

A/Z DRIVER ABLE SEAMAN ACTIVITY COORDINATOR, MEDICAL ADMINISTRATOR ADMISSIONS MANAGER ADMISSIONS OFFICER ADULT EDUCATION TEACHER ADULT NURSE PRACTITIONER (ANP) AGED CARE SUPPORT WORKER AGED CARE WORKER AGRICULTURE SPECIALIST AIRCRAFT CLEANER AIRCRAFT ENGINEER AIRPORT MANAGER ALLOCATION ANALYST AMBULANCE DRIVER ARCHIVIST ARCHIVIST, CURATOR, OR MUSEUM TECHNICIAN ARMOURER CAR GUARD & DRIVER ART TEACHER ART, DRAMA, OR MUSIC TEACHER, POST-SECONDARY ARTIST ASSEMBLER ASSESSMENT AND EDUCATION RESEARCHER ASSET MANAGEMENT COORDINATOR ASSISTANT CURATOR ASSISTANT GENERAL COUNSEL ASSISTANT LIBRARIAN ASSISTANT PRESCHOOL TEACHER ASSISTANT SOLICITOR ASSISTANT WAREHOUSE MANAGER ASSOCIATE ATTORNEY (LAW FIRM) AUDIOLOGIST AUTOMOBILE DETAILER BACKGROUND INVESTIGATOR BAKER BANK TELLER BICYCLE REPAIR BIOLOGICAL SCIENCE TEACHER, POST-SECONDARY BODYGUARD BOUNCER BROADCASTER BUS DRIVER BUS DRIVER, SCHOOL BUS DRIVER, TRANSIT AND INTERCITY BUS TRANSPORTATION MANAGER BUTCHER CAPTAIN, MATE, OR PILOT OF WATER VESSELS CARE HOME MANAGER CARE WORKER CARER CERTIFIED MESSAGE THERAPIST (CMT) CERTIFIED OCCUPATIONAL THERAPY ASSISTANT (COTA) CERTIFIED ORTHODONTIC ASSISTANT CERTIFIED ORTHODONTIC ASSISTANT (COA) CERTIFIED PHARMACY TECHNICIAN (CPHT) CHARITY STAFF CHARITY WORKER CHAUFFEUR CHEMICAL SCIENTIST CHILD CARE ASSISTANT CHILD CARE LEADER CHILDMINDER CHIROPRACTIC ASSISTANT CIVIL SERVANT CLEANER CLERICAL WORKER CLERK, LEGAL CLINICAL ASSISTANT CLINICAL CODER CLINICAL RESEARCH NURSE COMMUNITY HEALTH SERVICE WORKER COMMUNITY SUPPORT OFFICER CONSTABLE CONSTRUCTION LABOURER CONVEYANCER CHOREOGRAPHER CORPORATE COUNSEL CORPORATE PARA LEGAL CRANE OPERATOR CURATOR CURATOR, ART GALLERY CURATOR, MUSEUM CURRICULUM COORDINATOR CUSTOMER ASSISTANT CUSTOMER SERVICE REPRESENTATIVE DANCE TEACHER DANCER DAYCARE TEACHER DECKHAND DELIVERY DRIVER DENTAL ASSISTANT DENTAL ASSISTANT (CERTIFIED) DENTAL ASSISTANT (NON-CERTIFIED) DENTAL ASSISTANT LEAD DENTAL PRACTITIONER DEPARTMENT ADMINISTRATOR DETECTIVE DETECTIVE OR CRIMINAL INVESTIGATOR DETENTION OFFICER DIALYSIS TECHNICIAN DIETITIAN DIRECTOR, PRESCHOOL DISABILITY CARE WORKER DISPENSING OPTICIAN DISPENSING TECHNICIAN DISTRIBUTION SUPERVISOR DRIVER HELPER DRIVER/SALES WORKER DRIVING INSTRUCTOR EARLY CHILDHOOD EDUCATOR (ECE) EDUCATION COORDINATOR, NON-PROFIT ORGANIZATION EDUCATION FACILITATOR EDUCATION MANAGER EDUCATION PROGRAM MANAGER EDUCATIONAL ASSISTANT EDUCATIONAL SPECIALIST ELECTRICIAN ELEMENTARY SCHOOL TEACHER ENDOSCOPY TECHNICIAN ENGLISH AS A SECOND LANGUAGE (ESL) TEACHER ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL) TEACHER ENGLISH LANGUAGE / LITERATURE TEACHER, POST-SECONDARY ENGLISH TEACHER/TUTOR (VOCATIONAL) EXCAVATING, LOADING MACHINE, OR DRAGLINE OPERATOR EXCAVATOR OPERATOR FACTORY OPERATIVE FACTORY WORKER FAMILY NURSE PRACTITIONER (FN) FARM WORKER FILE CLERK FINANCE ASSISTANT FINANCE EXECUTIVE FIRE FIGHTER FIREMAN FIRST AID ATTENDANT FISHERMAN FLEET MANAGER FLEET MANAGER, TRUCKING & TRANSPORTATION FLOOR MANAGER FOOD BANK STAFF FOOD PREPARATION WORKER FOREIGN LANGUAGE / LITERATURE TEACHER, POST-SECONDARY FORKLIFT DRIVER FORKLIFT OPERATOR FREIGHT TRAIN DRIVER FRONT END LOADER OPERATOR FUEL TANKER DRIVER FUNERAL ASSISTANT FUNERAL ATTENDANT FUNERAL DIRECTOR GAS TECHNICIAN GLASS PRODUCTION OPERATOR GRADUATE ASSISTANT GRADUATE RESEARCH ASSISTANT (GRA) GRADUATE TEACHING ASSISTANT GRAPHIC DESIGNER HEAD LIBRARIAN HEAD NURSE HEALTH & SAFETY CONSULTANT HEALTH CARE AIDE HEALTH CARE AIDE HEALTH SAFETY ADVISOR HEALTHCARE ASSISTANT HEAVY / TRACTOR-TRAILER TRUCK DRIVER HEAVY TRUCK DRIVER HGV DRIVER HIGH SCHOOL TEACHER HISTORY TEACHER, POST-SECONDARY HOME CARE ASSISTANT HOME CARE WORKER HOME HEALTH CARE PROVIDER HOME HEALTH CARE WORKER HOME HEALTH CAREGIVER HOSPITAL ADMINISTRATOR HOUSEBUILD SITE MANAGER HYGIENE COORDINATOR IMMIGRATION CONSULTANT IMMIGRATION OFFICER IN-HOME SUPPORT SERVICES (IHSS) CAREGIVER INSTRUCTIONAL DESIGNER INSTRUCTOR, GYMNASTICS INSTRUCTOR, POST-SECONDARY / HIGHER EDUCATION INTELLECTUAL PROPERTY (IP) ASSISTANT INTELLECTUAL PROPERTY (IP) LAWYER INTELLECTUAL PROPERTY (IP) PARA LEGAL INTELLIGENCE ANALYST INTELLIGENCE OFFICER IT PROFESSIONAL IT TECHNICIAN JOURNALIST JUNIOR ARCHITECT JUNIOR DOCTOR JUNIOR PHYSIOTHERAPIST JUNIOR SOLICITOR KITCHEN STAFF LAB TECHNICIAN LAB TECHNOLOGIST LABORER, FREIGHT, STOCK, MATERIAL MOVER, HAND LANGUAGE TEACHER LANGUAGE THERAPIST LAUNDRY WORKER LAW CLERK LEARNING FACILITATOR LECTURER, POST-SECONDARY / HIGHER EDUCATION LEGAL ADMINISTRATIVE ASSISTANT LEGAL ADMINISTRATOR LEGAL ADVISOR LEGAL ANALYST LEGAL SERVICES HEAD LEGAL SUPPORT ASSISTANT LGV DRIVER LIBRARIAN LIBRARY MANAGER LICENSED PRACTICAL NURSE (LPN) LIFEGUARD LIGHT OR DELIVERY SERVICES TRUCK DRIVER LINE OPERATOR LITIGATION ATTORNEY LITIGATION PARALEGAL LIVE-IN CAREGIVER LOADER LOADER AND UNLOADER LOGISTICS ANALYST LOGISTICS SUPERVISOR LOSS PREVENTION INVESTIGATOR LOSS PREVENTION OFFICER MACHINE OPERATOR MAINTENANCE TECHNICIAN MANAGER WHOLESALE MANAGER, CHILD CARE CENTER MARINE CARGO SURVEYOR MATERIAL HANDLER MATERIALS SUPERVISOR MATHEMATICS TEACHER MECHANIC MECHANICAL ENGINEER MEDICAL / CLINICAL LABORATORY TECHNICIAN MEDICAL ASSISTANT (CERTIFIED) MEDICAL LABORATORY ASSISTANT (MLA) MEDICAL LABORATORY TECHNICIAN MEDICAL PRACTICE MANAGER MEDICAL PRACTITIONER MEDICAL TRANSCRIPTIONIST MEDIUM TRUCK DRIVER MIDDLE SCHOOL TEACHER MIDWIFE MOBILE CRANE OPERATOR MULTIMEDIA PRODUCTION COORDINATOR MUSICIAN NEWSAGENT NURSE NURSE ASSISTANT NURSE EDUCATOR NURSE PRACTITIONER (NP) NURSE, INTENSIVE CARE UNIT (ICU) OCCUPATIONAL THERAPIST OCCUPATIONAL THERAPIST (OT) OCCUPATIONAL THERAPY ASSISTANT (OTA) OFFICE ADMINISTRATOR ONLINE SALES ASSISTANT OPHTHALMIC OPTICIAN OPTICAL DISPENSER ORTHODONTIC ASSISTANT OSTEOPATH OVERHEAD CRANE OPERATOR PACKAGER PACKER PACKER / PACKAGER, HAND PAEDIATRICIAN PARALEGAL PARALEGAL ASSISTANT PARALEGAL OR LEGAL ASSISTANT PARAMEDIC PARKING ATTENDANT PARKING ENFORCEMENT WORKER PATIENT CARE TECHNICIAN PERFORMANCE IMPROVEMENT ANALYST PERSONAL / HOME CARE AIDE PERSONAL CARE WORKER PERSONAL CAREGIVER PHARMACY COUNTER ASSISTANT PHARMACY DISPENSER PHARMACY DISPENSING ASSISTANT PHARMACY SUPERVISOR PHARMACY TECHNICIAN PHELEBOTOMIST PHYSICAL EDUCATION TEACHER PHYSICAL THERAPY ASSISTANT PHYSICIAN / DOCTOR, RADIOLOGIST PHYSICIAN ASSISTANT (PA) PHYSIOTHERAPIST PHYSIOTHERAPY ASSISTANT PIZZA DELIVERY DRIVER PODIATRIST POLICE DETECTIVE POLICE INVESTIGATOR POLICE OFFICER POLICE OR SHERIFF'S PATROL OFFICER PORTER POST OFFICE RETAIL EXECUTIVE POSTAL WORKER PRACTICE ADMINISTRATOR PRACTICE MANAGER PRESCHOOL TEACHER ASSISTANT PRESCHOOL TEACHER, (BUT NOT SPECIAL EDUCATION) PRIMARY SCHOOL TEACHER PRINT FINISHER PRINTER PRISON GUARD PRISON OFFICER PRODUCTION AND PROCESS ENGINEER PROGRAM MANAGEMENT DIRECTOR, EDUCATION PROGRAMMER PSYCHIATRIC NURSE (RN) RADIOGRAPHER REAL ESTATE PARALEGAL RECEPTIONIST REFUSE COLLECTOR REFUSE TRUCK DRIVER REFUSE, GARBAGE, AND RECYCLABLE MATERIAL COLLECTOR REGISTERED CARE HOME MANAGER REGISTERED DENTAL ASSISTANT (RDA) REGISTERED DENTAL HYGIENIST (RDH) REGISTERED NURSE (RN) REGISTERED NURSE (RN) SUPERVISOR REGISTERED NURSE (RN), CRITICAL CARE REGISTERED NURSE (RN), EMERGENCY ROOM REGISTERED NURSE (RN), OPERATING ROOM REGISTERED PSYCHIATRIC NURSE (RPN) REGISTRAR, COLLEGE OR UNIVERSITY REHABILITATION ASSISTANT RESEARCH ASSISTANT, MEDICAL RESEARCH LABORATORY TECHNICIAN RESEARCH TECHNICIAN RESIDENTIAL CARE OFFICER RESIDENTIAL CAREGIVER RETAIL PHARMACIST RETAIL STAFF ROUTE DRIVER ROUTE PLANNER SCHOOL CROSSING GUARD SCHOOL LIBRARIAN SECONDARY SCHOOL TEACHER SECURITY GUARD SECURITY OFFICER SENIOR CAREGIVER SENIOR CORPORATE COUNSEL SENIOR LEGAL ASSISTANT SENIOR PHARMACY TECHNICIAN SENIOR SUPPLY CHAIN ANALYST SERVICE COORDINATOR SHIFT LEADER SHIPPING COORDINATOR SHIPPING MANAGER SHIPPING SUPERVISOR SOCIAL CARE ADMINISTRATOR SOCIAL SERVICES MANAGER SOCIAL WORKER SOFTWARE DEVELOPER SONOGRAPHER SOUP KITCHEN STAFF SPA THERAPIST SPECIAL EDUCATION ASSISTANT SPECIAL EDUCATION TEACHER, PRESCHOOL, KINDERGARTEN, OR ELEMENTARY SCHOOL SPECIAL EDUCATION TEACHER, SECONDARY SCHOOL SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) SPEECH-LANGUAGE THERAPIST SPORTS MASSAGE THERAPIST STAFF NURSE STERILE PROCESSING TECHNICIAN STORE DETECTIVE STORE MANAGER SUBSTITUTE TEACHER SUPPLY CHAIN ANALYST SUPPLY CHAIN CONSULTANT SUPPLY CHAIN PLANNER SUPPLY CHAIN SPECIALIST SUPPLY CHAIN SUPERVISOR SUPPORT WORKER SURVEILLANCE SUPERVISOR SWIMMING TEACHER TAKEAWAY CHEF TAXI DRIVER TEACHER TEACHER ASSISTANT TEACHER COLLEGE/UNIVERSITY (UNKNOWN TYPE) TEACHING ASSISTANT TEACHING ASSISTANT (TA) TELESALES THERAPY PROFESSIONAL TOWER CRANE OPERATOR TRACTOR OPERATOR TRAIN CONDUCTOR TRAIN DRIVER TRAINEE SOLICITOR TRANSPORT ANALYST TRANSPORTATION ANALYST TRANSPORTATION COORDINATOR TRANSPORTATION MANAGER TRANSPORTATION SUPERVISOR TRANSPORTATION, STORAGE, OR DISTRIBUTION MANAGER TREATMENT COORDINATOR, DENTAL TUTOR UNDERGRADUATE TEACHING ASSISTANT UNIT MANAGER VAN DRIVER VETERINARY ASSISTANT VETERINARY NURSE VETERINARY ASSISTANT WAREHOUSE ADMIN WAREHOUSE ASSISTANT WAREHOUSE ASSOCIATE WAREHOUSE COORDINATOR WAREHOUSE LABORER WAREHOUSE MANAGER WAREHOUSE MATERIAL HANDLER WAREHOUSE OPERATIVE WAREHOUSE WORKER WASTE DISPOSAL WORKER WEB DESIGNER WEB DEVELOPER WELDER WELFARE PROFESSIONAL YARD FOREMAN A/Z DRIVER ABLE SEAMAN ACTIVITY COORDINATOR, MEDICAL ADMINISTRATOR ADMISSIONS MANAGER ADMISSIONS OFFICER ADULT EDUCATION TEACHER ADULT NURSE PRACTITIONER (ANP) AGED CARE SUPPORT WORKER AGED CARE WORKER AGRICULTURE SPECIALIST AIRCRAFT CLEANER AIRCRAFT ENGINEER AIRPORT MANAGER ALLOCATION ANALYST AMBULANCE DRIVER ARCHIVIST ARCHIVIST, CURATOR, OR MUSEUM TECHNICIAN ARMOURER CAR GUARD & DRIVER ART TEACHER ART, DRAMA, OR MUSIC TEACHER, POST-SECONDARY ARTIST ASSEMBLER ASSESSMENT AND EDUCATION RESEARCHER ASSET MANAGEMENT COORDINATOR ASSISTANT CURATOR ASSISTANT GENERAL COUNSEL ASSISTANT LIBRARIAN ASSISTANT PRESCHOOL TEACHER ASSISTANT SOLICITOR ASSISTANT WAREHOUSE MANAGER ASSOCIATE ATTORNEY (LAW FIRM) AUDIOLOGIST AUTOMOBILE DETAILER BACKGROUND INVESTIGATOR BAKER BANK TELLER BICYCLE REPAIR BIOLOGICAL SCIENCE TEACHER, POST-SECONDARY BODYGUARD BOUNCER BROADCASTER BUS DRIVER BUS DRIVER, SCHOOL BUS DRIVER, TRANSIT AND INTERCITY BUS TRANSPORTATION MANAGER BUTCHER CAPTAIN, MATE, OR PILOT OF WATER VESSELS CARE HOME MANAGER CARE WORKER CARER CERTIFIED MESSAGE THERAPIST (CMT) CERTIFIED OCCUPATIONAL THERAPY ASSISTANT (COTA) CERTIFIED ORTHODONTIC ASSISTANT CERTIFIED ORTHODONTIC ASSISTANT (COA) CERTIFIED PHARMACY TECHNICIAN (CPHT) CHARITY STAFF CHARITY WORKER CHAUFFEUR CHEMICAL SCIENTIST CHILD CARE ASSISTANT CHILD CARE LEADER CHILDMINDER CHIROPRACTIC ASSISTANT CIVIL SERVANT CLEANER CLERICAL WORKER CLERK, LEGAL CLINICAL ASSISTANT CLINICAL CODER CLINICAL RESEARCH NURSE COMMUNITY HEALTH SERVICE WORKER COMMUNITY SUPPORT OFFICER CONSTABLE CONSTRUCTION LABOURER CONVEYANCER CHOREOGRAPHER CORPORATE COUNSEL CORPORATE PARA LEGAL CRANE OPERATOR CURATOR CURATOR, ART GALLERY CURATOR, MUSEUM CURRICULUM COORDINATOR CUSTOMER ASSISTANT CUSTOMER SERVICE REPRESENTATIVE DANCE TEACHER DANCER DAYCARE TEACHER DECKHAND DELIVERY DRIVER DENTAL ASSISTANT DENTAL ASSISTANT (CERTIFIED) DENTAL ASSISTANT (NON-CERTIFIED) DENTAL ASSISTANT LEAD DENTAL PRACTITIONER DEPARTMENT ADMINISTRATOR DETECTIVE DETECTIVE OR CRIMINAL INVESTIGATOR DETENTION OFFICER DIALYSIS TECHNICIAN DIETITIAN DIRECTOR, PRESCHOOL DISABILITY CARE WORKER DISPENSING OPTICIAN DISPENSING TECHNICIAN DISTRIBUTION SUPERVISOR DRIVER HELPER DRIVER/SALES WORKER DRIVING INSTRUCTOR EARLY CHILDHOOD EDUCATOR (ECE) EDUCATION COORDINATOR, NON-PROFIT ORGANIZATION EDUCATION FACILITATOR EDUCATION MANAGER EDUCATION PROGRAM MANAGER EDUCATIONAL ASSISTANT EDUCATIONAL SPECIALIST ELECTRICIAN ELEMENTARY SCHOOL TEACHER ENDOSCOPY TECHNICIAN ENGLISH AS A SECOND LANGUAGE (ESL) TEACHER ENGLISH FOR SPEAKERS OF OTHER LANGUAGES (ESOL) TEACHER ENGLISH LANGUAGE / LITERATURE TEACHER, POST-SECONDARY ENGLISH TEACHER/TUTOR (VOCATIONAL) EXCAVATING, LOADING MACHINE, OR DRAGLINE OPERATOR EXCAVATOR OPERATOR FACTORY OPERATIVE FACTORY WORKER FAMILY NURSE PRACTITIONER (FN) FARM WORKER FILE CLERK FINANCE ASSISTANT FINANCE EXECUTIVE FIRE FIGHTER FIREMAN FIRST AID ATTENDANT FISHERMAN FLEET MANAGER FLEET MANAGER, TRUCKING & TRANSPORTATION FLOOR MANAGER FOOD BANK STAFF FOOD PREPARATION WORKER FOREIGN LANGUAGE / LITERATURE TEACHER, POST-SECONDARY FORKLIFT DRIVER FORKLIFT OPERATOR FREIGHT TRAIN DRIVER FRONT END LOADER OPERATOR FUEL TANKER DRIVER FUNERAL ASSISTANT FUNERAL ATTENDANT FUNERAL DIRECTOR GAS TECHNICIAN GLASS PRODUCTION OPERATOR GRADUATE ASSISTANT GRADUATE RESEARCH ASSISTANT (GRA) GRADUATE TEACHING ASSISTANT GRAPHIC DESIGNER HEAD LIBRARIAN HEAD NURSE HEALTH & SAFETY CONSULTANT HEALTH CARE AIDE HEALTH CARE AIDE HEALTH SAFETY ADVISOR HEALTHCARE ASSISTANT HEAVY / TRACTOR-TRAILER TRUCK DRIVER HEAVY TRUCK DRIVER HGV DRIVER HIGH SCHOOL TEACHER HISTORY TEACHER, POST-SECONDARY HOME CARE ASSISTANT HOME CARE WORKER HOME HEALTH CARE PROVIDER HOME HEALTH CARE WORKER HOME HEALTH CAREGIVER HOSPITAL ADMINISTRATOR HOUSEBUILD SITE MANAGER HYGIENE COORDINATOR IMMIGRATION CONSULTANT IMMIGRATION OFFICER IN-HOME SUPPORT SERVICES (IHSS) CAREGIVER INSTRUCTIONAL DESIGNER INSTRUCTOR, GYMNASTICS INSTRUCTOR, POST-SECONDARY / HIGHER EDUCATION INTELLECTUAL PROPERTY (IP) ASSISTANT INTELLECTUAL PROPERTY (IP) LAWYER INTELLECTUAL PROPERTY (IP) PARA LEGAL INTELLIGENCE ANALYST INTELLIGENCE OFFICER IT PROFESSIONAL IT TECHNICIAN JOURNALIST JUNIOR ARCHITECT JUNIOR DOCTOR JUNIOR PHYSIOTHERAPIST JUNIOR SOLICITOR KITCHEN STAFF LAB TECHNICIAN LAB TECHNOLOGIST LABORER, FREIGHT, STOCK, MATERIAL MOVER, HAND LANGUAGE TEACHER LANGUAGE THERAPIST LAUNDRY WORKER LAW CLERK LEARNING FACILITATOR LECTURER, POST-SECONDARY / HIGHER EDUCATION LEGAL ADMINISTRATIVE ASSISTANT LEGAL ADMINISTRATOR LEGAL ADVISOR LEGAL ANALYST LEGAL SERVICES HEAD LEGAL SUPPORT ASSISTANT LGV DRIVER LIBRARIAN LIBRARY MANAGER LICENSED PRACTICAL NURSE (LPN) LIFEGUARD LIGHT OR DELIVERY SERVICES TRUCK DRIVER LINE OPERATOR LITIGATION ATTORNEY LITIGATION PARALEGAL LIVE-IN CAREGIVER LOADER LOADER AND UNLOADER LOGISTICS ANALYST LOGISTICS SUPERVISOR LOSS PREVENTION INVESTIGATOR LOSS PREVENTION OFFICER MACHINE OPERATOR MAINTENANCE TECHNICIAN MANAGER WHOLESALE MANAGER, CHILD CARE CENTER MARINE CARGO SURVEYOR MATERIAL HANDLER MATERIALS SUPERVISOR MATHEMATICS TEACHER MECHANIC MECHANICAL ENGINEER MEDICAL / CLINICAL LABORATORY TECHNICIAN MEDICAL ASSISTANT (CERTIFIED) MEDICAL LABORATORY ASSISTANT (MLA) MEDICAL LABORATORY TECHNICIAN MEDICAL PRACTICE MANAGER MEDICAL PRACTITIONER MEDICAL TRANSCRIPTIONIST MEDIUM TRUCK DRIVER MIDDLE SCHOOL TEACHER MIDWIFE MOBILE CRANE OPERATOR MULTIMEDIA PRODUCTION COORDINATOR MUSICIAN NEWSAGENT NURSE NURSE ASSISTANT NURSE EDUCATOR NURSE PRACTITIONER (NP) NURSE, INTENSIVE CARE UNIT (ICU) OCCUPATIONAL THERAPIST OCCUPATIONAL THERAPIST (OT) OCCUPATIONAL THERAPY ASSISTANT (OTA) OFFICE ADMINISTRATOR ONLINE SALES ASSISTANT OPHTHALMIC OPTICIAN OPTICAL DISPENSER ORTHODONTIC ASSISTANT OSTEOPATH OVERHEAD CRANE OPERATOR PACKAGER PACKER PACKER / PACKAGER, HAND PAEDIATRICIAN PARALEGAL PARALEGAL ASSISTANT PARALEGAL OR LEGAL ASSISTANT PARAMEDIC PARKING ATTENDANT PARKING ENFORCEMENT WORKER PATIENT CARE TECHNICIAN PERFORMANCE IMPROVEMENT ANALYST PERSONAL / HOME CARE AIDE PERSONAL CARE WORKER PERSONAL CAREGIVER PHARMACY COUNTER ASSISTANT PHARMACY DISPENSER PHARMACY DISPENSING ASSISTANT PHARMACY SUPERVISOR PHARMACY TECHNICIAN PHELEBOTOMIST PHYSICAL EDUCATION TEACHER PHYSICAL THERAPY ASSISTANT PHYSICIAN / DOCTOR, RADIOLOGIST PHYSICIAN ASSISTANT (PA) PHYSIOTHERAPIST PHYSIOTHERAPY ASSISTANT PIZZA DELIVERY DRIVER PODIATRIST POLICE DETECTIVE POLICE INVESTIGATOR POLICE OFFICER POLICE OR SHERIFF'S PATROL OFFICER PORTER POST OFFICE RETAIL EXECUTIVE POSTAL WORKER PRACTICE ADMINISTRATOR PRACTICE MANAGER PRESCHOOL TEACHER ASSISTANT PRESCHOOL TEACHER, (BUT NOT SPECIAL EDUCATION) PRIMARY SCHOOL TEACHER PRINT FINISHER PRINTER PRISON GUARD PRISON OFFICER PRODUCTION AND PROCESS ENGINEER PROGRAM MANAGEMENT DIRECTOR, EDUCATION PROGRAMMER PSYCHIATRIC NURSE (RN) RADIOGRAPHER REAL ESTATE PARALEGAL RECEPTIONIST REFUSE COLLECTOR REFUSE TRUCK DRIVER REFUSE, GARBAGE, AND RECYCLABLE MATERIAL COLLECTOR REGISTERED CARE HOME MANAGER REGISTERED DENTAL ASSISTANT (RDA) REGISTERED DENTAL HYGIENIST (RDH) REGISTERED NURSE (RN) REGISTERED NURSE (RN) SUPERVISOR REGISTERED NURSE (RN), CRITICAL CARE REGISTERED NURSE (RN), EMERGENCY ROOM REGISTERED NURSE (RN), OPERATING ROOM REGISTERED PSYCHIATRIC NURSE (RPN) REGISTRAR, COLLEGE OR UNIVERSITY REHABILITATION ASSISTANT RESEARCH ASSISTANT, MEDICAL RESEARCH LABORATORY TECHNICIAN RESEARCH TECHNICIAN RESIDENTIAL CARE OFFICER RESIDENTIAL CAREGIVER RETAIL PHARMACIST RETAIL STAFF ROUTE DRIVER ROUTE PLANNER SCHOOL CROSSING GUARD SCHOOL LIBRARIAN SECONDARY SCHOOL TEACHER SECURITY GUARD SECURITY OFFICER SENIOR CAREGIVER SENIOR CORPORATE COUNSEL SENIOR LEGAL ASSISTANT SENIOR PHARMACY TECHNICIAN SENIOR SUPPLY CHAIN ANALYST SERVICE COORDINATOR SHIFT LEADER SHIPPING COORDINATOR SHIPPING MANAGER SHIPPING SUPERVISOR SOCIAL CARE ADMINISTRATOR SOCIAL SERVICES MANAGER SOCIAL WORKER SOFTWARE DEVELOPER SONOGRAPHER SOUP KITCHEN STAFF SPA THERAPIST SPECIAL EDUCATION ASSISTANT SPECIAL EDUCATION TEACHER, PRESCHOOL, KINDERGARTEN, OR ELEMENTARY SCHOOL SPECIAL EDUCATION TEACHER, SECONDARY SCHOOL SPEECH-LANGUAGE PATHOLOGY ASSISTANT (SLPA) SPEECH-LANGUAGE THERAPIST SPORTS MASSAGE THERAPIST STAFF NURSE STERILE PROCESSING TECHNICIAN STORE DETECTIVE STORE MANAGER SUBSTITUTE TEACHER SUPPLY CHAIN ANALYST SUPPLY CHAIN CONSULTANT SUPPLY CHAIN PLANNER SUPPLY CHAIN SPECIALIST SUPPLY CHAIN SUPERVISOR SUPPORT WORKER SURVEILLANCE SUPERVISOR SWIMMING TEACHER TAKEAWAY CHEF TAXI DRIVER TEACHER TEACHER ASSISTANT TEACHER COLLEGE/UNIVERSITY (UNKNOWN TYPE) TEACHING ASSISTANT TEACHING ASSISTANT (TA) TELESALES THERAPY PROFESSIONAL TOWER CRANE OPERATOR TRACTOR OPERATOR TRAIN CONDUCTOR TRAIN DRIVER TRAINEE SOLICITOR TRANSPORT ANALYST TRANSPORTATION ANALYST TRANSPORTATION COORDINATOR TRANSPORTATION MANAGER TRANSPORTATION SUPERVISOR TRANSPORTATION, STORAGE, OR DISTRIBUTION MANAGER TREATMENT COORDINATOR, DENTAL TUTOR UNDERGRADUATE TEACHING ASSISTANT UNIT MANAGER VAN DRIVER VETERINARY ASSISTANT VETERINARY NURSE VETERINARY ASSISTANT WAREHOUSE ADMIN WAREHOUSE ASSISTANT WAREHOUSE ASSOCIATE WAREHOUSE COORDINATOR WAREHOUSE LABORER WAREHOUSE MANAGER WAREHOUSE MATERIAL HANDLER WAREHOUSE OPERATIVE WAREHOUSE WORKER WASTE DISPOSAL WORKER WEB DESIGNER WEB DEVELOPER WELDER WELFARE PROFESSIONAL YARD FOREMAN

In February 2020, Home Secretary, Priti Patel, labelled any person earning under £25k per year 'Low Skilled' or 'Unskilled'. Only one month later, struggling with the COVID-19 crisis, that same government labelled them 'Key Workers', realising just how important they really are. These workers haven't just become key to society, they always have, and will continue to be, Key Workers. And long may that term live on.

In solidarity with Key Workers.

OFFICE OF CRAIG

Disclaimer based on average UK salary or average UK level of living for household professionals. This is generalised and not specific to all cases - there are many more Key Workers than could be listed.



7

**Policies  
to build resilience**

# Main findings



Credit: © andresr



Markets on their own have not been adequately internalizing the fundamental economic and social contributions of key work.



When difficult working conditions and low pay are systemic, there will be problems with labour shortages, turnover and, ultimately, an inadequate provision of key services.



Shared assessments and planning through social dialogue are needed to strengthen the institutions of work and increase investment in key sectors so as to address underlying resilience risks.

 *The 'heroes' of this crisis, those who are sustaining our lives, are barely able to sustain theirs.<sup>1</sup>*

The COVID-19 pandemic made evident our reliance on key workers. Healthcare workers, supermarket cashiers, delivery workers, postal workers, seafarers, cleaners, and others supplying food and necessities continued to perform their jobs, day in and day out, even at the height of the pandemic, often at great personal risk. Key workers suffered illness and morbidity from COVID-19 at higher rates than non-key workers and were subject to adverse social behaviour and other sources of job strain.

Conscious of the health risks that key workers were undertaking, societies applauded key workers nightly throughout the world and exalted them as heroes. But this heightened public appreciation of their value has not, for the most part, transformed into better working conditions. Key workers remain in the lower echelons of the wage scale and social status. Except for a few cases of hazard pay or one-off bonuses, given mainly to health workers, key workers were not compensated for these additional risks, with the undervaluation of their work remaining unchanged during the pandemic.

Insecurity, limited bargaining power and inadequate remuneration are persistent characteristics of their situation, as detailed in Chapters 3 and 4. Despite their central role to the functioning of our economies and societies, key workers suffer from low levels of remuneration and poor working conditions around the globe. On average, key paid employees are disproportionately represented at the bottom of the wage distribution, earning 26 per cent less than other employees, with one third of the pay gap unexplained. A significant majority of key workers also endure other insecurities ranging from insecure contracts to lack of social protection and training. Many work long and irregular hours and face high OSH risks. The COVID-19 pandemic has made evident the extent to which societies have undervalued most key jobs, raising concerns about the sustainability of these essential activities, especially in the light of future shocks, whether it be from other pandemics, climate change, financial crises or war.

## Valuing key work on par with its social contribution

The benefits that key workers generate for economies and societies are higher than the economic compensation and societal recognition they receive.<sup>2</sup> Many low-paid key workers do jobs that have significant positive externalities – they provide value not only to people who receive their services directly but also, more broadly, to the communities in which they live and work. Yet, this is not reflected in their remuneration.<sup>3</sup> For instance, studies on the United Kingdom measuring the social return on investment (SROI) find that for every £1 spent on social care interventions, the return is between £1.20 and £6.50. Another study that uses the SROI approach, and therefore incorporates social, environmental and economic costs and benefits into its analysis, finds that three low-paid occupations – hospital cleaner, recycling plant worker and childcare worker – generate more quantifiable social value than what they receive in pay.<sup>4</sup>

On its own, the market tends to not compensate for the value of these externalities. As noted in this report, care workers experience large pay penalties, reflecting a lack of recognition of the skills needed in care work. The term “care penalty” refers to lower hourly pay than predicted rates based on the qualifications and experience of those holding such jobs.<sup>5</sup> In the United States, the care penalty is estimated to be around 5–6 per cent for both women and men, and for childcare the penalty increases to 41 per cent among female and 12 per cent among male care workers.<sup>6</sup>

The working conditions of cleaning and sanitation workers, who make up nearly 5.4 per cent of all key workers on average, are yet another example of a profession that is undervalued with respect to the social benefits it generates. It is estimated that every US\$1 spent on sanitation has a return of US\$9 in savings on treatment, healthcare costs, and gains from productivity.<sup>7</sup>

---

**In addition to being stigmatized for doing “dirty work”, cleaning workers also constitute one of the lowest-paid occupational groups.**

---

Yet the contribution of these workers is rarely recognized, their working conditions are poor, and the workers are often stigmatized.<sup>8</sup> During the COVID-19 pandemic, many waste pickers experienced repeated acts of violence and harassment by authorities, reflecting their status as “essential but disposable”.<sup>9</sup> Alongside the stigmatization that cleaning workers face for doing “dirty work”, they also constitute one of the lowest-paid occupational groups.

Despite ensuring the provision of food both in normal times and crises, food systems workers regularly face high levels of working poverty, endure OSH risks, and overall are poorly covered by labour and social protection, both in law and in practice.<sup>10</sup> In the global North, migrant workers are an essential but temporary source of labour, compensating for domestic labour shortages.<sup>11</sup> Yet their social value is far from being recognized in terms of pay and of their contractual arrangements, which not only are short-term but also limit their labour market mobility and give them fewer economic and social rights.<sup>12</sup>

Failure to compensate key workers for the wider value they create has negative effects not only for the people undertaking these jobs but also for society at large.<sup>13</sup> Workers might choose to exit from key occupations that are vital to the functioning of the society given the low social status and poor working conditions associated with many of these jobs. In 2021, the majority of workers who quit their work in the United States cited low pay (63 per cent), lack of advancement opportunities (63 per cent) and feeling disrespected at work (57 per cent) among their main reasons, all of which relate to undervaluation of work.<sup>14</sup> Key occupations such as nursing are facing shortages across countries, with the WHO estimating a global shortfall of 6 million nurses in 2020.<sup>15</sup> Overwork, violence and harassment, unpaid wages, low pay, and the resulting burnout and quits among nursing personnel, have hastened the shortfall.<sup>16</sup> In many OECD countries with ageing populations, the long-term care sector suffers from critical labour shortages, reflecting the poor working conditions.<sup>17</sup>

Heavy truck and lorry drivers, cleaners and helpers, and healthcare assistants are listed among the top occupations with the biggest labour shortages in Europe.<sup>18</sup> In India, the cities of Delhi, Mumbai and Bangalore have reported shortages of bus drivers due to low pay, heavy workloads and highly stressful working conditions.<sup>19</sup> Similar shortages in urban transport services are reported in France as well as in New Zealand, resulting in reduced passenger service, increased wait times and cutbacks in routes.<sup>20</sup> As a result of the astounding growth in e-commerce caused by the pandemic, labour shortages also increased in transport and logistic sectors.<sup>21</sup> Nearly 83 per cent of US manufacturers identified attracting and retaining a quality workforce as their top challenge, and the projections estimated that the lack of experienced and talented labour could cost US\$1 trillion by 2030.<sup>22</sup>

---

## Persistent labour shortages and high employee turnover caused by the undervaluation of workers in key economic activities affect the provision of basic services.

---

Persistent labour shortages and high employee turnover caused by the undervaluation of workers in key economic activities affect the provision of basic services. And these shortages become worse during crises. The COVID-19 pandemic also revealed how the lack of investments in physical and social infrastructure aggravated the negative effects of the pandemic, resulting in preventable deaths – if, for example, there were insufficient ventilators or staff in hospitals. Similarly, greater financial hardship was observed in sectors and organizations with little or no resources to furlough employees or provide them with social protection against income losses. The pandemic made the nexus between physical and social infrastructure and decent work more visible, and it underscored the need for sectoral investments to support better working and living conditions.

The pandemic also made clear that markets are not fully internalizing the social and economic value of resilience, similar to market failures in internalizing environmental externalities. If countries want to strengthen their ability to withstand major shocks, then they need to prepare accordingly, through investments and policy interventions in key sectors, and stronger institutions of work that support key workers.

## Towards stronger economic and social resilience

Decent work deficits of key workers weaken the resilience of economies and societies to shocks of various types. Some of the most common areas of concern whose importance was highlighted by the recent pandemic include:

- ▶ *Elevated OSH risks.* Physical and biological hazards, as well as psychosocial risks, were more common among key workers even before the pandemic. In security and health, data from Europe and the United States show that key workers experienced verbal abuse at a much higher rate than other workers (one in five prior to the pandemic). During the pandemic, the incidence of verbal abuse and threats increased sharply for all key workers (and more than for non-key workers), with particularly sharp increases recorded for retail workers (in the United States, from 2 per cent in 2015 to 12 per cent in 2021). Key workers faced additional health risks during the COVID-19 pandemic owing to their physical presence at workplaces and contact with clients. Available excess mortality data by occupation indicate that key workers in transportation, security and cleaning had the highest mortality rates, above the already high rate of medical professionals, likely reflecting lax OSH controls and more limited access to healthcare and paid sick leave among these occupations.
- ▶ *Over-reliance on temporary contracts.* Nearly one in three key employees is on a temporary contract, though there are considerable country and sectoral differences. In food systems, key employees have a higher incidence of temporary work, at 46 per cent. But temporary employment is also prevalent in retail, cleaning and sanitation, and manual labour, with one in three employees holding a temporary contract. Cleaning and security are commonly outsourced, and other key occupations are routinely staffed with agency workers, especially in warehousing, but also increasingly in healthcare.
- ▶ *Long and irregular working hours.* More than 46 per cent of key employees in low-income countries work long hours while a substantial share of key workers around the world has irregular schedules or short hours. Long working hours are more common in transport, where nearly 42 per cent of key workers across the globe work for more than 48 hours a week.
- ▶ *Low pay.* On average, 29 per cent of key employees are low-paid regardless of countries' level of development, earning 26 per cent less than other employees, of which only 17 per cent is accounted for by education and experience. In food systems, the share of low-paid key employees is 47 per cent; for key retail workers, it is 37 per cent. These sectors, especially in high-income countries, employ a large share of migrants, which points to the higher incidence of low pay among key migrant workers.
- ▶ *Under-representation, especially in a few key sectors.* While unionization and collective bargaining coverage are limited for many workers, unionization rates in several key sectors – including food systems (9 per cent), cleaning and sanitation (13 per cent) and retail (6 per cent) – are significantly lower than average in developed and developing countries alike. This is unfortunate, as representation allowed workers a means to address concerns during the COVID-19 pandemic, and collective bargaining was an effective and flexible tool used by social partners to design workplace regulation to respond to changing needs.
- ▶ *Deficits in social protection.* Nearly 60 per cent of key workers in low- and middle-income countries lack some form of social protection. In low-income countries,

social protection is minimal, only reaching 17 per cent of key workers. The picture is even bleaker for key self-employed in developing countries, as they are almost entirely left out of social protection in most countries.

- ▶ *Insufficient training.* Less than 3 per cent of key workers in low- and lower-middle-income countries received training during the preceding year, and this share is as low as 1.3 per cent among key self-employed workers.

As explained in Chapter 5, the regulations and policies needed to strengthen the institutions of work are of importance to all workers, and to the world of work in general. To give one example, workers, enterprises and society all benefit when excessive hours over prolonged periods of time are limited, but since key workers in sectors such as transport and security are particularly prone to excessive hours, this policy intervention is of particular benefit to key workers. Given the over-representation of key workers in insecure employment and in low-paid work affording inadequate social protection, general policy interventions in these areas would improve the working conditions of key workers while benefiting other workers as well.

But this is not to imply that specific policies are not needed. To the contrary, many major deficits in working conditions are sector- and occupation-specific, making social dialogue – and particularly collective bargaining – ideal for remedying deficiencies. Collective bargaining enables employers, workers and their representative parties to tailor rules to the unique challenges of the sector, occupation or enterprise, and adapt rules when the circumstances change, such as during the COVID-19 pandemic. Experiences with collective bargaining during the pandemic mentioned in Chapter 3 but detailed at length in the 2022 ILO report on social dialogue,<sup>23</sup> demonstrate the effectiveness of this tool in meeting the immediate needs of employers and workers during the COVID-19 crisis.

Specific policies are also needed for migrant workers, given that many of their challenges arise from the legal implications of their migration status. The COVID-19 pandemic demonstrated the essential role of migrant workers in sustaining key sectors of the economy, especially food security. There is thus a need for laws and policies that can align admission policies with labour legislation to ensure that migrant workers benefit from coverage of labour and social protection.

In other cases, however, the deficits in working conditions stem from a constrained operating environment that encourages employers, whether public or private, to reduce costs at the expense of working conditions. Hence, broader policies that tackle some of the root causes that ultimately affect working conditions need to be considered, such as addressing staff shortages in nursing – which can lead to excessive hours and greater work intensity for those that remain on the job – caused by cuts in government budgets. It is for this reason that policymakers cannot completely disconnect labour policies from broader policies at the macroeconomic and sectoral level.

---

## The resilience deficit prevalent in key sectors and activities warrants a deliberate process of shared assessment and planning through social dialogue.

---

In many countries, there are significant shortfalls in investment in health systems and food systems, irrespective of their level of income. If societies value the ability of their economies to provide goods and services that are essential to the daily functioning of life, then a first necessary condition is to ensure that organizations, whether public or private, have the resources – physical, financial and human – needed to deliver. Policies to boost resilience concern both the institutions of work and the investments and policies that support the organizations, whether public or private, that deliver key services or goods.

In sum, the resilience deficit prevalent in key sectors and activities warrants a deliberate process of shared assessment and planning through social dialogue. Governments and employers' and workers' organizations would benefit from coming together in each country to institute an actionable roadmap for identifying and addressing specific deficits in their institutions of work and in the productive capacity and resilience of key sectors. The resulting improvement in their economy's capacity to sustain adequate provision of key services and

goods would more than pay for itself when the next crisis hits. This is one of the most important policy lessons to be drawn from the COVID-19 pandemic.

Table 7.1 sets out a checklist of the most salient aspects of such a tripartite process of resilience assessment and proactive policy planning.

► **Table 7.1. Policy checklist for building resilience**

<b>Strengthen the institutions of work</b>	
✓	Ensure a safe and healthy working environment, for all workers, as set forth in the fundamental OSH Conventions, while addressing the specific risks in key work
✓	Strengthen freedom of association and collective bargaining to promote social dialogue and address deficits in working conditions of key workers
✓	Close legal gaps in labour protection, end employment misclassification and institute tailored policies to ensure protection for genuine self-employed workers
✓	Ensure equality of treatment in contractual arrangements and institute other safeguards that prevent the misuse of part-time, temporary, agency or subcontracted work
✓	Limit excessive working hours and unpredictable scheduling
✓	Leverage the benefits of minimum wage and collective bargaining to ensure that key workers' social contribution is duly rewarded
✓	Rectify the undervaluation of "soft skills" in feminized occupations through targeted regulation and policies
✓	Ensure social protection for all, with special attention to paid sick leave
✓	Improve access to training to build competencies and facilitate career progression
✓	Improve compliance to bridge the gap between law and practice
<b>Support key sectors and enterprises through investments in physical and social infrastructure</b>	
✓	Ensure financing of quality and affordable health systems and access to healthcare, including long-term care, sufficient to respond to crises and shocks as well as ensuring the general welfare of society
✓	Support farmers with physical infrastructure that improves their access to markets and productivity
✓	Develop insurance mechanisms to support farmers against commodity price volatility stemming from natural and climate change risks
✓	Develop innovative financing mechanisms and restructure sovereign debt to support low-income countries' investments into health and agriculture
✓	Ensure the adequacy and resilience of the physical infrastructure on which enterprises and organizations depend to operate and thrive
✓	Improve access to credit, with special attention to the needs of MSMEs, particularly in sectors producing key goods and services
✓	Support the transition to formalization through a multi-stakeholder, integrated approach
✓	Undertake assessments of industrial capacity and institute business continuity plans in key sectors to prepare for possible surges in demand or restrictions of supply during shocks and crises

## Notes

- 1 Del Río and Medappa, 2020.
- 2 Baum and Espinosa, 2021.
- 3 Lockwood, Nathanson and Weyl, 2017.
- 4 Lawlor, Kersley and Steed, 2009.
- 5 England, Budig and Folbre, 2002.
- 6 England, Budig and Folbre, 2002.
- 7 P.K. Singh, 2014.
- 8 Monteiro, 2022.
- 9 Orleans Reed, 2022.
- 10 ILO et al., 2020.
- 11 Weiler, McLaughlin and Cole, 2017.
- 12 European Parliament, 2021.
- 13 Bublitz and Regner, 2022; Press, 2021.
- 14 Parker and Menasce Horowitz, 2022.
- 15 WHO, 2020c.
- 16 International Council of Nurses, 2021.
- 17 OECD, 2021b; Lodovici et al., 2022.
- 18 European Commission, 2020.
- 19 ILO, 2021i.
- 20 ILO, 2021i.
- 21 ILO, 2021i.
- 22 Deloitte Insights and Manufacturing Institute, 2021; National Association of Manufacturers, 2021.
- 23 ILO, 2022g.





# Appendix

## A1. Methodology for deriving a global list of key services and workers

At the beginning of the COVID-19 pandemic, 126 countries issued either governmental decrees or announcements designating essential activities or services. Of these, 89 countries (71 per cent of the sample) issued lists that specified key activities that needed to continue operating, 31 countries (25 per cent) designated key services, while the remaining six countries (4 per cent) issued lists specifying activities that were not permitted.

For the purposes of this report, the lists of key activities and services were coded according to the two-digit sectors of the International Standard Industrial Classification of All Economic Activities, Revision 4 (ISIC Rev. 4). The compiled list of two-digit sectors was then narrowed down to those sectors that were deemed to be essential by 90 or more of the countries, corresponding to 72 per cent of the sample. To test the validity of this threshold, the limits of 80 or more and 100 or more countries were also considered. The low threshold of 80 resulted only in the additional inclusion of “Activities of extraterritorial organizations and bodies”, which represents a minor share of employment in the majority of countries. The higher threshold of 100, on the other hand, led to the exclusion of certain sectors under mining and manufacturing, which are critical parts of supply chains and continued to operate during the pandemic. The reason not to include these sectors was the absence of such activities in some countries, rather than a judgement that the activity was not “essential”. Using the threshold of 90 countries, 47 sectors at the two-digit ISIC level were considered key, grouped according to 13 broad categories (see table A1).

► **Table A1. List of essential sectors**

<b>Agriculture; forestry and fishing</b>	<b>Electricity; gas, steam and air conditioning supply</b>
01 Crop and animal production, hunting and related service activities	35 Electricity, gas, steam and air conditioning supply
02 Forestry and logging	<b>Water supply; sewerage, waste management and remediation activities</b>
03 Fishing and aquaculture	36 Water collection, treatment and supply
<b>Mining and quarrying</b>	37 Sewerage
05 Mining of coal and lignite	38 Waste collection, treatment and disposal activities; materials recovery
06 Extraction of crude petroleum and natural gas	39 Remediation activities and other waste management services
07 Mining of metal ores	<b>Wholesale and retail trade; repair of motor vehicles and motorcycles</b>
08 Other mining and quarrying	46 Wholesale trade, except of motor vehicles and motorcycles
09 Mining support service activities	47 Retail trade, except of motor vehicles and motorcycles
<b>Manufacturing</b>	<b>Transportation and storage</b>
10 Manufacture of food products	49 Land transport and transport via pipelines
11 Manufacture of beverages	50 Water transport
17 Manufacture of paper and paper products	51 Air transport
18 Printing and reproduction of recorded media	52 Warehousing and support activities for transportation
19 Manufacture of coke and refined petroleum products	53 Postal and courier activities
20 Manufacture of chemicals and chemical products	
21 Manufacture of pharmaceuticals, medicinal chemical and botanical products	
22 Manufacture of rubber and plastic products	
23 Manufacture of other non-metallic mineral products	
24 Manufacture of basic metals	
33 Repair and installation of machinery and equipment	

▶ **Table A1. (cont'd)**

<b>Information and communication</b>	<b>Professional, scientific and technical activities</b>
58 Publishing activities	69 Legal and accounting activities
60 Programming and broadcasting activities	70 Activities of head offices; management consultancy activities
61 Telecommunications	<b>Administrative and support service activities</b>
62 Computer programming, consultancy and related activities	80 Security and investigation activities
63 Information service activities	81 Services to buildings and landscape activities
<b>Financial and insurance activities</b>	<b>Public administration and defence; compulsory social security</b>
64 Financial service activities, except insurance and pension funding	84 Public administration and defence; compulsory social security
65 Insurance, reinsurance and pension funding, except compulsory social security	<b>Human health and social work activities</b>
66 Activities auxiliary to financial service and insurance activities	86 Human health activities
	87 Residential care activities
	88 Social work activities without accommodation

Using the two-digit sectors listed in table A1, the next step was to identify the occupations in each of those sectors based on the International Standard Classification of Occupations (ISCO-08), also at the two-digit level. This exercise resulted in 40 occupational categories, from which were removed those occupations that could be performed remotely from home during the pandemic. While these occupations are critical to the functioning of economies and societies, the ability to work from home meant that these workers were not exposed to the same risk as those whose jobs required physical presence. As mentioned in the introduction, the report focuses on key workers exposed to the risk of the COVID-19 virus as a result of their occupations.

Occupations were identified as teleworkable using global estimates from the ILO<sup>1</sup> and Dingel and Neiman.<sup>2</sup> Dingel and Neiman's analysis applies occupational descriptions from the United States Occupational Information Network (O\*NET). Because it is based on US data, it was considered an upper threshold of the ability to work from home. Thus, any occupation that was assumed not to be teleworkable by US standards was also assumed not to be teleworkable in countries at lower levels of economic development. The ILO estimates, which were based on an expert evaluation using a Delphi survey, assigned probabilities to occupations at the three-digit ISCO level for a range of different countries across the world and then aggregated the results by country income groupings. Occupations that were assigned high scores of teleworkability by both the ILO and Dingel and Neiman were excluded from the list of occupations.<sup>3</sup> After removing teleworkable occupations, there remained 25 occupational categories at the ISCO two-digit level.

For the purposes of this report, key workers are defined as workers in the 25 non-teleworkable occupations of table A2, working in the 47 key economic sectors of table A1 (key workers = key occupations  $\cap$  key sectors). The statistical analysis in this report identifies workers at this intersection.<sup>4</sup> For most of the occupations and sectors, there is a substantial overlap between the two categories. Figure A1 provides an overview of the overlap between key sectors and occupations, based on the average for the 90 countries and territories for which two-digit ISCO and ISIC data are available. Thus, for example, only 11 per cent of food systems workers were not employed in key sectors. An example of such an exception would be food preparation assistants employed in the hospitality industry, which was not designated as essential. Food systems, health, retail, security and transport all have a strong overlap with key sectors, upwards of 80 per cent. For the other categories – manual, cleaning and sanitation, and technicians and other support workers – the overlap is less strong (ranging from 32 to 48 per cent), reflecting the significant presence of these occupational categories across economic sectors.

► **Table A2. Non-teleworkable, key occupations within the eight occupational groupings**

**Food systems workers**

- 61 Market-oriented skilled agricultural workers
- 62 Market-oriented skilled forestry, fishery and hunting workers
- 63 Subsistence farmers, fishers, hunters and gatherers
- 92 Agricultural, forestry and fishery labourers
- 94 Food preparation assistants

**Health workers**

- 22 Health professionals
- 32 Health associate professionals
- 53 Personal care workers

**Retail workers**

- 52 Sales workers
- 95 Street and related sales and service workers

**Security workers**

- 54 Protective services workers

**Manual workers**

- 71 Building and related trades workers, excluding electricians

- 72 Metal, machinery and related trades workers
- 73 Handicraft and printing workers
- 74 Electrical and electronic trades workers
- 75 Food processing, wood working, garment and other craft and related trades workers
- 81 Stationary plant and machine operators
- 82 Assemblers
- 93 Labourers in mining, construction, manufacturing and transport

**Cleaning and sanitation workers**

- 91 Cleaners and helpers
- 96 Refuse workers and other elementary workers

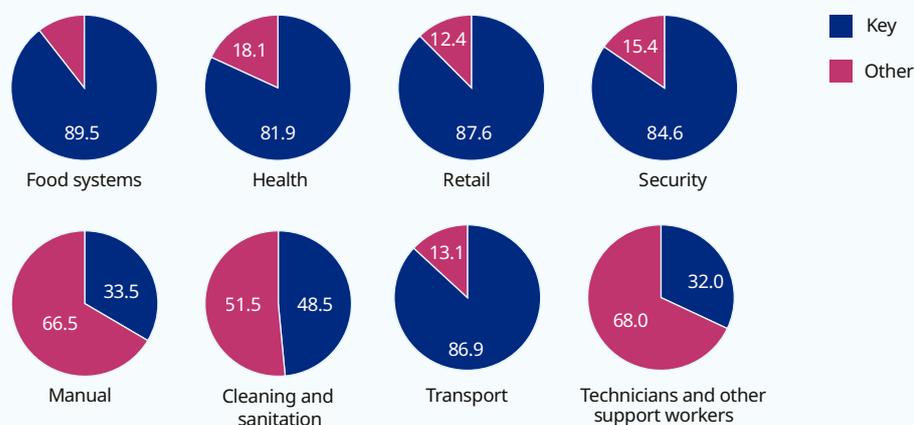
**Transport workers**

- 83 Drivers and mobile plant operators

**Technicians and clerical workers**

- 31 Science and engineering associate professionals
- 44 Other clerical support workers
- 51 Personal service workers

► **Figure A1. Presence of key occupations within essential and non-essential sectors (percentage)**



Source: ILO calculations based on the 90 countries and territories listed in table A6.

Because the list of key workers is wide-ranging, the analysis in the report is sometimes disaggregated to focus on the eight occupational groups grouped in figure A1 and listed in table A2, thereby allowing for a more focused discussion of the experience and concern of a more defined group of workers.

In section 4.8, the analysis is restricted to technicians and clerical workers, and excludes personal service workers (51), as this category covers a wide range of occupations (for example, food systems workers (512); transport conductors (5112, transport workers); cleaning and housekeeping supervisors (5151, cleaning and sanitation workers)) that are key but belong to the other occupational groups. As the data are limited to the

two-digit level and cannot be re-allocated, it was more accurate to remove personal service workers (51) from the analysis of occupational groups. This category is, however, included in the aggregate figures on key workers used in the report. Overall, personal service workers constitute just 1.8 per cent of key workers; their exclusion therefore does not affect the distribution of key workers by occupational group.

## Identifying key workers in India

The National Classification of Occupations (NCO 2004) used in the Indian Periodic Labour Force Survey (PLFS) slightly differs from the ISCO-08. A concordance table between the two classifications was therefore built to identify in the PLFS data the non-teleworkable occupations (table A2). For instance, in this concordance table, jobs classified as “Stationary plant and machine operators” (ISCO-08 code 81) are found in the Indian classification under both “Stationary plant and related operators” (NCO-2004 code 81) and “Machine operators and assemblers” (NCO-2004 code 82).

## Identifying key workers in China

For China, the survey used to study the population of key workers is the China Family Panel Studies (CFPS) of 2018. As with most household surveys in China, this survey does not include a detailed industry variable based on the ISIC Rev. 4 classification. Instead, it provides an aggregated variable grouping of workers according to China’s national economic industry classification (GB/T 4754–2002). This variable divides industries into the following 20 categories:

- 1 Agriculture, forestry, animal husbandry and fishery;
- 2 Mining;
- 3 Manufacturing;
- 4 Production and supply of electricity, gas and water;
- 5 Construction;
- 6 Wholesale and retail trades;
- 7 Transportation, storage and post;
- 8 Accommodation and catering services;
- 9 Information transmission, software and information technology services;
- 10 Financial industry;
- 11 Real estate;
- 12 Leasing and business services;
- 13 Scientific research and technical services;
- 14 Management of water conservancy, environment and public facilities;
- 15 Residential services, repairing and other services;
- 16 Education;
- 17 Health and social work;
- 18 Culture, sports and entertainment;
- 19 Public management, social securities and social organizations;
- 20 International organizations.

Since the detailed list of key industries and services used in the definition of key workers given in table A1 is not available in the Chinese data, the analysis was adapted by simply considering all industries and services except the following (according to the Chinese classification): 5 Construction; 8 Accommodation and catering services; 11 Real estate; 16 Education; 18 Culture, sports and entertainment; 20 International organizations.

With such a methodology, some workers surveyed in the CFPS may therefore have been classified as “key”, which would not have been the case if the precise definition had been used. For instance, workers in the tobacco industry belong to “3 Manufacturing” in the Chinese classification and could therefore be considered as “key” as they also work in a non-teleworkable occupation.

To measure the overestimation of key workers in China that this methodology may entail, the average share of additional workers included in the Chinese adaptation of the definition of key workers was computed across a sample of upper-middle-income economies (27 countries). On average, 9 per cent of workers would have been added to the population of key workers in these countries if the Chinese adaptation had been applied. Since the population of key workers in China is estimated at 44 per cent, it is likely that around 20 per cent of them (=9/44) were erroneously classified as “key”.

Even though the estimates for China do not rely precisely on the population of key workers as defined for the other countries covered by the report, they have been included in the results. Nevertheless, the estimates for China appear to be consistent overall with the findings concerning upper-middle-income countries, along the various dimensions studied.

## A2. Data for analysing the experience of key workers and enterprises during the COVID-19 pandemic (Chapter 2)

### Analysis of mortality by occupation

The analysis of mortality by occupation in section 2.1 uses published vital statistics from countries that include information on occupation (see table A3). Vital statistics are compiled using death certificates issued by hospitals or coroners. They are not samples and thus have no sample weights.

► **Table A3. Vital statistics used for analysis of morbidity by occupation**

Country	Name	Years
Brazil	Sistema de Informação sobre Mortalidade (SIM)	2019, 2020
Colombia	Defunciones No Fetales	2019, 2020
Costa Rica	Registro Civil: Total de Defunciones	2019, 2020
Mexico	Estadística de Defunciones Generales	2019, 2020
United States	National Vital Statistics System (NVSS)	2020

To calculate occupational mortality rates, the number of deaths per occupation must be divided by the number of workers. The number of workers by occupation is taken from the labour force surveys for the respective countries listed in table A6. Where this could not be done, variations in the number of deaths by occupation were used.

## Qualitative interviews

The interviews analysed in Chapter 2 followed a generic open-ended questionnaire for workers, covered their working conditions prior to the pandemic, their experience of working during the pandemic and their hopes and aspirations for the future, in addition to gathering basic socio-demographic information as well as information on their occupation, contractual status and place of work. For interviews with small business owners, including informal self-employed workers, the open-ended questionnaire asked about the difficulties of operating during the pandemic, how they were or were not affected by lockdowns, the effect on sales, supply chain impediments, and challenges in securing the safety and health of their workplace, including the provision of PPE. Table A4 gives the distribution of persons interviewed.

Given the wide range of countries, industries and occupations covered, interviewers adapted the questionnaire to the specific country and sectoral context. Interviewees were chosen using purposeful sampling and participated in either individual interviews or focus groups, with the explicit criteria that they were working in the same position prior to the pandemic. The individuals interviewed represent a cross-section of industries and work arrangements, including informal work. The interviews were analysed by the authors of the background papers, as well as by the authors of this report, who coded a sub-sample of the interviews using qualitative data analysis software Nvivo. The names of interviewees have been changed to protect the anonymity of the respondents.

► **Table A4. Number and distribution of workers and small business owners interviewed by sector of activity and country, individual and focus group interviews**

<b>Food systems</b>	Argentina (9), Canada (30), Ghana (4), India (urban) (12), India (rural) (48), Kenya (5), Malaysia (4), Mexico (3), Peru (8), Philippines (7), South Africa (10), Türkiye (14)
<b>Health</b>	Argentina (13), Ghana (16), India (16), Kenya (7), Mexico (13), Peru (11), Philippines (13), Türkiye (12)
<b>Retail</b>	Argentina (6), India (rural) (1), Kenya (7), Mexico (1), Peru (1)
<b>Security</b>	India (6), Kenya (6), Malaysia (4), Mexico (3), Philippines (2)
<b>Manual</b>	Peru (4), Philippines (2), South Africa (1)
<b>Cleaning and sanitation</b>	Argentina (6), India (12), Malaysia (4), Peru (5), Republic of Korea (8), Türkiye (3)
<b>Transport</b>	Argentina (6), Ghana (7), Kenya (4), Malaysia (4), Mexico (3), Peru (8), Philippines (3), Republic of Korea (6), South Africa (2)
<b>Technicians and clerical</b>	Ghana (5), India (rural) (1), Kenya (1), Mexico (9), Peru (8), Philippines (2), Republic of Korea (2), South Africa (2), Türkiye (1)
<b>Small business owners (key sectors)</b>	Argentina (11), Ghana (13), India (urban) (4), India (rural) (55), Kenya (16), Malaysia (4), Mexico (10), Peru (8), Türkiye (11), Philippines (4)

**Note:** Data from background studies prepared for the ILO.

## Analysis of key enterprises

The analysis of key enterprises during the COVID-19 pandemic uses the World Bank Enterprise Surveys (WBES) and COVID-19 follow-up surveys (COV-ES). WBES is a nationally representative data set of registered firms in the private sector with five or more employees. The sample of the COV-ES consists of enterprises in a baseline WBES between 2016 and 2020, which were re-interviewed. Section 2.3

► **Table A5. Sample overview and excluded countries**

**COV-ES countries included in the sample:**

Albania, Armenia, Azerbaijan, Bosnia and Herzegovina, Croatia, Cyprus, Czechia, El Salvador, Estonia, Georgia, Greece, Guatemala, Honduras, Hungary, Italy, Jordan, Lebanon, Mongolia, Montenegro, Mozambique, Republic of Moldova, Romania, Russian Federation, Serbia, Slovenia, South Africa, Zimbabwe

**COV-ES countries excluded from the sample:**

<b>No baseline year</b>	Panama
<b>No essential list</b>	Belarus, Chad, Guinea, Kazakhstan, Latvia, Lithuania, Nicaragua, Niger, North Macedonia, Somalia, Togo, Zambia
<b>No variation in list</b>	Bulgaria, Malta, Morocco, Poland, Portugal, Slovakia

utilizes the first wave of the COV-ES data, which has the largest coverage and is comparable between countries. Lists ranging from official documents to newspapers that include definition of essential sectors are collected and translated into WBES sectoral coding either through crosswalks or by matching sectoral descriptions with the ISIC Rev. 3.1 sector definitions. Responding business owners or managers wrote down a sentence or several keywords to describe the main operation of the firm. Based on the list of key sectors, a variable is created indicating whether the firm operates in a key sector of the respective country, or whether it produces a good or offers a service which is defined to be key. Lebanon is the exception, where the survey data include a variable indicating whether the enterprise is key or not. The final sample consists of 27 countries (see table A5).

WBES excludes firms in the agricultural, mining and several service sectors, such as health and social work, real estate or research and development. The sectoral classification is based on ISIC Rev. 3.1. Included sectors are manufacturing (section D), construction (section F), wholesale and retail (section G), hotels and restaurants (section H), transport, storage and communications (section I), and information technology (division 72). As the agricultural sector is excluded, the data are naturally not representative of all key sectors within the countries.

## **A3. Microdata for analysing socio-demographic characteristics and working conditions of key workers**

For the analysis of socio-demographic characteristics and working conditions, representative and harmonized labour force and household survey data from 90 countries were used. These data were obtained from the ILO's Microdata Repository and Harmonized Microdata.<sup>5</sup> These form the basis of the ILOSTAT repository, which provides comprehensive information, including indicators, on labour market topics. Specifically, the ILO's Department of Statistics identifies, obtains and processes primary national sources of labour statistics in addition to confirming the quality of the data. It also creates variables and indicators in a harmonized way, which implies mapping national microdata to international standard classifications, such as ISCO and ISIC for two-digit occupations and industries, respectively.<sup>6</sup> As such, the ILO's Microdata Repository and

Harmonized Microdata (ILOSTAT) is a key source for this report. For a few countries, the labour force and household survey data were supplemented with microdata sources that were accessed through national consultants. These countries are Australia, China, India, the Russian Federation and Ukraine.

The list in table A6 includes the 90 countries and their national data sources. All of these countries are used in Chapter 1 to classify key occupational categories and analyse the socio-demographic characteristics of key workers. In Chapters 3 and 4, the analysis of the working conditions of key employees is instead based on sub-samples of surveys available from those listed in table A6. For each variable, countries that lack a given survey question or have a high share of missing values are excluded from the descriptive analysis (see table A7). Alternatively, table A8 lists those variables which were included by fewer countries fewer countries and for which those countries had sufficient data in their survey.

Further sources of microdata were used for the descriptive analysis of physical and psychosocial risks in Chapter 3. These are the Sixth European Working Conditions Survey: 2015, the European Working Conditions Telephone Survey 2021, American Life Panel (2015 American Working Conditions Survey 2015) and American Life panel (Omnibus Survey-2021, Wave 10).

For all surveys, the analysis is limited to workers in employment. Most of the labour force surveys are structured according to the International Classification of Status in Employment, 1993 (ICSE-93) which designates six employment statuses: (1) employees, (2) employers, (3) own-account workers, (4) members of producer cooperatives, (5) contributing family workers, and (6) workers not classifiable by status. The report follows the designation developed by ILOSTAT whereby status in employment is grouped into two categories: (a) wage and salaried workers (also known as employees); and (b) self-employed workers (including the subcategories of self-employed workers with employees (employers), self-employed workers without employees (own-account workers), members of producers' cooperatives and contributing family workers. Although contributing family workers are often not paid, they are considered as being in employment given their contribution to family income. Workers in subsistence agriculture (ISCO 63), who are typically classified as self-employed or contributing family workers in labour force surveys, are also included. Other forms of unpaid work, such as care work in the home, fall outside these statistical boundaries, and are thus not considered in the analysis.

In all the cross-country estimates, each country is weighted equally. This choice highlights the importance of country-specific institutions and policies. An alternative, to weight each country by number of working individuals, would give more prominence to countries with a larger number of workers. This would have caused the results to be driven by the more populous countries, blurring cross-country variations.

► **Table A6. National data sources used to classify and analyse key workers' characteristics and working conditions**

Country/territory	Survey	Year	Income group (World Bank classification)
<b>Afghanistan</b>	Living Conditions Survey	2017	Low
<b>Albania</b>	Labour Force Survey (LFS)	2019	Upper-middle
<b>Angola</b>	Employment survey; Inquérito ao emprego	2019	Lower-middle
<b>Australia</b>	Household Income and Labour Dynamics	2019	High
<b>Austria</b>	LFS	2019	High
<b>Bangladesh</b>	LFS	2017	Lower-middle
<b>Barbados</b>	LFS	2019	High

► **Table A6. (cont'd)**

Country/territory	Survey	Year	Income group (World Bank classification)
<b>Belarus</b>	LFS	2019	Upper-middle
<b>Plurinational State of Bolivia</b>	Household Survey; Encuesta de Hogares	2019	Lower-middle
<b>Bosnia and Herzegovina</b>	LFS	2019	Upper-middle
<b>Botswana</b>	Multi-topic household survey	2019	Upper-middle
<b>Brazil</b>	Continuous National Household Sample Survey; Pesquisa Nacional por Amostra de Domicílios	2019	Upper-middle
<b>Brunei Darussalam</b>	LFS	2019	High
<b>Burkina Faso</b>	Integrated regional survey on employment and the informal sector; Enquête Régionale Intégrée sur l'Emploi et le Secteur Informel (ERIESI)	2018	Low
<b>Cambodia</b>	LFS	2019	Lower-middle
<b>China</b>	China Family Panel Studies	2018	Upper-middle
<b>Cook Islands</b>	LFS	2019	High
<b>Côte d'Ivoire</b>	National Employment Survey; Enquête Nationale sur l'Emploi	2019	Upper-middle
<b>Cyprus</b>	LFS	2019	High
<b>Czechia</b>	LFS	2019	High
<b>Dominican Republic</b>	Continuous National Labour Force Survey; Encuesta Nacional Continua de Fuerza de Trabajo	2019	Upper-middle
<b>Ecuador</b>	National Survey of Employment, Unemployment and Underemployment; Encuesta Nacional de Empleo, Desempleo y Subempleo	2019	Upper-middle
<b>Egypt</b>	LFS	2019	Lower-middle
<b>El Salvador</b>	Multi-Purpose Household Survey; Encuesta de Hogares de Propósitos Múltiples	2019	Lower-middle
<b>Eswatini</b>	LFS	2016	Lower-middle
<b>Ethiopia</b>	National Labour Force and Migration Survey	2013	Low
<b>Federated States of Micronesia</b>	Household Income and Expenditure Survey	2014	Lower-middle

► **Table A6. (cont'd)**

Country/territory	Survey	Year	Income group (World Bank classification)
<b>Fiji</b>	Employment and Unemployment Survey	2016	Upper-middle
<b>France</b>	LFS	2019	High
<b>Gambia</b>	LFS	2012	Low
<b>Georgia</b>	LFS	2019	Upper-middle
<b>Ghana</b>	LFS	2015	Lower-middle
<b>Greece</b>	LFS	2019	High
<b>Guatemala</b>	National Survey of Living Conditions; Encuesta Nacional de Condiciones de Vida	2014	Upper-middle
<b>Guyana</b>	LFS	2018	Upper-middle
<b>Honduras</b>	Permanent Multi-Purpose Household Survey; Encuesta Permanente de Hogares de Propósitos Múltiples	2019	Lower-middle
<b>India</b>	LFS	2019	Lower-middle
<b>Islamic Republic of Iran</b>	LFS	2019	Upper-middle
<b>Israel</b>	LFS	2017	High
<b>Jordan</b>	LFS	2019	Upper-middle
<b>Kenya</b>	Household Budget Survey	2019	Lower-middle
<b>Kiribati</b>	HIES	2019	Lower-middle
<b>Kosovo</b>	LFS	2019	Upper-middle
<b>Kyrgyzstan</b>	LFS	2018	Lower-middle
<b>Lao People's Democratic Republic</b>	LFS	2017	Lower-middle
<b>Lebanon</b>	LFS	2019	Upper-middle
<b>Lesotho</b>	LFS	2019	Lower-middle
<b>Liberia</b>	LFS	2017	Low
<b>Madagascar</b>	National Survey on Employment; Enquête Nationale sur l'Emploi et le Secteur Informel (ENESI)	2015	Low
<b>Maldives</b>	HIES	2019	Upper-middle
<b>Marshall Islands</b>	HIES	2019	Upper-middle
<b>Mexico</b>	National Occupation and Employment Survey; Encuesta Nacional de Ocupación y Empleo	2019	Upper-middle
<b>Mongolia</b>	LFS	2019	Lower-middle

► **Table A6. (cont'd)**

Country/territory	Survey	Year	Income group (World Bank classification)
<b>Mozambique</b>	Household budget survey; Inquérito sobre orçamento familiar	2015	Low
<b>Myanmar</b>	LFS	2019	Lower-middle
<b>Nepal</b>	LFS	2017	Lower-middle
<b>Niger</b>	ENESI	2017	Low
<b>Nigeria</b>	Socio Economic Survey	2019	Lower-middle
<b>North Macedonia</b>	LFS	2019	Upper-middle
<b>Occupied Palestinian Territory</b>	LFS	2019	Lower-middle
<b>Pakistan</b>	LFS	2019	Lower-middle
<b>Palau</b>	HIES	2014	High
<b>Panama</b>	Labour Market Survey; Encuesta de Mercado Laboral	2014	High
<b>Philippines</b>	LFS	2019	Lower-middle
<b>Portugal</b>	Employment Survey; Inquérito ao Emprego	2019	High
<b>Russian Federation</b>	LFS and for wage analysis; Survey of Income and Participation in Social Programs	2019	Upper-middle
<b>Samoa</b>	LFS	2017	Upper-middle
<b>Serbia</b>	LFS	2019	Upper-middle
<b>Seychelles</b>	LFS	2019	High
<b>Sierra Leone</b>	Integrated Household Survey	2018	Low
<b>Slovakia</b>	LFS	2019	High
<b>Solomon Islands</b>	HIES	2013	Lower-middle
<b>Sri Lanka</b>	LFS	2019	Lower-middle
<b>Suriname</b>	Survey of Living Conditions	2016	Upper-middle
<b>Switzerland</b>	Labour Force Survey; Enquête suisse sur la population active	2019	High
<b>Thailand</b>	LFS	2019	Upper-middle
<b>Timor-Leste</b>	LFS	2016	Lower-middle
<b>Togo</b>	ERIESI	2017	Low
<b>Tonga</b>	LFS	2018	Upper-middle
<b>Tunisia</b>	Labour Market Panel Survey	2014	Lower-middle
<b>Türkiye</b>	LFS	2019	Upper-middle

► **Table A6. (cont'd)**

Country/territory	Survey	Year	Income group (World Bank classification)
Tuvalu	HIES	2016	Upper-middle
Uganda	LFS	2017	Low
Ukraine	Ukrainian Longitudinal Monitoring Survey	2012	Lower-middle
United Kingdom	LFS	2019	High
United States	Current Population Survey	2019	High
Uruguay	Continued Household Survey; Encuesta Continua de Hogares	2019	High
Vanuatu	HIES	2019	Lower-middle
Zambia	LFS	2019	Lower-middle
Zimbabwe	LFS	2019	Lower-middle

**Note:** Data are from the ILO's Microdata Repository and Harmonized Microdata Collection (ILOSTAT), except for Australia, China, India, the Russian Federation and Ukraine, which were accessed through national consultants.

► **Table A7. Countries/territories missing from descriptive statistics**

Variable	Countries/territories missing
<b>Occupational groups</b>	Egypt, Fiji, Georgia, Kenya, Kyrgyzstan, Madagascar, Timor-Leste (for security), Ukraine
<b>Age</b>	None
<b>Gender</b>	None
<b>Education</b>	Albania, Kyrgyzstan, Myanmar, Solomon Islands
<b>Employment status</b>	Russian Federation
<b>Migrant status (foreign-born)</b>	Afghanistan, Albania, Australia, Barbados, Belarus, Plurinational State of Bolivia, Botswana, Brazil, China, Egypt, El Salvador, Ethiopia, Georgia, Guatemala, India, Islamic Republic of Iran, Kyrgyzstan, Lebanon, Madagascar, Mozambique, Myanmar, Nepal, Niger, North Macedonia, Occupied Palestinian Territory, Pakistan, Panama, Philippines, Russian Federation, Samoa, Serbia, Seychelles, Sierra Leone, Sri Lanka, Thailand, Timor-Leste, Tunisia, Ukraine, Vanuatu, United Kingdom
<b>Public sector employment</b>	Australia, Belarus, Cyprus, Czechia, Gambia, India, Israel, Kenya, Portugal, Russian Federation, Timor-Leste
<b>Temporary employment</b>	Afghanistan, Australia, Barbados, Plurinational State of Bolivia, Brazil, Brunei Darussalam, Burkina Faso, China, Cook Islands, Côte d'Ivoire, Ecuador, El Salvador, Eswatini, Federated States of Micronesia, Guatemala, Honduras, Islamic Republic of Iran, Israel, Kenya, Kiribati, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Liberia, Madagascar, Marshall Islands, Mexico, Myanmar, Nigeria, Occupied Palestinian Territory, Palau, Panama, Sierra Leone, Solomon Islands, Suriname, Thailand, Timor-Leste, Togo, Tonga, Tuvalu, United States, Uruguay, Vanuatu

► **Table A7. (cont'd)**

Variable	Countries/territories missing
<b>Working hours</b>	Barbados, Fiji, Kiribati, Nigeria, Suriname, Mozambique, Samoa, Tunisia, Vanuatu
<b>Social security</b>	Afghanistan, Australia, Austria, Barbados, Belarus, Cyprus, Czechia, Ethiopia, Federated States of Micronesia, France, Greece, Islamic Republic of Iran, Israel, Niger, Nigeria, Palau, Philippines, Portugal, Russian Federation, Slovakia, Solomon Islands, Suriname, Switzerland, Thailand, Timor-Leste, Tunisia, Tuvalu, Ukraine, United Kingdom, United States
<b>Wages</b>	Afghanistan, Angola, Austria, Barbados, Belarus, Bosnia and Herzegovina, Botswana, Brunei Darussalam, Burkina Faso, Cook Islands, Cyprus, Czechia, Eswatini, Ethiopia, Federated States of Micronesia, Fiji, Gambia, Georgia, Islamic Republic of Iran, Israel, Kiribati, Kosovo, Kyrgyzstan, Lesotho, Liberia, Marshall Islands, Mongolia, Mozambique, Myanmar, Niger, Nigeria, North Macedonia, Occupied Palestinian Territory, Pakistan, Palau, Seychelles, Sierra Leone, Slovakia, Solomon Islands, Suriname, Timor-Leste, Tonga, Tunisia, Türkiye, Tuvalu, Vanuatu, Zimbabwe

► **Table A8. Countries/territories included in descriptive statistics**

Variable	Countries/territories included
<b>Part-time employment</b>	Bangladesh, Greece, Kyrgyzstan, Lesotho, Occupied Palestinian Territory, Slovakia, Türkiye, United Kingdom, United States, Zambia
<b>Training in the past 12 months</b>	Albania, Austria, Belgium, Bulgaria, Burkina Faso, Côte d'Ivoire, Croatia, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Montenegro, Netherlands, North Macedonia, Norway, Pakistan, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Togo, Türkiye, Uganda, United Kingdom
<b>TVET attendance at any point in time</b>	Bangladesh, Burkina Faso, Cambodia, Egypt, Ethiopia, France, Fiji, Jordan, Kenya, Lao People's Democratic Republic, Lebanon, Madagascar, Nepal, Niger, Liberia, Pakistan, Russian Federation, Serbia, Switzerland, Timor-Leste, Togo, Türkiye, United Kingdom, Viet Nam, Zimbabwe

## A4. Analysing the difference in pay between key employees and other employees

To estimate the pay gap observed between key wage employees and other wage employees, a Blinder-Oaxaca econometric technique is calculated for each country. First, wage equations are estimated separately for key and other wage employees. Then, the estimated parameters of these equations are used to decompose the average pay gap into a part explained by the observable characteristics considered in the equations, and an unexplained part.

Formally, the wage equations estimated are as follows:

$$W_K = X_K \beta_K + \epsilon_K$$

$$W_O = X_O \beta_O + \epsilon_O$$

where  $W_*$  is the logarithm of the hourly wages of key ( $K$ ) and other ( $O$ ) wage employees, and  $X_*$  is a vector of variables including a constant term and dummies that describe paid employees' observable characteristics: age, education level, number of hours worked per week (below 20, between 20 and 40, above 40), and the sector of work (public/private). In this framework, the average pay gap is calculated as the sum of two components:

$$\bar{W}_O - \bar{W}_K = (\bar{X}_O - \bar{X}_K) \hat{\beta}_O + \bar{X}_K (\hat{\beta}_O - \hat{\beta}_K)$$

where  $(\bar{X}_O - \bar{X}_K) \hat{\beta}_O$  is the explained part, attributable to differences in human capital between key and other employees, and  $(\hat{\beta}_O - \hat{\beta}_K) \bar{X}_K$  is the unexplained part of the gap. In other words, the explained part of the gap corresponds to the difference in hourly wages, between key employees and other employees, attributable to differences in the composition of the workforce in terms of age, education level, working time and sector of activity. The unexplained part of the wage gap is due to factors not taken into account in the decomposition, such as undervaluation of the work undertaken by key workers.

# Notes

- 1 ILO, 2020r.
- 2 Dingel and Neiman, 2020.
- 3 It should be noted that both indicators of ability to work from home are highly correlated, and there are no discrepancies in ranking of jobs across measures.
- 4 When there are exceptions, they are indicated by a mention in the text or a note to the relevant table or figure.
- 5 ILO, 2018f; ILO, n.d.(a).
- 6 Ongoing initiatives at the ILO work towards extending these classifications to more detailed levels of aggregation.