

Russell Jackson
Cleaner
1981 - 2020



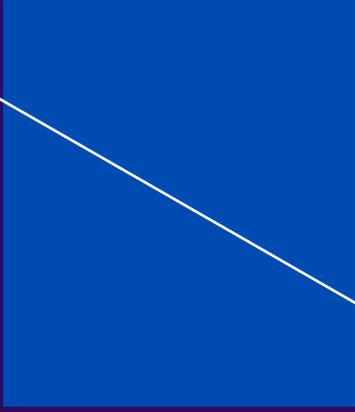
Lev Golubov
Road Car Inspector
1961 - 2020



Ernesto Hernandez
Bus Operator
1962 - 2020



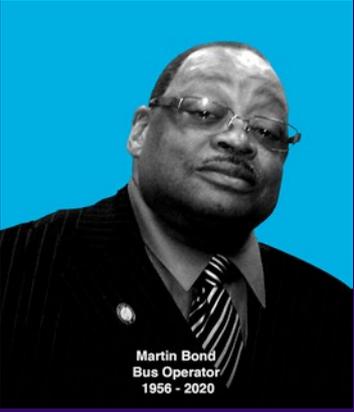
Lionel Hogan
Bus Operator
1964 - 2020



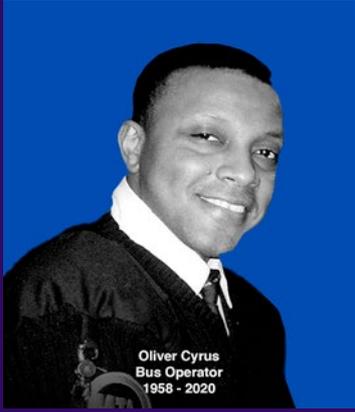
David Hamilton
General Superintendent, Signals
1965 - 2020



Laricter Brown
Dispatcher Rapid Transit Operations
1984 - 2020



Martin Bond
Bus Operator
1956 - 2020



Oliver Cyrus
Bus Operator
1958 - 2020



2

The risk and strain of working during the COVID-19 pandemic

Main findings



Credit: © volkerpreusser



Key workers suffered higher mortality rates from COVID-19 than non-key workers.



Among key workers, transport workers had the highest rates of excess mortality from COVID-19.



Formally employed workers with job security and union representation were better able to accommodate the increased demands and risks of working during the pandemic.



Key enterprises encountered difficulties in operating during the pandemic due to disrupted supply chains, financial uncertainty and the challenges of complying with emergency safety and health guidelines.

At the onset of the COVID-19 pandemic, the workplace was identified as a critical potential vector of transmission of the COVID-19 virus, leading most countries across the world to recommend remote work whenever possible.¹ Key workplaces that had to continue operating were often identified as sources of transmission.² In the meat packing industry alone, there were documented outbreaks in the early months of the pandemic in Australia, Argentina, Brazil, Canada, China, Denmark, France, Germany, Ireland, Italy, the Netherlands, Poland, Spain, the United Kingdom and the United States. It thus became clear that safe and healthy work was not just of concern to employers and workers, but to public health in general.

This chapter analyses the impact of the COVID-19 pandemic on workers' safety and health, both physical and mental, as well as the challenges enterprises faced in operating during the pandemic. Working during the pandemic was fraught with challenges. While the most obvious challenge was the increased likelihood of exposure to the COVID-19 virus, and thus greater risk of illness or death, there were few aspects of people's daily working lives that were not upended by the pandemic. This chapter probes the different sources of job strain faced by workers – physical risks, social isolation, work intensity, adverse social behaviour – as well as the organizational pressures that enterprises endured, including financial distress and uncertainty. Understanding the effects of the COVID-19 pandemic on key workers and enterprises is an important first step in designing and strengthening workplace health and safety programmes and other supportive policies and institutions that can assist workers and employers, whether in good times or bad.



2.1. Illness and morbidity among key workers in 2020

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2 virus) is transmitted directly through respiratory droplets and airborne aerosols, and indirectly through contact via contaminated surfaces. Although much remains to be learned about the mechanisms of transmission, the evidence indicates that avoiding contact with other human beings inhibits the spread of the infection.³ However, most key workers cannot avoid contact with other human beings as they must continue their day-to-day activities so that society can be fed, cared for, live in security and go from place to place when needed (even during lockdowns). As a result, key workers were more exposed to COVID-19 than those who could telework, or otherwise stay at home, in relative safety from the pandemic.

Figure 2.1 provides evidence demonstrating the greater degree of exposure to disease or infection among key workers in the United States. Using O*NET data, a database of occupational characteristics for the US economy, the figure shows potential exposure to disease or infection by two-digit ISCO occupation codes in relation to workers' physical proximity to others during work activities. The size of the bubbles is proportional to the number of workers in each two-digit occupation. The figure shows clearly that key occupations (dark blue) are those most exposed to disease and working in closest proximity to others.⁴ Health professionals, health associate professionals, personal care workers and protective service workers dominate all other occupations in the sense that they are more exposed to disease and work in closer proximity to people than any other occupational category. These four occupational categories are almost exclusively composed of key workers.

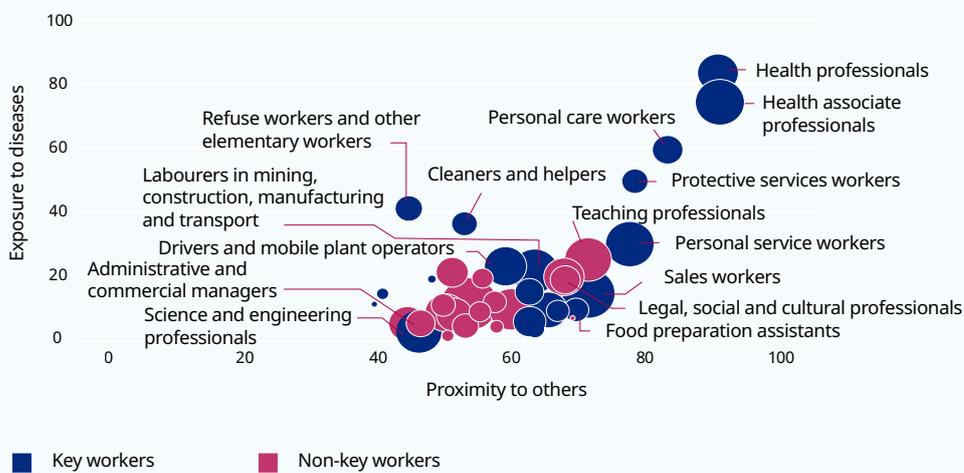
Nevertheless, greater exposure may not necessarily translate into worse health outcomes – particularly mortality. Whether the higher exposure intrinsic to each occupational category was counterbalanced by stricter security protocols and the use of protective equipment is an empirical question, to be answered by looking at mortality data.

Large-scale data on mortality from COVID-19 often rely on the concept of excess death rate, defined as the difference between the observed numbers of deaths in specific time periods and expected numbers

of deaths in the same time periods. This measure avoids problems of misdiagnosis and misreporting of COVID-19 deaths, which were particularly prevalent at the beginning of the pandemic.⁵

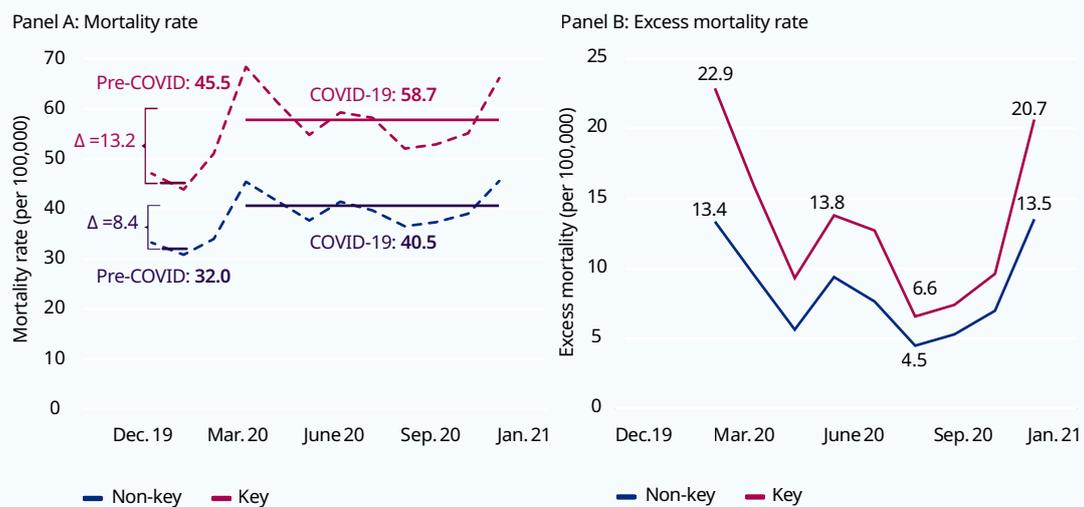
Panel A of figure 2.2 shows the mortality rate per 100,000 people, from all causes, for workers aged 18 to 62 years in the United States, by month, in 2020. The excess death rate is the death rate during the period under scrutiny (the COVID-19 pandemic, for instance) minus the death rate of an appropriate baseline in which the event under study was not happening. No COVID-19 deaths were reported in the first two months of the year, so these are used as the baseline. The last nine months are those for which excess mortality is calculated.⁶ The excess death rate of a given month is that month's total mortality rate minus the average mortality rate of the first two months.

▶ **Figure 2.1. Exposure to disease and physical proximity to others, by occupation, United States**



Source: ILOSTAT and O*NET.

▶ **Figure 2.2. Total mortality for key and non-key workers, United States, 2020**



Note: A two-month baseline is far from ideal, but the National Vital Statistics System (NVSS) Public Use Microdata Sample (PUMS) data do not provide occupation data prior to 2020.

Source: Current Population Survey (CPS) and NVSS microdata.

Excess mortality during the COVID-19 pandemic was higher for key workers than for non-key ones.

Baseline mortality in the United States is higher for key workers than for non-key workers: 45.5 monthly deaths against 32.0 per 100,000, respectively. This means that, prior to the COVID-19 pandemic, key workers suffered higher mortality.⁷ This may be a result of key workers having jobs that are intrinsically more dangerous, but it also likely reflects greater susceptibility to death from underlying health conditions, including comorbidities, such as obesity and hypertension, as well as age and tobacco use. Nevertheless, as will be argued in this section, some of the features that make certain jobs “intrinsically more dangerous” are also the result of lack of, or insufficient, protective procedures and equipment to deal with heightened risks.

In addition to higher baseline mortality, the increase in mortality was also greater for key workers (13.4 per 100,000) than for non-key ones (8.4 per 100,000). Panel B of figure 2.2 shows that excess mortality during the COVID-19 pandemic was higher for key workers than for non-key ones. This is not a surprise since key workers continued to leave their homes to go to work, and thus to be exposed to the virus, whereas other workers turned to telework or were furloughed.

Both panels of figure 2.2 show raw mortality data, and thus do not consider sex, age or other characteristics that could influence outcomes. Taking sex, age and education into account, and subtracting non-key mortality from key mortality, gives the “controlled excess mortality” difference shown in column (B) of table 2.1.^{8,9} The table also shows raw excess mortality differences (column (A)) as well as pure COVID-19 mortality¹⁰ (column (C)).

A pattern appears: excess mortality for key workers (relative to non-key) was high during the first three months and then fell. By the last quarter of 2020, it was in the low single digits, before picking up again slightly in December during the peak of the second wave in the United States (August 2020 to February 2021).

► **Table 2.1. Different measures of differential mortality (key vs non-key), United States, 2020**

Month	Mortality (per 100,000 workers)		
	Difference in excess mortality		(C) Difference in pure COVID-19 mortality
	(A) Uncontrolled (raw)	(B) Controlled	
Apr. 2020	9.5	14.5	6.4
May 2020	6.3	16.4	3.6
June 2020	3.7	10.6	1.7
July 2020	4.4	8.6	2.8
Aug. 2020	5.1	10.5	2.6
Sep. 2020	2.1	12.0	1.6
Oct. 2020	2.1	5.9	1.6
Nov. 2020	2.6	2.2	2.7
Dec. 2020	7.1	3.7	5.8
Mean	4.8	9.4	3.2

Note: The uncontrolled (raw) difference in excess mortality is the difference in excess mortality between key and non-key workers. The controlled difference is the result of logit model controlling for education, sex and age, in which key worker is also a variable (see note 6). The difference in COVID-19 mortality is the raw difference in per 100,000 mortality due to COVID-19 (it is not considered excess mortality since COVID-19 baseline deaths are zero) between key and non-key workers. The three statistics measure the same thing in different ways.

Source: CPS and NVSS microdata.

The most lethal occupational group was that of transport workers: truck, subway, bus, taxi and ride-hailing-platform drivers suffered higher mortality than workers in any other occupation.

The pattern of key workers' mortality is maintained in the three measures. The controlled difference in excess mortality was higher than the uncontrolled difference for all months, with the exception of November and December. This mostly reflects the fact that, in the United States, key workers are younger and more likely to be female than non-key workers. Women represent 48.4 per cent of key workers as opposed to 46.7 per cent of non-key workers, and the young (18–24 years old) make up 14.3 per cent of key workers versus 12.6 per cent of non-key workers. Table 2.1 also shows that the directly measured COVID-19 mortality is lower than the difference in excess deaths, which could be due to mismeasurement of COVID-19 deaths.

Table 2.2 gives results for the eight occupational groups of key workers in the United States. Both in terms of excess mortality and specific mortality from COVID-19, there were wide variations by occupational group. The most lethal occupational group was that of transport workers: truck, subway, bus, taxi and ride-hailing-platform drivers suffered higher mortality than workers in any other occupation. Health workers, despite their intense exposure to infected patients, fared no worse than the average key worker, probably because they had procedures and equipment which protected them from the virus, as well as greater access to healthcare and sick leave. Nevertheless, their excess mortality was still higher than that of the average non-key worker.

While NVSS microdata only provide information on occupation and industry from 2020 onwards, the data from the California Department of Public Health have done so for much longer. A study of excess mortality among California's workers by occupation corroborates the above findings: transportation workers were most at risk (excess monthly mortality of 10 per 100,000) and health workers once again fared no worse than other key workers (excess monthly mortality of 3 per 100,000), in spite of their constant exposure to the virus.¹¹ Health workers' excess mortality per capita was in general lower than the rates above, which likely reflects its baseline period of three years instead of two months.

▶ **Table 2.2. Monthly excess and COVID-19 mortality by occupation group, United States, April to December 2020**

Industry	Mortality (per 100,000)	
	Excess	COVID-19
Transport	22.9	11.9
Cleaning	14.8	8.7
Manual	14.4	6.9
Technical	14.3	7.3
Health	12.1	7.4
Retail	9.4	3.9
Food systems	7.5	6.7
Security	7.0	6.2
All	13.2	7.2

Note: Excess deaths are calculated using the methodology described above, using the first two months of the year as a baseline. COVID-19 deaths are those identified as such by the International Classification of Diseases (ICD) code in the NVSS data.

Source: CPS and NVSS microdata.

► **Table 2.3. Excess mortality by occupation category, England and Wales (UK), 2020**

Worker category	Excess deaths (%)
All occupations	-1.1
Non-essential	-3.0
Healthcare	13.3
Social and education	4.3
Other key workers	6.1

Source: Matz et al., 2022.

The study also finds that food and agriculture workers were among those with the highest mortality. This is perhaps surprising given that agricultural work is usually done outdoors with workers assumed to work far from one another. However, many agricultural workers in California are migrants who, in addition to working in the fields, work closely together in packhouses and live in overcrowded accommodation, which likely led to greater COVID-19 contagion and, ultimately, higher death rates.¹² Once again, this illustrates that protective measures (or the lack thereof in this case) are as important as the dangers inherent in the work itself. The same study also analyses excess mortality by race and occupation. It finds that even though occupation explains some of the racial gaps in mortality, significant racial differences remain even after controlling for occupation.

Another study of key workers, this time in England and Wales (United Kingdom),¹³ using the excess mortality methodology broken down by occupation finds that the risk of death from COVID-19 faced by “essential” workers was considerably higher than that faced by “non-essential” ones (see table 2.3).¹⁴ While the pandemic was actually protective of non-key workers in England and Wales – likely because the lockdowns were more stringent than in most of the United States – it was quite dangerous for key workers, most of all those in healthcare. Most of the danger arose in the early months of the pandemic when people did not yet know what was effective and what was not in terms of keeping safe from COVID-19 while working. From September onwards excess deaths fell, and by December 2020 excess deaths for all key workers were below levels reported in the previous five years.

Another study using the same matched data for England employed proportional hazard models to investigate hazard ratios of key and non-key workers during the first year of the pandemic in England.¹⁵ It found that the ratios for men ranged from 1.45 to 1.22, and for women, from 1.16 to 1.06.¹⁶ Taxi drivers and chauffeurs, support staff, bus and coach drivers, sanitation workers, social care workers and van drivers were the most lethal occupations for both men and women. Moreover, the hazard rates were similar between men and women in individual occupations, which suggests that the difference in aggregate mortality rates between working men and women responded more to differences in occupation than to biological differences in susceptibility to the disease (although these biological differences undoubtedly exist).¹⁷

Both in the United States and in England, health workers, who were continuously and massively exposed to the virus, suffered lower excess mortality than transportation workers, whose exposure was significant but lower than that of health workers. This apparently counterintuitive finding may be due to workplace safety and health measures – healthcare was more likely to have workplace safety and health protocols in place and enforced, and workers were more informed of the risks. Health workers were among the first to receive protective equipment and are generally more likely to have access to paid sick leave and medical care. Transportation workers, on the other hand, are often self-employed or working for small enterprises in which safety protocols were more of a personal responsibility than company policy. They often did not know how to protect themselves, only had access to protective equipment after a lag, had limited access to paid sick leave because of self-employment and, in the United States, were less likely to have health insurance. The wider conclusion is that while key workers may work in jobs that are intrinsically

A small but growing body of evidence shows that unionization was protective of workers during the pandemic.

more dangerous, preventative procedures, protective equipment and access to labour and social protection can help to keep them (relatively) safe even under adverse circumstances.

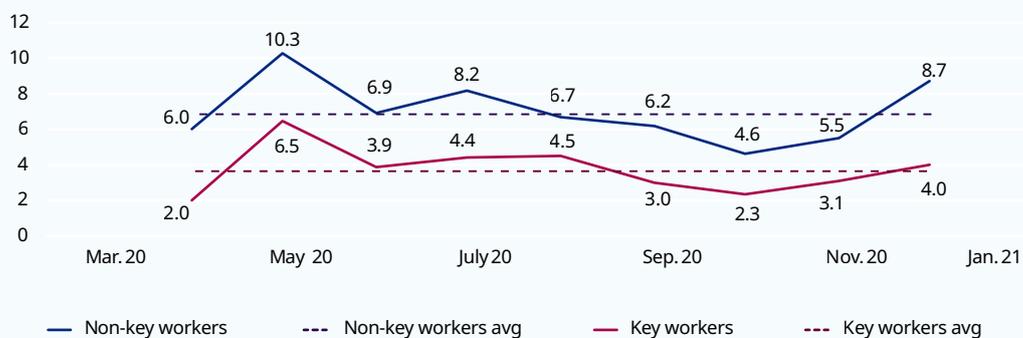
In France, a COVID-19 survey undertaken in January 2021 found that, while 18 per cent of employees as a whole had at some point been diagnosed with COVID-19 or had clear COVID-19 symptoms, the percentages were higher for transportation workers (29 per cent), nurses and midwives (29 per cent), health aides (28 per cent), and police and firefighters (28 per cent).¹⁸ The French results corroborate for the most part the American and English data vis-à-vis the most lethal occupations, though the French occupational differences in contagion appear to be smaller in amplitude than differences in mortality in the United States, perhaps reflecting universal access to health and sick leave.

Other studies on illness from COVID-19 also find significant occupational differences. In Spain,¹⁹ excess sick leave in March 2020 was higher among all occupations than during the baseline period, including healthcare, but it was highest for construction workers. In Qatar,²⁰ construction and retail trade workers were most likely to test positive for COVID-19. Retail trade is expected to entail greater risk since it implies contact with customers, but it may be less clear for construction. The authors of the study point to overcrowded accommodation of migrant construction workers as the likely culprit, highlighting once again that, often, it is not intrinsic characteristics of occupation per se that lead to higher mortality, but the policies and procedures taken or not taken to ensure workers' safety.

One final result worth mentioning is that there is a small but growing body of evidence that shows that unionization was protective of workers – all workers, not just key workers – during the pandemic.²¹ In the United States, unionized workplaces were more likely to address environmental hazards²² and to be visited by health inspectors.²³ Moreover, unionized workers were more likely to have health insurance and access to paid sick leave.²⁴ Consequently, it is hardly surprising that higher union densities slowed the spread of the pandemic²⁵ and that unionized workers are less likely to die from COVID-19 than non-unionized ones.²⁶ While the above studies refer to the United States, it stands to reason that these results would hold in other countries as well.

The above studies have all been on high-income countries. Figure 2.3 shows that, in contrast with what happened in the United States and in England and Wales, excess mortality in Brazil was lower for key workers than for non-key ones. The difference between key and non-key is not huge, mostly between three and four deaths per 100,000 workers, but it contradicts the findings from high-income countries.

▶ **Figure 2.3. Excess mortality for key and non-key workers, Brazil, 2020 (per 100,000 workers)**



Note: The baseline in the case of Brazil is the previous three years (2017, 2018, 2019), which is a much better baseline than that used for the United States (the first two months of 2020).

Source: Sistema de Informações sobre Mortalidade (SIM) and Pesquisa Nacional por Amostragem Domiciliar Continua (PNADC), microdata.

► **Table 2.4. Variations in deaths from 2019 to 2020 of workers aged 30 to 60, Brazil and Colombia, selected categories (percentage)**

Brazil		Colombia	
Worker category	Δ deaths	Worker category	Δ deaths
Funeral workers	35.8	Postal workers	62.0
Postal workers	34.8	Police and firefighters	60.4
Nurses and other hospital workers	30.1	Drivers	47.3
Drivers	27.2	Nurses and other hospital workers	40.7
Police and firefighters	27.0	Private security	32.1
Other workers	20.0	Street vendors	31.2
Public cleaners	19.6	Other workers	26.9
Street vendors	15.2	Public cleaners	13.3
Agricultural workers	7.5	Agricultural workers	12.9

Note: Agricultural workers in bold and occupations in which there were fewer than 300 deaths in 2019 in light grey. The data come from Vital Statistics Systems, which is a census, so there is no sampling error. Nevertheless, narrowly defined occupations with relatively few deaths are less subject to the law of large numbers and thus still show large swings from one year to another. Note also that these are only a few selected occupations and do not account for all employed workers.

Source: Vital Statistics Systems for Brazil and Colombia. Microdata.

Yet, key workers in middle- and low-income countries differ from those in high-income countries both in terms of the greater share of workers in agriculture and the higher incidence of informality, where the application of OSH measures is likely to be weaker or absent.

Agricultural workers were relatively protected from COVID-19 as a result of the distances linked to lower population density in rural life. Table 2.4 shows the variation in deaths from 2019 to 2020 for select key occupations in Brazil and Colombia, including agricultural workers. Owing to different occupational classifications in labour force surveys and vital statistics, it is not possible to calculate the variations in mortality, only in the number of deaths. Thus, it is not possible to disentangle the variations in deaths due to the number of workers in each occupation from those in the mortality rate of each occupation. Nevertheless, given the magnitude of the variations in the number of deaths, it is likely that the results are overwhelmingly driven by underlying mortality changes.

The data show that, both in Brazil and Colombia, agricultural occupations are those in which the number of deaths increased the least. For the non-agricultural occupations, the variations in the number of deaths align with those in mortality from the literature on France and the United States, as well as on England. Drivers and nurses were among the most dangerous occupations. Postal workers and, in Brazil, funeral workers, in spite of small numbers, faced the largest increase in deaths.

Table 2.5 shows the variations in deaths for Mexico and Costa Rica from 2019 to 2020. In contrast to table 2.4, table 2.5 shows deaths by broad categories that, in principle, account for all workers. The categories used in Costa Rica and Mexico are not the same but, in both cases, they account for the entire labour force, broken down into one-digit occupation categories.

Whereas in Costa Rica agricultural workers were in the upper half of occupations with the highest increase in total deaths, in Mexico agriculture is the category in which the increase in deaths was the smallest. The high agricultural mortality in Costa Rica may reflect large numbers²⁷ of temporary migrant workers (56 per cent of coffee workers were temporary Nicaraguan workers),²⁸ mirroring the situation in California.²⁹ There are migrant workers also in Mexican agriculture, of course, but the numbers are

► **Table 2.5. Variations in deaths from 2019 to 2020 of workers aged 30 to 60, broad occupational categories, Costa Rica and Mexico (percentage)**

Costa Rica		Mexico	
Occupational category	Δ deaths	Occupational category	Δ deaths
Managers	25.0	Managers	116.6
Administrative support	17.4	Professional and technical	96.2
Agricultural workers	16.2	Machine operators	95.5
Unemployed	15.5	Auxiliary and administrative	95.4
Scientific and intellectual	7.3	Sales	85.0
Technicians and associate professionals	4.1	Personal services	79.1
Sales and services	4.0	Artisans	45.0
Machine operators	3.9	Elementary occupations	26.4
Homemakers	0.8	Agricultural workers	16.2
Elementary occupations	-2.1	All workers	63.2
Artisans	-10.5		
All workers	3.1		

Source: Vital Statistics Systems for Costa Rica and Mexico. Microdata.

smaller: less than 10 per cent of all agricultural workers, as opposed to more than half in Costa Rica and the vast majority in California.

It should be noted that agricultural workers and food systems workers are not one and the same. While agricultural workers are food systems workers, the latter category also includes industrial workers, such as meat packers, whose mortality during the pandemic was very elevated, both in high-income³⁰ and in middle-income countries.³¹ Also, note the discrepancy between the results for Brazil, Colombia and Mexico, and those for food and agriculture workers in California, and to a lesser extent, Costa Rica. The likely reason is that, while agricultural employment in California is dominated by larger farms using migrant workers,³² in Brazil, Colombia and Mexico, most agricultural employment is in small-scale farms, and even larger farms can draw upon locally available labour. Finally, agricultural employment is much smaller in high-income countries. While, in high-income countries, a mere 3 per cent of the total workforce is employed in agriculture, in middle-income countries this share rises to 29 per cent and jumps to 59 per cent³³ in low-income countries.

The conclusion is that the combination of a higher share of agriculture in middle-income-country employment and a lower COVID-19 relative mortality of those workers drove down the overall mortality rate of key workers as a whole in these countries. Nevertheless, even in countries with many agricultural workers and low agricultural mortality, many other key occupations were badly hit, such as transport and security workers. Many of these other workers were informal workers, meaning that they likely had less access to OSH protections.

► **Table 2.6. Excess monthly mortality per 1,000 formal workers, Brazil, 2020**

Category	Excess mortality	Category	Excess mortality
Van driver	2.94	Gas station attendant	0.42
Truck driver	2.77	Maintenance technician	0.42
Bus driver	2.26	Other warehouse workers	0.39
Interstate bus driver	1.85	Administrative supervisor	0.39
Night security guard	1.05	Production line worker	0.38
Motorcycle driver	1.03	Caretaker	0.38
Porter	1.02	Cleaner	0.36
Storage worker	0.73	Cook	0.34
Nurse technician	0.66	Manager	0.29
Meat packer	0.58	Building maintenance technician	0.25
Hand packer	0.42	Car mechanic	0.24

Note: Occupations are *Classificação Brasileira de Ocupações* (CBO), which is largely based upon ISCO.

Source: Pereira Galindo, Pereira Silva and Pedreira Júnior, 2020.

Indeed, analysing just private-sector formal employment in Brazil, using data from a labour registry that records deaths,³⁴ reveals similar mortality rates by occupation to the findings for high-income countries.³⁵ Table 2.6 shows the 22 most lethal occupations by three-digit occupation code (out of 196) for 2020. As expected, drivers dominate the excess mortality realm. Doctors are not found among the 22 most dangerous professions, although nurses are in ninth place. Police officers and firefighters are not reflected in the numbers as they are employed under a different legal status not included in this database, but the occupation of night security guard remains among the more dangerous.

What conclusions can be drawn from the results? The most important conclusion is clear: policies matter and can save lives. In the United States, France and England, health workers, despite their intense exposure to the virus, were in relative terms better protected than transportation workers. Unionized workers were better protected than non-unionized ones. In Brazil, the most lethal occupations were the same as in high-income countries, but the overall mortality of key workers was lower because of the inclusion of agricultural workers. Everywhere, drivers, security guards and nursing staff experienced the highest COVID-19 mortality rates.

These results point to the importance of policy: workers in workplaces in which adequate procedures were put in place, who had access to protective equipment and who were entitled to sick leave and medical treatment were more protected in relative terms from death from COVID-19. These procedures can come through formality, higher union density or even professional knowledge (health professionals), but irrespective of how they come to the workplace, they save lives.

The same logic must also apply to other aspects of OSH. Are key workers sometimes exposed to risks that are inherent in their work? Yes, they are, but these risks can be mitigated or even eliminated outright with effective workplace safety and health policies.

2.2. The strain of working during the pandemic

Being a key worker during the COVID-19 pandemic entailed a range of increased strains placed on workers, all of which had consequences for their health and well-being. These varied from the physical risk of getting sick from the virus – as discussed above – and the fear of transmission to household members, to increased work intensity from having to incorporate safety and health protocols and other new tasks into one's daily work; a challenging social environment from dealing with unruly customers and not being able to interact with colleagues; and concerns over earnings loss. But the experience could also be motivating at times, increasing some workers' engagement and reward from work, particularly when there was strong social, managerial and community support, and recognition of their contribution to society.

The analysis in this section takes inspiration from the job strain literature as originally developed by Karasek in his model on demand control, subsequently refined and expanded by Seigrist's effort–reward imbalance model, and Bakker and Demeroutis's job demands–resources framework.³⁶ The job strain literature recognizes the interaction between the demands placed on the worker and the resources available to them to meet or mitigate such demands, and the overall implications on mental health, as well as overall job quality. Resources refer to the physical, psychological, social or organizational aspects of a job that help to achieve work goals, reduce job demands or stimulate personal growth, learning and development. Although performing excessively demanding work can increase the risk of ill health, including greater risk of cardiovascular disease, musculoskeletal disease and depression,³⁷ if a worker with a demanding job also has latitude for decision-making and enjoys a supportive working environment, then the risks of the demanding job can be mitigated. Yet if high work demands are combined with limited latitude in decision-making and scant job support, then risks are heightened. Notwithstanding the different models of job strain, the guiding principle is the assessment of the balance between demands and resources in the workplace.

An important determinant of the demands and resources available to a worker is the person's employment arrangement. A formally employed worker with job security and a union representing their interests has more resources to either minimize demands or adjust their work to address them, than an informally employed worker without job security or union representation. Managerial and collegial support are known to be valued resources to the worker and critical for workers' sense of well-being and job satisfaction. There are exceptions, of course, but, in general, the contractual relationship, and the rights and benefits it bestows, influence workers' scope for mitigating job strain. Own-account workers also experience job strain and, though the autonomy and flexibility of being one's own boss is an important resource, it can nonetheless be tested by the pressure of having to derive sufficient income from one's labour, the physical risks of the work, and the general lack of collective support. Working informally aggravates risks, while also limiting potential resources.



Another significant source of support – and potential strain – is the family or household. While personal resources are not explicitly included in the job demands–resources framework as it focuses specifically on the working environment, the framework does acknowledge that personal resources (or demands) are a mediator or antecedent to job demands and resources.³⁸ Workers are part of households, and the implications of being a key worker during

the COVID-19 pandemic affected families, potentially with consequences for workers' internal resilience. Changes at the household level due to the closing of schools, childcare centres and other restrictions meant that many dependants were at home and needed care, adding pressures for unpaid care work on key workers, especially women.³⁹ For migrant workers and seafarers, the added geographical distance between workplaces and homes is likely to have increased demands and lessened resources.⁴⁰ Pandemic-related travel restrictions extended their separation from their families. Moreover, dormitory living, which is common among migrant workers, was a prominent source of reported outbreaks and clusters, and also imposed increased psychological strain due to movement restrictions. The high rates of job loss and return migration constituted additional pressure for many households, even for those where some members continued to operate as key workers.

This section and section 2.3 draw on qualitative research commissioned by the ILO as well as secondary sources to provide a picture of the lived experience of key workers and business owners during the pandemic. The more than 500 individuals interviewed in Argentina, Canada, Ghana, India, Kenya, Malaysia, Mexico, Peru, the Philippines, the Republic of Korea, South Africa and Türkiye all perform key services (see Appendix for more details). The objective of the qualitative analysis that follows is not to enumerate frequency but rather to draw insights into the lived experience of key workers during the pandemic by allowing them to explain the different demands placed on them, as well as any resources that were available. Each section begins with an explanation of the relevance of the topic for job quality, in light of the COVID-19 pandemic. Where pertinent, the discussion draws on other sources of evidence, both primary and secondary. While common experiences and themes emerge, there are substantial differences depending on occupation and sector, employment status and contractual arrangement, citizenship and residency status, and the country in which the individual works, including its industrial relations system.

Physical environment: risk of illness

The most obvious strain of being a key worker in the pandemic stemmed from the heightened physical risk of exposure and illness from COVID-19, as documented in section 2.1. Workers were aware of this risk, both for themselves and their families. With few exceptions, study participants expressed their fear of contracting COVID-19 as a result of going to work, on account of their interactions with patients, customers and colleagues, but also in their travel between home and the workplace.

Fear was greatest at the beginning of the pandemic, when there was much uncertainty about the virus – its modes of transmission, its severity, or what measures needed to be put in place. Román, a supermarket cashier in Argentina, explained that working in the pandemic was *“horrible, horrible from the first moment. I saw that nothing was known about the virus, and you didn't go to work, you were forced to go to work, it was crazy. One had to go to work in the first period when nothing was known, and it was not clear how contagion happened or how you had to take care of yourself”*.

But even with time, concerns remained with workers, especially those who had continuous interaction with the public. As a postal worker in the Republic of Korea explained: *“Our post office alone has 120 employees. In some branches, there are even more. When a person is on outside duty, he or she comes into contact with more than 50 strangers. We're in a position to become super spreaders in that sense”*. Others worried about the consequences of getting ill in the workplace, such as this cleaner at a hospital in the Republic of Korea: *“The most mentally draining thing during this pandemic is the stress of knowing that if we get infected, then the entire hospital is at risk”*.

In Ghana and Kenya, hospital staff explained how the lack of adequate resources in their hospitals for COVID-19 testing heightened their risks. Eli, a hospital orderly in Ghana, explained: *“We were cautious approaching patients in the ward because we didn't know who had COVID-19 and who didn't. If someone coughs in the ward, then there is tension, nobody wants to stay around”*.

Others expressed frustration over the risks they were taking for meagre wages, as this nanny in Argentina recounted: *“I travelled by public transportation. For me, that was the worst thing. I had to risk my life to take care of a kid that wasn't mine, and for a few pesos”*.

Nevertheless, the duty to continue working was a strong impulse for many, allowing them to brave the risk. Carlos, a nurse in Argentina, explained:

At some point, I remember that I began to doubt: “What if I catch it?” I was afraid of infecting others, my family ... I started to have that fear and ... my defences were going down, like I was getting a feeling of being on my guard at that moment. I always remember my colleague telling me: “Well, that’s why we studied, that’s why we chose this career; in fact, we are here because we like to help people. These people need us and that’s why we are here. Now it’s our turn. We just have to be here”. I didn’t forget because that’s what gave me the strength to continue at that moment.

Many of the key workers interviewed did fall ill or had colleagues that did, and even died. The excess mortality data presented in section 2.1 show that it was workers in transport who had the highest rates of fatality. While the interviews were not undertaken to measure incidence, but rather to understand the experience of key workers in the pandemic, interviews with transport workers in Argentina attest to the high level of infection among these workers: a subway worker spoke of how 15 of her colleagues had died from COVID-19, prompting her and her colleagues to insist on priority access to vaccines; similarly, a bus driver recounted how three of his colleagues had died, which he attributed to insufficient measures taken to control the risks associated with the pandemic.⁴¹

Infection was also rife among the migrant community. In Malaysia, interviews with migrant workers revealed that almost all of the workers and their “housemates” had caught COVID-19 – most likely because of the overcrowded apartments or dormitories where they slept in shifts in the same beds. A Nepalese security guard working in Malaysia recounted how he had contracted COVID-19 and that 16 out of his 20 housemates had tested positive.⁴² Among migrant agricultural workers in Canada, the risk of spreading the virus among co-workers was aggravated by the practice of working on different farms.⁴³

Safety and health: implementation of protective measures, including provision of personal protective equipment

One of the principal concerns of key workers has been proper and sufficient implementation of safety and health measures at the workplace, including issues such as ventilation, physical barriers, implementation of social distancing, cleaning and disinfection, screening as well as provision of personal protective equipment (PPE). The interviews reveal a range of responses with respect to the implementation and rigour of OSH protocols. In general, a pattern emerges of stricter adherence to protocols in large, formal organizations, particularly in the health sector, where biological risks are constant and where COVID-19 patients were being treated, but also in other sectors, such as aviation, mining and ports, where safety and health standards are, by law, more rigorous. A port worker in Peru commented that his company carried out “periodic tests and every day they renew our masks and [hydroalcoholic] gel. There is a concern for the worker”. Similarly, a Kenyan flight attendant explained that:

The company medical team were always at hand before every flight to offer information on how to handle COVID-19-related cases on board. In-flight service was reduced to a minimum so that there was less interaction between crew and passengers. The company also discontinued in-flight service on domestic flights, considering that it wasn’t a

requirement to have domestic passengers tested prior to their travel ... Crew were planned to work on rotation and [the] same team members also planned to operate the same flights together.

But even within sectors with higher OSH standards, there were distinctions between countries, with health workers in some developing countries receiving insufficient PPE within their hospitals, reflecting difficulties at the national level (and globally) in procurement, especially at the beginning of the pandemic. In Mexico, but also in Ghana, India and Peru, workers recounted insufficient provision of PPE, like this nurse in a public hospital in Mexico:

... At the beginning they only wanted to give them ... one piece of equipment, so how could they expect them to work an eight-hour day with one piece of protective equipment, so they didn't eat, they didn't drink water or go to the bathroom? ... they told you literally, you only had the right, at the beginning, to one piece of equipment.

There were also considerable variations between workers within health institutions – doctors, nurses, orderlies, cleaners – likely reflecting their status in the organizations and perceived risk of exposure. Hospital cleaners in the Republic of Korea reported having to purchase masks at their own expense, as they were not provided in sufficient quantities, which was a source of concern especially to those cleaning the wards that held COVID-19 patients.⁴⁴ Health workers active outside institutions, such as community health workers in Ghana and India, also reported insufficient PPE provision. Bright, a mortuary worker in Ghana, lamented how they worked regularly with insufficient protection:

We need PPE badly but at our place, apron and gloves is all we wear to work. It is not good. We have a big exposure here and should there be an outbreak here, we will all be affected. You see mortuary staff in other countries wear PPE from head to toe. Consequently, their skin is protected as the water they use in cleaning the bodies doesn't seep through the PPE. We don't have it like that here. At times, we enter the cold room without wearing any PPE.⁴⁵

For migrant farm workers living in dormitories in Canada, overcrowded houses with shared bedrooms, bathrooms and kitchen made distancing difficult. Only one of the 30 interviewed workers stated that their employer had rented additional housing to divide up the workers and so reduce overcrowding. And while, in two cases, fewer workers than usual were expected to share housing during the pandemic, this was not common. The interviews reveal that the main strategy used to contain the spread of the virus during the pandemic was to keep workers confined to their house.⁴⁶ Yet, despite the quarantining of their workers, the practice of hiring additional undocumented workers, who often moved from farm to farm, was still common. Concern over the potential spreading of the virus by itinerant farm workers led Ricardo and his co-workers, who were employed at a greenhouse in Leamington, Ontario, to approach their farm owner. As he explained:

We were given an opportunity to talk to the farm owners. And we told them that if they are making restrictions for us, they too should make sure that they do not hire [undocumented] workers from contractors.

We respect company rules, but the workers sent to the company by contractors, they are free to go wherever they want after work. And that, we said, is not fair. They would go anywhere they want while we are being cautious, and then these persons would just come and infect us. So, we did not see it as something that was fair.

Out of concern for their safety, many key workers instituted their own measures or, for those who were unionized, appealed to their union to demand greater protection. A postal worker in Mexico recounted how he and his colleagues took the initiative to make changes in the workplace, including to their schedules, to keep their work environment safe:

 *We made changes ourselves ... we changed ... into two teams, so that we wouldn't all get together ... [Q. Was it a company directive or did you carry it out?] We carried it out, and the bosses also had to agree.*

At a food-processing factory in Argentina, outsourced workers did not benefit from the same safety and health measures, as there was a policy of “first” and “second” care, depending on one’s contractual arrangements. Under the policy, the company did not guarantee transportation services for outsourced workers. The outsourced cleaning and maintenance workers were able to organize to demand that the company also provide them with transportation services. With the help of the union and several meetings with the management, they were able to obtain the same right as the other workers.⁴⁷ In general, across the case studies, the presence of unions, especially internal union committees, was an important resource for securing additional protections in addition to those proposed by the companies.

In the Philippines, in the absence of formal regulations governing home-based caregiving, the measures taken to ensure health and safety depended on the patient’s family, as well as the minimum health guidelines that caregivers had received in their training. As a rule, caregivers shower and change into their uniform before attending to their patients and wear face masks in the workplace. Josie, a home-based caregiver to chronically ill and older patients, explained how one employer required her to take a monthly COVID-19 antigen test at the employer’s expense, while her subsequent employer required that she test negative on a PCR test, but at her own expense. Social distancing in home settings was not easily enforced, but households generally restricted the presence of outsiders and used online platforms to communicate with the patients’ doctors.⁴⁸

Informal own-account workers mentioned learning what to do from public channels. As Akosua, a street trader in Ghana, explained: *“We got public education on both TV and radio. Also, some of our customers were cautioning us to be careful each time they came to the market to buy from us”*. Similarly, Linda, a shopkeeper, noted: *“Nobody officially came to my shop to teach me, but I learned it from the news on television and the radio”*. John, the owner of a delivery service business, learned what precautions to take from his daughter, who had been taught what to do at school.⁴⁹

Separation from family and social isolation

Another measure taken by employers – and sometimes workers on their own initiative – was to reside separately from family members to prevent spreading the virus. While such separation mitigated the risk of contagion to family members, it nonetheless severed an important resource of social support for workers during a difficult time. For some workers, being separated was preferable to risking contamination; others had no choice and thus resented the arrangement. Yet, with the financial need to support their families, and the near impossibility of finding alternative employment during the pandemic, their sole option was to accept the separation.

Some of the workers interviewed relayed how they chose to isolate from their families to minimize risk. Lucrecia, a nurse at a public hospital in Mexico, explained how normally she lived with her sister and mother but that, for over a year during the pandemic, she lived separately from them, along with another colleague who was isolating from her family. As they were both working extensive hours, their family members would bring them food and pass it through the gate.⁵⁰ A nurse in Türkiye mentioned how he sent his wife and children to their home village for a month and a half to avoid contamination. Similarly, a Turkish café owner decided to *“completely separate for 42 days without even seeing my children and my family, even though I was not sick ... We were afraid to even go home”*.⁵¹

In other instances, workers were required to remain on company premises or in company-provided housing. In the mining sector in Peru, mandatory quarantines required that the workers be separated from their families for several weeks to avoid contagion. This point was strongly criticized by several unions, given the arbitrariness in the scheduling policy, and the retention of workers was even denounced as illegal.⁵² In the Philippines, business process outsourcing firms were allowed to continue operating only if they provided appropriate temporary accommodation to their employees or allowed them to transition to remote work. Some hospital staff were also required to stay in temporary accommodation. Ida, a nurse in a private hospital in the Philippines, relayed how she and other nursing staff were required to stay in hospital-provided lodgings for almost six months. She spoke of suffering from her “separation from family” (two siblings, mother and grandmother) and “loneliness” during those months.⁵³

Many domestic workers were obligated to stay at their employer’s premises once quarantines were imposed, essentially shifting to being live-in domestic staff. A domestic worker interviewed in Peru stated how “it shocked me, I even cried”. She did not return to her home for four months because of the restrictions imposed by her employer. Along with the separation and social isolation that the shift to live-in status entailed, there was also an increase in working hours and work intensity as many of the families that they worked for had the parents and children working from home.⁵⁴

Migrant farm workers were already separated from their families but the quarantine measures further increased their social isolation. Virtually all workers interviewed in Windsor-Essex, Canada, were not allowed to leave the farm during the COVID-19 pandemic, in some cases for up to a year and a half, and even after the regional health authority had lifted most restrictions. On one farm, each week, three people from the workers’ house were allowed to purchase food for the rest. There were some farms on which workers were not allowed to leave at all. Instead, they filled out shopping lists; their food was ordered for them by their employer and delivered to their doorstep. Yet, many workers accepted these restrictions. As one of them, Daniel, put it: *“It was as if we were in prison, but for our own good, right? Well, we didn’t have the right to leave because, if we were to leave, we would endanger the company and other co-workers, and who knows how many other families”*. Not everyone could tolerate the isolation but, if these rules were violated, workers were disciplined, as Matías explained: *“If someone went into town to do shopping or something, they were sent to do quarantine, and they were not paid while they were not working”*. Similarly, Abel commented: *“During the pandemic, you couldn’t leave the house to go anywhere. It was prohibited. And if you were to leave, he [the employer] got angry and reprimanded you”*.⁵⁵

Work intensity: more work demands

Work intensity concerns work demands on the job – the amount of work an individual has to carry out and whether that work requires large amounts of mental and physical energy. Although work that asks too little of a worker can leave their potential unfulfilled (“underload”), research has found that excessively demanding work (“overload”) is associated with an increased risk of serious ill health.⁵⁶ Intense work is a key component of job strain models, as numerous epidemiological studies have demonstrated the negative health consequences of high work demands, especially when combined with limited autonomy and a negative social environment.⁵⁷ From an organizational perspective, work intensity is not necessarily linked to better performance, especially if overload leads to working in haste, or if it is due to staff shortages. High work intensity, even if at times perceived as exciting and rewarding, is considered a negative contribution to job quality.⁵⁸

Most key workers saw and felt their work intensity increase. This was due, in part, to the addition of more tasks, usually related to carrying out OSH protocols, but it was also due to increases in absences at the workplace, as many workers with comorbidities were either prevented from coming to work or left their jobs out of fear of contagion. As a result, there were fewer staff carrying out the work that needed to be done, and greater demands placed on the remaining workers. Given substantial media attention in many parts of the world, the pressure placed on healthcare systems throughout the world is well known. Nonetheless, interviewees from a diverse array of key services – delivery, security, mining, retail and others – recounted the greater work intensity and work reorganization that occurred when the pandemic struck.

In the Philippines, medical staff explained how hospitals were already suffering from a shortage of nurses due to the emigration of experienced nurses overseas for better-paying jobs. During the pandemic, these shortages were compounded as some staff left hospital jobs for less risky environments, such as vaccination centres.⁵⁹ In addition, when a healthcare worker caught the virus, a whole ward or unit could be paralysed. In the hospital employing some of the study participants, two nurse stations were shut down because there were not enough nurses available to work. The Health Department provided extra-budgetary funds to public hospitals to hire contractual employees to fill shortages, but the demand was unmet. The shortages were aggravated by the intense amount of care required by COVID-19 patients. As explained, typically a nurse could attend to 4–5 ICU patients but would have difficulty caring for two COVID-19 critical or severe cases. A hospital that aims to double its operational capacity for COVID-19 would ideally need to double its staff. One nurse explained how she routinely worked extra hours in order to earn overtime but that, during the pandemic, overfatigue was so great that she eventually learned to refuse overtime.⁶⁰

The rise in demand in hospitals was not limited to medical staff. The Republic of Korea's quarantine guidelines, known as K-Quarantine, increased the workload of cleaning workers. For some cleaning workers, their work area was expanded to include the COVID-19 screening stations in operation both inside and outside medical institutions. Even in cases where their work areas did not change, the workload increased substantially because of the stricter cleaning protocols and the shift to disposable protective gear by medical staff. As one cleaner remarked: *"More than 1,000 people visit the COVID-19 screening station daily for testing. How are we to deal with the medical waste that results from their visits?"*⁶¹

In India, the work of the community health workers known as Accredited Social Health Activists (ASHAs) also increased substantially. Serving on the front line, ASHAs were responsible for tracing, testing, delivering medicine and sometimes food, and answering distress calls. Once the immunization programme began, they were responsible for keeping records of those who had received the vaccines and motivating people to get vaccinated. Through this period, ASHAs also continued with their routine tasks of following antenatal and postnatal care, monitoring infant health and so on. As Sneha, an ASHA from Hyderabad, explained:

There has been no rest from the time the pandemic began. We have to visit the homes of those who are positive, ensure that they isolate, give them medicines. They also call us any time of the day or night if they have any problem. If any patient calls, we have to give them advice. People didn't know much about it – they would tell us their symptoms. We would then assess and help them go to the hospital if we felt that they needed to go. For this, we would go to their house, coordinate with the hospital and arrange for the ambulance, and ensure that they went properly. We would also inform our Sir in the hospital and he would guide us on how we should handle the case.

A food service worker in the United States recounted how safety protocols, such as disinfecting and using hand sanitizer, while important, made their work slower and more difficult to carry out:

I was in the drive thru and my hands were burning after two hours, because I'm trying to hand-sanitize between each car, and there's hundreds of cars. And it slows you down when you're taking these basic measures with fewer and fewer people at work. So I think most people are trying to minimize stress by not really changing how we do things. Which is really dangerous.⁶²

The work intensity of security guards also increased. Throughout the world, many retail establishments hired extra security personnel to help implement government-mandated protocols. The President of the Security Industry Association of Malaysia reported that an estimated 70,000 guards were deployed at shopping malls, retail outlets, banks, other commercial places and residential complexes while another 50,000 guarded hospitals, schools and government-linked agencies. He described the security guards as “unsung heroes ... They are among the earliest frontliners to be exposed to the risk of COVID-19”. They are in direct contact with many people, especially if they work in busy places; they perform tasks such as registration and individual temperature screening, as well as ensuring that people comply with physical distancing in premises.⁶³ A security guard in the Philippines explained how she accepted the additional working hours as she was the only one in her family with an income, but that eventually she fell ill from overfatigue.⁶⁴

Social environment: from support to adversity

The social environment at work concerns the relationships that workers have with their colleagues and managers as well as their interactions with customers or patients. Given the many hours that most people spend working, such social interactions are critical for the individual well-being of workers and strongly influence feelings of job satisfaction.⁶⁵ A positive social environment can improve workers' engagement, organizational commitment and, ultimately, productivity.⁶⁶ It is also a critical resource in mitigating work demands, whereas an unsupportive or, at worst, negative social environment can be an impediment to one's work, with negative consequences for mental health at the individual level and for job quits at the organizational level.

Most of the key workers interviewed emphasized positive peer relations. Across countries and occupations, workers spoke fondly about having lunch together, travelling to work together and supporting each other in carrying out their duties. In India, community health workers (ASHAs) operated as a team if they encountered any difficulty with members of the community and filled in for each other during periods of leave. Similarly, security guards and nurses made informal arrangements with colleagues to exchange shifts in case they had an emergency.⁶⁷ For bus drivers in the Republic of Korea, collegial relations were a critical social and psychological resource, particularly since their long and asocial hours made it hard for them to maintain other social relationships. Bus drivers on the same shift shared hobbies and regularly socialized together after work.

The COVID-19 pandemic greatly limited social interactions with colleagues, both in and outside the workplace. For bus drivers, their regular social interactions with other drivers who would get off work late at night were severed, as there was no place to talk or spend time after work. As one Korean bus driver explained:

We used to go for a drink after, but now that's not possible. We go straight home. If I want a beer, then I get a couple of canned beers and take it home, and drink it in silence, watching TV, because everybody is sleeping.

Similarly, a cleaning worker in a hospital in the Republic of Korea remarked how, prior to the pandemic:

All of us cleaning ladies would go to the (break) room and talk. We would always be laughing. I was so happy, being with them was so much fun. But ever since COVID-19, we can't use the break room anymore. We all just eat lunch in our assigned spots and just go home from there and come back to the same spot in the morning, get changed and start working. There's no more communication.

Colleagues were also a source of emotional and financial support. One manufacturing plant supervisor in Peru related how, when he was sick, he received calls from his colleagues to see how he was doing. These same workers displayed other forms of solidarity among themselves:

We made family baskets to take to our colleagues. If there was a little money, those who could collaborate gave it ... People are very supportive.⁶⁸

Key workers were also restricted in their interactions with patients or customers; at times this affected their ability to perform effectively, especially in care work. A social worker in a Mexican hospital remarked that she and her colleagues were limited in how they could support grieving family members:

You leave the family member alone and, well, the poor thing, because he is in pain, he is crying. And you can't even go near him because if he is positive, he can infect me, and I have a family.⁶⁹

Other workers felt compelled to ignore OSH protocols despite the risks, as it prevented them from performing their job in a manner that they were comfortable with. Marieke, a care assistant in a Belgian nursing home for dementia patients, explained:

When residents cry, I normally give them a hug. I help residents in bed. I could do this the cold way: "Here's your blanket, do it yourself." In such situations, I don't follow the 1.5-metre rule. I still hug and help residents in bed – it would be inhumane not to do so.⁷⁰

Managerial support is a critical determinant of the social environment at the workplace. A positive organizational culture keeps workers committed, improving collective performance at work.⁷¹ Given the added pressures of being a key worker during the pandemic, having such support from managers proved to be a valuable resource for workers:

Our superiors gave us a lot of support and explained to us that we have to do this work. We were able to continue because they encouraged us. Not all Sir/Madam are as supportive as ours. We know that ASHAs in other areas had a very difficult time.

ASHA worker, Hyderabad, India

We feel comfortable talking to the boss. Whatever we need, we just tell him, and he is there to do it. He even asks us if we have any questions or if we want anything, what we think, and he encourages us to tell him. It's different here compared to other farms. Here, the boss never gets angry. He greets us and asks us how we are. And this makes us want to work better.

Mexican farm worker, Canada

There were also instances of workers who felt gratitude and appreciation for their work from patients, customers and the public at large. While health workers were the source of most public displays of gratitude, it did at times extend to other key workers, giving them an important sense of accomplishment and encouragement, especially as many of these professions have often been viewed with disdain.⁷² A street cleaner in Peru recounted how, prior to the pandemic, she was treated poorly by the public, but this had changed and now she felt appreciated:

[Before] they would scream at us, "you do your job poorly, that is what you are paid for, this is what I pay my taxes for", but during the pandemic they applauded us ... sometimes from their cars they would give us water ... just like they gave to the police ... This made us happy, it made us feel important ... I felt like a heroine, and that is what made me feel like I needed to move forward and not give up.⁷³

Similarly, a Mexican farm worker in Canada explained:

A few times, a bakery ... brought us a basket of bread because we were not allowed to leave during the pandemic. And it's not so much the products but ... the way of showing to us that we mattered to them. That's how I saw this support ... that they were interested in us as human beings in addition to recognizing the important work that we do.⁷⁴

A community health worker (ASHA) in the Indian city of Hyderabad recounted similar feelings of appreciation:

The families where people got [COVID-19] positive really appreciated us and blessed us. When we would go to give them medicines or help them go to the hospital, they would really thank us. Some even said we were like angels who came to help at a time even extended family and friends were not coming forward. When they said these things, we felt very happy.⁷⁵

The above examples illustrate the appreciation felt by the public or individual patients or customers to a particular worker. But gratitude can also come from within. Some workers came to realize the importance of their work and their contribution to society, as this Peruvian nurse explained:

I am proud to be a nurse ... not to belittle the work of the doctors who are also on the front line, but they are not with the patient, they are not with the patient as we nurses are.⁷⁶

Such experiences demonstrate the important resources that gratitude and pride can give workers, allowing them to forge ahead despite the daily struggles in their work. Research on the effects of felt public gratitude on key workers in Canada, the United Kingdom and the United States found that key workers that felt appreciated were more likely to engage in healthy (“adaptive”) recovery activities to relieve stress – exercise, spending time outside, seeking support from friends or loved ones, meditation, expressing gratitude, reading, watching or listening to something that “lifts one’s spirits” – as opposed to “maladaptive” activities. Maladaptive activities include overconsumption of alcoholic beverages, tobacco or food, shouting at others, venting frustrations or misusing prescription drugs. The study includes a survey of 186 corrections officers in the north-eastern United States, an “essential” but invisible occupation. The survey found that corrections officers experienced “low levels of public gratitude”, which were associated with maladaptive recovery activities. As one corrections officer reported: *“This job is thankless ... we believe that [people] feel that our lives are not as valuable as other first responders”* (emphasis added).⁷⁷

But worse than a lack of gratitude was the stigma, harassment and violence that some key workers endured because of their occupations on the front line. Adverse social behaviour – a severe form of job strain – includes stigma, bullying and harassment and, at its worst, physical, psychological or sexual violence. It is associated with decreased work motivation, absenteeism and resignations, and is a risk factor for mental depression. The pandemic and the fears it caused among the public were often directed at key workers, either because of their association as potential carriers of the virus or simply because their frontline role made them an easy target for the public’s frustrations.

Migrant workers have notoriously been subject to stigma by host communities, but the pandemic and fears that migrants were carriers of the disease heightened xenophobic sentiments, as well as making the return to their place of origin more difficult.⁷⁸ Accounts of stigma were also common among health professionals, as members of the public believed they would be likely to spread the virus because of their close contacts with those infected. A July 2020 article in *The Lancet* recounted cases of healthcare workers being denied access to public transportation as well as physical assault.⁷⁹ As a health professional in Malaysia put it: *“They view us like a COVID emoji”*.⁸⁰ In Hyderabad, India, an ASHA recounted the stigma that she and her colleagues endured from the public:

*During COVID-19 times, even neighbours would also say all kinds of things. That this woman goes all over, she will bring COVID-19. Some of the ASHAs who were renting [their home] had a lot of problems as the owners pressured them to vacate. Our house is our own so I didn’t have that problem. I know ASHAs who had to vacate and didn’t have anywhere to go. They stayed in the hospital till they could find a place.*⁸¹

In some instances, the stigma of being a frontline worker led to uncivil behaviour. Joyce, a food vendor in Ghana, recalled:

*[Some of] the customers who had cars ... will not even hand over money to me but would rather throw it to me. Some of them were throwing the money on the floor for me to pick it up.*⁸²

Witnessing and managing uncivil, and at times violent, behaviour was great source of job stress. It also increased the amount of “emotional labour” that the worker was required to perform. The concept of emotional labour was developed by American sociologist Arlie Russell Hochschild in the 1980s to characterize those occupations where a worker is required to not only manage their emotional expressions and interactions with customers or patients, but where their emotional displays are also monitored and subject to control and discipline.⁸³ As such, interactions with customers and patients, when

negative, increase the emotional labour of frontline workers, adding to job strain.⁸⁴ Jay, a supermarket worker in the United Kingdom, recounted the incivility and violence he witnessed from customers during the first days of the pandemic and the toll it took on his colleagues:

*It was like a war zone; customers were fighting over food and toilet paper ... I saw customers pushing, shoving and barging. I saw a customer grabbing another customer's collar. A colleague was crying because the customers were angry. She told me that she couldn't handle the pressure. Her manager was crying too ... My friend was working on the checkout and one customer had way more than the [maximum] three items. My friend was trying to do his job, saying "Sir, you can't buy more than three items of the same type". The customer said, "I'm going to f*** you up when I see you outside". Security came immediately and took the customer out of the store. Security was all over the place. We had to hire more security, the ones we had weren't enough to handle all the situations. It's shocking.⁸⁵*

As mentioned earlier, in addition to their regular duties, many security guards were tasked with enforcing health safety protocols on customers and clients – complying with contact-tracing forms, taking customers' body temperature, ensuring the proper wearing of face masks and social distancing. Security guards interviewed in the Philippines reported how this task was stressful, how they had been shouted at and insulted by customers, as well as scolded by management if they were caught not enforcing the protocols.⁸⁶

Street food vendors in Argentina, Ghana, India, Kenya and Peru recounted harassment and violence by the police despite their official recognition as "essential workers" in government decrees.⁸⁷ In Ghana, food vendors had curfew passes and were allowed to work but were nonetheless harassed by police. As a result, they would go to the wholesale market in the middle of the night to get their supplies for the next day as they were less likely to be stopped by police at that time.⁸⁸ Interviewees in Bihar, India, recounted how some farmers who had gone to their fields during the first lockdown to harvest their wheat and maize crops, were beaten up by the police, as well as the difficulties they had with the police in transporting their goods to market.⁸⁹

Of particular concern are health professionals who, prior to the pandemic, were already experiencing elevated levels of violence and harassment. In a 2019 meta-study covering 332,000 healthcare professionals (235 separate studies), 43 per cent reported exposure to non-physical violence (verbal abuse and threats) and 24 per cent reported experiencing physical violence in the preceding year. Incidences were highest in Asia and North America.⁹⁰ In Italy, in just one year, 50 per cent of nurses were verbally assaulted in the workplace, 11 per cent experienced physical violence and 4 per cent were threatened with a weapon.⁹¹ And this was before the pandemic.

Between February and July 2020, the International Committee of the Red Cross recorded 611 violent incidents across 40 countries against healthcare workers, patients and medical infrastructure associated with the COVID-19 response, about 50 per cent higher than average.⁹² In May 2020, it issued a declaration along with 12 other medical and humanitarian organizations calling on "governments, communities and weapon bearers to respect and protect healthcare at all times, and to contribute to creating a protective environment in which healthcare can be provided safely".⁹³

Voice and collective action as a resource for key workers

The ability to exercise voice with respect to work tasks and organization, as well as working conditions more generally, is an important resource for improving job quality.⁹⁴ This was particularly the case during

the pandemic, given the multiple demands placed on key workers. While a positive social environment at work with supportive management lends itself to voicing one's individual concerns, workers with union representation have formal channels to more easily, and often more successfully, voice collective concerns that effectuate change.

The qualitative interviews from the country case studies document instances of workers voicing their concerns about safety and health, as well as other issues such as unpaid wages (a concern among ASHAs in India and bus drivers in the Republic of Korea), and low pay. Unionized workers relayed their concerns through their union, which negotiated with management to address the issues or, in the absence of a favourable response, sometimes resorted to strikes or less formalized work stoppages. Other instances of collective action occurred among non-unionized workers, including informal workers, both employees and own-account workers.

Unionization rates among key workers differed depending on their employment and contractual status, as well as the degree of unionization in the specific country and the industry in which they worked (see Chapter 3). Among the countries studied, there is a wide divergence in unionization rates, with fewer than 10 per cent of employees unionized in Kenya, Malaysia, Peru, Philippines and Türkiye. However, these rates differ dramatically across economic sectors, with health, mining and some transport workers often unionized, even in countries with low unionization, whereas retail and agriculture tend not to be.

In Malaysia in July 2020, medical doctors on temporary contracts (known as contract workers) went on strike to demand the same rights and benefits as doctors on permanent contracts. As they explained: *"Our strike is not about resistance, we only want the government to give us the same rights and benefits that permanent doctors get. All of us here have been helping treat COVID-19 patients"*. Hospital cleaners came into the media spotlight in June 2020 when some union activists picketed for them to be paid decent wages and to be provided proper PPE for their work.⁹⁵

In Peru, workers in unionized sectors, such as ports, mining and healthcare, assessed positively the support they received from their union in demanding health and safety improvements, but also highlighted the need to engage in collective action to effectively voice their concerns. A cleaner at a port in Peru recounted: *"We had to take forceful measures so that they would do the [COVID-19] tests ... We had to stop working, it was like a strike ... It was a negotiation so that the company would agree to test some of our colleagues"*. Similarly, unionized workers in a hospital in Peru mentioned how the union successfully negotiated for the workers to receive masks and oximeters.⁹⁶

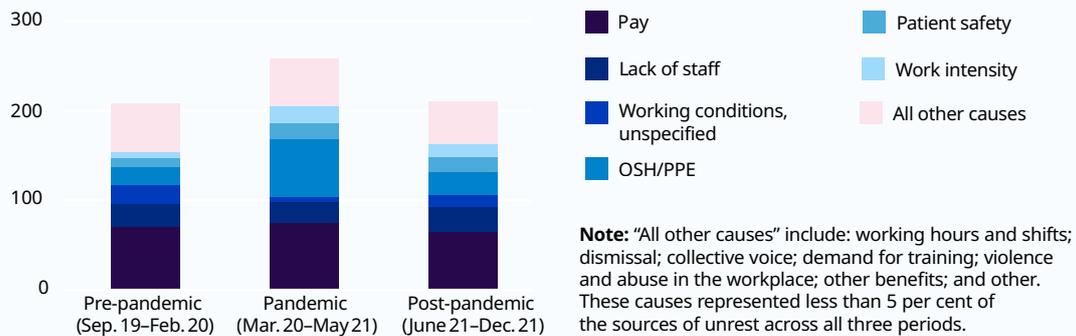
In the Republic of Korea, there was a clear dividing line among workers who were union members, and who could more easily voice their concerns during the pandemic, and those that were not. Unionized cleaning members recounted getting their demand for more masks met when their union argued for it, and bus drivers explained how their minority union was able to resolve the problem of delayed payment of their wages by pressuring the local government and filing complaints to the labour office. Similarly, the union of postal workers was able to negotiate so that the postal workers – who have a high degree of face-to-face contact with the public – would be given priority access to the vaccines. In contrast, hospital cleaning workers that were not unionized explained that they did not have a means to voice their opinions on such matters as mask provisions or the difficulties stemming from excessive workload.⁹⁷

In Argentina, nearly half of all employees are covered by collective bargaining agreements and close to 30 per cent are members of a trade union. The formal employees interviewed for the case study all had union representation and some practice of organizing in the workplace. This gave them a voice in organizing work tasks in the context of the pandemic, including re-organizing shifts as well as demanding strengthened health and safety measures. Informal employees, on the other hand, lacked such means. An informal employee in a restaurant recounted how he and his co-workers prepared and signed a letter that they presented to the owner outlining their concerns over safety and health as they lacked representation.⁹⁸

In Ghana, the union for nurses was able to negotiate with the government for six months of tax relief as a means to compensate the nurses for their contribution as key workers. An ASHA worker in Delhi, India, explained how their union needed to *"create a huge ruckus"* in order to receive back pay. *"We gave letters*

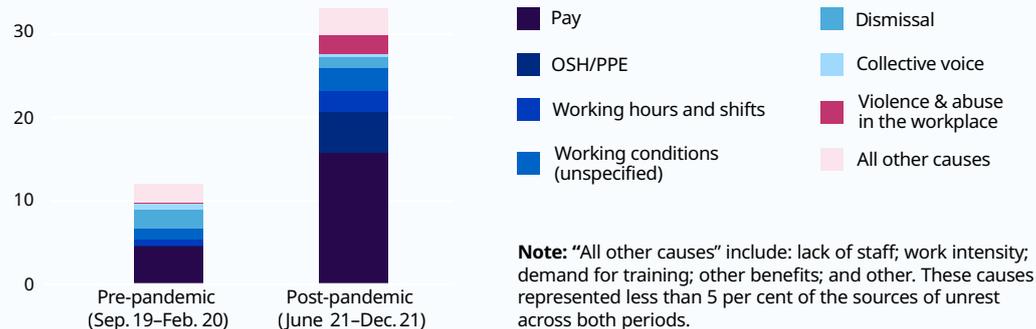
Box 2.1. (cont'd)

▶ **Figure B2.1.3. Average monthly protests in the healthcare sector by source of labour unrest, Sep. 2019–Dec. 2021**



Source: Trappmann et al., 2022.

▶ **Figure B2.1.4. Average monthly protests in the retail sector by source of labour unrest, Sep. 2019–Dec. 2021**



Source: Trappmann et al., 2022.

Non-pay-related aspects emerge as important causes of labour protest

Non-pay-related aspects of employment assumed greater importance both during and following the pandemic in the health (figure B2.1.3) and retail sectors (figure B2.1.4). Figure B2.1.3 shows that, while the average number of protests in the healthcare sector had returned to pre-pandemic levels by 2021, there was a shift in their underlying causes. In particular, there was a decline in the share of protests related to pay (from 34 to 31 per cent); this was offset by a rise in protests related to OSH, especially around the provision of PPE (from 9 to 12 per cent), patient safety (from 5 to 8 per cent) and work intensity (from 3 to 7 per cent).

Unlike the health sector, the average number of monthly protests in the retail sector increased substantially in the post-pandemic period. Some similar trends emerge, however, with respect to the change in the causes of protest. For example, while the importance of pay actually increased in this sector, the share of protests attributable to complaints about OSH, including PPE provision, also jumped from about 1 per cent to close to 15 per cent. Violence and abuse in the workplace was also particularly important to the retail sector, increasing from about 1 per cent of sources of protest prior to the pandemic to about 7 per cent in the post-pandemic period (second half of 2021).

Excess strain: worsened mental health among key workers

To see the patient asking you for oxygen like that and you not being able to give him more, it was a great shock ... there were days when I finished my shift and I started to cry ... it was a tremendous stress.

Medical doctor of COVID-19 patients, Peru

[My] insurance (ART) together with my personal doctor advised me to have an interview with a psychologist and so I did and now I am in treatment ... I collapsed mentally.

Subway worker, Argentina

Working during the pandemic placed multiple demands on key workers, including risk and fear of contagion, heightened work intensity, family separation, restricted social interaction, adverse social environment and, for some, especially informal workers, financial stress. Moreover, important resources, such as social interaction with colleagues, were compromised on account of safety and health protocols. Many key workers lacked the support of a union and felt the need to turn to protest to voice their concerns. Given the heightened and potentially severe job strain, it is not surprising that many key workers experienced increased levels of anxiety and depression as well as burnout.

Since 2020, there has been a growing literature evaluating the mental health of key workers.¹⁰⁰ Most of the studies have focused on health workers, but other key workers have also become a subject of research. With respect to healthcare workers, studies from the first weeks of the pandemic document how the fear of getting sick, insufficient PPE and high work intensity negatively affected workers' mental health. A study of 326 Italian healthcare workers undertaken just five weeks after the start of the COVID-19 pandemic found that nearly 40 per cent of healthcare professionals were suffering from high emotional exhaustion.^{101,102} Six months into the pandemic, a survey of 342 hospital workers in the Islamic Republic of Iran found that job stress and burnout were high among all staff, with 49.5 per cent of hospital workers who were in direct contact with COVID-19 patients reporting burnout, followed closely by 45 per cent of second-line hospital workers. The lack of support in the workplace and the lack of transparency in job responsibilities were reported as the predominant causes of stress and burnout. In addition, the lack of adequate PPE and the risk of transmitting the disease to their family aggravated the psychological problems of employees.¹⁰³ Similar studies of healthcare workers have documented elevated levels of burnout among healthcare personnel in Argentina,¹⁰⁴ India,¹⁰⁵ Morocco,¹⁰⁶ the Republic of Korea¹⁰⁷ and elsewhere. A 2021 meta-review of 30 articles covering 32,000 healthcare professionals working during the COVID-19 pandemic found that nearly half of them were experiencing burnout.¹⁰⁸

There has also been a series of studies looking specifically at non-health key workers, comparing different types of key workers, or comparing key workers with non-key workers or the general population. In the United States, several studies have been undertaken on grocery store workers on account of their high degree of contact with the public and social media coverage of incidents of adverse social behaviour. A survey of 3,344 supermarket workers in the state of Arizona found that the fear that customers might initiate negative interpersonal interactions led to increased anxiety and depression, whereas the strongest mitigator of perceived stress was feeling safe at work.¹⁰⁹ A similar study of 842 grocery store workers in California found that the fear of contracting COVID-19 was significantly and positively related to anxiety, while fear of COVID-19 and the perception of workplace threat (retaliation from customers for imposing OSH protocols) were positively related to depression and post-traumatic stress symptoms. A total of 40 per cent of respondents requested increased safety protections in the workplace.¹¹⁰

In the United Kingdom, a representative survey of 1,281 adult key workers by the Royal Society for Arts (RSA) reported that, in July 2020, 58 per cent of all key workers, 64 per cent of National Health Service (NHS) staff and 61 per cent of supermarket workers reported that they were finding it more difficult to maintain their mental health. As the pandemic dragged on, later waves of the survey revealed that the percentage of key workers reporting such difficulty had increased to 65 per cent overall in March 2021, and to 73 per cent among NHS staff specifically.¹¹¹

In Wuhan, China, a study undertaken between February and March 2020 of 191 non-health key workers – security guards, transport staff and cooks providing services for medical workers and patients – found that 50.3 per cent of participants had clinically significant symptoms of depression. The authors explain that the government had sent psychologists to treat medical personnel and argue that non-medical frontline workers also need psychological support.

A study of mental health in the general population in 11 countries (Brazil, Bulgaria, China, India, Ireland, North Macedonia, Malaysia, Singapore, Spain, Türkiye, United States) between June and August 2020 found that, while there was substantial variation across countries in anxiety and depression, the biggest risk overall was greater personal exposure to COVID-19.¹¹² The literature thus demonstrates that the obligation to leave one's home to work on the front lines in the pandemic – whether in health or other key services – heightened feelings of stress and anxiety, which, if not properly addressed, risked developing into depression and burnout.

2.3. COVID-19 and the challenges for key enterprises

Just like with key workers, there was an important distinction between enterprises that could continue operating because they produced key products and services (“key enterprises”) and those that could not. Allowed to continue operating, key enterprises nonetheless faced substantial impediments to their operations: lockdowns or restricted hours, lower demand, disrupted supply chains, financial uncertainty, declines in investment, as well as managing staff who were concerned for their safety, sick or unavailable because of transport restrictions or care responsibilities, not to mention unruly customers. Enterprises were also obligated to adapt their operations to comply with emergency OSH guidelines that could be erratic, complicated and costly to implement.

While there were some commonalities among the experiences of key enterprises, there were also stark differences depending on the goods or services they produced, their position in the domestic or global supply chain, the severity of restrictions in the locality in which they operated, whether they benefited from government assistance, the adeptness and experience of their owners or managers, and, most importantly, whether they were a large, well-financed and diversified enterprise or a microenterprise with no employees, no capital and no financial cushion for hard times.

Similarly to the previous section, which narrates the challenges for key workers of working during the COVID-19 pandemic, this section provides an overview of the challenges faced by key enterprises, based on qualitative interviews. The analysis is structured along the following main themes: the effects of the pandemic on their operation and sales, the adaptation strategies implemented to face these challenges, and the difficulties in complying with OSH protocols. With 85 per cent of key workers employed in the private sector, it is important to understand the struggles – and opportunities – of key enterprises during this time of crisis.

As mentioned, key enterprises are those enterprises offering goods and services that were deemed essential during the pandemic. According to data from the World Bank Enterprise Surveys (WBES) for

27 countries,¹¹³ approximately 53 per cent of enterprises in the sample were designated as key enterprises during the COVID-19 pandemic.¹¹⁴ By firm size, around 45 per cent of these key enterprises were small (5–19 employees), 32 per cent were medium-sized (20–99 employees) and 22 per cent were large (100+ employees).

Effects of the pandemic on the operation and sales of key enterprises

Being classified as a key enterprise allowed firms to continue operating, which indisputably gave these firms an advantage vis-à-vis other enterprises that were not considered key and whose operations were restricted during periods of lockdown. Indeed, 72 per cent of key enterprises in the WBES sample were able to remain open throughout lockdowns, compared with 28 per cent of firms not providing key goods and services. Yet, being permitted to stay open did not necessarily mean that the key firms would actually stay open or continue to operate. A total of 28 per cent of the firms providing key goods and services still closed at some point (figure 2.4), according to the WBES sample.

The ability to continue operating did not mean, however, that key enterprises were immune to disruption. In agriculture and fishing – which were designated as key economic sectors in all countries – shifts in consumption, transport impediments and problems with staffing reverberated across the industry. The closing of restaurants and the cancellation of weddings and other events, accompanied by a shift in demand for food that could be cooked at home, meant that farmers, fishers and meat packers had to adjust product offerings, where possible.

In meat packing, this meant shifting production from products prepared for the wholesale market, such as prime rib, to the lower-quality cuts of meat, such as chuck and ground beef, that are sold to retail outlets for purchase by households in supermarkets. Added to this challenge were the many COVID-19 outbreaks in meat packing facilities stemming, in part, from the production process, which is organized as an assembly line with workers in close proximity performing repetitive movements in a cold environment.¹¹⁵ Combined, the effects wreaked havoc on upstream and downstream supply chains, resulting in a surplus of livestock that could not be processed and a shortage of meat products available for purchase by households in grocery stores.¹¹⁶ A similar experience occurred in aquaculture, as demand fell for fresh fish products, but rose for canned, frozen and processed fish. In addition, border closures impeded fish exports, forcing aquaculture farmers to maintain significant live stocks in production facilities, incurring additional feed and monitoring costs, and increasing fish mortality risks.¹¹⁷

Further up the supply chain, farmers of some crops were negatively affected by declining prices. Cardamom farmers in Kerala, India, reported a dramatic drop in price from 3,000–4,000 Indian rupees per kilogram to 1,000–1,500 rupees per kilogram beginning in April 2020, as a result of lack of demand on the international market, shutdowns and an overabundance of stock due to a good harvest. At the same time, the prices of fertilizers and pesticides used in the production of cardamom rose by 25 per cent. As a result, farmers reported falls of 30 per cent in their income, which caused many to exhaust their savings

► **Figure 2.4. Operational status, by provision of key goods and services (percentage)**



Note: The sample consists of 9,169 firms. Sampling weights applied.

Source: Analysis based on WBES. See Appendix for more details.

and take out loans.¹¹⁸ The farmers also reported problems with finding labourers as migrants from the state of Tamil Nadu were unable to cross state borders, and even local labourers had difficulty reporting to work during the first lockdown in March 2020.

In addition, transportation and other bottlenecks heavily disrupted supply chains, both international and domestic. According to the WBES data, a total of 43.7 per cent of enterprises providing key goods and services experienced negative impacts around the supply of inputs – lower than the 65.4 per cent reported by non-key enterprises but nonetheless substantial. In India, data from one of the largest online grocery retailers found that online product availability of vegetables, fruits and edible oils fell by 10 per cent in the three weeks following the imposition of a strict lockdown on 25 March 2020. The effect at primary agricultural markets, known as Mandis, was even more pronounced, with the quantity of vegetables and fruits arriving for sale to intermediaries falling by 20 per cent in Delhi and Kolkata as a result of freight disruptions.¹¹⁹ Other key goods and services were also affected by transport disruptions. The pharmaceutical industry, for instance, faced difficulty in shipping products internationally as commercial flights were drastically reduced.¹²⁰

Small businesses were similarly affected by supply chain problems. In Kenya, limited transport services and the closure of borders, including with Uganda and the United Republic of Tanzania, complicated procurement, especially in remote areas, with ripple effects on the prices of goods and services.¹²¹ Similar experiences were observed in Malawi; traders who travel to neighbouring countries to buy merchandise to supply the city centres and marketplaces were unable to replenish their stocks.¹²²

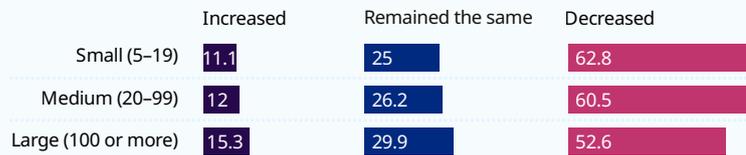
While supply problems caused disruptions in operations, the greatest impact was on the demand side, especially for micro and small businesses, which rely on foot traffic that was hampered by movement restrictions. In Accra, Ghana, a survey of informal workers found that, in July 2020, the earnings of market traders and food vendors stood at only one third of pre-pandemic levels.¹²³ The experience of Adele, a street trader, confirmed such findings: *“There are days when we sit here all day and make no sales ... that is how bad it has become”*.¹²⁴ Another food vendor recalled how *“we were closing by 4 p.m. instead of the usual 6 p.m. because there were no customers to buy the food we prepared. The place was very quiet and it was difficult to believe that we were in Accra”*.¹²⁵ As the pandemic continued, the negative effects in some instances multiplied, given that the customers of the food vendors had reduced their consumption because of income loss. From the beginning of the pandemic, there was a drop in food expenditure across developing countries due to reduced incomes. Compounding the financial troubles of food vendors was the entrance of displaced workers into food vending during the crisis, a phenomenon experienced across countries. An advantage of informality – ease of entrance – becomes a disadvantage when the activity serves as a refuge for workers who have no robust social protection system to depend on during hard times. New entrants increased competition among vendors, lowering the income of all vendors. By mid-2021, more than 60 per cent of the street vendors in 11 major cities in the global South reported their earnings were a mere quarter of what they made prior to the pandemic.¹²⁶

While supply problems caused disruptions in operations, the greatest impact was on the demand side, especially for micro and small businesses.

Thus, even though key enterprises were able to continue operating, many experienced declines in sales and income. According to WBES data, which do not include agriculture or microenterprises but do include food processing and retail, 62 per cent of key enterprises experienced a drop in sales (compared with 81 per cent of non-key enterprises) during the pandemic. Among key enterprises, there was some variation by firm size. Just over half of large firms experienced a drop in sales, but the outcome was worse for medium-sized (60.5 per cent) and small firms (62.8 per cent). Some enterprises prospered but, here again, it was larger firms that did better, with 15.3 per cent reporting an increase in sales, compared with 11.1 per cent among small firms (see figure 2.5).

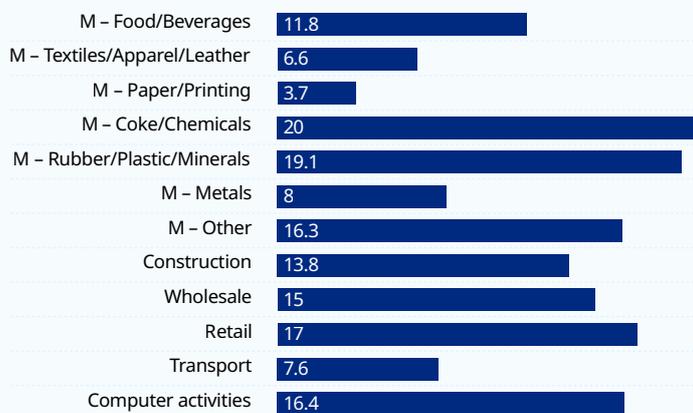
Nevertheless, as the data show, some enterprises prospered in the pandemic. Disaggregating further the enterprises that reported growth in sales, there is a clear distinction by sector, which is not surprising given the demand for specific products as a result of the COVID-19 pandemic. One in five enterprises engaged

► **Figure 2.5. Impact on sales, by size of enterprise, among key enterprises (percentage)**



Source: Analysis based on WBES. See Appendix for more details.

► **Figure 2.6. Key firms reporting increased sales during the pandemic, by sector (percentage)**



Note: M = manufacturing. The sample of enterprises producing key goods and services consists of 4,480 firms. Sectors with small sample size (≤ 30) were excluded.

Source: Analysis based on WBES. See Appendix for more details.

in “Coke/Chemicals” and “Rubber/Plastic/Minerals” reported increased sales; enterprises in “Wholesale” and “Retail” trade and “Computer activities” also did relatively well, with 15–17 per cent reporting positive sales (see figure 2.6). In contrast, few enterprises in the “Paper/Printing” sectors did well, likely because of the marked shift to working from home.¹²⁷

The impact on sales was driven by demand but was also determined by the ability of enterprises to innovate and adapt in response to the business disruption. Adaptations by enterprises include restaurants shifting to take-out, garment manufacturers switching to the production of face masks,¹²⁸ or paint and beverage manufacturers producing hand sanitizer and disinfectants.¹²⁹ Digitalization and the shift to e-commerce provided a means for enterprises to reach customers despite lockdowns, curfews and social distancing rules and preferences, with remote work facilitating continuity in business operations.

Among key enterprises, there were differences in terms of responses and adjustments according to firm size. Large enterprises were more likely to implement remote working – 49.3 per cent compared with 38.3 per cent of medium-sized enterprises and 25.9 per cent of small firms (see figure 2.7). The same differences by size were less marked, but still evident, for those that started or increased their online presence (20.3 per cent of small firms compared with 28.2 per cent among large firms). Regarding delivery, medium-sized firms turned to this option the most (23 per cent), with 18 per cent of small firms also starting or increasing this option, likely reflecting the smaller size of most restaurants and retailers. In all cases, however, small enterprises were least able to adapt.

▶ **Figure 2.7. Key enterprises that started or increased online sales, delivery or remote work during the pandemic (percentage)**

	Online	Delivery	Remote
Small (5–19)	20.3	18	25.9
Medium (20–99)	26.5	23	38.3
Large (100 or more)	28.2	21.5	49.3

Source: Analysis based on WBES. See Appendix for more details.

People had to stay at home, but they needed services, they needed articles, they needed many things, and we had to bring them to them. So that has changed a lot, we have become very visible.

Owner, international package delivery business, Mexico¹³⁰

Moving to online sales and delivery required adjustments in operations. Restaurant owners in Malaysia explained how the shift involved adapting their menus, investing in appropriate packaging and setting up delivery services. The enterprises also had to rely more on advertising and develop systems to take orders online.¹³¹ Elsewhere, restaurants and non-food retailers opted to use intermediary platforms that provided the services of online ordering and delivery, either because they did not have the means to develop their own infrastructure, or because the important market position of the platforms meant that, if the enterprises did not use their services, sales would be insufficient.¹³² However, the high fees and commissions charged by e-commerce and food delivery intermediaries – typically amounting to close to one third of the sale price – risked compromising the financial viability of small enterprises.¹³³ In view of this, it is not surprising that some of the biggest winners from the pandemic have been e-commerce firms. In 2021, Amazon posted a 44 per cent rise in global sales and record profits of US\$8.1 billion, an increase of 220 per cent,¹³⁴ and Flipkart, India's second-largest e-commerce retailer, posted a 25 per cent increase in revenue for fiscal year 2021.¹³⁵

Complying with OSH protocols

While most enterprises producing key goods and services were allowed to continue operating, they were nonetheless obligated to comply with workplace safety and health protocols to both ensure the safety of their staff and clientele and mitigate the potential spread of the virus in the community. At the outbreak of the COVID-19 pandemic, WHO released guidance on workplace safety and health measures,¹³⁶ as did most countries. While many of these guidelines were applicable universally, some of them were more suited to developed country settings, particularly formal workplaces. For instance, the guidelines suggest to “make clear to employees [isolating themselves at home] that they will be able to count this time off as sick leave” – something that is not universally available, either in law or in practice. Informal enterprises in low-income countries were also less likely to have access to water and sanitation facilities, making it harder to comply with the guidelines.

As the nature of COVID-19 was not fully understood until several months into the pandemic, advice could also be confusing as well as difficult and costly to implement, especially for smaller firms that lacked experience with workplace safety and health measures.¹³⁷ A restaurant owner in Peru explained how “[we] did not have the resources to implement, supervise and monitor the protocols ... we tried to implement it as much as possible, but it is impossible to do it 100 per cent ... the fear was, more than getting infected, the municipality and its fines”.¹³⁸ For larger firms, the measures could still be

cumbersome and costly to implement but were recognized as a means to ensure business continuity, as the experience of citrus growers in the Western Cape of South Africa demonstrates (see box 2.2).

At the outbreak of the pandemic, some enterprises experienced difficulties in convincing workers to report to work. An owner of a coffin-making workshop in Peru explained that there was concern among the staff about continuing operations, and that *“we thought about closing it, but I was saying how we ... cannot close, there is a demand, there is a need, there is a great need for coffins, how can we close if it is our line of business, it is our work, it would be irresponsible to close, then we talked with everyone and so we agreed [to remain open]”*.¹³⁹ The owner commented that precautions were taken so that funeral parlour staff could no longer enter the workshop and how they required the use of masks and hydroalcoholic gel.

Quarantine measures could also affect workplace staffing.¹⁴⁰ A central protocol in virus mitigation was having staff who tested positive, had symptoms, or who were in contact with infected persons to self-isolate or quarantine.¹⁴¹ As part of the self-isolation or quarantine enforcement, a number of countries introduced contact tracing, often enforced by phone calls or use of apps.¹⁴² In the United Kingdom, the NHS Test and Trace programme, a contact-tracing initiative, was launched in response to the pandemic to help curb the spread of COVID-19 by tracking users in different institutions and notifying them if they had been in close contact with a person who had tested positive for the virus. The Test and Trace scheme was widely implemented and resulted in reductions in the spread of COVID-19.¹⁴³ Nonetheless, it posed challenges for employers as it intensified workplace shortages, particularly in occupations that required close in-person contact. In the United Kingdom, the workforce impacts were so acute that the situation was dubbed a “pingdemic”.¹⁴⁴

After the rollout of the COVID-19 vaccines, many countries instituted rules requiring cooperation from employers to help monitor their employees' vaccination status. For example, in the United States, any business with over 100 employees needed to show proof of vaccination for their employees or undergo regular testing.¹⁴⁵ In Italy, when the Green Pass was in effect, unvaccinated employees were sent home without pay.

Despite the difficulties and cost of compliance with certain COVID-19-related protocols, these protocols did allow for business continuity. In Canada, for instance, the measures implemented, including those to facilitate distancing, were found to be appreciated by Canadian shoppers.¹⁴⁶

Box 2.2. Safety and health measures among large citrus growers and packhouses in the Western Cape, South Africa

The experience of large citrus growers and packhouses in the Cederberg region in the Western Cape province of South Africa gives an indication of the extent of workplace safety and health measures taken to limit infection and ensure their businesses could continue operating. As in other parts of South Africa, the growers and packhouses in Cederberg are part of the global value chain of fresh fruits, with a variety of citrus and other produce exported primarily to Europe but also to other parts of the world. Production is organized in large plantations and packhouses, employing at peak harvest times between several hundred and several thousand workers, depending on the producer. Workers are predominantly internal migrants, but also include migrants from Lesotho and Zimbabwe. While some workers live in on-farm hostels, most reside in informal settlements and are transported daily to the plantations and packhouses on farm trucks provided by the employer.

Given the State's warning that key businesses would be shut down if they did not comply with COVID-19 health and safety protocols, the Citrus Growers' Association (CGA), the commodity organization representing citrus producers, formed a COVID-19 Response Committee (CRC) in order to advise its members on compliance. From 15 April to 27 August 2020, the CRC met weekly to discuss the industry's response to COVID-19. The risk of workers falling ill and

Box 2.2. (cont'd)

jeopardizing entire harvesting teams, packhouses, cold stores and shipping terminals was identified as a major risk. Another was that the State might restrict the movement of migrants, preventing them from reaching farms and packhouses.¹

The CRC consulted widely to collect best practices on implementing COVID-19 regulations, including with the Department of Agriculture, Land Reform and Rural Development (DALRRD) and with fruit industry representatives from Australia, New Zealand and Spain. It asked its members to share tips and experiences of coping with COVID-19 in the workplace. It eventually developed two best practices guidelines for producers: one for workplaces and one for transporting workers. It also sent newly published government directives to its members and updated its own guidance based on the evolving information and directives. Between April and July 2020, the CGA distributed 44 memos containing guidelines to its members and also distributed posters and pamphlets that producers could display in workplaces.

While the activities of the CRC were put on hold after the first wave, it was reconvened to deal with the Delta variant of the virus. This time representatives of the DALRRD, the Fresh Produce Exporters Forum, the Perishable Produce Export Control Board and AgBIZ were invited to join the CRC, leading to closer cooperation between agriculture and government institutions. Most other commodity organizations as well as the national farmers' organization, AgriSA, and ethical trade organizations, such as the Sustainability Initiative of South Africa and the Wine and Agricultural Ethical Trade Association, supported their members in similar ways. In addition, in the Cederberg region, various local WhatsApp groups were established, linked to AgriSA, community policing forums and the Cederberg's medical manager (who conveyed guidelines via the Department of Health). In short, large exporting producers received substantial information and guidance on how to deal with the pandemic.

Despite having access to the same information, producer responses to the pandemic sometimes differed markedly, ranging from extreme caution to dismissal. One producer (P6) recounted how he locked the gates to his farm after ending up in hospital with COVID-19, while another (P4) "realized that COVID was no joke" following the death of one of his senior managers. P4 developed a contact-tracing app to be able to quickly quarantine all contacts, hired a consultant to ensure that COVID-19 risk prevention strategies were implemented on his farm and conducted a detailed COVID-19-specific risk analysis of his workplace. Another producer, P3, in addition to conducting a COVID-19-specific risk analysis, appointed a COVID-19 management team (including senior management, HR, the packhouse quality controller and the shop steward) and instructed its industrial nurse to monitor high-risk areas on an ongoing basis. At P2, workers who did not wear masks in the packhouse received disciplinary warnings. At the other end of the spectrum was P1, who recounted: "I told the workers it is nonsense – if your spit stays behind your mask, it cannot influence anybody"; he also did not implement social distancing protocols.

Once vaccinations became available, all of the producers – with the exception of P1, who was sceptical – embraced the opportunity to vaccinate themselves and their workers. In the Citrusdal area, the largest producers organized a vaccination drive in cooperation with the Department of Health, with all producers in the area invited to participate in the drive. On the farms of producers interviewed, vaccination rates were above 90 per cent immediately after the drive, with P5 boasting the highest vaccination rate, at 99 per cent. He not only provided free transport to workers to vaccination sites, but he also launched an extensive vaccination campaign over cell phones, messaging workers throughout the epidemic about how to avoid COVID-19 and, later, extolling the benefits of vaccination. The workers interviewed confirmed that they were encouraged to get vaccinated and were provided with free transport to vaccination sites.

Box 2.2. (cont'd)

While two producers (P1 and P5) described the impact of the pandemic on their businesses as “negligible”, all producers remarked that their transport costs had doubled as a result of implementing social distancing guidelines. P4 reported that the costs of implementing the different measures came to approximately 1.1 million South African rand (around US\$61,000) on additional transportation; appointing a consultant to monitor the implementation of COVID-19 regulations; fumigating and sanitizing indoor spaces; appointing a contractor to clean and sanitize hostels on a daily basis; purchasing masks and sanitizers; and buying food hampers for ill workers. P3 spent approximately 1.5 million rand (around US\$83,000) on sanitation, masks, fumigating the packhouse and appointing ten extra cleaners to sanitize the packhouse. While the measures were extensive and costly, these large producers had the requisite information and financial means to implement the safety protocols, allowing them to continue their operations.

¹ CGA, 2021, 22.

² CGA, 2021.

Source: M. Visser, 2023.

Notes

- 1 ILO, 2020r.
- 2 Murti et al., 2021.
- 3 WHO, n.d.(a).
- 4 According to the methodology used in this report, key workers are those who are in a key occupation working in a key industrial sector. Unfortunately, owing to lack of data, the analysis in this section could not incorporate the sectoral dimension. As a result, the occupational categories used in this section are broader than in the rest of the report.
- 5 Calculating mortality of key workers is not easy because of data limitations, given that such calculations require publicly available timely data on both the labour force and mortality by detailed occupation and/or industry. The three countries whose data satisfied all these conditions were Brazil, England (United Kingdom) and the United States (United States National Vital Statistics System (NVSS) data have information on occupation and industry only for 2020 and onwards). England provides linked data sets in which deceased workers are matched to census data, but there are no linked data for Brazil and the United States. Lack of linked data is not particularly serious as the mortality rate can be calculated as the ratio between deceased workers from the mortality data and living workers from labour force surveys.
- 6 Data for mortality come from the US NVSS, provided by the Centers for Disease Control and Prevention (CDC); data for the population (number of key workers, or workers in a given occupation) come from the Current Population Survey (CPS) conducted by the US Census Bureau. Using the first two months of a given year as a baseline for calculating excess mortality is far from ideal. Two months is not long enough and deaths in January and February suffer from seasonal variation. Nevertheless, it is the best that can be done because NVSS data previous to 2020 do not publish occupation and industry.
- 7 Hummer, Rogers and Eberstein, 1998.
- 8 The controls are undertaken through a logistic regression in which mortality is the result, key worker is the explanatory variable, and the controls are age, sex and a composite for education.
- 9 Controlled excess mortality is the difference in mortality associated with the key worker coefficients. The increase in mortality associated to a logistic regression coefficient is the change in probability of death, given by the logistic function evaluated at the average probability of death:

$$\Delta p = \frac{1}{1+e^{(x_0+\beta_{key})}} - \frac{1}{1+e^{(x_0)}}$$
 where β_{key} is the coefficient associated with key workers and x_0 is the argument which yields average mortality for all workers.
- 10 Pure COVID-19 mortality is calculated as deaths having as their first International Statistical Classification of Diseases and Related Health Problems (ICD) code U071, B342 or U049, divided by the relevant population. This is an underestimate of actual COVID-19 mortality due to misdiagnosis or the code above being listed as the secondary or tertiary cause of death.
- 11 Chen et al., 2021.
- 12 Chen et al., 2021.
- 13 Matz et al., 2022. The data for England are the only data in which decedents are actually merged with labour market data from the census.
- 14 The authors use the term “essential workers” in their study. Since they identify these essential workers in a way different from the one in which this report identifies key workers, “key” was not changed to “essential” when presenting their results.
- 15 Nafilyan et al., 2021.
- 16 A hazard ratio of 1.45 means that the mortality rates of key workers are 45 per cent higher than those of non-key ones (not 45 percentage points, but 45 per cent higher).
- 17 Mortality from COVID-19 is also a function of underlying health conditions that vary according to the occupation. In some occupations, smoking and obesity are more prevalent than in others. The studies analysed here have not been able to take these differences into account because of data limitations.
- 18 DARES, 2021.
- 19 Calvo-Bonacho et al., 2020.
- 20 Al-Kuwari et al., 2021.
- 21 Dean, Venkataramani and Kimmel, 2020; Firouzi Naeim and Rahimzadeh, 2022; Soares and Berg, forthcoming.
- 22 Leigh, 1981.
- 23 Weil, 1991.
- 24 Mishel, 2012.
- 25 Firouzi Naeim and Rahimzadeh, 2022.
- 26 Soares and Berg, forthcoming.
- 27 El Colegio de la Frontera Norte, 2020.
- 28 Baumelster, 2021.
- 29 The per cent difference in incomes between Costa Rica and Nicaragua is about the same as that between the United States and Mexico.
- 30 Douglas and Marema, 2020.
- 31 Mano, 2020.
- 32 State of California, n.d.
- 33 Source: ILOSTAT.
- 34 In Brazil, all workers with a labour card are registered in the Cadastro Geral de Empregados e Desempregados (CAGED). Specifically, whenever an employment link is made or broken, it is registered and the reason given, including death of the worker.
- 35 Pereira Galindo, Pereira Silva and Pedreira Júnior, 2022.
- 36 See Karasek, 1979; Karasek and Theorell, 1990; Siegrist, 1996; Bakker and Demerouti, 2007.
- 37 Eurofound and ILO, 2019.
- 38 Schaufeli and Taris, 2014.
- 39 ILO, 2021c.
- 40 Qin et al., 2021.
- 41 Elbert, Boniolo and Dalle, 2022.
- 42 Lim, 2022.
- 43 Vosko et al., 2022.
- 44 Unpublished background study prepared for the ILO.
- 45 Darkwah, 2022.
- 46 Vosko et al., 2022.
- 47 Elbert, Boniolo and Dalle, 2022.
- 48 Unpublished background study prepared for the ILO.
- 49 Darkwah, 2022.
- 50 Interview with Lucrecia, Mexican nurse, on 24 August 2021.

- 51 Unpublished background study prepared for the ILO.
52 Manky et al., 2022.
53 Unpublished background study prepared for the ILO.
54 Manky et al., 2022.
55 Vosko et al., 2022.
56 Eurofound and ILO, 2019.
57 Eurofound and ILO, 2019.
58 Eurofound and ILO, 2019.
59 Unpublished background study prepared for the ILO.
60 Unpublished background study prepared for the ILO.
61 Unpublished background study prepared for the ILO.
62 Loustaunau et al., 2021.
63 Lim, 2022.
64 Unpublished background study prepared for the ILO.
65 Indeed, job satisfaction indicators are more likely to reflect an individual's feelings about their social environment at work as opposed to workers' evaluations of their contractual conditions (Rose, 2003).
66 Seppälä and Cameron, 2015.
67 D. Singh, forthcoming.
68 Manky et al., 2022.
69 Unpublished background study prepared for the ILO.
70 Vermeerbergen et al., 2021.
71 Eurofound and ILO, 2019.
72 Hughes, 1958; Press, 2021.
73 Manky et al., 2022.
74 Vosko et al., 2022.
75 D. Singh, forthcoming.
76 Manky et al., 2022.
77 H. Kim et al., 2022.
78 Jones, Mudaliar and Piper, 2021.
79 Bagcchi, 2020.
80 Lim, 2022.
81 D. Singh, forthcoming.
82 Darkwah, 2022.
83 Hochschild, 2012.
84 Joo and Rhie, 2017.
85 Cai et al., 2021.
86 Unpublished background study prepared for the ILO.
87 WIEGO, 2021.
88 Darkwah, 2022.
89 Dev and Rahul, 2022.
90 J. Liu et al., 2019.
91 Vento, Cainelli and Vallone, 2020.
92 ICRC, 2020.
93 Healthcare in Danger, n.d.
94 Bryson and Green, 2015.
95 Lim, 2022.
96 Manky et al., 2022.
97 Unpublished background study prepared for the ILO.
98 Elbert, Boniolo and Dalle, 2022.
99 Dev and Rahul, 2022.
100 Barello, Palamenghi and Graffigna, 2020.
101 Emotional exhaustion is defined as having one's emotional resources depleted with no source of replenishment.
102 Barello, Palamenghi and Graffigna, 2020.
103 Sadeghipour, Aghdam and Kabiri, 2021.
104 Scatularo et al., 2021.
105 Khasne et al., 2020.
106 Kapasa et al., 2021.
107 M. Kim et al., 2022.
108 Ghahramani et al., 2021.
109 Janson, Sharkey and del Cid, 2021.
110 Mayer et al., 2022.
111 Jooshandeh, 2021.
112 Ding et al., 2021.
113 The WBES cover registered firms in the private sector with five employees or more. The data set excludes agriculture and the health sectors; information was available for 27 countries. See Appendix for more details.
114 Unlike the analysis for workers, which is based on a global definition of "key", the designation of key enterprises is based on the specific list for each of the 27 countries analysed in the WBES data set, as an enterprise's ability to continue operating was determined at the country level. See Appendix for more details.
115 In the early months of the pandemic, there were outbreaks in the meat packing industry in Australia, Argentina, Brazil, Canada, China, Denmark, France, Germany, Ireland, Italy, the Netherlands, Poland, Spain, the United Kingdom and the United States.
116 ILO, 2021i.
117 FAO, 2020.
118 Based on interviews with farmers in Kerala, India, in September 2021.
119 Mahajan and Tomar, 2021.
120 Flynn et al., 2021.
121 Unpublished background study prepared for the ILO.
122 Background note.
123 WIEGO, 2021.
124 Darkwah, 2022.
125 Darkwah, 2022.
126 Alfors et al., 2022.
127 ILO, 2021d.
128 Manolova et al., 2020.
129 Laato et al., 2020.
130 Unpublished background study prepared for the ILO.
131 Lim, 2022.
132 Popper, 2020.
133 Mitchell, 2021.
134 Weise, 2021.
135 Statista, n.d.
136 WHO, 2020b.
137 Shaw et al., 2020.
138 Manky et al., 2022.
139 Manky et al., 2022.
140 Koren and Petó, 2020.
141 WHO, 2021.
142 Scarpetti, Webb and Hernandez-Quevedo, 2020.
143 Wymant et al., 2021.
144 Hipwell and Shepherd, 2021.
145 United States Chamber of Commerce, n.d.
146 Ellen Goddard, "The Impact of COVID-19 on Food Retail and Food Service in Canada: A Second Assessment", *Canadian Journal of Agricultural Economics/Revue Canadienne d'Agroéconomie* 69, No. 2 (2021): 167–175.