- 115 ITF, 2017: 19.
- 116 Spooner, 2011.
- 117 Kumar, Zimmerman and Arroyo-Arroyo, 2021.
- 118 ITF, 2017: 20.
- 119 Viscelli, 2018.
- 120 Rosenblat and Stark, 2016.
- 121 ILO, 2021s.
- 122 Fanggidae et al., 2016.
- 123 NSC, n.d.
- 124 Hege et al., 2017.
- 125 Useche et al., 2018.
- 126 Spooner, 2011: 8.
- 127 Sinha and Kumar, 2018.
- 128 Nag, Vyas and Nag, 2016.
- 129 Jepsen, Zhao, and van Leeuwen, 2015; Idnani and Kotłowski, 2011.
- 130 IMO, n.d.
- 131 Marine Accident Investigation Branch, 2020.
- 132 Schneider and Irastorza, 2011.
- 133 Jepsen, Zhao and van Leeuwen, 2015: 108.
- 134 Gekara and Sampson, eds., 2021.
- 135 EU, n.d.
- 136 Health and Safety Executive, n.d.
- 137 Copsey, 2011.
- 138 Calculations based on the main sample, see Appendix.
- 139 EUI Florence School of Regulation, n.d.
- 140 Parliament of Australia, “Submissions”.
- 141 Interview with Cesar, Mexican postal worker, 8 November 2021.
- 142 Abboud, Dombey and Johnson, 2020.
- 143 Parliament of Australia, n.d.
- 144 Interview with Cesar, Mexican postal worker, 8 November 2021.
- 145 UPU, n.d.
- 146 Agarwal and Bellman, 2020.
- 147 Interview with Cesar, Mexican postal worker, 8 November 2021.
- 148 Jameel, 2021.
- 149 EUI Florence School of Regulation, n.d.
- 150 Hermosín Gandul, 2020.
- 151 Parliament of Australia, n.d.

- 199 Eichhorst et al., 2015.
- 200 ILO, 2022c.
- 201 ILO, 2022c.
- 202 ILO, 2017b.
- 203 Marock, 2017; ILO, 2021a.
- 204 National Government of South Africa, n.d.
- 205 Transport Education Training Authority, 2021.
- 206 ILO, 2018h.
- 207 Cambridge University Press, n.d.(a); Cambridge University Press, n.d.(b).
- 208 See, for example, Dickens, ed., 2012; Gunningham and Johnstone, 1999; Weil, 2008.
- 209 ILO, 2006.
- 210 C.155, Art. 9 (1).
- 211 C.155, Art. 9(2).
- 212 C.155, Art. 10; R.164, Para. 4(d).
- 213 C.155, Art. 14.
- 214 Speiler, forthcoming.
- 215 Cooney et al., forthcoming.
- 216 See ILO, n.d.(g).
- 217 Pires, 2008; C.175, Art. 5; Etienne, 2015; Tombs and Whyte, 2013.
- 218 ILO, 2022f.
- 219 See, for example, Blackett and Koné-Silué, 2019.
- 220 Speiler, forthcoming.
- 221 ILO, 2022f.
- 222 Australia, Work Health and Safety Act (No. 137), Parts 9 and 10. See Brazil, [Regulatory Norm NR3 – Embargo and Prohibition](#) of 19 January 2011; China, Law of the PRC on Work Safety, arts 65 and 70; China, Law of the PRC on Prevention and Control of Occupational Diseases, arts 63, 64 and 77. In China, the powers of inspectors and the penalties were strengthened in 2021. Japan, Law No. 57, Chapter X.
- 223 United States Department of Labor, [OSH Act](#) of 29 December 1970, Section 13(a), 29 USC § 662(a). In the United States, when there is no specific standard, OSHA inspectors may seek enforcement under the employer's general duty, which appears to give the agency broad enforcement powers. However, in fact, proving this type of violation is onerous because judicial decisions now require that the agency provide expert evidence regarding risks and abatement.
- 224 ILO, 2006.
- 225 ILO, 2008b.
- 226 ILO, 2021f.