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**Who are
the key workers?**

Main findings



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Key workers are needed for societies to function. They work in food systems, healthcare, retail, security, manual trades, cleaning and sanitation, transportation, and as technicians and clerks.



The COVID-19 pandemic showed how much societies undervalue most key jobs, raising concerns about the sustainability of these essential activities, especially in the light of future shocks.



Key workers make up 52 per cent of the workforce. The share is lower in high-income countries (34 per cent), where economic activities are more diversified.



Women account for 38 per cent of all key workers globally, though they are the majority in health and retail.

We live in an age of crisis. Less than 15 years after the global financial crisis, the world suffered a global health pandemic that closed borders, brought financial despair and led to the loss of at least 7 million lives. While the consequences of the COVID-19 pandemic have been unprecedented, the frequency of crises we are experiencing is not. Global warming, political polarization, war, and the continued blights of poverty and inequality mark our every day.

But amidst the many hazards the world faces, societies must continue to function. The 8 billion people who inhabit the earth must be fed, clothed and housed. To do this, certain activities – “essential” activities – must go on. At the end of March 2020, 80 per cent of the world’s population lived in countries with required workplace closures. These closures were a necessary restriction for inhibiting the spread of the virus, particularly at that early stage when there was still much to be learned about its transmission and severity. But among the hushed streets of cities and towns throughout the world, key workers left the safety of their homes to go to work. These workers produced, distributed and sold food, cleaned streets and buses to minimize the spread of the pandemic, ensured public safety, transported essential goods and workers, and cared for and healed the ill. These are the “key workers”.

This report is about these key workers: their experiences of working during the COVID-19 pandemic, the health risks that they endured, both physical and mental, and their working conditions overall. But it is also broader. It is about raising awareness of the long-standing relevance of this key workforce in the light of the numerous crises – both present and future – that the world faces. It is about encouraging governments, employers’ and workers’ organizations, and broader society to take the steps necessary to prevent, prepare for and mitigate crises by valuing these workers for their contribution to society, by investing in the infrastructure, both physical and social, that the world needs, and by creating an enabling environment for the private sector and its workers, who account for much key activity, to thrive.

Improving the working conditions of key workers is central to these efforts. Working conditions – such as safety and health, collective voice and representation, job security, working time, earnings, social protection and access to training – are interconnected. Deficiencies in one domain lead to deficiencies in others. The COVID-19 pandemic brought to the fore the importance of occupational safety and health (OSH), and the centrality of the workplace to public health. In a world of recurring shocks, where essential activities cannot stop functioning, it is evident that workplace safety and health is not just a benefit to the individual, but to the organization for which they work, as well as to society at large. Recognizing this, the International Labour Conference declared in June 2022 that the Occupational Safety and Health Convention, 1981 (No. 155), and the Promotional Framework for Occupational Safety and Health Convention, 2006 (No. 187), would be considered as fundamental Conventions, meaning that ILO Member States, regardless of the status of ratification of those Conventions, would henceforth be obliged to uphold the principles related to a safe and healthy working environment.

The objective of OSH – to prevent work-related injuries and diseases, and protect and promote the health of workers – has gained renewed importance on account of the pandemic, but also other challenges facing the world of work, such as heat stress¹ and the effects of climate change more broadly. Modern-day OSH regulation places prevention through risk elimination or mitigation at the centre of its efforts. But prevention is not limited to OSH; it applies to other working conditions that form the pillars of decent work. Preventing low wages, excessive hours, job insecurity, lack of voice, insufficient training and career paths through robust institutions of work prevents economic hardship, labour market segmentation, industrial strife and other social ills.

The ILO’s Employment and Decent Work for Peace and Resilience Recommendation, 2017 (No. 205), recognizes that “decent work is essential to the resilience of societies” as it not only mitigates the impact of disasters, but also ensures the conditions for a successful recovery.² This has been true during the COVID-19 pandemic, as countries with stronger institutions of work – robust systems of

The COVID-19 pandemic demonstrated the importance of workplace safety and health ... not just for the individual, but to the organization for which they work, and to society at large.

The Employment and Decent Work for Peace and Resilience Recommendation, 2017 (No. 205), “provides guidance to Members on the measures to be taken to generate employment and decent work for the purposes of prevention, recovery, peace and resilience with respect to crisis situations arising from conflicts and disasters.

... the term ‘resilience’ means the ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner ...”

social dialogue, labour administration, labour and social protection – could more readily attenuate the harmful effects of the pandemic, including better ensuring the continuity and quality of key services. Recommendation No. 205 calls for moving beyond humanitarian relief in disasters or conflicts so that countries make the broader investments in decent work necessary for resilient societies.

Unfortunately, as this report will show, key workers are, overall, in a more vulnerable position in the labour market. Despite delivering key goods and services that societies need for their everyday functioning, key workers face many decent work deficits, and these deficits are more pronounced than those faced by non-key workers. Consequently, this report calls for a revaluation of key work that reflects its social contribution, both as a matter of justice, but also to ensure the delivery of quality key services that are critical to society.

Revaluing key work to reflect its social contribution

So often we overlook the work and the significance of those who are not in professional jobs, of those who are not in the so-called big jobs. ... [W]henver you are engaged in work that serves humanity and is for the building of humanity, it has dignity, and it has worth. One day our society must come to see this. One day our society will come to respect the sanitation worker if it is to survive, for the person who picks up our garbage, in the final analysis, is as significant as the physician, for if he doesn't do his job, diseases are rampant.

*Martin Luther King, Jr*³

Poor pay, unsafe working conditions and low social prestige characterize many key occupations. Despite their critical role in the functioning of economies and societies, as evidenced during the COVID-19 pandemic, key work is typically undervalued and not reflective of its social contribution. Wage-setting is a complex process that reflects demand for the good or service being provided, and the supply of labour, but also long-established social norms about occupational prestige and hierarchy.⁴ As a result, the pay of many occupations is influenced by their social status, with some jobs degraded despite their social value. This can be seen clearly in the case of cleaning and sanitation work, which routinely scores at the bottom of indices of occupational prestige.⁵ It is also the case in highly feminized occupations, particularly in care, which suffer from well-documented “care penalties” in terms of earnings.⁶

Basing wages on market-based calculations of the marginal productivity of labour eschews society's responsibility to value key work through better pay and other working conditions, quite apart from the near-impossibility of measuring marginal productivity, especially in services.⁷ Indeed, “meeting market demand is not necessarily the same thing as making a truly valuable contribution to society”.⁸ In the early

months of the pandemic, in cities across the world, key workers were applauded nightly and extolled as heroes for the services they were providing, increasing the prestige of the work they do.⁹ Turning this new-found appreciation of their fundamental value to economies and societies into better working conditions is the task that lies ahead.

Structure of the report

This introductory chapter begins by explaining the definition of key worker used in the report as well as the use of the term “essential” worker, both legally and during previous crises. It then provides a descriptive analysis of the socio-demographic profile of key workers. Though the profiles and working conditions of key workers have been the focus of numerous studies since the onset of the pandemic, most of these have been country- or region-specific, and often limited to selected occupations. Being global, this report presents findings from a more diverse set of workers, from countries at vastly different levels of economic development, and thus with different economic, social and demographic profiles.

Chapter 2 addresses the challenges of working during the pandemic, both for key workers and enterprises providing key goods and services. It begins with an empirical analysis of excess mortality between key and non-key workers, and among the different categories of key workers, and demonstrates the importance of OSH protocols in mitigating workplace safety and health risks. The second and third sections of the chapter draw on interviews conducted for this report with workers and small business owners in Argentina, Canada, Ghana, India, Kenya, Malaysia, Mexico, Peru, the Philippines, the Republic of Korea, South Africa and Türkiye, as well as secondary literature. The objective of the qualitative analysis is to draw insights from the lived experience of key workers and business owners during the pandemic by giving them a voice to explain the different demands they faced. It documents the physical and mental stress experienced by key workers during the pandemic, and how their experiences differed depending on their working conditions. The analysis of enterprises distinguishes between those firms that did well and those that did not, and the challenges they encountered in instituting OSH protocols.

Chapters 3 and 4 analyse the working conditions of key workers, focusing on seven domains that frame job quality: safety and health, the right to freedom of association and collective bargaining, contractual arrangements, working hours, wages, social protection, and training. The analysis is based on representative and harmonized labour force and household survey data from 90 countries. These surveys allow the identification of key workers, following the definition put forth in this chapter. Chapter 3 explains the importance of each of the domains and assesses the extent of deficits in these domains for key workers. As job quality is highly influenced by the work one performs, Chapter 4 details the working conditions in the eight broadly defined key occupational groups analysed in the report, highlighting the particular risks of specific key occupations. It shows that many key workers entered the pandemic already experiencing difficulties, which were heightened by the strain of working in the pandemic.

Chapters 5 and 6 turn to policy, providing guidance on how to ensure that the vital contribution of key workers to the essential functioning of economies and people’s daily lives is recognized and valued accordingly, to support a more resilient world of work. Chapter 5 addresses the principal labour institutions – OSH, employment contracts, working hours, wage policies, social protection, training and labour inspection – that need to be strengthened to revalue key work, drawing on ILO standards and national practices. Chapter 6 explains how, in addition to strengthened labour institutions, a necessary condition for a more resilient world of work is investing in physical and social infrastructure in key sectors, especially in low-income countries where shortfalls are acute. The chapter looks specifically at the case of health-care, including long-term care, food systems and private enterprises. These investments ensure that the organizations – whether public or private – that supply these key services and goods have the means to fulfil their mission. Moreover, such investments yield significant economic and social returns.

Chapter 7 returns to the central argument that it is time for a reevaluation of key work, through improvements in working conditions. It argues that the investments advocated in the preceding chapters are necessary and summarizes the policies needed to build resilience.

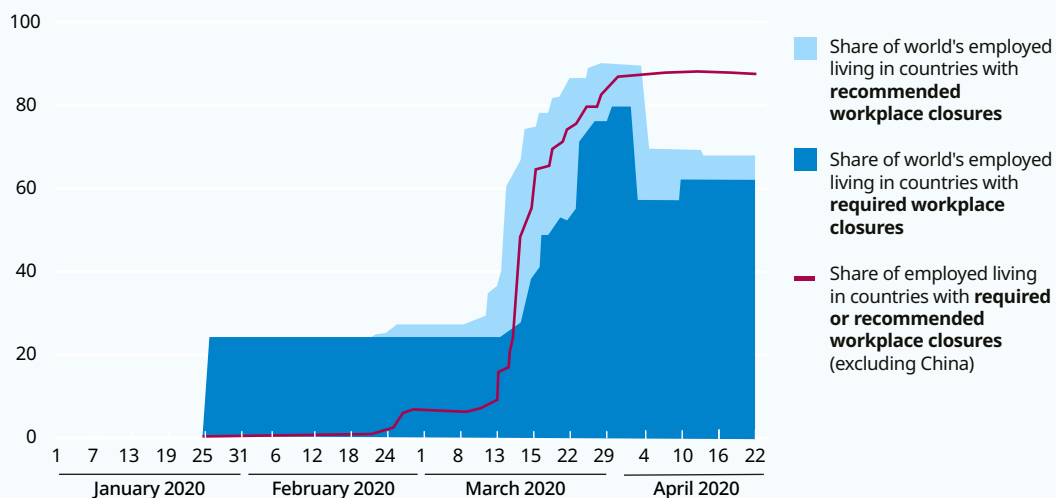
At the time of finalizing the report (autumn 2022), the pandemic had subsided to the extent that most restrictions around the world had been lifted. Thus, although the repercussions of the pandemic continue to be felt and there continue to be new cases of COVID-19 – and the risk of a reimposition of restrictions remains – the report refers to the pandemic in the past tense.

1.1. Defining key workers

At the start of the COVID-19 pandemic, countries cancelled large events or gatherings and tried to mitigate unnecessary human contact as much as possible to stymie the spread of the virus. At its peak in April 2020, nearly 80 per cent of the world's employed lived in countries with mandatory workplace closures and an additional 10 per cent lived in countries with recommended workplace closures (see figure 1.1). During the first year of the pandemic, more than 108,000 COVID-19-related international travel restrictions were put in place by countries, together with internal movement restrictions within countries.¹⁰ The COVID-19 pandemic also interrupted international migration, slowing the growth in the stock of international migrants by around 2 million by mid-2020, or 27 per cent less than the expected growth.¹¹

Despite these disturbances, some activities had to continue in order to meet societies' basic needs and functions. Therefore, most countries issued official lists that exempted certain workers who performed critical services from stay-at-home mandates, or that prioritized these workers for testing and eventually for vaccine access. These workers, commonly referred to as "essential", "frontline" or "key" workers, are the subject of this report. They cover a wide range of professions – from emergency medical technicians, to postal workers, to food vendors – including both wage workers and the self-employed, and with highly divergent working conditions. But they share the common attribute of engaging in a profession that serves the fundamental needs of societies and facing a greater risk during the pandemic of exposure to and illness from the virus by the mere action of leaving the safety of their home to perform their work.

▶ **Figure 1.1. Employment in countries with recommended or required workplace closures, January–April 2020 (percentage)**



Note: The share of employed in countries with recommended workplace closures is stacked with those in countries with required workplace closures.

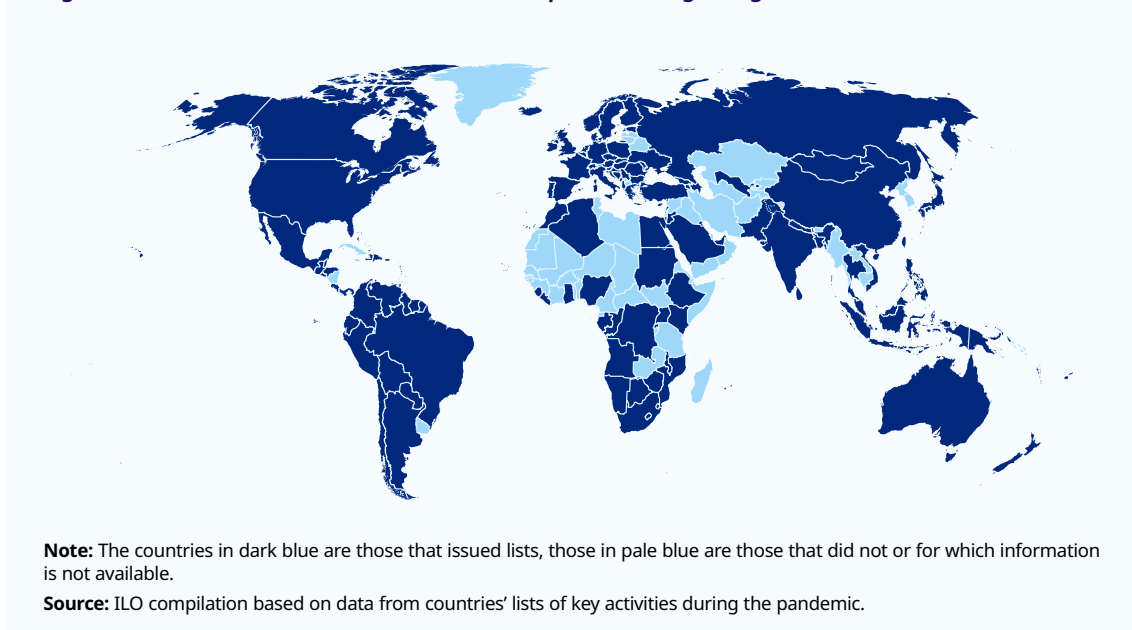
Source: "ILO Monitor: COVID-19 and the World of Work. Third edition", 2020.

Key workers in the COVID-19 pandemic

The definition of key workers in this report is derived from the lists issued by countries across the world at the beginning of the pandemic. In total, 126 countries issued lists in March–April 2020 designating those activities or services that had to continue to operate in spite of the pandemic (see figure 1.2).¹² While the lists varied in purpose, scope, and detail, there were important similarities across countries as to which services or activities were considered essential. This was true of countries in different regions of the world – Africa, the Americas, the Arab States, Asia or Europe – as well as between high-income, middle-income and low-income countries. Nevertheless, there were also differences, reflecting the structure of individual economies and geographies as well as political pressure by certain sectors to continue operations, particularly during subsequent waves of the pandemic.¹³

Most countries provided detailed lists of services that needed to continue operating, though in a few countries the lists were general, and in six countries the lists were limited to activities that were not permitted. In general, there was substantial overlap in the identified activities, which was not surprising given the need to guarantee that basic services and goods continued to be provided. Consequently, most countries included activities safeguarding access to food, water, electricity, sanitation and healthcare, and ensuring public order. The provision of such goods and services, however, implied that other activities came into the fold given their involvement in such provision. Thus, for example, no country denied the cruciality of food and agricultural production. But, in addition to the farmers who cultivate the land, ensuring adequate food provision also meant incorporating transport (to deliver the food to market), certain manufacturing activities (the factories that prepare processed food items), some retail sectors (the stores and street vendors that sell food, both fresh and processed), restaurants that prepare food for take-out, as well as delivery services (including platform workers) that deliver the food to consumers. Similar networks of production and exchange apply to healthcare. In addition to these services, most governments extended their list of essential services to include information and communication activities, financial activities, legal services and public administration. These services were necessary for the continuation of economic activity and indeed ensured that the basic needs listed above could be met. In all, there were 13 broad sectors that provide services considered essential in most countries (see table 1.1; see also the Appendix for further details on the methodology used to map the country lists).

► **Figure 1.2. Countries that issued lists in March–April 2020 designating “essential” activities**



▶ **Table 1.1. Sectors associated with essential services**

Agriculture; forestry and fishing	Information and communication
Mining and quarrying	Financial and insurance activities
Manufacturing	Professional, scientific and technical activities
Electricity; gas, steam and air conditioning supply	Administrative and support service activities
Water supply; sewerage, waste management and remediation activities	Public administration and defence; compulsory social security
Wholesale and retail trade; repair of motor vehicles and motorcycles	Human health and social work activities
Transportation and storage	

Using the compiled sectoral lists (at the two-digit ISIC level), the next step was to identify the occupations in each of those sectors using the International Standard Classification of Occupations (ISCO-08). There were 40 such occupations at the two-digit ISCO level, 15 of which were considered teleworkable in most parts of the world. While many teleworkable occupations are critical to the functioning of economies and societies, the ability to work from home meant that the workers concerned were not exposed to the same health risks emanating from the pandemic as those whose jobs required physical presence. As the focus of the report is to derive lessons from the COVID-19 experience for Member States wishing to strengthen the resilience of their economies and societies to future shocks, the report concentrates on those workers who had to leave their homes to perform their work. Therefore, teleworkable occupations are excluded from the analysis,¹⁴ and “key workers” are considered to be those working in the 25 non-teleworkable occupations in the sectors associated with essential services (table 1.1). These occupations are categorized into the following eight broad occupational groups: food systems workers; health workers; retail workers; security workers; manual workers (includes plant operators and warehouse workers); cleaning and sanitation workers; transport workers; and technicians and clerical workers (see figure 1.3).¹⁵

▶ **Figure 1.3. Non-teleworkable key occupations by broad occupational category**



The eight main occupational groups cover the principal services needed to maintain the basic functions of an economy and society, with one notable exception: education.¹⁶ Quality education is the fourth United Nations Sustainable Development Goal and, like health, has long been considered necessary for the fulfilment of “basic needs” as it is a means for full participation in the social, cultural and political life of a community.¹⁷ But in response to concerns from public health experts that schools were a primary source of community transmission of the COVID-19 virus, 188 countries instituted school closures in April 2020.¹⁸ Likely as a result, only 19 countries designated educational services as “essential” during the early months of the pandemic. Most countries (90 per cent) adopted alternative means of providing continuous education using technologies such as the internet, television and radio, with teachers and students shifting to remote learning.¹⁹ As education was designated as “essential” only by a small share of countries, and because there was a shift to remote learning in many countries, educational professions are not included in the definition of key workers for purposes of this report, notwithstanding wide recognition of their essential function in societies and economies.

The concept of key or essential work over time

The term “essential”, “frontline” or “key” worker appeared in the daily lexicon at the onset of the COVID-19 pandemic and the resulting lockdowns which restricted or discouraged the movement of all but those considered vital for the core functions of the economy and society, namely “essential workers”. While the concept of “essential work” was new to many, it had been used in the past, in reference to the requirement that certain tasks be carried out, either by permitting or, at times, compelling specific types of labour. In addition, it is used juridically with reference to restrictions on the right to strike for workers performing specific activities.

Though the concept of “essential work” is associated with the modern, industrial state, there are nonetheless examples of its use in pre-industrial times, reflecting the realization that specific services need to be delivered even in times of crisis. During the various iterations of the black plague in Europe between the fourteenth and seventeenth centuries, various city governments implemented quarantines, shut down economic activities, and granted exemptions only to residents who conducted critical work. Plague-era essential services included gravediggers to bury the dead, guards to enforce quarantine, nurses to serve at pesthouses and “searchers of the dead”.²⁰ As with modern-day key services, the riskiest jobs were carried out by individuals who were economically vulnerable and desperately needed an income, such as widows and parish pensioners. During the bubonic plague in London (1665–66), many physicians, who were exclusively male at the time, did not risk examining contagious corpses and fled the disease-ridden city, which left the essential job of searching for the dead to women under economic duress.²¹ In some cases, authorities took even less desirable steps, forcing some groups to undertake critical tasks that were extremely dangerous during plague outbreaks. City health officials in Marseille at the beginning of the eighteenth century, for example, purchased slaves from a quarantined ship to cart and bury corpses.²² Similar “essential activities” were protected during the 1918–20 Spanish flu pandemic. In Java, the Dutch colonial government redirected workers from sugar cane and tobacco cultivation to rice production, in response to labour shortages and the heightened risk of famine.²³

The designation of essential services was used more explicitly during the two world wars of the twentieth century. In the First World War, the British Government passed the National Registration Act to identify all occupations that “produce the necessary goods for civilian and military use”, and people employed in these jobs were exempted from military service.²⁴ Among the industries that were deemed as essential were metals, mining, textiles, footwear, transport, agriculture, cement and brick production, chemicals, leather, flour milling and baking, public utilities and local government. The United Kingdom reintroduced laws regarding essential work during the Second World War with the Essential Work Order, which

The concept of “essential work” was new to many during the COVID-19 pandemic, but it has been used in the past in reference to certain tasks that need to be carried out even in times of crisis, such as plagues or wars.



became law in 1941. According to this law, employers were forbidden to lay off workers whose jobs were considered essential for the war effort. Moreover, various skilled employees were exempted from military service if they held key occupations. Given the labour shortages, it became compulsory in 1941 for women to register for war work, and unmarried females were able to choose between working in the service sector or industry.²⁵

In Germany, during the Second World War, various industries were declared essential to the war economy including the production of oil and non-ferrous metals, railway wagon construction, the chemical industry, and the manufacture of gunpowder and explosives.²⁶ Certain native workers, often in managerial positions and often skilled specialists, were considered indispensable for the economy and were thus exempted from military service.²⁷ In the United States, the Government distinguished between people who needed to be employed in key industries and those who should be recruited for military service. The Selective Training and Service Act of 1940 established the rules for exemption from military service based on occupation.²⁸ People working in the defence industry and labourers employed in factories providing necessary supplies as well as workers in industries that served national interests and public health were considered to be key.²⁹ Because of the high number of men called to serve in the war effort, there were labour shortages in key jobs, especially in ship-building, ammunition storage and machine-building factories. Subsequently, people of colour, women and persons with disabilities were encouraged to join the workforce and perform these critical tasks.³⁰

One week following the Russian invasion of Ukraine in February 2022, the Ukrainian Ministry of Economy issued several decrees that reserved certain key workers from being mobilized into military operations for a period of six months to meet the needs of the Government and its defence operations, as well as the population at large. Among the categories of reserved workers were those in the military-industrial complex, the public sector (including state enterprises), agriculture, utilities, information and communications technologies, banks, trade, handicrafts, food processing of necessities (such as bread), and the pharmaceutical industry, as well as health professionals, drivers and railway workers.³¹

Legal definition of essential work

The other known use of the term “essential workers” is juridical, in reference to legal limitations imposed by many countries on the right to strike of workers performing essential services. Although the ILO’s Freedom of Association and Protection of the Right to Organise Convention, 1948 (No. 87), establishes the right of workers’ and employers’ organizations to “organize their administration and activities and to formulate their programmes” (Article 3), with a view to “furthering and defending the interests of workers or of employers” (Article 10),³² countries have nonetheless restricted the right to strike for certain categories of “essential” workers. According to the ILO’s Committee on Freedom of Association (CFA), such restrictions are valid only “for public servants exercising authority in the name of the State”, “in the event of an acute national emergency for a limited period of time”, or if the interruption of service “could endanger the life, personal safety or health of the whole or part of the population”.³³

The CFA “has called attention to the abuses that might arise out of an excessively wide definition in the law of the term ‘essential services’ and suggested that the prohibition of strikes should be confined to services which are essential in the strict sense of the term”,³⁴ defined as “services whose interruption could endanger the life, personal safety or health of the whole or part of the population”.³⁵ Typically this is associated with the provision of services that meet basic needs including utilities (water, electricity, gas, telephone),

public safety (fire, police, armed forces, prisons) or health. The Committee has acknowledged that “a non-essential service may become essential if a strike lasts beyond a certain time or extends beyond a certain scope”,³⁶ as could be the case for sanitation services, for example.

On several occasions, the CFA has issued positions critical of overly broad definitions of essential services employed by ILO Member States, including in reference to radio and television services, the metal and mining sectors, computer services for the collection of excise duties and taxes, government printing services, state monopolies on alcohol, salt and tobacco, airline pilots, hotel services, auto manufacturing, as well as agricultural activities, including the supply and distribution of foodstuffs.³⁷

During the COVID-19 pandemic, some countries distinguished between the concept of essential services in reference to limitations on the right to strike and “essential services” in the pandemic. For example, when the Malaysian Government instituted its first Movement Control Order in March 2020, it clarified that the list of “essential” sectors and services was different from that under the First Schedule of Malaysia’s Industrial Relations Act, 1967, which relates to restrictions for lockouts and strikes. Instead, the pandemic list of essential sectors and services allowed to operate during the lockdown was gazetted in the Prevention and Control of Infectious Diseases (Measures within the Infected Local Areas) Regulations 2020.³⁸

Nevertheless, some countries enacted broad emergency measures to restrict the right to speech, assembly and association, including the right to strike, during the COVID-19 pandemic. In March 2020, Portugal ordered striking port workers back to work, arguing that the ports were vital to the production and supply of essential goods and services to the population.³⁹ In February 2022, following a series of strikes in the health and electricity sectors in Sri Lanka amid a severe economic crisis, the President invoked a 1979 law prohibiting stoppages in the two sectors, declaring all related work “essential public services”.⁴⁰ Some countries have formally registered derogations from their treaty obligations to respect freedom of association, including Ecuador and Estonia (to Article 22 of the International Covenant on Civil and Political Rights) and Albania (to Article 11 of the European Convention on Human Rights).⁴¹

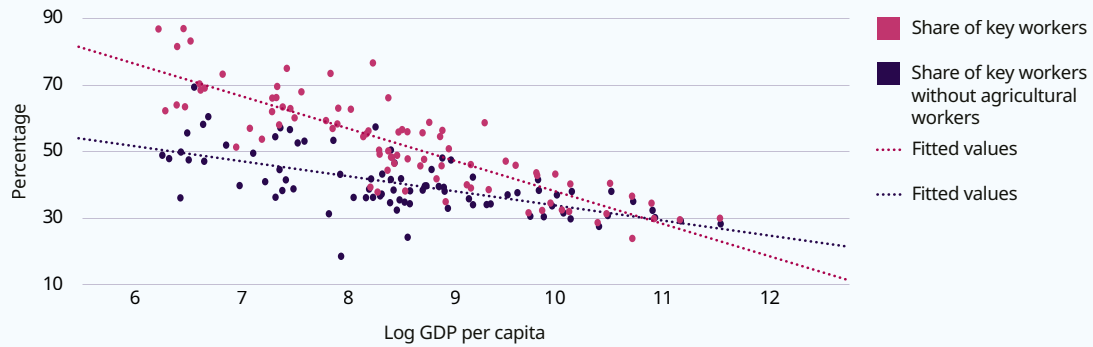
Because of the association of “essential services” with restrictions on the right to strike, this report uses the nomenclature “key workers”.

During the COVID-19 pandemic, some countries enacted broad emergency measures to restrict the right to speech, assembly and association, including the right to strike.

1.2. How many key workers are there and what are their characteristics?

Key workers account for a large share of the world’s labour force. For the 90 countries for which there are data, the share of key workers ranges from a high of 87 per cent in Mozambique to a low of 24 per cent in Israel, with an average of 52 per cent across all the countries.⁴² As figure 1.4 demonstrates, in general, the higher the level of income of a country, the lower the percentage of workers in key occupations. This is not surprising given that, in many low- and middle-income countries, agriculture continues to be an important part of economic activity and a dominant occupation. Nonetheless, as can be seen from figure 1.4, the negative relationship holds even after agricultural workers are excluded. With economic development, the structure of economic activities diversifies, with more people employed in non-key sectors – such as finance, insurance and real estate or arts, entertainment and recreation – that do not fall under the categorization of key work. As a result, with increases in income, there is an overall decline in the share of key workers (see figure 1.5), which holds even when agriculture is excluded.

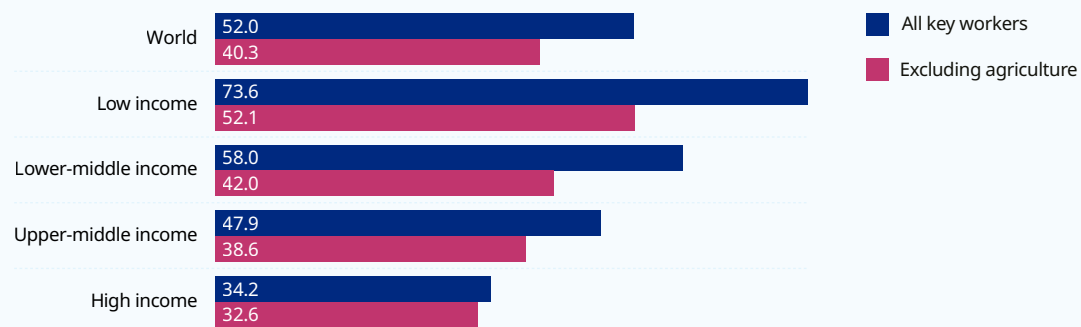
▶ **Figure 1.4. An inverse relationship between level of income and share of key workers**



Note: The figure is based on a bivariate regression between key employment share and gross domestic product (GDP) per capita (constant 2015 US dollars).

Source: ILO calculations based on surveys listed in the Appendix.

▶ **Figure 1.5. Key workers among employed population by country income group, with and without agriculture (percentage)**

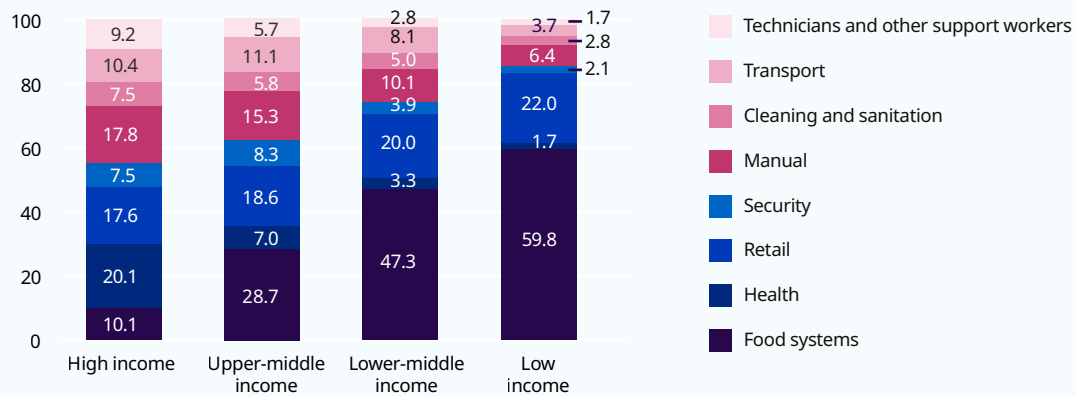


Source: ILO calculations based on surveys listed in the Appendix.

In addition, there is a shift in the types of occupations that become most prevalent in key work, particularly towards healthcare, cleaning and sanitation, manual work (manufacturing and warehouses), and work as technicians and clerks. Whereas less than 2 per cent of key workers are engaged in healthcare in low-income countries, the share jumps to nearly 20 per cent for high-income countries (see figure 1.6). But even within occupational groups, there is a shift in occupations. For example, the food systems category includes the value chain of food production from subsistence farmers, fishers, hunters and gatherers (ISCO 63), to market-oriented skilled agricultural, forestry, fishery and hunting workers (ISCO 61 and 62) and labourers (ISCO 92), to food preparation assistants (ISCO 94). Nearly 40 per cent of key food systems workers in low-income countries are classified as subsistence farmers (ISCO 63), with the share of subsistence farmers among key workers highest in Angola, Ethiopia, Mozambique and Nigeria. In contrast, in high- and upper-middle-income countries, the share is just over 10 per cent. Similarly, food preparation assistants account for 7 per cent of food systems workers in high-income countries, whereas their presence in low-income countries is negligible (0.1 per cent).⁴³

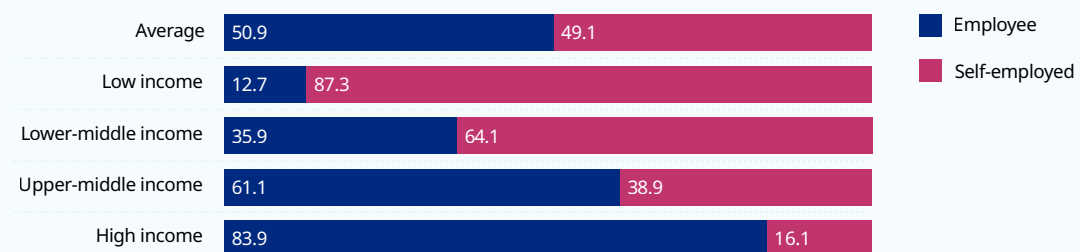
While subsistence farming may seem outside the scope of key work as it concerns family provision, it is important to bear in mind that, in practice, workers classified statistically as “subsistence farmers” often engage in market activities, particularly during harvest time when they sell excess produce, in addition to recurrently performing work as agricultural labourers or as homeworkers in goods production.⁴⁴

► **Figure 1.6. Distribution of occupations among key workers by country income group (percentage)**



Note: Due to data limitation, the “technicians and other support workers” category includes key personal service workers (ISCO code 51), including those who fall under other occupational groups (for example, food systems workers, such as cooks).
Source: Analysis based on ILO Harmonized Microdata (ILOSTAT). See Appendix for more details.

► **Figure 1.7. Employment status of key workers by country income group (percentage)**



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

Indeed, studies from Ethiopia and Nigeria demonstrate that these other economic activities are critical for securing their livelihoods.⁴⁵ Thus subsistence farmers typically blur the lines between agricultural production for self-consumption and market orientation.

Moreover, subsistence farmers and agricultural labourers can grow in number during times of economic downturn as the sector often acts as a refuge for return migrants. This has been the case in India, where more than 11 million urban migrants returned to the countryside following the imposition of a strict lockdown at the end of March 2020.⁴⁶ While not all of these workers turned to agricultural work, many did, given the need to maintain their livelihoods in the absence of robust social protection systems.⁴⁷ A similar outcome could be found among street vendors (retail), as many workers who lost their jobs during the pandemic turned to street vending as a means of earning a living. Consequently, some key occupations, particularly in the global South, play a double role in both contributing to the provision of society’s basic needs and helping to support the livelihoods of individual workers and their families.

On average, 51 per cent of key workers are wage and salaried while the rest are self-employed (see figure 1.7). Nonetheless, there are crucial differences across income groups: in high-income countries, most key workers are employees (84 per cent), whereas the opposite is true for low-income countries,

Many of the rights and benefits bestowed on workers are absent when a worker is self-employed.

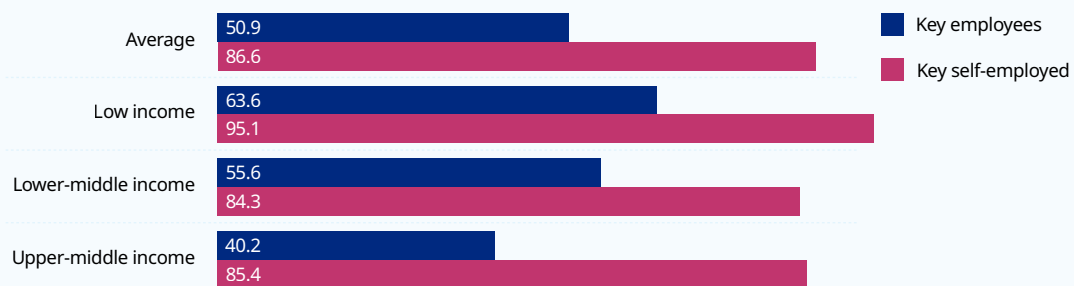
where more than 87 per cent of key workers are self-employed. In high-income countries, agriculture and, to a lesser extent, transportation are the two main economic activities in which self-employment is common. In contrast, in low-income countries, self-employment is the dominant type of employment among key workers in all occupational groups except health and security.

The distinction in employment status – employees versus self-employed workers – is critical, as the employment relationship remains the gateway to employment, labour and social protection in most legal systems of the world.⁴⁸ Many of the rights and benefits bestowed on workers are absent when a worker is self-employed. Workers who are self-employed (or own-account) are not covered by protections on working hours or minimum wages, and generally do not benefit from OSH protections, access to training or social protection. The right to freedom

of association and collective bargaining, while recognized by the CFA as applying to all workers regardless of their status, is also not universally applied.⁴⁹ It is for this reason that there are concerns about the growth in disguised employment relationships, which can nullify or attenuate the protection afforded to workers by law.⁵⁰ The distinction between employment statuses had important consequences during the COVID-19 pandemic, as it determined the amount of protections that workers could rely on to mitigate the strain of working as a key worker.

In developing countries, informality is a common feature of key workers, especially among the self-employed. Informality, as defined by the ILO, includes employees holding informal jobs, contributing family workers, and own-account workers, employers and cooperative members operating in the informal sector.⁵¹ On average, in developing countries, nearly 87 per cent of key self-employed workers have informal status; in low-income countries, 95 per cent are informal. For key employees, the distribution is less skewed but nonetheless worrisome, as 51 per cent work informally. Once again, low-income countries have high rates of informality, with 64 per cent of key employees working informally; in upper-middle-income countries, the share falls to 40 per cent, which is still high (see figure 1.8). It is important to note that, while agriculture is highly informal, excluding it from the analysis only reduces the rate of informality among key employees to 46 per cent on average, suggesting the pervasiveness and challenge of informality in developing countries. Yet, despite its pervasiveness, some informal workers faced difficulties with the authorities when they continued working during the pandemic lockdowns. As countries' lists concerned the essential goods and services that needed to be provided – rather than the occupations that performed them – in countries with substantial shares of informal workers, there was at times a grey area as to whether informal workers would be allowed to work (see box 1.1).

► **Figure 1.8. Informality of key workers (employees and self-employed), developing countries (percentage)**



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

Box 1.1. Lack of recognition of some informal workers as key workers

Informal workers make up around 60 per cent of the global workforce, and in some parts of the developing world the percentage is even higher.¹ Many informal workers provide goods and services that were classified as “essential” during the pandemic, such as in food, sanitation, care and transport, which should have allowed all workers in these sectors to perform their jobs despite the restrictions imposed. Nonetheless, compared to their formal counterparts in the same sectors, informal workers faced extensive obstacles, exacerbating the challenges they had already faced before the pandemic.

The lists of key sectors across different countries varied in their levels of specificity. Due to the informal nature of their work, informal workers often fell into a grey area that COVID-19 mandates overlooked. For example, while informal workers such as street vendors were explicitly classified as key workers in many African countries, in many Latin American countries the rules were ambiguous. Their recognition as key workers also varied across different sectors. As a result, some informal workers had to organize and lobby for the official codification of their status as key workers in order to guarantee their right to work during the pandemic. While some eventually received that recognition, by 2022 waste pickers in India still had not been recognized as key workers.

Even when they were recognized as key, informal workers could still face trouble working, as implementation relied on the discretion of the local authorities. A WIEGO study across 11 major cities worldwide during the pandemic found that some informal workers needed to obtain additional permits, which often involved extensive interaction with the local authority. Moreover, permission to perform the job did not explicitly include other activities needed to do so, such as obtaining ingredients, leading at times to confrontation with the police. As a result, the study found, for example, that 95 per cent of respondents who were food vendors in South Africa could not continue working in April 2020 due to market closures or restrictions on travel.²

Even prior to the pandemic, informal workers were less likely to be protected than others and often faced eviction and confiscation of their property. The pandemic restrictions exacerbated existing tensions, escalating the harassment they routinely encounter from security and police. The pandemic also aggravated other existing difficulties faced by informal workers. Since incomes declined during the pandemic, there was less demand for goods and services provided by informal workers. The restrictions on travel also limited the movement of customers and increased the costs for informal workers to operate. The decrease in daily cash flow had a more detrimental impact on informal workers as they have less access to formal sources of credit, including government support.

¹ Bonnet, Vanek and Chen, 2019.

² Alfars et al., 2022.

Source: Orleans Reed, 2022.

Lastly, key workers are employed predominantly in the private sector. On average, just under 15 per cent are employed in the public sector, compared with 24 per cent for non-key workers (figure 1.9). Nevertheless, public employment of key workers varies greatly between countries, with a mere 3 per cent of key workers employed in the public sector in low-income countries, compared with 25 per cent in high-income countries. This situation reflects both the small size of the public sector in low-income countries (which in turn reflects significant differences in the share of tax revenues as a percentage of national income), as well as the dominance of agriculture in low-income countries (food production and distribution being almost entirely private). Even when food systems workers are excluded, however, the share of public employment among key workers in low-income countries rises to only 8 per cent,

▶ **Figure 1.9. Share of public employment among key workers by country income group (percentage)**

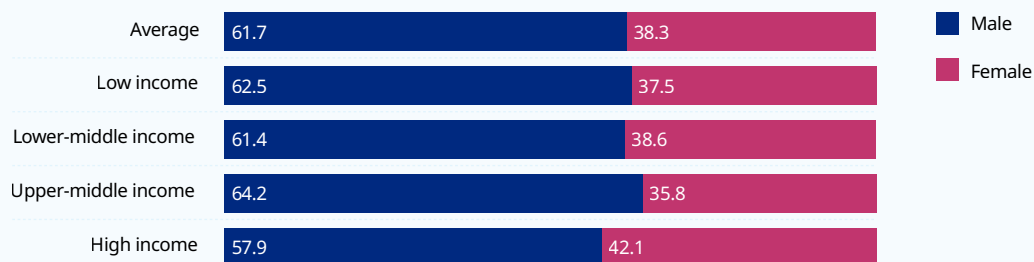
Source: Analysis based on ILO Harmonized Microdata (ILOSTAT). See Appendix for more details.

which is well below the world average of 19.6 per cent. Low levels of public investment in healthcare in many low-income countries (see section 6.1) translate into low shares of key health workers. Indeed, key health workers constitute just 2 per cent of all key workers in low-income countries, compared with 20 per cent in high-income countries.

Socio-demographic characteristics of key workers

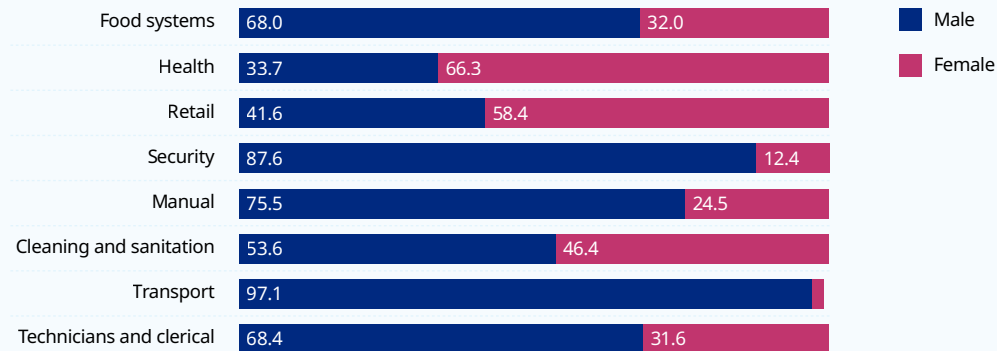
Because key workers constitute a sizeable proportion of the labour market, especially in low-income countries, there are similarities between the demographic profile of key workers as a whole and the overall working population – though also some distinctions, especially when disaggregated by occupational group or country income level.⁵²

Globally, women are under-represented among key workers, comprising 38.3 per cent of all key workers, while they account for 42 per cent of non-key workers. This figure includes contributing family workers, but not other types of unpaid work undertaken by women. Nevertheless, women's representation in key work in the 90 countries for which there are data is lower, overall, than that of men's, reflecting the lower shares of female participation in some regions as well as their scant representation in some key occupations. High-income countries have relatively higher shares of female key workers, at roughly

▶ **Figure 1.10. Sex of key workers by country income group (percentage)**

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

► **Figure 1.11. Sex of key workers by occupational group, percentage average across countries**



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

► **Figure 1.12. Age distribution of key workers by country income group (percentage)**



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

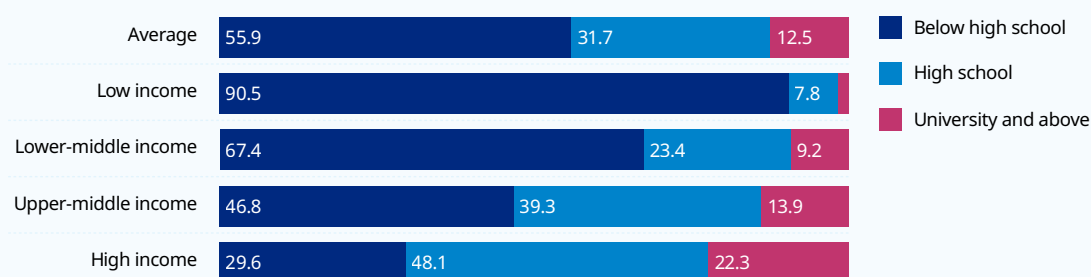
42 per cent, compared with upper-middle-income and low-income countries, where women's employment as key workers is 4 to 5 percentage points lower (see figure 1.10). Because occupational and industrial sex segregation continues to be an important feature of labour markets around the world, the relative importance of occupations that are male- or female-dominated in a country's employment structure affects the percentage of women in key employment.⁵³ In health and retail, women constitute the majority of key workers, at 66 and 58 per cent, respectively, whereas in occupational groups such as security and transport there are few women (see figure 1.11).

The age distribution of key workers reflects the age distribution of labour markets around the world. On average, more than 71 per cent of key workers are between the ages of 25 and 54 (figure 1.12). While key workers in low-income countries have a slightly higher share of youth, the opposite holds for high-income countries, where the proportion of older workers is above the average. Moreover, the same pattern is observable for non-key workers, reflecting the demographic structure of these countries. For example, in Ethiopia and Guatemala, where the median age of the population is 20 and 23 years old, respectively, more than 31 per cent of all key workers are aged 15 to 24. In contrast, in Greece and Slovakia, the share is below 5 per cent, with the median age in these countries at 46 and 41 years old, respectively.⁵⁴

Average educational qualifications of key workers across the sample of 90 countries are below those of their non-key counterparts at every level of economic development. On average, 12.5 per cent of key workers have at least some tertiary education, compared with nearly 28 per cent of non-key workers (figure 1.13). As the logit analysis in box 1.2 shows, less-educated workers have a greater chance of being a key worker, independent of their country's income level. Nevertheless, there are important distinctions in educational attainment between countries. In low-income countries, 91 per cent of key workers have an education level below high school, compared with just 30 per cent in high-income countries; the ratio of tertiary education follows a similar pattern. However, the data also show that, even in occupational groups such as retail, transportation, cleaning and sanitation, and manual labour – that generally do not require advanced skills⁵⁵ – between 6 and 11 per cent of key workers have a university degree. According to the ILO, 258 million people around the world are overeducated for the jobs they are performing.⁵⁶ The incidence of education mismatches differs from country to country, but there are negative impacts of such mismatch in terms of earnings, job satisfaction and lost investment, both in developed and developing countries.⁵⁷

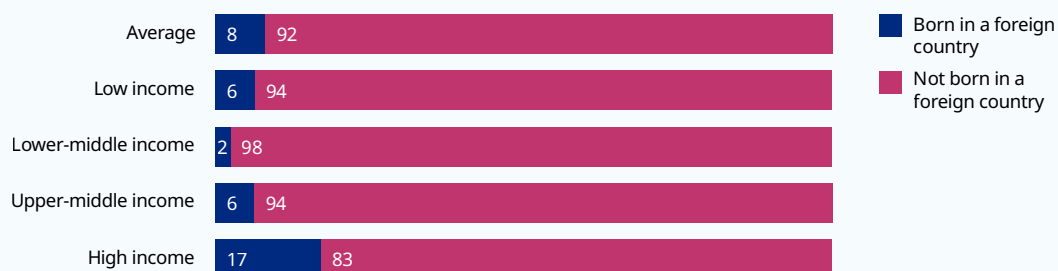
The pandemic highlighted the important role of international migrants in delivering key services. As figure 1.14 shows, nearly one in five key workers in high-income countries was an international migrant. Migration status is derived from the responses in household surveys on whether the individual is foreign-born; although an imperfect measure, it allows standardization across many countries. As the figure shows, on average, the share of foreign-born key workers is 8 per cent, though it is much smaller in lower-middle-income countries, at 2 per cent. There are also important distinctions by locality. In Europe, for example, the share of migrant workers is around 14 per cent, but in certain capital cities, like Brussels, it can reach 50 per cent.⁵⁸ The presence of international migrants across occupational groups differs as well. While in security, on average, less than 5 per cent of individuals employed in key sectors are migrants, in cleaning and sanitation their share exceeds 10 per cent on average. In high-income economies, the proportion of migrant key workers in cleaning and sanitation reaches 26 per cent.

► **Figure 1.13. Educational level of key workers by country income group (percentage)**



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

► **Figure 1.14. Share of international migrants in key work by country income group (percentage)**



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

Box 1.2. Socio-demographics and likelihood of employment in key jobs

Table B.1 demonstrates the likelihood of working in key occupation and sectors by sex, age, education, and migrant status. The results are based on a pooled sample of 49 countries.

Sex has a statistically insignificant relationship to being a key worker for the total sample, yet the effects are diverse across countries. In high- and low-income countries, being a woman increases the likelihood of employment as a key worker, whereas in middle-income countries the correlation is negative but insignificant. The diverse findings can be largely attributed to differences in female labour force participation and the occupational structure across countries. With respect to age, being prime-aged increases the probability of employment in key jobs only in low-income countries, while being older has the same effect in low- and middle-income countries. Less-educated workers, as opposed to individuals with high-school or university qualifications, have a greater chance of being a key worker, with the relationship holding independent of country income level. Migrant status is positively associated with being a key worker in high-income countries, whereas the association is negative in upper-middle-income countries.

► **Table B.1. Relation between employment in key jobs and socio-demographic characteristics by country income group** (result from logistic regressions)

	All	High income	Upper-middle income	Lower-middle income	Low
Female	-0.1 (0.14)	0.13** (0.01)	-0.26 (0.22)	-0.3 (0.26)	0.28* (0.08)
Male	Ref.	Ref.	Ref.	Ref.	Ref.
Young	Ref.	Ref.	Ref.	Ref.	Ref.
Prime	0.08 (0.1)	0.03 (0.02)	-0.03 (0.03)	0.22 (0.22)	0.18* (0.08)
Older	0.24 (0.14)	0.03 (0.04)	0.28* (0.12)	0.6* (0.28)	0.5** (0.14)
Below high school	Ref.	Ref.	Ref.	Ref.	Ref.
High school	-0.59** (0.07)	-0.28** (0.07)	-0.36** (0.03)	-0.75** (0.11)	-1.41** (0.19)
University and above	-1.36** (0.12)	-1.01** (0.15)	-1.3** (0.07)	-1.74** (0.12)	-2.22** (0.19)
Migrant status	0.02 (0.05)	0.08* (0.04)	-0.5** (0.16)	0.44 (0.19)	-0.4 (0.3)
Non-migrant	Ref.	Ref.	Ref.	Ref.	Ref.
Country dummy	Yes	Yes	Yes	Yes	Yes
Year dummy	Yes	Yes	Yes	Yes	Yes
N	2435976	1395768	613022	395125	32061

Note: "All" includes pooled logit results from 49 countries with clustered standard errors. "High income" includes 14 countries, "upper-middle income" includes 15 countries, "lower-middle income" includes 17 countries, and "low income" includes 3 countries. Standard errors are shown in parentheses. * $p < 0.05$, ** $p < 0.01$

Notes

- 1 ILO, 2019f.
- 2 La Hovary, 2022.
- 3 Martin Luther King, Jr., "All labor has dignity", Memphis, TN, 18 March 1968.
- 4 Grimshaw and Rubery, 2007.
- 5 Van Drie and Reeves, 2020.
- 6 ILO, 2018a; Folbre, Gautham and Smith, 2021.
- 7 Grimshaw and Rubery, 2007.
- 8 Sandel, 2020.
- 9 De Camargo and Whiley, 2020.
- 10 IOM, 2021.
- 11 UNDESA, 2021.
- 12 Many countries revised their lists, issuing new versions during different waves of the pandemic. This analysis considers activities specified in the first lists issued in March–April 2020.
- 13 Many countries introduced exemptions to established mobility restrictions to allow the international movement of workers in specific sectors in the light of food security concerns.
- 14 ILO, 2021r, addresses teleworkers in the COVID-19 pandemic.
- 15 The Appendix gives the two-digit occupations in these eight broad categories.
- 16 Except for education, all other services for the community at large identified for the fulfilment of basic needs, such as safe drinking water, sanitation, public transport and health, were included. See ILO, 1976.
- 17 ILO, 1976.
- 18 By September 2020, the extent of school closures, especially in Europe and Asia, had decreased, and teaching professionals who needed to commute to work were exempt from movement restrictions. See UNICEF, n.d.
- 19 Through remote tools, educational institutions were able to reach nearly 70 per cent of students across the world, though arguably not at the same level of quality as in-person classes (UNICEF, n.d.).
- 20 Siena, 2020.
- 21 Munkhoff, 1999.
- 22 Bradley, 2011.
- 23 Gallardo-Albarrán and de Zwart, 2021.
- 24 Dewey, 1984.
- 25 Wagner, Osborne and Reyburn, 2007.
- 26 Milward, 2015.
- 27 Echternkamp, 2015.
- 28 In addition to occupation, the other criteria for exemption were dependency and being unfit for military service.
- 29 Gropman, 1996.
- 30 Graves, 2020.
- 31 Ministry of Economy of Ukraine, n.d.
- 32 ILO, 1996.
- 33 ILO, 2015.
- 34 ILO, 1973, para. 109.
- 35 ILO, 2018c, para. 779.
- 36 ILO, 2018c, para. 837.
- 37 Knäbe, 2019.
- 38 Lean, 2022.
- 39 Subansinghe and Vogt, 2020.
- 40 Al Jazeera, 2022.
- 41 Subansinghe and Vogt, 2020.
- 42 Global estimates are obtained from a sample of 90 countries that have detailed ISIC and ISCO codes in their labour force, or equivalent surveys, between 2012 and 2019.
- 43 These estimates at the detailed ISCO code level are based on the national data sources listed in table A6 in the Appendix, with the exception of Australia, China, India, the Russian Federation and Ukraine.
- 44 ILO, 2021r.
- 45 Sibhatu and Qaim, 2017; Babatunde and Qaim, 2010.
- 46 Pasricha, 2021.
- 47 Dev and Rahul, 2022.
- 48 De Stefano et al., 2021.
- 49 ILO, 2018c.
- 50 ILO, 2016c; Vermeylen et al., 2017.
- 51 For more details on the definition of informality and how it is measured in labour force surveys, see ILO, n.d.(d).
- 52 The results in the analysis that follows also hold when food systems workers are excluded from the descriptive analysis. Hence, the socio-demographic characteristics of key workers are not driven by a single occupational group.
- 53 ILO, 2016d.
- 54 Worldometers, n.d.
- 55 For an overview of skill requirements by occupation, see ILO, n.d.(c).
- 56 ILO, 2020t.
- 57 Cultrera et al., 2022; Darko and Abrokwa, 2020.
- 58 OECD, 2020a.