OECD Employment Outlook 2021

NAVIGATING THE COVID-19 CRISIS AND RECOVERY

OECD

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Foreword

The *OECD Employment Outlook* provides an annual assessment of key labour market developments and prospects in OECD member countries. Each edition also contains several chapters focusing on specific aspects of how labour markets function and the implications for policy in order to promote more and better jobs. The 2021 edition is devoted to *navigating the COVID-19 crisis and recovery*. Chapter 1 focusses on the labour market impact of the crisis and its consequences for vulnerable groups. Chapter 2 provides a first assessment of the role of job retention schemes during the crisis. Chapter 3 analyses how active labour market policies have responded to the challenges posed by the crisis. Chapter 4 assesses the extent and consequences of domestic outsourcing for the labour market. Finally, Chapter 5 focusses on trends in working time, including teleworking, and its regulations.

OECD Employment Outlook 20*21* is the joint work of staff of the Directorate for Employment, Labour and Social Affairs (ELS). The whole Outlook has also greatly benefited from comments from other OECD directorates and contributions from national government delegates. However, its assessments of each country's labour market prospects do not necessarily correspond to those made by the national authorities concerned.

This report was edited by Andrea Bassanini, and is based on contributions from Emily Farchy, Satoshi Araki, Fabio Manca and Agnès Puymoyen (Chapter 1), Alexander Hijzen, Andrea Salvatori and Agnès Puymoyen (Chapter 2), Stewart Butler, Kristine Langenbucher, Anne Lauringson and Theodora Xenogiani (Chapter 3), Andrew Green (Chapter 4), and Sandrine Cazes, Chloé Touzet and Sébastien Martin (Chapter 5). The report benefitted from extensive comments from Stefano Scarpetta (Director of ELS), Mark Pearson (Deputy Director of ELS), Stéphane Carcillo (Head of the Jobs and Income Division of ELS), Mark Keese (Head of the Skills and Employability Division of ELS) and Stijn Broecke. The infographic is based on contributions from Alastair Wood. Pascal Marianna was responsible for the statistical annex. Specific contributions were provided by Marius Lüske and Morgan Williams. Statistical support was provided by Sébastien Martin, Agnès Puymoyen and Dana Blumin. Editorial assistance was provided by Liv Gudmundson, Lucy Hulett, Niamh Kinane, and Isabelle Reullon.

Editorial: Seizing the moment to build a more inclusive labour market

It is 16 months since the outbreak of the COVID-19 pandemic sparked a global health crisis without parallel in living memory. With vaccination rates speeding up in many countries, the future is starting to look brighter, but more for some and less for others. The economic and jobs crisis it unleashed is far from over. Uncertainties, including the spread of new variants of COVID-19, loom on the horizon. The pandemic has cost lives and livelihoods.

Economic growth has taken a massive hit. Many OECD countries will not re-gain the pre-COVID GDP levels before 2022, and for many emerging and developing countries this target will take even longer to reach.

The pandemic has also cost jobs. At the end of 2020, around 22 million jobs had vanished in the OECD compared to 2019. And globally 114 million jobs had disappeared. In the OECD area, despite a gradual recovery, there are still over 8 million more unemployed than before the crisis, and over 14 million more inactive people. At the end of 2020, OECD countries were only half-way towards a full employment recovery. A recovery to pre-pandemic levels of employment in the OECD will not be reached by the end of 2022, according to our projections.

COVID-19 has also accentuated economic and social divides. It has amplified existing inequalities in labour market outcomes, skills, and opportunities. It has accelerated the digital transformation and automation, providing opportunities for many to continue work remotely, but also widening the gulf between workers. Teleworking became mainstream for many high-skilled workers but remained peripheral in many low-skilled occupations. At the beginning of the crisis, low-skilled workers were more likely to lose their jobs. High skilled workers were more likely to reduce their working time.

The unprecedented scope and scale of state support for reviving and reinvigorating our economies is a source of hope. Now we have a unique opportunity for bold labour market and social policies to avoid locking in inequality and exclusion as a legacy of the crisis.

There is a real risk that the depth of the COVID-19 crisis will entrench inequality and exclusion unless governments put jobs at the heart of the recovery

That recovery must focus on the most vulnerable – youth, women, the low skilled and some self-employed – to ensure a transition from exclusion to inclusion.

Failing to address inequality and exclusion now is likely to result not only in deeper social divisions but will have negative ramifications for productivity and economic recovery.

There is light at the end of the tunnel, but it burns brighter for some than others

During the pandemic, government support for firms and households was unprecedented in breadth and depth. For example, in the first half of 2020, despite GDP per capita falling by 12.4% across the OECD, real household gross disposable income grew by 3.7% on the back of largescale COVID-19 government support. Despite major support, however, *the toll of the crisis has not been equally spread*. ***The COVID-19 crisis has accentuated – and further deepened – economic and social divides in the OECD*.**

Some sectors – including tourism, food services and the arts – bore the brunt of COVID-19 lockdowns. Other sectors not only suffered less but recovered more quickly. While there was one pandemic, its impact was felt unequally. Skills, education, income, and gender divides were exposed by the crisis.

In low-paying occupations, as the COVID-19 crisis hit, one in ten jobs were destroyed across the OECD. While in high-pay occupations the shock was, in most countries, absorbed through reductions in working time, supported by generous job retention schemes, or by switching to teleworking. At the peak of the crisis, half of workers with top earnings were able to work from home, against only 29% among low-paid workers.

Other vulnerable labour groups, such as workers on non-standard contracts and youth, have been hit hard by job and earnings losses. And these groups are often weakly covered by earnings replacement benefits and job retention support, though many OECD governments tried to close these gaps with emergency measures.

The crisis also highlighted, and compounded, other forms of economic and social disadvantage, such as greater exposure to the virus for “frontline” workers. Homes were often ill suited for working and studying for many lower-income households. Many working parents struggled to juggle work and childcare. Unequal access to computers between affluent and poor households highlighted the digital divide at school.

The crisis accelerated the digital transformation and automation, which even before the pandemic favoured those with higher skills and in ICT-related occupations. Evidence from online job postings suggests that during the crisis, hirings in those occupations involving routine and physical abilities that were already losing ground before the crisis have plummeted. At the same time, those occupations involving cognitive and digital skills that were projected to expand, resisted the downturn in hirings better. In parallel, ageing of the working population may hinder the speed of job reallocations towards growing sectors and firms, which typically accelerate during the recovery phase. Such reallocations often require both occupational and geographical mobility as well as the acquisition of new skills.

All this suggests that the COVID-19 crisis risks amplifying the longstanding trend towards increasing economic inequalities in many OECD countries. In the decades before 2020, real household incomes diverged, having grown, on average, by 63% for the top 10% of households, and only by 20% for the bottom 10%, since 1985.

Long-standing disparities in opportunities and outcomes have weakened the ability of vulnerable workers and households to withstand the pandemic crisis, despite efforts to help them with emergency measures. This is not new. Crisis periods often bring about further challenges in the labour market, often compounding pre-existing ones.

The depth of the COVID-19 crisis raises the risk that the recovery will be harder without bold and timely policies

Governments in most OECD countries and beyond have announced unprecedented plans for the recovery. This provides a ***once-in-a-lifetime opportunity to address the main long-standing structural challenges*** that have been exacerbated by COVID-19.

In previous recoveries, most countries quickly tightened their public finance belts. This time, enormous resources have been made available in the next five to ten years. The Government of the United States is committing trillions of US dollars, while the European Union is borrowing on behalf of its member countries for the first time to support often large national recovery and resilience plans for the next five years.

Promote job creation while providing an effective bridge to the recovery for those still affected by the crisis

"*It ain't over till it's over*". As economies roll out their recovery plans in coming months, it is essential to continue supporting families most in need and jobs that remain viable, while providing the right incentives for job creation and resuming work. Withdrawing support too soon to the many still in need risks generating mass bankruptcies and job losses in sectors still deeply affected by containment measures, making the recovery more difficult and uncertain. The short-term costs of these measures can be reduced by enhancing the targeting of support to the most vulnerable sectors, companies, and households, while fostering start-ups and job creation.

Promoting reallocation of workers towards expanding job opportunities will indeed be key to sustain the economic recovery and address the labour market challenges brought about by the crisis. Temporary hiring subsidies can be an effective tool to promote job creation and a number of OECD countries have recently introduced or renewed such schemes. Evidence from the global financial crisis suggests that hiring subsidies can boost job growth and be cost effective. Incentives could also be used to promote the mobility of workers from supported to other jobs. For example, governments could consider temporarily reducing employee social security contributions for workers starting a new job in a firm not receiving job retention support or temporarily providing an in-work benefit. These job mobility bonuses would promote the reallocation of workers towards expanding firms.

It is time to think big and address the right structural issues affecting the labour market

It is also an imperative to strengthen the resilience of the labour market to better withstand potential future shocks, which could include other pandemics, natural disasters and threats from climate change.

The recovery from the pandemic will take place in a context of profound transformation of our economies and labour markets and the process of creative destruction. Certain tasks will either be taken over by machines or offshored, while new, often greener, jobs will be created. The doubling of the incidence of teleworking during the peak of the COVID-19 pandemic, often involving jobs where distant work was considered impossible, is a stark reminder of how this process can suddenly be accelerated. While some jobs and activities are likely to return to their pre-pandemic ways, the persistent increase in vacancies requiring full-time home working confirms that business models are changing.

Investing in effective skills policies will be essential to reduce inequalities and minimise individual risks

To allow people to better harness the opportunities brought about by such transformations, to keep their jobs or move to new, more productive ones, upskilling and reskilling will be crucial.

However, training opportunities are significantly unequal while skills policies often fail to reach those adults who are more at risk. On average, across OECD countries, participation in training by those with less than secondary education is one-third of that of highly educated adults. Similarly, workers whose jobs are at high risk of automation are one half less likely to engage in adult learning than their peers in jobs with a lower risk.

Rapidly changing skills needs in the recovery and beyond require a significant upscaling of adult learning opportunities as well as the development of new tools for promoting skills investments over the whole career. All efforts should be made to foster a culture of continuous lifelong learning and linking training to individuals rather than jobs. Awareness of the benefits of training could be raised through information campaigns and career guidance, which should identify training pathways from occupations with low growth potential to occupations with high growth potential. Training formats should also address bottlenecks such as workers' lack of available time and prohibitive monetary costs, by making them more modular and flexible, partially subsidising individual costs and/or developing better financial incentives. Employers can and should play an important role in this respect, and they should be helped and encouraged to train groups at risk.

Effectively helping jobseekers find work will require further investment in the infrastructure of activation systems

The crisis risks leaving deep scars on those who lost their jobs at the beginning of the pandemic, and in particular vulnerable groups marginally attached to the labour market who face major or multiple employment obstacles (such as single parents with young children, people with disabilities, low-qualified youth not in employment, education or training – NEET). These groups are often left outside the scope of active labour market policies (ALMPs). Where this is the case, ALMPs should be expanded to provide these vulnerable people with integrated, comprehensive, and individualised support in order to reconnect them with good opportunities in the labour market.

More generally, ALMPs play a crucial role in fostering the resilience of a labour market in transformation. The COVID-19 crisis, by increasing caseload while generating a slump in job vacancies, has posed a significant challenge to public and private employment services. About two-thirds of OECD countries have increased their budget for public employment services since the onset of the crisis. But increasing spending may not suffice. Among the countries that were more effective in responding to these challenges are those where the infrastructure to scale up support while ensuring quality employment and training services was already up and running. Building this infrastructure takes time and will require medium-term planning. It will also require harnessing the potential of digital technologies to better identify and match the skill needs of firms and the skill sets of workers, and to develop appropriate profiling tools, without leaving the most difficult clients unserved. Many countries have made substantial progress in this respect during the crisis but additional investments in digital capacity and efficient internal processes are still necessary in many of them.

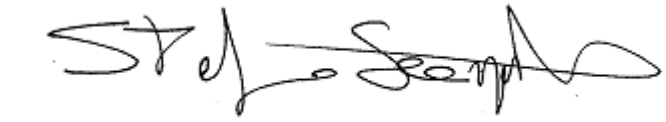
Fostering inclusiveness requires addressing long-standing gaps in social protection

In the last decades, non-standard forms of employment, such as on-call or zero-hours contracts, as well as various forms of own-account work, have grown in many countries in response to changes in preferences, innovations in business models and technological developments. Yet, significant gaps in access to social protection exist between workers on standard, full-time, open-ended contracts, and those in non-standard forms of work. The self-employed are usually less well covered by statutory social protection provisions. Many workers in other forms of non-standard employment (e.g. temporary, intermittent work), while being equally covered in principle, still struggle to gain effective access, because they fail to meet minimum contribution periods or earnings, and for this reason also remain off the radar of active policies.

Addressing gaps in social protection, where they exist, should be a priority. Proactive action is needed to extend the reach of programmes that often exclude specific categories of workers. The portability of entitlements between social insurance programmes that are intended for different labour market groups should be boosted. And it is important to ensure a more neutral treatment of different forms of work to prevent arbitrage between them. At the same time, means tests should be made more responsive to people's needs by changing the reference periods for the needs assessment and putting appropriate weight on recent or current incomes of all family members. Many countries put in place emergency support for the self-employed after the outbreak of the COVID-19 crisis, temporarily filling a few of these gaps, but that experience should now be re-assessed and translated into a more systematic structural response, capable of ensuring fairness and restoring incentives.

A transition agenda for a *Future that Works* for all

Two years ago, the *OECD Employment Outlook* was calling for a transition agenda for a *Future that Works* for all – a whole-of-government approach that targets interventions on those who need it most. Implementing this agenda is more than ever a priority to ensure that the opportunities that digitalisation, globalisation, green technologies and longer lives can bring will be seized, the associated risks mitigated and those who are left behind by the digital transformation and globalisation reconnected. Policies to build a more productive, rewarding, greener, and inclusive world of work require adequate financial resources – in particular for strengthening active policies, lifelong learning, and social protection. Before the crisis, often strict constraints on public finances made financing this transition a difficult endeavour. More resources are available now. A window of opportunity is opening. Let us not waste it.



Stefano Scarpetta

Director for Employment, Labour and Social Affairs

OECD

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Executive summary

The burden of the COVID-19 crisis has fallen disproportionally on already vulnerable groups

The initial shock of the COVID-19 crisis was felt across large swathes of the economy, as fear of contagion and strict restrictions on social proximity severely dampened economic activity in OECD countries. As people and governments have learnt how to live alongside the virus, behaviours have adapted and restrictions have become looser and more targeted. This has enabled many to return to work. But the deeply sectoral nature of the crisis and differences in the sheltering offered by various types of jobs have left some to shoulder the bulk of the burden in terms of job losses and reduced working time. Those in low-paying occupations, often with fixed-term contracts, holding a low level of education, and youth have been particularly affected by the ravages of the crisis; hours worked by these groups have fallen disproportionately, and joblessness has accounted for a larger share of the adjustment, while other groups were better able to adjust through working time reductions and telework. Firms are also restructuring in ways that are accelerating pre-existing megatrends, such as automation and digitalisation. All this will have implications for the strength and extent of recovery.

Soaring long-term unemployment is a tangible risk

Almost a year and a half into the crisis, many are still to regain full-time employment. As job retention schemes are rolled back, workers who have not regained normal hours face an increasing risk of entering open unemployment. At the same time, many of those who lost their jobs in the first phases of the pandemic have been jobless since then and may find it increasingly difficult to compete with those whose jobs have been previously sheltered. As a result, there is a risk of a rapid build-up of long-term unemployment. At the end of 2020, there were indeed 60% more people unemployed for at least six months, and this figure has continued to grow in the first quarter of 2021.

After protecting jobs during the height of the crisis, the design of job retention schemes must be adjusted to support the recovery

Job retention schemes have been the main instrument used in many OECD countries to soften the labour market impact of the COVID-19 crisis. The use of job retention support peaked at unprecedented levels of around 20% of employment on average across the OECD in April 2020. At the height of the crisis, it supported approximately 60 million jobs, more than ten times as many as during the global financial crisis. Job retention schemes helped to limit rises in unemployment while there is no indication that they had a significant adverse impact on job creation. However, while support must continue for sectors still heavily affected by social distancing restrictions, for others where economic activities have resumed the design of these schemes must progressively be adjusted to promote the recovery and eventually phased out. More generally, well-designed job retention schemes should be timely, targeted and temporary.

Countries have strengthened employment services and adapted their delivery to cope with increased numbers of jobseekers in the pandemic

To handle the sudden increase in unemployment, around two-thirds of OECD countries increased the budget for their public employment services in 2020 and about half of them plan to do so in 2021. Social distancing requirements also necessitated significant changes to service delivery. Digital provision of services has been rapidly expanded to support jobseekers, workers and employers. Close collaboration with stakeholders and flexibility in active labour market policy legislation and its implementation have been key in enabling agile responses to the pandemic. Measures to foster job creation and increase labour demand have been widely used in the early stages of the crisis. Training programmes and employment incentives that support displaced workers and help vulnerable groups such as youth, women, the low skilled, those with health and disability conditions, and those furthest from the labour market will be essential to ensure a balanced recovery.

Domestic outsourcing is growing across OECD countries and may bring risks for job quality and inequality

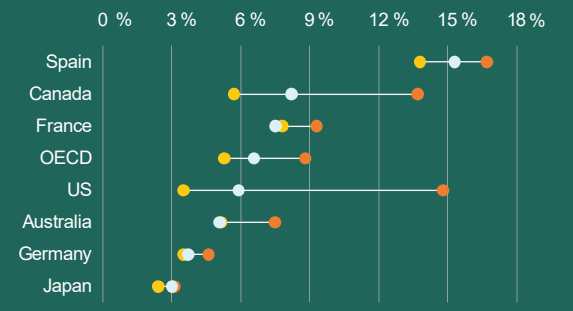
An increasing share of workers in OECD countries are legally employed by one firm but in practice work for another. For example, cleaners, security guards and cafeteria staff often physically work on the premises of one firm, but their legal employer is a third-party support-services company. Such tripartite employment relationships, which are often referred to as “domestic outsourcing”, are on the rise in many OECD countries. Domestic outsourcing may bring productivity and employment gains but workers in certain low-pay occupations, when employed by third-party contractor firms, tend to earn less than those employed in similar but in-house jobs. This suggests that domestic outsourcing may be an important contributor to inequality. Policy makers may wish to consider policies aimed at preserving the positive aspects of outsourcing while mitigating any deterioration in job quality for affected workers.

Working hours have stabilised in recent years, but working time patterns vary significantly across countries and groups of workers

All OECD countries regulate working time to some extent, but there are significant differences in the stringency of rules, as well as the hierarchy between statutory and negotiated ones. Understanding these differences is necessary to analyse the link between regulation and working time outcomes (e.g. hours worked, leave taken, etc.). The trend in usual weekly hours for full-time employees has been flat since the mid-1990s in most countries, while time spent on leisure has decreased. Since the mid-2000s, the incidence of paid overtime among full-time employees has also been stable. For those concerned, overtime amounted to one additional day per week on average in 2019. These patterns mask large differences across groups, with a higher intensity of very short hours among women and low-skilled workers. The use of flexible working time arrangements also varies. These differences have also shaped the use of telework during the COVID-19 crisis. It was already most frequent among highly educated and highly paid workers before the COVID-19 crisis, but these disparities have been widening during the pandemic.

Infographic 1. Key facts and figures

Unemployment is still well above pre-pandemic levels



In May 2021 about 8 million more people in the OECD were unemployed than before the crisis.

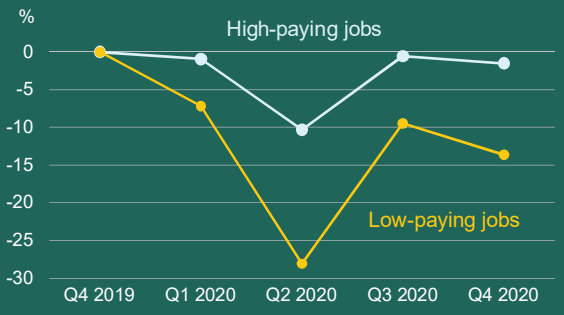
Long spells of joblessness are a real risk

% increase in unemployment rate by duration category, OECD average, Q4 2019 - Q4 2020

At the end of 2020, there were 22 million more people jobless for more than 6 months compared to before the pandemic.

Massive drop in hours worked for low-paying jobs during pandemic

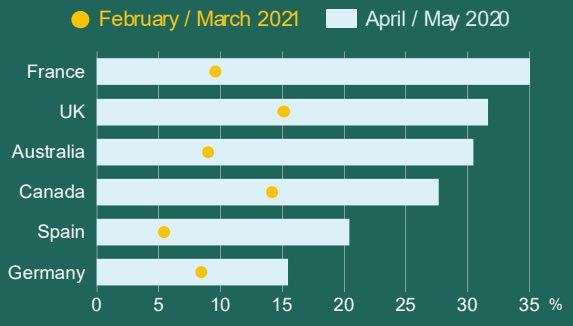
OECD average, % year on year change from same quarter of 2019



Total hours worked in Q1 2021 still 7% lower than in Q4 2019.

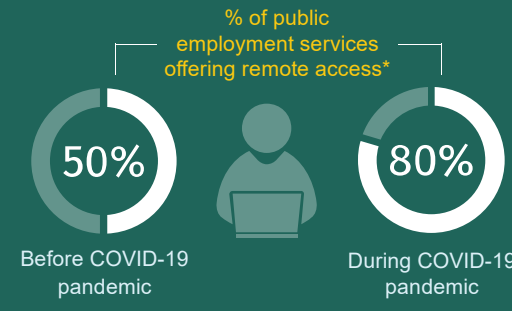
Many governments heavily subsidised hours not worked to protect jobs

Use of job retention schemes as % of employees covered



Up to 21 million jobs may have been saved at the peak of the COVID-19 crisis.

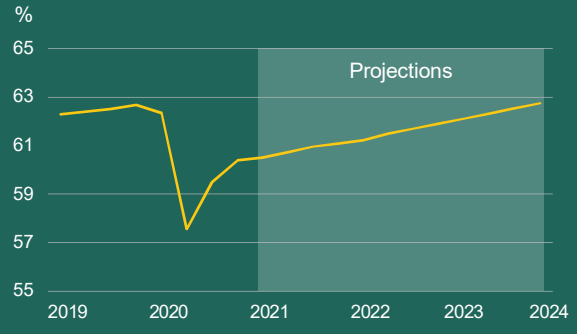
Public employment services rapidly increased digital & remote services



*OECD average

The labour market recovery will be slow in most countries

Projected OECD employment rate, as % of working age population



1 Labour market developments: The unfolding COVID-19 crisis

The COVID-19 pandemic led to a global health crisis with no parallel in living memory. The impact on the economy and societies around the world has been both deep and widespread. The initial shock hit large parts of the economy, as fear of contagion and severe restrictions on social proximity put economic activity on hold in many countries. As people and governments have learnt more about how to live alongside the virus, behaviours have been adapted and restrictions more targeted. This has enabled many to return to work, although others have continued to suffer. This chapter documents the unfolding impact of the COVID-19 crisis on the labour market, as well as the challenges that are still emerging. The chapter highlights those groups who have borne the brunt of the crisis, suggesting where there may be a need for more profound and long-lasting support.

In Brief

Key findings

The initial shock of the COVID-19 crisis was felt across large swathes of the economy, as severe restrictions on social proximity and fear of contagion put large parts of the economy on hold across OECD countries. Most countries have, by now, endured several waves of mounting COVID-19 caseloads. And, as governments and people have learnt more about the virus and how to live alongside it, restrictions have become somewhat looser and distinctly more targeted. This has enabled many to return to work, while the eye of the storm has become increasingly focused. As we now begin to navigate the economic upturn, it is important to identify not only those who have been hit hardest by the crisis, but also those who are likely to face the longest road to recovery. The latest evidence available at the time of writing shows that:

- **One year after the onset of the crisis, hours worked are still far from pre-crisis levels.** In March 2021 hours worked were still 7% below the level in December 2019, on average across the ten countries for which up-to-date hours worked statistics are available. This is halfway from the crisis trough that was reached in the second quarter of 2020, when total hours worked fell by over 15% across the OECD.
- **The form of the unprecedented impact of the crisis on the labour market was shaped, in large part, by policy.** While widespread temporary layoffs swelled unemployment numbers in the United States and Canada, driving OECD unemployment rates up by 3 percentage points in just one month, elsewhere publicly subsidised reductions in working time absorbed much of the slack. Indeed, across the OECD, close to three-quarters of the decline in hours worked was accounted for by some form of reduced working time among those who remained in employment. In addition, many withdrew from the labour market, swelling the numbers in inactivity as fear of infection and increased demands at home (particularly for those with small children) rendered job search difficult.
- **The highly sectoral nature of the crisis has meant that some workers have shouldered the bulk of the burden, while others, not only suffered less, but benefited more quickly from the recovery.** In low-paying occupations, as the COVID-19 crisis hit, hours worked fell by over 28% across the OECD – 18 percentage points higher than the fall seen among high-paying occupations. Among those holding only a low level of education, the impact of the crisis on hours worked was nearly three times that experienced by those with a high level of education.
- **Young people have been particularly affected by the ravages of the crisis.** Youth unemployment in the OECD surged at the onset of the pandemic, and hours worked by young people fell by more than 26% – close to double the fall seen among prime-aged and older workers (15%). Many young people – often working in hard-hit sectors and with precarious contracts – have lost their jobs, while those just about to enter the labour market after finishing education have struggled to find employment in the context of limited vacancies. As a result, the rate of those not in employment, education or training (NEET) increased at the start of the pandemic, reversing the trend of the past decade. By the end of 2020 the average NEET rate of 15-29 year-olds, at 12%, remained a full percentage point above that of the previous year.

- **Despite widespread availability of job retention support to preserve jobs, increased joblessness played an important role in the adjustment among the low educated, those in low-paid occupations and young people.** Indeed, among the low educated, half of the total hours lost in the second quarter of 2020 compared with the same quarter in 2019 was due to increases in joblessness. In contrast, for the highly educated, almost all the decline in hours was driven by reductions in working time, with no impact on joblessness. As a result, recovery among the low educated remained limited, even when many of those working shortened working hours were able to return to work in the third quarter of 2020. Similarly, while just over 40% of the decline in hours worked by young people was accounted for by working time reductions, among prime-aged and older adults the figure stood at almost 80%. This is likely to have profound implications for the speed of the labour market recovery among young people.
- **The first wave of the crisis hit temporary workers disproportionately.** And, while during the uncertainty of the second wave, those on temporary contracts have fared relatively better, the impact of the crisis on workers in non-standard employment, whether temporary or self-employed, has substantial implications for income security and well-being. This is because workers on these types of contracts tend to be less well protected by job retention schemes and unemployment insurance.
- **A year and a half into the crisis, many are still to return to full-time employment.** In many OECD countries, employment rates are projected to remain below their pre-crisis level until at least the end of 2022. As support is rolled back and increasingly targeted, further jobs may be destroyed. Similarly, in countries that have relied primarily on temporary layoffs, eventual recall may not be feasible for many of those who are still expecting to return to their previous employer. As time passes, workers who have not returned to their employers stand an increasing chance of entering open unemployment.
- **Those who lost their jobs at the start of the pandemic may be worse off still, and the labour market remains vulnerable to a rapid build-up of longer-term unemployment.** The number of those unemployed since the onset of the crisis is increasing in most countries. When job search resumes, the majority of these workers will not have worked for well over a year. Even if the overall economic outlook has improved in many countries, there is the risk that a gulf emerges between those who have continued to work and those who have suffered job and income loss. At the same time, a widening gap may develop between those who have weathered the crisis through reduced hours and short periods on temporary layoff and those who have found themselves jobless – increasingly distant from the labour force, exhausting benefit entitlements and risking long-term scars. At the end of 2020, 60% more people had been unemployed for at least six months than before the crisis, and these numbers were still rising in the first months of 2021.
- **Despite the substantial impact of the pandemic on employment and on earnings, governments across the OECD were able to protect household income through deep and wide use of government support.** Indeed, between Q4 2019 and Q2 2020, despite a 12.4% *decline* in GDP per capita across the OECD area, real household gross disposable income increased in most countries and *grew* by 3.7% in the OECD area on the back of large-scale COVID-19 government support measures. However, while rapidly designed and implemented measures have done a remarkable job in protecting the economic well-being of households on average, tentative evidence is emerging that certain groups have been left vulnerable and disproportionately exposed to job and income losses.

- **The full impact of the crisis on the labour market is not yet behind us.** The final extent of net job destruction is likely to depend not only on the length of restrictions but also on expectations and long-term shifts in consumer demand and technology. Tentative evidence suggests that firms are restructuring in ways that are accelerating pre-existing trends such as automation, digitalisation and increasing demand for professionals in the health care and green sectors. This is profoundly reshaping the way companies produce and combine human labour with new technologies. Going forward, governments should prioritise upskilling and retraining of those workers hit hardest during the pandemic and expected to struggle the most to return to durable, good-quality jobs.
- **As many OECD countries now turn to navigating a recovery, many emerging and developing countries are still facing high numbers of new COVID-19 cases and difficulties in vaccinating their population.** This provides a stark reminder of the potential of new variants and the need for international co-operation, but also of the fact that given close cross-country interactions there will no end to this pandemic until a large fraction of the global population will be vaccinated.

Introduction

Nearly a year and a half into the economic crisis induced by the COVID-19 pandemic, there is finally light at the end of the tunnel. But even as activity picks up across the OECD, labour markets face enormous challenges. As the crisis has evolved, so individuals most affected by its ravages have shifted. Certain groups however – including those in low-paid occupations, the low educated and the young – have persistently been in the eye of the storm. These groups not only suffered the most substantial reduction in hours worked but are more likely to have experienced this impact through joblessness.

The shape and speed of the labour market recovery is likely to be determined by: the extent to which the ultimate duration of the health emergency and economic crisis destroys those jobs currently "on ice", triggering a new surge in job losses among those currently on temporary layoff or reduced hours; the ease with which those who have moved into inactivity can quickly be re-engaged within the labour force; and finally the extent to which new job opportunities emerge to accommodate the growing number of those currently without jobs.

This chapter provides an examination of the unfolding labour market impact of the COVID-19 crisis, as well as the challenges that are still emerging. The chapter shines a spotlight on those groups who have carried a heavy share of the burden of the crisis and points to areas where there may be a need for more profound and long-lasting support. The chapter is organised as follows. Section 1.1 briefly describes the ongoing development of the crisis and containment measures. The section charts how activity has responded to restrictions as OECD governments and populations have learnt more about the virus and how to live and work alongside it. Section 1.2 then turns to the labour market, examining the impact on unemployment and working hours in the various phases of the crisis and highlighting the labour market challenges that are still emerging. Section 1.3 is focused on those groups whose labour market outcomes have suffered the most during the crisis. The section examines the extent to which each group has been affected by loss of hours among the employed or loss of jobs, and the implications this may have for the speed of recovery. Finally, Section 1.4 reviews the available evidence about the acceleration of long-standing structural changes during the COVID-19 crisis and their impact on the world of work, discussing the key role that upskilling and retraining policies to support vulnerable individuals will have in the recovery phase.

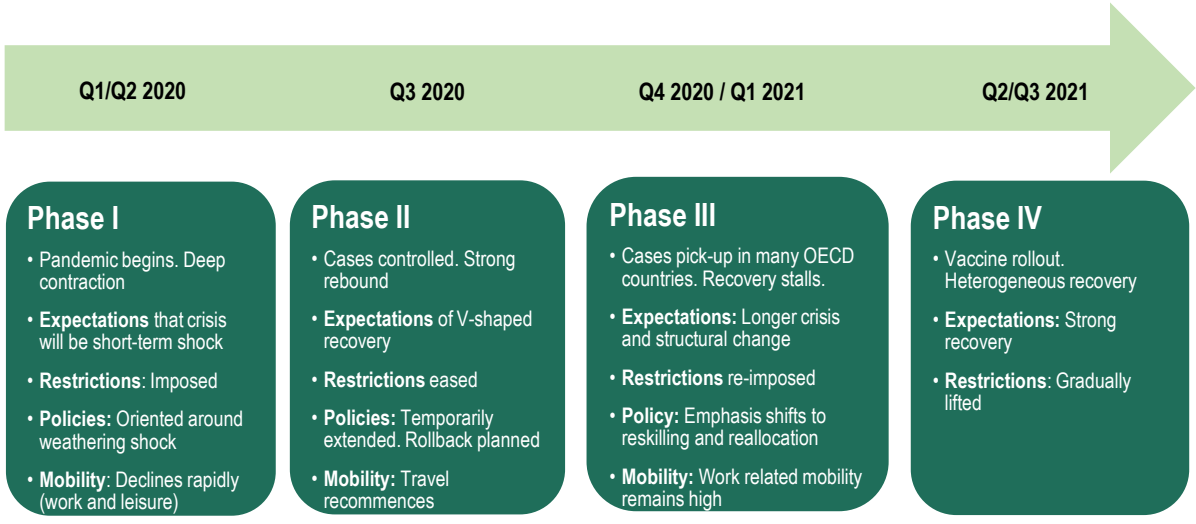
1.1. The ongoing development of the crisis

In early 2020, at the outbreak of the pandemic, most countries were unprepared for the speed of diffusion, the magnitude of the impact, and the duration of the struggle to contain the virus. Even with the recovery phase now underway, albeit with some stuttering because of further waves of contagion, we may yet be surprised by the lasting impact of the pandemic on OECD labour markets and livelihoods.

1.1.1. The evolution of the crisis

In March 2020, the speed and size of the shock precipitated by the pandemic plunged the global economy into a severe recession. Strict containment measures and behavioural guidelines, implemented to stymie contagion, had deep economic consequences, but were anticipated to be short-lived (Figure 1.1). The spread of the virus manifested first as an international supply shock – as workers were quarantined or sick, refrained from commuting or were subject to lockdowns, and as companies were forced to suspend operations or preferred to do so. It soon, however, spread to demand, as incomes plummeted and growing uncertainty reduced consumption and investment.

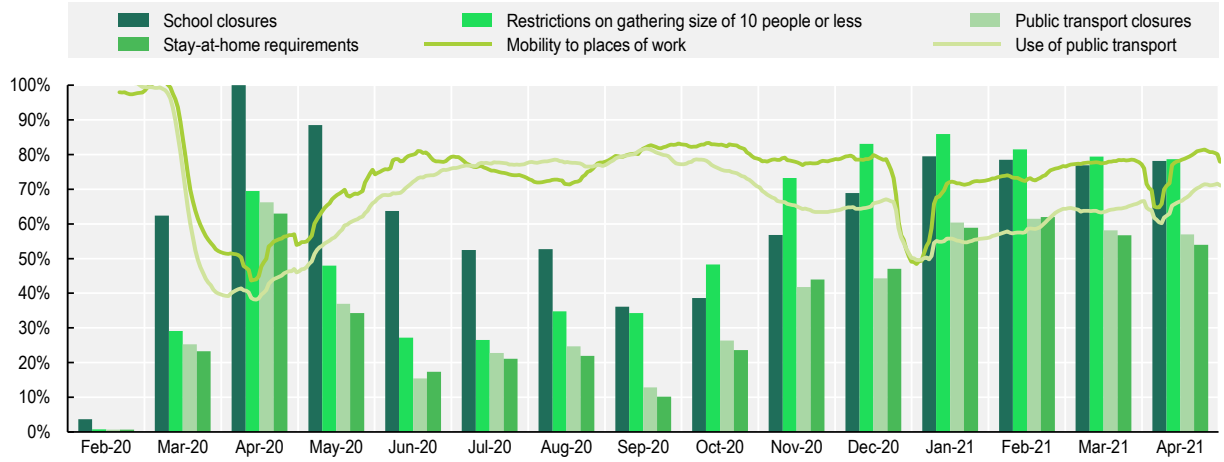
Figure 1.1. Evolution of the crisis



Initial hopes were for a rapid recovery. Indeed, over the course of the third quarter of 2020, many governments relaxed social distancing measures and began to plan for the roll back of support (Figure 1.2). This early optimism, combined with the reopening economies, prompted a strong rebound in GDP in Q3 (Figure 1.3, Panel B). By the end of 2020, however, this optimism had faded. As new variants were discovered across the world, and cases once more began to rise, many OECD countries – particularly in the Northern hemisphere – returned to stringent containment measures and even lockdown. This second wave, however, was far less uniform in its impact than that seen in Q1/Q2 2020. Indeed, as the recovery stalled across Europe, where strict containment measures were reintroduced, elsewhere, in countries such as Australia and Japan (where a substantial second wave never materialised – Figure 1.3, Panel A) and to a lesser extent Canada and the United States (where the second wave came later), the recovery continued throughout the second half of 2020 (Figure 1.3, Panel B).[1]

Figure 1.2. Evolution of stringency measures

Percentage of OECD countries implementing stringency measures[1] and measures of mobility as compared with pre-crisis levels[2]



1. The extent of stringency measures exhibits significant within-country heterogeneity. For example, in certain countries, universities closed on a different timescale than primary schools, which remained open only for the children of essential workers. These issues create substantial measurement difficulties when seeking to compare national responses in a systematic way (Hale et al., 2020[1]). The above figure transforms ordinal figures from Hale et al. (2020[2]) into binary variables, such that: school closures are set at 1 if school closures are required either partially (e.g. only high schools) or at national level; restrictions on gathering size are set at 1 if gatherings are restricted to less than 10; public transport closures are set at 1 if they are required, not just recommended, to stop; stay-at-home requirements are set at 1 if outings are either almost prohibited or limited only for daily exercise, grocery shopping, etc. Moreover, the extent of closure may differ across regions in the country. Binary variables are based on the most stringent conditions in place in each country in a given month.
2. The data show how visits to (or time spent in) categorised places changed compared to a baseline day(s). The baseline day is the OECD median value from the 5-week period 3 Jan-6 Feb, 2020 (see https://support.google.com/COVID-19-mobility/answer/9824897?hl=en&ref_topic=9822927).
Source: University of Oxford, COVID-19 government response tracker, https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker#data and Google Mobility data.

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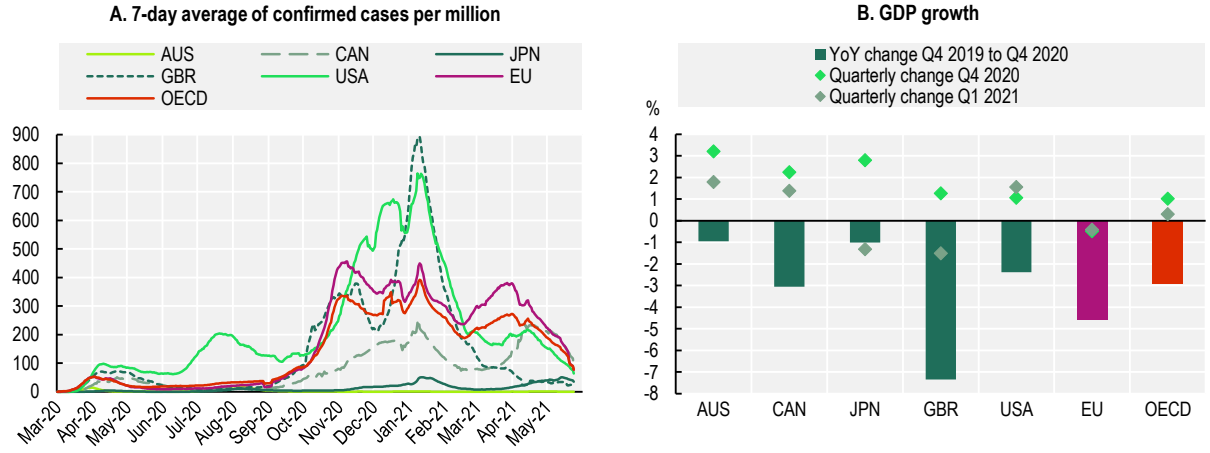
Figure 1.3. Evolution of the impact of the crisis and containment measures



Source: Panel A: University of Oxford, COVID-19 government response tracker, https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker#data. Panel B: OECD National Account Database.

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As the pandemic has progressed, and scientific understanding of transmission increased, non-pharmaceutical interventions have become increasingly targeted. The contractions in activity that accompanied the second and third waves of restrictions were smaller and less uniform than those seen in the second quarter of 2020 (Figure 1.2).[2] They were also associated with more limited behavioural changes (e.g. use of public transport). Nevertheless, as the crisis has lengthened, the ground lost may prove harder to regain. Policymakers now recognise the dangers of rapid relaxation of restrictions while many individuals, after a year of severe precautions, remain uneasy about a quick return to economic activity. Meanwhile, though bankruptcies have been staved off through deep and widespread government support, the extended duration of the crisis has hit many businesses hard and further redundancies may yet materialise as support for business is rolled back.

1.1.2. Short-term outlook

Deployment of vaccines to combat the virus is now providing greater certainty, and most OECD countries are once again re-opening. Alongside this, increasingly targeted and effective measures to suppress the spread of the virus, and largescale additional fiscal support in many countries have, once more, renewed optimism that the end may soon be in sight. Reflecting this renewed optimism, OECD (2021[3]), forecasts that GDP growth will rise to 5.75% in 2021 and 4% in 2022 in the OECD area. Nevertheless, GDP per capita is unlikely to return to pre-pandemic levels before 2022 in the majority of OECD countries and in a number of them the full recovery is further down the road.

The economic outlook remains uncertain. Vaccine rollout stalled in a number of countries, with shortages of doses, logistical delays, and scepticism among some populations delaying deployment in the first half of 2021. As a result, the strict containment measures that remained in place in a number of countries throughout the first and second quarters of 2021 may weigh on the recovery in the near term – particularly in the service sector. The evolution of new variants of the virus across the globe continues to temper the cautious optimism of many OECD countries as they plan for a gradual reopening of their economies. At the same time, widespread uncertainty remains about the extent of the financial distress facing employers – particularly small and medium-sized enterprises – see e.g. Hadjibeyli, Roulleau and Bauer (2021[4]). Furthermore, while this more positive outlook extends also to the labour market (see Section 1.2), even as unemployment rates fall it will be important to be aware that long-term scars are likely to remain.

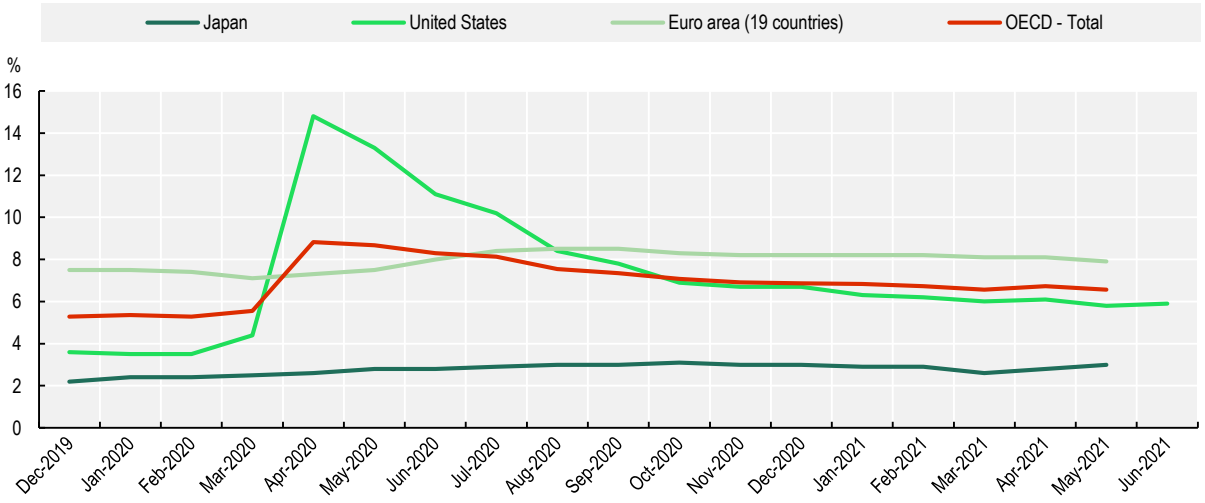
1.2. The evolving impact on the labour market

1.2.1. A number of countries saw a marked increase in unemployment following the outbreak of the pandemic

The impact of the COVID-19 crisis on labour markets across the OECD has been profound. In April 2020, following the onset of the crisis, the OECD unemployment rate saw an unprecedented 3 percentage point increase to reach 8.8% – the highest unemployment rate seen in a decade (Figure 1.4). In just one month, the entirety of the progress made since the financial crisis was erased. A large part of this surge in unemployment was driven by substantial increases in countries such as the United States, and Canada, where large numbers of temporary layoffs inflated unemployment figures as businesses closed and sent their workers home to shelter from the virus.[3] In the United States alone, in just one month, the number of people in unemployment swelled by nearly 16 million, to reach over 23 million in April 2020 (see Figure 1.11 below). Numbers then tumbled, more than halving in the following six months, as economic activity recovered and businesses recalled their workers (Figure 1.5).

Figure 1.4. Unemployment over time, selected countries

Percentage of labour force, adjusted for seasonality



Note: Euro Area refers to the 19 EU member countries joining the euro area.
Source: OECD Short-term Labour Market Statistics Database.

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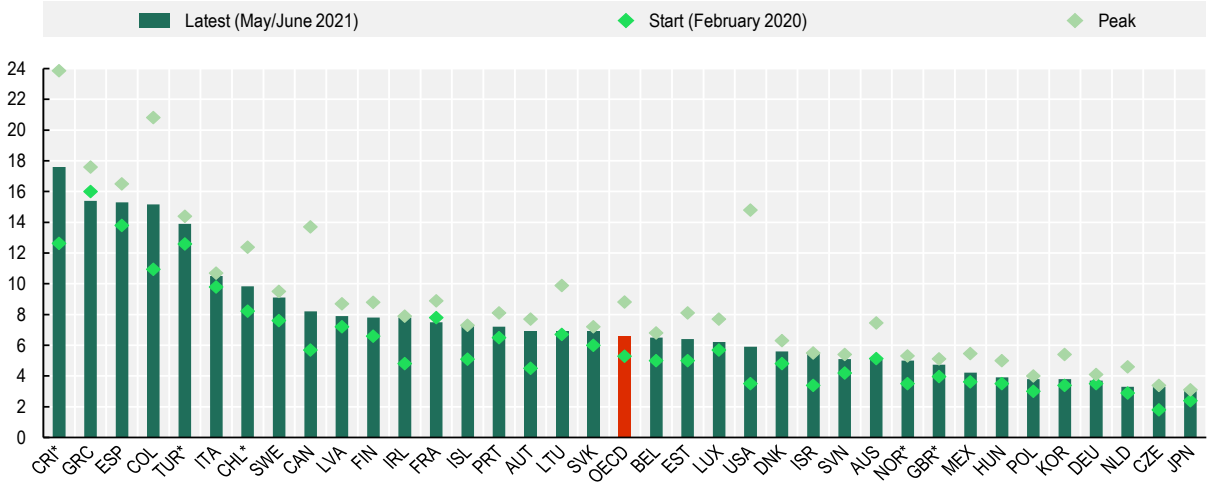
Figure 1.5. Unemployment, pre-crisis, peak, most recent

Percent of labour force, seasonally adjusted



Note: * Latest data refer to April 2021 for Chile, Costa Rica and Turkey, March 2021 for the United Kingdom and November 2020 for Norway. Peak refers to April 2020 in the United States, May 2020 in Canada, Colombia, Luxembourg and Slovenia, June 2020 in Austria, Chile, Costa Rica, Greece, Hungary, Latvia and Mexico, July 2020 in Australia, Denmark and Turkey, August 2020 in Finland, France, Germany, the Netherlands, Norway, Portugal, Spain and the Slovak republic, September 2020 in Estonia and Lithuania, October 2020 in Japan, November 2020 in the United Kingdom, January 2021 in Korea, March 2021 in Belgium, the Czech Republic, Iceland, Poland and Sweden, April 2021 in Ireland and Italy and May 2021 in Israel.
Source: OECD Short-term Labour Market Statistics Database.

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Elsewhere in the OECD (particularly in countries making heavy use of job retention schemes that support employers to reduce their labour costs by cutting the hours of retained employees – see Chapter 2), while unemployment has risen, the growth in the number of jobseekers has remained modest relative to the size of the shock: rising by around 1 percentage point in the majority of countries over the course of 2020 (see Box 1.1 for details regarding the comparability of unemployment data).[4]

1.2.2. During the COVID-19 crisis, labour market slack has taken various dimensions

The unemployment figures, while in some cases dramatic, do not capture the full extent of the impact of the COVID-19 crisis on OECD labour markets; unemployment is just one form of labour market slack. This is because of the specific nature of the COVID-19 shock and of the unprecedented policies introduced to support companies, jobs and people – see OECD (2020[5]) and Chapters 2 and 3. Alongside the unemployed, a large number of people both inside and outside the labour force would have liked more employment, either because they were working only few hours or because they were jobless but not available to work and searching for it – i.e. the conditions to be considered as unemployed.

Box 1.1. Cautionary note regarding comparability of unemployment and other labour force data

The striking difference in unemployment trends during the crisis reflect, in part, differences in the mix of policies countries have adopted to cushion the economic and social effects of the crisis. Where the United States and Canada relied heavily on normal unemployment insurance to secure the incomes of those who lost their jobs, even if through temporary layoffs, many other OECD countries relied primarily on job retention (JR) schemes – allowing employers to reduce their labour costs by cutting the hours of retained employees (see Chapter 2).

Alongside these policy-driven differences, there are a number of technical reasons why unemployment figures over the course of the COVID-19 pandemic should be read with some caution.

Sampling issues resulting from the practicalities of operating surveys during a pandemic: The COVID-19 crisis brought very practical challenges to the production of labour market statistics around the world. Call centres operated at a lower capacity and carrying out face-to-face interviews was not possible. As a result the response rate fell in a number of countries. Particularly worrisome this non-response may have led to a degree of bias to the extent that it was concentrated in certain populations. In the United Kingdom, for example, the move to telephone based interviews for the UK Labour Force Survey during the pandemic was found to have increased non-response more in rented households as compared to owner occupied housing (see UK Office of National Statistics (2020[6])). This selective non-response will have altered the sample of many populations who are over-represented in rental housing.

Differences in the classification of short-time work or temporary layoffs can compromise comparability[1]:

- **Across countries**: In European countries, individuals reporting temporary absence from work because of slack work for technical or economic reasons were, until January 2021 (see below), counted as "*employed*" (not at work) if (i) the expected total duration of the absence is less than three months,[2] or (ii) they continue to receive half or more of their remuneration from their employer – see Eurostat, (2016[7]).[3] As a result, most workers supported by JR schemes, if completely absent from work, were in this category. The same applies to workers encouraged to take annual leave as well as those whose contract was suspended without compensation – although in practice, in most European countries, due to restrictive regulations, the latter likely represents a small category, see for example Eurofound (2021[8]). In the United States and Canada, people on temporary layoffs are classified as "unemployed" if they have a date of return to their current employer, and as inactive otherwise.[4]

- **Across time**: As of 1 January 2021,[5] according to the new rules governing the collection and dissemination of labour force data in the European Union, individuals reporting (i) to be working zero hours for more than three months and (ii) not to be searching for employment, are now classified as inactive – rather than employed (not at work) as previously. These definitional changes are likely to have profound implications for the numbers of employed and inactive individuals on JR schemes or independently employed but working zero hours. While unemployment numbers are somewhat insulated from these changes, and statistical institutes have done retrospective revisions where possible, a small break in the series may nonetheless arise in unemployment rates through the impact on the labour force. As a result, comparison of European data that bridges this date should be taken with some caution.

These definitional differences, typically, have only a limited impact on the broad comparability of employment and unemployment statistics. However, in times of crisis, the cross-country comparability of unemployment statistics can be significantly affected. In Italy, for example, measured job losses incurred between February and December 2020 increased by 80% in the revised time series (Istituto Nazionale di Statistica, 2021[9]).

The unemployment statistics reflect the fact that fear of infection and lockdowns affected people's job search behaviour. To be considered "unemployed", an out-of-work person must actively look for a job. As the restrictions imposed by governments and the fear of infection likely severely hindered job search behaviour, many out-of-work people who would normally be searching for employment and therefore counted as unemployed, will in fact be counted as inactive.

1. See detailed note in OECD (2020[10]).
2. More if the return to employment in the same economic unit is guaranteed.
3. Including partial pay, even if they also receive support from other sources, including government schemes
4. In the United States, people on temporary layoff are classified as 'unemployed' if they expect to be recalled to their job within six months. If they have not been given a date to return to work by their employer and if they have no expectation to return to work within six months, they need to fulfil the "job search" criteria to be classified as 'unemployed'.
5. From 1 January 2021, Regulation (EU) 2019/1700 came into force specifying the technical items of the Labour Force Survey, establishing the technical formats for transmission of information and specifying the detailed arrangements and content of the quality reports on the organisation of a sample survey.

Source: Adapted and updated from OECD (2020[11]) "OECD employment and unemployment statistics during the COVID-19 crisis", https://www.oecd.org/sdd/labour-stats/OECD-employment-and-unemployment-statistics-during-the-COVID-19-crisis.pdf, and OECD (2020[5]), *OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis*, https://doi.org/10.1787/1686c758-en.

The excess demand for employment is indeed made up of three components (i) the *unemployed*, those who are both seeking and available to work (ii) the *marginally attached*, people who are available for work but not searching for it and (iii) the *underemployed*, full-time workers working less than a full-week as well as part-time workers who want but cannot find full-time work.[5] In the context of COVID-19, and the labour market interventions that have accompanied the pandemic, these additional components of labour market slack have taken on increased importance.

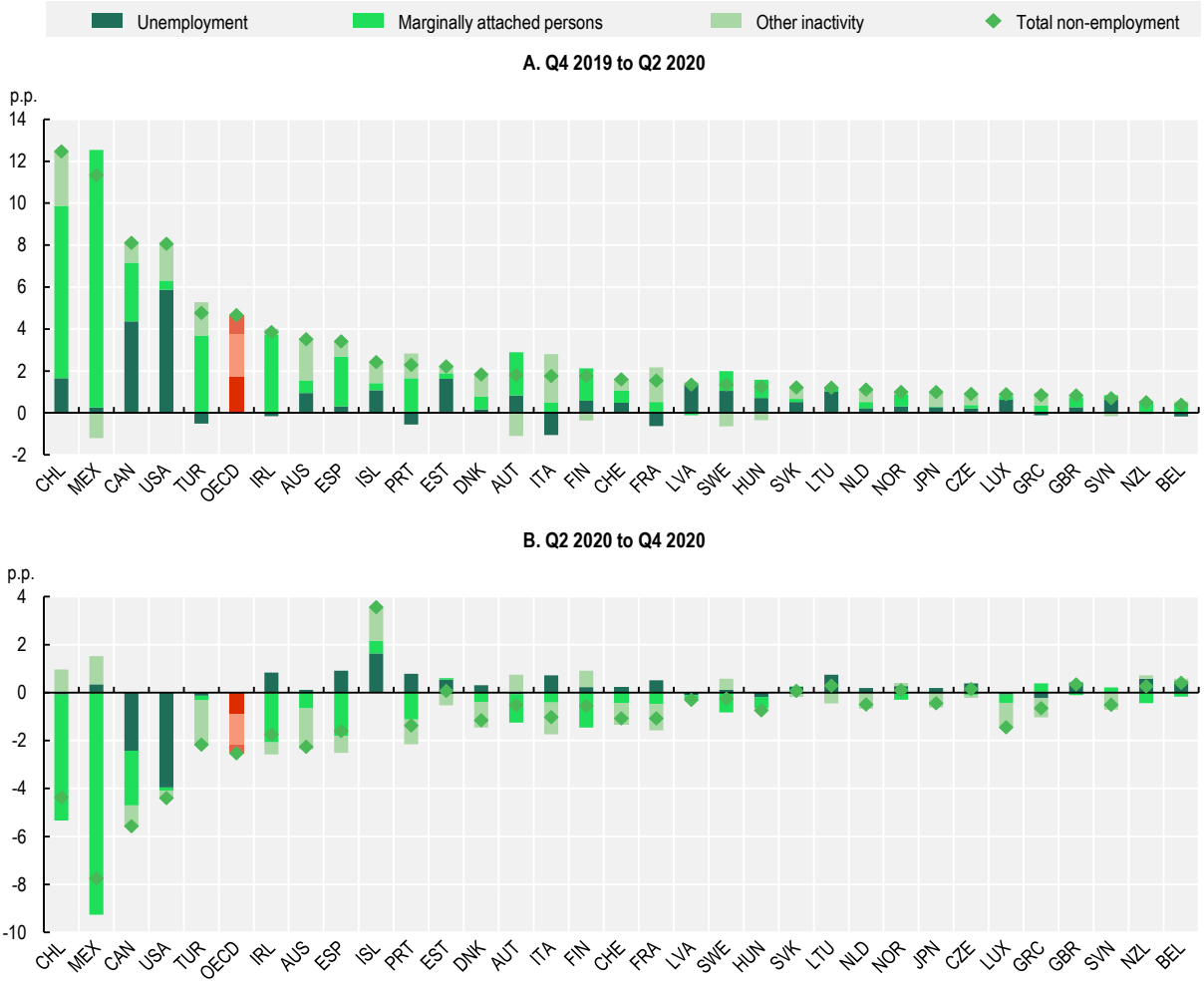
1.2.3. Many have withdrawn from the labour market…

At the height of the first wave of the coronavirus, widespread restrictions on mobility and social interactions, alongside fears of contracting the virus put a sharp break on job search activities as many of those who lost their job were not immediately able to search for a new one. In fact, while aggregate job search usually increases in times of recession, in many countries there is evidence of a reduction in job search during the COVID-19 crisis (see Box 1.2). Indeed, acknowledging the difficulties, and dangers, of job search during the height of the pandemic, a number of countries temporarily lifted the job search requirements associated with benefit receipt (see Chapter 3).[6]

Nonetheless, to be considered unemployed, according to labour market statistics, an out-of-work individual must be actively looking for a job. Thus the limits on job search created by the pandemic pushed many of those who would, in normal times, have been classified as unemployed, into the inactive – or marginally attached – population. The contribution of these 'marginally attached' individuals to the swell of inactivity was particularly important in Chile, Mexico and Turkey, as well as a number of European countries such as Austria, Ireland, Finland, Portugal and Spain (Figure 1.6, Panel A).

Figure 1.6. Composition of the change in non-employment

Percentage point change, percentage of population aged 15+, adjusted for seasonality



Note: OECD is the unweighted average of the countries shown. Time series comparisons for Mexico require caution: in Q2 2020, the National Survey of Occupation and Employment was suspended and replaced with telephone interviews due to domestic COVID-19 restrictions in the country.
Source: OECD National Accounts Household Dashboard.

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Alongside individuals who remain marginally attached to the labour force, however, in a number of countries, a worrisome proportion of labour force withdrawals in the second quarter of 2020 were driven by increasing numbers who were no longer available for work. These withdrawals into inactivity were likely

driven partially by school closures, and the increased demand for labour in the home, that left many, especially women, who may want to take up work, unavailable to do so.

During the third and fourth quarters of 2020, in the context of rolling back of mobility restrictions, the contribution of the marginally attached to the jobless fell back somewhat, reducing by over 2 percentage points in Mexico, Chile, Canada and Ireland and over 1.8 in Spain. Only in Iceland, Greece, Slovenia, Estonia and the Slovak Republic did marginal attachment continue to increase (Figure 1.6, Panel B). Nevertheless, marginal attachment remains – in all countries but Latvia, Luxembourg and Australia – above pre-crisis levels.

Box 1.2. Job search during the COVID-19 crisis has been unusually limited

The large increase in temporary unemployment, and workers working reduced hours or not working at all but maintaining their employment contract, is likely to have contributed to a further unusual feature of the COVID-19 induced crisis. As many of those who are not working, expect to return to their previous positions, contrary to typical recessions, job search activity during the COVID-19 downturn appears to have declined rather than increased. Alongside falling demand for labour, the crisis has also stymied labour supply – see Forsythe et al. (2020[12]), Hensvik, Le Barbanchon and Rathelot (2021[13]), and Balgova et al. (2021[14]).

While traditional labour force surveys provide information on the number of unemployed, and the number of inactive, they tell us little about search intensity. That is, they provide information on the extensive margin – whether or not individuals are searching for employment – but not on the intensive margin – how hard individuals are searching. Furthermore, labour force surveys do not, generally, provide information on the job search of those in employment.

During a downturn aggregate job search tends to increase – see Forsythe et al. (2020[12]) and Balgova et al. (2021[14]).[1] This increase may operate through a number of channels. In the first place, during a downturn there are more people in unemployment, thus even if some become discouraged, the extensive margin among the unemployed tends to increase. In the second place, job security tends to decrease, this may increase search among employed individuals. Finally, search intensity – among the unemployed and employed – may be affected. Data on job search captured in labour force surveys tend to capture only the first of these channels – the number of unemployed jobseekers.

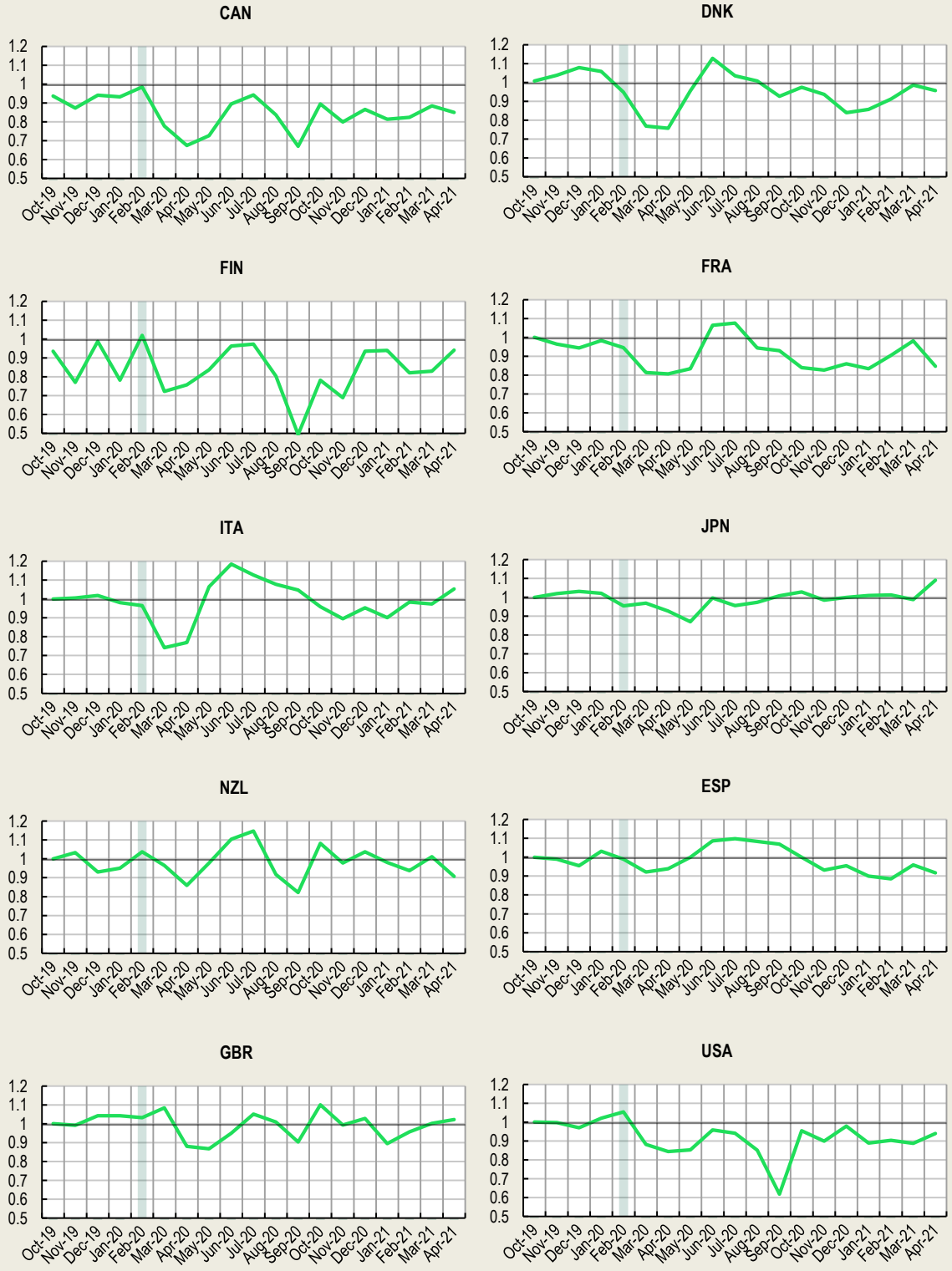
Job search during the COVID-19 crisis, does not appear to have followed this pattern. Indeed, in the majority of OECD countries job search fell at the outbreak of the pandemic (Figure 1.7). This is likely driven by a number of factors, including (i) the fear of infection, (ii) more limited employment services, (iii) relaxed conditionality for benefit receipt (iv) large numbers on temporary layoff or JR support expecting to return to their previous position (v) school closures, which limited the availability of many parents to undertake (or search for) work.

Those on temporary layoff, in particular, have the potential to distort traditional measures of labour market tightness – the ratio of job openings to job seekers – that are based upon unemployment numbers. This is because, while they are counted among the unemployed in certain countries, they are less likely to actively search for employment because they are waiting to be recalled by their previous employer.

In light of this, Figure 1.7 below follows Forsythe et al. (2020[12]) and Baker and Fradkin (2017[15]) in using Google Searches involving the word “Job” (or the local language equivalent) as a proxy for aggregate search intensity.[2] This enables a measure of search intensity that encompasses search effort undertaken by the employed, those working reduced or zero hours, those on temporary layoff, as well as the jobless unemployed.

Figure 1.7. Job search

Google Trends search index (searches containing the word “Job”). Ratio of the average in each month relative to the average for the same month over the previous three years



Note: Google Trends returns a time series representing internet search activity for a given search term, date range, and geographical location. This series represents the number of searches for the specified search term relative to the total number of searches of that term on Google over the period. The above series measure job search activity as the google searches containing the word "job", where the search term ("job") is translated into the primary local language via Google translate. Seasonal trends are accounted for, following Forsythe et al. (2020[12]), by plotting the ratio of current intensity to the average of the preceding 3 years.
Source: Google Trends.

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During the early phases of the crisis job search fell as, across the OECD, pandemic-related restrictions, health concerns, and increased labour needs in the home, pushed individuals who had lost their job to temporarily put job search on hold. And, while job search appears to have recovered somewhat over the course of the second quarter of 2020 – to levels seen prior to the onset of the pandemic, or marginally higher – a second trough is discernible in the majority of countries at the beginning of the fourth quarter of 2020 (Figure 1.7). At this time, as the second wave of infections gathered steam, it became increasingly apparent that the crisis represented more than a short-term shock.

Importantly, more limited job search during the initial phases of the crisis does not appear to have been driven by increased benefit generosity. Indeed studies based upon both Swedish jobs board postings (Hensvik, Le Barbanchon and Rathelot, 2021[13]) and online jobs boards in the United States (Marinescu, Skandalis and Zhao, 2020[16]) find the timing of reduced search preceded the introduction of enhanced unemployment insurance. A more open question is whether increased benefit generosity could hamper job search when the economy moves more decisively into a recovery trend.

In the context of dampened search activity, labour markets may appear to be implausibly tight, prompting over optimism regarding the speed with which recent increases in unemployment will be absorbed once the pandemic comes to an end.

Furthermore, limited job search may have important implications for the timing and efficacy of the use of hiring subsidies. On the one hand, depressed job search has the potential to stymie vacancy creation, if employers expect a limited pool of applicants (and hence lower quality hire) for any vacancies they create (Forsythe et al., 2020[12]). This may suggest an important role for hiring subsidies to kick-start the recovery. On the other hand, however, temporary hiring subsidies tend to be more effective in bad times (or for badly affected sectors). This is because, in slacker markets, the impact of such hiring subsidies on wages tends to be negligible. If limited job search means that labour markets are tight – despite the profound labour market impact of the pandemic – hiring subsidies have more potential to pass through to wages. This suggests that hiring subsidies may more efficiently translate to job creation if their introduction is delayed until businesses can reopen and operate normally, and workers can resume their search (see also Chapter 3).

1. Looking at data from the Netherlands, Balgova et al. (2021[14]) find, more precisely, that job search among the unemployed is substantially lower during the pandemic than would be anticipated given the prevailing conditions while, among the employed, job search is marginally higher.
2. The validity of this proxy is dependent on the prevalence of internet access and use within the country.

While the contribution of other forms of inactivity fell alongside the numbers marginally attached to the labour market, it remained particularly elevated in Chile (3.6 percentage points), Iceland (2.4), the United States (1.3) and Italy (1.0), above pre-pandemic levels. Apart from Iceland, these countries have been among those experiencing the longest school closures as a result of the pandemic (UNESCO, 2021[17]).

1.2.4. Of those who remained in employment, many saw their hours significantly reduced

Just as business closures and the lifting of job search requirements have blurred the boundaries between traditional labour market categorisations of unemployment and inactivity by swelling the numbers putting job search on hold, so a heavy reliance on Job Retention (JR) schemes in many countries has blurred the boundary between employment and unemployment.

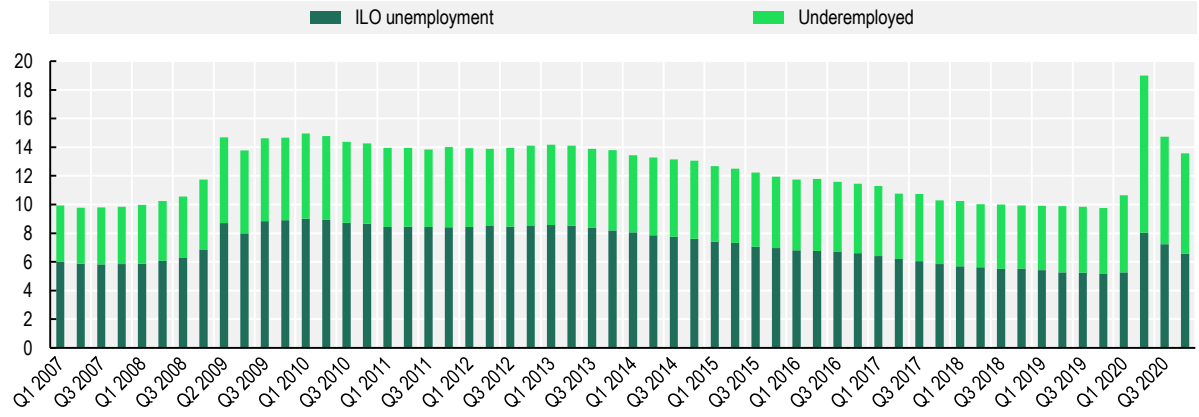
Across the OECD, the restrictions imposed by COVID-19 containment measures were accompanied by support to help businesses in "non-essential" sectors to retain their workforce. Among these measures, JR schemes played a prominent role (see Chapter 2). JR schemes seek to minimise job losses by allowing firms, experiencing a temporary lull in business, to receive support for a significant share of the wages of employees working reduced hours. At the start of the pandemic, many countries, particularly in Europe, eased companies' access to these schemes, or introduced new, temporary schemes. They increased coverage of sectors and firms (becoming, in most cases, universal); they increased their generosity, and lowered the associated conditionality, in efforts to minimise job losses and enable a quick resumption of economic activity when business closures came to an end. In response, use of the schemes rocketed, with take up in May 2020 being ten times as high as during peak of the global financial crisis. Alongside such wage support, to prevent the need for redundancies, many OECD countries provided largescale liquidity support to firms while a number of countries – such as Spain, France and Italy – directly imposed implicit or explicit bans on dismissals among companies making use of JR support.

To the extent that these schemes have enabled employers to avoid making largescale redundancies, they have prevented the impact of the crisis from translating into mass unemployment. And, given the unprecedented reliance on JR schemes in many countries, adjustments to the working time of workers who retained their employment are playing an unprecedented role. Figure 1.8, below, highlights the extent of the role played by underemployment in the absorbing the impact of the COVID-19 pandemic on OECD labour markets. Underemployment saw a swift increase since the start of the pandemic, doubling from 5.4% to 11% of the labour force in just one-quarter. This increase dominated the marked increase in the underutilisation of the OECD labour force in the second quarter of 2020.[7] To put this dominance in perspective, in early 2010 – during the peak of the global financial crisis – unemployment accounted for close to two in every three individuals not working, or working less than they would normally, or would hope to. In the second quarter of 2020, the unemployed accounted for less than one in every two. Despite a much higher rate of labour underutilisation the unemployment rate remained below that seen during the financial crisis. This was true in all OECD countries except Australia which did not go into recession during the financial crisis, as well as Canada and the United States, the latter two countries being those in which temporary layoffs swelled employment numbers.

In the third and fourth quarters of 2020, labour underutilisation fell back sharply – by 4 percentage points – with falling underemployment driving the bulk of the decline. It is worth noting, however, that in many countries where underemployment contracted the most, unemployment increased.

Figure 1.8. Components of labour underutilisation, quarterly

Labour underutilisation rate as a percentage of labour force, OECD average, seasonally adjusted



Note: OECD average excluding Costa Rica, Colombia, Israel and Korea. Underemployed refers to full-time workers working less than a full-week and part-time workers who want but cannot find full-time work.
Source: OECD National Accounts Household Dashboard.

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1.2.5. Thus reduced hours among those in employment absorbed much of the initial impact

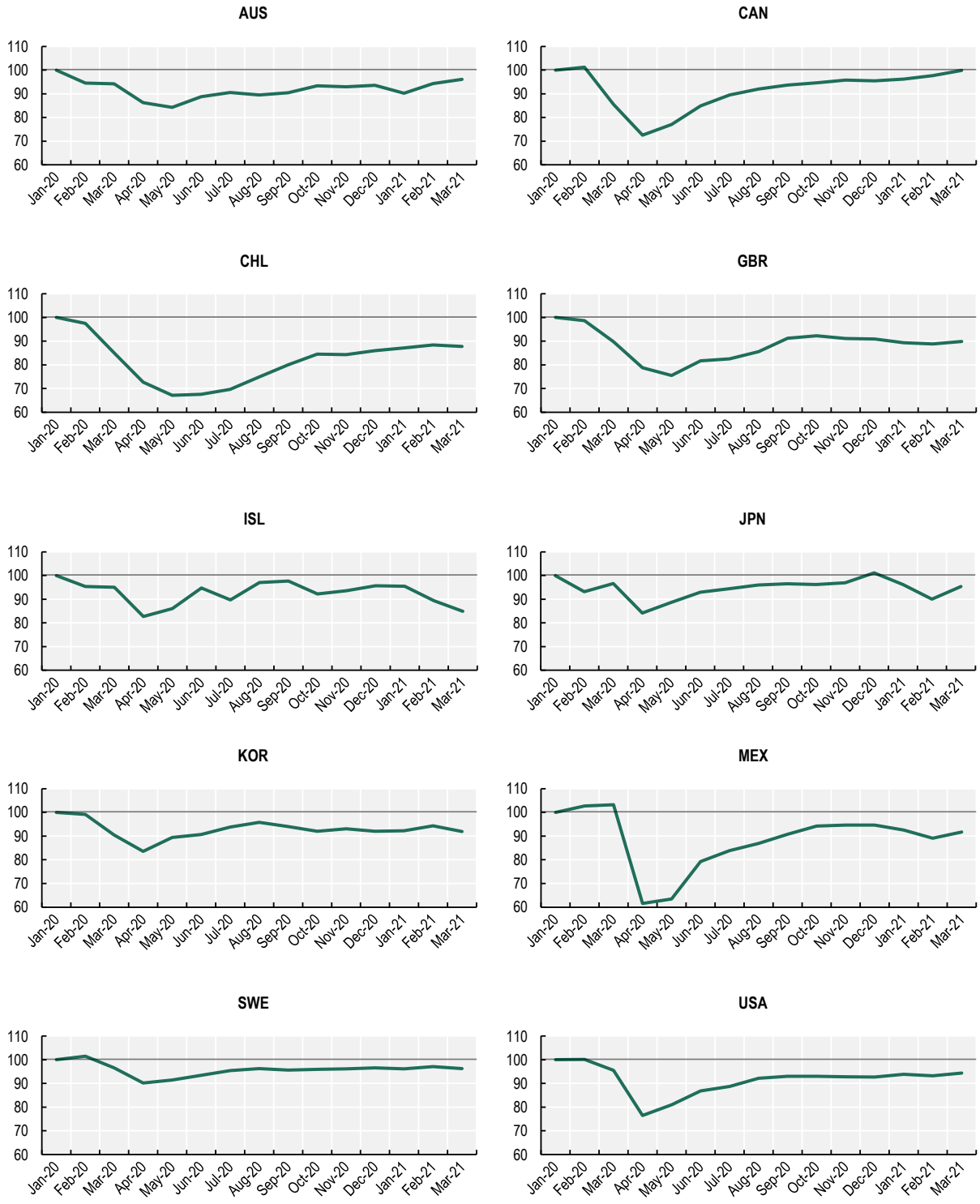
The unemployment, underemployment and inactivity figures give an important indication of the large number of individuals affected by the COVID-19 crisis. However, while stark, they each tell only part of the story. A complete picture of the depth of the impact of the pandemic on OECD labour markets must bring these multiple elements together. The change in hours worked since the start of the crisis provides just such a picture; capturing the impact both on the extensive margin (fewer employed workers) and the intensive margin (remaining workers working fewer hours). On average across the countries for which monthly data are available, total hours worked fell by close to 20% in just one month from March to April (Figure 1.9). The initial impact was felt most immediately among female workers, who saw their hours fall by over 21% compared to a fall of 19% among their male colleagues. As hours began to recover, over the course of the second quarter, however, women appear to have returned to work, and increased their hours at a faster rate than men. These averages, however, mask a degree of heterogeneity across countries, with a particularly stark initial decline in hours worked seen in Canada, Chile, Mexico, the United Kingdom, and the United States – where, by April 2020, hours worked had fallen by more than 20% with respect to the start of the year. In Sweden, where restrictions on activity were more limited, hours worked dropped by no more than 10%.

Beyond a fuller picture of the overall impact of the pandemic on OECD labour markets, a breakdown of the source of the reduction in hours offers a clearer picture of the *channels* through which the impact of the pandemic has been felt. Figure 1.10, below, divides the year-on-year fall in hours[8] into the contribution of workers moving into joblessness, and that of the reduction in hours among workers that remained in employment.

At the onset of the COVID-19 crisis, close to 4 in every 5 of the unworked hours were accounted for by some form of reduced working time. Even more impressive, the majority of unworked hours – more than 2 in every 3 – were accounted for by workers who, though employed, nonetheless reduced their working time to zero hours. This heavy reliance on the intensive margin to absorb the early labour market impact was driven, in large part, by European countries. Indeed, in countries such as Belgium, France, Greece, Hungary, Luxembourg, the Netherlands and the United Kingdom 9 in every 10 of the unworked hours were accounted for by reduced working time among the employed. In contrast, in the United States, the intensive margin accounted for just one-quarter of unworked hours, with the majority of the adjustment channelled through joblessness (albeit temporary in many cases – see below).

Figure 1.9. Evolution of hours worked over the course of the COVID-19 pandemic

Index of monthly hours worked (January 2020 =100), seasonally adjusted, selected countries



Note: The selection of countries is based on up-to-date data availability. Time series comparisons for Mexico require caution: in Q2 2020, the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country.

Source: OECD calculations based on Australian Bureau of Statistics (Labour Force Survey), Statistics Canada (Labour Force Survey), National Statistics Institute of Chile (Encuesta Nacional de Empleo), Statistics Iceland (Labour Force Survey), Statistics Bureau of Japan (Labour Force Survey), Statistics Korea (Economically Active Population Survey), National Institute of Statistics and Geography (ENOE and ETOE), Statistics Sweden (Labour Force Surveys), Office for National Statistics (Labour Force Survey) and the Bureau of Labor Statistics (Current Population Survey).

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Working time recovered markedly during the third quarter of 2020 in the majority of countries, as many shops and restaurants reopened, and workers returned to work. On average working time in the third quarter of 2020 was just 4.3% below the same quarter the previous year. This recovery appears to be largely driven by the reabsorption of the intensive margin. As a result, the composition of lost hours changed somewhat during this phase of the crisis, with joblessness taking on an increasingly important role in the adjustment – accounting for approximately 2 in every 3 unworked hours on average (Figure 1.10, Panel B).[9] At the same time, in those countries which relied more heavily on temporary layoff in the second quarter of 2020 – notably Chile, the United States, Turkey and Canada, the recovery in hours worked in Q3 2020 was less pronounced.[10]

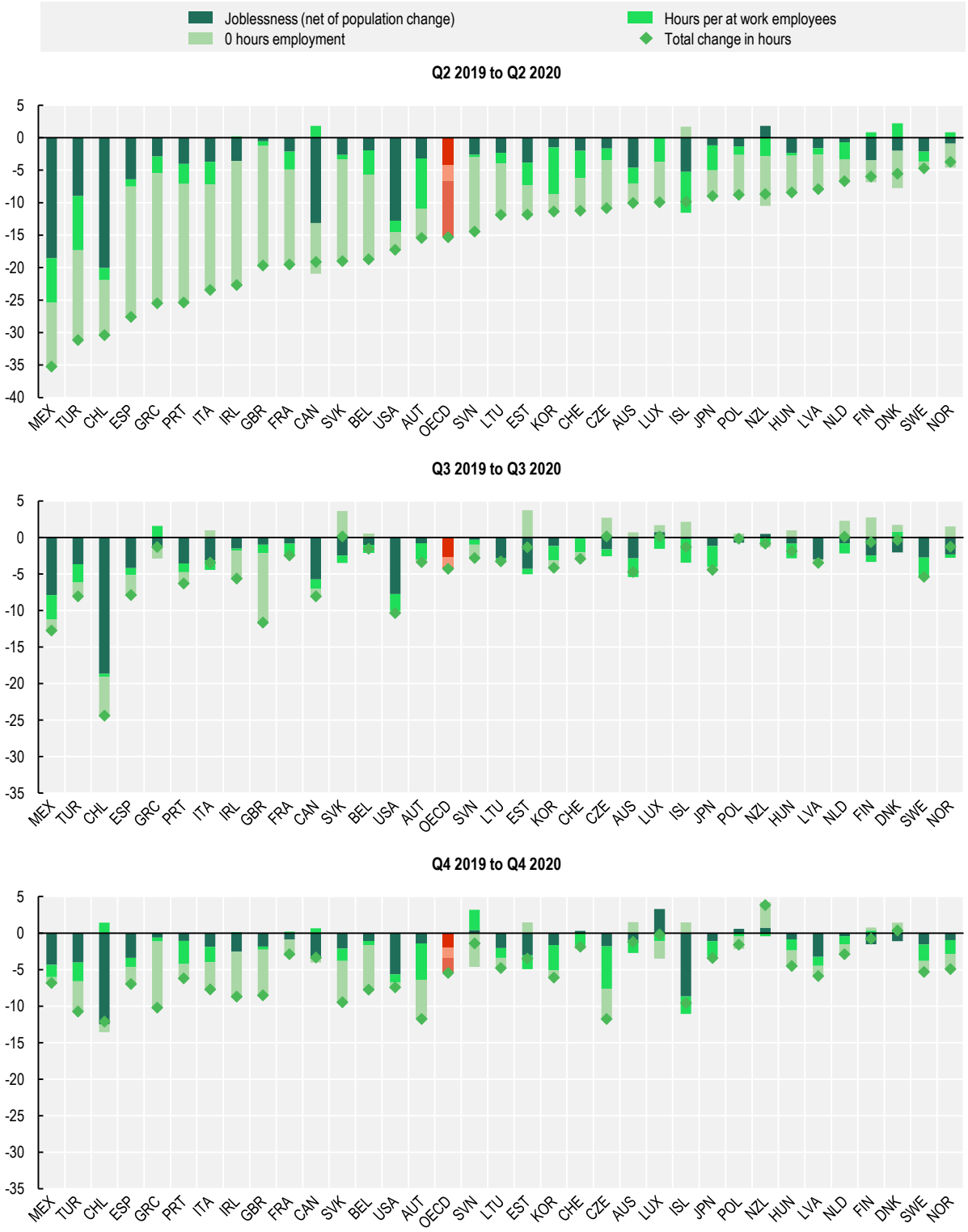
By the fourth quarter, as restrictions began to return in a number of countries (see Section 1.1.1), hours worked, once more began to decline – widening on average across the OECD from a 4.3% year on year fall in Q3, to a 5.6% year on year fall in Q4 (Figure 1.10). However, again, the OECD average disguises a degree of heterogeneity in these trends. Indeed, a number of countries – such as Austria, Belgium, the Czech Republic, Greece, Iceland, the Netherlands, Norway, Poland and the Slovak Republic – saw the year on year fall in hours worked more than triple between Q3 and Q4, while countries such as Australia, Chile, Canada, Denmark, Mexico, New Zealand, the United Kingdom and the United States, experienced an increasingly small year on year decline in hours worked or even returned to pre-pandemic levels. Alongside the renewed fall in hours, the final quarter of 2020 saw a return to the use of the intensive margin to absorb much of this slack. By March 2021 hours worked were still 7% below their pre-crisis level, on average across the ten countries for which up-to-date, monthly hours worked statistics are available (Figure 1.9), with Canada being the only country showing a full recovery. A gap of about 7% in Q1 2021 with respect to the level of Q4 2019 is also estimated for the OECD area as a whole, using figures from quarterly national accounts in countries for which labour force survey data for Q1 2021 are not available.

1.2.6. Many currently on temporary layoff, or working reduced hours, may end up in open unemployment…

Given the external nature of the shock caused by the COVID-19 pandemic, the resultant short-term liquidity problems experienced by many businesses provided little information regarding their long-run viability. To keep these businesses afloat until economic activity resumes, OECD governments have stepped in to provide unprecedented levels of support, including corporate bond purchases, direct lending, equity infusions, cash grants as well as direct support for labour costs. By allowing firms to reduce labour costs, such schemes were able to ease the immediate liquidity problems resulting from the pandemic and associated lockdowns.

Figure 1.10. Decomposition of total hours change

Percentage change, year on year



Note: The figure reports the contribution of each category to the change in total hours. See Annex 1.A for details on the decomposition. Time series comparisons for Mexico require caution: in Q2 2020, the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country. OECD is the unweighted average of countries shown.
Source: Secretariat calculations based on the European Labour Force Survey; UK Office for National Statistics (Labour Force Survey); Australian Bureau of Statistics; Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); National Institute of Statistics and Geography of Mexico (ENOE and ETOE); Statistics Bureau of Japan (Labour Force Survey); Statistics Korea (Economically Active Population Survey); Statistics New Zealand (Household Labour Force Survey); and the Current Population Survey for the United States.

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As a result, the COVID-19 crisis thus far has reversed the historical trend according to which bankruptcies track the business cycle. Indeed, according to the OECD bankruptcy index, in all quarters of 2020, the number of bankruptcies had fallen as compared to the previous year in almost all OECD countries for which data is available.[11] However, while such schemes were designed to support firms and workers to weather the immediate impact of the pandemic, as the crisis lengthens, more firms will struggle to maintain solvency – see Demmou et al. (2021[18]) and Hadjibeyli, Roulleau and Bauer (2021[4]). This will necessarily entail permanent layoffs.

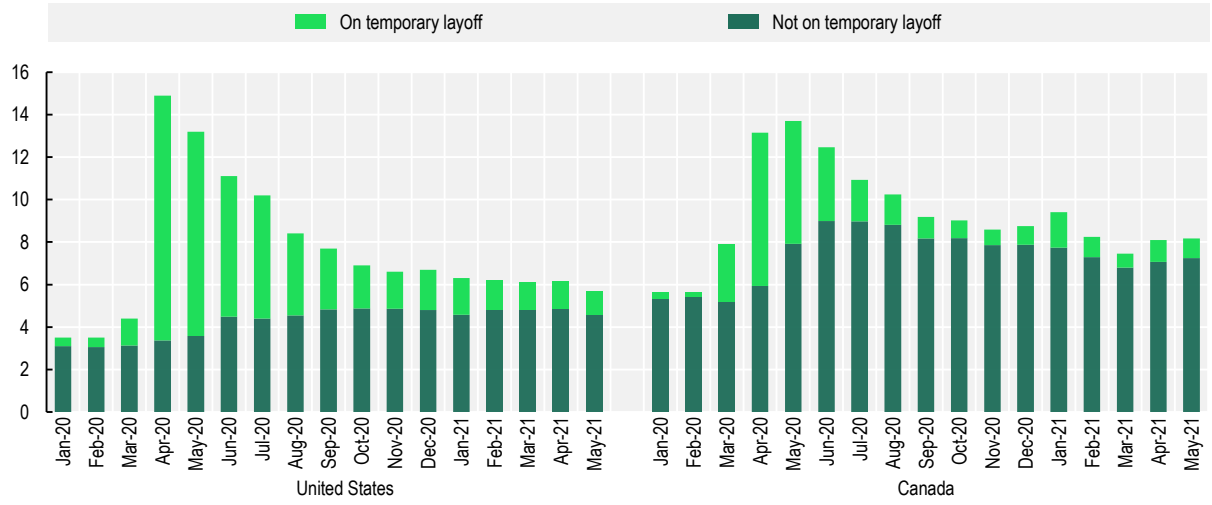
Beyond an increasing number of firms facing solvency issues, as the crisis lengthens, employers may increasingly find that labour hoarding encouraged by job retention schemes is a less attractive option – particularly as subsidies are rolled back and increasingly targeted. The benefits of labour hoarding (the tendency of firms to maintain more employees in response to a negative shock than would be needed to fulfil current optimal production) are particularly pronounced when shocks are temporary (Giupponi and Landais, 2018[19]). This is because, while the expected costs are time dependent, the savings, associated with the avoidance of firing and rehiring workers, are not. Expectations that the crisis would have been short-lived were largely set aside by the end of 2020, as uncertainty increased regarding the potential duration of the crisis and the structural changes it would imply. Indeed, employers dramatically reduced their claims for JR support as the economy reopened during Q3 2020, while the subsequent pickup in claims during the second lockdown did not reach the peak of April and May (see Chapter 2).

Similarly, in countries that have relied primarily on temporary layoffs, eventual recall may not be feasible for many of those who are still expecting to return to their previous employer.[12] And, while the rapid employment movements between March and June were dominated by temporary layoffs and recalls, as time passes, workers who have not been recalled by their employers stand an increasing chance of becoming permanent (Cheng et al., 2020[20]). Indeed, the rapid fall in temporary layoffs over the course of Q3 2020 was accompanied by an increasing number of permanent job losses – both in Canada and in the United States (Figure 1.11). In the United States, for example, as the proportion of the labour force on temporary layoff fell – by over 10 percentage points between April 2020 and April 2021 – the proportion of the labour force unemployed but not on temporary layoff rose by 1.5 percentage points.

Recall rates among those on temporary layoff have, historically, been relatively high, with estimates suggesting that, in the United States, more than two in every three of those on temporary layoff were eventually recalled – the majority within the first 8 weeks (Katz and Meyer, 1990[21]).[13] However, as the duration of the crisis has lengthened, beyond that initially expected at the time temporary layoff decisions were taken, and as businesses continue to grapple with how to adjust, for many the feasibility of recalling employees still on layoff has altered. As a result, historical patterns, observed during a more predictable labour market climate, may not provide an accurate guide. Indeed, by April 2021, of those reporting temporary layoff in the United States, more than 48% had been unemployed for 27 weeks and over,[14] while a large number of workers are experiencing repeated unemployment spells during the pandemic. Indeed, using anonymised bank account data, Ganong et al. (2021[22]) have found that more than half of new unemployment insurance claims reflect workers who had already previously received unemployment insurance during the pandemic, suggesting that many of the workers who were recalled in the summer were subsequently laid off again.

Figure 1.11. Evolution of open unemployment and temporary layoffs, United States and Canada

Percent of labour force, seasonally adjusted



Source: United States Bureau of Labor Statistics, https://www.bls.gov/web/empsit/cpseea11.htm, and Statistics Canada, https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410005801 and https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1410012501.

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1.2.7. For those who have lost their jobs, long-term unemployment and scarring could become a concern

With increasing numbers of unemployed, large numbers still working reduced hours or on temporary layoff, and elevated inactivity, the labour market remains vulnerable to a rapid build-up of longer-term unemployment. Many of those currently outside employment have put job search on hold, for a variety of pandemic-related reasons, (see Figure 1.7). As these individuals return to the labour force (alongside those currently working reduced hours and on temporary layoff who find their jobs no longer exist), current levels of labour market tightness – the ratio of job openings relative to individuals searching for employment – may well be expected to deteriorate. This could lead to lower job-finding rates and, potentially long-term unemployment. Over a year into the crisis provoked by the COVID-19 pandemic, long-term unemployment is becoming an increasingly urgent concern.

Usually defined as the share of the unemployed who have been unemployed for 12 months or longer, the long-term unemployment rate usually begins to rise only one year after unemployment starts to increase. However, according to this definition, and given the lag in the availability of cross-country data, the unemployed made redundant at the start of the COVID-19 crisis are not yet reflected in the long-term unemployed in the latest available data (Q4 2020). However, looming long-term unemployment can already be observed in the increasing numbers remaining unemployed between 6 months and 12 months. In the absence of a strong pickup in vacancies, these numbers provide a strong indication that the long-term unemployment rate will soon increase. As a result, the analysis below follows the Bureau of Labor Statistics in the United States in concentrating on those unemployed for greater than 6 months.[15]

By the fourth quarter of 2020, nine months after the start of the pandemic, on average across the OECD, the number of individuals unemployed between 6 and 12 months had more than doubled since the onset of the pandemic (Figure 1.12). This large increase reflects a climate of both limited vacancies and limited job search that led to relatively few of those made unemployed at the start of the pandemic returning to

employment by the end of the year. In the United States and in Canada, where joblessness absorbed a large part of the early labour market shock, the proportion of the labour force experiencing an unemployment spell of 6-12 months had risen by more than 540% and 370%, respectively.[16] In Australia, and in countries across Europe, despite substantial job support, the proportion of the labour force with longer unemployment duration was already beginning to edge up, with countries such as Austria, Denmark, the Czech Republic, Spain, Lithuania and the Netherlands all seeing the numbers unemployed for 6-12 months increase by more than two-thirds while Iceland, Estonia, Slovenia, Ireland, Portugal, Norway and Australia saw those unemployed between 6-12 months more than double by Q4 2020. In the United States, those unemployed for at least 6 months accounted for 43.4% of all the unemployed in March 2021, approaching the historical peak of 45.5% in April 2010, to fall slightly to reach 42.1% in June 2021 in the aftermath of the improvement of the US economy.[17]

The increase in the number of individuals unemployed for 12 months or more remains relatively limited in the majority of OECD countries. In the fourth quarter of 2020, less than a year had passed since the onset of the pandemic, hence long-term unemployed do not yet reflect its impact. Indeed, a number of countries (France, Greece, Ireland, Italy, Norway, Portugal, the Slovak Republic, Turkey) saw a declining proportion of the labour force with unemployment spells lasting longer than one year. This, however, likely results from individuals with longer unemployment spells becoming discouraged and abandoning job search in light of the additional hurdles created by the coronavirus pandemic alongside the suspension of mutual obligations in many countries (see Chapter 3).

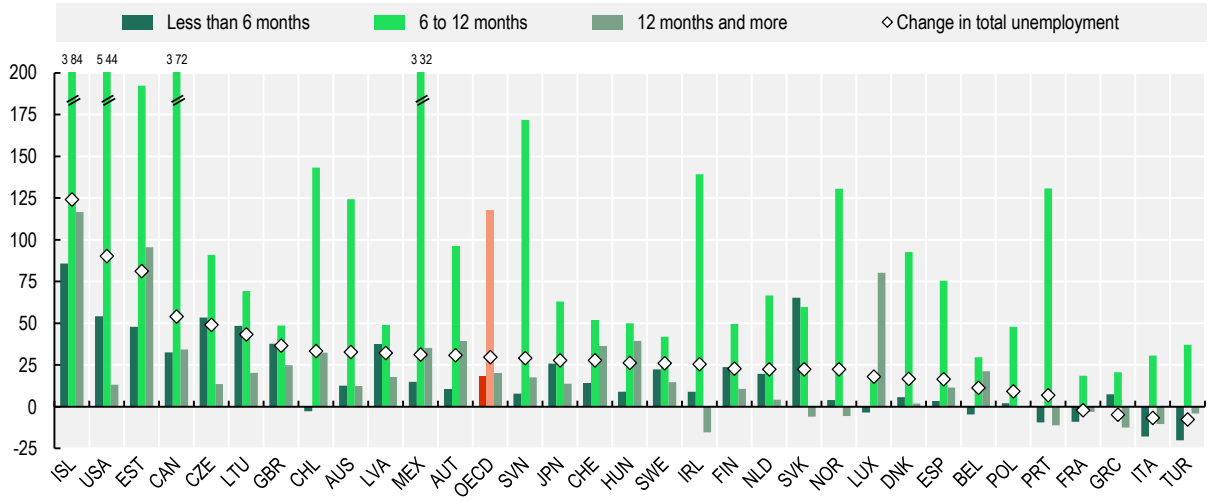
The build-up of long-term unemployment also depends, in addition to the entries into unemployment, on ability to escape unemployment quickly. In the context of the continued uncertainty surrounding the spread of new variants of the virus, the date when social distancing will no longer limit economic activity, and the large degree of hidden slack, even a relatively moderate inflow may still be cause for concern.

While short periods of joblessness are of less concern, especially when unemployed persons are covered by unemployment insurance schemes or other forms of financial support, prolonged periods of unemployment are more problematic. In particular, as income insurance is exhausted and savings are depleted, long-term unemployment can lead to financial hardship. Indeed, recent figures collected via the OECD Risks that Matter Survey (OECD, 2020[23]) suggest that, on average across surveyed countries, close to one in three households affected by job loss since the start of the pandemic report being unable to pay a usual expense, while one in eight report having gone hungry (Figure 1.13). Financial hardship, while worrisome in and of itself, can also have potential long-run employment repercussions if it obliges jobseekers to accept lower quality job offers, potentially leading to skills mismatch.

Alongside financial hardship, and the mental and material stress that goes with it, long-term unemployment may lead to 'scarring' that can impede future job prospects; making future jobs harder to find, less lucrative, and more unstable. That jobseekers who have been unemployed for a relatively short period, find jobs at a faster rate than the long-term unemployed, is now relatively well established – see e.g. OECD (2018[24]). However, it is not yet clear what drives this association, nor the extent to which such scarring will occur in the context of COVID-19 related unemployment. Where scarring is driven by human capital depreciation, and the deterioration of skills during time spent outside employment – see (Pissarides, 1992[25]), for example – then its effects may be of wider concern beyond the long-term unemployed. Individuals working reduced, or zero, hours for extended periods – even if they have not technically been unemployed – are also likely to experience human capital depreciation. This is particularly likely to be the case where those on working zero hours have not had access (or perceived need) to undertake labour market training (see Chapter 3).

Figure 1.12. Unemployment duration

Percentage change (Q4 2019 – Q4 2020)



Note: See Box 1.1 for details regarding the comparability of unemployment data. OECD is the unweighted average of countries shown.
Source: Australian Bureau of Statistics; Statistics Canada (Labour Force Survey); European Union Labour Force Survey (EU LFS); UK Office for National Statistics (Quarterly Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); ENOE and ETOE, National Institute of Statistics and Geography; Current Population Survey (CPS), US Bureau of Labor Statistics; Labour Force Survey, Statistics Bureau of Japan.

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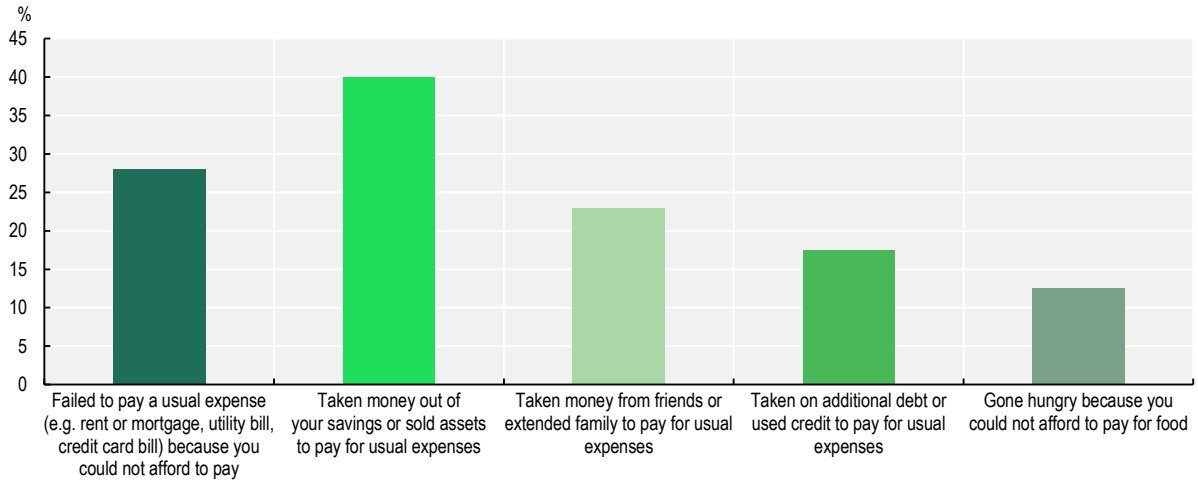
Yet the scarring associated with long-term unemployment is also likely to result partially from the stigma associated with protracted unemployment spells. Where employers view such spells as a negative signal of jobseeker quality, employer discrimination can cause longer unemployment spells to self-perpetuate – see for example Farber et al. (2018[26]). Indeed, experimental evidence, on the basis of CV-testing, suggests that, *ceteris paribus,* the likelihood a job applicant is called for interview significantly decreases with the length of their spell in unemployment (Kroft, Lange and Notowidigdo, 2013[27]) particularly for those with very long unemployment spells (Farber et al., 2018[26]). In the current economic climate, widespread joblessness is largely reflective of the exceptional limits on economic activity and the associated financial difficulties of many employers, rather than the quality of the work of the individuals who have been made redundant. As a result, the stigma associated with longer-term unemployment may be moderated in the context of the external shock of COVID-19. Indeed Kroft, Lange and Notowidigdo (2013[27]) find the stigma effect to be weaker in less tight labour markets, suggesting that employers do recognise that the signal provided by unemployment duration is less informative when unemployment is high. Nevertheless, as the crisis lengthens, if newly unemployed continue to enter the pool of job-seekers, those with longer unemployment spells may increasingly find themselves at the back of the queue when vacancies pick up.

Figure 1.13. Financial difficulty in households reporting job loss since the start of the pandemic

Percentage of respondents reporting each of the following financial difficulties since the start of the COVID-19 pandemic, OECD average, 2020



Note: OECD average, see Annex Figure 1.B.1 for data by country. Respondents could select all the options that applied. Percentages present the share who selected at least one. "Job loss in household" refers to respondents reporting that either they or any member of their household have/has either "Lost their job or been laid off permanently by their employer" and/or "Lost their self-employed job or their own business", since the start of the COVID-19 pandemic. Households with "no job loss in household" may have had other types of job disruption in the household.
Source: OECD (2021[28]) "Risks that Matter 2020: The Long Reach of COVID-19", https://doi.org/10.1787/44932654-en.

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The extent and effects of long-term unemployment during the COVID-19 induced crisis will have long-term implications for the widening vulnerabilities in the labour market. Already, early research suggests that groups that had the highest unemployment rates in April also tended to have the lowest reemployment rates (Cheng et al., 2020[20]). As the crisis continues, there is the risk that a gulf emerges, not just between those that have been able to work from home and those that have suffered job and income loss – see OECD (2020[5]) and Chapter 5 – but also between those that have weathered the crisis through recourse to reduced hours and short periods of temporary layoff, and those that have found themselves jobless, increasingly distant from the labour force and risking long term scars.

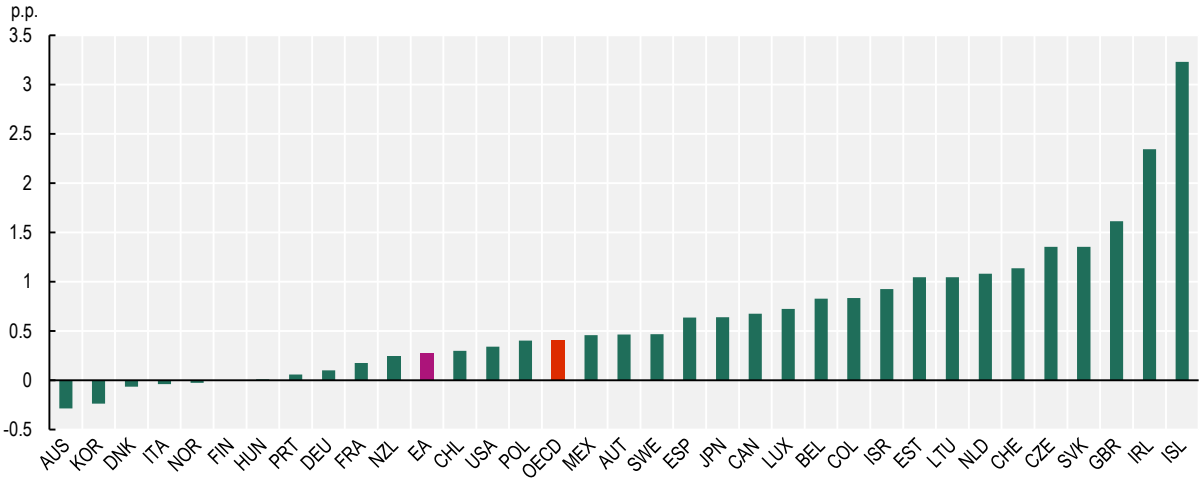
1.2.8. Much will depend on ability to create new matches

As vaccines are rolled out and economic activity is, once more, able to resume across the board, there is hope that excess savings have created a strong demand potential that may drive forward the eventual recovery. Indeed, OECD (2021[3]) forecasts further fall in unemployment in 2021 and 2022 to reach 5.7% in the last quarter of 2022. This improved outlook will, nevertheless, leave unemployment above pre-crisis rates in most countries (Figure 1.14), with continued labour market slack throughout 2021-22. This is largely due to the expectation that the absorption of the slack embodied in workers on JR support currently working reduced hours will precede largescale job creation.

Although the projected recovery is more optimistic than earlier forecasts, OECD (2021[3]) forecasts a significant degree of heterogeneity in the pace and pattern of the recovery across OECD countries. Indeed, a few countries have already recovered pre-crisis employment rates and, by the end of 2022, many countries will see their employment rates at or approaching their pre-pandemic levels. Yet, in a few others, employment is expected to take several years before returning to pre-pandemic levels.

Figure 1.14. In many countries unemployment will not return to pre-crisis levels by the end of 2022

Projected unemployment rates in Q4 2022, percentage point difference from Q4 2019



Note: EA: Euro Area.
Source: OECD (2021[3]), *OECD Economic Outlook, Volume 2021 Issue 1*, https://doi.org/10.1787/edfbca02-en.

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Only when the labour market is no longer at risk of being constrained by mandatory restrictions on activity, school closures, and individual concerns to avoid infection, will it be possible to gain a fuller grasp of the full extent of the required recovery. The shape and speed of the labour market recovery will indeed likely be determined by the extent to which the ultimate duration of the pandemic destroys those jobs currently '*on ice*' – either on temporary layoff or reduced hours – triggering a new surge in job losses, the ease with which those who have moved into inactivity can be re-engaged within the labour force and the extent to which new job opportunities emerge to accommodate the growing number of those currently without jobs.

1.3. Who is bearing the brunt of the impact? Who is recovering?

As the rollout of vaccines brings renewed hope that the pandemic may be drawing to an end in a number of OECD countries, OECD labour markets still face enormous challenges. An unprecedented number of people on reduced hours, on temporary layoff, or out of work entirely, have done little or no work in over a year. The impact of such worklessness risks far outlasting the crisis itself. As stock can now be taken of the likely long-term implications of the past year, it is important to examine this experience, and what it tells us about who will bear the economic pain in the months, and years, to come.

1.3.1. Sectoral impact of the crisis

One of the distinctive features of the COVID-19 induced crisis has been its highly sectoral nature

During the first phase of the crises**,** at a time when many OECD countries were in lockdown, the severe reductions on mobility and social proximity triggered by the COVID-19 pandemic put many sectors on hold. The initial shock of the pandemic was therefore shared across large swathes of the economy. As economies have slowly re-opened, however, and as we have increasingly learned to live, and work,

alongside the virus, the eye of the storm has become increasingly focused on sectors such as hospitality, tourism, arts and leisure.[18]

In accommodation and food service activities, the number of hours worked across the OECD more than halved in the second quarter of 2020. At this time, expectations that closures would be short-lived, prompted widespread use of job retention schemes as employers attempted to keep workers in their jobs in anticipation of a V-shaped recovery. As a result, close to two in every three of the lost hours in accommodation and food services were accounted for by individuals reducing their normal hours (see Figure 1.15). By the third quarter, as shops, restaurants and hotels were reopened, the fall in hours worked was a more modest 20%, as many of those on furlough and temporary layoff returned to work. However, the burden of adjustment moved to the extensive margin, with many on short hours returning to work while jobs destroyed were not recovered. As a result, job destruction accounted for over 80% of lost hours in the third quarter of 2020. A similar pattern was seen in the Arts sector, where hours worked fell by over 42% in the second quarter of 2020 before retrenching somewhat to a 14% year-on-year fall in the third quarter of 2020. A notable exception to this trend is seen in the United States, where reliance on temporary layoff has meant that the extent to which the extensive margin absorbed the reduction in hours worked – even in the second quarter of 2020 – was more pronounced with net job destruction accounting for approximately four in five of the reduced hours in sectors such as arts, as well as accommodation and food services, even in the second quarter of 2020.

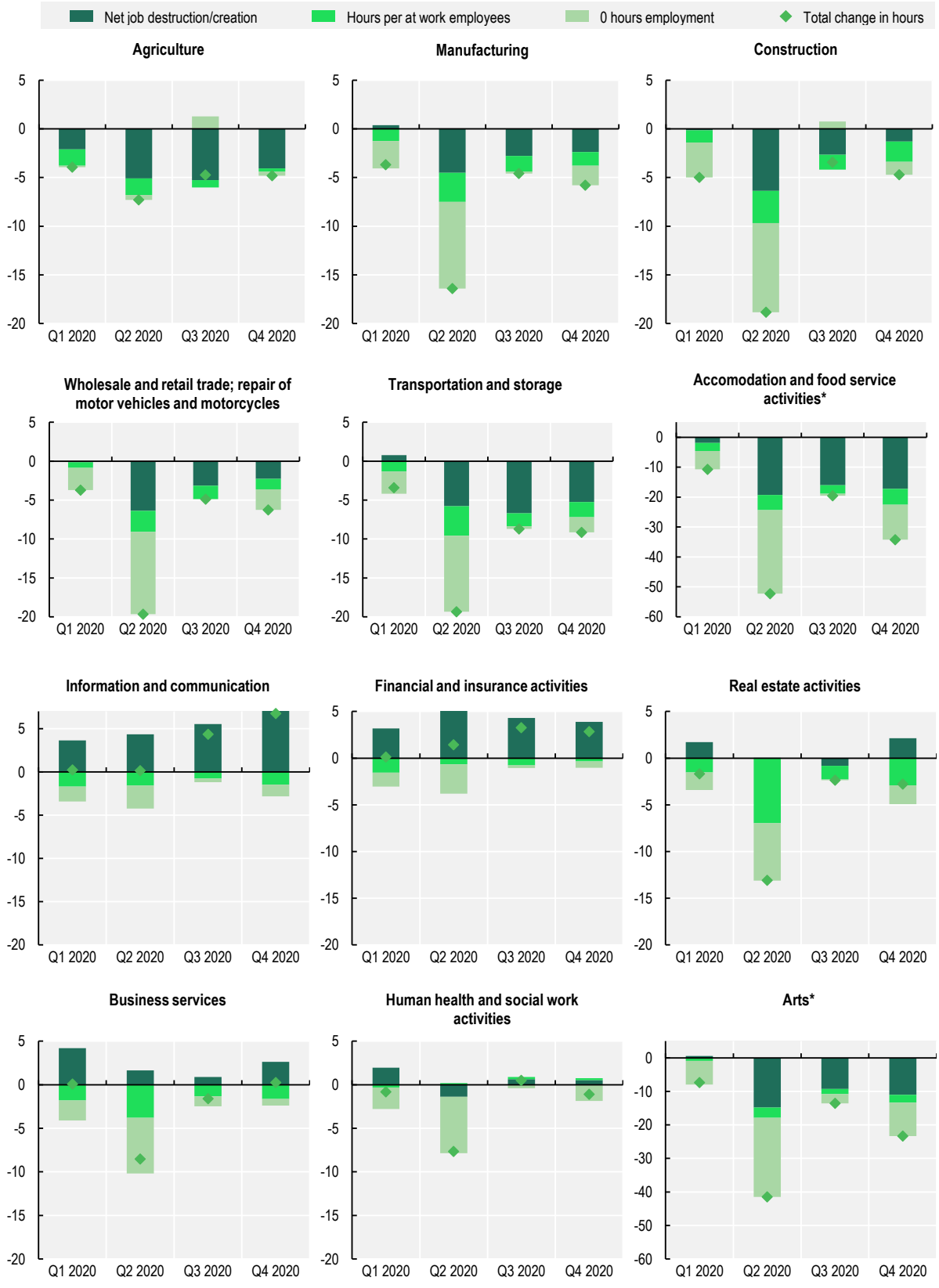
In contrast to the modest reduction in hours lost due to net job destruction in the third quarter in sectors such as accommodation and food services and arts, the transportation and storage sector saw an increase in the hours lost because of job destruction in the third quarter of 2020. This may be due to limited openings of seasonal jobs and/or reflect the fact that some of those workers, initially on reduced or zero hours, found their jobs were destroyed by the third quarter – perhaps reflecting changing expectations regarding the duration of the crisis, in particular as regards future demand for travel.[19]

Also during the third quarter, retail, previously in the eye of the storm, began benefitting, alongside manufacturing, from shifts in spending away from services towards goods, dampening the reductions in hours worked seen during that period. Meanwhile, a number of sectors – including real estate, business services and construction – saw a strong rebound, as economies began to reopen during the third quarter and hours worked returned to levels seen the previous year, prior to the pandemic.

In contrast, hours worked in information and communication, as well as in financial and insurance activities, saw an increase in hours worked compared to the previous year, with these sectors making limited use of reduced hours while increasing labour along the extensive margin. Indeed, employment in these two industries continued to grow on average throughout the peak of the crisis. In the case of finance and insurance, or information and communication, this pattern likely results from the speed with which they were able to adapt by adopting changed work practices such as reduced travel and working from home – see Dingel and Neiman (2020[29]).

Figure 1.15. Hours decomposition, by sector

OECD average, percentage change, year on year



Note: * Different scale. The figure reports the contribution of each category to the change in total hours. Average of EU countries (excluding Germany), Chile, Japan, Mexico, Norway, Switzerland, Turkey, the United Kingdom and the United States.
Source: OECD calculations based on the European Labour Force Survey; UK Office for National Statistics (Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); National Institute of Statistics and Geography of Mexico (ENOE and ETOE); Statistics Bureau of Japan (Labour Force Survey); and the Current Population Survey for the United States.

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In sectors where the full throttle impact of the crisis was relatively short-lived, such as real estate, as well as the health and social work, the fall in unworked hours accounted for by workers on reduced or zero hours between the second and third quarters of 2020, was not accompanied by a rise in net job destruction in the third quarter. This pattern maybe suggestive of success, in these sectors, of the largescale use of job retention schemes that allowed employees working reduced hours to quickly return to work in in those sectors experiencing a rebound. Other sectors – such as agriculture – that were less reliant on physical proximity were also affected to a much smaller degree.

As case numbers again began to rise in the fourth quarter of 2020, the year on year fall in hours increased in almost all sectors relative to that seen in Q3. The exceptions – of information and communication, financial and insurance services and business services – being sectors in which workers have been relatively able to adapt to mobility restrictions through increased work from home. Despite the negative impact of the second wave on hours worked, the majority of sectors, were able to adjust largely through recourse to reduced working hours among the employed, with the extensive margin absorbing part of the impact only in the worst hit sectors – accommodation and food service activities, and the arts.

There remains a high degree of uncertainty regarding the duration and form of the ongoing (and evolving) restrictions on activity, as well as the permanence in the changes to habits and consumer preferences that have resulted from extended shutdowns. While some sectors, such as construction and real estate, may benefit, even before the pandemic has come to an end, from low interest rates, pent-up demand, and consumers' desire to improve their living conditions, for others – such as accommodation and food services – the rebound may come too late for many businesses. If consumers make permanent shifts in how they work, shop, and spend their leisure, even with the acceleration of vaccination, a rebound in some sectors may never come. Recent OECD work estimates a large increase in firms that may become distressed as a result of the falling profits induced by the pandemic and associated restrictions (Demmou et al., 2021[18]). Indeed, while results differ across types of firms, in sectors experiencing the largest adverse impact, such as "Accommodation and food service activities" as well as "Arts and Entertainment", up to 32% and 24% of otherwise viable firms are expected to become distressed, respectively, even in the context of current support measures. If a wave of bankruptcies is on the horizon, slack in certain sectors of the economy may still have some way to go.

The concentration of the impact of the COVID-19 pandemic on the service sector is unusual. Indeed, in contrast to manufacturing and construction, which typically suffer more from cyclical downturns, services tend to be more resilient. The heavy impact of the current recession on the service sector may have implications both for the speed of recovery (Beraia and Wolf, 2021[30]), and – given the concentration of certain socio-economic group in service sector occupations – the extent to which this crisis falls on the shoulders of the most vulnerable (Box 1.3).

Box 1.3. Sectoral concentration of socio-demographic groups in Europe

Certain demographic groups are concentrated in sectors heavily affected by net job destruction

Across Europe, in the first quarter of 2020, restaurants, shops and leisure facilities were ordered to close, air travel was halted, and public transport greatly reduced. A number of papers have now studied the effect of these shutdowns and the role of sectoral concentration in determining those most affected. Using data from the United Kingdom, for example, Joyce and Yu (2020[31]) find that while 17% of women were working in a sector shut down during the first lockdown, among male employees the figure stood at just 13%. Similarly, employees aged under 25 were about two and a half times more likely to work in a sector shut down during the first lockdown than other employees.

However, the likely impact on net job destruction of the COVID-19 crisis depends, not only on whether or not a sector is shutdown, but also on declines in consumer demand, sector-specific expectations about the duration of shutdowns, the ease of firing and hiring (and retraining) workers, as well as, relatedly, the extent to which sectors have relied upon the extensive or intensive margin for absorbing the labour market impact. Indeed, recent research in the United States using google trends data to estimate the impact of non-pharmaceutical interventions on unemployment insurance claims finds that, in March 2020 restaurant and bar limitations and non-essential business closures explain only 6% and 6.4% of claims respectively, suggesting that other factors were driving the majority of the short-run increase in UI claims (Kong and Prinz, 2020[32]). This is consistent with evidence presented in OECD (2020[5]), which found that most of the increase in UI claims in the United States in that period can be attributed to individual and company voluntary restraints following the federal emergency declaration and the issuing of federal guidelines rather than other non-pharmaceutical interventions.

Figure 1.16, below, illustrates the sectoral concentration of a number of demographic groups, highlighting, in particular, those sectors characterised by heavy net job destruction during the COVID-19 crisis (a year-on-year quarterly fall of greater than 3% in the hours worked in that sector that is attributable to net job destruction).

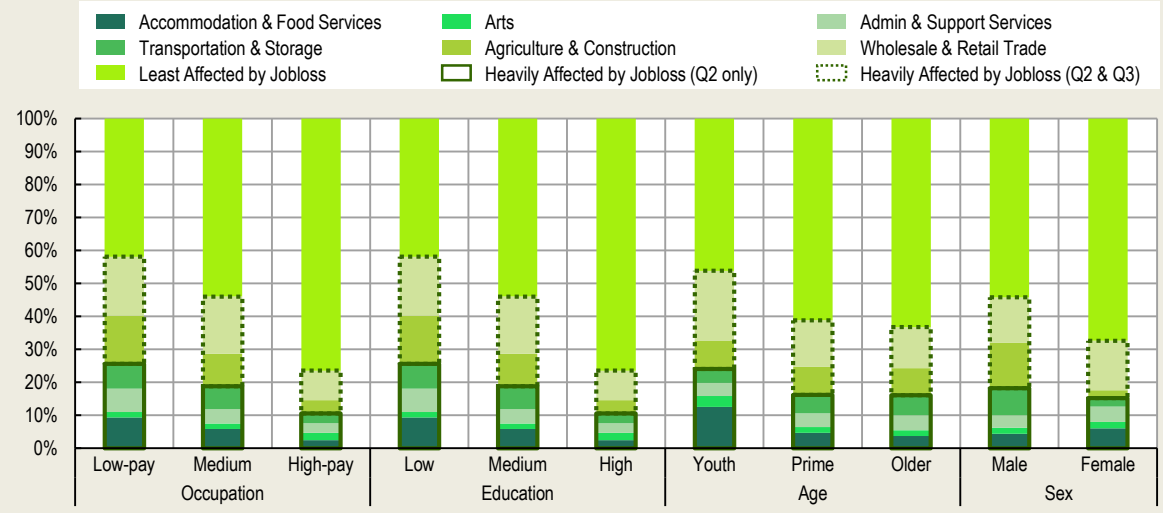
Workers in low-paying occupations were more than twice as likely to have been working in a sector characterised by substantial net job destruction, while more than half of low-educated workers were working in heavily affected sectors. This compares to less than one in five highly educated workers.

Young workers are particularly concentrated in those sectors experiencing heavy net job destruction. In 2019, 12% of young workers were working in accommodation and food services – a sector experiencing net job destruction in both the second and third quarters of 2020.

Male workers were more likely to have been working in sectors experiencing heavy net job destruction during the initial phases of the pandemic in the second quarter of 2020. This is because, though female workers were indeed more concentrated in accommodation and food services, as well as retail trade, they are also more likely to work in education and public administration, or health and social work, sectors that were relatively protected from job destruction. However, in later phases of the crisis, as the male-dominated sectors of construction and agriculture were able to return to work, the gender balance of sectors experiencing largescale job destruction during the third quarter of 2020 equalised.

Figure 1.16. Sectoral concentration of socio-demographic groups

Percentage, 2019



Note: Sectoral distribution of each category of workers. Sectors heavily affected by job destruction are defined as those in which hours worked fell on average across the EU (excluding Germany) by greater than 3% year on year as a result of net job destruction in the specified quarter(s). Sectors least affected by job loss are all the other sectors. Sectoral concentration remains unaffected when students are removed from the sample.

Source: European Union Labour Force Survey.

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1.3.2. Impact of the crisis on socio-demographic groups

The economic fallout of the coronavirus pandemic has had profoundly different impacts across socio-economic groups, leaving some to shoulder the bulk of the burden, while others suffered little and recovered quickly. In the United States, for example, where transaction data from several private companies has been used to study the impact of the pandemic on individual's employment and spending, employment is found to have largely recovered among the upper income quintiles while it remains subdued at the lower end of the distribution.[20]

Much ink has already been spent examining the impact of the pandemic on certain socio-economic groups, including the low paid, low educated, youth and women – see for example OECD (2020[5]), Adams-Prassl et al. (2020[33]), Cheng et al. (2020[20]). Building on this existing work, the analysis below expands on how this impact has evolved over the course of the crisis, looking in particular at who has benefited from the shift of the labour market impact from the extensive to the intensive margin; from joblessness, to reduced hours among the employed. The form the impact of the pandemic has taken varies across socio-demographic groups and will likely have implications both for the speed of recovery, and for the longer-term challenges that may yet emerge.

Low paid occupations have been hit hard and much of the impact has translated through job destruction

The coronavirus pandemic has changed how we think of low-wage employees and highlighted the extent to which society depends upon essential workers. At the same time, praise for the heroic work of these workers, in conditions that are often dangerous and exhausting, has been widespread. In some quarters, this appreciation has been accompanied by concern that job quality in a number of essential sectors

matches neither the importance of the work, nor the hazards involved. Indeed, recent research using data on 800 000 commercially insured individuals in Philadelphia, the United States, suggests that, during lockdown, essential workers were 55% more likely than others to get COVID-19 (Song et al., 2021[34]). While the identification of work that is considered to be "essential" is not clear-cut and varies across – and even within – countries, the category 'essential worker' tends to include those working in: health and social care; education and childcare; food and other necessary goods; key public services; local and national government; utilities; public safety and national security, and transport.[21] In Europe, such workers account for slightly more than one in every four employed individuals.[22]

Protecting all essential workers is indisputably important, yet only a subset must be physically present at their workplace. These, the most vulnerable to health risks, tend to be labelled "frontline" workers and, in many countries, have had priority access to childcare, protective equipment and vaccines. These 'frontline workers', not only tend to be more exposed to the virus, but are also likely to be less able to protect themselves from the financial consequences of the virus (see Box 1.4 on frontline workers in the long-term care sector). Indeed, building on the work of Dingel and Neiman (2020[29]) to identify those essential workers whose work requires their physical presence, recent work by Blau, Koebe and Meyerhofer (2020[35]) attempts to identify 'frontline workers' as distinct from the larger pool of essential workers. The authors find that, in the United States, while the broader group of essential workers tends to mirror the demographic characteristics of the labour force, frontline workers are less educated, tend to earn lower wages and encompass a relatively high proportion of immigrants.

Alongside the increased vulnerability to infection among low-wage frontline workers, however, workers in low-wage occupations more widely have been disproportionately vulnerable to loss of income, job loss and loss of hours as a result of the pandemic. Furthermore, JR support appears to have been less effective at protecting the labour market attachment of those in low-paid occupations, who have seen the fall in their hours of work manifest largely along the extensive margin – see Chapter 2 for more analysis of JR schemes. This is likely a result of the smaller proportion of low-paid occupations on stable and protected employment contracts, as well as the more limited costs associated with hiring/firing low-paid employees.

Figure 1.17 builds upon the occupational categories defined in Goos, Manning and Salomons (2014[36]), to aggregate occupations into those which are highly paid, middle paid and low paying.[23] Low-paying occupations took a strong hit in the initial months of the crisis. Indeed, the average reduction in hours in these occupations, across the OECD, at 28% exceeded that experienced among high-paying occupations by over 18 percentage points. In countries such as Portugal and Spain these low-paying occupations saw hours fall by over 40% when compared to the previous year (see Annex 1.B). These patterns stand in contrast to the trends in vacancies following the initial onset of the crisis, when falling vacancies were comparable in both high and low paying occupations (OECD, 2020[5]) with middle paying occupations experiencing a slightly stronger negative impact.[24]

Furthermore, the apparently homogenous impact on vacancies also appears to have disguised a strongly differential impact on the extensive and intensive margins as revealed in the hours of existing employees. In the second quarter of 2020, across the OECD, over 34% of the hours reduction in low-paying occupations were the result of net job destruction. Among highly paid occupations, meanwhile, even in the context of reduced total hours, hours worked on the extensive margin remained incrementally positive. This suggests that the low paid have faced a double disadvantage. Alongside the magnitude of the fall in hours among low-paying occupations, the extent to which this reduction translated through joblessness suggests that the low paid may have disproportionately suffered from instability, income loss, and longer-term career damage.

By the third quarter of 2020, while total hours worked by those in highly paid occupations were largely back to their pre-pandemic levels, among those in low-paid occupations total hours worked remained 10% below those seen in 2019, with the preponderance of the adjustment – over 80% – now accounted for by job destruction. It is also notable that, in Q3 2020, as hours begin to recover from the peak of the crisis, some convergence is observable in the pattern of recovery among low and middle paid occupations – while many of those working reduced hours returned to work, little recovery was observed on the extensive margin.

Box 1.4. Frontline workers in the long-term care sector

The long-term care sector has been hit hard by COVID-19

Given the elevated risks faced by the elderly and those with underlying conditions, long-term care workers have played an exceptionally important role during the crisis. With estimates indicating up to 50% of deaths related to COVID-19 occurring in long-term care facilities (OECD, 2020[37]), the COVID-19 crisis has shone a spotlight, in particular, on workforce shortcomings in the long-term care (LTC) sector.

In the majority of OECD countries the LTC sector suffers from a shortage of workers. Indeed, a recent OECD report (OECD, 2020[38]) published on the LTC sector, found that, already between 2011 and 2016, the growth in the number of LTC workers was outpaced by the growth in numbers of elderly people in three-quarters of OECD countries. Keeping the current ratio of five LTC workers for every 100 people aged 65 and older across OECD countries would imply that the number of workers in the sector would need to increase by 13.5 million by 2040. As a large number of people, dependent on care, have fallen ill, and as LTC workers have faced increased exposure to infection. The structural problems of poor job quality and recruitment and retention difficulties that underpin the insufficient staffing, has been exposed by the pandemic.

Low job quality leads workers to leave the elderly care sector

Growing shortages are exacerbated by low wages and poor job quality that lead to recruitment and retention difficulties. Indeed, when compared to hospital workers in similar occupations, LTC workers tend to have fewer promotion opportunities and earn substantially less. Indeed, the median wage of LTC workers across European countries at EUR 9 per hour is over 50% less than those working in similar occupations in hospitals (OECD, 2020[38]).

Alongside this, non-standard employment, including part-time and temporary work, is common in the sector with almost half (45%) of LTC workers in OECD countries working part-time, (over twice the share in the economy as a whole) and almost one in five working on a temporary contract, (compared to just over one in ten in hospitals). Half of LTC workers do shift work, which is associated with health risks such as anxiety, burnout and depression. Indeed, even before the crisis hit, the LTC workforce suffered disproportionately from health problems with, on average 44% suffering from mental health problems (OECD, 2020[38]). Given the high risks to LTC patients and the associated stress amplified by the crisis, such occupational hazards are likely to be exacerbated.

Rethinking job quality for frontline workers

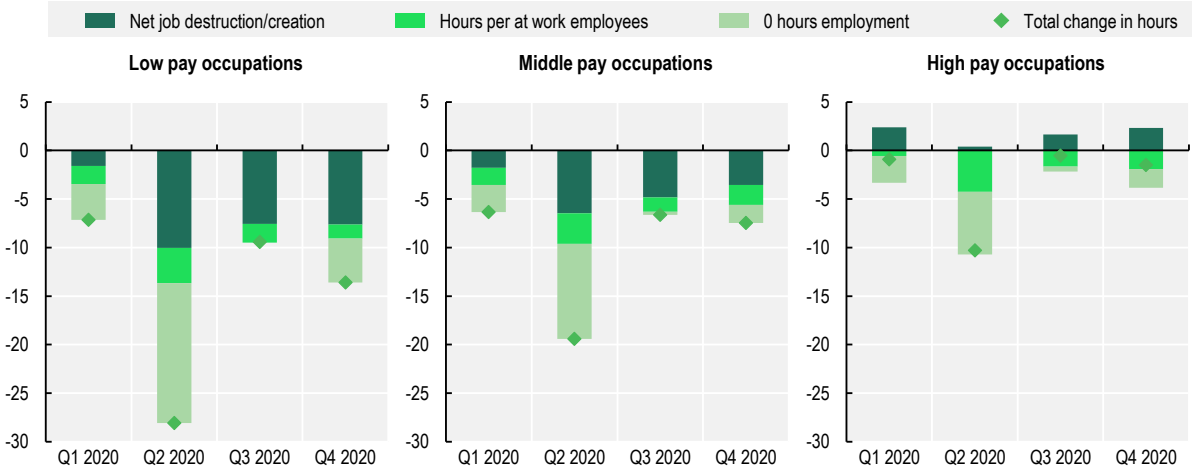
There is increasing appreciation of the frontline workers who have kept our societies functioning, through lockdowns and rising infection rates – often at considerable risks to their personal health (Song et al., 2021[34]). Indeed, the COVID-19 pandemic has highlighted how much is asked of certain workers, and how little is offered in return. Whether this heralds the start of a deeper reflection on how these forms of work are valued and remunerated remains to be seen, though in a number of countries calls for hazard pay and other benefits are growing.

Beyond wages, promoting a healthier work environment and prevention of work-place accidents and illness is likely to receive more attention post-COVID-19. In the LTC sector, a number of countries have already made efforts in this direction; the Netherlands has developed coaching programmes, while Japan has workplace counselling services to promote prevention of accidents and burnout and a few countries such as Denmark and Korea promote training and career options for personal care workers (OECD, 2020[38]).

In the fourth quarter of 2020 the year on year fall in hours once more widened. However where, once again, the entirety of the contained hours losses among high-paying occupations has been, on aggregate, absorbed by employees working reduced hours (indeed an increase in job creation has mitigated the hours lost to reduced hours), among low-paying occupations hours lost to job destruction have not recovered. In fact, representing over half of the reduced hours, job destruction among low-paying occupations accounted for an even larger share in the second wave than it did in Q2, during the first. In contrast to the middle and high-paying occupations, the lion's share of the remaining lost hours were accounted for by individuals moving down to zero (as opposed to reduced) hours.

Figure 1.17. Hours decomposition by occupation groups

OECD average, percentage change, year on year



Note: The figure reports the contribution of each category to the change in total hours. Average of EU countries (excluding Germany), Chile, Japan, Mexico, Norway, Switzerland, Turkey, the United Kingdom and the United States. An unofficial crosswalk between the ISCO classification and both the Japan Standard Occupation Classification (JSOC) and the Mexican Classification of Occupations (CMO) was built by the OECD Secretariat only for the purpose of this analysis.
Source: OECD calculations based on the EU LFS; UK Office for National Statistics (Labour Force Survey); Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (*Encuesta Nacional de Empleo*); Mexican National Institute of Statistics and Geography (ENOE and ETOE); Statistics Bureau of Japan (Labour Force Survey); and the US Current Population Survey.

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The heavy impact of the pandemic on low-paying occupations is partially a reflection of the concentration of many low-paying occupations in those sectors most affected by closures and reduced demand – particularly in retail and trade (Box 1.3). It may also partially reflect the skill composition of those in low-paying sectors and the concomitant implications for the incentives of firms to retain (or not) these skills through extended reliance on JR schemes.

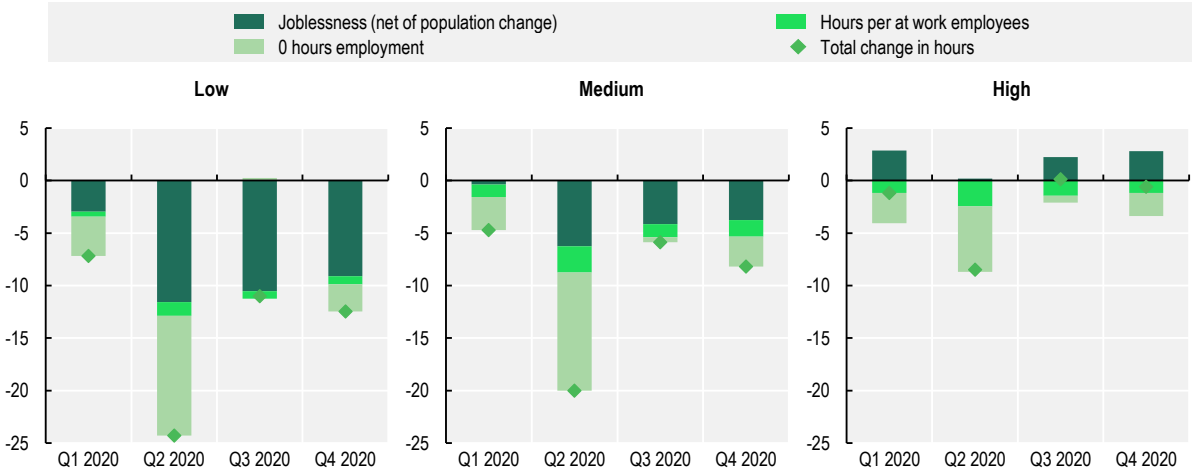
…And those with less education are more likely to have lost their jobs

In the early phases of the COVID-19 pandemic, a strong and widespread fall in hours worked was seen among workers at all levels of education. The initial labour market impact was felt most strongly, however, among those with a more limited education. Across the OECD, average hours worked fell by 8.5% among the high skilled, 20% among those with a medium level of education, and 24% among those holding just a lower secondary education diploma or less (Figure 1.18). This disparate reduction was most marked in countries such as Ireland, the Slovak Republic, Slovenia, the United States and Finland, where the

reduction in hours worked among the low skilled was 25 percentage points larger than that among those with a high level of education (some tertiary). The trend was less notable in Mexico, Greece, the Czech Republic, Austria, Denmark and Switzerland, where the difference remained under 10 percentage points. In Latvia and Lithuania, highly educated workers experienced a larger impact on their labour market.

Figure 1.18. Hours decomposition by educational attainment

Percentage change, year on year



Note: The figure reports the contribution of each category to the change in total hours. Average of EU countries (excluding Germany), Canada, Chile, Mexico, Norway, Switzerland, Turkey, the United Kingdom and the United States.
Source: OECD calculations based on the EU LFS; UK Office for National Statistics (Labour Force Survey); Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); Mexican National Institute of Statistics and Geography (ENOE and ETOE); and the US Current Population Survey.

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Alongside having experienced a larger contraction in demand for their labour, the contraction in hours worked among the low educated was also more frequently experienced on the extensive margin. Indeed, among workers holding a low level of education, the increase in net joblessness accounted for about half of the hours lost in the year to the second quarter of 2020. This is likely to be partly a reflection of the fact that temporary jobs are more widespread among the low-educated (see Box 1.5) and were less covered by JR schemes. Conversely, consistent with the finding that net job destruction was limited in high-paying occupations, net joblessness did not increase for the highly educated – rather the entirety of the reduction in hours was channelled through the intensive margin.[25]

Perhaps more worrisome still, from the perspective of the growing labour market inequalities provoked by the COVID-19 pandemic, is the evolution of the composition of unworked hours from the second to the third quarter of 2020. In contrast to the patterns observed among low/medium/highly paid occupations, the third quarter of 2020 saw educational disparities consolidated, as many of the medium and highly educated returned to work from reduced or zero hours while, among the low-skilled, joblessness persisted – even increasing in some countries such as Latvia, Lithuania, Slovenia, the Slovak Republic, Belgium, the Czech Republic, Sweden, Chile, Norway, Greece and Poland.

In the fourth quarter of 2020, the year on year change in hours worked again deteriorated with the increasing spread of the virus and concomitant restrictions. This was largely felt through increased reliance on reduced hours at all levels of education. However, among the highly educated the reliance on the intensive margin to absorb the shock was accompanied by net job creation, while among those with a mid

or low level of education the fall in hours was seen along both the extensive and intensive margins.[26] Overall, among those holding only a low level of education, at the end of 2020 almost 10% fewer people had a job than one year prior, while employment of those with at least a college diploma grew by 3% during the same period.

It is important to note that an examination of the impact of employment and hours alone cannot capture the full extent of the impact on earnings. This is because it is not possible to distinguish in the hours worked data between those who reduced their employment through JR schemes, and those who were on unstable contracts and whose reduced hours were not compensated through JR schemes. The proportion of hours reduction that was compensated is likely to be even lower among the low paid. Indeed, the Low Pay Commission in the United Kingdom found that the proportion working reduced hours on full pay was increasing in income (Low Pay Commission, 2020[39]).

From the perspective of employers, much of the benefit of retaining employees in the face of temporary reductions in demand through relying on subsidised unworked hours, accrues through savings made by avoiding the costs associated with firing and rehiring workers (see Chapter 2). These costs are likely to be higher for highly educated workers, who tend not only to hold more stable positions benefiting from employment protection, but are, in many cases, harder to replace. Furthermore, in addition to these firing/rehiring costs, refilling certain positions also implies substantial firm-specific, or positions-specific, reskilling costs. To the extent that such positions are also more likely to be occupied by more educated workers, it is to be expected that joblessness accounts for a smaller proportion of reduced hours among highly educated workers (Pfann and Palm, 1993[40]). While intuitive, the finding that subsidised labour hoarding benefits disproportionately the highly educated has important implications for the complementarity of job support and out-of-work benefits and suggests the need for a strong unemployment insurance system and other forms of out-of-work income replacement.

Box 1.5. Low-educated workers are concentrated in unstable work in Europe

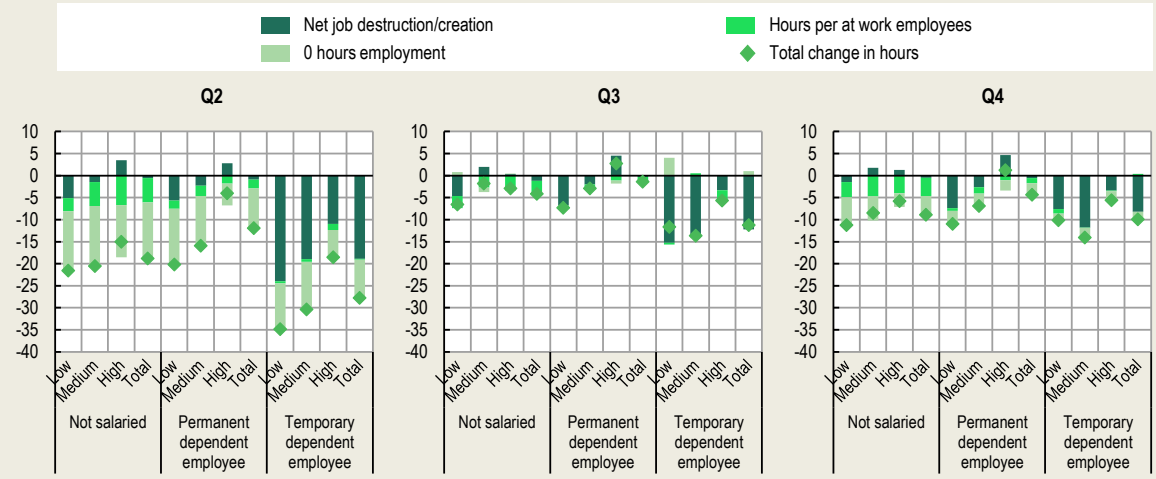
The first wave hit temporary workers disproportionately as job creation was limited even on a temporary basis

The impact of the COVID-19 pandemic on the hours worked by those on temporary contracts was substantial and largely concentrated in job destruction – particularly among the low educated. Indeed, in the second quarter of 2020, those on temporary contracts saw their hours fall by 28% on average year on year – more than double the reduction seen by permanent dependent employees (Figure 1.19). More striking still is the extent to which net job destruction accounted for the reduction in hours worked. Among the low-educated on temporary contracts, one in every four hours of those worked in Q2 2019 was lost by Q2 2020 due to net job destruction.

This substantial impact in the early months of the crisis, as temporary contracts were not renewed and new jobs were not opened, reflects not only the tendency of hard-hit sectors to rely heavily on temporary workers, but also the intrinsic instability of these contracts and the ease with which temporary workers can be laid-off with limited cost to the employer.

Figure 1.19. Fall in hours worked by education and employment status

Percentage change, year on year, 2020



Note: The figure reports the contribution of each category to the change in total hours. Average of EU countries (excluding Germany), Norway, Switzerland, Turkey, and the United Kingdom. The 'Not salaried' include the self-employed with and without employees, as well as those identifying themselves as family workers.
Source: OECD calculations based on the EULFS and UK LFS.

StatLink https://stat.link/q3txlf

The self-employed were also hit hard by the recession, but the impact was less dependent on education

Hours worked among the self-employed fell 19% in Q2 2020 with respect to the same quarter the previous year. This fall, while substantially larger (12 percentage points) than that seen among dependent employees, was nevertheless more evenly distributed across the education spectrum – with the highly educated suffering alongside those with a lower education (Figure 1.19). This pattern may be supported partially by the tendency of many low-educated self-employed individuals including those who find work through apps – such as private hire drivers – to be among the least negatively affected in terms of hours worked.[1] Indeed, in the United Kingdom, as many as a third of such workers reported having more work than usual (Blundell, Machin and Ventura, 2020[41]). Many of these workers tend to have a lower level of education, and the strong demand for their services may have partially offset hours lost by others in the same group. In addition, others who have lost a dependent job may have tried to compensate income losses through temporary apps jobs.

At the same time, the tendency of the low-educated self-employed to be less likely than their medium and highly educated peers to absorb reduced hours through the intensive margin in the second and third quarters of 2020 may also be reflective of liquidity constraints, or fears of job loss, in driving the decision to continue to work in the face of elevated health risks. Indeed a recent survey conducted in the United Kingdom found that many in 'gig economy' jobs continued to work despite considering their health to be at risk and many were unaware of government support schemes to support their incomes (Blundell, Machin and Ventura, 2020[41]). The high proportion of lost hours accounted for by the intensive margin – particularly among the medium and highly educated self-employed workers – may be suggestive of access to targeted government income support measures (see OECD (2020[42])).

The impact of the second wave was less unequal

During the second wave of the pandemic the impact on the fall in hours of those on permanent and those on temporary contracts was far less pronounced. Indeed, among those with a low level of education, the year on year loss of working hours in the final quarter of 2020 was marginally *larger* among those with a permanent contract than among those on a temporary contract (Figure 1.19). This pattern was even more pronounced among hours lost due to job destruction.

While the ease with which temporary contracts can be terminated is likely to have contributed to the extent to which they took a heavy hit during the first wave of the pandemic, it may also have contributed to the relatively more muted impact of the second wave as, in the climate of uncertainty, companies were reluctant to take on permanent employees.

Nevertheless, the extent to which the impact of the crisis has fallen on workers in non-standard employment, whether temporary or self-employed, has substantial implications for the impact of the crisis on income security and well-being. This is because workers in these contract types tend to be less well protected by JR schemes and unemployment insurance – see OECD (2020[42]) and OECD (2020[5]).

1. Pre-pandemic European estimates suggest that, on average across European countries, 6% of the adult population spend over 25 hours on, or earn more than 25% of their income from, platform work (European Commission JRC, 2020[43]).

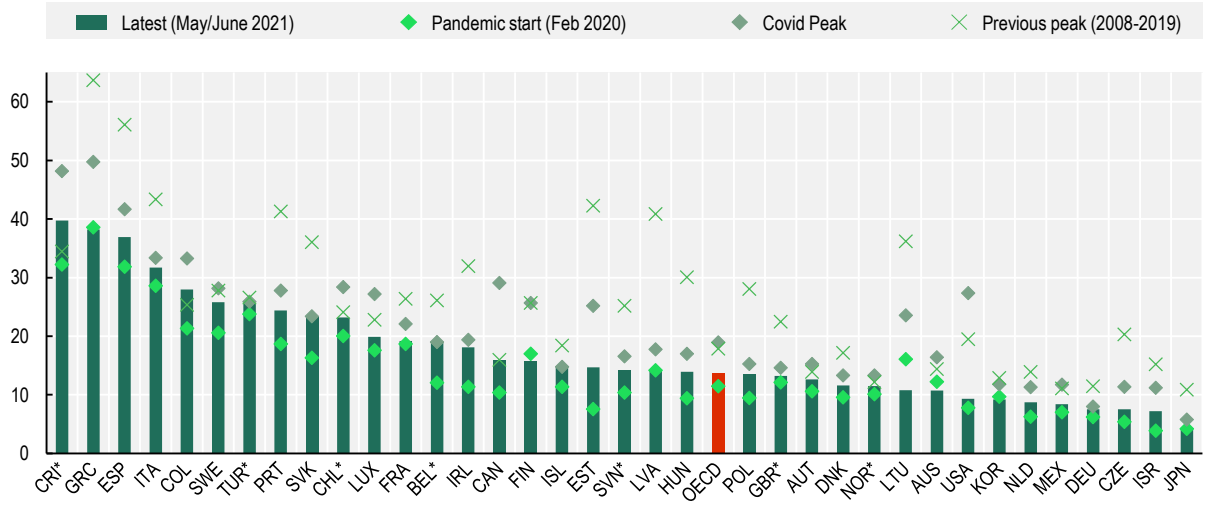
Unemployment rates among young people have surged…

Young people have shouldered a heavy part of the burden of the COVID-19 pandemic and associated restrictions on activity. At the best of times, the youth labour market is highly sensitive to economic cycles; having been hired relatively recently, they tend to have had less chance to accrue firm-specific skills and experience. And, as the last in, young workers are often the first out. The crisis prompted by COVID-19 has also been particularly damaging to the youth labour market because young people tend to be more likely to work in those sectors most affected by lockdown and social distancing measures, notably in hospitality and non-food retail (Box 1.3).

At the onset of the pandemic, unemployment among 15-24 year-olds in the OECD surged, from historical lows of just 11.5% in February 2020, to 19% in just two months. This was more than two times the percentage point increase seen in the unemployment rates of those aged 25 and over. As with headline unemployment figures, these dramatic fluctuations are driven, in large part, by vast swings in those countries that have relied heavily on temporary layoffs. Both in the United States and in Canada youth unemployment rates increased by 17 percentage points in just two months, reaching over 27% in April 2020. In the European Union, however, youth unemployment has, thus far, remained substantially below levels seen during – and for some time after – the global financial crisis (Figure 1.20). Nevertheless, even in Europe, the 3 percentage point increase in youth unemployment rates since the start of the year, significantly outpaced that seen among their older peers (by 1 percentage point). And in many countries rates continue to rise (Figure 1.20). This strong increase in youth unemployment is likely driven, both by flows from employment to unemployment, but also by increased numbers of those who join the labour market but, in the context of limited hiring, are not able to access an initial foothold in employment. With further restrictions on economic activity introduced during Q4 2020 and Q1 2021, alongside large numbers of young people leaving education into a labour market with limited vacancies, youth unemployment rates will likely remain elevated for some time to come.

Figure 1.20. Youth unemployment rates by country

Individuals aged 15-24, percentage



Note: * Latest data refer to April 2021 for Belgium, Costa Rica, Chile and Turkey; March 2021 for Slovenia and the United Kingdom and November 2020 for Norway. Peak refers to April 2020 in Slovenia and the United States; May 2020 in Austria, Canada, Colombia, Finland, Korea and Latvia; June 2020 in Chile, Hungary, Luxembourg, Portugal and Spain; July 2020 in Australia, Estonia, France, Norway and Sweden; August 2020 in Israel, Netherlands and the United Kingdom, September 2020 in Costa Rica, Ireland and Lithuania; December 2020 in Germany; January 2021 in Belgium, Czech Republic, Italy and Japan; February 2021 in Poland and Turkey; March 2021 in Denmark; April 2021 in Mexico and Slovak Republic; and May 2021 in Iceland. The OECD weighted average of youth unemployment reached a peak in April 2020.
Source: OECD Short-term Labour Market Statistics Database.

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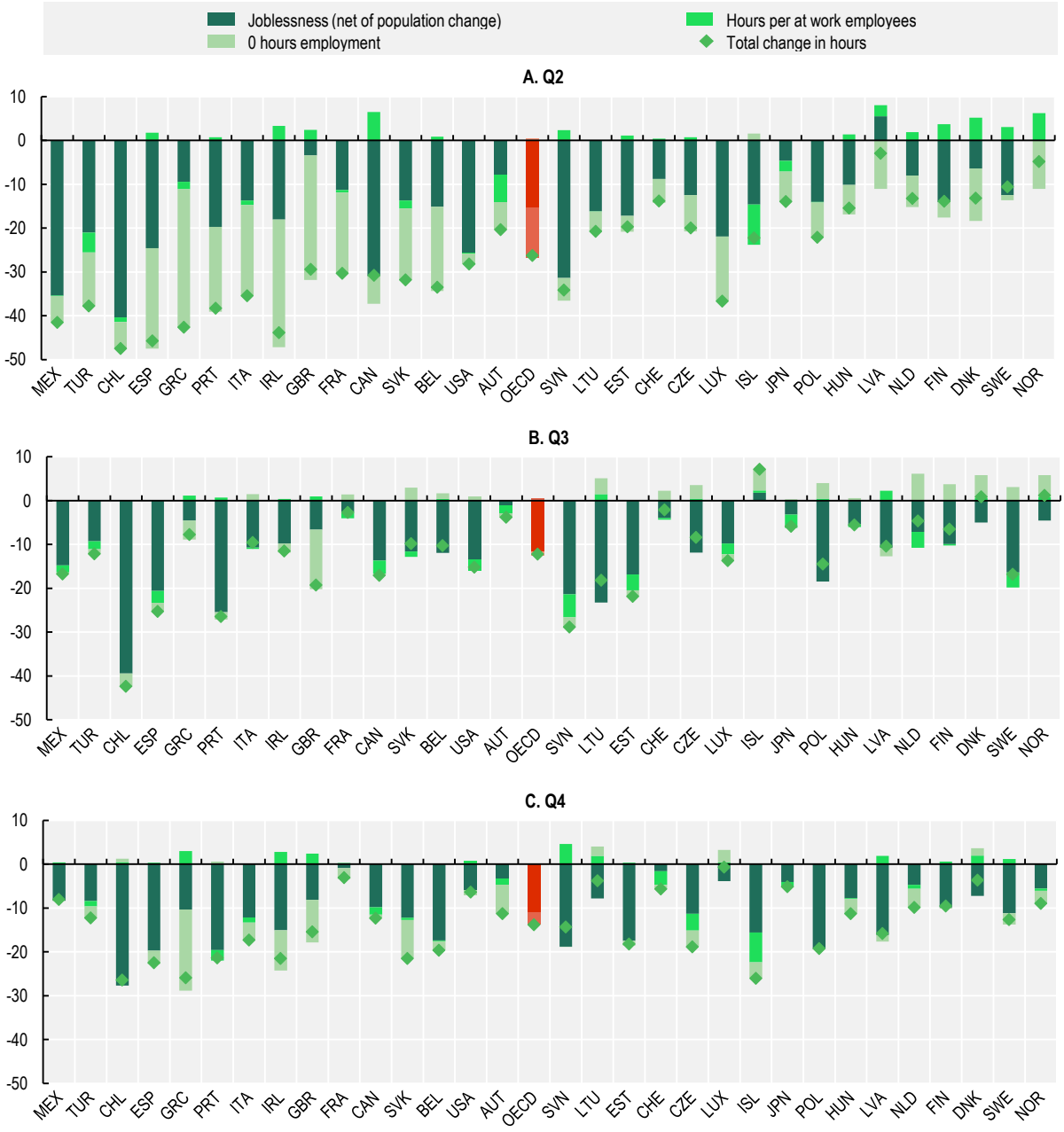
…as joblessness has accounted for the lion's share of the labour market impact on youth

Given the concentration of young workers in the sectors affected by lockdown and social distancing (Box 1.3), and in less stable contracts, it is unsurprising that, alongside unemployment, young workers have seen heavy reductions in their hours of work. In the second quarter of 2020, across the OECD, reductions in working time contributed to close to half of the 24% fall in hours worked by this age group. And, in contrast to the pattern among prime aged and older workers, only in a minority of countries – including Austria, Iceland, Turkey, and to a lesser extent Greece, the Slovak Republic and Italy – did the adjustment occur through a partial reduction in working hours – see Figure 1.21 and Figure 1.22. Indeed, the vast majority of reduced hours among youth was accounted for by young workers moving down to zero-hours employment. It is likely that, given the concentration of young workers in non-standard contracts, a proportion of this zero hours employment may have been outside job retention support (for example through paid or unpaid leave), however, the available data do not allow examining the extent of this.

Figure 1.21. Hours decomposition: Youth

Percentage change, year on year, 2020



Note: The figure reports the contribution of each category to the change in total hours. Youth is defined as those aged 15-24 years. Countries are ranked by increasing change in total hours in Q2 2020 (see Figure 1.10). Time series comparisons for Mexico require caution: in Q2 2020, the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country. OECD is the unweighted average of the countries shown.
Source: OECD calculations based on the EU LFS; UK Office for National Statistics (Labour Force Survey); Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); Japanese Labour Force Survey; National Institute of Statistics and Geography (ENOE and ETOE); and the Current Population Survey.

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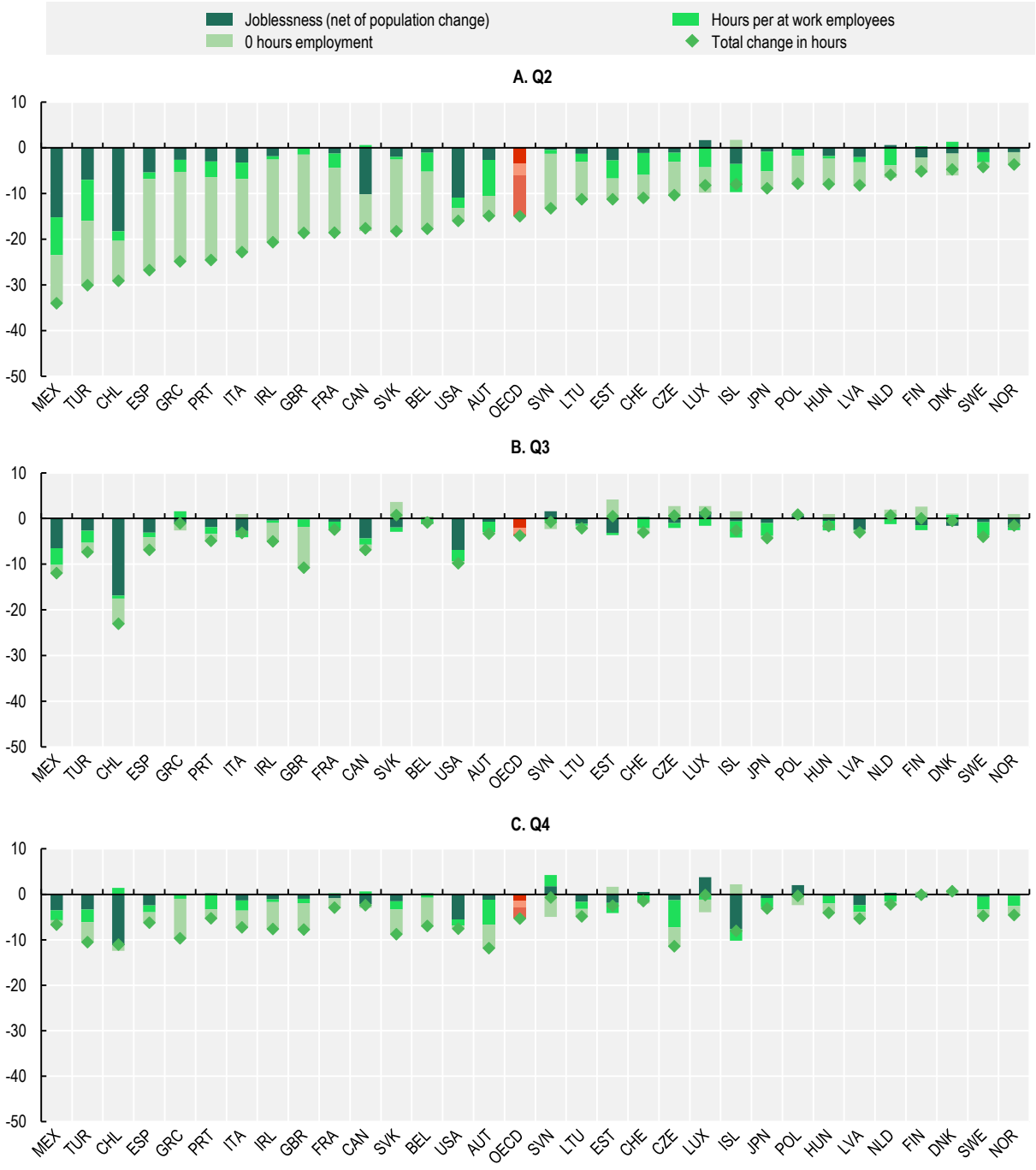
Figure 1.22. Hours decomposition: Prime age and older

Percentage change, year on year, 2020



Note: The figure reports the contribution of each category to the change in total hours. Prime age and older is defined as those aged 25+ years. Countries are ranked by increasing change in total hours in Q2 2020 (see Figure 1.10). Time series comparisons for Mexico require caution: in Q2 2020, the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country. OECD is the unweighted average of the countries shown.
Source: OECD calculations based on the EU LFS; UK Office for National Statistics (Labour Force Survey); Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); Japanese Labour Force Survey; National Institute of Statistics and Geography (ENOE and ETOE); and the Current Population Survey.

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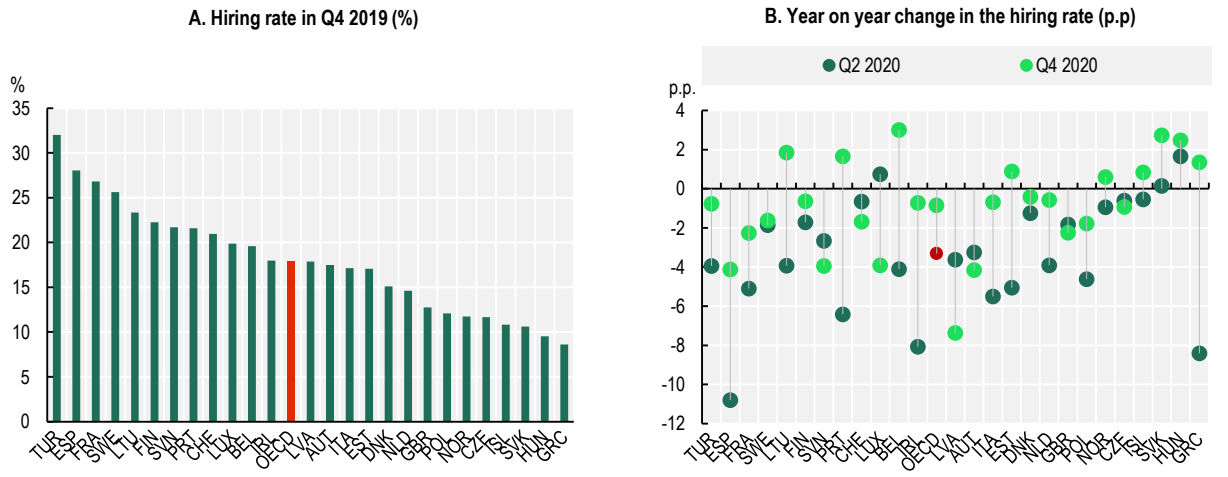
During the third quarter of 2020, as lockdown and social distancing measures began to ease across the OECD, many of those young people working zero hours began to return to work. However, given the relatively large role played by joblessness in the reduced hours among youth, in contrast to prime-aged and older workers, the fall in their unworked hours has not seen a substantial retrenchment.[27] In the fourth quarter of 2020, as workers both young and old, returned to shorter hours, the year on year fall in hours resulting from joblessness among young workers remained prominent.

The increase in joblessness among youth prompted by the pandemic arises, largely, through two channels. In the first place, there are those young people – often working in hard hit sectors and on precarious contracts – who lose their jobs. In addition, however, there are large numbers leaving the education system – either dropping out, or reaching the end of their educational career – who struggle to find employment in the context of limited vacancies. While timely cross-country data on youth hires are limited, some tentative indication of this entry margin can be gained by looking at the hiring rate, defined here as the proportion of employed youth who started their jobs in the past three months (Figure 1.23, Panel A). The second quarter of 2020 saw the hiring rate among youth fall substantially – falling, year on year, by more than 5 percentage points in Spain, Greece, Ireland, Portugal, Italy, France and Estonia (Figure 1.23, Panel B).[28] This fall in the hiring rate, sustained, albeit to a lesser degree, in the third and fourth quarters of 2020, suggests that new entrants to the labour market have accounted for a relatively large degree in the increase in joblessness among youth.

Figure 1.23. Hiring rates among youth in Europe



Note: Hirings are defined as the employed who have been continuously in the current job for less than 3 months. The hiring rate is defined as a hiring-to-employment ratio. OECD is the unweighted average of the countries shown. p.p.: percentage points.
Source: OECD calculations based upon data provided by Eurostat and UK Office for National Statistics (Labour Force Survey).

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Inactivity accounted for the majority of the increase in NEET as many young people put their life on hold

Many young people remain in full-time education, and have struggled through the crisis learning at distance. This has taken a heavy toll on the mental health of many young people, and the true costs in terms of lost learning, particularly among the most vulnerable, may not be fully realised for many years. Others, those young people who are now leaving the education system, or had only a very tentative foot in the labour market when the pandemic struck, are particularly exposed – to unemployment in the short-

term, and to greater risk of scarring if they go through a long spell of unemployment and inactivity. Finally, there are those who may have planned to work alongside their studies in order to finance their education. For these young people, the paucity of employment prospects may compromise, not only their labour market activity, but also their educational careers and, as a result, their long-term career prospects.

Work-based learning opportunities and apprenticeships have also been hard hit as employers have often be forced to cut such schemes, or conduct them at distance due to social distancing measures and business closures. In Germany, for example, less than half a million people agreed on new apprenticeship contracts in 2020, down 9.4% from the previous year. In the United Kingdom, only around 61 000 apprenticeship began between March and July 2020 – a year-on-year fall of over 45% (OECD, 2021[44]).

In 2019, the share of young adults not in employment, education or training (NEET) was one of the lowest since the turn of the century. At the end of 2019, prior to the onset of the pandemic, on average across OECD countries, just over 1 in every 10 young people aged between 15 and 29 were NEET. In the early phases of the COVID-19 crisis, however, the NEET rate swelled across the OECD (Figure 1.24, Panel A), reversing the trend of the past decade – rising more than 4 percentage points in countries such as Canada, the United States,[29] Ireland, Turkey, Spain and Portugal. Particularly worrisome in the second quarter of 2020 was the extent to which the increasing number of NEET were concentrated in inactivity.

By the third quarter of 2020, as mobility restrictions diminished, economies began to re-open, and opportunities returned (albeit in limited numbers). Many young NEET returned to active job search and the year on year growth in inactive NEET fell substantially back. Nevertheless, by the fourth quarter of 2020, inactive NEET numbers remained elevated in the majority of countries – including Turkey, the United States, Greece, Italy, Iceland, Ireland, Hungary, Estonia and France (Figure 1.24, Panel B).

This increase in inactive NEET is unsurprising given the restrictions on activity imposed by the virus, and more limited availability of employment and childcare services. Nevertheless, this trend stands in contrast to that seen during the global financial crisis (Carcillo et al., 2015[45]). And, given that periods of inactivity have been shown to be particularly damaging for the career prospects of young people, high levels of inactivity among young NEET risk enhancing scarring. As a result, it will be important to identify and contact those who have dropped out of the education system, and to ensure that those youth who are NEET are not left to drift further and further from the labour market. Often, the most vulnerable young people do not get in contact with the Public Employment Services (PES) or youth services, because they are not entitled to income support, because they lack trust in public authorities, or simply because they are not aware of the support they can receive. Rapid and proactive outreach will be particularly important in the current crisis.

A young person's level of education has typically been an important determinant of NEET status. Across OECD countries, 25-29 year-olds with below upper secondary education are four times more likely to be NEET than those with a tertiary education (OECD, 2020[46]). And, in nearly all OECD countries, youth holding only a low level of education (lower-secondary at most) are strongly overrepresented among NEETs. However, in recent years, young people with a medium to higher level of education have accounted for a growing proportion of the NEET (Carcillo et al., 2015[45]) and in a number of countries this share increased further during the COVID-19 crisis (Figure 1.25). Across much of the OECD, the share of NEETs with at least some tertiary education has risen since the onset of the crisis, and a number of countries saw large increases in the early phases of the pandemic with Denmark, France, Hungary, Latvia, Portugal and Sweden, all seeing year-on-year increases of the share of NEET with a high or medium level of education of over 7 percentage points in Q2 2020. And, while year-on-year growth in the share of NEET with a medium/high level of education fell back somewhat in the third quarter of 2020 in the majority of countries, it increased once more in the final quarter of the year – even outstripping the second quarter year-on-year growth in a number of countries.

Figure 1.24. Change in NEET (15-29)

Percentage point change, year on year, 2020

Note: NEET: not in employment, education or training. In Canada, the large increase in NEET rates in Q2 was driven, in large part, by school closures and the large numbers of youth who, as a result, reported that they were not attending school. See https://www150.statcan.gc.ca/n1/pub/81-599-x/81-599-x2020001-eng.htm for more details. Elsewhere, data refer to enrolment rather than attendance and are, as a result, unaffected by school closures. OECD: average of the countries shown.
Source: OECD calculations based on EU LFS; UK Office for National Statistics (Labour Force Survey); Statistics Canada (Labour Force Survey) and US Current Population Survey.

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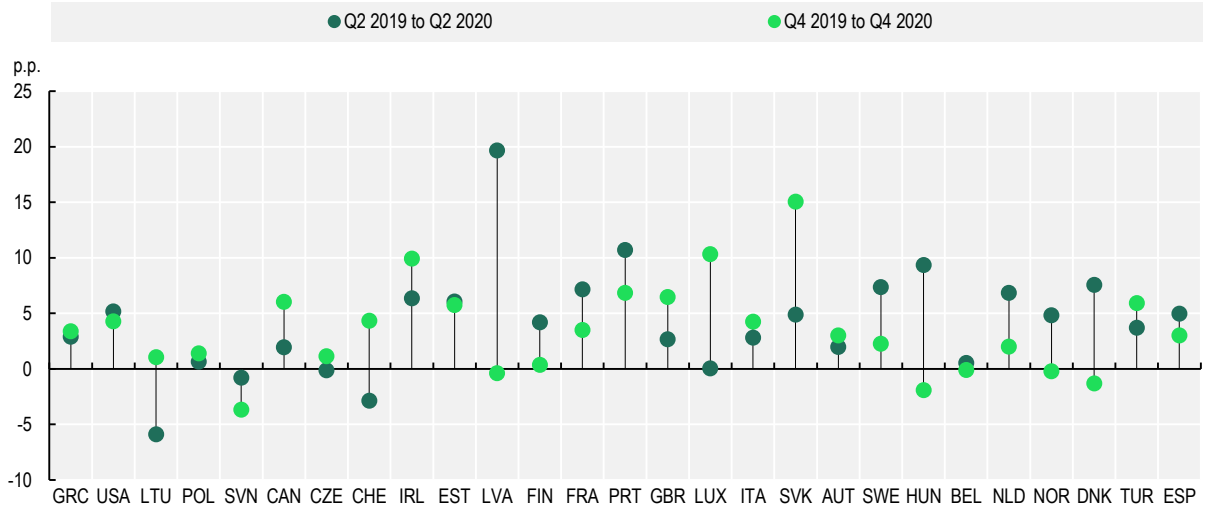
Lack of prior experience makes youth particularly vulnerable to long-term unemployment and scarring

The careers of young people can be significantly disrupted by poor labour market conditions at the time they leave school. The long-lasting labour market consequences, directly related to the impact of economic crises can play particularly heavily on the career trajectories of new labour market entrants. When it comes to youth, scarring tends to work through two channels. For those who are unable to find employment upon labour market entry, spells in unemployment and, particularly, in inactivity can weigh upon their future

employment and earnings prospects (Dorsett and Lucchino, 2018[47]). Those who successfully find a job can, however, also face lasting disadvantage from scarring if they are forced to accept lower level starting positions, if their mobility is compromised by more limited vacancies, or if they are able to access more limited training and promotion opportunities.[30] Indeed research has found that a large recession at time of graduation, not only reduces earnings upon graduation, but the effect persists in subsequent years. Looking at the United States, Altonji, Kahn and Speer (2016[48]) identify an earnings reduction of roughly 10% for the average graduate joining the labour market in a typical recession, with a yearly earnings loss of approximately 1.8% over the first 10 years following graduation. Results of a similar magnitude are found by Oreopoulos, von Wachter and Heisz (2012[49]) who use employer-employee matched data in Canada. There is also evidence that these scarring effects extend to health and well-being (Garrouste and Godard, 2016[50]).

Figure 1.25. Change in the share of NEET with a high or medium level of education (15-29)

Year on year change in the percentage share of middle and high education NEET in total NEET



Note: p.p.: percentage points. NEET: not in employment, education or training.
Source: OECD calculations based on EU LFS; UK Office for National Statistics (Labour Force Survey); Statistics Canada (Labour Force Survey); and Current Population Survey (Census Bureau).

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Certain groups of youth may be particularly vulnerable to the effects of scarring. For example, research has found that lower skilled youth, as well as those graduating from fields characterised by relatively low pay, tend to be particularly vulnerable to scarring effects – see Kroft, Lange and Notowidigdo (2013[27]) and Altonji, Kahn and Speer (2016[48]). Furthermore, the effects of the distributional burden tend to differ by recession (Altonji, Kahn and Speer, 2016[48]). And, there may be reason to believe that the social distancing and home working brought about by COVID-19 will have a negative impact upon the career prospects of even those young people who have managed to secure a job – particularly in fields where post-schooling human capital accumulation is important.

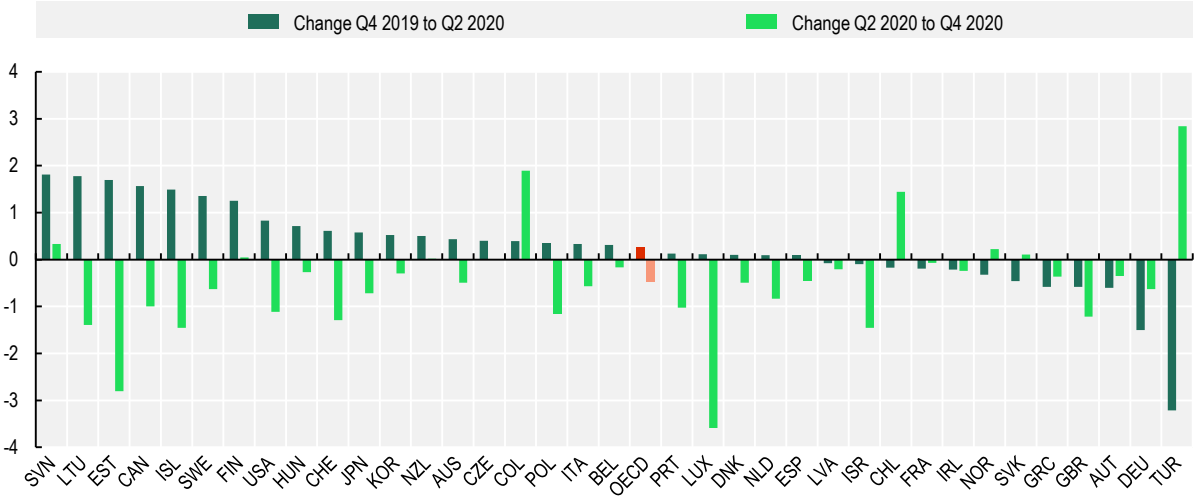
The disproportionate impact on the labour market attachment of women has dissipated in a number of OECD countries

Despite substantial progress in recent decades, women still tend to be less firmly attached to the labour market than their male colleagues. Women in employment tend to work fewer paid hours than men, earn less, and have shorter job tenure – see OECD (2018[24]; 2020[51]; 2020[52]; 2020[53]). This can leave them more vulnerable than men and easier to lay off. On top of this vulnerability, and in contrast to previous crises, which are often concentrated mainly in male-dominated sectors – see for example Bredemeier, Juessen and Winkler (2017[54]) – retail, catering, and hospitality – a sector characterised by high female employment – suffered particularly heavily at the start of the COVID-19 induced crisis. The rise of the service economy in recent decades has been found to account for an important share of the observed trends in the number of hour's women work, as well as their relative wages – see Ngai and Petrongolo (2017[55]) and Blau and Kahn (2017[56]). And the negative impact on employment in these sectors, prompted by the COVID-19 pandemic, led to concern that greater job and income loss among women may undermine recent progress made toward closing the gender gap (Adams-Prassl et al., 2020[33]). Indeed, in the initial phases of the pandemic, the majority of OECD countries saw the gender employment rate gap increase – by more than 1 percentage point in a number of countries, including Slovenia, Canada, Sweden and Finland (Figure 1.26). However, the following quarter saw a reversal of this widening gender employment gap in the majority of countries, albeit with a number of exceptions including Slovenia, Lithuania, Canada, Sweden, Finland, Hungary, Colombia and Belgium.

Nevertheless, as well as being overrepresented in the lockdown sectors, women also make up a disproportionate share of workers in many of the sectors, defined as essential, that have often been required to work additional hours to cope with heavy demand (see Box 1.3). And, beyond jobs either shut down or defined as essential, the impact of the pandemic on employment in the early phases of the crisis was, to a large extent, dependent on the ability to work from home – which tended to be possible in many female dominated sectors such as education.

Figure 1.26. Change in gender employment rate gap

Percentage point change, seasonally adjusted



Note: The gap is calculated as the difference in employment rates between men and women aged 15-64 years old.
Source: OECD Short-Term Labour Market Statistics Database.

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As understanding of COVID-19 advances, and as new variants-of-concern emerge, restrictions are constantly evolving. In later phases of the crisis, many of those working in male-dominated sectors (such as construction, repairs, and large parts of manufacturing) that do not require close interaction with colleagues or clients have been able to return to work. At the same time, as restaurants have once again closed, and as new more contagious strains of the virus have led to school closures in a number of countries (see Figure 1.2), many of both the push and pull factors that kept women from work at the start of the outbreak have returned. These trends may still be reflected in later data releases.

Indeed, increased caregiving typically affects gender disparities in labour market outcomes slowly, over time, as women – in particular – move down to part-time work, leave the labour market entirely, or merely search for jobs with more flexibility or a shorter commute. These choices often translate into slower wage growth – through limiting the pool of jobs, weaker bargaining power and scarcer opportunities for promotion once *in situ* – see e.g. OECD (2018[24]). In this respect, the pernicious repercussions of the pandemic may yet be felt for many years.

Reduced hours enabled women to smooth the employment impact in a number of countries

In recent years, the earnings penalty associated with motherhood has remained stubbornly stable (Ngai and Petrongolo, 2017[55]). And, indeed, beyond what happens to their job, the labour market attachment of women has been tested by the closure of school and childcare facilities that has accompanied efforts to contain the virus (see Figure 1.2). The increased care burden that accompanied widespread school closures fell largely upon the shoulders of women – see Hupkau and Petrongolo (2020[57]) in the United Kingdom, Farré et al. (2020[58]) in Spain, and del Boca et al. (2020[59]) in Italy – prompting many to withdraw from the labour market entirely – even in cases where their jobs remain active.

In a number of OECD countries that have introduced JR schemes, or specific care leaves, women have been able to request to move to reduced hours to avoid being pulled from the labour market by home schooling and care responsibilities.[31] As a result, the impact on the employment rate gap of the first wave of the virus was not clear cut, but rather varied across countries (Figure 1.26).[32]

When it comes to hours, the magnitude of impact on hours lost following the initial impact of the crisis tended to be larger among women than among men – both along the intensive and extensive margins (Figure 1.27, Panels A and B). – However, this disparate impact appears to have been short lived in many countries or even reversed. Indeed, hours lost in the third quarter of 2020 were comparable, with male hours falling marginally further than those of women – 4.3 percentage points among women on average across the OECD, and 4.5 percentage points among men. These trends tend to suggest that, for women, policies that channelled the impact of the crisis through the intensive margin appear to have been relatively successful in cushioning the impact of the crisis and enabling a rapid return of women to work. Indeed, in the United States, where the bulk of the impact was felt through the extensive margin, the fall in hours among the female workforce in the third quarter remained larger than that among men.[33]

The return of the virus in many countries during the fourth quarter of 2020 once again saw hours worked by women fall marginally more, on average across the OECD, than those worked by their male counterparts – 6.2% among women compared to 5.7% among men (Figure 1.27, Panels C and D). And, while the intensive margin again absorbed the majority of this increase, joblessness carried a larger share of the fall in hours during this second wave – particularly among women. However, particularly during this second wave of restrictions, the more substantial fall in hours among women was driven by large disparities in a handful of countries – such as Chile, Slovenia, Turkey and Lithuania. In many countries, particularly across Europe, the impact on hours worked among women during Q4 was comparable or, in many cases, more limited, than among men.

Deep and wide government support has protected the income of many households

Despite the substantial impact of the pandemic on employment and earnings, governments across the OECD were able to protect household income through deep and wide use of government support – see OECD (2020[42]; 2020[5]). Indeed, between Q4 2019 and Q2 2020, despite falling GDP per capita by 12.4% across the OECD area, real household gross disposable income grew by 3.9% on the back of largescale COVID-19 government support measures. Such growth was particularly marked in Canada and in the United States where large but temporary support led to growth of 12.6% and 11.1%, respectively (Figure 1.28, Panel A). In these two countries, however, this growth has since retrenched somewhat and, by the fourth quarter of 2020, growth in household disposable income had fallen to a more modest 6.6% and 4% since pre-pandemic levels. This is reflective of the temporary nature of the increase in net transfers to households (Figure 1.28, Panel B).

Smaller increases in disposable income were also observed between Q4 2019 and Q2 2020 in Ireland (4.5%), Australia (4.1%) and Poland (3.5%). In Ireland and Australia this growth continued through Q4 2020. Despite the increase in net cash transfers to households in almost all countries (Figure 1.28, Panel B), many still experienced reductions in disposable income per capita in Q2 2020. However, Chile, Austria, Sweden, Hungary and Slovenia, as well as Italy, Mexico and the Netherlands made strong progress in reversing the negative shock to household disposable per capita income experienced between Q4 2019 and Q2 2020.

These figures provide some insight into the extent to which support measures have been effective in maintaining livelihoods in the face of the COVID-19 pandemic. However, they tell us little about how the impact of the pandemic on disposable income was distributed across the income distribution, and among certain socio-economic groups; they tell us little about the success of government support in protecting the most vulnerable segments of the population.

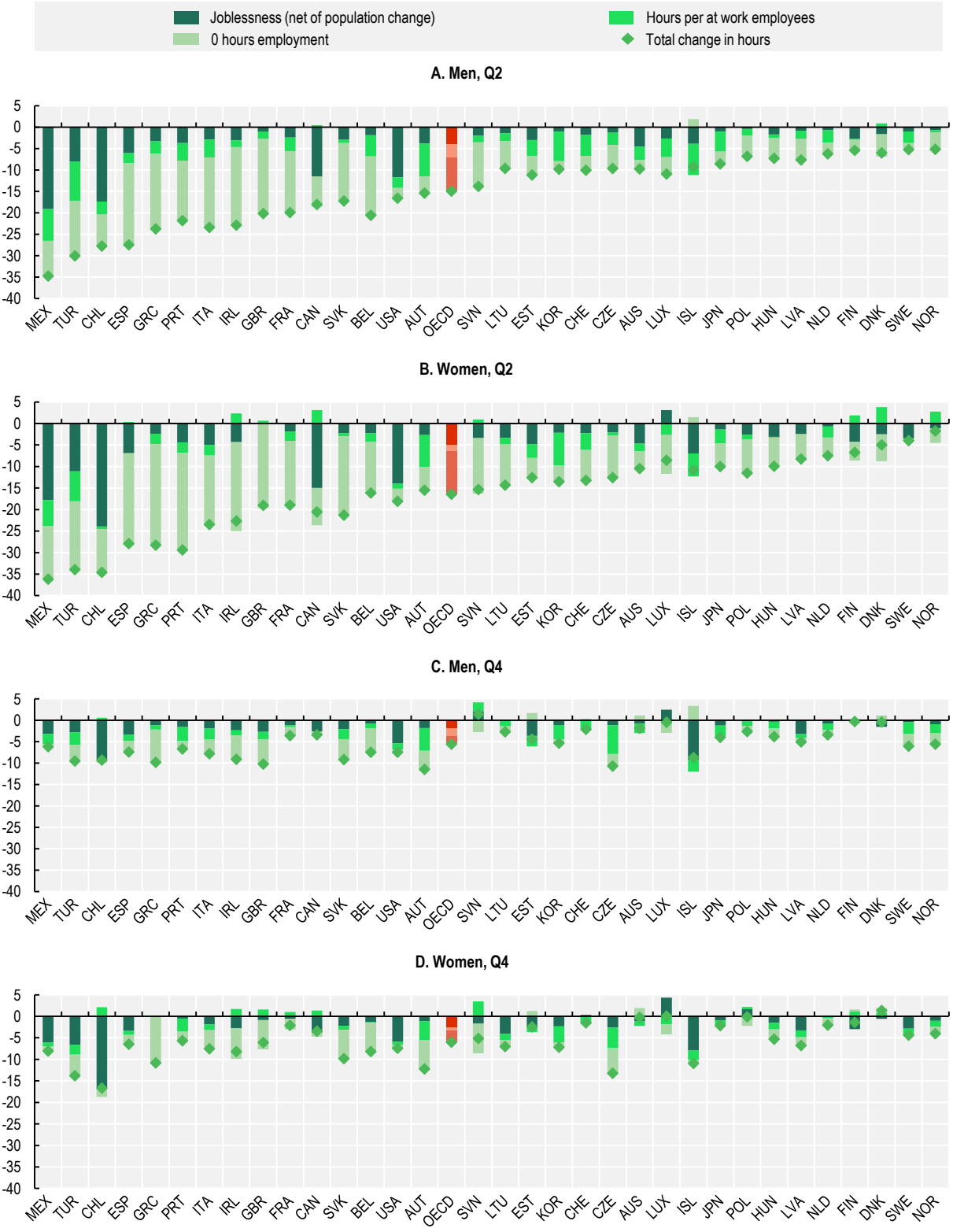
But some remain vulnerable, and many challenges remain

Unfortunately cross-country micro data on the impact of government transfers are not yet available. Reliable indicators of economic inequality at a high frequency are lacking, with most official statistics on income inequality available only on an annual basis, and often with a long delay. Fortunately, however, recent research – see for example Aspachs et al. (2020[60]), Bick and Blandin (2021[61]), Chetty et al. (2020[62]), Cox et al. (2020[63]) and Ganong and Noel (2019,[64]) – has been able to harness big data, from private sources, to understand the rapid changes and to inform policy making in a timely manner. Such work provides tentative evidence that, while rapidly designed and implemented measures have done a remarkable job in protecting the economic well-being of households on average, the labour market characteristics of certain groups may have left them vulnerable and disproportionately exposed (see Box 1.6).

Nearly a year and a half into the COVID-19 induced crisis, there is, once again, hope that there is light at the end of the tunnel. But even now, as economic activity resumes, labour markets across the OECD face enormous challenges. As the crisis has evolved, so those most affected by its ravages have shifted. Certain groups however – including those in low-paid occupations, the low-educated and the young – have consistently been in the eye of the storm. These groups not only saw the most substantial impact on their hours of work, but have been more likely to experience this impact through joblessness. This finding has important implications: it sheds light on the *de facto* targeting of employment support policies and the potential impact this has on inequalities, as well as it informs us about the likely long-term implications of the crisis on the careers of those affected.

Figure 1.27. Hours decomposition by gender

Percentage change, year on year, 2020



Note: The figure reports the contribution of each category to the change in total hours. Countries are ranked by increasing change in total hours in Q2 2020 (see Figure 1.10). Time series comparisons for Mexico: in Q2 2020, the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country. OECD is the unweighted average of the countries shown.
Source: OECD calculations based on the EU LFS; UK ONS (Labour Force Survey); Australian Bureau of Statistics; Statistics Canada (Labour Force Survey); Japanese Labour Force Survey; Korean Economically Active Population Survey; National Statistics Institute of Chile (*Encuesta Nacional de Empleo*); Mexican National Institute of Statistics and Geography (ENOE and ETOE); and the US Current Population Survey.

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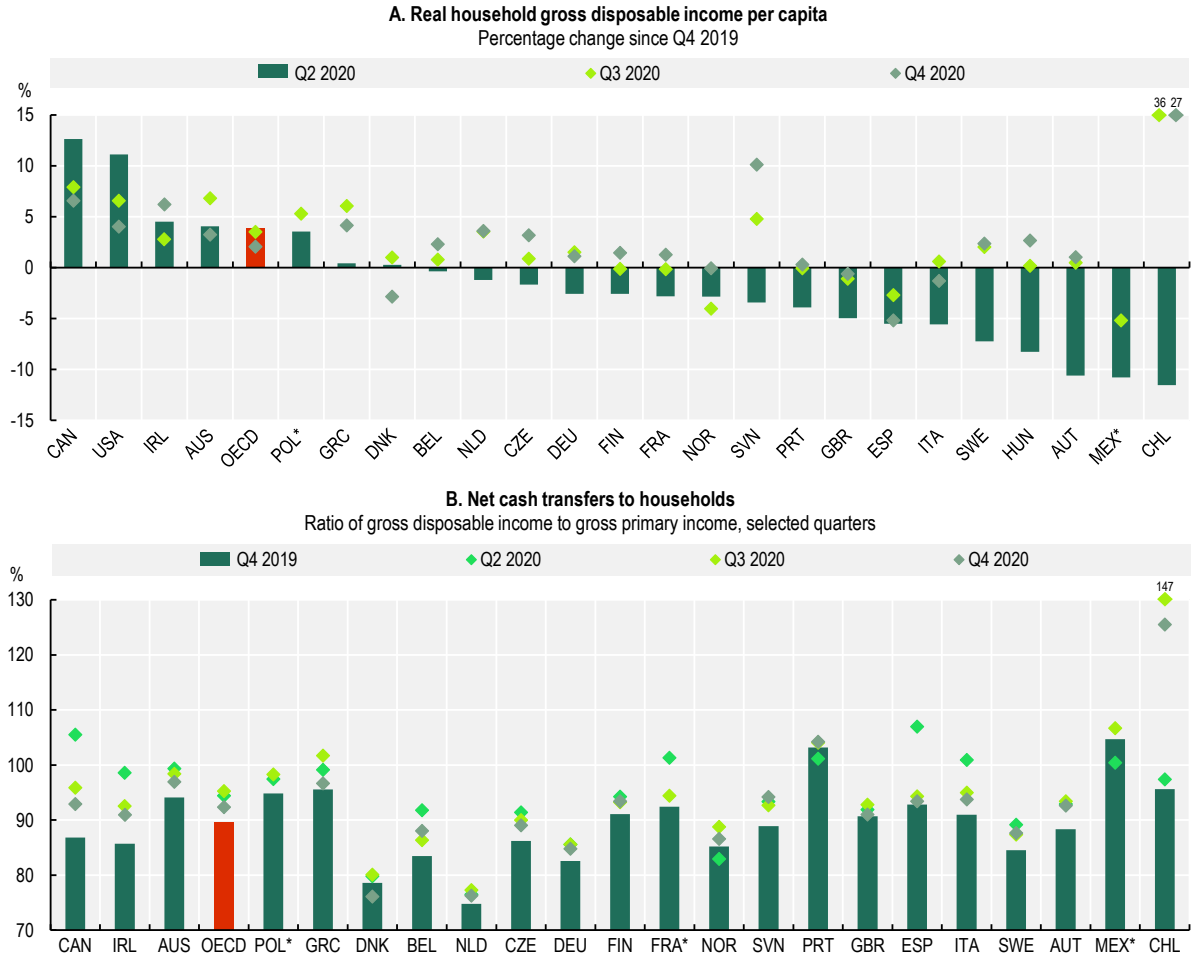
Figure 1.28. Household income was relatively protected



Note: * Latest data refer to Q3 2020 for France (Panel B), Mexico and Poland (Panels A and B). Gross primary income is the income that accrues to households as a consequence of their involvement in the production process (such as compensation of employees, income from self-employment) or as a consequence of ownership of assets that may be needed for purposes of production (net of any payments on liabilities). Household gross disposable income is derived from primary income by taking into account net current transfers; for example, the payment of taxes on income and wealth and social contributions, and the receipts of social benefits from government. It does not include, however, in-kind transfers, such as those related to health and education provided for free or at economically insignificant prices by government. Taxes deducted from income do not take into account the payment of consumption taxes (such as value added taxes). The ratio of gross disposable income to gross primary income shows the impact of the redistribution of income, mainly through government intervention, on the income levels of households.
Source: OECD National Accounts Household Dashboard.

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Box 1.6. Cushioning the impact of the pandemic on inequality in Spain

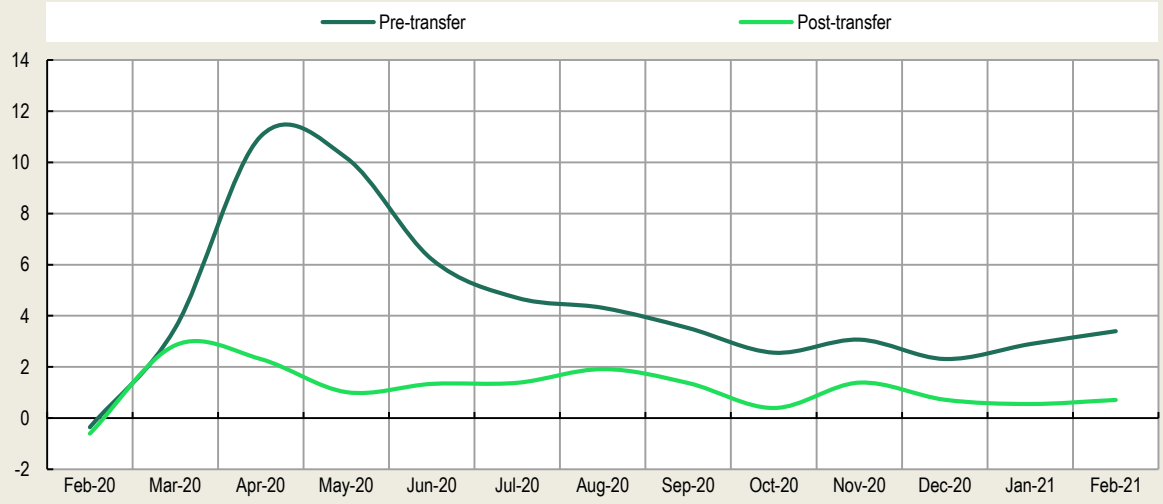
While detailed cross-country micro data on incomes will not be accessible for some time, data made available by one of Spain's largest banks, CaixaBank, are able to shed light, not only on the impact of the crisis on incomes, but also on the extent to which the welfare state has cushioned this impact. Containing detailed real-time information on transfers, wages and subsidies, anonymised micro data of this type, extracted from banking records, is well suited to assessing the effect of rapidly introduced government policies in a timely manner. The data cover all active account holders receiving either a government subsidy, or any payroll payments from a private or public employer. And, covering nearly 3 million retail depositors, the sample is highly representative of the Spanish working population.

Early analysis of the data suggests that the initial impact of the crisis was felt most heavily among those at the lower end of the wage distribution, with those in lower wage brackets being 20% more likely to have lost all of their wages between February and April 2020 than they were the previous year (Aspachs et al., 2020[60]). Indeed, changes in pre-transfer wage income led to a sharp increase in inequality such that, by April 2020, the Gini index reached over 11 percentage points above that seen the previous year, before falling from May as lockdowns eased (Figure 1.29).

The extent to which public sector transfers – such as unemployment benefits and support provided under the Spanish JR scheme (ERTEs) – have been relatively successful in protecting the most vulnerable is evidenced by the much more moderate increase in post-transfer income inequality. Post-transfer inequality, which increased initially in March 2020, began to fall back to levels close to those seen the previous year already as early as April 2020 and have remained relatively stable ever since.

Figure 1.29. Government transfers smoothed the spike in inequality during the pandemic

Evolution of Pre- and Post-transfer Gini, percentage point change, year on year



Note: To ensure payrolls or transfers correspond to only one individual, the sample is restricted to accounts with a single account holder, or accounts receiving wages from only one employer. Public benefits paid by the Social Security include job retention schemes (known as ERTE in Spain). Year-on-year changes in the Gini coefficient are used to smooth out seasonal fluctuations such as bonus payment in February.
Source: OECD calculations based upon data provided by CaixaBank Research, CaixaBank Inequality Tracker (2020[65]), https://inequality-tracker.caixabankresearch.com/.

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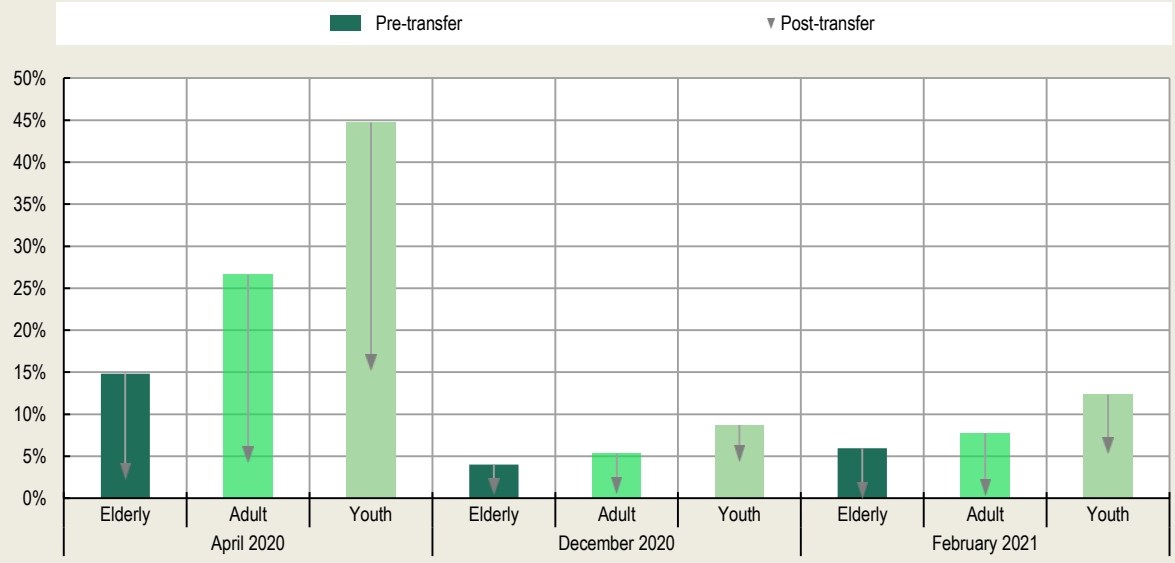
However, these patterns – both pre- and post-transfer – differ substantially among certain groups of the population. Among the youngest cohorts – aged between 16 and 29 – the increase in the pre-transfer Gini index experienced in April 2020 was particularly dramatic, rising to Levels 45% higher than those seen in April 2019 (Figure 1.30). Among older cohorts (aged 50 to 64), the increase in the pre-transfer Gini index was more muted. This pattern may be reflective of the relative dominance of the extensive margin in the reduction in hours worked among youth following the onset of the crisis.

Furthermore, while public transfers partially mitigate the large increase in the Gini index among the young, post-transfer inequality remains substantial – relative to levels seen in 2019. Indeed, while public transfers appear to have been rather successful in shielding the vulnerable among prime-age and elderly adults, they do not appear to have been fully able to reach many of the most vulnerable young. This is likely due, in part, to their relative concentration in less secure contracts which impacts upon the tendency among young workers to benefit proportionally less from JR schemes and working time reductions (Figure 1.21) and upon their eligibility to unemployment insurance – see OECD (2020[5]; 2020[42]).

Figure 1.30. Transfers have not been sufficient to offset inequalities among the young

Percentage increase in pre and post transfer within-group Gini coefficients compared from February 2020



Note: To ensure payrolls or transfers correspond to only one individual, the sample is restricted to accounts with a single account holder, or accounts receiving wages from only one employer. Public benefits paid by the Social Security include JR schemes (known as ERTE in Spain). Presented figures are percentage changes from the February-2020 Gini coefficients computed after factoring in year-on-year changes. The elderly category is defined as those aged 50-64, the adult category as those aged 30-49, and youth as those aged 16-29.
Source: OECD calculations based upon data provided by CaixaBank Research and Aspachs et al. (2020[60]), "Real-Time Inequality and the Welfare State in Motion: Evidence from COVID-19 in Spain", Aspachs et al. (2020[66]), "Tracking inequality in real-time: impact of the activity rebound", and CaixaBank Inequality Tracker (2020[65]), https://inequality-tracker.caixabankresearch.com/.

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1.4. Looking forward: Evidence on the impact of the pandemic on ongoing megatrends and on the path towards the recovery

Despite efforts to reduce the hardship of the crisis, the economic and employment effects of the COVID-19 crisis are likely to extend well beyond the short term, into the medium and long term.

This section concludes the chapter by reviewing the available evidence about the acceleration of long-standing structural changes and their impact on the world of work. In particular, many companies facing severe containment guidelines and uncertainty may have sped up their plans to digitalise and automate production processes. This may, in turn, lead to a 'double impact' on vulnerable workers who have lost their jobs during the pandemic and may not be able to recover them in its aftermath due to accelerated automation and technology adoption.

1.4.1. Has the COVID-19 crisis hit workers who were already at high risk of labour market displacement in the near future?

Before the COVID-19 pandemic hit countries around the globe, technological change, automation, digitalisation as well as the advent of artificial intelligence and the use of big data were already among the megatrends reshaping societies and the world of work – see e.g. OECD (2019[67]).

Despite initial fears of potential massive technological unemployment, recent evidence on the impact of automation on labour markets suggests that employment levels have been trending upwards, with the exception of the period of global financial crisis (GFC). While there is no clear-cut evidence of a negative effect of automation on employment at the aggregate level, important concerns remain as to the negative effect that technological change (including digitalisation and automation) can have on specific groups of individuals such as the low skilled or those with poor digital skills. Further evidence (Georgieff and Milanez, 2021[68]) indicates, in fact, that occupations that were at higher risk of automation in 2012 experienced lower employment growth than average, or even modest declines in employment levels in the subsequent period, up to 2019. The risk that technological change could create more inequalities is exacerbated by the fact that many of the workers employed in occupations at high-risk of automation are generally low-skilled or older workers who are less likely to engage in lifelong learning and retraining (OECD, 2019[69]; 2021[70]).

Even in the aftermath of the COVID-19 crisis, the pace of technology adoption is expected to remain unabated or even accelerate (World Economic Forum, 2020[71])). Similarly, other megatrends such as population ageing and climate change are still expected to play a key role in shaping employment trends, boosting the demand for workers in health care or in sectors related to the green economy, in turn, likely spurring further adoption of new technologies. In order to anticipate these changes, some countries have produced employment projections (see Box 1.7 and Annex 1.D) that account for the short to long-run effects that megatrends are expected to have on jobs.

Most of the available employment projections were elaborated prior to the COVID-19 pandemic and, therefore, account for structural factors driving employment growth and decline but not for the expected rebound (or further decline) that employment in different occupations is likely to experience in the aftermath of the COVID-19 crisis, as economic activity is gradually restarting and vaccines are rolled out to increasingly larger shares of the population.

These employment projections, however, allow to investigate the key question as to whether jobs that before the COVID-19 crisis were already facing a high risk of displacement due to megatrends, have also been hit particularly hard during the pandemic downturn, leading to a double negative effect on already vulnerable workers.

Box 1.7. Long-run employment projections in Australia, Canada, the United Kingdom and the United States

Predicting future employment trends is a difficult tasks and some countries have developed specific projections that are used with the purpose of anticipating future changes in labour markets (see Annex 1.D). Most available projections at the country and occupation level show that substantial employment growth is expected in ICT and health care related jobs. In Australia, for instance, engineering professionals (others) and ICT support and test engineers are projected to grow by approximately 30% by 2024 while computer network professionals by 26%. Occupations in the health care sector are also expected to increase their employment levels both in the medium and in the long run. Projections elaborated prior to the COVID-19 pandemic foresee a substantial increase in employment for specialist physicians (+31% in Canada by 2028), nurse practitioners (+52% in the United States by 2029) and in caring personal service occupations (+5% in the United Kingdom by 2024). Consistent with previous literature (OECD, 2017[72]; 2021[73]), employment in several routine and low-skilled occupations is expected to decline substantially in the short term and to further deteriorate in the long-run. Employment for secretaries, for instance, is expected to decline by 30% in the next 4 years in Australia and by 12% in the United Kingdom by 2024 (Secretarial and related occupations). Jobs for data entry clerks and word processors and typists are also expected to decline by 20% and 36% in Canada (by 2028) and the United States (by 2029), respectively. This section makes use of the available country specific employment projections available in Australia, Canada, the United Kingdom and the United States to investigate the association between the evolution of jobs postings published online during the COVID-19 crisis and projected employment trends produced before the pandemic. Other existing projections point to similar broad trends but have not been used here as their disaggregation at the occupational level is not sufficient to match in a meaningful way the fine-grain information contained in online vacancies used in this analysis.

Source: http://occupations.esdc.gc.ca/sppc-cops/content.jsp?cid=occupationdatasearch&lang=en, https://www.gov.uk/government/publications/uk-labour-market-projections-2014-to-2024, https://www.bls.gov/mlr/2020/article/projections-overview-and-highlights-2019-29.htm, https://lmip.gov.au/default.aspx?LMIP/GainInsights/EmploymentProjections, accessed 25 February 2021.

Recent evidence shows, for instance, that the adoption of digital technologies during the coronavirus pandemic has helped protect the jobs of millions of workers who were able to carry out their activities remotely and working from home – see OECD (2020[5]; 2021[73]) and Chapter 5. But, while many employers and employees have used digital technologies to weather the COVID-19 crisis, others have instead been unable to do so due, among other reasons, to the lack of adequate skills or the necessary technological infrastructures in their workplace.

Mounting evidence suggests that vulnerable workers, especially those facing higher risks from automation and digitalisation, may have been particularly exposed during the COVID-19 crisis, experiencing a more pronounced employment hit than other workers. Going forward, these same workers could experience a far weaker recovery as many of the jobs and tasks they held before the pandemic may end up being automated in the meantime. According to the UK Commission on Workers and Technology,[34] for instance, approximately 61% of jobs furloughed in the first half of 2020 in the United Kingdom were in sectors where automation is most likely to lead to job losses. Similarly, a recent report from the Royal Academy of Science (Wallace-Stephens and Morgante, 2020[74]) shows a positive and significant correlation between the probability of automation and the JR scheme take up in the United Kingdom, which can be considered a rough measure of the contraction of activity in different occupations (see also Section 1.3 and Chapter 2).

To investigate the association between the impact of the COVID-19 crisis on jobs and workers' vulnerability to megatrends, Figures 1.32, 1.33, 1.34 and 1.35 combine information on the evolution of job postings

published online during the crisis and country-specific employment projections that account for the impact that megatrends are expected to have on future labour markets.

Results suggest that, on average across the countries for which information is available, many of the jobs that were projected to decline the most due to structural changes already ongoing prior to the pandemic have also bore the brunt of the current crisis, experiencing among the strongest declines in the number of new job openings published during the pandemic. In Australia, for instance, online job postings for Secretaries and Personal assistants dropped in 2020 by 28% and 37% relative to 2019. Prior to the pandemic, employment in those occupations was already projected to decline by 30% and 9% by 2024 due to structural trends, among which technology adoption.

Similarly, in Canada, online job postings for Data entry clerks or Banking insurance and other financial clerks decreased by 39% and 31%, respectively, relative to the same period in 2019. Projections elaborated prior to the pandemic were already expecting those jobs to decline by 20% and 14% by 2028 (relative to 2019). Results are qualitatively similar for the United States, where travel agents and word processors and typists, jobs projected to decline significantly in the next decade, also experienced among the strongest drops in the number of new job postings published online during the pandemic. Data for the United Kingdom show a particularly strong and statistically significant correlation between the projected decline in employment and the drop in new job postings during the pandemic.[35] In particular, occupational groups such as Secretarial and related occupations or Process, plant and machine operatives were already expected to decline by more than 15% and 7%, respectively, by 2024 but they have also been occupational groups hit particularly hard by the pandemic, experiencing a decrease in online job postings of 32% and 14%, respectively, in 2020 relative to the previous year.

Results above also show that those jobs that have performed relatively well during the COVID-19 crisis are also among those that, prior to the pandemic, were projected to grow the most in coming years. Not surprisingly, among the occupations with the strongest increase in online job postings during the pandemic, several of those jobs are in the health care sector: Aged and disabled carers (Australia, +35%), Licensed practical nurses (Canada, +39%), Community health workers (United States, +91%) or Health professionals (United Kingdom, +25%).

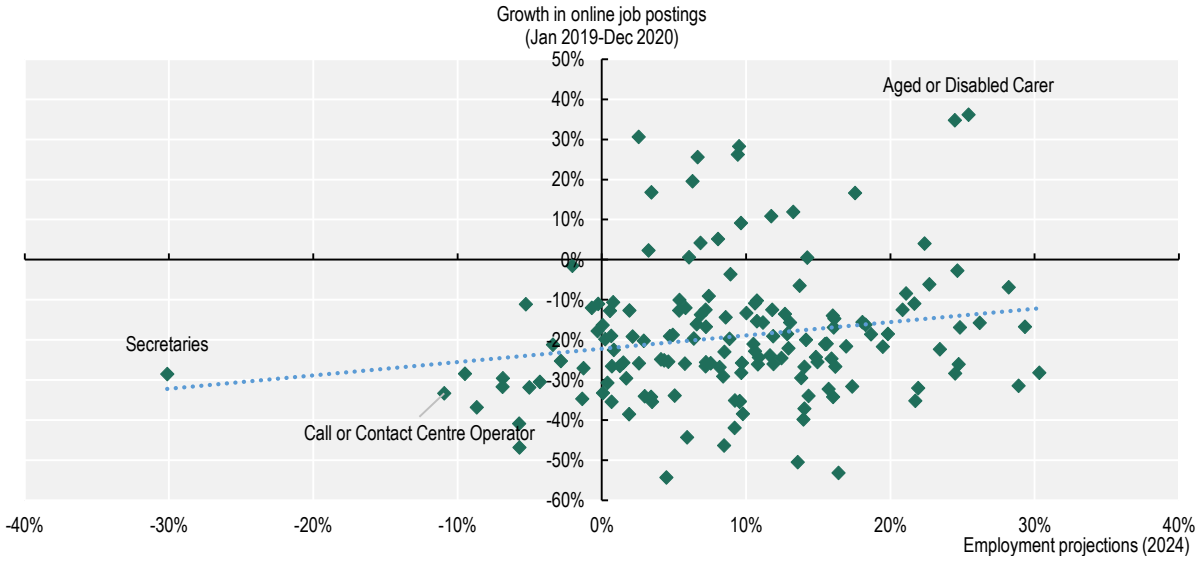
While the extreme pressure on countries' health care systems is surely at the core of the sudden increase in demand for these professionals, it is also worth noticing that those are occupations that were already projected to grow well above 10% prior to the COVID-19 shock. In addition to health care jobs, other occupations whose employment is projected to increase significantly and that also experienced a strong demand during the crisis are in the green-economy sector, such as Solar photovoltaic installers (United States, +91%).

These results hint to the existence of an association between the vulnerability of certain workers to megatrends and the intensity with which the crisis has hit them (and their jobs) in the 2020.

Despite being suggestive, these results also show a wide heterogeneity across occupations which can be hard to disentangle with the available data. Regression analyses (see Annex 1.C), however, indicate that the association between the impact of the COVID-19 on jobs and the projected employment trends due to megatrends remains significant also when controlling for time-invariant occupational group effects.

While caution should be used when interpreting the results in this section – as it may be still too early to say whether the COVID-19 crisis has indeed accelerated ongoing megatrends – there are several reasons to believe that labour markets may not go back to 'business as usual' after the crisis and that, instead, the effect of the COVID-19 pandemic will extend to a more profound reorganisation of work, accelerating, among others, the adoption of new technologies, the importance of certain occupations in the labour market (in particular in the health care sector) and increasing the risk of displacement for those who were already particularly vulnerable prior to the crisis.

Figure 1.31. Australia: The association between the growth of online job postings during the pandemic and medium to long-term employment projections by occupation



Note: Values on the Y-axis represent the growth in online job postings collected from January 2019 to December 2019 and those from January 2020 to December 2020. Values on the X-axis represent the projected growth in employment by occupation. The projection time horizons is 2019-24. Each dot represents a 4-digit occupation as defined in the Australian and New Zealand Standard Classification of Occupations (ANZSCO). Outliers with limited information (fewer than 200 online job postings per month over the period) have been dropped.
Source: OECD calculations based on Burning Glass Technologies data and Australia Labour Market Information portal (LMIP).

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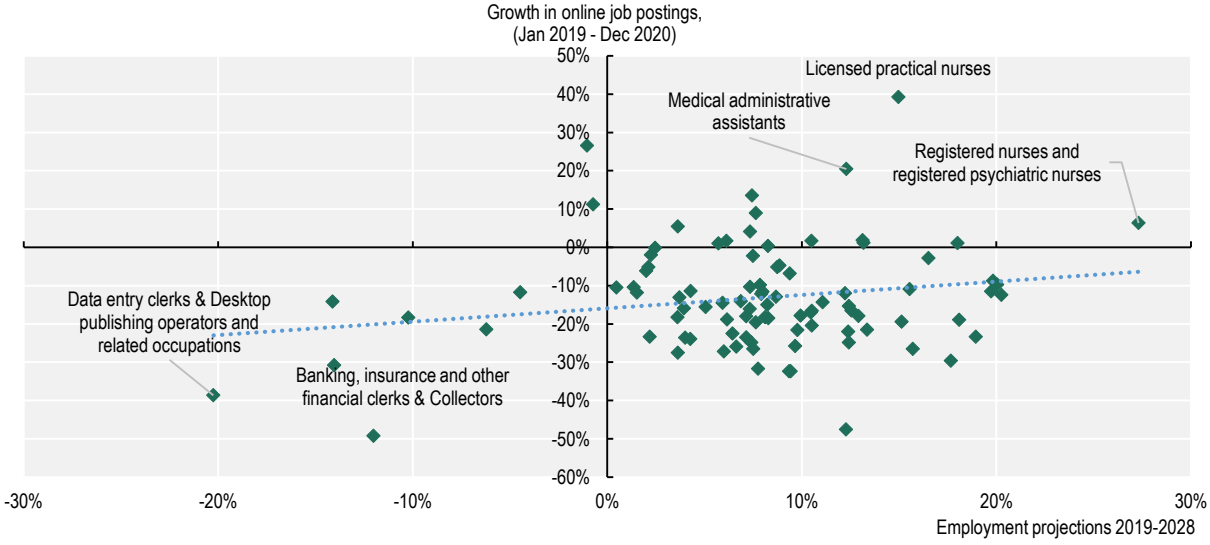
Figure 1.32. Canada: The association between the growth of online job postings during the pandemic and medium to long-term employment projections by occupation



Note: Values on the Y-axis represent the growth in online job postings collected from January 2019 to December 2019 and those from January 2020 to December 2020. The projection time horizon is 2019-28. Each dot represents a 4-digit occupation as defined in the Canadian National Occupational Classification (NOC). Outliers with limited information (fewer than 200 online job postings per month over the period) have been dropped.
Source: OECD calculations based on Burning Glass Technologies data and Canadian Occupational Projection System (COPS).

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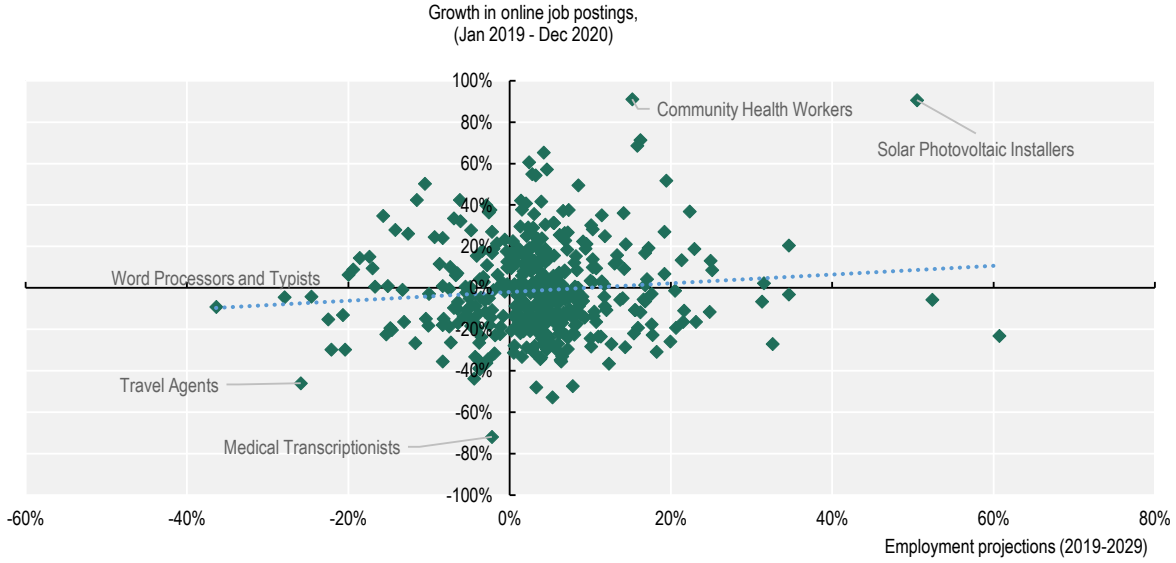
Figure 1.33. United States: The association between the growth of online job postings during the pandemic and medium to long-term employment projections by occupation



Note: Values on the Y-axis represent the growth in online job postings collected from January 2019 to December 2019 and those from January 2020 to December 2020. The projection time horizon is 2019-29. Each dot represents a 6-digit occupation as defined in the US Standard Occupational Classification (SOC). Outliers with limited information (fewer than 200 online job postings per month over the period) have been dropped.
Source: OECD calculations based on Burning Glass Technologies data and the United States Bureau of Labor Statistics (BLS) employment projections.

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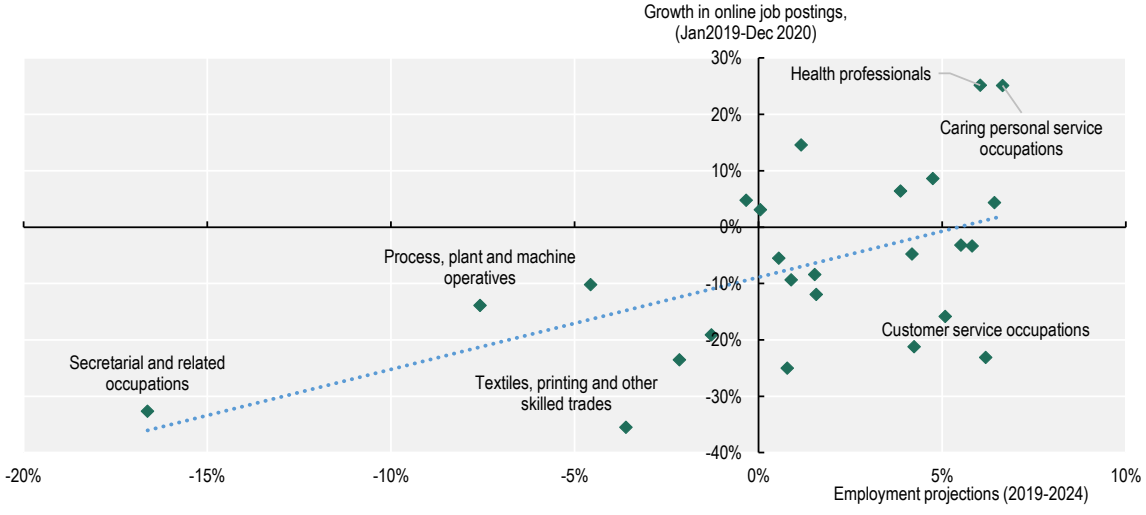
Figure 1.34. United Kingdom: The association between the growth of online job postings during the pandemic and medium to long-term employment projections by occupation



Note: Values on the Y-axis represent the growth in online job postings collected from January 2019 to December 2019 and those from January 2020 to December 2020. Values on the X-axis represent the projected growth in employment by occupation. The projection time horizon is 2020-24 (United Kingdom). The evolution of online job postings is calculated for 2-digit occupations of the UK Standard Occupational Classification (UK SOC) to allow for comparison with employment projections.
Source: OECD calculations based on Burning Glass Technologies data and UKCES Working Futures employment trends and projections.

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The uncertainty as to when human 'manual' labour will be fully available again, for instance, is likely to accelerate firms' plans to adopt automation technologies earlier than expected. A recent survey of large employers run by the World Economic Forum (World Economic Forum, 2020[71]) indicates that, in addition to cloud computing, big data and e-commerce, employers increased their interest for encryption, nonhumanoid robots and artificial intelligence – signalling that more investment is likely to go into digitalisation of processes and the deployment of automation technologies.

Similarly, new work by the Bureau of Labor Statistics in the United States (Ice, Rieley and Rinde, 2021[75]) suggests the possibility of widespread, permanent changes to consumer and firms' behaviours. Increasing adoption of telework, even after the end of the health crisis, are expected to have both direct and spillover effects on individuals, firms and the economy through changes in the need for office space, individual choices about non-residential construction, the demand for food and accommodation and the location of retail stores, and that for information technology (IT) and computer-related occupations, particularly those involved in IT security. Public demand for better prevention, containment, and treatment of infectious diseases is also expected to lead to increased scientific and medical research funding and to a further boost to the health care sector on top of what already projected.

If confirmed, these trends would imply that workers in occupations that have been hit hard during the pandemic may struggle more than others to return to their previous job (assuming they lost it during the crisis), not only because of the layoffs in their sector (which are likely to take time to fully recover) but also because firms may use the crisis period to accelerate pre-existing trends (automation, digitalisation as well as the boost in the demand for professionals in the health care and green sectors), restructuring profoundly the way they produce and combine human labour with new technologies.

1.4.2. Retraining pathways in the aftermath of the COVID-19 crisis

Predicting what will happen in the near future can prove to be extremely difficult, especially as many intertwined factors are likely to play a role in the path towards recovery. With the ongoing (or even accelerated) speed of technology adoption, it is reasonable to assume that many of the workers who will be able to go back to the jobs they held before the pandemic, will still experience significant changes in the tasks they will be expected to perform in their jobs. More vulnerable workers, instead, may not even be able to re-enter the labour market in their previous roles and will need to consider career changes as some of their jobs are expected to disappear.

In both cases, however, retraining and upskilling will be key for all workers going forward as some will need to update their skills for new tasks and others will retrain and look for new employment opportunities through career changes. The identification of targeted and responsive retraining pathways will, therefore, be key for individuals to navigate such uncertain and challenging landscape and to reduce the risk of persistent skill mismatch and under-qualification among the most vulnerable workers.

During the pandemic several countries developed short training programmes to meet the pressing demand for frontline and health care workers. In many cases, training programmes have been targeted at health and medical professionals who needed to acquire specific knowledge related to the pandemic response (OECD, 2020[76]). In other cases, the training recipients have been workers displaced by the pandemic whose skills were deemed to be relevant to fulfil roles in high-demand essential services (see Box 1.8).

Box 1.8. Filling skill gaps as a response to the pandemic

During the worst epidemic waves, many of the retraining measures adopted by countries were meant to fill pressing skill gaps that had emerged particularly in the health care sector or in related occupations. Targeting workers who already had some relevant skills could help to keep training times short and respond to the crisis more effectively. In this context, the Sophiahemmet University and the flight company SAS in Sweden offered short medical training to laid-off staff in the airline industry, recognising that airline crews usually work under high-pressure and that many of those skills could be useful during the health emergency, including when performing first aid, safety and in communicating to patients and caring for people with the disease. Similar initiative were launched in the United Kingdom and in the United States, where young adults already trained in first aid received short training (1-2 weeks) to become community health workers, implement prevention and control measures, such as organising social distancing and hand hygiene stations as well as detecting cases and co-ordinating testing.

In Japan, the Industrial Stabilization Center of Japan (ISCJ), supported the aviation and airlines sectors by spurring temporary secondments to different industries. Similarly, one of the Japanese Trade Union Confederation's affiliates (UA ZENSEN) developed a matching scheme among the affiliated firm level unions to second workers from downsizing businesses to restaurants or supermarkets, which experienced labour shortages. To facilitate this scheme, the government started to provide additional subsidies from February 2021 onwards for both sender and receiver companies.

Source: OECD (2020[76]), "Skill measures to mobilise the workforce during the COVID-19 crisis", https://dx.doi.org/10.1787/afd33a65-en, and information provided by the OECD Trade-Union Advisory Committee (TUAC).

Going forward, despite the uncertainty surrounding the shape of the recovery and its timing, countries should put more efforts in anticipating the potential impact that the pandemic could have in the medium to long run on a wide range of jobs and to provide support to workers who may be displaced and struggle to go back to their original occupations (see Box 1.9).

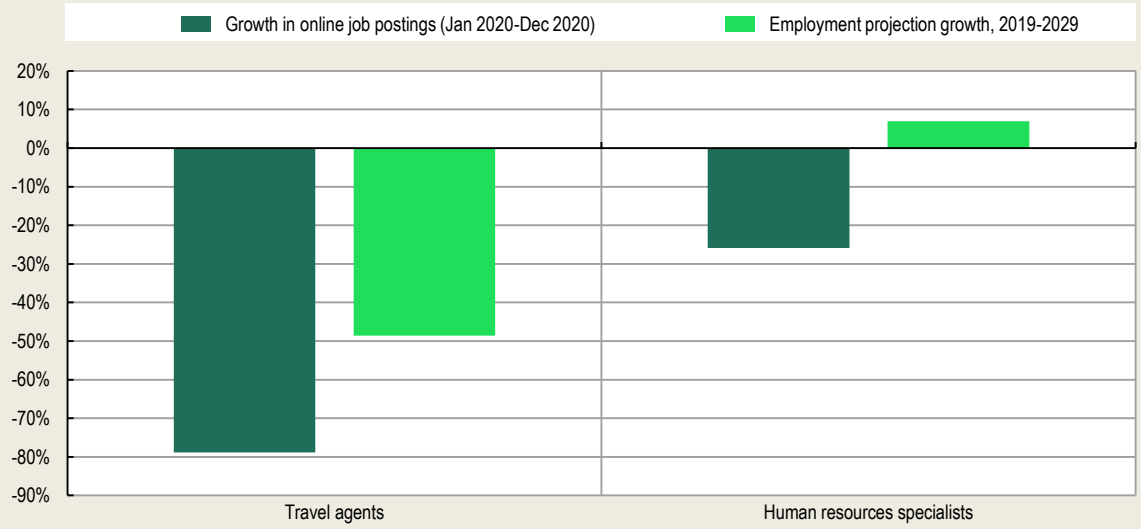
Box 1.9. Retraining and career moves in times of COVID-19: Using big data and employment projections to support individuals going forward

Career decisions are usually very difficult and these may become even more complicated in times of particular uncertainty regarding the future of labour markets. Employment predictions combined with granular information (i.e. online vacancies) about the status of the current labour market can be of great help to individuals for understanding available options and making informed decisions. As an example of how these data sources can be leveraged, Figure 1.35 analyses two occupations (Travel agents and Human resources specialists) that share a significant degree of skill similarity in certain administration and management tasks or in IT skills such as database management (see note to Figure 1.36). The figure shows the dynamics of US online job postings for the two occupations up until December 2020 and their projected employment evolution in the United States going forward (up to 2029).

The figure shows that, during the pandemic period, between January and December 2020, both occupations experienced a marked decline in the volume of job openings published online. While both occupations suffered significantly during the pandemic, their employment projections going forward differ substantially: Human resources specialists are projected to grow by 7% while travel agents to decline sharply, by 49%, by 2029.

Figure 1.35. Evolution of job openings during COVID-19 pandemic and projections up to 2029 for travel agents and human resources specialists

United States, online job postings (Jan-Dec 2020) and employment projections up to 2029



Source: OECD calculations based on Burning Glass Technologies data and US Bureau of Labor Statistics employment projections.

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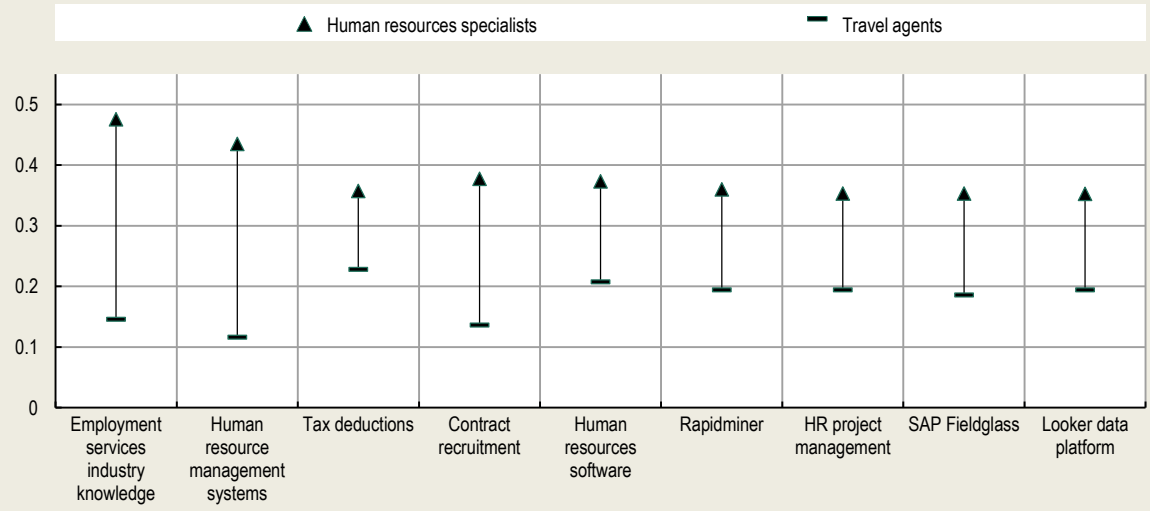
Taking in consideration both past and future trends, governments should consider investing substantial resources in supplying targeted retraining options for workers in occupations that have been i) hit hard during the pandemic and that ii) are projected to further decline in the future so that those can move to jobs with a brighter long-term outlook. In other words, retraining and upskilling should be functional to support workers in career changes, moving from suffering jobs to others that, in the longer-run, are projected to grow (i.e. for instance, from travel agents to human resources specialists). In addition to employment projections, the desirability of occupational movement (in terms of differences in pay, benefits, etc.) should also be considered as this can be an important limiting factor for mobility – see OECD (2021[73]).

The analysis of online vacancies can help to identify skill similarities across occupations and to develop granular retraining pathways for specific career moves. Figure 1.36, for instance, applies natural language processing models to the analysis of the text of millions of job postings to identify the skills that, on average, a travel agent would need to reinforce to access a job as a human resource specialist – see OECD (2021[73]) for the methodology. Among the aspect to reinforce, there is the knowledge of 'employment and services industry' as well as that of 'human resources management systems'. The analysis of skill demands collected in online vacancies also shows that technical and professional skills such as the ability to carry out 'tax deductions', or overseeing 'recruitment' processes are key in the career transition to a human resource specialist job. Similarly, the ability to use specific software such as 'SAP Fieldglass' or 'looker data platform' are also amongst those digital skills which should get priority in the retraining towards a safer job. Despite sharing several skills, the two occupations also differ in the typical education level required in the job (high school diploma in the case of travel agents and bachelor degree for human resources specialists) pointing to the fact that the career switch may require acquiring a new qualification.

Figure 1.36. Retraining pathways from travel agents to human resources specialists



Note: The chart shows the top skills that (on average) a worker employed as a travel agent would need to develop to be employed as human resource specialist. Skills are ordered by their relevance for the destination occupation (human resources specialists). The relevance of each skill for the occupation (left axis) is computed by using natural language processing algorithms applied on the analysis of approximately 69 million online vacancies collected in the United States in between 2016 and 2018. In particular, textual information about skill demands and occupation's skill composition is transformed into mathematical vectors which are then used to assess the relevance of each skill to the occupation and the skill similarity across occupations (US Standard Occupational Classification – SOC 6 digit) measured as the cosine distance between word (skill) vector and the occupation vectors.
Source: OECD calculations based on Burning Glass Technologies data.

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Concrete examples of these efforts are those implemented by Public Employment Services (PES) in some countries. In Ireland, for instance, the Department of Employment Affairs and Social Protection created a site to connect displaced workers from recent business closures with jobs in health care, retail, life sciences, infrastructure and IT, customer support and other sectors facing short-term staffing requirements. In France, Pôle Emploi launched an online platform to facilitate recruitment by those sectors currently in need of more labour, including agriculture, agrifood, health, transport and telecommunications. Lithuania's PES also partnered with the massive open online course (MOOC) provider, Coursera, to provide free courses for unemployed adults during the summer and autumn of 2020. The initiative involved already thousands of unemployed adults who participated in online learning. The PES in Brussels has also developed an active campaign on its website, using its newsletter to advertise training offers (in particular basic digital skills and language training) and encourage adults to use them. Italy's government also set up a website gathering various short courses that can help managers and employees develop the skills and competencies to telework more effectively.

Several governments also partnered with education institutions to make quick progress in delivering online learning during the pandemic. France, for instance, has launched online VET courses free of charge for a period of three months, including the core curriculum of vocational schools and main training courses for professional qualifications. Korea started a virtual training platform enabling learning providers to upload their course content while in the Netherlands, in-person VET in small groups was organised for students who do not have sufficient digital resources (OECD, 2020[77]). Going forward, similar efforts should be boosted also in other countries in order to provide displaced workers the necessary skills to remain active in high-quality jobs in the recovery phase and in the longer run.

1.5. Concluding remarks

After a significant increase at the start of the pandemic, unemployment is now retracting in many countries, although it is projected to remain above pre-crisis rates in most of them. Yet in the context of this pandemic – and the labour market policy that has accompanied it – unemployment offers only a partial picture. In the early phases of the crisis, large numbers withdrew from the labour market because of job search restrictions and increased burden of household duties. At the same time, many of those who remained in employment saw their hours reduced, often supported by job retention schemes. In the second quarter of 2020 working time reductions among workers still in employment accounted for around 80% of the decline in hours worked.

While many of those on temporary layoffs or working reduced, or even zero, hours, have been relatively quick to return to work over the course of the past year, others are struggling to bounce back. Many young people have lost their jobs during the crisis or failed to find one upon entry in the labour market. The fall in hours worked by 15-24 year-olds was almost twice as large as that of prime-aged and older workers, and hours lost through increased joblessness are likely to be more durably gone. Other vulnerable groups – such as those with a limited education and those in low-paying occupations – have also been affected more deeply. As the recovery phase progresses in the coming months and years, this unequal impact – if left unaddressed – risks translating into a more lasting increase in inequality.

As we now look towards a recovery, promoting a return to work will require supportive policy, implemented with careful timing. While loosening restrictions, countries must begin to promote a return to active job search, ensuring the re-engagement of those who have become increasingly distant from the labour market over the past year. As job search picks up, measures to support job creation may be needed, such as carefully timed and targeted hiring subsidies, while jobseekers may need support and intelligently designed training pathways, to build on their existing skills and guide them towards emerging opportunities.

Young people will need particular attention. The ravages of COVID-19 itself fell with particular force on the older population. And, in response, OECD countries implemented deep and wide-ranging measures to control the virus and protect the vulnerable. The impact of these measures, however, has fallen disproportionately on the livelihoods and labour market prospects of the young. OECD countries must now, with equal purpose, develop a programme of measures to protect these young workers, with the aim of providing them with an initial foothold in the labour market, preventing scarring of young careers, and preparing them for future opportunities.

Much remains to be learned regarding who has shouldered the burden of the COVID-19 crisis, and it is not yet clear what form the recovery will take. This chapter has made a first attempt to survey the impact on a few broad groups. However, emerging evidence suggests that, in addition to those groups, the impact has also varied depending on race, ethnicity and migrant status. There is also considerable scope to examine the impact on inequality and on livelihoods across the income distribution. The limited availability of timely micro data in many OECD countries has meant that a thorough investigation of these disparities is not yet possible. Building on the micro data as they become available, future analysis will be able to provide important insights into how these groups have fared through the crisis and how they benefited from the protective policies introduced to cushion its impact on OECD labour markets.

The wide-ranging labour market policies introduced over the course of the past year have had a profound effect. They have protected the livelihoods of many and prevented widespread hardship. But these policies were introduced at speed, as a rapid response to the emergent structural weaknesses revealed by the crisis, and not all have benefited to an equal degree. As OECD countries now turn to navigating the recovery, addressing these structural weaknesses in a manner that is both holistic and durable will be an important priority.

Going forward, many of the workers hit hardest during the pandemic may struggle to return to their previous occupations, due to a lack of skills and as firms profoundly restructure the way they produce and combine human labour with new technologies. Targeted support in the form of upskilling and retraining should be provided to the most vulnerable to ensure that the recovery is inclusive and does not leave anyone behind.

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Annex 1.A. Decomposition of hours worked

Let *t* denote time, *e* at-work employed workers, *j* jobless workers (inactive plus unemployed), *o* 0-hour employees, *H* total hours worked, *N* number of people and *h*(=*H/N)* hours per at-work worker.

The change in hours worked between *t* and *t*+1 can be decomposed into the contribution of hours per at-work employed worker (intensive margin) and number of at-work employed workers (extensive margin) as follows:

$$\Delta H_{t+1} = H_{e,t+1} - H_{e,t} = h_{e,t+1}N_{e,t+1} - h_{e,t}N_{e,t} =$$

$$= \left(h_{e,t+1}N_{e,t+1} - h_{e,t}N_{e,t+1}\right) + \left(h_{e,t}N_{e,t+1} - h_{e,t}N_{e,t}\right) = \Delta h_{e,t+1}N_{e,t+1} + h_{e,t}\Delta N_{e,t+1}$$

Taking into account that $\Delta N_{e,t+1} = -(\Delta N_{j,t+1} + \Delta N_{o,t+1} - \Delta N_{p,t+1})$, where p denotes the relevant population, the above expression can be further decomposed as:

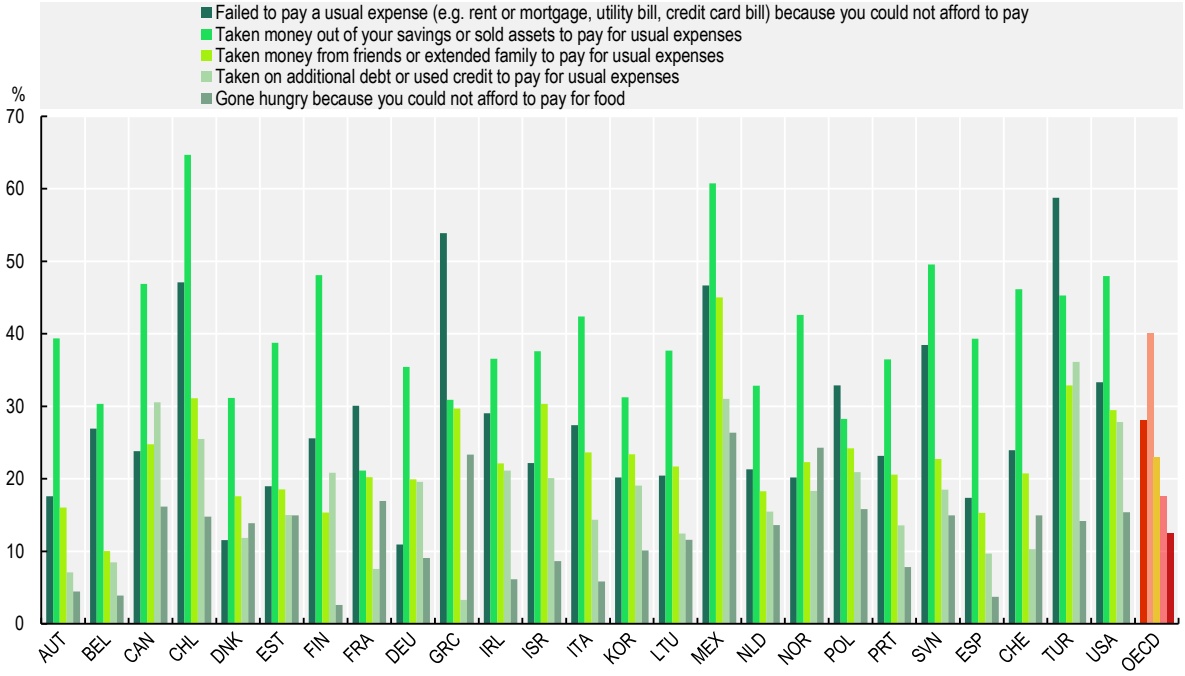
$$\Delta H_{t+1} = \underbrace{\Delta h_{e,t+1}N_{e,t+1}}_{\substack{Contr.of\ hours\ per \\ at-work\ employee}} - \underbrace{h_{e,t}\Delta N_{o,t+1}}_{\substack{Contr.of\ 0\ hours \\ employment}} - \underbrace{h_{e,t}(\Delta N_{j,t+1} - \Delta N_{p,t+1})}_{\substack{Contr.of \\ joblessness\ (net\ of \\ population\ changes)}}$$

That is, the change in hours can be decomposed in the contribution in the change in the average hours worked for at-work employees, the net change in the level of 0-hour employees and the net change in the level of jobless individuals (inactive and unemployed), net of population changes.

Annex 1.B. Additional material, by country

Annex Figure 1.B.1. Financial difficulty in households reporting job loss since the start of the pandemic

Percent of respondents reporting each of the following financial difficulties since the start of the COVID-19 pandemic, 2020



Note: OECD average, see Annex 1.B for country details. Respondents could select all the options that applied. Percentages present the share who selected at least one. "Job loss in household" refers to respondents reporting that either they or any member of their household have/has either "Lost their job or been laid off permanently by their employer" and/or "Lost their self-employed job or their own business", since the start of the COVID-19 pandemic. Households with "no job loss in household" may have had other types of job disruption in the household. OECD average of countries shown.

Source: OECD (2021[28]), "Risks that matter 2020: The long reach of COVID-19", https://doi.org/10.1787/44932654-en.

StatLink https://stat.link/mw7vhy

Annex Figure 1.B.2. Hours decomposition, by occupation groups, by country, quarter 2

Percentage change, year on year, 2020

Note: The figure reports the contribution of each category to the change in total hours. Countries are ranked by increasing change in total hours in Q2 2020 (see Figure 1.10). Time series comparisons for Mexico require caution: in Q2 2020, as the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country. OECD: average of the countries shown.

Source: OECD calculations based on the EU LFS; UK Office for National Statistics (Labour Force Survey), Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (*Encuesta Nacional de Empleo*); National Institute of Statistics and Geography (ENOE and ETOE); Statistics Bureau of Japan (Labour Force Survey); and the Current Population Survey.

StatLink https://stat.link/ec8kya

Annex Figure 1.B.3. Hours decomposition, by occupation groups, by country, quarter 3

Percentage change, year on year, 2020

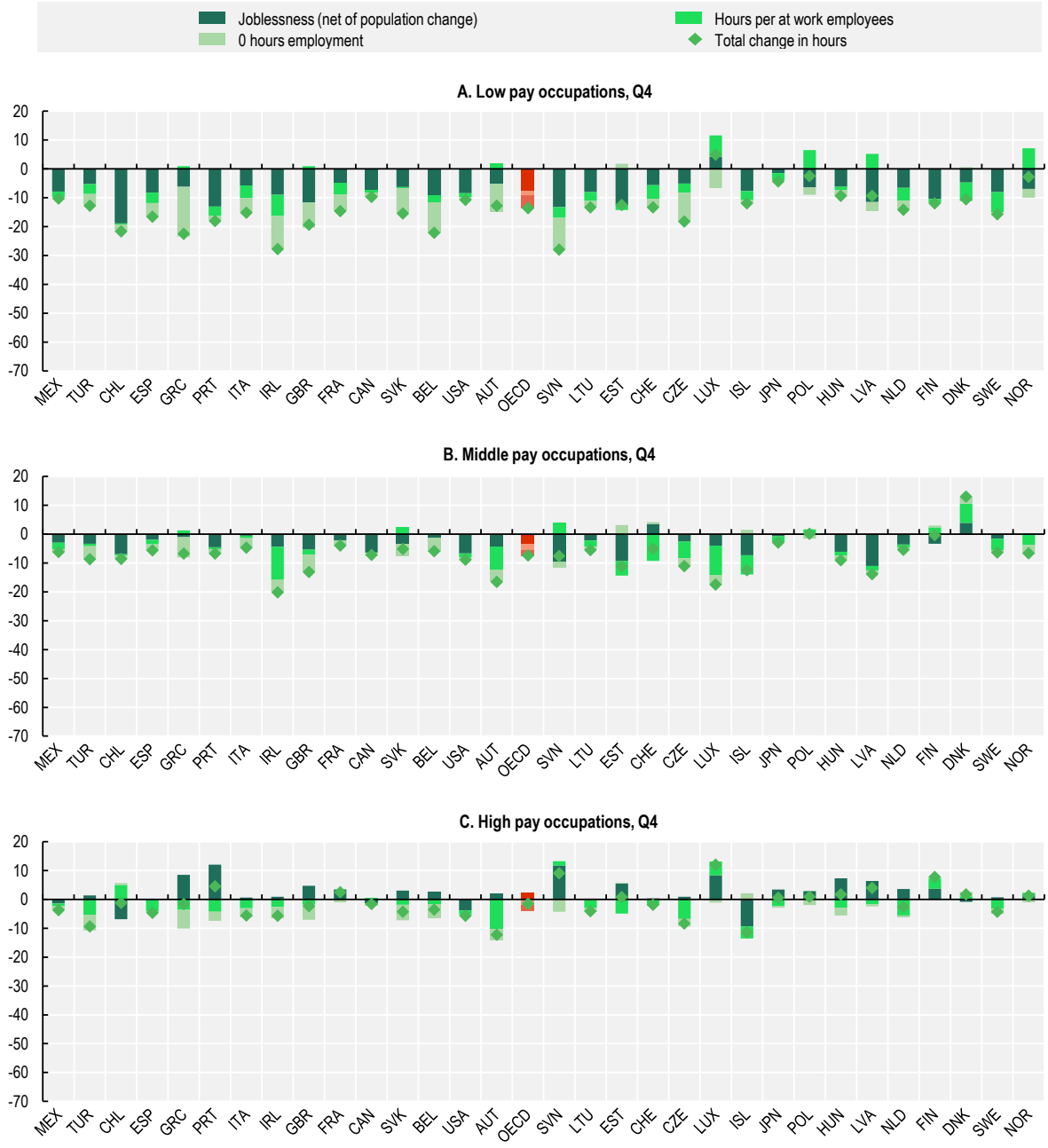
Note: The figure reports the contribution of each category to the change in total hours. Countries are ranked by increasing change in total hours in Q2 2020 (see Figure 1.10). Caution should be taken in time series comparisons for Mexico: in Q2 2020, as the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country. OECD: average of the countries shown.

Source: OECD calculations based on the EU LFS; UK Office for National Statistics (Labour Force Survey), Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); National Institute of Statistics and Geography (ENOE and ETOE); Statistics Bureau of Japan (Labour Force Survey); and the Current Population Survey.

StatLink https://stat.link/wud92m

Annex Figure 1.B.4. Hours decomposition, by occupation groups, by country, quarter 4

Percentage change, year on year, 2020



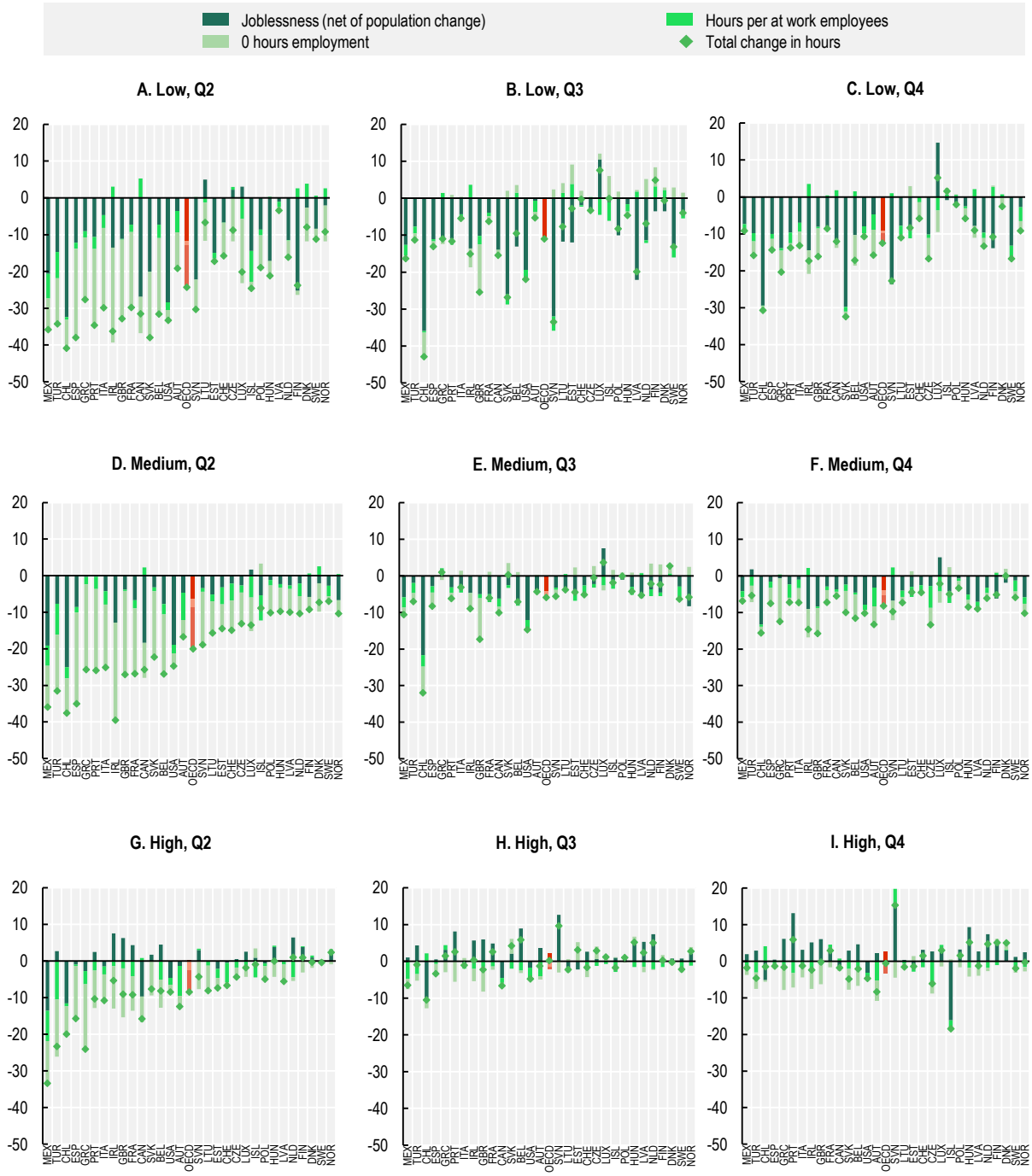
Note: The figure reports the contribution of each category to the change in total hours. Countries are ranked by increasing change in total hours in Q2 2020 (see Figure 1.10). Time series comparisons for Mexico require caution: in Q2 2020, the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country. OECD: average of the countries shown.

Source: OECD calculations based on the EU LFS; UK Office for National Statistics (Labour Force Survey), Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); National Institute of Statistics and Geography (ENOE and ETOE); Statistics Bureau of Japan (Labour Force Survey); and the Current Population Survey.

StatLink https://stat.link/erd54v

Annex Figure 1.B.5. Hours decomposition by educational attainment

Percentage change, year on year, 2020



Note: The figure reports the contribution of each category to the change in total hours. Countries are ranked by increasing change in total hours in Q2 2020 (see Figure 1.10). Time series comparisons for Mexico require caution: in Q2 2020, the National Survey of Occupation and Employment (ENOE) was suspended and replaced with telephone interviews (ETOE) due to the domestic epidemic-related restrictions that were in place at that time in the country. OECD: average of the countries shown.

Source: OECD calculations based on the EU LFS; UK Office for National Statistics (Labour Force Survey); Statistics Canada (Labour Force Survey); National Statistics Institute of Chile (Encuesta Nacional de Empleo); Mexican National Institute of Statistics and Geography (ENOE and ETOE); and the US Current Population Survey.

Annex 1.C. Further regression analysis of the link between COVID-19 and employment projections

Correlations presented in Figures 1.32, 1.33, 1.34 and 1.35 hint to the existence of an association between the strength by which the COVID-19 crisis hit jobs in 2020 and the employment projections (due to megatrends) for those occupations going forward. Results are suggestive that jobs that have been hit particularly hard during the pandemic were also already projected to decline substantially in the future. Results based on the correlation, however, still highlight a substantial deal of occupation-heterogeneity. The reasons behind this heterogeneity can be multiple. During the pandemic, for instance, certain jobs (and sectors) may have been disproportionally hit due to imposed lockdowns while others may have been thriving due to a sudden increase in demand, that little have to do with the impact of megatrends on employment. In order to account in part for such heterogeneity at the occupation level, regression analysis in Annex Table 1.C.1 estimates the relationship between the growth in online job postings and the growth in employment projections controlling for occupational dummies (at 2 digit level) in separate OLS regressions. In the case of the United States, additional controls at the occupation level are also available so that results also account for occupational skill and educational heterogeneity, experience and on-the-job training differences across occupations (see note to Annex Table 1.C.1). Results of the OLS regression broadly confirm that the association between the growth/decline in job postings and future employment trends remains statistically significant even after accounting for occupational heterogeneity and other controls but small sample size (especially in the case of Canada) calls for caution when interpreting and generalising these results.

Annex Table 1.C.1. The relationship between the growth in online job postings and employment projections

Dependent variable: Growth in online job postings (2019-20)	AUS	CAN	USA
Employment projections (growth)	0.006**	0.355*	0.003**
Controls			
Skill/Education level	YES	NO	YES
Experience+OJT	NO	NO	YES
Occupation group (2 digit)	YES	YES	YES
Obs.	154	81	424
R2	0.24	0.06	0.11

Note: The table presents results of separate OLS regressions. The dependent variable is the growth in online job postings collected for the period in between January 2019 and December 2019 and those in January 2020 and December 2020 by detailed occupation. Controls are country specific: Skill/Education Level: i) Australia: dummy 1, high-skill to 5, low skill (see the Australian Bureau of Statistics Labour Force Survey), ii) United States: Typical educational qualification required to enter the job, that is Bachelor, Associate, Master or Doctoral degree, No formal educational credential, some College (no degree) or High school diploma or equivalent (see US Bureau Labour and Statistics). Experience and OJT are: Work experience in a related occupation (none, less than 5 years, more than 5 years) and Typical on-the-job training needed to attain competency in the occupation (none, Internship/residency, Apprenticeship, Short-term on-the-job training, Moderate-term on-the-job training, Long-term on-the-job training). Occupation group (2 digit) are dummy variables at 2 digit level for occupations expressed in national classifications, ANZSCO (Australia), NOC (Canada), SOC (United States).*,** significant coefficients at 10% and 5% confidence levels.
Source: OECD calculations based on Burning Glass Technology data and Australia Labour Market Information portal (LMIP), Canadian Occupational Projection System (COPS), United States Bureau of Labor Statistics (BLS) employment projections.

StatLink https://stat.link/f7j5n9

Annex 1.D. Employment projections and their data sources

This chapter makes use of available country-specific employment projections. Data sources and a selection of results are provided below.

Australia: The employment projections presented in Section 1.4 are based on detailed data from the Australian Bureau of Statistics Labour Force Survey. The projections have been derived from time series models that summarise the information that is in a time series and convert it into a forecast. The projections are made by combining forecasts from autoregressive integrated moving average (ARIMA) and exponential smoothing with damped trend (ESWDT) models, with some adjustments made to take account of research undertaken by the National Skills Commission and known future industry developments.

Canada: The projections presented in Section 1.4 draw from the current Canadian Occupational Projection System (COPS) analysis completed in 2019, before the 2020 COVID-19 outbreak. Employment projections by occupation are first calculated at the industrial level, by multiplying total employment projected in a given industry times the projected employment share of the occupation in the industry. The result can then be summed up across all industries to produce the total employment projection for each occupation. Employment projections by industry are derived from the macroeconomic and industrial outlook (including GDP and productivity projections), while the projected shares of occupational employment by industry are derived from historical trends and other assumptions (including output gap). The projections were developed for 42 industrial groupings that cover the entire economy (based on the North American Industry Classification System – NAICS) and 293 occupational groupings that cover the entire workforce (based on the National Occupational Classification – NOC).

United Kingdom: The projections presented in Section 1.4 draw from the work of the UK Commission for Employment and Skills (UKCES) and the Warwick Institute for Employment Research / Cambridge Econometrics. Projections are calculated from a number of different data sources, using a variety of econometric and statistical techniques. For further details, see the Working Futures Technical Report (available at https://www.gov.uk/government/publications/uk-labour-market-projections-2014-to-2024).

United States: The projections presented in this section draw from the US National Employment Matrix database produced by the Bureau of Labor Statistics (BLS). The matrix displays data on base- and projected-year employment and employment change. BLS produces occupational employment projections by analysing current and projected future staffing patterns (the distribution of occupations within an industry) in an industry – occupation matrix. Changes in the staffing pattern for each industry are projected and applied to the final industry projections, yielding detailed occupational projections by industry. This projected employment matrix includes estimates for 790 occupations across 295 industries. The Occupational Projections Data database displays data on employment, employment change, occupational openings, education, training, and wages for each detailed National Employment Matrix occupation.

Annex Table 1.D.1. Fastest growing and declining occupations, medium to long-run projections

Fastest growing occupations, available countries							
Australia	Projected employment change(2019-24)	Canada	Projected employment change (2019-28)	United States	Projected employment change (2019-29)	United Kingdom	Projected employment change (2020-24)
Engineering professionals (others)	30%	Specialist physicians	31%	Wind turbine service technicians	61%	Caring personal service occupations	5%
Social workers	29%	General practitioners and family physicians	31%	Nurse practitioners	52%	Health and social care associate professionals	5%
ICT support and test engineers	29%	Registered nurses and registered psychiatric nurses	27%	Solar photovoltaic installers	51%	Health professionals	5%
Welfare, recreation and community arts workers	28%	Occupational therapists & Other professional occupations in therapy and assessment	25%	Occupational therapy assistants	35%	Customer service occupations	4%
Computer network professionals	26%	Physiotherapists	25%	Statisticians	35%	Corporate managers and directors	4%
Fastest declining occupations, available countries							
Mail sorters	-16%	Banking, insurance and other financial clerks & Collectors	-14%	Cutters and trimmers, hand	-30%	Sales occupations	-2%
Timber and wood process workers	-18%	Administrative assistants	-14%	Watch and clock repairers	-32%	Textiles, printing and other skilled trades	-2%
Personal assistants and secretaries	-18%	Textile fibre and yarn, hide and pelt processing machine operators and workers	-17%	Nuclear power reactor operators	-36%	Skilled metal, electrical and electronic trades	-3%
Switchboard operators	-19%	Data entry clerks & desktop publishing operators and related occupations	-20%	Parking enforcement workers	-36%	Process, plant and machine operatives	-5%
Secretaries	-30%	Travel counsellors	-20%	Word processors and typists	-36%	Secretarial and related occupations	-12%

Source: Australia: Labour Market Information portal (LMIP) employment projections, Canada: Occupational Projection System (COPS), the United States Bureau of Labor Statistics (BLS) employment projections, the United Kingdom: UKCES Working Futures employment trends and projections.

StatLink https://stat.link/qhb9v7

Notes

[1] Further discussion of the heterogeneity across European countries in the restrictions to individual mobility can be found in European Commission (2020[79]).

[2] The short and sharp contraction in mobility visible in January that coincides with the second wave of restrictions, is largely due to the holiday break observed in the vast majority of OECD countries and not to non-pharmaceutical interventions such as lockdowns.

[3] In many other countries, temporary layoffs are counted among the employed in labour force statistics (see Box 1.1).

[4] Alongside the United States and Canada, both of which saw an increase in the unemployment rate of 3.2 percentage points over the course of 2020, notable exceptions include Colombia (3.8 percentage points), Lithuania (3 percentage points), Chile (2.7 percentage points), Iceland (2.5 percentage points), and Spain (2.3 percentage points).

[5] While the first and third of these groups are in the labour force, the marginally attached are generally counted among the inactive. Eurostat refers also to a fourth category of labour market slack defined as those who are searching for work but are not currently available. The analysis that follows does not separate these individuals from the remainder of the inactive population.

[6] Among the countries that suspended or changed job-search requirements, the vast majority had restored them by the end of 2020.

[7] In the European Union, underemployment represented almost the entirety of the increase of the 8.9 percentage point rise in the underutilised labour force seen in the second quarter of 2020, while unemployment edged up by only 0.2 percentage points. This reliance on the intensive margin to absorb the labour impact was particularly marked in Italy, France, Portugal, Belgium and the United Kingdom.

[8] Year-on-year changes are used to account for seasonality. However, as they represent the sum of quarterly changes over four moving quarters, they do not fully capture the extent of downturns, when, as in this case, this is concentrated in the last month. Similarly, care should be taken in comparing year on year changes for two consecutive quarters (e.g. Q2 and Q3), as the latter include one additional quarter in the previous year and the former one additional quarter in the current year.

[9] The positive contribution of employment with zero hours to the change in total hours observed in a number of countries in the third quarter of 2020 (including Italy, the Slovak Republic, Estonia, the Czech Republic, Australia, Luxembourg, Iceland, Poland, Hungary, the Netherlands, Finland, Denmark, Norway) reflects fewer people on zero hours in Q3 2020 relative to Q3 2019. This is because those who are on leave are also reflected in the numbers on zero hours. As a result, there are three potential drivers of this result: (i) many workers were asked to take annual leave during lockdowns and to give up vacations in exchange, these people, were on leave during Q3 2019 but working during Q3 2020; (ii) those on leave in Q3 2019 and jobless in Q3 2020; (iii) finally, workers on leave during Q3 2019 and on zero hour JRS in Q3 2020 do not contribute to the impact on hours in Q3, because they were at zero hours both in 2019 and 2020. They do in Q2, because they were working in Q2 2019 and employed at zero hours in Q2 2020.

[10] The United Kingdom represents a partial exception here. This may reflect the fact that until July 2020 JR support was not possible for workers working partial, non-zero, hours – this may have stymied the return to partial hours of some workers on zero hours at the start of the quarter (see Chapter 2).

[11] OECD Timely Indicators of Entrepreneurship (https://stats.oecd.org/Index.aspx?QueryId=74180). Spain, where bankruptcies soared in the fourth quarter of 2020, is the only exception.

[12] Workers on temporary layoff tend to be defined as those who expect to return to their employer (in the United States this expectation must be within six months of layoff) or have been provided with a specific recall date. In the United States, if, because of the coronavirus, a person is uncertain when they will be able to return to work, interviewers were instructed to enter a response of "yes," rather than "don't know." This would allow the individual to be included among the unemployed on temporary layoff. This may have inflated numbers.

[13] Using data from the Survey of Income and Program Participation in the United States, Fujita and Moscarini (2017[81]) found that over 40% of *all* employed workers who separated into unemployment returned, after the jobless spell, to their previous employer, with this proportion rising during downturns. However, this exceeded the contribution due to temporary layoffs, workers who had reported being laid off with a recall date or expectation, because about 20% of permanent separations were also recalled to their previous employer.

[14] This figure then fell to reach 40.1% in May 2021 – see https://www.bls.gov/web/empsit/cpseea34.htm.

[15] https://www.bls.gov/charts/employment-situation/duration-of-unemployment.htm.

[16] Recent research by Ganong et al. (2021[22]) identifying repeated unemployment spells among a large number of unemployed during the COVID-19 induced crisis suggests that data collected in the CPS on the amount of time that a worker has been unemployed in their *most recent* spell in unemployment likely understates the extent to which they have experienced labour market displacement during the pandemic.

[17] These figures are adjusted for seasonality, see https://www.bls.gov/news.release/empsit.t12.htm.

[18] The data employed in this section limits the analysis to a relatively aggregate level, at which important disparate trends – such as those experienced in transportation and storage – cannot be disaggregated. As a result, the broad brushstrokes of the short-term sectoral and occupational impacts of the crisis are discussed in this section, while the longer-term trends, at a finer level of disaggregation, and their implications are left to the final section of the chapter.

[19] In contrast with the second quarter of 2020, a number of sub-industries were, under stringent health protocols, permitted to operate again by the third quarter of 2020. However, demand for passenger transportation services was still depressed, and the crisis changed long-run expectations on the growth of the industry.

[20] See Opportunity Insights Economic Tracker, data available at https://tracktherecovery.org/.

[21] While Governments across the OECD have issued lists of the workers considered to be essential, these definitions vary across countries and states and are changing over time. In the United States, for example, while 42 states have issued essential worker orders or directives, only 20 defer to the definitions developed at the federal level (see CISA) with the remaining 22 issuing their own lists of who should continue to go to work.

[22] Estimate based upon EULFS 2019 includes: health professionals; health associate professionals; personal care workers: teaching professionals; cooks; waiters and bartenders; food preparation assistants; protective service workers; travel attendants, conductors and guides; process control technicians; sales workers and armed forces occupations.

[23] Goos, Manning and Salomons, (2014), use income data from the European Community Household Panel (ECHP, the predecessor of EU-Statistics on Income and Living Conditions EU-SILC) to classify each occupation of the International Standard Classification of Occupations (ISCO) according to their mean European average wage, aggregating occupations according to the resultant rank into those in high, middle, and low-paying occupations. This classification has been adopted in previous OECD publications to capture low/middle/high skill – see, for example OECD (2020[5]). Low-pay occupations include sales and service elementary occupations; salespersons and demonstrators; personal and protective service workers, and labourers in mining, construction, manufacturing and transport. High-pay occupations includes managers and administrators, professionals and associate professionals.

[24] High, middle and low-paying occupations were referred to as high, middle and low-skill occupations in the terminology of OECD (2020[5]).

[25] It is important to note that the data upon which Figure 1.18 is based are unable to separate those who are currently in full-time education. As a result, some of these patterns (in particular those concerning joblessness) may be due to students losing student jobs. This is, however, likely to be limited among those with a low level of education, who will largely have left education at an age when few combine work and study (except in the case of mature student going back to secondary school).

[26] This divergence is particularly notable in a number of countries including Slovenia, the Slovak Republic, Chile, Portugal, Greece, Ireland, Finland, the Netherlands, Belgium, Sweden and the United Kingdom. It is noteworthy that Slovenia, the Slovak Republic, Portugal, Ireland, the Netherlands, Belgium, Sweden and the United Kingdom recorded no year-on-year increase in joblessness for those with a high level of education throughout 2020. Meanwhile, the rate of joblessness of those with a low level of education continuously rose in the Slovak Republic, Greece and Ireland.

[27] These patterns may also partially be affected by students losing or not finding part-time, temporary summer jobs.

[28] This is likely an underestimate of the true impact of the crisis on the hiring rate because the use of job start in the previous three months as a proxy for hires may also capture hires made in the previous quarter.

[29] Large increases in Canada in Q2 were driven, in large part, by school closures (see the notes of Figure 1.24). The large numbers in the United States and larger proportion of NEET in unemployment is likely a reflection of the inclusion of temporary layoffs in the unemployment figures.

[30] Van den Berge (2018[80]) finds that graduates graduating in a downturn face a higher penalty than vocational graduates. However, through job mobility, they reduce the penalty faster than vocational grads, for whom mismatch is longer lived.

[31] Using the longitudinal Understanding Society Survey conducted in the United Kingdom Bell, Codreanu and Machin (2020[78])) found that the difference in likelihood to work less than 50% of normal (February 2019) hours in June was 5.4 percentage points higher for those with three or more children compared with those without any children.

[32] While Alon et al. (2020[82]) identify large (and unprecedented) increases in disparities in unemployment rates between men and women in the United States following the COVID-19 pandemic, Hupkau and Petrongolo (2020[57]) find evidence using longitudinal data of roughly equal reductions to working hours (and job loss) across genders in the United Kingdom. They also find that women on average experienced slightly smaller hours' and earnings' losses, whether unconditional or controlling for a rich set of individual and job characteristics.

[33] Widespread school closures in the United States, may also have played an important role in this remaining disparity.

[34] See: https://fabians.org.uk/about-us/our-projects/workers-and-technology/.

[35] It is worth noticing that projections for the United Kingdom are only available at a higher occupational aggregation level (UK SOC 2 digit) and that therefore the correlation is based on a limited number of occupation data points.

2 Job retention schemes during the COVID-19 crisis: Promoting job retention while supporting job creation

Job retention schemes have been the main instrument used in most OECD countries for stemming the labour market impact of the COVID-19 crisis. This chapter provides a preliminary assessment of their impact during the crisis. It offers four key contributions: i) an institutional analysis of the main features of job retention schemes; ii) a statistical portrait of their use and determinants; iii) a discussion of their possible effects on job retention and job creation during the COVID-19 crisis based on the available preliminary evidence; iv) a comprehensive discussion of the policy challenge of promoting job retention while supporting transitions to jobs in firms and sectors with better growth prospects. The main message is that well-designed job retention schemes can be an effective policy tool to help the labour market weather an economic downturn: they need to be timely, targeted and temporary to support workers and firms effectively while minimising unintended negative effects on job creation and growth.

In Brief

This chapter provides a preliminary assessment of the role of job retention (JR) schemes during the COVID-19 crisis. It offers insights about their design, use and effects, and proposes a number of recommendations to make these schemes more effective in protecting jobs and reducing the risk of them undermining job creation in the recovery.

Almost all OECD countries operated job retention schemes during the COVID-19 crisis, but with important differences in their design and implementation:

- Traditionally, short-time work schemes that directly subsidise hours not worked (e.g. the German *Kurzarbeit* programme) represented the main instrument to promote job retention during economic downturns. Countries that already had such measures in place typically took steps to facilitate access, expand coverage and increase the generosity of these schemes during the crisis.
- Countries without pre-existing schemes introduced new ones that tended to take the form of furlough schemes, which restrict support to jobs that are temporarily suspended (e.g. the UK Coronavirus Job Retention Scheme), or wage subsidy schemes, which subsidise hours worked, but can also be used to top up the earnings of workers on reduced hours (e.g. the Australian Job Keeper Payment).
- Generous support allowed firms to reduce working time in line with the decline in business activity at limited or no costs, significantly reducing the number of jobs at risk of termination due to liquidity constraints.
- Support was increasingly made available to workers in non-standard forms of work, particularly those on temporary contracts, but in some cases also temporary agency workers and certain types of self-employed workers.

After reaching an unprecedented peak, the use of job retention schemes receded quickly as restrictions were withdrawn partially and economic activity could resume:

- On average across the OECD, the use of JR support peaked in April 2020 at the unprecedented level of around 20% of employment, supporting approximately 60 million jobs, more than ten times as many as during the global financial crisis. In contrast with what occurred during the global financial crisis, take-up rates were high both in countries with pre-existing schemes and those that introduced new ones.
- Average take-up declined quickly to 7% by September 2020 with the reopening of the economy, and remained above 6% until the first months of 2021, increasing again in some countries as they saw a resurgence of the virus, while receding in others.
- The use of JR support closely followed variations in government restrictions and economic activity, while there was no apparent link with other policies, such as employment protection legislation that played a significant role during the global financial crisis. Importantly, the strong decline in take-up in response to improved economic conditions suggests that the unprecedented levels of use are unlikely to persist once the economic recovery takes hold. However, take-up is likely to become more persistent as time goes by since firms with structural problems are more likely to continue relying on JR support, while other firms resume their activity.

- The use of JR schemes was particularly large in sectors most affected by government restrictions such as hotels and restaurants, arts and entertainment as well as wholesale and retail. As a result, the incidence of JR support was relatively high among young workers who represent a disproportionate share of the workforce in those sectors.

Job retention schemes helped to limit losses in employment and are unlikely to have had a significant adverse impact on job creation so far:

- Preliminary evidence on the effectiveness of JR schemes during the first six months of the COVID-19 crisis suggests that they played an important role in limiting job losses and averting a surge in unemployment. There is, however, considerable uncertainty over the magnitude of the impact. If the reduction in hours had fully translated into reductions in employment in the absence of JR schemes, the fall in the number of employees might have been as large as 11% instead of the decline of 4% observed in the second quarter of 2020. The actual effect might have been smaller because some firms might have been able to retain some workers even without the help of JR schemes, in part due to complementary measures taken by governments to provide liquidity to firms.
- At the same time, there is limited evidence that JR support so far has hampered job creation by locking workers into firms with structural difficulties. Support overwhelmingly went to firms in sectors affected by government-mandated restrictions and thus experiencing temporary difficulties due to the COVID-19 crisis, while job vacancies remained depressed during this period, suggesting that opportunities for job mobility were rather limited. Moreover, due to the increased number of jobseekers per vacancy, it has become easier to fill vacancies for firms, despite the adverse impact of the health situation on job search.

The evidence in the chapter suggests that JR schemes must be designed to ensure that they are both cost-effective and support job creation. They therefore need to incorporate a number of key features:

- As the crisis is not over yet, governments need to continue providing JR support to firms affected by social distancing restrictions in a timely manner. Reducing the delay in payments to a minimum is crucial for the effectiveness of JR support, but there have been significant differences across countries in the time between application and first payment. Where possible, payments should be made at least partly in advance with any required checks for eligibility carried out later.
- To prevent JR schemes from becoming an obstacle to job creation and job reallocation in the recovery, they should progressively become more targeted to jobs that are likely to remain viable in the medium term in firms or sectors were activity can resume. This might entail strengthening conditions for eligibility and increasing the employer's participation in the cost of the schemes for firms and sectors in which health recommendations and economic restrictions are withdrawn.
- Support from JR schemes can only be temporary. JR schemes are an important tool for limiting excessive layoffs in the context of a temporary reduction in business activity, but they should not become a tool for supporting firms with structural difficulties as this risks undermining the creation of good jobs and job reallocation.

Introduction

Job retention (JR) schemes seek to preserve jobs at firms experiencing a temporary decline in business activity by reducing their labour costs and supporting the incomes of workers whose hours are cut back. While there are important differences in their design and implementation across countries, a crucial aspect of all JR schemes is that employees' contracts remain in force even if their work is fully suspended (OECD, 2020[1]).

JR schemes have been the main instrument used to contain the fallout of the COVID-19 crisis on jobs in most OECD countries. Their use has been unprecedented, with take-up as a share of dependent employment in May 2020 about ten times as high as during the peak of the global financial crisis (OECD, 2020[1]). By investing in JR schemes, governments sought to protect firms and workers against the costs of government-imposed restrictions and broader social distancing measures and contain the impact of the health crisis on the economy and society at large. They did so while faced with great uncertainty about the duration and depth of an unprecedented, sudden and global crisis that threatened the lives and livelihoods of many of their citizens. The purpose of JR schemes during the COVID-19 crisis was therefore considerably broader than during the global financial crisis when they were used as a cost-effective tool to preserve jobs that were temporarily at risk of being destroyed (Boeri and Bruecker, 2011[2]; Cahuc and Carcillo, 2011[3]; Hijzen and Venn, 2011[4]).

The aim of this chapter is to provide a preliminary assessment of the role of JR schemes during the COVID-19 crisis. The central question that the chapter attempts to address is how governments can promote job retention on the one hand without deterring workers from moving from declining firms and sectors into ones that are expanding. As such, it touches on important questions related to the cost-effectiveness of JR schemes as well as their implications for the strength of the economic recovery. How many jobs have been saved thanks to JR schemes and how many would have been maintained even in the absence of public support? To what extent did JR schemes slow the creation of quality jobs by locking workers into firms facing structural difficulties? Answering these questions is not straightforward. The synchronised nature of the health crisis across countries and the plethora of policy responses deployed by governments to stem its economic and labour market impact severely limits the possibility of providing reliable estimates of the effects of JR schemes.

To provide a preliminary assessment of the role of JR schemes during the COVID-19 crisis, this chapter makes use of a variety of approaches. Section 2.1 offers an institutional analysis of the main features of job retention schemes based on the OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes (see Chapter 5 for a description of the questionnaire). Section 2.2 provides a statistical portrait of their use during the initial phase of the COVID-19 crisis and the factors affecting it. Section 2.3 presents tentative evidence on the effects of job retention schemes on employment and hours worked as well as their possible implications for job creation. Section 2.4 provides a comprehensive discussion of the policy challenge of promoting job retention while supporting job reallocation. Section 2.5 concludes with some remarks on how schemes might be adapted as the crisis evolves following the principles summarised by the three T's: timely, targeted and temporary.

2.1. The design of job retention schemes during the COVID-19 crisis

As the COVID-19 crisis took off, nearly all countries took steps to ensure that JR schemes provide timely and broad-based support for all firms and workers that were affected by social distancing restrictions, with limited attention to their fiscal costs or their potential implications for the recovery. Virtually all governments using JR schemes have eased access to pre-existing schemes and increased their generosity or, if no pre-existing scheme was present, introduced comprehensive temporary new ones. Mexico was the only country without a universal JR scheme.[1] In several countries, social partners were involved in the design and implementation of the JR schemes (Box 2.1). For a detailed overview of the key features of JR schemes as they operated during the initial period of the COVID-19 crisis, see Annex Table 2.A.1.

Box 2.1. The role of the social partners in the implementation and design of job retention schemes

Social partners have been involved in the design and implementation of job retention schemes in several countries.

In a number of countries, including Austria, Denmark, Korea, Norway and Sweden, JR schemes used during the COVID-19 crisis derive their main features from national-level collective agreements and declarations (The Global Deal for Decent Work and Inclusive Growth, 2020[5]). For example, in Korea, the decision to increase the Employment Retention Subsidy from 63% to 75% was taken following a tripartite declaration on the COVID-19 crisis. In Spain and Ireland, the social partners have further been instrumental in the simplification of procedural requirements and the adjustment of eligibility requirements (Eurofound, 2021[6]).

In certain other countries, social partners have been active in shaping JR schemes through the use of sectoral collective bargaining agreements. In Germany, sectoral agreements have raised replacement rates up to 90% and have enabled the use of short-time work in the public sector.[1] In Italy, a collective agreement was signed in the temporary agency work sector to allocate EUR 75 million from a bipartite fund to protect the continuity of employment and pay for temporary agency workers for the month of March 2020.

1. See for example https://www.dgb.de/themen/++co++27da3b1a-7038-11ea-85dd-52540088cada.

2.1.1. Almost all OECD countries operated job retention schemes during COVID-19, but with important differences in their design and implementation

Countries have used a variety of different approaches to job retention during the COVID-19 crisis (Table 2.1). Traditionally, short-time work (STW) schemes that directly subsidise hours not worked, such as the German *Kurzarbeit,* have been the main instrument to promote job retention during economic downturns. However, since the outbreak of COVID-19, a number of countries have introduced temporary wage subsidy (WS) schemes that subsidise hours worked but can also be used to top up the earnings of workers on reduced hours, such as the *Job Keeper Payment* in Australia. A crucial aspect of all JR schemes is that employees keep their contracts with the employer even if their work is fully suspended.

Most of the STW schemes that existed already before the crisis either do not impose any significant limits on the permissible reduction in working time or only allow for partial reductions (e.g. Sweden, the United States). One reason why schemes only allow for partial reductions is to promote work-sharing and spread the costs of adjustment across the workforce. Most new STW schemes that were introduced in response to the crisis take the form of furlough schemes that only subsidise jobs whose hours are

temporarily reduced to zero (e.g. Denmark, Slovenia, and the United Kingdom).[2] Such schemes might be easier to implement quickly and be less susceptible to abuse based on the misclassification of part-time workers. However, by restricting support only to jobs that are fully suspended, they are also necessarily more rigid and exclude the possibility of sharing the costs of adjustment across the workforce through broad-based working time reductions (OECD, 2020[1]).

A number of countries have introduced temporary WS in response to the COVID-19 crisis that can be used by firms for hours worked (like standard WS) as well as for hours not worked (like STW schemes) – e.g. Australia, Canada, Estonia, Ireland, New Zealand. WS are reserved for firms experiencing a significant decline in revenue. In some countries, the size of the actual subsidy only depends on the wage bill (before programme participation) and not the decline in business activity. Since such subsidies are not contingent on reducing working time, employers have strong incentives to request support for all eligible workers in the firm, raising potentially important questions about the way they are targeted (OECD, 2020[1]). A number of countries have therefore introduced mixed wage subsidies that do not just depend on the previous wage, but also the reduction in business activity, similar in spirit to STW schemes. For example, the Netherlands introduced a temporary WS that is proportional to the reduction in sales. Canada reformed its temporary WS scheme in July 2020 by making the subsidy partially proportional to the decline in sales.

Table 2.1. Job retention schemes have been used in almost all OECD countries, albeit in somewhat different forms

A typology of permanent and temporary job retention schemes

Type	Permanent schemes	Temporary schemes
Short-time work schemes		
– **General or unrestricted** (no significant limits on the reduction in working time)	Austria, Belgium, France, Germany, Italy, Japan, Korea, Luxembourg, Norway, Portugal, Spain, Switzerland, Turkey, the Netherlands (suspended)	Czech Republic, Lithuania
– **Furlough** (no partial reductions in working time allowed)	Finland	Denmark, Greece, Israel, Latvia, Slovenia, Turkey, the United Kingdom
– **Work-sharing** (significant limits on the maximum reduction in working time)	Denmark, Ireland, Sweden, the United States	Chile, Greece (since July), Hungary, Iceland,
Wage subsidy schemes		
– **Pure wage subsidy** (based on wage bill only)		Australia, Canada (until end June), Colombia, Estonia, Ireland, New Zealand
– **Mixed wage subsidy** (based on wage bill *and* reduction in business activity)		Canada (since July), the Netherlands, Poland, Portugal (since August), the Slovak Republic

Note: Austria: during the COVID-19 crisis, a downtime of up to 100% is possible within the short-time working period, but on average the short-time working period may not exceed 90%. The main reason for this is to exclude complete work stoppages rather than to promote work-sharing through broad-based reductions in working time. Chile: job retention support is financed out of the individual savings accounts for unemployment insurance of workers, unless there are no remaining funds. Denmark, Ireland and Portugal (from August): the pre-existing short-time work scheme was complemented with a temporary wage subsidy scheme. Greece: two schemes were introduced, the Special Purpose Compensation (furlough) in March 2020 and the Syn-Ergasia Mechanism (work-sharing) in July 2020. Netherlands: the pre-existing short-time work scheme was suspended during the crisis, while a new temporary was introduced. Turkey: the pre-existing short-time work scheme was complemented by a furlough scheme. United States: short-time compensation programmes (operational in 26 states); the Paycheck Protection Program is not considered here since it is targeted at small and medium-sized firms; temporary layoffs are not considered since the employment contract is not maintained. Mexico: did not operate a job retention scheme during the COVID-19 crisis.
Source: Country answers to OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes.

2.1.2. Job retention support has become more generous

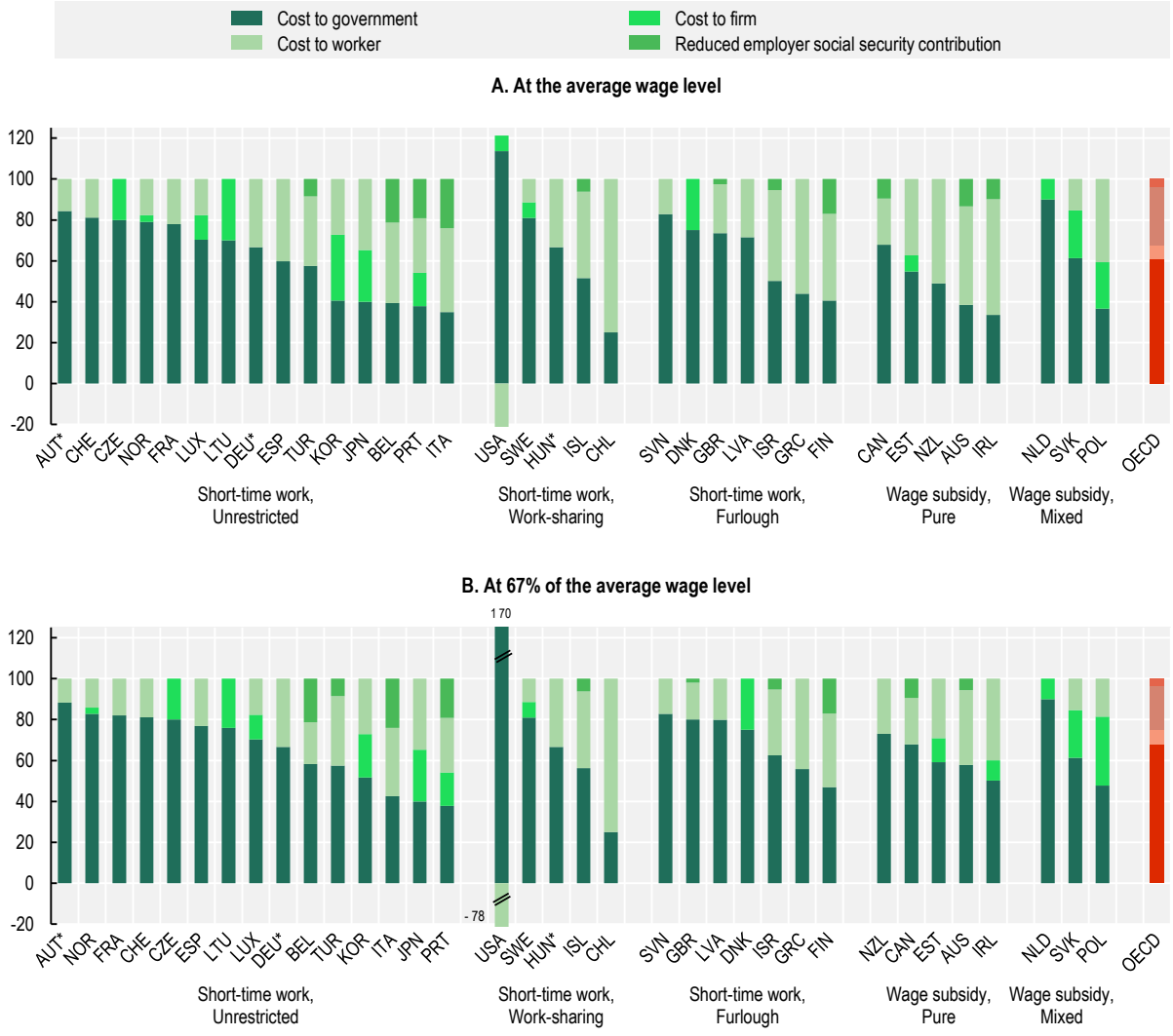
Most countries provided generous JR support to firms and workers in the immediate aftermath of the COVID-19 crisis. As a result, the cost of hours not worked was largely borne by governments (61% and 68% of labour costs for average and low-wage workers respectively on average across countries).[3] However, workers often bore a significant part of the costs of reduced working hours (28% and 21% of labour costs for average and low-wage workers on average), while the costs for firms were usually smaller (7% on average) (Figure 2.1).

During the early stage of the COVID-19 crisis, a majority of countries set to zero the cost of hours not worked, allowing firms to adjust labour costs in line with the decline in business activity. This tended to hold in countries with STW schemes as well as those with WS schemes. When some business activity remained possible, WS schemes allowed for even larger reductions in labour costs than STW schemes since they subsidise hours worked as well.[4] In about half of STW countries, the cost of hours not worked was already zero, while in several others it was reduced to zero as the COVID-19 crisis struck (e.g. France, Germany, and Italy). However, in some countries, employers have continued to bear some of the cost of idle workers. The costs of hours not worked amount to around 30% in Korea and Lithuania, and 25% in Denmark and Japan. Even in the countries where employers bear some of the costs, JR schemes allowed for significant adjustments in labour costs during the crisis, alleviating liquidity constraints and limiting the number of workers at risk of dismissal. The *actual* impact of JR schemes on the number of jobs saved also depends on other factors, including the timeliness of support (Box 2.2).

Workers typically bore a substantially larger share of the cost of hours not worked than firms in terms of lower wages and social security entitlements, but still were considerably better off than workers on full-time unemployment benefits, even in the case of a complete work stoppage (see Section 2.4). Workers at the average wage absorbed 28% of the costs of hours not worked on average across countries.[5] The incomes of low-wage workers – defined here as workers earning 67% of the average wage – were usually better protected due to the role of benefit caps for workers with incomes above a certain threshold (e.g. Italy, Spain and the United Kingdom) or lump-sum subsidies (e.g. Australia, New Zealand, the United States).[6] Low-wage workers bore 21% of the costs of hours not worked on average across countries. In countries with a statutory minimum wage, this sometimes served as a floor for benefits, so that minimum-wage workers did not experience any loss in income when put on short-time work (e.g. Belgium, France, Greece).[7] In countries without a statutory minimum wage, concerns about low incomes were sometimes addressed through temporary ad hoc top-ups for low-wage workers (e.g. Switzerland). More than half of countries with a pre-existing STW scheme increased the replacement rate for hours not worked in response to the COVID-19 crisis. All in all, JR schemes played an important role in preventing financial hardship, particularly among low-income families, and supporting aggregate demand.

Figure 2.1. The cost of hours not worked for the government, firms and workers

The cost of hours not worked as a percentage of labour cost – gross wage plus employer social security contributions – for maximum permissible reduction in working time, May/June 2020



Note: * Net terms (after taxes and other transfers). Short-time work – unrestricted: no significant limits on the reduction in working time; short-time work – furlough: no partial reductions in working time allowed; short-time work – work-sharing: significant limits on the maximum reduction in working time; wage subsidy – pure: based on wage bill only; wage subsidy – mixed: based on wage bill and reduction in business activity. Mandatory employer contributions for private insurance are not taken into account (consistent with the OECD methodology of Taxing Wages). If job retention benefits are paid directly to workers it is assumed that firms pay no employer social security contributions over hours not worked. Chile: payments mainly take the form of withdrawals from individual unemployment accounts. Norway: for the first 3 months (60 days). Chile, Hungary, Sweden and the United States: for a maximum reduction of working time. United States: includes weekly lump-sum of USD 600 that was paid irrespective of the reduction in working time to all short-time compensation recipients as part of CARES, resulting in an increase in earnings in both cases considered here. If there are several schemes in the country, the figure relates to the primary scheme in May 2020 (Denmark: Wage compensation scheme (Lønkompensation); Greece: Special purpose scheme; Ireland: COVID-19 Wage Subsidy Scheme; Portugal: Layoff Simplificado; the United States: short-time compensation).
Source: Country answers to OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes.

StatLink https://stat.link/rimsza

2.1.3. Access to job retention schemes has been eased

Most countries took measures to allow easy access to JR schemes. Applications can now be made mostly online, approval processes have been automated in many countries (Box 2.2) and eligibility requirements for either firms or workers have sometimes been eased.

To reduce the risk of supporting jobs that do not need support, i.e. "deadweight effects", countries often condition eligibility to having a valid economic justification. A formal economic test based on a quantitative threshold is required in the case of all WS schemes. STW schemes do not always require an economic justification and, if there is one, this is usually less formal (not based on a quantitative threshold).[8] Since subsidies are conditional on reducing working hours, which only makes sense when business activity is down, a formal economic justification may be less relevant in the context of STW. To promote access, a number of countries with STW, temporarily weakened the criteria for a valid economic justification or even completely removed the need for one. This reflected reduced concerns about deadweight effects during the initial lockdown when economic activity came to a virtual standstill. Requiring an agreement with a trade union or worker representative can also help to alleviate deadweight effects, while at the same time ensuring a sound process. Since participation is costly for workers, a firm-level agreement can help to prevent firms from claiming support when there are no jobs at risk. The need for a firm-level agreement is quite common in countries with STW schemes but never present in countries with WS schemes.

In addition to easing eligibility for firms, several countries have extended eligibility for workers. Eligibility may be limited to "insured" workers, i.e. workers who meet the minimum contribution requirements for unemployment benefits, or workers with a permanent contract, i.e. jobs that would be expected to last for a long time in the absence of the temporary shock. The focus of JR schemes on workers with recent work experience or permanent jobs is, in principle, consistent with the rationale of such schemes to preserve firm-specific knowledge that would be costly to rebuild if the worker is laid off. However, it also risks deepening labour duality, i.e. the gap in employment protection between those on open-ended and temporary contracts (Hijzen and Venn, 2011[4]). Newly introduced JR schemes typically do not impose such restrictions, while a number of countries with pre-existing ones have removed or relaxed minimum contribution requirements (e.g. Japan, Turkey) or extended coverage to workers on temporary contracts (e.g. Finland, France and Switzerland).[9] Almost all countries now cover workers on temporary contracts and a number of countries even cover certain categories of self-employed (e.g. Australia, Latvia, Poland), typically without minimum contribution requirements. However, formal eligibility to JR schemes for these categories does not guarantee actual access. Evidence presented in Chapter 1 indeed suggests that adjustments for workers in temporary contracts still occurred mostly through job destruction.

Box 2.2. Support needs to be provided in a timely manner to be effective

To be effective, JR support needs to be provided in a timely manner. This requires a smooth process of applications, approvals and payments.

In essentially all countries applications can be made online and in most countries the approval process is automated resulting in immediate or quasi-immediate approvals (within two working days). In some countries, the approval process takes somewhat longer but generally no more than two weeks. In the majority of countries, applications could be made retroactively, with respect to one or several months in the past, something that was not possible before the COVID-19 crisis. Retroactivity was introduced to take account of the fact that in many countries lockdown measures were implemented with limited or no notice. This allowed governments to adjust their existing job retention schemes or introduce new ones and firms to work out the implications of the lockdown measures for their activities and file an application for support.

In a few countries, payments were made largely or fully in advance of the period for which support is given (e.g. the Netherlands, New Zealand and Sweden). In countries with pure WS schemes, this was relatively straightforward since there is no uncertainty about the amount of the subsidy that is due as it does not depend on the actual decline in sales or working time. In New Zealand, wage subsidies simply took the form of a lump-sum payment per worker (COVID-19 Wage Subsidy and Extension COVID-19 Wage Subsidy). Payments were made within two working days following the approval of the application for the entire three-month support period. In the Netherlands, 80% of the subsidy was paid in advance based on the expected decline in sales and a constant wage bill (Emergency Bridging Employment Measure). If the expected decline in sales materialised and the wage bill remained constant, the remaining 20% was paid once the final balance was made up. However, if the actual decline in sales was smaller than expected or the wage bill declined (e.g. termination of temporary contracts, retirements) the final payment was smaller and firms could even be required to pay back part of the advance. Preliminary data suggest that in more than half of cases, partial paybacks were required in relation to the first subsidy period. This was good news since this meant that the need for support was less than initially anticipated. However, it also raised potentially important implementation issues related to the payback of subsidies at a time when business conditions had not fully recovered.

In the majority of countries, payments were made ex post, but with considerable variation across countries between the time of application and the first payment. In Australia, Estonia and Latvia, payments were made within days from the application, while in most other countries payments were made at a fixed day of the following month. However, in a few countries, the payment was made after two months or more, substantially limiting the potential effectiveness of the schemes for job retention.

The implications of delays in the process of applications, approvals and payments depend on whether the payment is made to firms or workers. When payments are made to firms – as in the majority of countries – delays reduce the effectiveness of JR schemes in alleviating the financial difficulties of firms and preventing job losses. When payments are made to workers, they reduce their effectiveness in alleviating financial hardship of workers and supporting consumption. This is the case in Belgium, Finland, Hungary, Norway, Spain, Turkey and the United States (short-time compensation).

Source: Country answers to the OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes.

2.1.4. In sum, JR support was easily accessible, widely available and exceptionally generous in the initial phase of the COVID-19 crisis

As a result of these measures, JR support during the early period of the COVID-19 crisis was easily accessible, widely available and exceptionally generous. These measures no doubt helped to provide timely support to all firms and workers whose economic activities had suddenly been reduced or even completely come to a halt. To an important extent, this reflects the specific nature of the crisis that was driven by government-imposed economic restrictions and social distancing measures to contain the epidemic and the need to shield firms and workers as much as possible against their economic and social consequences. However, it may also reflect the tendency of JR schemes to temporarily become more cost-effective during an economic downturn (Hijzen and Venn, 2011[4]). The efficiency cost of JR support may be reduced during a recession since many more jobs are at risk, reducing the risk of supporting jobs that do not need support, while the social cost of locking workers in unviable jobs is temporarily lower since the prospects of moving quickly to more productive jobs are weakened as a result of the decline in job vacancies. At the same time, the benefits from preventing layoffs during a recession may increase due to the longer expected duration of unemployment and the increased risk of "scarring". Importantly, both arguments suggest that the measures taken by governments to promote the use of JR schemes should be temporary and be adapted when social distancing restrictions are withdrawn and economic activity can be resume. Section 2.4 discusses how this can be done.

2.2. The use of job retention schemes during the COVID-19 crisis

Partly as a result of the measures taken by governments to promote access to JR schemes and increase their attractiveness, the use of JR schemes reached unprecedented levels following the outbreak of the COVID-19 crisis.

2.2.1. After reaching an unprecedented peak the use of job retention schemes receded quickly

The use of both new and old JR schemes was widespread during the first wave of the COVID-19 pandemic. Across the OECD, take up as a share of dependent employment peaked (mostly in April 2020) at around 20%, supporting approximately 60 million jobs, more than ten times as many as during the global financial crisis (Figure 2.2).[10] Take-up rates were lower in the few countries with STW schemes that only allow partial reductions in hours. This small group of countries includes the US which relied on the unemployment benefit system more than any other country to deal with the labour market shock of the pandemic.[11] By contrast, in countries with general STW schemes, peak take-up rates tended to be considerably higher, reaching or exceeding 30% in France, Belgium, Switzerland and Italy. All countries with WS schemes except Poland had peak take-up rates above 20%, with New Zealand reaching a stunning 66%. High take-up in countries with WS schemes could reflect strong incentives to apply for support for all workers in the firm rather than just those at risk, but also the ease with which such schemes could be accessed. During the global financial crisis, newly introduced JR schemes typically had difficulty achieving high levels of take-up (Hijzen and Venn, 2011[4]).

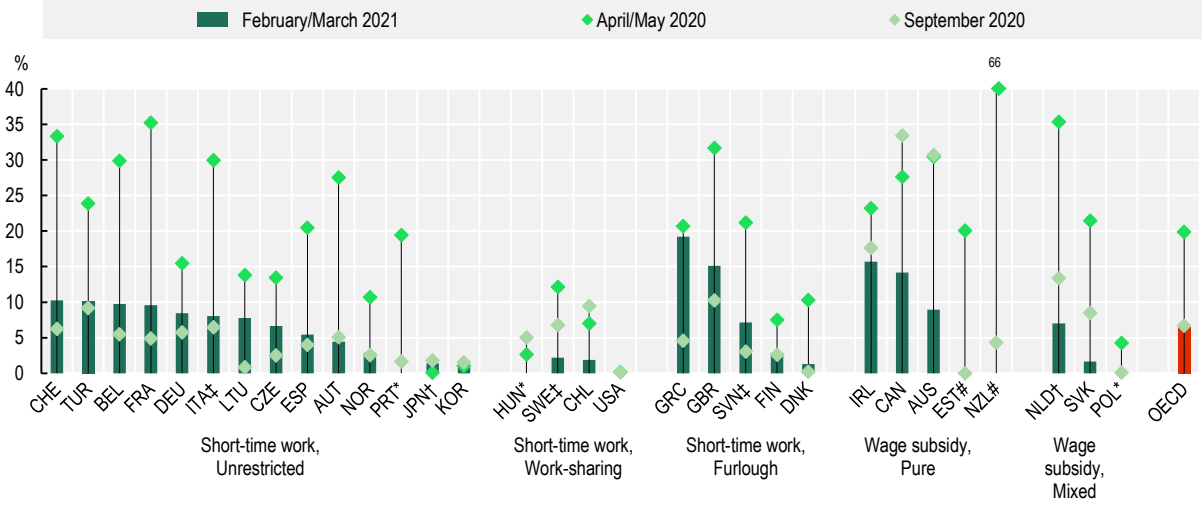
The use of JR support declined quickly as most countries relaxed restrictions over the summer of 2020. Average take-up fell to 7% by September 2020, just before several countries began to see a resurgence of the epidemic. The decline was particularly strong in countries with high initial take-up. For example, France, Belgium, Switzerland and Italy saw take-up plummeting from higher-than-average values of 30% to values in line with the new average of 7% in September 2020. In some countries, the decline was due to the termination of temporary schemes (e.g. Estonia, New Zealand), while in others this may also have reflected in part the gradual phase out of measures to promote take-up (e.g. France, the United Kingdom).

Take-up rates declined much less in some of the countries with WS schemes. Indeed, by September, take-up was higher in Canada, Australia, Ireland and the Netherlands than in any other country except Greece. This likely reflects that WS schemes are less targeted to firms with reduced working hours, but also the fact that these countries eased restrictions less than others during the third quarter of 2020 (Figure 2.3).

The average use of JR support remained around 6% in February/March 2021 as countries experienced diverging health developments a year after the start of the crisis. Countries that were hit by a second or even a third wave of the coronavirus such as France, Italy, and the United Kingdom saw increases in take-up – although to levels well below the peak of spring 2020. In Greece, take-up reached levels very close to the peak seen at the start of the crisis. Other countries, such as Canada and Sweden, saw continued declines in take-up.

Figure 2.2. The use of job retention schemes was very high across countries

Percentage of dependent employment (April/May 2020, September 2020, February/March 2021)



Note: Short-time work – unrestricted: no significant limits on the reduction in working time; short-time work – furlough: no partial reductions in working time allowed; short-time work – work-sharing: significant limits on the maximum reduction in working time; wage subsidy – pure: based on wage bill only; wage subsidy – mixed: based on wage bill and reduction in business activity. Take-up rates are calculated as a percentage of all dependent employees in Q1 2020. ‡ Italy, Slovenia, and the Slovak Republic: Latest data refer to December 2020.*Hungary, Poland and Portugal: Data for December unavailable. # Estonia and New Zealand: Scheme no longer operational. †Japan, the Netherlands: estimate based on the total use during the reference period and the assumption that support is provided for no more than three months during this period, the United States: Refer to short-time compensation benefits. Sorted by latest available data.
Source: National sources, see Annex Table 2.A.1 for details.

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2.2.2. Over the first wave of the pandemic, the use of JR schemes closely followed variations in government restrictions and economic activity

Differences in the use of JR support across countries largely reflect the intensity of the crisis rather than differences in their broader institutional settings. Peak take-up rates are correlated with both the stringency of the lockdown measures and the fall in GDP (Panels A and B of Figure 2.3).[12] For example, take-up was very low in countries like Korea and Japan which managed to contain the first wave of the epidemic and therefore resorted to less stringent government restrictions and experienced a smaller fall in output than most other countries. By contrast, peak take-up rates do not correlate with institutions such as employment

protection legislation (EPL) and collective bargaining systems. Indeed, during the COVID-19 crisis, even countries that traditionally relied on external flexibility, such as Australia, Canada, New Zealand and the United Kingdom, have deployed JR schemes on a massive scale. This is likely due to the nature of the crisis that in many countries suddenly forced large swaths of firms to temporarily cease their activity and stands in contrast with previous evidence that stricter EPL is associated with higher take-up of JR schemes (Boeri and Bruecker, 2011[2]; Hijzen and Martin, 2013[7]).

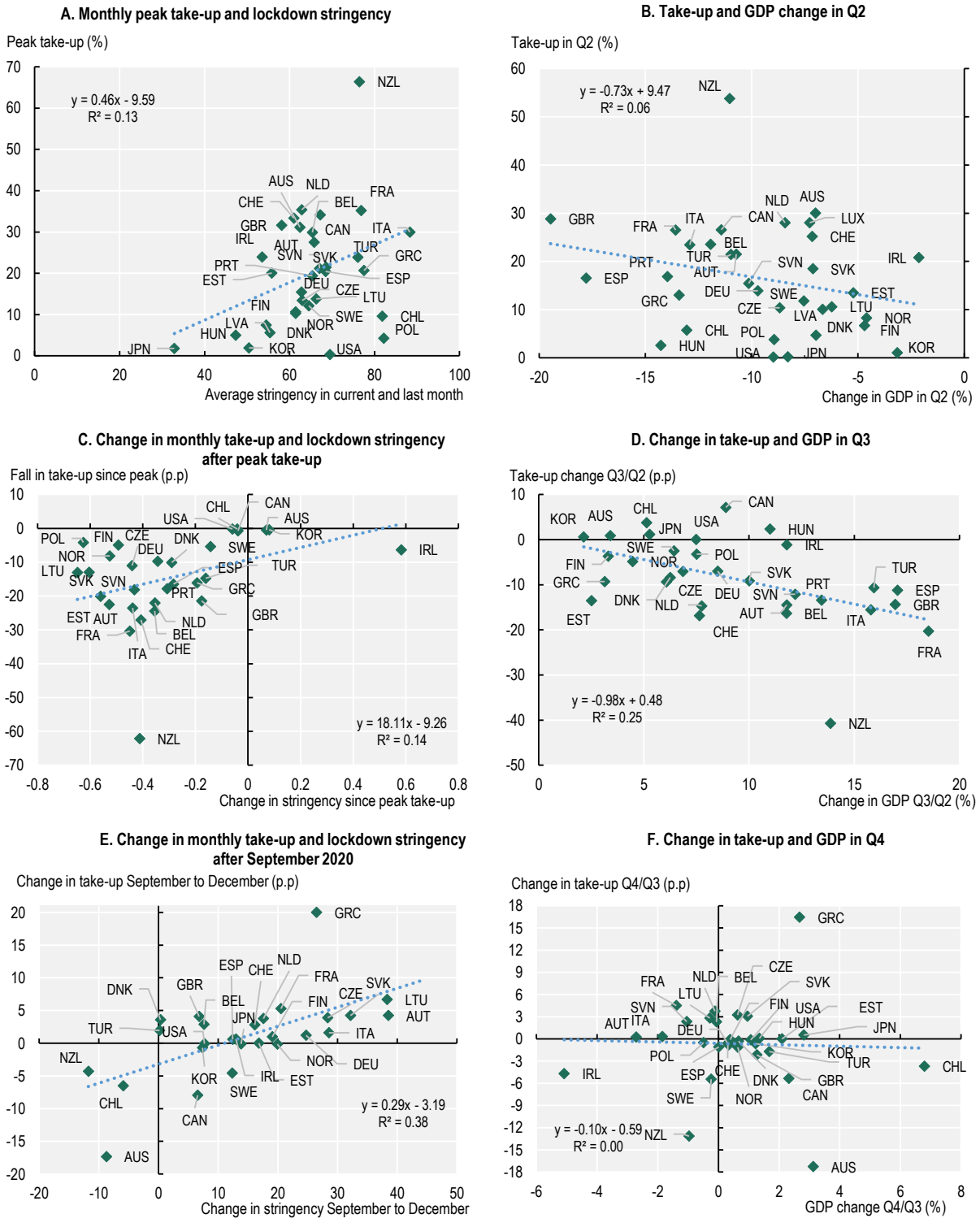
As the first wave receded in most countries, the use of JR schemes declined in line with the relaxation of the lockdown measures and the rebound in GDP in the third quarter of 2020 (Panels C and D of Figure 2.3). For example, the large declines in take-up in France, Italy, Belgium and Switzerland took place as these countries greatly relaxed the restrictions and GDP regained some of the lost ground. By contrast, Ireland, Canada and Australia made relatively smaller changes to their restrictions and saw smaller changes in take-up which, as noted above, resulted in them having higher-than-average use of JR schemes in September 2020. The strong responsiveness of take-up to enhanced economic conditions suggests that the unprecedented levels of take-up are unlikely to persist once the economic recovery takes hold. However, one would expect take-up to become more persistent as it falls to lower levels since firms with temporary difficulties will resume their activities, while firms with structural problems will continue to rely on JR support.

In the last quarter of 2020, the use of JR schemes continued to follow variations in government restrictions and economic conditions, but less closely than during the previous two quarters (Panels E and F of Figure 2.3). The weakening relationship between take-up, government restrictions and economic conditions across countries is likely to reflect a variety of factors. While many countries saw a resurgence of the epidemic in Q4 2020, the nature, scope and enforcement of the new restrictions varied considerably between countries (as well as within countries). In addition, by the end of 2020, firms and workers had learned much more about managing the risk of contagion while performing different activities and could therefore behave differently from when the pandemic first hit. Finally, the policy context evolved as countries continued to fine-tune their interventions to support firms and workers, including through adjustments to JR schemes.

2.2.3. The use of job retention schemes across sectors closely mirrors the impact of economic restrictions

The use of JR schemes was particularly important in sectors that were most affected by government restrictions (Figure 2.4, Panel A – see also Chapter 1). In hotels and restaurants, more than 50% of jobs were supported by JR schemes in Q2 2020 compared with 19% on average in the countries considered. Other sectors that were heavily affected by government restrictions include arts and entertainment as well as wholesale and retail. In sectors where telework is possible such as finance the use of JR support remained rather limited. While take-up declined strongly from Q2 2020 to Q3 2020, it declined relatively more in wholesale and retail as shops were allowed to resume activity in many countries, while it declined relatively less in manufacturing, possibly due to the role of the COVID-19 crisis for consumption and investment. The widespread use of JR schemes in services stands in sharp contrast to the experience during the global financial crisis. In France and Germany, 80% of the actual use of JR support in France and Germany was concentrated in manufacturing during the global financial crisis, compared with around 20% during the COVID-19 crisis (OECD, 2020[1]).

Figure 2.3. The use of job retention schemes reflects variations in government restrictions and economic activity



Source: JR take-up: national sources; stringency index: Hale et al. (2020[8]), Oxford COVID-19 Government Response Tracker, Blavatnik School of Government; GDP: OECD National Account Database.

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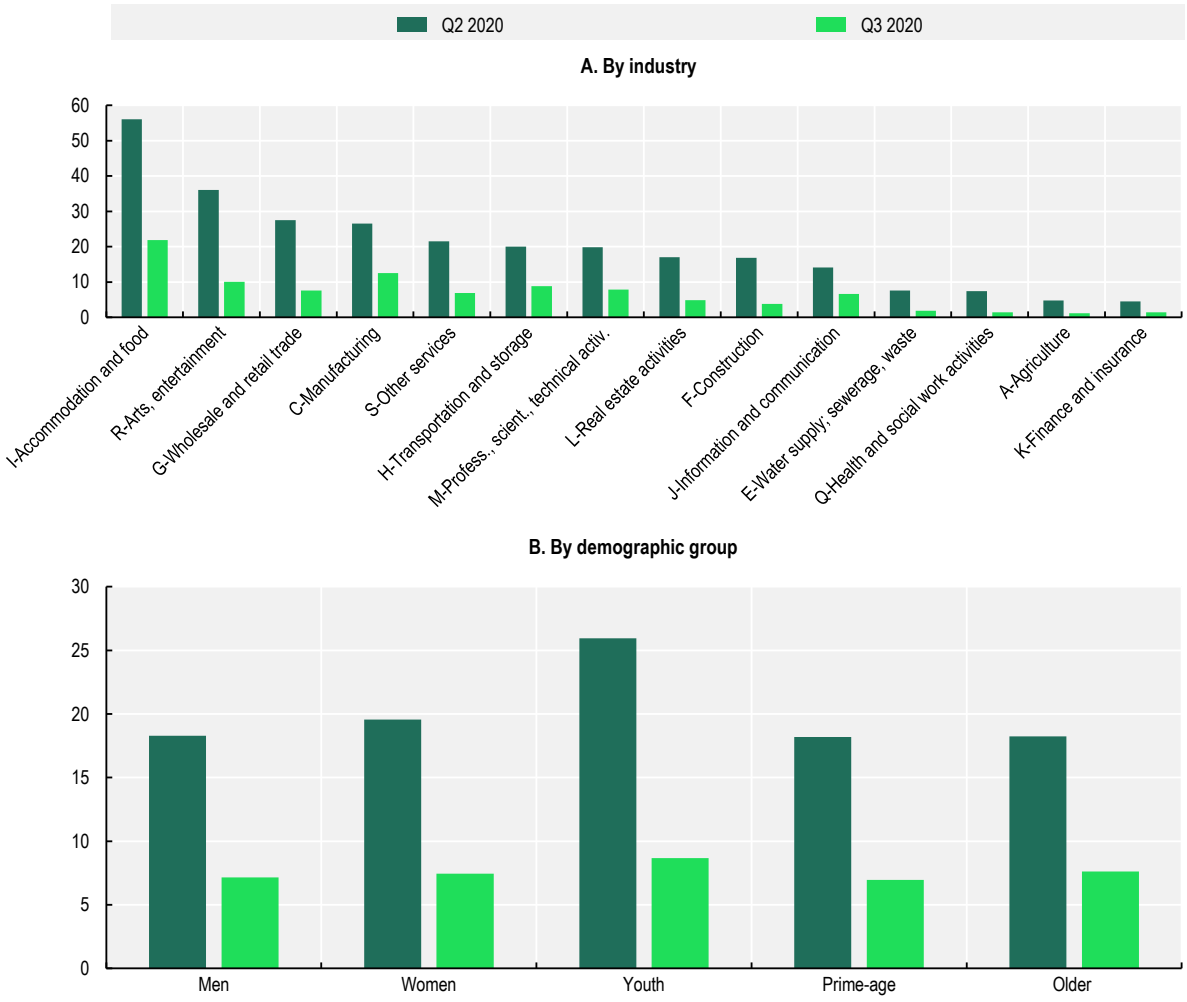
Figure 2.4. The use of job retention schemes by industry and demographic group

Average across selected countries, Q2 2020 and Q3 2020, percentage of dependent employment



Note: Panel A: private sector only, average across seven selected countries (Austria, Belgium, Denmark, Italy, Spain, Sweden and Switzerland). The letters indicate the sector in the ISIC rev.4 classification; Panel B: average for Italy, Switzerland and the United Kingdom.
Source: National sources (see Annex Table 2.A.1 for details).

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The use of JR schemes across sectors also determines to an important extent their use across demographic groups (Panel B). Their use was considerably higher for young workers than prime-age or older workers and, in some cases, there is some evidence of significant use for workers with temporary contracts albeit at a lower level than for permanent workers (see Box 2.3). These patterns are likely to reflect the fact that a disproportionate share of young and temporary workers is employed in hotels, restaurants, retail and arts – sectors which made most intensive use of JR support.[13] The use of JR schemes was similar between men and women, but if anything slightly higher for women.[14] The patterns by industry and demographic group are strikingly consistent across the countries for which disaggregated data are available.

Box 2.3. The use of job retention schemes across different groups of workers: Insights from Switzerland

This box presents additional insights on the use of JR schemes across different groups of workers for Switzerland (Figure 2.5).

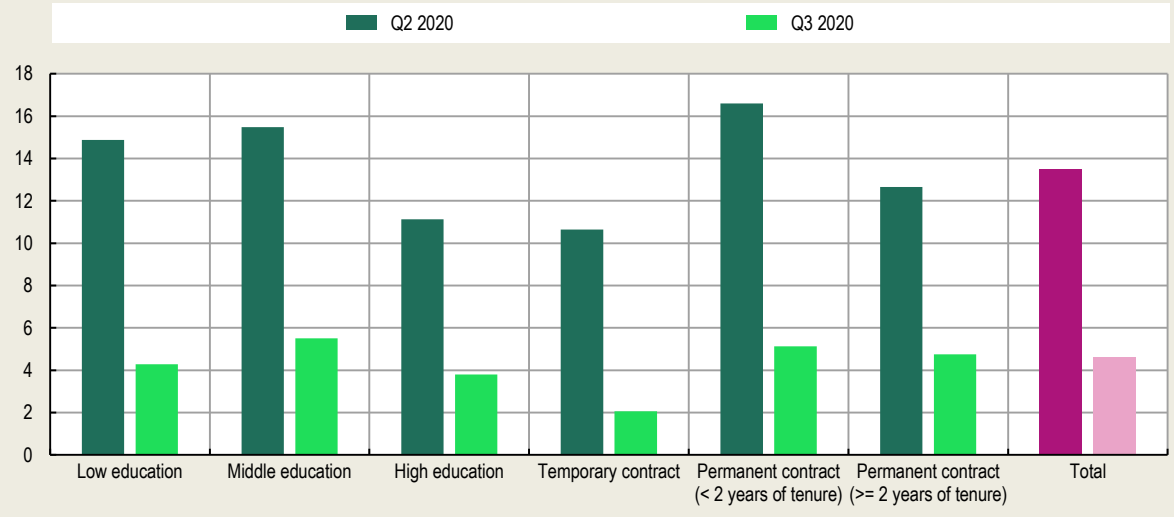
The incidence of STW is highest for persons with intermediate levels of education, followed by persons with low levels of education, while the incidence of STW is markedly lower for persons with high levels of education. The lower incidence among highly educated workers most likely reflects the higher scope of working effectively from home – see e.g. OECD (2020[9]) and Chapter 5. The somewhat lower incidence of STW among workers with low levels of education may reflect their higher propensity to work in essential professions that remained open for business during the lockdown – see also Chapter 1.

The incidence of STW is considerably higher among workers with a permanent contract than those with a temporary contract. However, even among workers with a temporary contract take-up was sizeable, amounting to over 10% in Q2 2020. This suggests that the temporary extension of eligibility for STW to temporary workers by the Swiss Government in response to COVID-19 is likely to have played an important role in mitigating the labour market impact of the crisis on this group of workers, which usually tends to be among the hardest hit during an economic downturn.

The descriptive statistics documented in this box are based on answers by workers to the Swiss Labour Force Survey, rather than on administrative data as in the main text. The difference in take-up between the two sources is considerable: 14% (4%) based on the LFS data versus 24.6% (7.8%) in the administrative data in Q2 2020 (Q3 2020). While this might in part reflect the fact that workers are not always aware that they are on STW, more likely it reflects differences in the reference period. The LFS data refer to workers who were on STW in a specific reference week in the quarter, while the administrative data count anyone who has been on STW at any point in a month and average take-up across months in the quarter.

Figure 2.5. The use of job retention schemes by education and contract type in Switzerland

Percentage of dependent employment



Source: OECD Calculations based on Swiss LFS.

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2.3. The effects of job retention schemes: A preliminary analysis

This section presents a preliminary discussion of the possible effects of JR schemes during the first two quarters of the COVID-19 crisis on job preservation as well as their possible adverse effects on job creation and reallocation.

2.3.1. Job retention schemes helped to preserve jobs

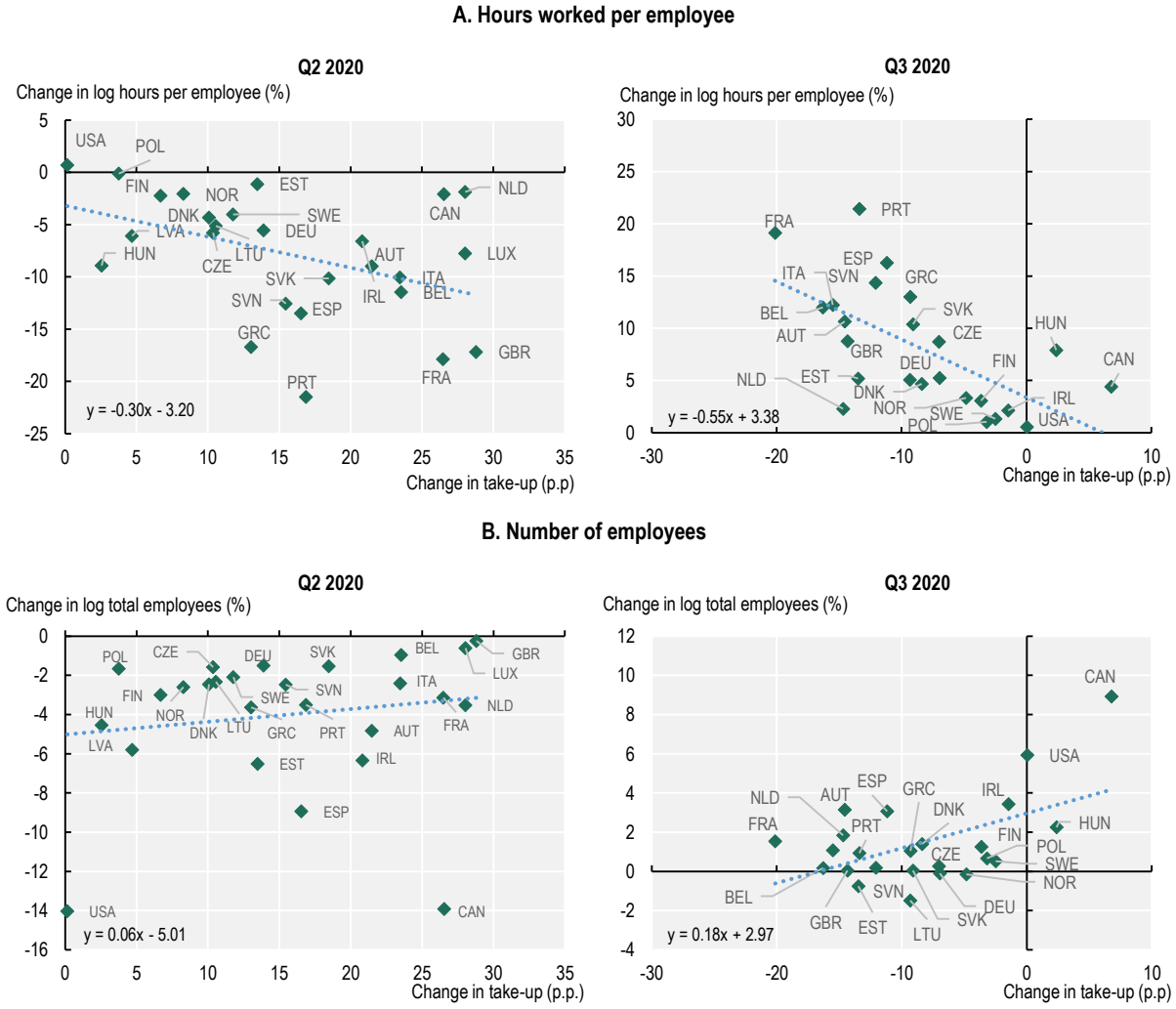
Providing an accurate estimate of the number of jobs saved by JR support requires a well-defined and credible counterfactual for what would have happened during the COVID-19 crisis in the absence of JR schemes. This is far from obvious due to the unprecedented and synchronised nature of the COVID-19 crisis that followed from the combination of legal restrictions imposed by governments and behavioural responses by workers and firms to the epidemic. Moreover, governments across the OECD responded decisively through a range of measures to contain the impact of the health crisis on the economy and the labour market by providing liquidity to firms, via JR schemes but also tax deferrals, direct income-support to workers and households and many other measures (Chapter 1). These factors greatly complicate the task of defining a meaningful counterfactual based on either previous crisis episodes or by making comparisons across countries that differed in their use of JR support and not much else.

Bearing these limitations in mind, this sub-section presents some tentative insights on the plausible range of the effect of JR support on jobs saved.[15] The estimates are based on two simple pair-wise correlations which relate the change in JR use during the COVID-19 crisis to respectively the change in hours worked per employee and the change in the number of employees. The correlation between the change in average hours worked and the use of JR support provides an indication of the number of jobs saved under the assumption that firms only used the scheme to support jobs that they would have otherwise terminated (i.e. no efficiency losses). The correlation between JR support and the change in the number of employees provides an indication of the number of jobs saved under the assumption that employment growth is not affected by any other factors that also correlate with JR take-up (i.e. other policy interventions, pre-existing policies and institutions, the size and nature of the shock). While the latter set-up in principle allows for efficiency losses, it is also clear that there are important confounding factors that are not easily taken into account. To the extent that larger shocks cause both an increase in the use of JR support and a decline in employment, the implied jobs effect is most likely underestimated and should be interpreted with due caution.[16]

The correlations of JR support on the one hand and average hours worked and employment on the other, point to a broad range of plausible estimates of the jobs impact of JR schemes during the COVID-19 crisis (Figure 2.6).[17] As expected, the use of JR schemes is associated with a strong reduction in hours worked per employee across countries (Panel A). The fitted line suggests that a 10% increase in the use of JR support is associated with a reduction in hours worked per employee of about 4% (on average between Q2 and Q3), equivalent to an average reduction in working time for those on JR support by 40%.[18] As discussed above, under the assumption of no efficiency losses, this also implies a jobs impact of 4%, which could therefore be considered an upper bound to the true effect on jobs. The correlation between the use of JR support and employment is weaker: a 10% increase in the use of JR support is associated with a 1.2% higher level of employment (Panel B). Taken at face value, a relatively small effect of JR schemes on jobs may reflect the ability of firms to retain workers independently of JR support, due to complementary measures taken by governments to provide liquidity to firms. However, as mentioned above, there are good reasons to believe this is an underestimate of the true jobs impact.[19]

Figure 2.6. The use of job retention schemes, average hours worked and employment

Pairwise correlations between the use of JR schemes and average hours worked (Panel A) and log employees (Panel B), Q2 2020 and Q3 2020



Note: Data refer to quarter-on-quarter changes. Seasonally adjusted hours and employees data.
Source: JR take-up: national sources (see Annex Table 2.A.1 for details). Hours and employees: OECD Quarterly National Accounts database.

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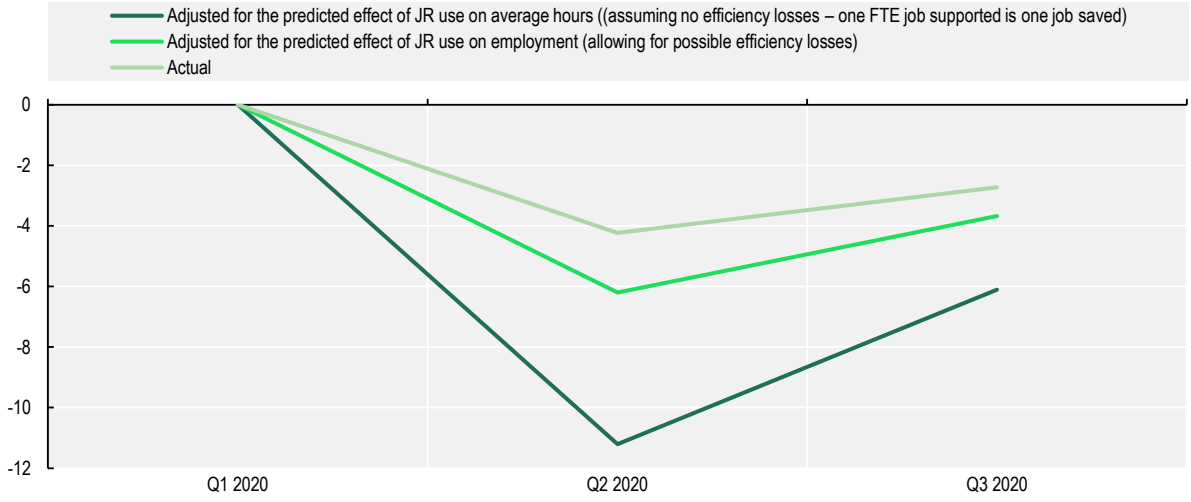
The implications of these different jobs estimates of the use of JR schemes for the evolution of employment during the COVID-19 crisis are visualised in Figure 2.7. It compares the actual change in the total number of employees with the implied counterfactual changes that would have occurred in the absence of JR support. The counterfactual changes have been obtained by adjusting the actual change in employment for the estimated effect of JR use on hours and employment. Across the OECD, the number of employees fell sharply by about 4% between Q1 2020 and Q2 2020, and then started to recover gradually. The adjusted employment series based on the correlation between the change in JR support and the change in average hours worked indicates that in the absence of JR support – not allowing for possible efficiency losses – the fall in the number of employees in Q2 2020 might have been as large as 11%. The adjusted employment series based on the correlation of the change in JR support and the change in the number of

employees across countries suggests that, in the absence of JR schemes, the decline in the number of employees would have been almost 50% larger than the actual change in employment, resulting in a decline in employment of more than 6%. The large differences in the evolution of employment after adjusting for the estimated associations of JR schemes with average hours worked and employment clearly highlight the high degree of uncertainty that surrounds these estimates. A better understanding of the role of JR schemes during the COVID-19 crisis may be obtained as time passes and more detailed data become available.

Figure 2.7. Job retention schemes have helped to contain the decline in employment, but there is considerable uncertainty by how much

Percentage change in the number of employees with and without JR support from Q1 2020 to Q3 2020



Note:
Adjusted for the predicted effect of JR use on average hours = Actual employment – the average slope coefficient in the scatter plots relating average hours worked to the use of JR schemes * the actual use of JR schemes.
Adjusted for the predicted effect of JR use on employment = Actual employment – the average slope coefficient in the scatter plots relating employment to the use of JR schemes * the actual use of JR schemes.
Seasonally adjusted hours and employees data.
Source: OECD calculations based the use of JR support: national sources. Hours and employees: OECD Quarterly National Accounts database.

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Given the difficulty of coming up with a well-defined and credible counterfactual of what would have happened in the absence of JR schemes using country level data, there have been only few attempts to quantify their effects so far and those that have done so rely on detailed microdata. An early evaluation of the Australian *JobKeeper Payment* finds that it saved the job of one in five employees who received the payment or about 700 000 jobs over the period April to July 2020 (Bishop and Day, 2020[10]). Given the modest size of the lump-sum subsidy, this effect seems large, suggesting that the *JobKeeper Payment* was an effective instrument to preserve jobs. Evidence for the *Paycheck Protection Program* in the United States remains inconclusive, with some studies finding very small and others finding very large employment effects (see Box 2.4).

Box 2.4. The *Paycheck Protection Program* in the United States

As part of the initial policy response to the COVID-19 crisis, the United States introduced the *Paycheck Protection Program* (PPP) which provides small and medium-sized businesses with less than 500 employees forgivable, low-interest loans to pay their employees even if they do not work. Eligibility did not depend on the financial situation of the firm. The loan was converted into a subsidy if employment and compensation levels were maintained. The programme was administered by private banks. The programme was extremely large, disbursing more than USD 500 billion between April and June 2020 equivalent to about 2.5% of GDP.

Jobs estimates are mixed

A few academic studies have evaluated the initial effects of PPP (Autor et al., 2020[11]; Chetty et al., 2020[12]; Bartik et al., 2020[13]; Hubbard and Strain, 2020[14]) comparing employment changes between eligible firms with just under 500 employees and ineligible firms with just over 500 employees. These studies tend to find rather small employment effects. For example, Autor et al. (2020[11]) find that PPP increased employment by about 3% or 2 million jobs over the period from April to June 2020. This amounts to about 250K USD per job saved (based on a combination of loans and subsidies). Other studies argue that comparisons around the eligibility threshold of 500 employees are not informative of the likely larger effect on smaller and more vulnerable firms (Faulkender, Jackman and Miran, 2021[15]; Doniger and Kay, 2021[16]). Exploiting time variation in the receipt of PPP loans, these studies find much larger employment impacts of the programme and argue that it could have achieved even better results had it been targeted more effectively to smaller firms.

Targeting was initially weak

Some features of the initial design of the PPP might have limited its ability to target firms with jobs at risk (Granja et al., 2020[17]; Doniger and Kay, 2021[16]). First, since the programme was administered by private banks, it had a tendency to favour firms with better connections. As a result, smaller firms were less likely to be aware of the programme, experienced longer processing times and were less likely get their applications approved. Second, the initial version of the programme did not consider the need for financial support beyond being small as a condition for receiving a loan. Consequently, a considerable number of firms received support which did not need it and these firms were more likely to have their loans forgiven since they could more easily maintain employment and compensation levels. Third, loans were often used to make non-payroll payments and build up savings buffers. While this reduced the impact of PPP on employment, it has rendered it more effective in preventing bankruptcies.

Targeting has been enhanced in the revised programme

In January 2021, an additional USD 300 billion were assigned to PPP as part of the second COVID-19 relief package. The programme was more narrowly focused on businesses which have been hit hard. While qualifying circumstances remain unchanged for first-time applicants, firms which have already received funds from the programme will be eligible for a second loan only if they have 300 employees or fewer and can prove significant revenue losses. Moreover, the maximum loan will be limited to USD 2 million, down from USD 10 million in the original round of funding.

2.3.2. It is unlikely that the widespread use of JR schemes had a significant adverse impact on job creation and reallocation so far

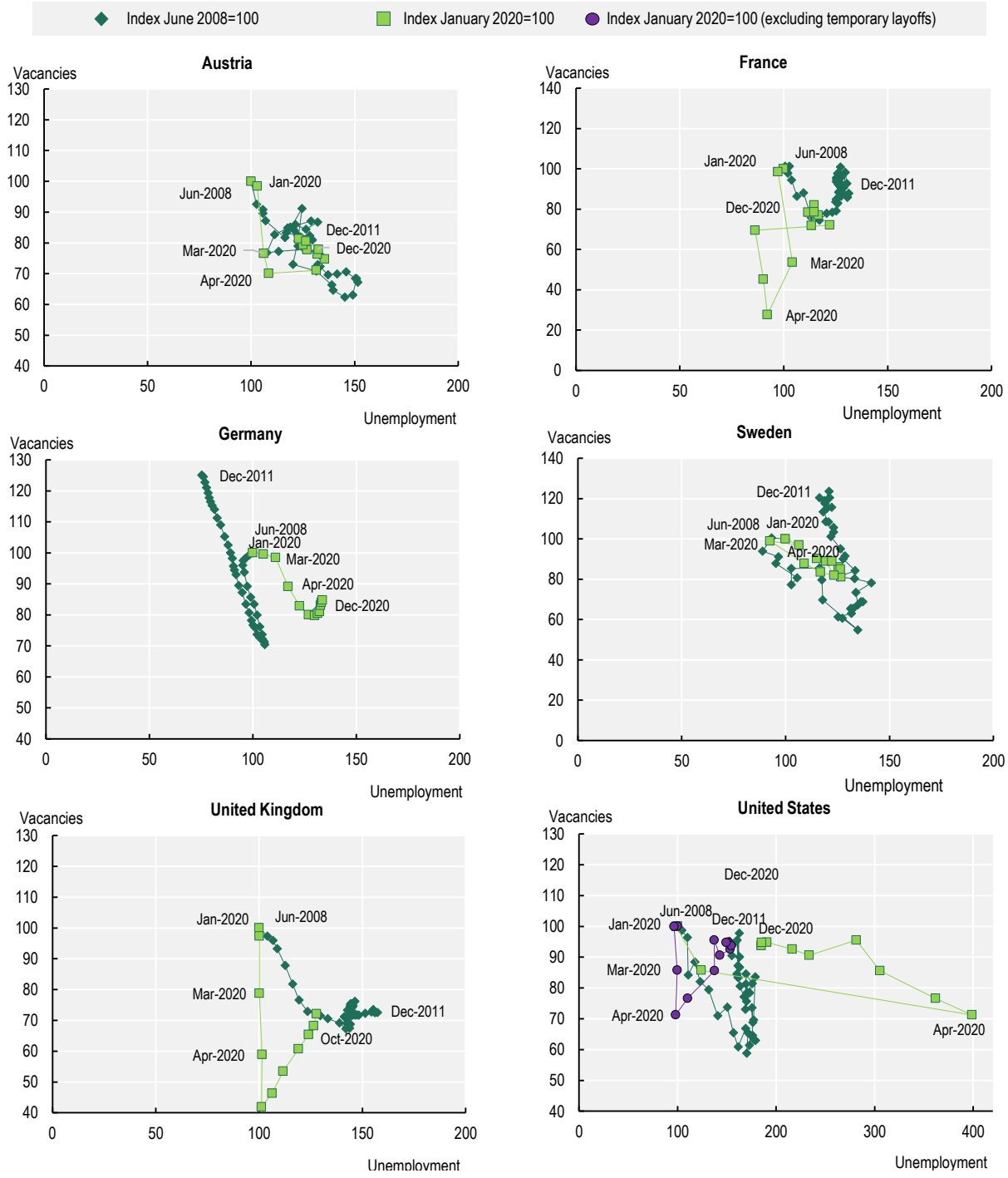
The main concern with the widespread use of JR schemes is that, when used for too long, there is a risk that they undermine job creation in the recovery and slow down the reallocation of jobs from low to high performing firms.[20] For these concerns to have materialised so far, three conditions need to be met. First, JR schemes must have supported unviable jobs in firms with structural difficulties (low productivity firms). Second, in the absence of JR support, these workers would have been laid off and would swiftly have found a job in another firm. Third, it must have become more difficult for firms to fill their job vacancies as a result of the use of JR schemes. Each of these issues will be reviewed in turn below, based on the available data and preliminary evidence for the first year of the COVID-19 crisis.

JR schemes may end up supporting unviable jobs in firms with structural difficulties for two main reasons. First, the JR schemes may support firms with *pre-existing* structural difficulties. This is likely to be small relative to the number of jobs supported by JR schemes. As documented above, the use of JR support has been widespread across sectors and was closely related to presence of economic restrictions since the start of COVID-19 crisis. While a number of countries that relied heavily on JR schemes exhibited lower layoffs than in normal times, suggesting that JR schemes and other firm-support measures have tended to preserve some jobs that in the absence of the crisis would have been terminated, the number of these "missing layoffs" so far is likely to have been rather small.[21,22] Second, JR schemes may have supported jobs that had become permanently unviable as a result of the COVID-19 shock itself: it did not just represent a temporary shock but also a permanent one, requiring the reallocation of jobs across firms and sectors.[23] While it is too early to say to what extent the COVID-19 crisis is likely to induce permanent changes, it is likely to accelerate a number of important pre-crisis trends related to the spread of online activities, the incidence of working from home and the automation of production (see Chapter 1).

Even in the event that JR schemes were supporting many permanently unviable jobs, this does not necessarily mean that they were also slowing job creation and reallocation. If there is weak effective demand for workers in permanently unviable jobs, letting them go would merely increase unemployment, without any effect on job creation and reallocation. This is more likely when job vacancies are relatively low and the number of unemployed persons competing for these job vacancies is relatively high. This is visualised in Figure 2.8 using Beveridge Curves which trace out combinations of job vacancies and unemployed job seekers during the COVID-19 crisis (from 2020M1 to 2020M12) and, to put this in perspective, also during the global financial crisis (from 2008M6 to 2011M12).[24] It shows that as a result of the COVID-19 crisis, the ratio of vacancies to the number of unemployed initially sharply declined as job vacancies plummeted and the number of unemployment jobseekers tended to increase. As time passed, job vacancies started to recover while unemployment continued to edge up, resulting in an outward movement of the Beveridge Curve. With the exception of the United States, however, job vacancies remained well below their pre-crisis levels until the end of 2020. At least in part, this is likely to reflect weak labour demand related to the high degree of uncertainty about the short-term outlook. The continued weakness of labour demand mitigates concerns about the possible adverse effects of JR schemes on job creation and reallocation. Indeed, the resulting increase in the expected duration of unemployment and the competition for jobs among the unemployed provides a justification for temporarily increasing the generosity of JR support (and unemployment benefits) in the context of an economic downturn (Landais, Michaillat and Saez, 2018[18]; Hijzen and Venn, 2011[4]).[25]

Figure 2.8. In countries that have relied heavily on job retention schemes job vacancies remain depressed

Index of job vacancies and unemployment set to 100 at start of crisis, selected OECD countries



Source: OECD Short-term labour force statistics database.

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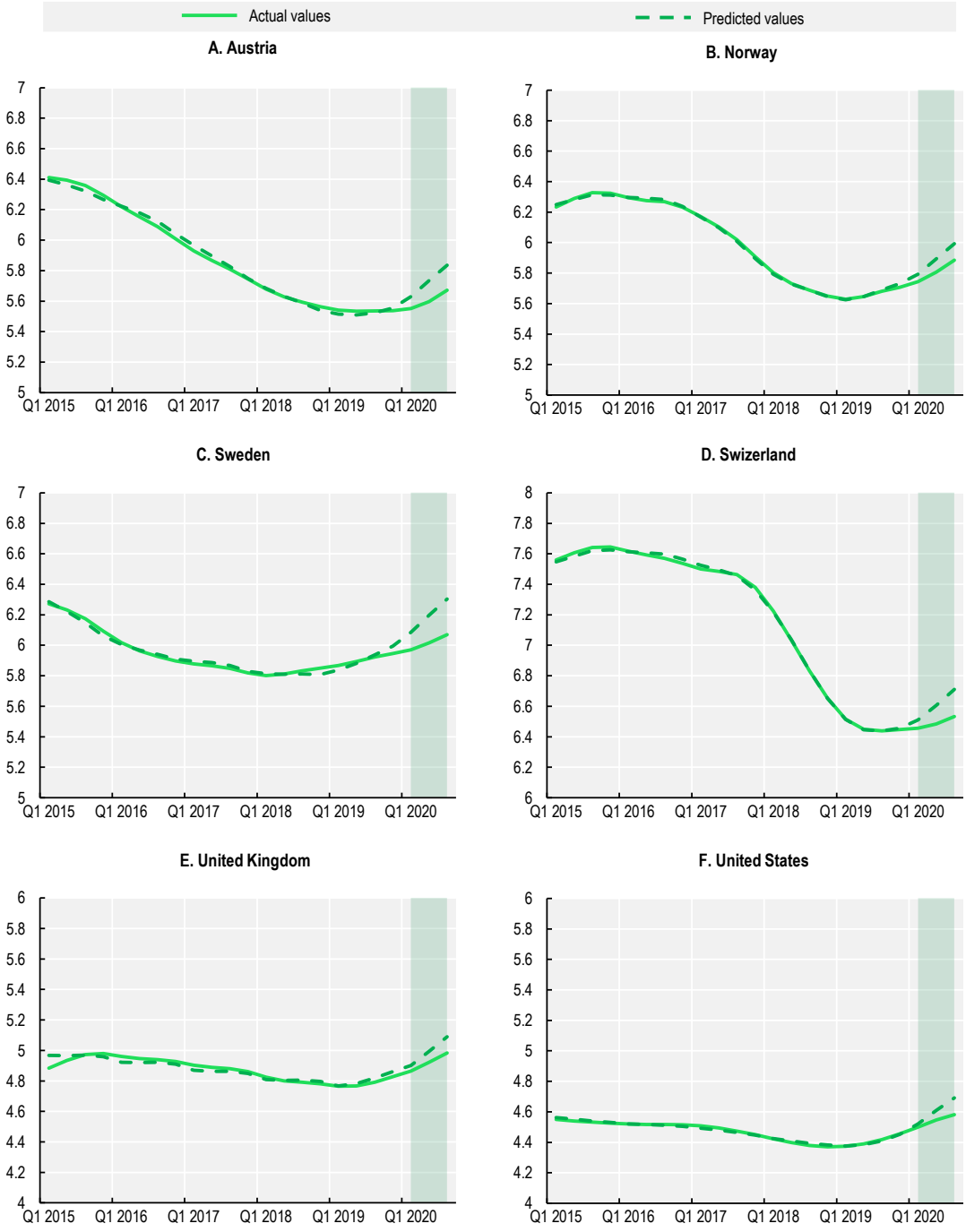
A further question is whether supporting jobs in firms with structural difficulties has undermined job creation by making it more difficult for firms to fill their vacancies. To shed some light on this question, so-called "matching functions" are estimated, which describe the ease with which job openings can be filled (or unemployed job seekers can find jobs) for a given level of labour market tightness (Petrongolo and Pissarides, 2001[19]; Federal Reserve Bank of San Francisco et al., 2011[20]). Figure 2.9 documents the actual evolution of the job-filling rate, the ratio of hires over vacancies, as well as its expected evolution based on actual changes in labour market tightness (see Box 2.5 for details). The figure provides two insights. First, actual job-filling rates have tended to increase since the start of the COVID-19 crisis. This is the typical pattern observed during economic downturns as more workers are competing for fewer job vacancies. Importantly, the increase in the job-filling rate suggests that it has not become more difficult to fill job vacancies. Second, the job-filling rate tended to increase less than what might have been expected based on its relationship with labour market tightness in the period before the COVID-19 crisis. While this may point to a decline in matching efficiency, it is unlikely to be related to the unprecedented use of JR schemes. Indeed, there is no clear indication in the data that the use of JR schemes played a significant role in explaining the-smaller-than-expected increase in the job filling rate (Figure 2.10).

The limited increase in the job-filling rate might, instead, be due to the nature of the crisis itself. The asymmetric impact of the crisis across sectors with different skill requirements might have produced a mismatch between skills of unemployed jobseekers and those required by employers, as observed during previous recessions (Şahin et al., 2014[21]). Indeed, one of the objectives of JR schemes is to prevent the build-up of such skill mismatches. Moreover, unemployed workers might have limited their search efforts due to concerns linked to the severity of the health and economic situation – see Chapter 1. For example, evidence for Sweden shows that job-search declined more sharply than vacancies in the period immediately after the COVID-19 outbreak, making it harder to fill jobs despite a larger number of unemployed per vacancy (Hensvik, Le Barbanchon and Rathelot, 2021[22]).

Figure 2.9. Actual job-filling rates during COVID-19 fell short of their predictions based on historical data

Actual and predicted job-filling rates, selected countries, Q1 2015- Q3 2020



Note: Job-filling rate: ratio of hires to job vacancies. Predicted job-filling rates are based on country-specific regressions on labour market tightness using data for the period before the COVID-19 crisis (Q1 2015-Q4 2019).
Source: Hires: European Union Labour Force Survey (EULFS) for European countries and Job Openings and Labour Turnover Survey (JOLTS) for the United States. Job vacancies: OECD Short-Term Labour Force Database.

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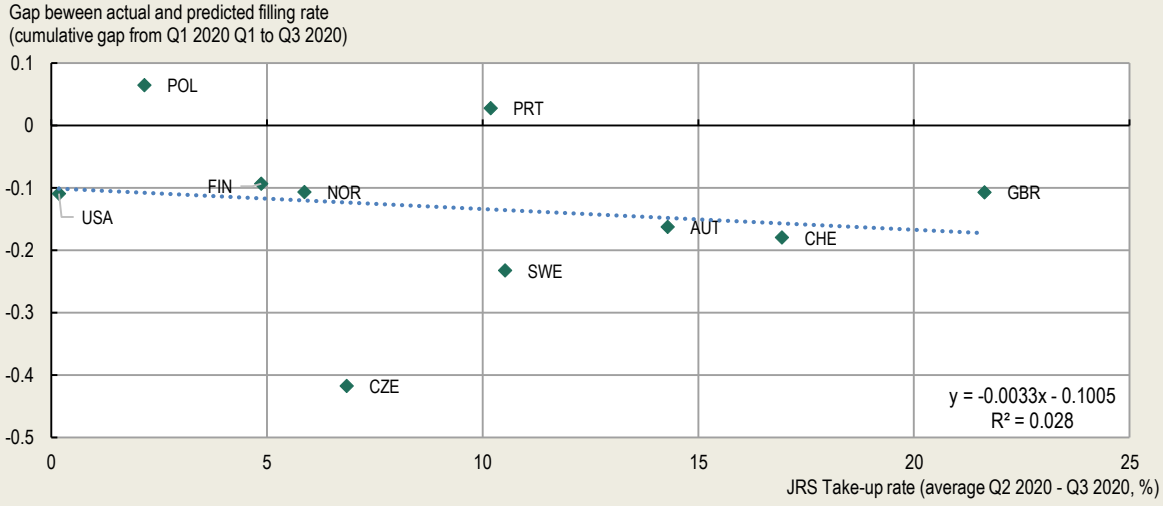
Box 2.5. Assessing the role of job retention schemes for labour market efficiency

Matching functions describe the ease with which job openings can be filled (or unemployed job seekers can find jobs) for a given level of labour market tightness. For the purpose of this chapter, matching functions for the job-filling rate are estimated separately for each country using the following empirical model (Petrongolo and Pissarides, 2001[19]; Federal Reserve Bank of San Francisco et al., 2011[20]):

$$(1)\ \ln y_t = \alpha_0 + \alpha_1 \ln\left(\frac{v_t}{u_t}\right) + \varepsilon_t$$

where y refers to the job-filling rate, u and v refer to the number of vacancies and unemployed job seekers and ε an independent error term. α_1 captures the sensitivity of matching measured in terms of the job-filling rate with respect to labour market tightness and α_0 measures the degree of matching frictions conditional on labour market tightness. Matching functions are estimated separately for each country using quarterly data for the pre-crisis period (Q1 2015 to Q4 2019). The evolution of the job-filling rate since the start of the crisis can be predicted by combining the estimated parameters of the matching function with the actual evolution of labour market tightness since the start of the crisis. While these estimates suggest that matching efficiency may have declined since the start of the crisis in a number of countries, there is no clear relationship with the use of JR schemes (Figure 2.10).

Figure 2.10. The shortfall in the job-filling rate during the COVID-19 crisis is not related to the use of JR schemes



Source: Hires: European Union Labour Force Survey (EULFS) for European countries and Job Openings and Labour Turnover Survey (JOLTS) for the United States. Job vacancies: OECD Short-Term Labour Force Database.

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2.4. Policy discussion: Combining job retention policies with job reallocation

With job vacancies and job search remaining depressed in most countries, JR schemes mainly helped preserve jobs and limit the surge in unemployment, probably without a significant impact on workers' flows towards expanding firms. As a result of often strict social distancing restrictions, many jobs were

temporarily at risk, limiting the risk of subsidising jobs that do not need support (deadweight costs), while the risk of significantly stifling job creation was small since the scope for effective job search and job mobility was limited. This justified the measures taken by governments to promote the use of JR support during the initial phase of the COVID-19 crisis.

Going forward, concerns about the possible adverse effects of JR schemes on job reallocation are growing, but withdrawing the support too early or too widely risks generating a sudden wave of layoffs.[26] A careful scaling back of JR support should be implemented flexibly, closely following the evolution of the economic and health situation, and likely requires a differentiated approach across sectors. Firms and sectors whose ability to operate remains constrained by health recommendations or legal restrictions should continue to receive strong JR support. In other sectors, however, continuing to provide generous support after the end of health and legal restrictions carries an increased risk of supporting unviable jobs and consequently potentially undermine job creation and reallocation as economic activity resumes. Here, the challenge for governments is to adapt JR schemes to provide incentives for firms and workers to use support only for jobs that are temporarily at risk but remain viable in the longer term. Indeed, as firms with temporary difficulties are likely to leave support when activity can resume – as witnessed during the third quarter of 2020 – the share of firms with structural problems is likely to increase.

This section discusses the dimensions along which job retention schemes can be adapted and how the changes can be implemented keeping into account the uncertain evolution of the crisis and its differentiated impact across sectors. It focuses on the following three key issues:

- Limiting the maximum duration of support
- Enhancing the targeting of support
- Supporting workers in jobs at risk

2.4.1. Limiting the maximum duration of support

While support should remain in place as long as government-imposed health measures restrict economic activity, once these measures are withdrawn and economic activity can resume, support should become time-limited to reduce the risk of subsidising jobs that no longer need support or jobs that have become unviable. Since STW schemes provide relatively strong incentives for resuming working hours once business conditions have improved, the main purpose of maximum limits for those schemes is to avoid supporting jobs with structural problems. By contrast, WS are not conditional on reducing working time and therefore provide strong incentives for drawing support as long as possible irrespective of the financial need or the viability of the job. To limit the risk of subsidising jobs that do not need support (i.e. deadweight losses), firm eligibility needs to be re-assessed regularly in WS schemes. Conditional on eligibility requirements being met, limits to the effective maximum duration serve the same purpose as in STW schemes, i.e. reducing the risk of preserving jobs that have become unviable in the longer term.

The maximum duration of support varies considerably across JR schemes. In countries with STW schemes, the maximum duration varies from about three months in Japan, Latvia and Portugal to 18 months in Switzerland up to 24 months in Germany. In Germany, firms which started using STW before 31 December 2019 can continue to do so for up to 24 months without reassessment of eligibility until the end of 2021 (compared to 12 months in normal times). While the maximum duration of support in Switzerland is also quite long, its continued use is subject to regular reassessments of firm eligibility (every 3 or 6 months).[27] In countries with WS schemes, the maximum duration of support tends to be short (around 3 months) or firm eligibility is re-assessed regularly. In countries such as Australia, the Netherlands and the United Kingdom, several extensions have been introduced, allowing for additional support for firms that remain eligible, albeit in some cases under less generous conditions.

2.4.2. Enhancing the targeting of support

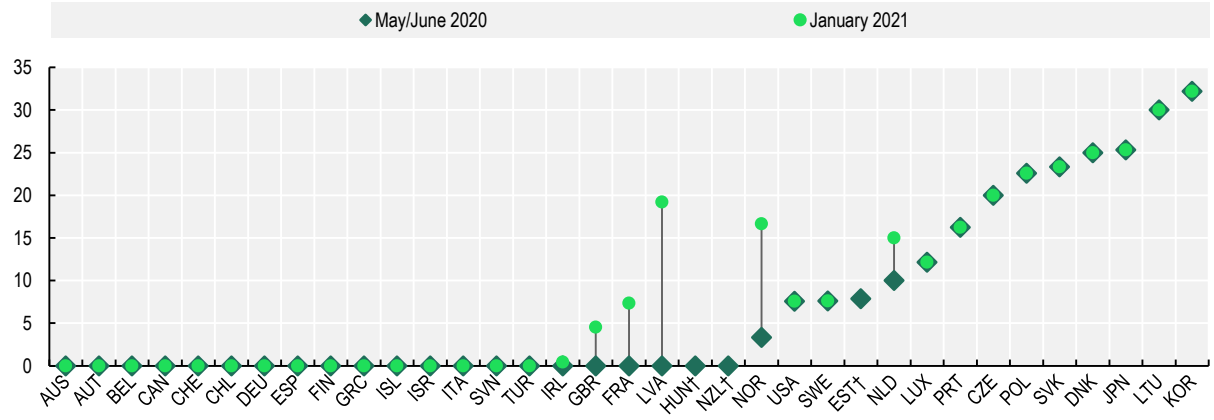
Limiting the maximum duration prevents that jobs are supported for too long, particularly those with limited prospects of recovering, but does not ensure that subsidies go to the right jobs, i.e. jobs that are temporarily at risk but will be able to resume in the not too distant future. Firms and workers typically have a better sense of the viability of jobs than governments, particularly in the current context where social distancing restrictions remain important and market signals are weak. Financial incentives for firms and workers can help enhance the targeting of JR support to jobs that are temporarily at risk, but viable in the longer term.

Requiring firms to contribute to the costs of reduced working hours

While the cost of reducing working time was set to zero in response to the COVID-19 crisis in most countries, governments should consider (re)introducing some cost-sharing with firms in sectors where restrictions are withdrawn and activity can resume. While this would reduce the attractiveness of STW for firms in general, it would also strengthen incentives to use support only for jobs that are likely to re-start after the crisis and to resume regular work schedules as soon as possible. A number of countries have introduced co-financing for firms, while others have increased the rate (Figure 2.11). For example, since 1 June 2020, firms in France were required to pay 10% of the cost of hours not worked (15% of the benefit) in sectors that were no longer subject to economic restrictions.[28] This is expected to increase to 24% from 1 July 2021 (40% of the benefit). The United Kingdom had started to gradually increase the cost to employers for keeping workers on furlough from July 2020, but as the health situation deteriorated in the fall, largely reverted to its original version with firms only required to pay social security contributions over hours not worked. Employers in Germany will be liable to pay 50% of social security contributions from July 2021 and 100% from January 2022, which is the usual rule during short-time work. In Norway, the waiting period during which firms have to pay full wages has been increased from 2 to 10 days since November 2020. Latvia introduced a new scheme in response to the second wave of the virus which requires firms to cover up to 20% of the costs of hours not worked, while employers did not have to contribute anything with the temporary scheme that was operational during the first wave.

Figure 2.11. Some countries recently introduced co-financing by firms or increased the rate

Cost of hours not worked for firms as percentage of labour cost for the maximum permissible reduction in working time, May/June 2020 and January 2021



Note: † Schemes no longer operational in January 2021. Mandatory employer contributions for private insurance are not taken into account (consistent with the OECD methodology of Taxing Wages). Norway: for the first 3 months (60 days). For full details see Annex Table 2.A.2.
Source: Country answers and ad hoc updates to OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes.

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The optimal contribution of firms for hours not worked depends on efficiency considerations related to the risk of slowing job reallocation and equity considerations related to the risk of reinforcing labour market duality.

If the objective is to prevent supporting jobs that are permanently unviable, a small co-payment by firms should be sufficient. This would help to reduce the risk of supporting permanently unviable jobs from the start of programme participation rather than only after the maximum duration of support. In practice, the objective of co-financing is likely to go beyond preventing permanently unviable jobs by limiting support to jobs that are viable after the maximum duration of support. To the extent that jobs that are not viable after this period will be terminated, it may be preferable to avoid supporting such jobs in the first place. This requires a more significant co-payment by firms. To provide a broad idea of the approximate co-financing rate, Box 2.6 considers a set of numerical examples. For STW schemes with a maximum duration of 12 months, requiring firms to pay 8.5% of the costs of hours not worked may be enough to limit support to jobs for which the costs of closing and re-opening them exceeds one month of pay. Having a shorter maximum duration or restricting support to jobs with larger replacement costs would be consistent with a larger co-payment.

While co-payments by firms increase the targeting of support to viable jobs (and firms), they can have unintended consequences. First, co-payments may reinforce firms' financial difficulties and increase the risk of bankruptcies. To avoid increasing the risk of bankruptcies in solvent but illiquid firms, co-financing by firms could take the form of a delayed payment or (zero-interest) loan (Cahuc, Kramarz and Nevoux, 2018[23]; Burdett and Wright, 1989[24]).[29] Second, co-payments by firms risk reinforcing labour market duality by limiting support to workers with high replacement costs, e.g. permanent workers with significant firm-specific skills and severance pay entitlements, and laying off workers with low replacement costs, e.g. temporary jobs or jobs with limited skill requirements. Indeed, Tilly and Niedermayer (2017[25]) show using administrative data for Germany that take-up is increasing in tenure and experience.[30] This reflects weak incentives for firms to hoard such workers rather than concerns over the viability of these jobs in the future. A potentially more nuanced but also much more complex and so far untested approach would be to link the co-payment to tenure or contract status.[31]

Box 2.6. Setting the STW co-financing rate: A quantitative illustration

Job retention schemes seek to limit inefficient layoffs, i.e. jobs that have become unprofitable temporarily for firms but remain viable in the longer term. This may be because firms cannot unilaterally reduce earnings in line with the decline in business activity (sometimes referred to by economists as "wage rigidity") or because firms do not have the means to absorb the costs of reduced business activity due to liquidity constraints even though this would be profitable in the medium term. JR schemes help to overcome earnings rigidities and alleviate liquidity constraints by allowing labour costs to decline in line with the decline in business activity.

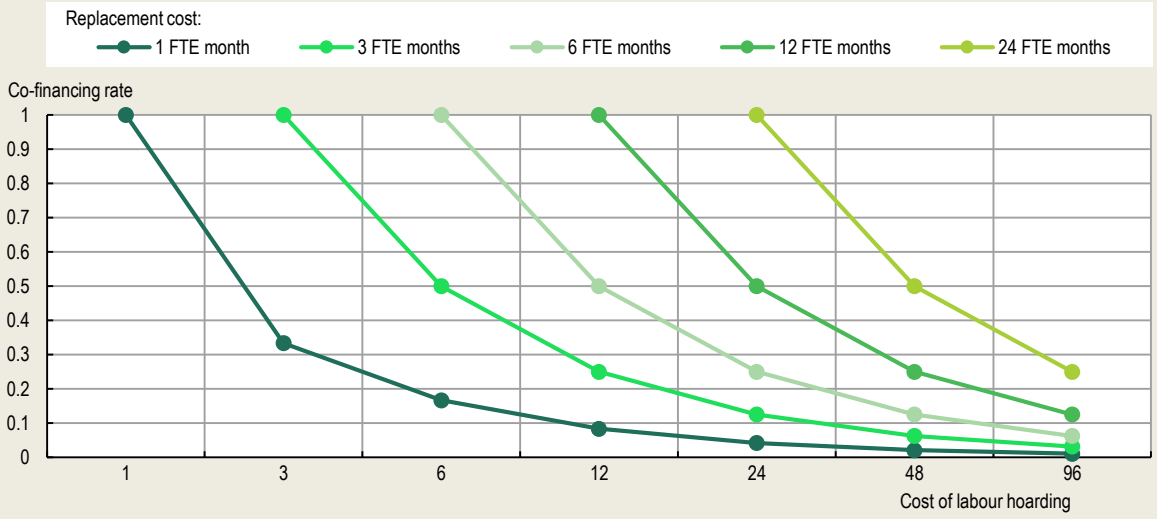
In the context of STW, firms face a choice between using STW to retain workers and laying them off. This requires comparing the cost of hoarding workers with STW support on the one hand with the cost of laying off workers and recruiting and training new ones once business activity resumes on the other. The cost of labour hoarding depends on the duration of reduced business activity (and STW support) and the cost for firms of hours not worked. The replacement cost of workers consists of firing costs (e.g. notification requirements and mandatory severance pay, privately negotiated severance pay, experience-rated social security contributions) and hiring costs (e.g. recruitment costs, formal training, on-the job learning). These costs are likely to be larger for workers with higher levels of firm-specific capital, i.e. workers who have considerable experience in the firm and who engage in knowledge-intensive activities.

In the absence of any co-financing requirements, the cost of labour hoarding under STW is zero and hence labour hoarding with STW is beneficial to firms for all workers irrespective of the period over which workers should be hoarded. With co-financing requirements, labour hoarding with STW is only beneficial for workers in firms for whom the replacement cost exceeds the cost of labour hoarding over the period. This is more likely the higher the replacement cost of workers (the cost of firing, hiring and training) and the lower the cost of labour hoarding (the shorter the hoarding period and the lower the co-financing rate for STW).

To provide an indication of the appropriate co-financing rate Figure 2.12 calculates the STW co-financing rate for different combinations of replacement and hoarding costs. When business activity is down by 100% for a period of 24 months, a small co-financing rate of about 4% of the costs of hours not worked ensures that all jobs with a replacement cost of one month of salary or more will be preserved. When business activity is completely down for 12 months, a co-financing rate of 8.5% should ensure that jobs with a replacement cost of one month of salary or more will be preserved, while a co-financing rate of 17% would allow preserving jobs with a replacement cost of two months of salary or more.

Figure 2.12. The co-financing rate could be higher the lower the cost of labour hoarding and the higher the replacement cost of workers

The co-financing rate for given hoarding and replacement costs



Note: The cost of labour hoarding in the absence of STW is defined as the number of months of salary that need to paid to keep a worker when business activity is down (in full-time equivalents). For example, if activity is down by 50% for a period 12 months, the cost of hoarding will be 6 months in full-time equivalents. The replacement cost of workers is defined as the firing, hiring and training costs of workers in terms of months of pay.

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While WS schemes typically have short maximum durations, they have been extended multiple times in a number countries, raising similar issues as STW in relation to reallocation. To address this issue to some extent, governments could ensure that employers bear some of the cost of hours not worked – at least for large reductions in working hours – by requiring firms to pay a fraction of a workers' usual wage regardless of hours worked with the subsidy set to cover only part of that pay.[32] The WS scheme operated in the Netherlands mimics STW schemes that require firms to share some of the cost of hours not worked. While

workers continue to receive 100% of their earnings during periods of reduced working time, employers receive at most 90% of the wage, depending on the decline in business activity. Since 1 October 2020, firms are allowed to reduce the wage bill by 10%, be it through quits or layoffs during a 3-month period, *without* a reduction in the subsidy. The implications for job retention and job reallocation of this measure are discussed in Box 2.7.

Box 2.7. Reconciling job retention and job reallocation: An example from the Netherlands

In the initial versions of the Dutch JR scheme (NOW1 and 2), participating firms had to pay full earnings, were not allowed to make any layoff and received a subsidy of 90% of the wage bill times the expected reduction in sales for all workers in the firm. This system supported job retention, but impeded job reallocation due to the restrictions on firing. In the revised version of the scheme operational from 1 October 2020 (NOW3) the ban on firing is lifted: firms are allowed to reduce the wage bill by up to 10% through quits or layoffs, *without* a reduction in the subsidy. The subsidy is now computed as 80% of the wage bill times the expected decline in sales (85% from 1 January 2021) while firms continue to be required to pay full earnings to all workers.

The new version of the scheme continues to support the retention of core workers, but also generates incentives to adjust employment by laying off marginal workers whose hours have been reduced. To see this, consider as an example a firm with ten workers of which five workers continue to work full-time and five are put on furlough following a reduction in business activity of 50%. According to the rules that were introduced in October 2020, the firm continues to pay full earnings to the furloughed workers (equal to 50% of the usual wage bill) and receives a subsidy of 0.8*0.5 or 40% of the usual wage bill. Hence the total cost of the five furloughed workers amounts to 10% of the usual wage bill. However, the firm can now bring the total cost of hours not worked to zero by laying off one of the workers on furlough – hence reducing the amount it pays to workers from 50% to 40% of the usual wage bill while still receiving a wage subsidy of 40%.

The new scheme therefore at the same time actively promotes job retention of core workers and job reallocation of marginal workers. Whether this is desirable is debatable. Indeed, one might wonder whether a more neutral treatment of layoffs would not be preferable. For example, layoffs could be allowed with a pro rata adjustment of the subsidy in case of layoffs and quits instead.

Aligning STW and unemployment benefits more closely in countries where the gap is large

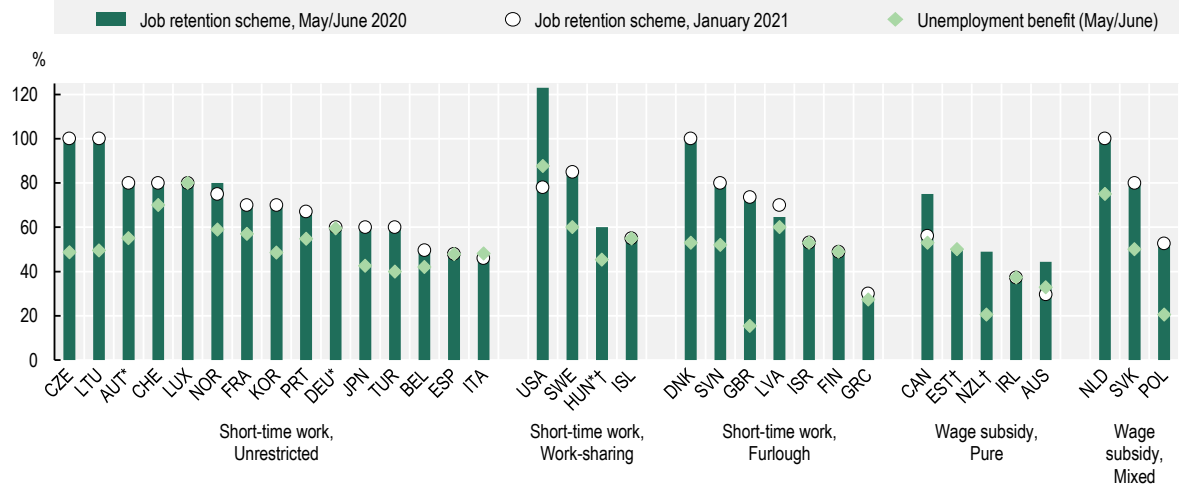
Balancing job retention and reallocation also requires striking the right mix of in-work and out-of-work support in the form of JR and unemployment benefits (UB). In most countries, JR benefits for hours not worked exceeded regular unemployment benefits during the initial period of the COVID-19 crisis (Figure 2.13).[33] The largest differences with UB can be found in countries with temporary JR schemes such as Denmark and the Netherlands, which offer full income protection to workers, as well as countries with means-tested UB such as Australia, New Zealand and the United Kingdom. Higher replacements rates for workers increase the attractiveness of short-time work in comparison to (full) unemployment and the willingness of workers, including those not directly at risk of being laid off, to accept a reduction in working hours as part of a STW scheme.[34] One argument why JR benefits should be more generous than UB in the beginning of a deep crisis may be that it helps to limit congestion in the labour market, as many unemployed search for a limited number of jobs (Giupponi and Landais, 2018[26]; Lalive, Landais and Zweimüller, 2015[27]), and prevents the PES from being overwhelmed (OECD, 2020[1]). In other words, the flattening-the-curve argument that has been used to justify lockdown measures to contain the health crisis equally applies to the use of JR schemes to contain the jobs crisis.[35]

As concerns about congestion in the labour market diminish and those about the cost-effectiveness of JR support become more important, there may be a case for rebalancing JR with UB support, by reducing the gap between STW benefits and regular unemployment benefits, notably in countries with particularly generous JR benefits. These changes would help contain the overall cost of JR schemes, and might improve the targeting of STW schemes to jobs at risk of being destroyed by reducing the willingness of workers to accept STW. Lower subsidies might also increase incentives for workers to resume normal working hours or actively look for another job altogether (see also discussion on financial incentives to promote job mobility below). Even with a smaller difference when compared to unemployment benefits, JR is likely to remain attractive because it preserves the employment contract and the non-wage benefits linked to it (fringe benefits, social security, including access to health insurance in some countries). In France's general STW scheme, the gross replacement rate has been reduced from 70% to 60% in April 2021, while in the Australia and the United States the lump-sum benefit was reduced.

There may also be an argument for letting benefits decline over the support period in countries where the maximum duration is relatively long. One justification for this could be that the risk of supporting permanently unviable jobs increases with the duration of support. Another is that since in most countries unemployment benefits decline over the spell already, a similar benefit schedule may be needed for JR benefits to prevent the gap between the two from increasing over time. To the best of our knowledge, no country operates a JR scheme with a declining benefit schedule. Interestingly, Germany temporarily operates increasing benefit schedules. This is based on the observations that i) during the COVID-19 crisis workers in the services sector are hit particularly hard, ii) these workers are less likely to be covered by top-ups in sectoral collective agreements and iii) the risk of financial hardship is likely to increase over the period of reduced activity. Korlsrud (2018[28]) recently proposed a similar argument for having increasing benefit schedules for unemployment benefits (see Hijzen and Salvatori (2020[29]), for a discussion of this issue in the context of unemployment benefits).

Figure 2.13. Gross replacement rates in job retention schemes tend to be higher than in unemployment benefit systems

Percentage of gross wage, evaluated at the average wage for the maximum permissible reduction in working time



Note: * Net terms (after taxes and other benefits). † Ended schemes in January 2021. Unemployment benefit for a single adult with no children and two months of unemployment.
Source: Country answers and ad hoc updates to OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes; Calculations based on output from the OECD tax-benefit model (version 2.3.0) along with ad-hoc updates based on the Policy Tracker of the Policy Responses to the COVID-19 crisis.

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Adapting support over time and differentiating it across industries and firms

How to adjust the level of support available for firms and workers has been a major challenge for governments. The consensus over the course of the COVID-19 crisis has been to protect firms and workers as much as possible from the direct effects of health-related restrictions on economic activity.[36] As a result, firms typically were able to reduce working time in line with the decline in business activity at no or limited costs and benefits for workers were exceptionally generous (OECD, 2020[1]). However, this also meant that adjustments needed to be made as economic restrictions were withdrawn, particularly in countries where significant special measures were introduced in response to the crisis. This was complicated by the fact that restrictions were often not universal, but limited to specific sectors or regions and the risk of a relapse in the form of a second or a third wave loomed. Adjustments typically related to the generosity of support to firms and workers, i.e. the contribution rate by firms and the replacement rate to workers for hours not worked. In some cases, adjustments have also been made with respect to firm eligibility (tightening eligibility as government measures are withdrawn or economic conditions improve).

To reduce uncertainty about the degree of JR support available in the future, one promising avenue is to relate the degree of JR support more directly to the evolution of the health and the economic situation. Most countries already make use of dashboards to monitor the health and economic situation and inform policy. In principle, these could be used to explicitly relate the level of JR support to the health and economic situation. As long as social distancing restrictions remain significant, the health situation, possibly differentiated across regions, may be the main determinant for the degree of support. To take account of the differential effect of social distancing measures across sectors or firms, information on sales may be used as a complement. Once social distancing restrictions have been withdrawn, the strength of the economic recovery could determine to what extent prolonged support is necessary. This could be based on a set of readily available indicators of the state of the labour market, such as statistics on vacancies, hires and separations, the unemployment rate or broader measures of labour market slack accounting for underemployed and marginally attached workers (issues that are particularly important in the current context – see Chapter 1).

Based on these health and economic indicators, the generosity of JR support to firms and workers could be allowed to evolve gradually. For example, the cost of hours not worked for firms could be allowed to increase gradually to its desired long-term level in countries with permanent schemes and 100% in countries where JR support is supposed to remain temporary. Similarly, the benefit for workers for hours not worked could be gradually brought in line with that for unemployed workers in countries where this is considerably higher. To provide a maximum degree of transparency and predictability about the degree of JR support available to firms and workers, it is important to not just monitor the health and economic situation, but also provide forecasts of their evolution in the near term and their implications for the availability of JR support under different scenarios of the short-term outlook.

To take account of the fact that the impact of economic restrictions varies across sectors, regions and firms, some countries differentiated JR support. France for example applied different rules for sectors that remained subject to government-imposed restrictions and those that were not. Firms in sectors without major government restrictions were required to contribute 10% of the cost of hours not worked (expressed in usual gross wages) from 1 July 2020[37] and 24% from 1 July 2021, while this has remained zero in sheltered sectors. Moreover, from 1 May 2021, support without co-financing by firms in sheltered sectors has been restricted to firms experiencing significant reductions in revenue (more than 80%), with other firms being gradually brought into the general regime.[38] Portugal introduced a new temporary scheme in August 2020 that requires firms to pay for 30% of the costs of hours not worked when working time is reduced by less than 60%, while there is no co-financing for firms with larger reductions in working time. Moreover, firms with a reduction in sales of more than 75% firms receive an additional WS to contribute to the cost of hours worked.[39,40]

Box 2.8. Balancing job retention and job reallocation: The use of layoff bans in JR schemes

A number of countries impose restrictions on layoffs for firms that make use of JR support. Restrictions increase the costs of layoff by requiring firms to pay back the subsidy and in some cases a fine (Netherlands until June 2020, New Zealand, the United States) or ruling out economic layoffs, with the implication that they will be considered unfair if challenged in court (Spain and Portugal). The restrictions may apply only during programme participation or extend for a period after its end. For example, in Denmark the tripartite agreement between the government and social partners establishing the new STW scheme for the COVID-19 crisis banned firms from laying off workers while receiving support. In Hungary and Latvia, layoffs are banned until one month after programme participation, and for two and six months respectively in Portugal and Spain. Austria normally enforces a ban that extends for a month after the end of the support, but this was suspended by an agreement among social partners in the summer of 2020.

Bans on layoffs can be viewed as a conditionality imposed on firms in return for public support. However, whether they are socially desirable remains unclear a priori because they can have potentially contrasting effects on job retention and job reallocation. By increasing the de facto firing costs, layoff bans may improve the targeting of the schemes to jobs that are more likely to remain viable, with a potential positive effect on job reallocation, but at the costs of less job retention (especially among workers with lower replacement costs in temporary jobs or jobs with limited skill requirements). However, it is also possible that layoff bans increase job retention by making it more difficult to lay off workers on JR schemes when business conditions deteriorate and slow down job reallocation. The relative magnitude of these different effects is likely to depend on the specific design of the bans and remain an open empirical question.

As the COVID-19 crisis hit, Italy took a more radical approach, banning all layoffs regardless of the actual use by firms of JR schemes. Because of the political difficulty of lifting them, such bans run the risk of staying in place for too long, slowing down the necessary adjustment in the labour market and generating a wave of layoffs when they are eventually removed. In general, designing JR schemes that encourage widespread take-up is likely to be a preferable approach that provides workers with a strong level of protection while limiting the risk of overly restrictive measures that can hinder the recovery.

2.4.3. Supporting workers in jobs at risk

While the main aim of JR schemes is to preserve jobs, they will not be successful in all cases as some jobs may have become permanently unviable. Some workers in subsidised jobs may have limited career prospects and remain at risk of losing their job eventually. Government can promote the career prospects of workers by investing in the viability of their current job or facilitating job mobility across firms.

Promoting the mobility of workers from subsidised to unsubsidised jobs

The permanent mobility of workers from subsidised to unsubsidised jobs[41] can be promoted through the provision of effective public employment services (PES), by engaging employers in supporting job mobility among workers in jobs at risk and by strengthening the incentives of workers for job mobility.[42]

Governments can promote job mobility among workers in subsidised jobs by encouraging or requiring workers on short-time work to register with the PES and benefit from their support (e.g. job-search assistance, career guidance and training (cf. Chapter 3). OECD analysis shows that early interventions – including those before job displacement takes place – can be very effective in promoting smooth job transitions (OECD, 2018[30]).

Mandatory registration requirements exist in only few countries, and typically concerns countries where JR support is part of the overall UB system and subsidies are paid directly to the worker (e.g. Finland, Ireland (STW), and Norway).[43] Mandatory job-search requirements are even less common and where they exist, they do not tend to be enforced in practice (e.g. Finland, Norway). This is not surprising since workers on JR schemes are supported to keep them in their existing job. Consequently, the main purpose of mandatory registration requirements in the context of JR schemes may be to encourage workers to make use of PES rather than to impose job-search requirements.

About half of countries allow for the voluntary registration of workers on JR support with the PES and enable such workers to access their services (e.g. job-search assistance, career guidance, counselling). This includes both countries with STW schemes (e.g. Belgium, Canada, Germany, Italy, and Switzerland) and countries with WS schemes (e.g. Australia, Canada). While little is known about the actual number of people in subsidised jobs who register with the PES, let alone their level of engagement with any of their activities, there are good reasons to believe that this tends to be rather modest in practice.[44] Governments can promote registration with the PES by reaching out to firms that make use of JR support with information about the process and the potential benefits this can provide. For example, the Ministry for Social Development in New Zealand contacted firms using JR support with information about training opportunities.

Firms could also play an active role in promoting the mobility of workers at risk of dismissal. For example, the Netherlands requires employers using JR support to stimulate career development among employees. Concretely, employers are obliged to inform the works council when using JR support and to contact the PES when dismissing a worker for economic reasons. These notification requirements provide a natural starting point for discussing possible development options. Development measures can be financed through education and development funds ("O&O fondsen") managed by the social partners or through additional funding made available by the government. Sweden has a well-established system of Job Security councils that can be activated to provide income support and employment services in the case of collective dismissal (OECD, 2018[31]).

Financial incentives could also be used to promote the mobility of workers from jobs supported by JR schemes to other jobs. For example, it may be possible to temporarily reduce employee social security contributions for workers starting a new job in a firm not receiving JR support or to temporarily provide an in-work benefit. These job mobility "bonuses" compensate workers for the cost of changing jobs, while at the same promote the reallocation of workers from subsidised jobs to expanding firms. A similar bonus could be made available for persons moving from unemployment into work as well as new labour market entrants (e.g. youth). The fiscal cost of such a measure would most likely be limited if kept for a short period of time (say 3 months) since the cost-saving effect of reduced JR (or unemployment) benefits would most likely outweigh the cost of the bonus (Cahuc, Carcillo and Le Barbanchon, 2019[32]). In Spain, it is possible to keep JR benefits for a limited period of time after having moved to another firm.[45]

Box 2.9. Temporarily working in a different firm while receiving STW benefits

A number of countries allow workers on short-time work to temporarily work in another firm (e.g. Belgium, France, Finland, Germany, Spain and Switzerland). The main argument for this provision is to allow low-wage workers to top-up their earnings. This may be particularly relevant in countries where STW replacement rates are low or that do not have a minimum level of benefits (for example, because there is no minimum wage). Other arguments that are sometimes advanced include providing workers with work experience that may be relevant for their current job or facilitate making a permanent transition to another job and alleviating bottlenecks in the labour market. The main concern about this provision is likely to be that it reduces incentives among workers for resuming normal working hours in their main job or making a permanent transition to another job.

Source: Responses from the Joint OECD/EC Questionnaire on Active Labour Market Policy Measures to Mitigate the Rise in (Long-Term) Unemployment (Q4 2020) as well as the OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes.

Promoting training while on reduced working hours

Participation in training while on reduced working hours can help workers improve the viability of their current job or improve the prospect of finding a new job. Several countries actively encourage training during short-time work by providing financial incentives to firms or workers (e.g. France, Germany, Japan, Portugal) or setting expectations (e.g. Netherlands). In France, employers were fully reimbursed for the costs of training and for 70-80% since March 2021. In Germany, training costs are reimbursed up to 100%, with larger subsidies for smaller firms. In addition, from July 2021, as the obligation to pay social security contributions on hours not worked is re-introduced, firms that place their workers on training will have them discounted by 50% till July 2023. In the Netherlands, employers applying for JR support have to declare that they actively encourage training since June 2020, while the government has taken additional measures to make on-line training and development courses freely available. Formal training requirements as a condition for JR support currently do not exist.[46] By contrast, in Italy, Greece and Chile, training is not allowed during subsidised hours. This most likely reflects concerns about abuse in relation to training provided within the firm to the extent that this makes it difficult to distinguish between work and training, particularly when provided informally. To some extent, this can be addressed by allowing only for formal training. Any remaining concerns about abuse should be weighed carefully against the costs of excluding training while on reduced working time completely.

There is limited information on the use and nature of training whilst on JR support during the COVID-19 crisis. Evidence from the global financial crisis suggests that the use of training was negligible in most countries (Hijzen and Venn, 2011[4]). To some extent this reflects the difficulty of engaging employed adults in training more generally. Only about 40% of all adults participates in training in normal times (OECD, 2020[33]). However, it is also likely to reflect the difficulty of organising training in such a way that it can be combined with temporary reductions in working time. This is easier when training courses are targeted at individuals rather than groups, delivered in a flexible manner through online teaching tools and their duration is relatively short (OECD, 2020[34]). France has been one of the countries that has been most successful in engaging workers on JR support with training (Box 2.10). In November 2020, almost one in five workers on JR support participated in training.

Box 2.10. The use of training while on short-time work: The case of France

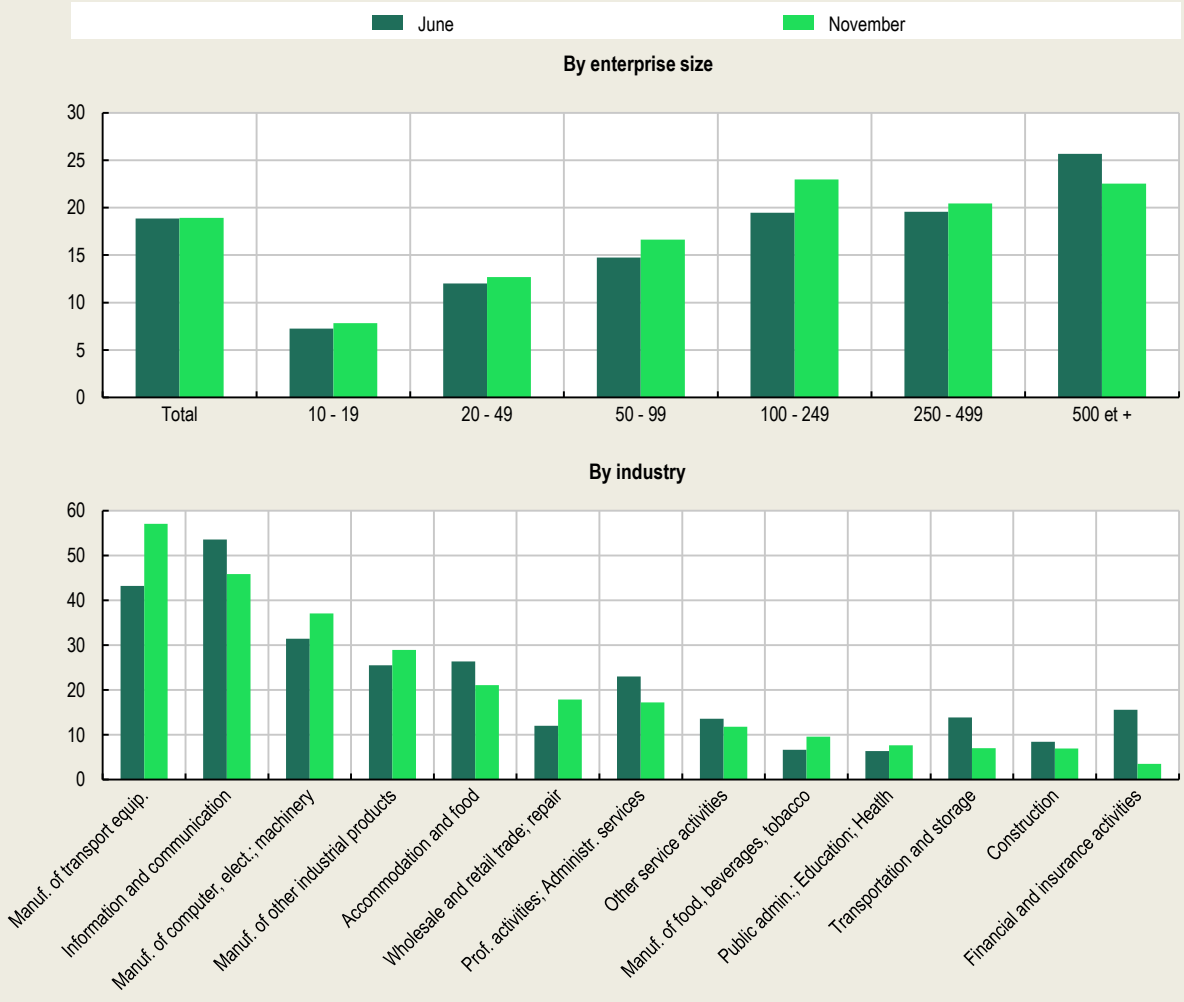
France has been one of the countries that has been most successful in combining short-time work with training. In November 2020, almost one in five workers on JR support participated in training. There are however important differences across firms and industries (Figure 2.14). Even if the use of training while on short-time work is only slightly above-average in large firms (>100 employees), in small and medium sized firms, this is considerably lower at respectively 8% for firms with 10-19 employees and 12% for firms with 20-49 employees. Differences across sectors are even larger with take-up reaching more than 30% in most manufacturing industries (and over 50% in manufacturing of transport equipment), while it tends to remain below 10% in transport, construction and financial services. The relative importance of training in larger firms and firms in manufacturing is likely to reflect the importance of skills, particularly in the form of firm-specific human capital, and a relative emphasis on long-term contracting. It may also reflect the difficulty of identifying suitable training opportunities by small firms (OECD, 2019[35]).

The well-established infrastructure for adult learning coupled with generous financial resources is likely to have been key for the relatively high use of training while on short-time work in France. The system for adult training among the unemployed was swiftly redeployed to support workers on STW (*FNE Formation*). The programme fully reimburses the pedagogical expenses of training for employers, with limited conditions on the type of training that is pursued and workers receive 100% of the usual wage when participating in training. About half of workers participating in training while on STW were supported

by *FNE Formation*. Since these subsidies are directed at employers they are likely to be used mainly for training courses that enhance the performance of workers in their current firm. France's system of individual training accounts (*Compte Personnel de Formation, CPF*) can also be used for training whilst on STW. This is explicitly directed at the workers themselves and s more likely to be used for training courses that enhance opportunities for career advancement more generally, including through job mobility between firms.

Figure 2.14. The use of training for workers on short-time work in France

Percentage of persons on short-time work by firm size and industry, June and November 2020



Note: Non-responses are not included.
Source: Dares, Enquête Acemo Covid. https://dares.travail-emploi.gouv.fr/dares-etudes-et-statistiques/.

StatLink https://stat.link/o5ty9e

2.5. Concluding remarks

Job retention (JR) schemes have been the main policy tool used by most OECD countries for stemming the labour market impact of the COVID-19 crisis. This has helped limit the increase in unemployment and prevent financial hardship among workers and their families. At the same time, preliminary evidence suggests that concerns that JR schemes might significantly slow the reallocation of jobs to high-performing firms and undermine job creation have not materialised so far. Job vacancies remain depressed on the whole and there is no evidence that the use of JR schemes has made it more difficult to fill them. The risk of growing dependency on JR benefits seems limited. During periods when business activity was able to resume, take-up declined quickly. Nevertheless, as jobs in firms facing temporary difficulties restart and are no longer covered by the programmes, the share of supported jobs in firms with structural problems is likely to increase. This is why JR support has to remain temporary and become more targeted on jobs in temporary need of support due to the effects of social distancing restrictions rather than those at risk because of pre-existing structural difficulties. Indeed, well-designed JR schemes need to be timely, targeted and temporary:

Timely. To be effective, JR support needs to be timely. The unprecedented levels of take-up soon after the outbreak of the COVID-19 crisis in many countries suggest that by and large this was the case. Moreover, and in contrast to the experience during the global financial crisis, high take-up was achieved both with pre-existing schemes and new ones that were introduced in response to the COVID-19 crisis. In almost all countries, applications could be made on-line and the approval process was largely automated. However, there are important differences across countries in the time between application and the actual payment of the subsidy. Reducing the delay in payments to a minimum is crucial for the effectiveness of JR support. Where possible, payments should be made partly in advance. Proof of eligibility, when required, and the circumstances determining the amount of the subsidy can be verified ex post.

Targeted. As the COVID-19 crisis took off, most countries took steps to ensure that JR schemes provide broad-based support for all firms and workers that were affected by social distancing restrictions, with limited attention to their fiscal costs or implications for the recovery. However, this also increased the risk of subsidising jobs that did not need support and jobs that would have disappeared even in the absence of the pandemic. To prevent JR schemes from becoming an obstacle to job reallocation and job creation in the recovery, it is important that their targeting is enhanced by strengthening the conditions for eligibility and bolstering incentives of firms and workers to limit support to jobs that are at risk, but remain viable in the medium term. Where necessary the rules can be differentiated between sectors and firms according to the impact of social distancing restrictions on their activities.

Temporary. JR schemes are an important tool for limiting excessive layoffs in the context of a temporary reduction in business activity, but should not be used to support firms with structural difficulties as this risks undermining job reallocation and the creation of good jobs. While support should remain in place as long as government measures restrict economic activity, the use of JR support should be time-limited once economic activity can resume. It may be preferable that firms with structural problems restore financial health by restructuring. Workers who lose their jobs should be supported through effective income-support schemes and re-employment support provided by the public employment services (cf. Chapter 3).

Adapting JR schemes to the evolving crisis is challenging. The degree of uncertainty over the short-term outlook remains very high and the effects of social distancing restrictions vary widely between sectors and regions. This raises important questions about the speed with which temporary support measures are withdrawn and for whom. One promising avenue may be to link the degree of JR support more directly to developments in the health situation and economic activity. Most countries are already making use of dashboards to monitor the health and economic situation and these could be used to inform policy on JR support. As long as social distancing restrictions remain significant, the health situation could be used as

the main determinant for the degree of support, possibly on a regional basis. Meanwhile, information on sales could be used to decide the level of support for individual sectors or firms. Once social distancing restrictions have been withdrawn, the strength of the economic recovery could determine the extent to which prolonged support is provided. The generosity of JR support to firms and workers could therefore be adjusted gradually, based on developments in the health and economic situation.

Beyond the refinements needed to JR schemes over the near term, an important question is also whether it is necessary to have a permanent scheme in place so that this can be scaled up if necessary, or whether a temporary scheme could simply be introduced when the need arises. As mentioned above, several countries without pre-existing JR schemes have been able to provide timely support to firms and workers, in large part thanks to the use of digital technologies in the application and payment process. While this is clearly positive, it did not come without any costs. To achieve high levels of use, new schemes had to be sufficiently simple and necessarily tended to be somewhat crude. For example, most new short-time work schemes only provided support in the case of a temporary suspension of work, while some temporary wage subsidy schemes only made lump-sum payments. This suggests that there may be a case for having a limited permanent scheme in place that can be scaled up quickly in the context of a major crisis and cut back gradually as economic activity picks up. The nature and scope of such a scheme is likely to vary between countries depending on their preferences and existing institutional settings.

There are several important issues left for future work. The most important is no doubt to provide a more comprehensive ex-post evaluation of the effectiveness of JR schemes in preserving jobs and supporting job creation during the COVID-19 crisis once data become available. A key aspect of such any such evaluation should be to analyse the effectiveness of JR schemes in protecting different types of workers from the risk of job losses, as well as the longer-term career paths. While JR schemes have helped to prevent a surge in unemployment, it is not clear to what extent they have been equally effective in protecting the jobs of different groups of workers. Evidence presented in Chapter 1 suggests that those in high-pay occupations were much likely to keep their jobs, even if their hours were reduced to zero hours, while those in low-pay occupations were more likely to be laid-off. Moreover, despite efforts to open up JR schemes to workers on temporary contracts, concerns remain about the effectiveness of JR schemes to protect workers in such jobs. To some extent these differences in the effectiveness of JR schemes across different groups may be related to their design. For example, co-financing requirements for firms are likely to reinforce such concerns. Empirical evidence on the effectiveness of JR schemes in protecting different groups of workers will help fine-tune their design but also provide a better understanding of their limits and how they should be complemented by other policy tools, including income support schemes.

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Annex 2.A. Additional tables

Annex Table 2.A.1. Job retention schemes in place in May/June 2020

Name, type, duration and source of data on participants

Country	Name of the scheme	Type	Start	End	Source of data on participants	Note
Australia	JobKeeper	WS-P	30 March 2020	31 March 2021	Australian Taxation Office	
Austria	Kurzarbeit	STW-G	Pre-existing	-	Labour Market Service (AMS)	
Belgium	Chômage temporaire	STW-G	Pre-existing	-	Ministry of Employment	
Canada	Canada Emergency Wage Subsidy (CEWS)	WS-P until end June. WS-M from July	15 March 2020	30 June 2021	StatCan	
Chile	Suspensión de contrato – (Ley 21.227 título I) y reducción de jornada (Ley 21.227 título II)	STW-WS	1 April 2020	..	Superintendencia de Pensiones	
Colombia	Formal Employment Support Program – PAEF	WS-P	4 June 2020	31 March 2021	..	
Czech Republic	Targeted employment support programme "Antivirus"	STW-G	1 April 2020	30 April 2021	StatCZE	
Denmark	Work sharing scheme (Arbejdsfordeling)	STW-WS	Pre-existing	-	Danish Business Authority and Jobindstat	
Denmark	Wage compensation scheme (Midlertidig lønkompensation)	STW-F	15 March 2020	31 December 2021		
Estonia	Wage subsidy programme	WS-P	20 March 2020	30 June 2020	Eurostat, Statistics on society and work related to COVID-19	
Finland	Temporary layoff scheme	STW-F	Pre-existing	-	Ministry of employment	
France	Activité partielle	STW-G	Pre-existing	-	Direction de l'animation de la recherche, des études et des statistiques (Dares), Ministry of Labour	
Germany	Kurzarbeit	STW-G	Pre-existing	Pre-existing	Bundesagentur für Arbeit	
Greece	Special purpose compensation	STW-F	14 March 2020	31 December 2020	Hellenic Statistical Authority	
Hungary	Job Protection Wage Subsidy	STW-WS	16 April 2020	31 December 2020	Eurostat, Statistics on society and work related to COVID-19	
Iceland	Reduced employment ratio	STW-WS	15 March 2020	..		No information
Ireland	Short-time work support	STW-WS	Pre-existing	.		Data on participants refer to TWSS/EWSS only
Ireland	Temporary wage subsidy scheme (TWSS) / Employment Wage	WS-P	24 March 2020	TWSS:31 August 2020	Revenue IE	

Country	Name of the scheme	Type	Start	End	Source of data on participants	Note
	Subsidy Scheme (EWSS)			EWSS: 30 June 2021		
Israel	Unemployment benefit during unpaid leave	STW-F	17 March 2020	30 June 2021		No information
Italy	Cassa integrazione (CIGO, CIGS, CID)	STW-G	Pre-existing	-	Istituto nazionale della previdenza sociale (INPS)	
Japan	Employment Adjustment Subsidy	STW-G	Pre-existing	-	Ministry of Health, Labor and Welfare	Stocks estimated as 3 months cumulative flows
Korea	Employment retention subsidy	STW-G	Pre-existing	-	Korean Statisitcal Information Service (Kosis)	
Latvia	Allowance for fully idle employees	STW-F	24 March 2020	31 December 2020	Eurostat, Statistics on society and work related to COVID-19	
Lithuania	Wage subsidies during idle time	STW-G	19 March 2020	When the state of emergency ends	Eurostat, Statistics on society and work related to COVID-19	
Luxembourg	Chômage partiel	STW-G	Pre-existing	-	Comité de conjoncture	
Netherlands	Regulation Short-Time Work	STW-G	Pre-existing (suspended)	-		
Netherlands	Temporary Emergency Measure Bridging Employment (NOW)	WS-M	1 March 2020	30 June 2021	Employee Insurance Implementation Institute (UWV)	Stocks estimated as 3 months cumulative flows
New Zealand	COVID-19 Wage Subsidy and COVID-19 Wage Subsidy Extension	WS-P	27 March 2020	1 September 2020	Ministry of Social Development	
Norway	Temporary lay-off scheme	WS-M	Pre-existing	-	Norwegian Labour and Welfare Administration (NAV)	
Poland	Guaranteed Employee Benefits Fund (GEBF)	WS-M	31 March 2020	..	Eurostat, Statistics on society and work related to COVID-19	
Portugal	Layoff and Simplified layoff	STW-G	Pre-existing	-	Eurostat, Statistics on society and work related to COVID-19	
Portugal	Support for the progressive resumption of activity	WS-M	1 August 2020	31 December 2020		Data on participants refer to the Layoff scheme only
Slovak Republic	First Aid schemes	WS-M	1 April 2020	30 March 2021	Eurostat, Statistics on society and work related to COVID-19	
Slovenia	Part of Anti-Corona Law	STW-F	13 March 2020	30 June 2021	Eurostat, Statistics on society and work related to COVID-19	
Spain	Expediente de regulación temporal de empleo (ERTE)	STW-G	Pre-existing	-	Ministerio de Inclusión, Seguridad Social y Migraciones	
Sweden	Short-time work (Korttidsarbete)	STW-WS	Pre-existing	-		

Country	Name of the scheme	Type	Start	End	Source of data on participants	Note
					Swedish Agency for Economic and Regional Growth	
Switzerland	Indemnité en cas de réduction de l'horaire de travail / Kurzarbeitsentschädigung	STW-G	Pre-existing	-	SECO – Amstat	
Turkey	Short-time Working Benefit	STW-G	Pre-existing	-	ISKUR	
United Kingdom	Coronavirus Job Retention Scheme	STW-F	20 March 2020	30 September 2021	HMRC coronavirus (COVID-19) statistics	
United States	Short-Time Compensation (STC) programme	STW-WS	Pre-existing	-	Department of Labor	

Note:
STW-G: Short-time work scheme – General or unrestricted (no significant limits on the reduction in working time)
STW-F: Short-time work scheme – Furlough (no partial reductions in working time allowed).
STW-WS: Short-time work scheme – Work-sharing (significant limits on the maximum reduction in working time)
WS-P: Wage subsidy scheme – Pure wage subsidy (based on wage bill only)
WS-M: Mixed wage subsidy (based on wage bill and reduction in business activity).
Source: Country answers to OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes.

Annex Table 2.A.2. Effective cost of hours not worked for workers, firms and the government

For a 100% reduction in hours or a maximum reduction in working time

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Country	Period	Average wage (monthly)	Maximum benefit (monthly)	Replacement rate at the average wage	Cost to employer	Cost to state	Normal social security contributions payed by employer	Social security contributions payed by employer during COVID	Social security contributions payed by state during COVID	Effective cost to worker	Effective cost to employer	Effective cost to state	Cost due to reduced social security contribution
		National currency	National currency	% average wage	% average wage	% average wage	% average wage	% average wage	% average wage	% normal labour cost	% normal labour cost	% normal labour cost	% normal labour cost
										[1-(3)]/[(1+(6)]	[(4)+(7)]/[1+(6)]	[(5)+(8)]/[1+(6)]	1-(9)-(10)-(11)
Australia	May-20	7 319	3 000	41%	0%	41%	15%	0%	0%	51%	0%	36%	13%
	Jan-21	7 319	2 000	27%	0%	27%	15%	0%	0%	63%	0%	23%	13%
Austria*	May-20	4 034	4 296	80%	0%	80%	28%	0%	28%	16%	0%	84%	0%
	Jan-21	4 034	No change										
Belgium	May-20	4 130	2 100	50%	0%	50%	27%	0%	0%	39%	0%	39%	21%
	Jan-21	4 130	No change										
Canada	May-20	4 591	847 per week	75%	0%	75%	10%	0%	0%	23%	0%	68%	9%
	Jan-21	4 591	595 per week	56%	0%	56%	10%	0%	0%	40%	0%	51%	9%
Chile	May-20	836 920	225 000	25%	0%	25%	0%	0%	0%	75%	0%	25%	0%
	Jan-21	836 920	No change										
Colombia		..	..	..	..	..	..	..	..	..	..	..	..
		..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	May-20	34 063	39 000	100%.	20%.	80%.	34%.	7%.	27%.	0%.	20%.	80%.	0%.
	Jan-21	34 063	No change										
Denmark	May-20	35 658	30 000	100%	25%	75%	0%	0%	0%	0%	25%	75%	0%
	Jan-21	35 658	No change										
Estonia	May-20	1 427	800	50%	11%	39%	34%	0%	34%	37%	8%	55%	0%
	Jan-21	1 427	Ended										
Finland	May-20	3 773		49%	0%	49%	20%	0%	0%	42%	0%	41%	17%
	Jan-21	3 773	No change										

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Country	Period	Average wage (monthly)	Maximum benefit (monthly)	Replacement rate at the average wage	Cost to employer	Cost to state	Normal social security contributions payed by employer	Social security contributions payed by employer during COVID	Social security contributions payed by state during COVID	Effective cost to worker	Effective cost to employer	Effective cost to state	Cost due to reduced social security contribution
		National currency	National currency	% average wage	% average wage	% average wage	% average wage	% average wage	% average wage	% normal labour cost	% normal labour cost	% normal labour cost	% normal labour cost
										[1-(3)]/[(1+(6)]	[(4)+(7)]/[1+(6)]	[(5)+(8)]/[1+(6)]	1-(9)-(10)-(11)
France	May-20	3 046	4 849	70%	0%	70%	36%	0%	36%	22%	0%	78%	0%
	Jan-21	3 046	4 849	70%	10%	60%	36%	0%	36%	22%	7%	71%	0%
Germany*	May-20	4 349	3 870	60%	0%	60%	20%	0%	20%	33%	0%	67%	0%
	Jan-21	4 349	No change										
Greece*	May-20	1 782	534	30%	0%	30%	25%	0%	25%	56%	0%	44%	0%
	Jan-21	1 782	No change										
Hungary*	May-20	370 845	112 418	60%	0%	60%	20%	0%	20%	33%	0%	67%	0%
	Jan-21	370 845	Ended										
Iceland	May-20	802 249		60%	0%	60%	7%	0%	0%	42%	0%	52%	6%
	Jan-21	802 249	No change										
Ireland*	May-20	4 067	350 per week	37%	0%	37%	11%	0%	0%	57%	0%	34%	10%
	Jan-21	4 067	350 per week	37%	0%	37%	11%	1%	0%	57%	0%	34%	9%
Israel	May-20	13 248		53%	0%	53%	6%	0%	0%	44%	0%	50%	5%
	Jan-21	13 248	No change										
Italy	May-20	2 633	1 199	46%	0%	46%	32%	0%	0%	41%	0%	35%	24%
	Jan-21	2 633	No change										
Japan	May-20	435 706	330 000	60%	20%	40%	15%	9%	6%	35%	25%	40%	0%
	Jan-21	435 706	No change										
Korea	May-20	4 146 188	1 428 900	70%	36%	34%	10%	0%	10%	27%	32%	41%	0%
	Jan-21	4 146 188	1 428 900	70%	36%	34%	10%	0%	10%	27%	32%	41%	0%
Latvia	May-20	1 083	700	65%	0%	65%	24%	0%	24%	29%	0%	71%	0%
	Jan-21	1 083	1 000	70%	24%	46%	24%	0%	24%	24%	19%	57%	0%
Lithuania	May-20	1 199	911	70%	0%	70%	2%	0%	2%	29%	0%	71%	0%
	Jan-21	1 199	No change										
Luxembourg	May-20	5 064	4 284	80%	0%	80%	14%	14%	0%	18%	12%	70%	0%

Country	Period	(1) Average wage (monthly)	(2) Maximum benefit (monthly)	(3) Replacement rate at the average wage	(4) Cost to employer	(5) Cost to state	(6) Normal social security contributions payed by employer	(7) Social security contributions payed by employer during COVID	(8) Social security contributions payed by state during COVID	(9) Effective cost to worker	(10) Effective cost to employer	(11) Effective cost to state	(12) Cost due to reduced social security contribution
		National currency	National currency	% average wage	% average wage	% average wage	% average wage	% average wage	% average wage	% normal labour cost	% normal labour cost	% normal labour cost	% normal labour cost
										[1-(3)]/[(1+(6)]	[(4)+(7)]/[1+(6)]	[(5)+(8)]/[1+(6)]	1-(9)-(10)-(11)
	Jan-21	5 064	No change										
Netherlands	May-20	4 433	9 538	100%	10%	90%	12%	1%	11%	0%	10%	90%	0%
	Jan-21	4 433	9718	100%	15%	85%	12%	2%	10%	0%	15%	85%	0%
New Zealand	May-20	5 182	2 538	49%	0%	49%	0%	0%	0%	51%	0%	49%	0%
	Jan-21	5 182	Ended										
Norway	May-20	51 226	50 000	80%	3%	77%	13%	0%	13%	18%	3%	79%	0%
	Jan-21	51 226	50 000	75%	17%	58%	13%	2%	11%	22%	17%	61%	0%
Poland	May-20	4 945	..	53%	26%	26%	16%	0%	16%	41%	23%	37%	0%
	Jan-21	4 945	No change										
Portugal	May-20	1 566	1905	67%	20%	47%	24%	0%	0%	27%	16%	38%	19%
	Jan-21	1 566	No change										
Spain	May-20	2 295	1 098	48%	0%	48%	30%	0%	30%	40%	0%	60%	0%
	Jan-21	2 295	No change										
Slovak Republic	May-20	1 100	880	80%	0%	80%	30%	30%	0%	15%	23%	61%	0%
	Jan-21	1 100	1100	80%	0%	80%	30%	30%	0%	15%	23%	61%	0%
Slovenia	May-20	1 715	1 754	80%	0%	80%	16%	0%	16%	17%	0%	83%	0%
	Jan-21	1 715	No change										
Sweden	May-20	38 485	37 400	85%	10%	75%	31%	0%	31%	11%	8%	81%	0%
	Jan-21	38 485	No change										
Switzerland	May-20	7 611	9 880	80%	0%	80%	6%	0%	6%	19%	0%	81%	0%
	Jan-21	7 611	No change										
Turkey	May-20	4 885	2 943	60%	0%	60%	18%	0%	8%	34%	0%	57%	9%
	Jan-21	4 885	No change										
United Kingdom	May-20	3 400	2 500	74%	0%	74%	11%	0%	8%	24%	0%	74%	3%
	Jan-21	3 400	2 500	74%	0%	74%	11%	5%	6%	24%	5%	72%	0%

		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Country	Period	Average wage (monthly)	Maximum benefit (monthly)	Replacement rate at the average wage	Cost to employer	Cost to state	Normal social security contributions payed by employer	Social security contributions payed by employer during COVID	Social security contributions payed by state during COVID	Effective cost to worker	Effective cost to employer	Effective cost to state	Cost due to reduced social security contribution
		National currency	National currency	% average wage	% average wage	% average wage	% average wage	% average wage	% average wage	% normal labour cost	% normal labour cost	% normal labour cost	% normal labour cost
										[1-(3)]/[(1+(6)]	[(4)+(7)]/[1+(6)]	[(5)+(8)]/[1+(6)]	1-(9)-(10)-(11)
United States	May-20	4 755		123%	0%	123%	8%	8%	0%	-21%	8%	114%	0%
	Jan-21	4 755		78%	0%	78%	8%	8%	0%	20%	8%	72%	0%

Note:

. Information not available.

* Net terms (after taxes and other transfers). Mandatory employer contributions for private insurance are not taken into account (consistent with the OECD methodology of Taxing Wages). If job retention benefits are paid directly to workers it is assumed that firms pay no employer social security contributions over hours not worked. When relevant, it is assumed that the employer do not pay any top-up payment. Data on average wage and normal social security contribution refer to 2019.

Australia: Benefit for two fortnights. Czech Republic: In the event of closure of business due to the Government order. Canada: For a drop in revenue of at least 70%. Chile: payments mainly take the form of withdrawals from individual unemployment accounts. Hungary: the employer social security contribution was 19.5% between 1 January 2018 and 30 June 2019; 17.5% between 1 July 2019 and 30 June 2020; and is 15.5% from July 2020. Norway: for the first 3 month (60 days). Chile, Hungary, Sweden and the United States: for a maximum reduction of working time. Germany and Spain: for a childless worker. Japan and Korea: for big companies. United States: includes weekly lump-sum of USD 600 (USD 300 in January) that was paid irrespective of the reduction in working time to all short-time compensation recipients as part of CARES.

If there are several schemes in the country, the table relates to the primary scheme in May 2020 (Denmark: Wage compensation scheme (Lønkompensation); Greece: Special purpose compensation; Ireland: COVID-19 Wage Subsidy Scheme; Portugal: Layoff Simplificado; the United States: short-time compensation).

Source: Country answers to OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes. Average wages and normal employer social security contribution: OECD Taxing wages database.

StatLink https://stat.link/c1t4xz

Annex Table 2.A.3. Unemployment benefit gross replacement rates

Percentage of the average wage

	Unemployment benefit before the COVID crisis (2019)	Unemployment benefit (May/June 2020)
Australia	16.5	32.8
Austria*	55.0	55.0
Belgium	42.0	42.0
Canada	53.0	53.0
Czech Republic	48.7	48.7
Denmark	52.9	52.9
Estonia	50.0	50.0
Finland	48.9	48.9
France	57.0	57.0
Germany*	59.5	59.5
Greece*	27.4	27.4
Hungary*	45.3	45.3
Iceland	55.0	55.0
Ireland	21.1	37.3
Israel	53.0	53.0
Italy	48.2	48.2
Japan	42.5	42.5
Korea	48.5	48.5
Latvia	60.0	60.0
Lithuania	49.6	49.6
Luxembourg	80.0	80.0
Netherlands	75.0	75.0
New Zealand	20.5	20.5
Norway	59.0	59.0
Poland	20.6	20.6
Portugal	54.8	54.8
Slovak Republic	50.0	50.0
Slovenia	52.0	52.0
Spain	47.9	47.9
Sweden	51.2	60.0
Switzerland	70.0	70.0
Turkey	40.0	40.0
United Kingdom	15.3	15.3
United States	33.0	87.7

Note: * Net terms (after taxes and other benefits). Unemployment benefit for a single adult with no children and two months of unemployment.
Source: Calculations based on output from the OECD tax-benefit model (version 2.3.0) along with ad-hoc updates based on the Policy Tracker of the Policy Responses to the COVID-19 crisis.

StatLink https://stat.link/ts18gk

Notes

[1] In the United States, 26 states (accounting for about 70% of the population) operate universal short-time compensation (STC) programmes. However, their use has remained very limited during the COVID-19 crisis due to a variety of design and implementation issues (see footnote 11 for details). To bypass these, the *Paycheck Protection Program* (PPP) was introduced, which provides small and medium-sized businesses with forgivable loans to pay their employees during the COVID-19 crisis (see Box 2.4 for a discussion of its design and effects).

[2] In the United States, where the maximum reduction in working time tends to be capped, another reason may be that this helps ensure that short-time compensation (STC) programmes effectively complement the system of temporary layoffs and unemployment benefits in a context where employers can dismiss workers at will.

[3] The labour cost includes the gross wage and any mandatory employer's contributions to publicly provided social security. Note that in some countries (e.g. Australia, Denmark and Switzerland) employers remain liable for contributions to private insurance, including pensions.

[4] For example, in the case of a worker on the average wage experiencing a 30% reduction in hours worked, labour costs fall by the same proportion in most STW countries, but they decline by 70% in Australia and New Zealand and 100% in Canada (OECD, 2020[1]).

[5] It is not a priori clear who pays for reduced employer social security contributions whilst on reduced working time. It could take the form of lower entitlements for social security (i.e. pensions) for workers, higher future labour taxes for firms or lower tax revenues for the government.

[6] Due to the additional lump-sum payment to workers on short-time compensation as part of CARES, they are actually better off than without the reduction in working time. A similar situation is observed for workers on regular unemployment benefits. However, the difference is more pronounced for those on short-time compensation since the full lump sum is paid irrespective of the reduction in working time (limited to at most 60%).

[7] This is not the case in all countries including Germany. This may be related to the fact that the statutory minimum wage was only introduced relatively recently in 2015.

[8] Moreover, a number of countries impose minimum reductions in working time, which may serve a similar purpose in practice.

[9] The only country that excludes temporary workers is the Slovak Republic.

[10] Take-up rates are defined here as a share of all dependent employees rather than only those eligible for support in line with the existing literature on JR schemes.

[11] The low use of short-time compensation (STC) in the United States is not just related to the presence of limits on the maximum reduction in working time, but also administrative bottlenecks, lack of employer awareness, and weak financial incentives for employers (employers are liable for their part of social-security contributions for hours not worked). In addition, to STC the United States also operated specific JR programmes targeted at small firms such as the Paycheck Protection Program and the Employee Retention Tax Credit.

[12] The stringency index measures the strictness of the measures adopted by different governments to contain the pandemic. It is a composite measure based on 9 response indicators including school closures, workplace closures, and travel bans, rescaled to a value from 0 to 100 (100 = strictest response). Since these measures impact directly the ability of firms to carry out their activities and consumers' ability to buy goods and services, they certainly provide a meaningful indication of the intensity of the shock for different economies. However, the overall impact on the economy of a given level of stringency in lockdowns may vary across countries because of both non-compliance and voluntary changes in behaviour. Variations in GDP are likely to reflect these latter factors more closely, but they are also likely to be affected by the use of JR schemes. For example, higher take-up of JR schemes might support consumption, but also enable some firms to continue to operate.

[13] Despite their high share in the take-up of JR support, joblessness also increased significantly for this group – see Chapter 1.

[14] This represents a significant change from earlier times when men accounted for a significant majority of those on STW. For example, over 2018-19, about 80% of STW recipients in Italy were men, while women accounted for more than 50% of the recipients during the COVID-19 crisis. The increased representation of women reflects the extension of the scheme beyond manufacturing as well as the particular nature of the crisis that has hit more heavily sectors that employ larger proportions of women. Similarly, data from Belgium also show a clear increase in the proportion of workers on STW who are women, rising from 20% in 2019 to over 40% in 2020 (ONEM/RVA, 2020[44]).

[15] Data from the United States are included in this analysis as they provide a useful reference point for changes in the number of jobs in the absence of widespread use of JR support. The results are qualitatively similar if the United States is excluded from the analysis. See Chapter 1 for a broader discussion of the issues arising from differences in the statistical treatment of workers on temporary lay-off or JR support by different countries.

[16] Given the difficulty of controlling in a comprehensive way for the size and nature of the shock, pre-existing policies and institutions and other policy measures taken in response to the COVID-19 crisis, there are limits to what one could conceivably achieve using country level data at this point in time. More granular data are likely to be better suited to isolate the role of JR schemes in the present context. This is left for future work when such data will become available.

[17] This analysis is limited to Q2 and Q3 and 2020 when the crisis was broadly synchronised across the OECD countries and the vast majority of countries made significant use of job retention schemes – generating the significant variation over time that is exploited in the analysis. The pairwise correlations for Q4 are weaker. This is likely due to the fact that, as discussed in Section 2.2, the health and economic situation and social distancing restrictions was much more varied across countries, weakening the pairwise correlations with the use of JR schemes. In order to include Q4 a multivariate regression framework would have to be adopted that accounts for the nature of the shock and the policy response.

[18] The considerably weaker association between average hours worked and the use of JR schemes in countries with wage subsidies is notable (e.g. Canada, Estonia, Ireland, the Netherlands).

[19] Taken at face value, these estimates imply an efficiency loss of over two-thirds. To put this in perspective, Hijzen and Venn (2011[4]) found that an efficiency loss of one-third in relation to the use of STW schemes during the global financial crisis.

[20] Concerns regarding the impact of JR support on employment reallocation rest on the underlying assumption that workers who are placed on these schemes have a low probability of moving to a new job

voluntarily. Currently, however, very little is known on the job search and switching behaviour of workers on JR schemes in general and in particular during the COVID-19 crisis. Survey evidence from the United Kingdom indicates that furloughed workers are pessimistic about the prospects of their jobs and that as many as 40% of them are either looking for a job or expect to do so in the coming months (Cominetti et al., 2021[43]; Adams-Prassl et al., 2020[38]). If these results apply more broadly beyond the United Kingdom, job retention schemes might hinder job mobility and therefore reallocation less than it is commonly assumed.

[21] For an analysis of bankruptcies for France, Italy and the United States see respectively Cross, Epaulard and Martin , Viviano (2020[47]) and Gourinchas et al. (2020[40]).

[22] Back-on-the-envelope calculations based on the cumulative shortfall in unemployment inflows until 2020 Q3 relative to historical patterns suggest that the number of "missing layoffs" since the start of COVID-19 remains modest relative to the number of normal layoffs in countries that relied heavily on JR schemes. A limitation of this calculation is that the number of unemployment inflows is underestimated due to people leaving the labour force. This, however, would lead to an overestimate of the number of missing layoffs and therefore does not affect the conclusion that the number of missing layoffs was small.

[23] Drawing on a firm-level survey of business expectations in the United States, Barrero et al. (2020[39]) suggest that the speed of job reallocation is expected double and that about 40% of layoffs are likely to be permanent, meaning that these jobs are not expected to come back in the recovery.

[24] Since unemployed persons on temporary layoff in the United States often do not actively search for another job, but instead wait to be recalled in their previous job, these should not be counted as unemployed jobseekers and therefore a Beveridge Curve excluding them is also documented, following Forsythe et al. (2020[45]).

[25] However, the initial decline in job vacancies is also likely to partly reflect weak labour supply as firms suppress job vacancies due to the difficulty of finding suitable candidates in a context where job search is severely limited due to restrictions on movement (Forsythe et al., 2020[45]). Google trends data suggest that, during the early phase of the crisis, aggregate job search activity was initially sharply down, although it has largely returned to pre-crisis levels and its cross-country heterogeneity does not appear related to the take-up of job retention support (Chapter 1). While depressed job search is likely to have contributed to the initial decline in job vacancies, it may be less relevant for explaining the continued weakness in job vacancies.

[26] An indication of the possible consequences of a cliff-edge end to support comes from UK redundancies, which shoot up to 400k in the fall of 2020 (against a normal level of 100k) as employers expected the Job Retention Scheme to end (https://www.ons.gov.uk/employmentandlabourmarket/peoplenotinwork/redundancies/timeseries/beao/lms).

[27] The need for regular re-assessments may explain in part why short-time work had only a limited impact on reallocation in Switzerland in the aftermath of the global financial crisis (Kopp and Siegenthaler, 2019[36]).

[28] This measure was temporarily suspended during the second lockdown from October 2020 to December 2020.

[29] This would be similar to experience-rating employer social-security contributions, i.e. making future contributions dependent on firms' use of short-time work subsidies during the crisis, but would be simpler to implement.

[30] In Switzerland, where there is no co-financing, no such pattern is observed (Box 2.3).

[31] An alternative option may be to impose minimum work requirements for employees on JR support instead of co-financing (Cominetti et al., 2021[43]). This approach can help target the scheme to firms that can continue to operate similarly to co-financing, while also providing stronger incentives for resuming activity and work-sharing within firms (rather than encouraging the retention of only some employees). The United Kingdom planned at some point to transform its *Coronavirus Job retention Scheme* into a *Job Support Scheme,* which would have required employees to work at least 20% of hours and setting the contribution of employers for hours not worked to 5% of gross wages, but this was not implemented due to the deteriorating health situation.

[32] For example, the COVID-19 Wage Subsidy scheme that was in operation from March to June 2020 in New Zealand encouraged – but did not legally require – employers to pay 80% of usual earnings, while the subsidy amounted to roughly 30% of average earnings. Employers complying with this recommendation would pay more than 50% of usual earnings when hours were reduced by more than 50%, hence bearing some of the cost of hours not worked.

[33] The difference in terms of total incomes is even larger for workers who combine full pay for hours worked with short-time work benefits for hours not worked.

[34] While generous JR benefits are likely to have played an important role in alleviating financial hardship and supporting consumption, – mitigating the risk that the COVID-19 crisis transformed itself into a full-fledged economic crisis -, this does not explain why JR support should be more generous than unemployment benefits.

[35] Von Audenrode (1994[42]) provides a different argument for more generous STW based on the interaction between the latter and employment protection. According to this argument, workers on STW need to be compensated for not receiving severance pay.

[36] Indeed, some countries have banned layoffs of workers on JR support, or, in the case of Italy, of any workers (Box 2.8).

[37] This requirement was temporarily lifted from October to December 2020 as new government restrictions were introduced in response to the second wave of the virus.

[38] Since 1 January 2021, in addition a special long-duration scheme operates. This scheme entails a co-financing rate of 10% and a cumulative maximum duration of two years. The long-duration scheme is reduced for modest reductions in working time of up to 40% and requires a firm-level agreement with a worker representative.

[39] Italy also introduced a co-financing for firms experiencing a small reduction in revenue (<20%) in 1 September 2020. This was motivated by concerns over abuse (requiring workers to work despite reporting reduced working hours). Most other countries deal with this issue by limiting access to STW by making firm eligibility dependent on having a significant reduction in business activity.

[40] Japan, Korea and the United States operate JR schemes that provide stronger support or exclusively target small and medium-sized firms. The main motivation for this appears to be that are likely to experience more pressing liquidity constraints due to their more limited access to external finance or they are exposed to less favourable financing conditions when they do (Sharpe, 1994[41]; Chodorow-Reich et al., 2020[37]; Faulkender, Jackman and Miran, 2021[15]; Doniger and Kay, 2021[16]). However, it could

also reflect the possibility that the economic activities of small and medium-sized firms have been impacted more strongly by social distancing restrictions.

[41] This sub-section draws on responses from the Joint OECD/EC Questionnaire on Active Labour Market Policy Measures to Mitigate the Rise in (Long-Term) Unemployment (Q4 2020; see Chapter 3) (as well as the OECD Policy Questionnaire on Working Time Regulation and Short-Time Work Schemes (see Chapter 5)).

[42] Beyond promoting permanent transitions a number of countries also allow for temporary transitions while on JR support (see Box 2.9).

[43] However, this is not always the case and a number of countries have temporarily suspended registration requirements (e.g. Belgium, Israel).

[44] Many workers on JR support are likely to have little prior experience with the PES and the kind of support they can provide.

[45] While the evidence on the effects of temporary in-work benefits on work incentives for the unemployed is relatively weak and has sometimes been used to argue for permanent in-work benefits (OECD, 2018[46]), there is no evidence on the effects of temporary in-work benefits for job mobility between firms. Since workers already have a job, and hence a stronger bargaining position compared with those without a job, the risk that prospective employers capture part of the reduction in employee social security contributions may be relatively limited.

[46] Such a requirement existed in Austria and Portugal before COVID-19.

3 Active labour market policies and COVID-19: (Re-)connecting people with jobs

Active labour market policies (ALMPs) will be vital in shaping the labour market recovery from the COVID-19 crisis. Connecting people to jobs through effective training, assisting companies to retain and recruit staff, and providing comprehensive support to people with major employment obstacles, will help to ensure an equitable and efficient emergence from the crisis, avoiding labour market detachment of more vulnerable individuals. Many countries reacted swiftly in increasing funding for their public employment services (PES), training programmes, hiring subsidies and other measures to increase labour demand. PES have hired additional staff and expanded remote and digital accessibility to their services to ensure service continuity. This chapter draws on a cross-country survey of policy responses to the crisis to highlight areas of good practice and institutional features that facilitated the development of contingency plans and adjustment to the new environment.

In Brief

Key findings

Despite the significant progress in the vaccination campaign in many OECD countries and the gradual re-opening of their economies, in April 2021 there were still 7 million more people unemployed than before the onset of the pandemic and many more discouraged jobseekers and people on reduced hours of work. In the still uncertain recovery, active labour market policies (ALMPs) play an important role as they help displaced workers find jobs more quickly and facilitate the matching of jobseekers with emerging job opportunities. At the same time, ALMPs are needed to support the labour market integration of groups with major employment obstacles to build a more inclusive labour market in the recovery. In response to the COVID-19 crisis, governments across the OECD are developing or putting into place medium- to long-term strategies to boost the jobs recovery and be better prepared for future shocks. These strategies include redesigning and scaling up ALMPs and increasing funding for their public employment services (PES). This chapter reviews how countries reshaped their PES and ALMPs to cope with the pandemic and prepare for the recovery. It presents new analysis on the institutional features that enabled a quick and effective response to the crisis. It draws on the responses of 45 countries and regions to an OECD/European Commission questionnaire on "Active labour market policy measures to mitigate the rise in (long-term) unemployment", conducted at the end of 2020. The chapter highlights good country practices and identifies key challenges that will need to be addressed in the future.

PES together with private employment services (PrES) have been playing a key role in supporting jobseekers, employers and workers since the start of the pandemic:

- Despite social distancing restrictions, difficulties in service provision and limited job vacancies, 41% of all unemployed people contacted the PES to find work in 2020 in Europe (EU countries plus Iceland, Norway, Switzerland) and Turkey, just 4 percentage points below the 2019 figure. This underlines the important role of the PES and PrES in providing good quality services to a growing number of clients.
- Around two-thirds (65%) of countries increased their budget for public employment services and administration over the course of 2020 and just over half (53%) of countries plan increases in 2021 beyond the 2020 level. The reallocation and training of staff have also been used to increase PES capacity. Almost 90% of countries responding to this question indicated that changes in PES operating models (principally adjustments in service delivery processes, the expansion of remote channels and reallocations of staff) represented the core of their short-term employment policy response to the COVID-19 crisis. Some countries also increased capacity by contracting out employment services to complement public provision and address peaks in demand.
- During the crisis, there was a widespread need for PES to rapidly scale up the use of digital and remote services to continue providing support to clients. Around 80% of PES offered remote access, compared with 50% before the pandemic. Of the PES that offered remote access to services prior to the pandemic, around 40% subsequently expanded this offering to facilitate delivery during the crisis (e.g. by streamlining application processes or opening up more digital channels).

- The scale of the expansion of remote and digital access in less than one year almost exceeded the total volume of digital services built up prior to the pandemic. Going forward, it is vital that each country's PES continues to develop its technological capacity to enable customers to engage with services digitally and fully utilise the tools and information at their disposal online.

Certain features of the institutional and regulatory set-up of ALMP provision have influenced each country's ability to adjust to the new environment and develop contingency plans and new strategies:

- More than half of countries responding to the OECD/European Commission questionnaire highlighted co-operation and co-ordination between stakeholders and policy domains (e.g. health, employment and social policies) among the main factors facilitating their COVID-19 responses. Moreover, all countries have involved almost all key stakeholders (the PES, the ministry responsible for labour market policies, the social partners, sub-national levels of government and private providers) in their ALMP systems when developing their strategies.
- Close to a third of countries stated that flexibility in ALMP implementation due to their organisational set-up has been crucial for their agile response to the crisis. Some favourable features of the organisational set-up are highlighted by two-thirds of countries with a PES set up as an autonomous public body with tripartite management.
- Countries with more flexible ALMP regulations (e.g. where the legislation passed by parliament only defines the main principles of ALMP provision, with the details of design and delivery set by lower-level regulations) were able to redesign their policies faster. Meanwhile, countries where the details of ALMP design require the approval of higher-level institutions, or where there is a more complex regulatory system, experienced delays in adjusting their ALMPs.

Recognising the important role played by ALMPs in mitigating the impact of the crisis, seven in ten OECD and EU countries reported an increase in funding for active labour market measures in 2020 and half of the countries are planning increases in 2021. While too early to assess the adequacy of public spending on ALMPs in 2020 and 2021, past evidence suggests that there is a clear risk of countries investing too little. Moreover, the effectiveness of public spending will depend on a successful implementation of the measures that were – or will be – introduced or adapted to support the recovery. Additional investments may be necessary in a number of areas:

- Investing in up-skilling and re-skilling of unemployed and displaced workers is important to support job transition in the recovery and respond to changes in the demand for skills brought by automation, digitalisation and structural changes. Training programmes have been found to be particularly effective during past downturns as lock-in effects (enrolment in training programmes preventing an early return to work) tend to be smaller. Training has therefore been expanded during the pandemic to support the reallocation of workers and to upskill those at risk of displacement, with countries making additional training places available and moving classroom-based training courses online. More than ever before, the current crisis has emphasised the importance of cultivating the skills needed to access various digital tools, including for job search and online training.
- Measures to foster job creation and increase demand for labour have been introduced or expanded in many countries. Almost two-thirds of OECD and EU countries have scaled up their employment incentives and 42% of countries lowered social security contributions for some or all employers. This was important to preserve employment that had been impacted by sudden economic shutdowns imposed by COVID-19 and to prevent detachment of individuals from the labour market. The targeting of employment incentives on groups in need can increase their effectiveness and avoid money being wasted on subsidies for the hiring or retention of workers who would have been hired or retained anyway. Many countries have therefore targeted their

new measures on young jobseekers, the long-term unemployed, people with disabilities, the older unemployed and other disadvantaged groups. Other countries expanded public sector direct job creation programmes and start-up incentives. Further changes in the mix and sequencing of ALMPs might be needed as countries enter the recovery period.

- This crisis risks leaving deep scars on vulnerable groups marginally attached to the labour market facing major or multiple employment obstacles. Barriers to (re)enter the labour market include scarce work experience faced by many young people, care obligations particularly amongst women with young children, low skills or health limitations. Not all these groups show up on the radar of PES, which is why it is important to identify the groups at risk and their needs, develop effective outreach strategies, and provide integrated, comprehensive and well-targeted support. This in turn requires a good exchange of information and co-operation between the relevant institutions responsible for the provision of employment, health, education and social services, as well as income support.
- Furthermore, evaluations of the new policies and programmes introduced in response to the COVID-19 crisis will be required, to identify effective ones and those that are less effective and need to be adapted or terminated. These efforts should be best embedded in a broader framework of evidence-based policy making that would enable countries to conduct regular and timely evaluations of their policies.

Introduction

Active labour market policies (ALMPs) perform an important function in making labour markets more resilient, helping displaced workers to get back into work quickly and enabling them to seize emerging job opportunities. The deep shock to labour markets everywhere brought about by the COVID-19 pandemic has highlighted the importance of this role but also the strain that has been placed on traditional ways of providing employment assistance to growing numbers of jobseekers in a time of social distancing and restrictions on mobility.

Against this background, this chapter illustrates the part that public employment services (PES),[1] private employment services (PrES)[2] and ALMPs have played, and continue to play, during the COVID-19 pandemic in supporting jobseekers, employers and workers based on new information on countries' policy responses (see Box 3.1).

The remainder of this chapter is structured as follows. First, it shows the extent to which unemployed people remained active during the crisis and contacted the PES to find work (Section 3.1). Second, it presents a new dashboard of the institutional set-up of ALMP provision in OECD and EU countries, highlighting features that have enabled a quick and effective response to the current crisis and detailing the key elements of countries' strategies for moving from crisis management to medium- and long-term strategies (Section 3.2). Third, it shows how countries adjusted their funding for ALMPs over the course of 2020 and 2021 and how investments in technology can increase the effectiveness and efficiency of these policies (Section 3.3). Fourth, the chapter provides an overview of the areas in which countries have already adjusted and extended their ALMPs. It pays particular attention to vulnerable groups, who are facing major labour market integration obstacles and are at risk of being left behind in the economic crisis, and outlines the support needed by these groups to enable them to improve their labour market outcomes and access good jobs (Section 3.4). The chapter concludes with some remarks on the importance of continuous evaluation of policy measures to identify those that are less effective and need to be modified or terminated (Section 3.5).

Box 3.1. The OECD/European Commission questionnaire on "Active labour market policy measures taken by countries in response to the COVID-19 crisis"

The analysis presented in this chapter draws on a questionnaire on "Active labour market policy measures to mitigate the rise in (long-term) unemployment" sent by the OECD Secretariat in collaboration with the European Commission (EC) to all OECD and European Union (EU) member countries in September 2020, with responses received during October and November 2020 from 45 countries and regions. For Belgium, four sub-national responses were received and these are counted separately in some of the statistics of the chapter[1], although the chapter generally uses the term countries in all cases.

In order to obtain a comprehensive overview of the discretionary ALMP measures taken in response to the COVID-19 crisis, the questionnaire asked countries to provide information on policies and programmes in place in 2020 or planned over the course of 2021. Also included were questions on the institutional set-up of active labour market policy design and provision, as well as institutional settings that influence the responsiveness of ALMPs during times of crisis.

The chapter also benefited from information collected from PES across the European Union by the Secretariat of the European Network of Public Employment Services, on behalf of the EC on PES actions that have been implemented or will be introduced to cushion the effects of COVID-19. This information has been updated frequently since March 2020.

1. The four questionnaire responses from Belgium concern the three regions of Brussels, Flanders and Wallonia and the country's German-speaking community.

3.1. How has the COVID-19 crisis changed the composition of PES clients?

This section uses data available from the European Labour Force Survey to examine changes in the number and composition of unemployed people who contact the PES to find employment. The number of unemployed people who contacted the PES to find work in Q2-Q4 2020 has risen in many countries but not in all. In 16 out of the 26 countries presented in Figure 3.1, the share of unemployed who contacted the PES to find work out of all unemployed has fallen in the second, third and fourth quarters of 2020 relative to the same period in 2019. This reflects the confinement measures that severely restricted mobility of job seekers as well as the operation of PES in many countries throughout 2020, and the fall in available vacancies. Nevertheless, large increases are observed in Switzerland, Latvia, Lithuania, Iceland and Estonia. In the latter, the increase may still reflect, at least partly, the effects of the Work Ability Reform, which increased the incentives for people with long-term health conditions or disabilities to register with the PES, offered them comprehensive services and promoted their labour market participation.

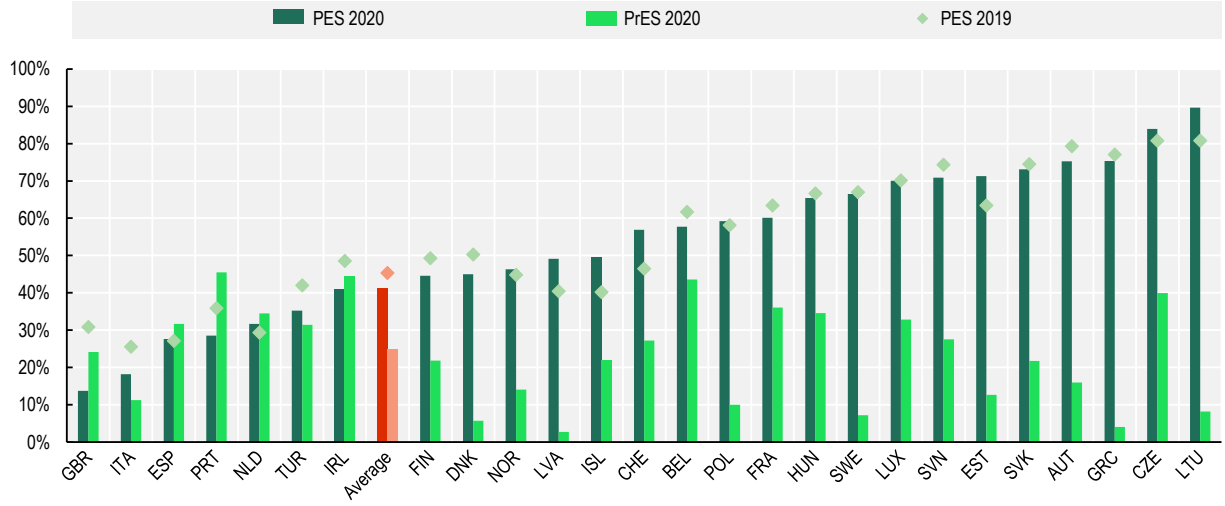
The drying up of job vacancies as a result of lockdowns and social distancing requirements also meant that it was neither feasible nor desirable to keep up mutual obligations requiring jobseekers to actively look for work while receiving benefits. As part of their initial response, one in seven countries suspended job-search requirements and six in ten countries changed them, sometimes following an initial suspension. Among countries that suspended or changed job-search requirements the vast majority had restored such requirements by the end of 2020. The pace was different across countries, with some restoring the requirements at the end of the first lockdown periods (e.g. France and Latvia), whereas other countries waited until the third (e.g. Australia, Estonia and Switzerland) or fourth quarter (e.g. Finland, Israel, Luxembourg) of 2020.

While enforcement of job-search requirements is important to uphold the active stance of an activation regime that seeks to encourage active job search and reduce benefit dependency, it needs to be matched by maintaining mutual support offered through the PES. Indeed, countries taking longer to fully restore job-search requirements first needed to make adjustments to their delivery channels expanding online services, e.g. through introducing or expanding remote channels to deliver job-search assistance, before restoring the pre-COVID-19 requirements. In-person services are often reserved for more vulnerable jobseekers (see Section 3.4.3) or only used for specific transactions (e.g. referral to ALMPs). Over a quarter of countries did not change their job-search requirements due to the COVID-19 imposed restrictions. Countries that kept their job-search requirements intact often already had online and other remote channels of job-search assistance available before the crisis (e.g. Chile, Japan, Norway; see also Figure 3.8).

Despite the drop in the number of vacancies and limited hiring taking place during the last three-quarters of 2020, unemployed people still relied on the support of PES in their job-search efforts. In total, in Europe and Turkey, 41% of unemployed people contacted the PES to find work in 2020, slightly below the share in 2019 (45%). In over 42% of the countries in Figure 3.1, this share was above 60% and reached 90% in Lithuania, 84% in the Czech Republic and 75% in Austria and Greece. In contrast, in the United Kingdom and Italy only 14% and 18% respectively of unemployed people contacted the PES to find work in 2020, which represents a further decline of 17 and 7 percentage points respectively relative to the same period in 2019. Private employment services also support the unemployed in their job search. Close to one-quarter of unemployed people contacted private employment services to find work in Europe in 2020.[3]

Figure 3.1. Jobseekers rely on public (and private) employment services in their job-search efforts

Share of unemployed persons who contacted an employment office to find work in 2019 and 2020 (Q2-Q4)



PES: Public Employment Service; PrES: Private Employment Service.
Note: The average is weighted and includes the EU27, Iceland, Norway, Switzerland, Turkey and the United Kingdom.
Source: European Labour Force Survey.

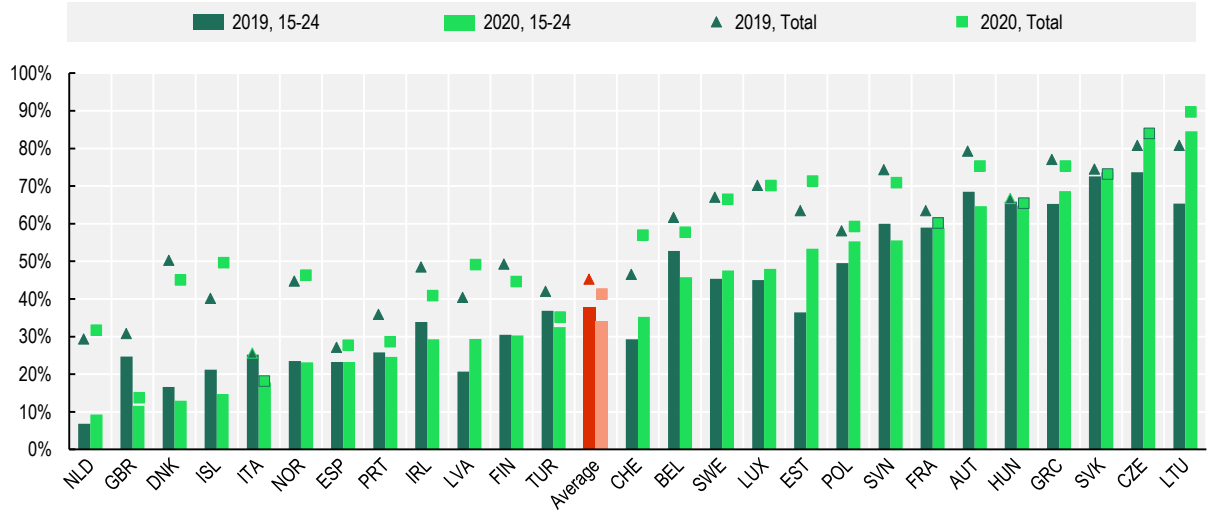
StatLink https://stat.link/uty3g2

The groups that have been more heavily affected by the COVID-19 crisis and who were also the most vulnerable groups after the Global Financial Crisis (GFC), tended to have less contacts with PES during the pandemic. Notably, young unemployed people use the PES much less than other age groups, and this gap has increased over time.[4] In total, in Europe and Turkey, only 34% of the unemployed aged 15 to

24 years contacted the PES to find work in 2020, versus an average of 41% among all age groups (Figure 3.2). Moreover, this share also declined by 4 percentage points during the COVID-19 pandemic. PES outreach is even lower in some European countries: fewer than 15% of unemployed youth contacted the PES to find work in the Netherlands, the United Kingdom, Denmark and Iceland. In addition, in the United Kingdom and Iceland, this share dropped by 13 and 6 percentage points respectively between 2019 and 2020. In contrast, unemployed youth in Estonia and Lithuania relied even more on the PES to find work during the pandemic, with the shares increasing from 36% and 65% in 2019 to 53% and 85% in 2020 respectively.

Figure 3.2. PES should increase its outreach to unemployed youth

Share of unemployed persons (aged 15-24 and total) who contacted the PES to find work in 2019 and 2020 (Q2-Q4)



PES: Public Employment Service.
Note: The average is weighted and includes the EU27, Iceland, Norway, Switzerland, Turkey and the United Kingdom.
Source: European Labour Force Survey.

StatLink https://stat.link/d7t5uk

3.2. Contingency plans of ALMP provision

Some countries have managed to adjust to the new environment imposed by COVID-19 and develop contingency plans and new strategies quickly and smoothly, while others have struggled. This section first presents key features of the institutional set-ups of ALMP provision in OECD and EU countries and then identifies those features that enabled swift responses to the crisis. It also discusses the content of country responses as they have moved from crisis management to adjusting medium- and long-term strategies.

3.2.1. How the institutional set-ups of ALMP provision can support agile responses during times of crisis

The dashboard presented in this section provides a schematic framework to help identify key features of the ALMP systems that enable quick responses to changes in labour market conditions and efficient adjustments in the provision of ALMPs. The dashboard displays the institutional set-up of ALMP provision separately in three dimensions (see specific indicators in Annex Table 3.A.1 and complementary discussion in Lauringson and Luske (forthcoming[1])):

- Organisational set-up of ALMP provision – the division of responsibilities for ALMPs, co-ordination and co-operation between the key stakeholders.
- Regulatory set-up of ALMP provision – the key legislation relevant for ALMP design and implementation.[5]
- Capacity of ALMP systems – the resources for employment services and ALMP measures.

Organisational set-up of ALMP systems varies across countries more in terms of policy implementation than policy design

The high-level responsibilities for labour market policies and thus for providing the general framework for ALMP provision lie in the relevant ministries, although more stakeholders are often involved in the policy design. In systems where the ministry responsible for labour market policies and PES are separate public bodies, generally both organisations are involved in designing strategies and accountability frameworks for ALMP provision, as well as ALMP interventions and their budgets (Annex Table 3.A.1). While a single body responsible for drafting changes in policy design might make the process quicker in an emergency situation, involving more stakeholders might ensure better implementation. Furthermore, the majority of ALMP systems (76% of countries responding to the OECD/EC questionnaire) have an official or quasi-official role for the social partners whether through advisory or supervisory bodies, and almost all other countries involve the social partners ad-hoc for consultations (except Israel and Mexico).[6] These practices could potentially facilitate designing policies that meet the needs of both labour demand and supply.

There are stark differences in the organisational set-up of ALMP implementation (Figure 3.3), particularly concerning the autonomy of organisations implementing ALMPs. This can heavily affect the agility of the system. On the one hand, greater autonomy of PES and involvement of PrES can facilitate fast changes in operating models, which is crucial in a health crisis when rules on the working environment change abruptly. On the other hand, for contracted-out employment services, it might be difficult to change the contractual terms as a result of sudden changes in needs. The continuation of service provision may then depend largely on willingness of PrES to co-operate. High levels of decentralisation of ALMP provision can lead to more responsiveness to local labour market needs (OECD, 2020[2]; 2014[3]), but require a well-designed national-level accountability framework to function successfully in the long term (Weishaupt, 2014[4])).

In addition to implementing ALMPs, many PES have additional tasks and responsibilities. For example, slightly more than half of the PES in the European Economic Area (EEA) are partially or fully responsible for unemployment benefit schemes (Peters, 2020[5]). Other responsibilities can include administering short-time working schemes, social assistance benefits, parental benefits, pre-retirement benefits or sickness and disability benefits, managing training centres and career services for schools, issuing work permits, licencing private employment services and beyond. A crisis in the labour market means that the PES in charge of benefit schemes are under particular pressure as the needs for both active and passive labour market policies increase. Yet, responsibilities for other services and measures might help PES provide more integrated and holistic support to the people. Furthermore, different services, measures and benefits facilitate PES outreach to vulnerable groups and motivate them to register (Konle-Seidl, 2020[6]).

Figure 3.3. Dashboard: Organisational set-up of ALMP implementation

Autonomy of ALMP implementation in respect to national governments

Role of PrES

Set-up of public institutions / Role of PrES	Department in a ministry coordinating public and/or private providers	National level PES fully managed by a ministry	National level PES with tripartite management body	Sub-national PES with a national coordinating agency	Sub-national PES without a national coordinating agency
Mainly public providers	CYP, JPN, LUX	CHL, CRI*, CZE, ISR, SVK	DEU*, EST, HRV, PRT, SVN	CHE, DNK	CAN
PrES relevant on the market in addition to public providers		BGR, LTU, LVA, MEX, NLD*	GRC, ISL, ROU TUR	COL, ESP	
Employment services are partially or fully contracted out	AUS, FIN*, GBR, HUN, IRL, NZL,	KOR*, MLT, NOR, SWE	AUT, FRA	ITA	BEL, POL, USA

Note: ALMP: Active Labour Market Policy.
Public employment service (PES) is a public body whose main responsibility is to actively facilitate the integration of jobseekers into the labour market and which implements employment services (providing placement and related services as defined by category 1.1 in the methodology of the OECD Employment and Labour Market Statistics database and European Commission Labour Market Policy database: services that facilitate the integration of jobseekers in the labour market or which assist employers in recruiting and selecting staff, including the provision of self-service facilities such as on-line job-banks), potentially in addition to other active labour market policies (training, employment incentives, sheltered and supported employment and rehabilitation, direct job creation, start-up incentives), and which optionally fulfils additional public functions. "National level PES fully managed by a ministry" refers to cases where a separate national level body exists to implement employment services, i.e. not a fully integrated department in a ministry as in the most left column.
Private employment service (PrES) is a private company or an NGO providing employment services (category 1.1 of labour market policies according to the OECD/EC methodology, i.e. placement and related services), regardless of the financing source (i.e. regardless of having a contract with the public sector or not). The category "PrES relevant on the market in addition to public providers" refers to countries that replied that PrES provide employment services, but did not reply that employment services are contracted out to PrES.
* Only the mainstream / first tier system mapped, while alternative systems are present (e.g. local authorities provide additional employment services).
Source: Responses to OECD/EC questionnaire "Active labour market policy measures to mitigate the rise in (long-term) unemployment"; OECD Employment and Labour Market Statistics database, https://doi.org/10.1787/data-00312-en; and European Commission Labour Market Policy database https://webgate.ec.europa.eu/empl/redisstat/databrowser/explore/all/lmp?lang=en&display=card&sort=category.

Finer details of specific ALMPs are often set in few flexible regulations

High-level regulations of ALMP provision can limit the flexibility of the regulatory set-up. Generally, the higher the level of the institution that needs to adopt the regulation, the longer the process takes; also as these regulations often need to be approved first by lower-level bodies. For example, amending an act in a parliamentary process can take considerably longer than adopting a ministerial decree or amending a PES internal guideline. However, it might be important to fix the general framework for ALMP provision (the organisational set-up, objectives of ALMP provision) in higher-level regulations to make a top political body accountable for the system and ensure democratic processes.

The agility of the regulatory set-up also depends on the complexity of the system. When ALMP design is set in several regulations, amending the design to meet the changing needs of the labour market can be a cumbersome process.

Figure 3.4 provides an overview of how agile the regulatory set-ups of ALMP provision across the OECD and EU countries potentially are. The complexity of regulation is indicated by the number of types of regulations that set the conditions of ALMPs (i.e. design of ALMP measures and services). Theoretically, this number could be up to eight (regulations adopted by the parliament, government, minister, ministry, PES supervisory body, PES executive management, regional or local authorities or other bodies). In practice, only eight countries use more than three types of regulations to set ALMP conditions, although the number of regulations can in practice be higher if several regulations on the same level are in force. The indicator for the flexibility of the ALMP regulation is defined in two groups – whether at least one regulation for ALMP conditions is an act passed by the parliament or not. More than half of the countries belong to the latter group and they could potentially change the ALMP design swiftly when labour market needs change.

Figure 3.4. Dashboard: Regulatory set-up of ALMP provision

Lean regulation

Flexible regulation

Regulatory complexity / Regulatory flexibility	Conditions of specific ALMPs are set in 3 or more types of regulation	Conditions of specific ALMPs are set in 2 types of regulation	Conditions of specific ALMPs are set in 1 type of regulation
Some or all conditions of specific ALMPs are adopted by the parliament	DEU, EST, FRA, HUN, ITA, LUX, MEX	AUT, BGR, DNK, FIN, GRC, POL, TUR	LTU, ROU
Conditions of specific ALMPs are not adopted by the parliament	AUS, ESP, ISR, JPN, PRT, SVK, SVN	COL	BEL, CAN, CHE, CRI, CYP, CZE, GBR, HRV, IRL, ISL, KOR, LVA, MLT, NLD, NOR, NZL, SWE

Note: ALMP: Active Labour Market Policy.
The *regulatory complexity* (the indication for a "Lean regulation") counts eight types of regulations to set ALMP conditions: 1) Act passed by the parliament, 2) Decree/order by the government, 3) Decree/order by a minister, 4) Decision by a ministry (key official), 5) Decision by the PES supervisory body, 6) Decision by the PES executive management, 7) Decision by regional/local authorities, 8) Other regulations.
In Belgium, the conditions of specific ALMPs are set by one type of regulation in each region, although slightly differently across regions (by a decision of the PES supervisory body in the Brussels region, and by a decree of the government in Flanders and Wallonia).
Conditions of specific ALMPs include eligibility criteria, durations, amounts etc. relevant for implementing each ALMP. The types of regulations to set the general groups eligible for ALMPs, list of specific ALMPs, target groups of specific ALMPs, and ALMP budgets are presented in Lauringson and Luske (forthcoming[1]).
Source: Responses to OECD/EC questionnaire "Active labour market policy measures to mitigate the rise in (long-term) unemployment".

Capacity of ALMP systems defined through public expenditures on employment services and ALMP measures

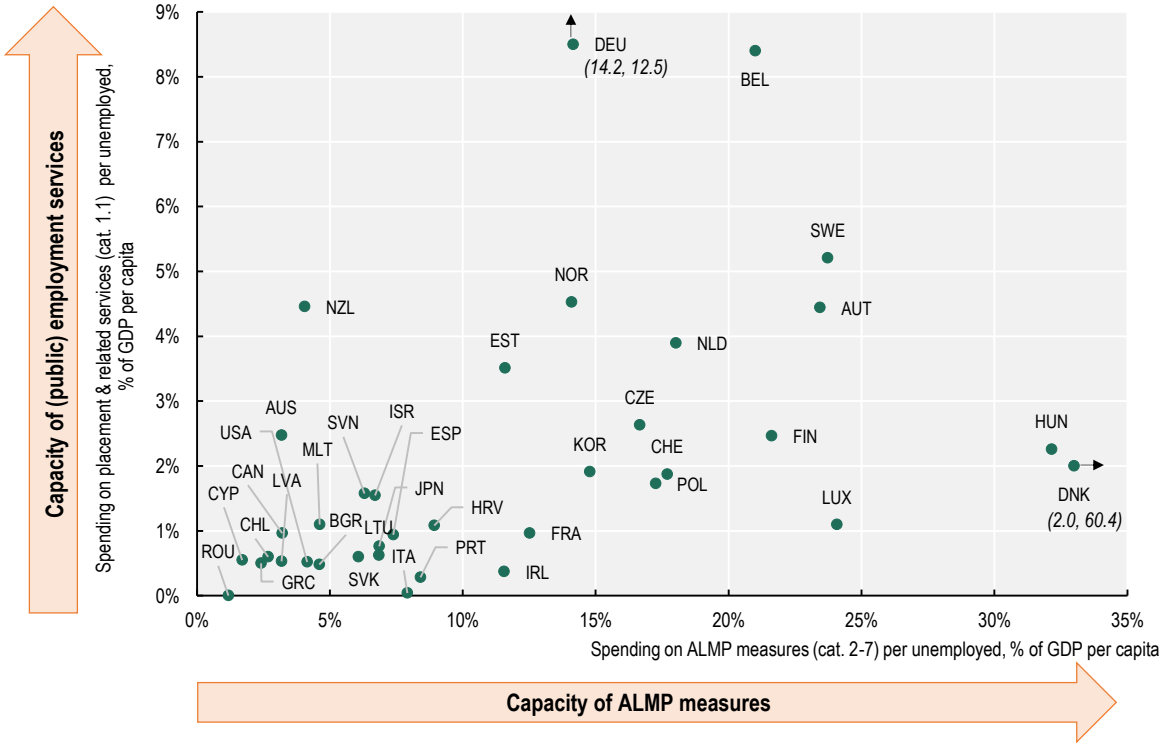
More resources available for ALMP systems before a labour market shock occurs can facilitate absorption of increased pressure on the system. In most OECD and EU countries, budgets for ALMPs are not automatically adjusted according to the labour market situation and amending budgets follows fixed procedures, including negotiations between stakeholders. Even in countries where ALMP budgets do have automatic corrections (Belgium (Flanders), Switzerland), actual implementation of the budget can take some time – e.g. hiring additional staff for employment services or contracting out additional training places. A system with lower caseloads for employment counsellors could more easily continue with effective job search counselling by making some adaptations (cutting time for counselling sessions, focusing on more vulnerable groups, cutting some parts of additional support services), while a system already working on its limits might not have any room for manoeuvre.

Figure 3.5 provides some indication of the capacity of ALMP systems before the COVID-19 pandemic. The figure displays on the horizontal axis the expenditures on ALMP measures (categories 2 to 7, i.e. training, employment incentives, supported employment and rehabilitation, direct jobs creation and start-up incentives) per unemployed as a share of GDP per capita in 2018. This indicates the capacity of the system to support jobseekers with intensive interventions and takes into account the level of unemployment in countries. The vertical axis displays the expenditures on placement and related services per unemployed as a share of GDP per capita – category 1.1 according to the OECD categorisation of labour market policies that aim to capture expenditures on employment services by public employment services and other publicly-financed bodies, but excluding expenditures on benefit administration (OECD, 2015[7]). The latter is an indication of staff levels and caseloads in the employment services. Furthermore, empirical evidence shows that these types of expenditures are generally most cost-effective as the relative cost is lower compared to other ALMPs (Brown and Koettl, 2015[8]; Card, Kluve and Weber, 2018[9]). An ALMP system was potentially able to absorb the first effects of COVID-19 better when neither of the indicators were at a low level.

Although the latest data for ALMP expenditures are from 2018, these likely present the situation relatively well also for the beginning of 2020, as the resources available for ALMPs do not change usually a lot from year to year when the economic situation is relatively stable. Nevertheless, the indicators might underestimate or overestimate the capacity of systems in countries where it is not possible to accurately differentiate between expenditures for administrating ALMPs, and benefits and other measures, or where digital tools are highly advanced and the need for staff is lower.[7] Annex Table 3.A.1 provides an additional indicator for the capacity of the ALMP systems comparing ALMP expenditures (without administration costs of labour market policies and other activities, i.e. categories 1.1 and 2 to 7) to expenditures on passive labour market policies (categories 8 to 9, above all unemployment benefit schemes) to indicate how activation oriented different labour market policy systems are.

Figure 3.5. Dashboard: Capacity of ALMP systems

Expenditures on ALMPs in 2018



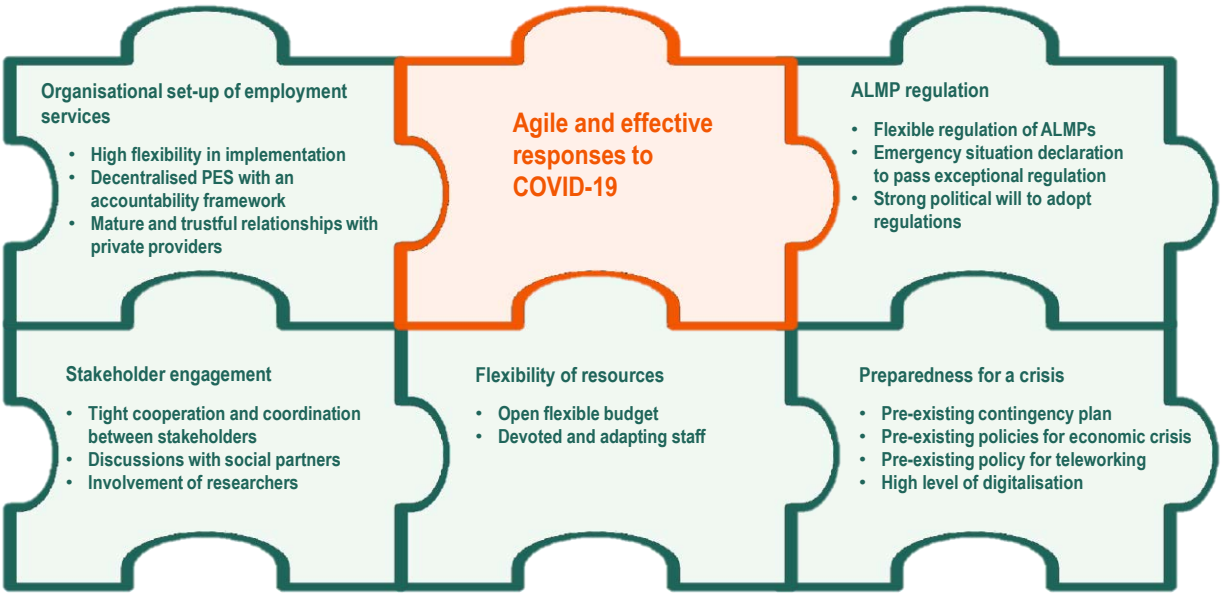
Note: ALMP: Active Labour Market Policy.
Estimations for "Capacity of (public) employment services" for Bulgaria and Switzerland. Canada: data include federal expenditures on programmes implemented by the provinces and territories, but do not generally include the provinces' additional or complementary funding of these programmes.
Capacity of (public) employment services: Publicly funded expenditures on placement and related services (category 1.1) per unemployed person as a percentage of GDP per capita (i.e. other expenditures in category 1, above all expenditures on benefit administration, are excluded).
Capacity of ALMP measures: Publicly funded expenditures on ALMP measures (categories 2 to 7: training, employment incentives, supported employment and rehabilitation, direct jobs creation, start-up incentives) per unemployed person as a percentage of GDP per capita.
Expenditures on ALMPs per unemployed *as a percentage of GDP per capita* are calculated as expenditures on ALMP relative to GDP multiplied by population size over the number of unemployed.
Unemployed according to the International Labour Organization (ILO) definition of unemployment and based on OECD Labour Force Statistics.
For detailed ALMP categories, see http://www.oecd.org/els/emp/Coverage-and-classification-of-OECD-data-2015.pdf.
Source: *OECD Employment and Labour Market Statistics database*, https://doi.org/10.1787/data-00312-en and *European Commission Labour Market Policy database* https://webgate.ec.europa.eu/empl/redisstat/databrowser/explore/all/lmp?lang=en&display=card&sort=category.

StatLink https://stat.link/y21n0m

Institutional features that enable effective and agile responses to labour market shocks identified by countries in 2020

The most important features highlighted by countries to enable them to develop both their short- and long-term responses to COVID-19 were stakeholder engagement, organisational set-up of the ALMP system, regulatory set-up of the ALMP system, resources for ALMPs and preparedness for a crisis that imposed remote working arrangements (Figure 3.6).

Figure 3.6. Key features of ALMP systems for agile and effective responses to COVID-19



Note: ALMP: Active Labour Market Policy.
The graph is based on self-assessments by the OECD and EU countries provided as responses to OECD/EC questionnaire "Active labour market policy measures to mitigate the rise in (long-term) unemployment". The countries were asked to highlight the key enablers that helped them adjust their ALMP responses to COVID-19. The analysis enables to summarise those elements that are potentially helpful for agile and effective responses, but does not provide quantitative evidence on causal links.
Source: Responses to OECD/EC questionnaire "Active labour market policy measures to mitigate the rise in (long-term) unemployment".

Virtually all countries have involved all key stakeholders of their ALMP systems in developing their strategies on mitigating the effects of the COVID-19 crisis on the labour market, taking advantage of the wider set of expertise this offers. Countries that have a national level organisation for PES overwhelmingly involve them in strategy development, in addition to the ministry responsible for labour market policies. Other key partners in the development process have been employers' associations and trade unions, sub-national levels of government and ALMP providers (such as organisations representing local private employment services and training providers). Strategy development has often involved other ministries and public sector institutions more closely than before to ensure co-ordinated responses to the crisis across policy fields. For example, in response to the COVID-19 pandemic, Australia dissolved the New Employment Services Reference Group to allow for the establishment of a new advisory group with a broader remit to support economic recovery, including experts across business, training, social welfare and the employment services industry.

Tight co-operation and co-ordination between the stakeholders in ALMP systems has been key to quick and well-designed responses to address the challenges in the labour market posed by the COVID-19 outbreak. More than half of the countries replying to the OECD/EC questionnaire highlight co-operation and co-ordination as one of the main factors facilitating their COVID-19 responses. Co-ordination and established governance models have become particularly critical in decentralised systems, where a high share of responsibilities for ALMPs lies in the regional or local level authorities (last two columns in Figure 3.3). For example, Italy has worked intensively on establishing the governance model and stakeholders' roles and responsibilities after a major reform in the organisational set-up was launched in 2014-16, and which results have facilitated the country to co-ordinate responses to COVID-19 crisis. Co-operation and establishment of designated steering groups for crisis management have been important in systems where responsibilities to design and implement ALMPs are shared among several national level

organisations, such as in cases where the PES is set up as an autonomous public body (countries in the middle column in Figure 3.3). For example, the ministry and PES in Slovenia have had almost daily contact since the start of the COVID-19 crisis, which is based on a long tradition of open communication between the two organisations and shared objectives.

Close to half of the countries that consider the co-operation of stakeholders as a particularly beneficial practice, highlight that engaging the social partners in the development of their short- and long-term responses has been of particularly high value. In addition, Austria, Belgium (Brussels), Finland and Norway have involved researchers in the development of their employment policy responses. In the Brussels region, *View Brussels* (the Brussels Employment and Training Observatory, whose main mission is to observe and analyse the regional labour market) has participated actively in the dedicated task force to re-design and implement employment policy in response to COVID-19, providing the task force with regional monitoring data. In Finland, the Ministry of Economic Affairs and Employment and the Ministry of Finance appointed a working group swiftly when COVID-19 reached the country to prepare an assessment of the impact of the crisis on its economy and labour market and develop a strategy to tackle these impacts. The three-stage strategy to reduce the immediate adverse effects, stimulate the economy and repair the damages was proposed already in early May 2020 (Ministry of Economic Affairs and Employment, 2020[10]). Also, in Austria, researchers were involved in re-designing the ALMP package from the very beginning of the crisis through a standing research committee.

Countries with more flexible ALMP regulations were able to redesign their policies quicker. About one-third of the countries that responded to the survey find that an emergency situation declared by their government or passing particular emergency laws enabled them to adopt the necessary regulations for redesigning ALMPs quickly, without the normal parliamentary process. However, close to one-third of the countries already had very general framework laws for ALMP provision before the crisis, so that introducing and redesigning ALMPs was possible without particular emergency laws. In these countries, adaptions of regulations by their government or ministries was sufficient, or no changes in regulations were necessary at all (the Czech Republic, Malta and New Zealand). Although in total two-thirds of countries regulate the details of ALMP design in lower-level regulations (Figure 3.4), half of them had to still make major adjustments to introduce new schemes. Regardless of how flexible the regulations were before COVID-19, strong political will played a crucial role in many cases to adapt ALMPs to the new needs. The crisis also demonstrated that leaner higher-level ALMP regulations might be desirable as well in a more normal economic situation, to adapt to the continuously changing labour market needs. While the finer details of ALMP design should be flexible and adaptable by lower level institutions, the general framework should be fixed via a parliamentary process to ensure political accountability and democratic processes.

Higher autonomy in PES to decide their operating model and ALMP implementation details has supported responsiveness to local labour market needs and the continuity of ALMP provision despite sudden changes in the working environment. One-third of countries state that high flexibility in ALMP implementation due to their organisational set-up (supported by flexible ALMP regulation) has been crucial in their swift responses to the crisis. Having an autonomous national level PES set up with a supervisory body involving the social partners, is often highlighted by countries as a means to deliver flexible and swift policy responses (in total two-thirds of countries in the middle column in Figure 3.3 stated that some features of their organisational set-up were of key importance). Close to 40% of the countries with a decentralised ALMP system (last two columns in Figure 3.3) note that their set-up enabled fast changes in operating models that took into account local labour market conditions. Mature governance models and co-ordination of activities were critical enablers of this. In countries where a large share of employment services are outsourced, mature and trustful relationships between the ministry and the providers have been key to adapt to the new situation (stressed by Australia and the United Kingdom), involving, for example, changes to the contractual terms agreeable to both parties.

Only a minority of countries exercise a high flexibility of resources to respond to changes in the labour market. Sweden has been successful in amending its ALMP budget in response to COVID-19 faster than

other countries as its regulations mean that an increase in long-term unemployment automatically raises funds available both for benefits and ALMPs. Similarly, in the Netherlands, some resources for ALMPs become available automatically for PES when expenditures on unemployment benefits increase. In Switzerland, where cantons are responsible for ALMP provision, ALMP budgets are directly linked to the number of registered jobseekers in cantons and can be adjusted during the year. In Belgium (Flanders), most ALMPs use open budget, which means that additional funds are automatically made available when the needs exceed expectations.

Regarding the flexibility of human resources in PES, close to half of the countries were able to increase their staff numbers in 2020 in response to the crisis and two-thirds made staff re-allocations (mostly for call centres, registering jobseekers, processing benefits, see details in Section 3.3.1). Belgium (Brussels), Croatia, Finland and Slovenia consider the adaptability and devotedness of staff, as well as possibilities to reallocate tasks, to have been key in coping with the challenges of COVID-19 in 2020.

Of all OECD and EU countries, only Israel and Switzerland had a plan prepared before the COVID-19 outbreak to tackle a potential crisis on the labour market that proved to be useful in early 2020. Nevertheless, as the COVID-19 crisis posed challenges that were not foreseen, even these crisis management plans had to be adjusted extensively. Responses to the COVID-19 challenges were facilitated in Austria, Finland, Germany, the Netherlands, New Zealand and Switzerland, as they had already specific measures in place to tackle an economic crisis situation, which were designed during the GFC or following natural disasters (New Zealand). As the COVID-19 crisis posed challenges to the working environment, countries' preparedness to respond to the situation was also highly dependent on the level of digitalisation and possibilities to telework. Some countries consider these factors as integral in coping with the new situation.

3.2.2. From crisis management to longer term strategies

In the face of the COVID-19 pandemic, the PES (and PrES) in all countries needed to switch to a crisis management mode and quickly adapt to the new situation to minimise its impact on employment by delivering ALMPs, processing job retention schemes (see also Chapter 2), minimising delays in benefit payments despite record applications, providing information to jobseekers, employees and employers, and encouraging jobseekers to stay active even when there were fewer vacancies (OECD, 2020[11]). After the initial shock and adjustments in the operating models, countries have started to adjust their medium- and long-term strategies, adapting the basket of ALMPs in line with the changed composition of jobseekers as well as support the speedy recovery of enterprises and ensure effective matching of jobseekers with new job openings.

Responses in 2020 focused on PES operating models

The short-term responses of ALMP systems to the COVID-19 crisis involved above all changes in the operating models of public and private employment services, while the scope for redesigning active support to jobseekers was limited. First, the suddenness of the COVID-19 outbreak and the subsequent restrictions on social interactions imposed a rapid change in working environments and service delivery models. Second, many PES witnessed high inflows of applications for benefits and registrations as well as increased needs for information by the clients (OECD, 2020[11]). On top of that, the approaches taken needed tight monitoring and frequent re-assessments, which required establishment of crisis management systems in many PES, supported by adopting new monitoring tools and dashboards and using data for management decisions more than ever before. Close to 90% of countries responding to the OECD/EC questionnaire highlight the changes in PES operating models as the core parts of their short-term responses to the COVID-19 crisis. More specifically, the key changes involved: i) digitalising processes, boosting remote channels, automating processes for clients and the back-office, ii) simplifying processes for clients and staff, iii) adapting processes to meet health guidelines on the premises, iv) adopting new

tools to increase the quality and timeliness of statistics and management information, v) adapting communication to staff and clients, and vi) reallocating staff, increasing staff numbers and training staff to increase PES capacity. One third of countries made more significant changes to ALMP design already in their short-term strategies in 2020.

Medium- and long-term strategies aim at re-designing ALMPs to meet new needs

Most countries had started developing their medium and longer-term strategies of labour market policy responses to the COVID-19 crisis by October/November 2020, but only about half of the countries had already adopted a new strategy. Discussions on the longer-term responses were hindered as day-to-day crisis management absorbed policy makers and implementers throughout 2020. In addition, the health situation, social distancing requirements and the forecasts of the labour market situation kept changing significantly over the year (see Chapter 1), with implications on the appropriate longer-term policy responses.

Compared with the short-term responses, longer-term strategies tend to focus much more on the content of the support to jobseekers, employees and employers, rather than delivery models and PES operating models. The planned changes concern redesigning the basket of ALMPs to match the changed needs of jobseekers and enterprises. All countries responding to the OECD/EC questionnaire that had adopted their longer-term strategy by October 2020, or were to adopt the strategy soon, identified ALMP design and targeting as key components of their plans for 2021 and beyond. For example, Belgium (Brussels) aims to give more priority to the most vulnerable groups, who have suffered more in the COVID-19 crisis and to apply a sectoral approach to employers to meet better the sectoral needs. Belgium (Wallonia) intends to further prioritise individualised approaches to jobseekers, particularly to those who have been recently dismissed, in its new model of “instant support” focusing more on coaching and finding solutions swiftly. Greece is planning to give particular attention to supporting jobseekers from the sectors that have suffered the most in the current crisis, e.g. tourism and culture. Slovenia is trying to increase co-operation with the providers of social services to better support groups that have multiple labour market barriers, and promoting employment of disadvantaged jobseekers (including support with job interviews and post-placement support). Colombia is planning to address the labour market integration challenges of several vulnerable groups, such as youth, older workers, jobseekers from the sectors that suffered exceptionally more due to COVID-19, as well as people working informally. Changes in different ALMPs are discussed in more detail in Section 3.4 of this chapter.

At the same time, still more than half of the countries plan to continue fine-tuning the ALMP delivery models in their longer-term strategies, learning from the experience of 2020. For example, the COVID-19 outbreak led many countries to review and simplify their processes (internally and with clients) and to decrease the level of bureaucracy. Several countries aim to continue making their ALMP design and implementation processes leaner through reviewing structural set-ups, and functions and tasks of all stakeholders involved. Also further digitalisation and automation of processes remain high in the PES agenda, aiming at further increasing PES efficiency (see Section 3.3.2 for more details).

3.3. Increasing ALMP capacity to support a rapid return to work for all jobseekers

Following an economic downturn like the one caused by COVID-19, ALMPs play a key role in supporting the rapid return to work of the unemployed and the reallocation of labour from declining to growing firms, including across sectors and regions. As has been argued before, this requires countries to adjust existing ALMPs and delivery models or design new ones in an agile manner, as well as additional investments into ALMPs. This section argues that countries need to further scale up their investments in two areas: First, additional expenditure on ALMPs will be needed over the course of 2021 and the years to come to enable public and private employment services to serve a higher number of jobseekers and offer additional support

to those who do not return to work quickly. Second, strategic investments into digital infrastructures of employment services are needed to increase ALMP effectiveness and efficiency both in the short and long term.

3.3.1. Scaling up resources for ALMPs

This section provides an overview on countries' adjustments to ALMP spending in 2020 and 2021, staffing adjustments in PES and the option to complement public provision through contracted provision. While too early to assess sufficiency of public spending on ALMPs in 2020 and 2021, past evidence suggests that there is a clear risk that countries invest too little in this area.

Increasing public expenditure on ALMPs

Evidence shows that spending on ALMPs can help reduce unemployment and long-term unemployment.[8] Following the onset of the GFC many countries reacted swiftly with discretionary changes to ALMP expenditure in response to the economic downturn to sustain labour demand and support the unemployed find work. Measures taken by OECD countries as early as 2008/09 included increased funding for their PES and additional investments in ALMPs such as employment incentives, reductions in non-wage labour costs, public sector job creation, business start-up incentives, work experience and training programmes (OECD, 2009[12]).

Countries responded swiftly also to the current downturn and made adjustments to their ALMPs. While some of these adjustments did not require additional funding (e.g. reallocation of staff), most countries increased their funding for ALMPs over the course of 2020 and are planning further changes in 2021. Two principal expenditure categories are distinguished for describing these changes in funding:

- **Labour market services**:[9] This includes public provision (or private provision, with public financing) of counselling and case management of jobseekers, financial assistance with the costs of job search or mobility to take up work, and job brokerage and related services for employers, including similar services delivered by private providers but with public financing. Also included is the administration of benefits such as unemployment benefits, job retention schemes and redundancy or bankruptcy compensations.
- **Active labour market measures**:[10] These include training, employment incentives, sheltered and supported employment and rehabilitation, direct job creation and start-up incentives, if targeted on the unemployed and closely-related groups such as inactive who would like to work, or employed who are at known risk of involuntary job loss.

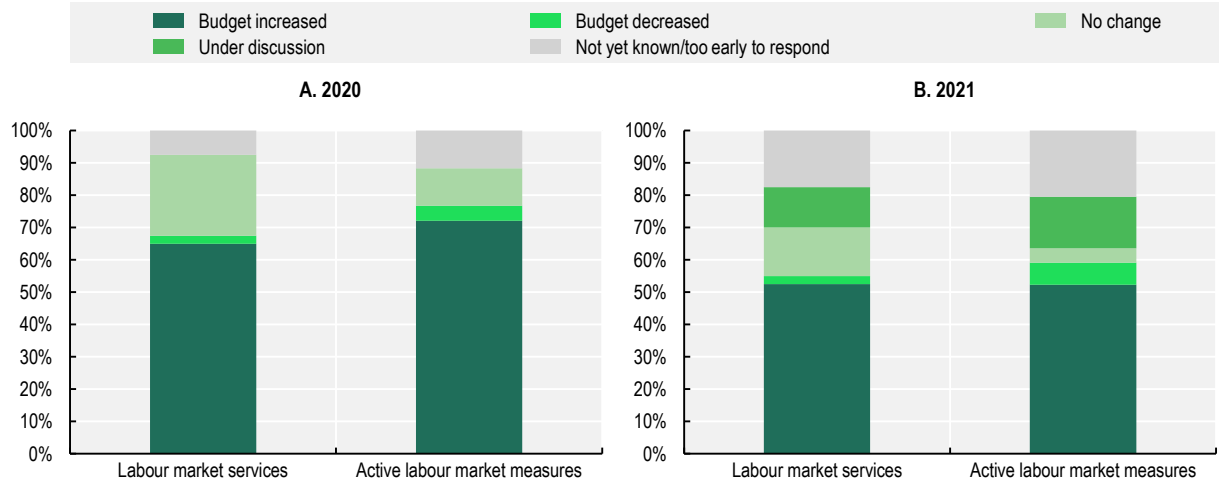
Just under two-thirds (65%) of all responding countries increased their budget for labour market services over the course of 2020 (Figure 3.7). For example, in Denmark, the Netherlands and Switzerland the budget for labour market services and active labour market measures automatically increases in line with rising unemployment making the system more responsive to changes in labour market needs (see Section 3.2.1). In many countries additional resources for labour market services were used to hire additional staff to support a higher caseload of jobseekers. In Australia, additional funding was used to enhance the digital service offer for jobseekers. A bolder picture emerges for active labour market measures. Seven in ten countries reported an increase in funding for these types of programmes. For example, Canada more than doubled the funding for the Workforce Development Agreements[11] in comparison to the 2018/19 financial year. Hungary increased its expenditure for active labour market measures by 21% in comparison to 2018, Portugal by 30% in comparison to 2018 and Switzerland estimated the increase at around 20%. Details on new or expanded active labour market measures are provided in Section 3.4.

In 2021, just over half (53%) of all responding countries plan to increase the funding levels for labour market services in comparison to 2020, with a similar number of countries (52%) planning an increase in

and active labour market measures. A number of countries, however, had to make difficult choices. For 2020, Mexico reported a budget decrease both for labour market services and active labour market measures in order to redirect spending to address priorities and deal with the health crisis caused by COVID-19. In Spain, unused spending on active labour market measures was re-allocated to job retention policies. In 2021, three countries (Hungary, Poland and the Slovak Republic) expect to decrease their expenditure on active labour market measures in comparison to 2020. All three countries reported increases in 2020 and expect to return to pre-crisis levels again. For a full overview of all countries' spending decisions on labour market services and active labour market measures in 2020 and 2021 see OECD (2021[13]).

Figure 3.7. The majority of OECD/EU countries increased expenditure on active labour market policies in 2020 and further increases are planned in 2021

Public expenditure budget allocation for labour market services and active labour market measures, percentage of countries by type of action



Note: *Labour market services* includes public (or private, with public financing) provision of employment services and administration of benefits. *Active labour market measures* includes training, employment incentives, sheltered and supported employment and rehabilitation, direct job creation and start-up incentives.
Source: OECD (2021[13]), "Active labour market policy measures to mitigate the rise in (long-term) unemployment: A summary of country responses to the OECD/EC questionnaire", https://www.oecd.org/els/emp/almpmeasuresCOVID-19.pdf.

StatLink https://stat.link/1f5jcl

While the evidence presented here shows that many countries moved quickly to increase ALMP spending, it is too early to judge whether additional resources made available in 2020 and planned for 2021 were, or will be, sufficient to provide the required level of support to ensure a rapid return to work in the recovery.[12] Following the GFC, OECD governments scaled up ALMP spending more strongly than in earlier recessions, probably due to their fuller appreciation of the need to retain an activation stance during a deep recession. Nevertheless, spending per unemployed person declined by 21% on average (in real terms) across the OECD between 2007 and 2010 (OECD, 2012[14]). Larger additional investments into PES and ALMPs may be needed going forward to support the reallocation of labour from declining to growing firms, including across sectors given the persistence of depressed conditions in some sectors (e.g. leisure and hospitality – see Chapter 1). This requires advanced planning, as in contrast to income support policies it may not be straightforward to translate increased funding into higher capacity in the short run. To achieve this, PES need to hire new staff, existing programmes need to be expanded or new ones established, which in turn requires agile systems of ALMP provision, as argued in Section 3.2.

Staff reallocations alleviated initial pressures, but additional PES staff is needed in many countries

The immediate effect of the COVID-19 crisis hit PES when governments introduced lockdowns and social distancing measures in March/April 2020, with the number of jobseekers and applications for job retention schemes rocketing (OECD, 2020[11]) – see also Chapter 2. Sixty-seven percent of countries responding to the OECD/EC questionnaire reported staff reallocations in their PES as an immediate reaction to deal with the most pressing tasks (for information by country see OECD (2021[13])). Often staff reallocations were made to support the handling of short-time work and other job retention schemes, both in countries with pre-existing schemes as well as those that introduced such schemes for the first time (OECD, 2020[15]). Reallocation of staff to help with processing of job retention schemes was reported by Austria, the Czech Republic, Korea, Luxembourg, the Slovak Republic, Slovenia, Switzerland and Turkey. For example, in late spring 2020, more than 60% of staff in the provincial directorates of the Turkish PES were assigned to payment of short-time working benefits to ensure that payments were processed correctly and paid on time to beneficiaries. Staff were also reallocated to support the processing of unemployment benefit claims and registration of new jobseekers in Finland, Germany, Iceland, Ireland, Korea, Latvia, New Zealand and Norway, and to support the contact/call centres in Belgium (Brussels) and Slovenia. During the peak of the crisis, the German PES reallocated up to 20% of its staff.

Staff reallocations have often not been sufficient to ensure service continuity and over half of all countries therefore reacted with hiring additional PES staff over the course of 2020 (for information by country see OECD (2021[13])). In many hiring PES, the new positions are on a fixed-term basis and sometimes involved shifting staff from other public institutions into the PES. New staff have been hired to deal with short-time work and other job retention schemes (e.g. Lithuania, Luxembourg), process the high number of unemployment benefit claims (e.g. New Zealand and Norway), boost call centre support, (e.g. Finland, Luxembourg), provide counselling services to jobseekers and employers (e.g. Estonia, Finland, Ireland, Japan and Korea) and support the further development of online solutions (e.g. Turkey). In most hiring PES the increase in staff over the course of 2020 has been modest, ranging from 1% to 5%. Notable exceptions are Iceland, Ireland, Israel, Japan, Korea and Switzerland where PES staffing levels have been increased by 10% or more. Iceland increased its PES staffing by 37% in comparison to the beginning of 2020 and Korea by 79% through fixed-term contracts.

Public employment services are likely to require additional staff in 2021 to deliver high-quality services and have a comprehensive offer of ALMPs for a higher number of jobseekers. Without additional staff, there is a clear risk that PES may not be in a position to offer individual comprehensive support that more vulnerable groups may require (see Section 3.4.3). Among countries responding to the questionnaire almost half (47%) reported plans to further increase PES staff levels in 2021 (for information by country see OECD (2021[13])). For example, the PES in France and the United Kingdom plan to hire additional staff to increase front-line staff in local offices and the new employment programmes for young people, *1 jeune 1 solution* (“1 youth 1 solution”) in France and *Kickstart* in the United Kingdom. The PES in Luxembourg plans to hire new staff in 2021 to guarantee high level of service quality to both jobseekers and employers, as well as to develop new services. The Turkish PES plans to hire additional software developers and IT experts to support the expansion of online services. In many countries PES plans were still under discussion at the time the OECD received questionnaire responses and a number of countries highlighted that hiring decisions depend on the further development of unemployment.

Contracting out employment services as an option to increase capacity in the medium- to longer-term

Many PES face capacity constraints, as inflows of jobseekers applications continue to be high. One option to address the higher and potentially further rising need for employment services is to contract out publicly financed labour market services such as counselling and case management of jobseekers to external

service providers. Increased use of contracted provision is likely to be considered mainly by countries with extensive experience in tendering of employment services. While offering the opportunity to scaling up the support for different types of jobseekers, outsourcing of labour market services also carries risks in its design and implementation (Langenbucher and Vodopivec, forthcoming[16]).

Two in five of the countries covered by the OECD-EU survey already contract out employment services to external parties, including both to for-profit and not-for-profit entities. A number of countries foresee expanding the use of contracted out services in the near future. Among them are Austria, Belgium (Brussels), Ireland, Israel, Korea, Sweden and the United Kingdom, and (potentially further into the future) Slovenia. Austria and Belgium (Brussels) recently expanded the use of contracted provision to support displaced workers who lost their jobs due to business closures or other economic reasons and other groups at risk (see Box 3.2).

A number of countries use some form of contracted-out provision for all types of jobseekers (e.g. Colombia, Denmark, Italy, Norway, Sweden) or particularly job-ready jobseekers (e.g. France). Other countries outsource specialised support to specific target groups, including young people (e.g. Korea, New Zealand), persons with a disability or a health condition (e.g. the United Kingdom (England and Wales)), older jobseekers (e.g. Austria, Belgium (Brussels)) and long-term unemployed (e.g. Ireland and Poland). Following the GFC, large-scale programmes using contracted-out employment services to support a high number of long-term unemployed back into work have been introduced in the United Kingdom in 2011 (*Work Programme*; (OECD, 2014[3])) and Ireland in 2015 (*JobPath*; see Box 3.3). Both programmes ran over a period of five years. Building on the experience with the *Work Programme*, the British Department for Work and Pensions has already started the commissioning process for a new programme in England and Wales, called *Restart*, which will go live in summer 2021.

Box 3.2. Scaling up resources for displaced workers and other groups at risk through contracted provision in Austria and Belgium (Brussels)

***Corona-Joboffensive* ("corona job initiative") in Austria**

With the *Corona-Joboffensive* the Austrian Government introduced a new funding package with the aim to support over 100 000 participants from October 2020 onwards, including unemployed seeking professional reorientation or further training, unemployed young adults without a qualification, women re-entering the labour market, workers at risk of displacement and other target groups (e.g. persons with disabilities, persons with language-related employment barriers and people with complex needs). The new package combines a number of different measures, most of which are outsourced to contracted providers, including both not-for-profit and for-profit entities. Amongst the measures are:

- Professional guidance and counselling for education and career planning, taking into account individual requirements.
- Labour market training to support upskilling and reskilling in growing occupations and sectors with a focus is on digitalisation; science, technology, engineering, and mathematics (STEM); the green economy; and the care, health care and education sectors.
- Start-up incentives.

Participants who complete a qualification measure or (re)training under the corona job initiative that lasts longer than four months receive an education bonus (EUR 180 per month) in addition to their regular unemployment benefits.

Rebond.brussels **("Rebound Brussels") in Belgium**

The PES of the Brussels region in Belgium set up the new *Fonds Rebond* in response to bankruptcies in the Brussels region since the start of the COVID-19 crisis. Workers made redundant by a Brussels employer following a bankruptcy declared after 1 July 2020 have access to this free service on a voluntary basis[1] to support their re-integration into the labour market as quickly as possible. The programme lasts up to 12 months and consists of two components:

- Social component: it supports participants with benefit claim procedures and informs them about mutual obligations attached to unemployment benefits.
- Employment component: participants have a personal coach who supports them with counselling, skills assessment, and career advice and helps access other support that is part of the programme, such as workshops and training.

The employment component is provided either by an existing provider of the PES or by a specialised outplacement office. The choice of the service provider depends on several criteria such as age, employment history and career goals.

1. Participation in outplacement services is mandatory for displaced workers aged 45 and over and at least one year of seniority with the employer declared bankrupt. Refusal may result in benefit suspensions ranging from 6 to 52 weeks.
Source: Bundesministerium für Arbeit (2020[17]), "Die Corona-Joboffensive", https://www.bma.gv.at/Services/News/Coronavirus/Corona-Joboffensive.html and Actiris (2020[18]), "Bénéficier de Rebond.brussels", https://www.actiris.brussels/fr/citoyens/beneficier-de-rebond-brussels/ (accessed on 20 May 2021).

Box 3.3. Contracted out employment services for the long-term unemployed in Ireland

Following the GFC and the sovereign debt crisis, unemployment and especially long-term unemployment reached very high levels in Ireland. Staff-to-client ratios at the Irish Public Employment Service (PES) of around 1:500 remained far too high. While there had been efforts to increase the number of PES counsellors, financial and recruitment constraints limited the degree to which PES services could have expanded further. Against this background, the Irish Department of Social Protection prepared for large-scale contracting out of employment services targeting the long-term unemployed through the *JobPath* programme. *JobPath* was the single biggest contract for employment services of the Irish state. Long-term unemployed were referred to contracted providers between mid-2015 until end-2020 through a randomised referral mechanism. The programme applied to all of the Republic of Ireland, which was divided into four contract areas and eventually delivered by two providers only (each operating in two contract areas). The payment model was characterised through a high outcome-based component providing strong incentives to achieve sustained employment for the participants (the maximum fees per clients could only be claimed after 52 weeks of employment). A set of minimum services requirements guaranteed one-to-one meetings with a counsellor at least every 20 days while the participants were unemployed, development of a "Personal Progression Plan", quarterly in-depth review meetings and in-employment support for at least the first 13 weeks of employment.

A counterfactual impact evaluation of *JobPath*, exploiting the random referrals to the programme, found that unemployed who participated in *JobPath* in 2016 were 20% more likely to move into employment in 2017 than without *JobPath*, and 26% more likely in 2018. *JobPath* participants who found a job also earned 16% more per week in 2017 and 17% more in 2018 than the comparison groups (long-term unemployed not (yet) referred to *JobPath*). This means that, on average, individuals who benefited from

JobPath in 2016 had earnings from employment that were 35% higher than they would have been without the programme in 2017 and 37% higher in 2018. What is more, positive effects were found for all participant cohorts, including those furthest from active participation in the labour market. Qualitative surveys of *JobPath* participants also revealed good performance of *JobPath* providers. More than half of the participants felt that the contracted providers offered services similar or better than comparable PES services.

Source: Department of Employment Affairs and Social Protection (DEASP) (2018[19]), "Satisfaction with JobPath service providers (Online research 2018)"; DEASP (2019[20]), "Satisfaction with JobPath service providers (October 2018, Phone)"; Department of Employment Affairs and Social Protection (2019[21]), "Evaluation of JobPath outcomes for Q1 2016 participants", DEASP Working Paper, Dublin; and Intreo (2014[22]), "Pathways to work 2015".

3.3.2. Harnessing technology to increase ALMP effectiveness and efficiency

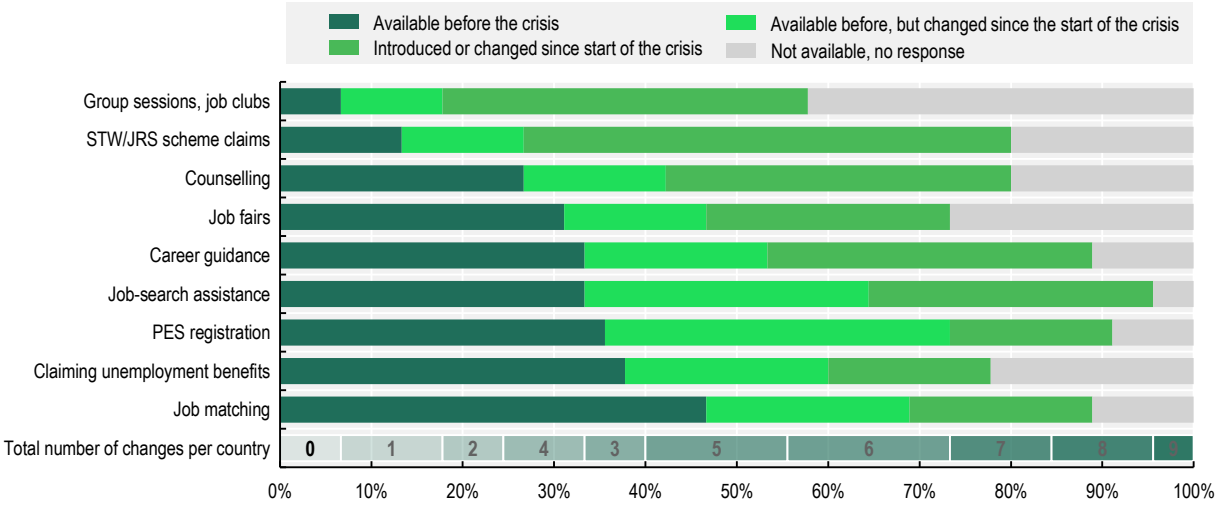
The utilisation of digital tools has been a cost-effective method to deal with increased demand for services and reduced physical capacity. More sophisticated digital tools, that are now becoming more widespread in PES, offer further advantages in tailoring services to clients, increasing efficiency and facilitating self-service amongst clients. However, care will need to be taken to ensure that all processes designed as short-term fixes to acute demand pressures are reviewed to ensure they are fit for purpose for the longer term.

Remote channels have been crucial to maintain services

Facilitating greater use of technology and expanding services beyond traditional face-to-face settings have been features of many PES strategies long before the current pandemic. However, the severity of the recent face-to-face restrictions forced PES to scale up and adapt this capacity at an unprecedented pace. They also represent a unique opportunity for PES to seize this momentum and advance a step-change in technology utilisation, to better serve their customers as they continue into a post-pandemic world.

Figure 3.8 shows the dynamics of PES digital and remote access to services. Prior to the pandemic, on average, around half of PES offered remote access across the range of activities undertaken. Subsequent to the social distancing restrictions imposed due to COVID-19, this has increased to around 80% and the variation in remote access between activities has dropped. Of those PES offering remote access to services prior to the pandemic, 42% have augmented delivery subsequent to it. The strides made in extending remote and digital access by PES in less than one year, almost surpasses the totality of that access that was built up prior to the pandemic. Across the nine activities surveyed, 60% of countries had made changes to facilitate remote access across five or more activities. Those countries with good remote access prior to the pandemic (e.g. Belgium (Flanders), Estonia and Sweden) had to make relatively few changes to their delivery, compared to those with relatively little previous remote access (e.g. Spain having made changes to the entire suite of activities surveyed).

Figure 3.8. Proportion of PES offering remote/digital access to services



Source: OECD (2021[13]), "Active labour market policy measures to mitigate the rise in (long-term) unemployment: A summary of country responses to the OECD/EC questionnaire", https://www.oecd.org/els/emp/almpmeasuresCOVID-19.pdf.

StatLink https://stat.link/wdha2c

The recent introduction of remote access by some PES and the expansion of it by others suggests there is still much development – to both scope and content – that can be achieved, building on recent successes. It is important to note that whilst PES have increased their ability to deal with customers remotely this was often piecemeal, designed to meet the immediate pressures of COVID-19 inflows. This included allowing customers' registrations via paper applications sent by ordinary mail and applications via email and by phone. Others streamlined their existing digital channels to remove some face-to-face contact. The challenge for PES will be to review their processes subsequent to the pandemic and to design remote and digital channels that offer streamlined and future proof delivery. Some of the shortcuts to registration may have weakened checks and balances on fraud and error, a compromise to ensure that speed of support to individuals was maintained. Work will need to be undertaken to review the impact of the changes made, so that integrity of benefit administration is maintained when we move beyond the pandemic.

Digital channels and automation provide efficient service capacity to PES

The speed at which the pandemic unfolded and the impact of social distancing restrictions, brought an abrupt halt to face-to-face delivery of services across OECD countries. Increased digitalisation of services helped PES mitigate the impact in several ways:

- *Teleworking arrangements for staff* in front and back-office functions allowed service continuity, protected workers and maintained capacity where the physical demands of social distancing reduced available office capacity (European Commission, 2020[23]; ILO, 2020[24]).
- Remote channels for ALMP provision have allowed continuation of counselling, career guidance, job matching and training via online channels. Interactive service provision such as counsellors interacting with a client via an online channel (e.g. in the United Kingdom via the Universal Credit "journal" where caseworkers and clients can interact with one another) has been supported with more "static" online support (information on PES websites, general guidelines for job search, videos for training etc.).
- *Remote benefit applications and jobseeker registrations* (remote channels and user-interfaces enabling jobseekers to send or upload their data to PES IT systems) have protected customers by limiting social exposure risk and facilitated the speed and volume of applications.

PES that offered comprehensive e-services for clients, in combination with automated back office systems, were able to almost fully serve their clients without the need for personal interaction (e.g. Estonia, Belgium (Brussels and Flanders), Iceland, the Netherlands, Norway the United Kingdom). This served twin benefits: i) to facilitate quick and easy application for benefits, critical for individuals and families to meet their sustenance and security needs; and ii) to allow PES to reserve what little face-to-face capacity they retained for their most vulnerable customers. PES with more advanced digital capacity were able to preserve their capacity for ALMP delivery. For example, the Estonian PES was already providing career counselling via Skype prior to the pandemic, allowing them to seamlessly continue high quality service provision to their customers as the pandemic hit (Holland and Mann, 2020[25]).

Whilst digital penetration is now much higher among PES (see Figure 3.8), there are still some PES that do not offer such access across a majority of services. An important element of digital strategies will be to embed the use of e-services as the default mode for registration and administration of benefits (e.g. already in Iceland, Italy, the Netherlands, Norway) also beyond the pandemic. In turn, it is important to reserve face-to-face interaction for those clients without digital skills or with complex needs that may necessitate personal contact. ALMP provision should rely on a combination of digital and face-to-face support, depending on the specific needs of target groups and the services and measures in question. Careful evidence building is required before moving to broader digital provision of ALMP in the longer term. Previous evidence has shown that there can be some risk to channel shift in delivery, so building theories of change and testing the impact of digital delivery on outcomes should be incorporated prior to any shift. For example, the reform in Finland in 2013 substituting face-to-face counselling with online counselling in 60 municipalities, has been estimated to have increased unemployment length by 2-3 weeks (Vehkasalo, 2020[26]). The importance of channel management to fit to the target groups has been demonstrated also in Austria, the Netherlands and the United Kingdom (Middlemas, 2006[27]).

It is vital that PES continue to develop their technological capacities so that they may design and implement digital services at the heart of their offer going forwards. This will require a continued investment in IT infrastructure to allow both PES employees and customers to seamlessly utilise all the tools at their disposal. It should be designed with the service users' needs at the centre. Case workers should be able to easily review customer circumstances, skills and experience, match them to vacancies and use them to provide well-targeted ALMPs. PES customers should be able to easily navigate the information, support and training available to them and to select the best available vacancies. For example, the PES of Belgium (Flanders) restructured its product development so that the customer is at the heart of the design and implementation process and any application not used sufficiently by customers after its implementation is now discarded (Peeters, 2020[28]).

PES should also consider the most appropriate co-ordination of data and services across national and local agencies, to ensure that data can be linked and shared and service provision tailored for maximum effect. PES that can link customer data to benefit, income and employment records and to local and national training provision and vacancies, will be able to cross-use the data and increase efficiency for customers. For example, the move to *Universal Credit* in the United Kingdom means that customers no longer have to make separate applications for five different benefits, particularly useful for people that cycle into and out of work frequently.

There will always exist a group of customers for whom a purely digital and/or remote offering is not appropriate and PES should retain some face-to-face capacity to ensure continued support for these customers. At the same time, with a fuller digital capacity for society as a whole, PES should – in collaboration with other responsible agencies – seek to equip those without digital capability with the tools to enable them to participate. This will require not only training in digital skills and IT but also access to the necessary equipment to do this. For example, through labour market transfer agreements, Canada has provided provinces and territories, who design and deliver training and employment programming, with the flexibility to use federal funds to provide IT equipment and internet access to learners that may have otherwise been excluded from participation. This is particularly important as those individuals without this

access are also those who may benefit the most from it (for example, older workers, migrants or those with fewer skills). Colombia has also sought to include people without access to computer equipment or with limited internet connection (such as students living in rural and remote areas) by introducing tools such as pre-recorded classes, tutorial videos, groups on messaging applications, emails, video calls or phone calls.

Artificial Intelligence (AI) can enhance service delivery going forwards

The use of Artificial Intelligence (AI) practices and advanced analytics can help PES manage their COVID-19-related caseload in the short term and build capacity to improve longer-term outcomes. However, care needs to be taken to protect service users in the design and implementation of any service improvements via the use of AI and algorithms for decision-making and sufficient heed paid to the equitable assignment of customers to provision, based on digital recommendations. Functionality will need to be designed to protect user data, compliant with data protection regulations. Box 3.4 discusses the various aspects of ALMP provision that AI and advanced analytics can facilitate in more detail and provides some country examples. PES that had already begun to utilise AI in their work will be better placed to mitigate the extra burden placed upon them by increased numbers of jobseekers, principally along three dimensions:

- **Better matching workers to vacancies:** In a period of accelerated structural change, AI can facilitate better matching of individuals to vacancies, particularly through the assimilation of data on jobseekers' existing skills. Learning algorithms can spot emerging patterns that may speed up the reabsorption of displaced workers into industries requiring similar skillsets – see also Chapter 1 and OECD (2021[29]) – and AI can quickly process large pools of jobseekers. Usage of click data may also help to identify how workers search for vacancies to improve recommendations for new jobseekers.
- **Better tailoring of services and ALMP:** Not only has COVID-19 substantially increased caseloads of jobseekers across countries, it has also altered their composition, as some groups have been affected more by the current health and economic crisis than others (Chapter 1 and Section 3.1). This may result in traditional profiling tools used by PES – either digital or via caseworker assessment – becoming less accurate as they are dealing with unknown individuals. AI algorithms allow for rapid and consistent adjustment of profiling based on the new information on these individuals, meaning that services can be adapted and deployed at scale and with pace.
- **Greater efficiency and increased "self-service":** The demands placed upon many PES by the rapid influx of new jobseekers mean that support had to be rationed, as there are fewer staff per jobseeker. The provision of virtual job coaching via the use of AI means that PES with this capacity can facilitate fast and accurate matching and job finding for individuals that are potentially easier to place in the labour market, reserving the support of case workers for those in greater need. This has potential benefits to both the efficiency and equity of PES services.

It is important to note that due to the relative infancy of PES offerings in the AI space, there is a scant literature of robust impact assessments. Therefore a crucial part of offering these services in the future will be to ensure they are evaluated and properly scrutinised alongside existing service provision. There is a trade-off between accuracy and equity in algorithmic assignment which may lead to unintended discrimination between individuals (Desiere and Struyven, 2020[30]) without proper consideration and discussion of risks. In the absence of complete information, some things that are observed (like ethnicity or socio-economic status) may be confounded with unobserved data (like motivation or intrinsic ability). It is likely that data underlying algorithmic assignments is insufficient to generate completely socially equitable outcomes, at least in the medium term. Therefore a human backstop is essential to review and monitor implementation of policy via these channels and rigorous evaluation conducted to support this.

Box 3.4. Automation, AI and the future of PES

Combined technological advances in data capture, storage and processing, offer a multitude of potential tools for PES to address:

- Automation of application processing – Fully automated processes without human involvement to make decisions on eligibility to register or granting a benefit based on information provided on the application and pulling data from registers (e.g. Estonia). This can also involve, or be supported by, AI tools to detect fraud and tools for quality assurance (comparing data from different sources, potentially also using predictive analytics).
- Profiling to segment jobseekers and/or target ALMPs – tools predicting labour market outcomes of jobseekers and identifying potential labour market barriers to support counsellors (Belgium (Flanders), Estonia, the Netherlands, the United States and many others). These tools detect those clients that need more support and provide recommendations on the type of support needed. Sophisticated profiling tools provide detailed analysis of the labour market prospects of a jobseeker and recommend strategies on labour market integration and advice (e.g. *Bob* in France developed by an NGO is open also to PES clients).
- Matching jobseekers and vacancies automatically including sending automatic alerts. Particularly sophisticated tools in Flanders (Belgium) apply semantic matching of jobseekers and vacancies using deep learning, which works across languages i.e. French and Dutch. A more sophisticated "personal assistant" is planned in VDAB in the future.
- Proactive vacancy identification – identifying companies with a high potential for recruitment before they publish job announcements (France); web crawlers to collect vacancies across internet (e.g. the Netherlands via their contract partner Textkernel).
- Career counselling, career advice and training provision – tools to map distance to occupations and identify gaps in competencies are used by the PES in Belgium (Flanders), tools using machine learning to inspire career and education choices by analysing expected skills by employers and career choices of workers are work in progress in Germany. AI is also used to draw up skills assessments and/or fill gaps in CVs.
- Chatbots and conversation bots to provide information and (today still basic) counselling (basic chatbots e.g. in Croatia and Slovenia).
- Fraud recognition – As PES have had to make changes to ensure that they can quickly process and begin supporting the surge in new customers from COVID-19, they inevitably had to trade off speed against rigour in claim administration. This has given potentially greater room for fraud and error within the system, as opportunities arise to exploit potentially weaker compliance checks. The use of AI algorithms to detect and reduce these errors lowers the risk for PES. For example, the Dutch PES has developed an application that detects fraudulent behaviour based on click data.

That France and Belgium feature repeatedly in the list of possible automation and AI use by PES is an example of how a co-ordinated strategy can help to establish and integrate technology and AI into PES activities. The PES in Belgium (Flanders) established an innovation lab as early as 2014 and first begun to use AI tools in 2018. The French Government launched "*Action Publique 2022*" in 2017 and "*TECH.GOUV*" in 2019 with the aim of bringing digitalisation to the heart of their services. Both agencies established partnerships with university centres – for example, the Sorbonne's LIP6 IT lab in France and KU Leuven in Belgium – and with external data science companies to spur innovation and create products for their PES services.

Source: Bob (2021[31]), Avec Bob, la recherche d'emploi devient plus simple!, https://www.bob-emploi.fr; Desiere, Langenbucher and Struyven (2019[32]), "Statistical profiling in public employment services: An international comparison", https://dx.doi.org/10.1787/b5e5f16e-en; Ministère de la Transformation et Fonction publiques (2017[33]), *Transformation publique*, https://www.modernisation.gouv.fr/laction-publique-se-transforme/avec-les-administrations-et-les-operateurs-publics/action-publique-2022; *TECH.GOUV* (2020[34]), *Stratégie et feuille de route 20 19-2022: édition actualisée mi-2020*, https://www.numerique.gouv.fr/publications/tech-gouv-strategie-et-feuille-de-route-2019-2021/; OECD (2020[11]), "Public employment services in the frontline for employees, jobseekers and employers", https://doi.org/10.1787/c986ff92-en; Owalgroup (2019[35]), Artificial intelligence in employment services – a mapping. Final report; Pieterson (2019[36]), Digital technologies and advanced analytics in PES, European Commission; Scheerlinck (2020[37]), AI & Advanced Analytics @ VDAB, https://www.oecd.org/els/emp/EU_OECD_Webinar_Agenda.pdf and VDAB (2015[38]), *Dotting the I's in IT. VDAB innovates with information*, http://wapes.org/en/system/files/dotting_the_is_in_it_1.pdf.

To establish a productive AI capacity, PES need to bring together investment in data infrastructure and human capital. Data need to be set up and stored in a way that they are accessible to AI computations. An important element of this is having the right data available – requiring near-live data exchange across databases to provide comprehensive details, as well as up-to-date information across work history, skills, education, demographics and job-search. Furthermore, using big data is generally at the core of AI tools. For example, the "traditional" register data need to be linked to click data, so that information on time spent and navigation of available vacancies and training materials can be incorporated into algorithmic decision making. The requirements for data availability need to be coupled with the appropriate human expertise to utilise these data to develop a suite of AI capabilities. Agile developing methodology should be applied when advancing in digitalisation and AI, involving cross-functional development teams. In case IT expertise is outsourced, PES in-house experts need to collaborate closely with the external partners to develop tools that support well the content of service provision, as well as meet the data protection requirements. This all needs to be embedded within a tight ethical framework so that AI practices explicitly consider and protect outcomes for all PES clients.

3.4. Ensuring the appropriate ALMPs reach the groups in need

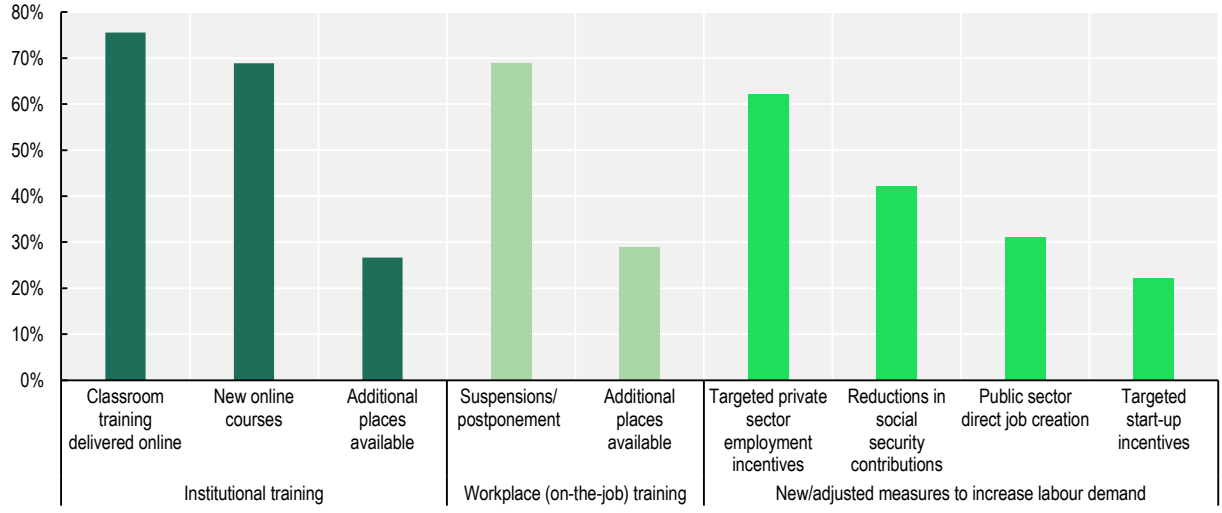
After the initial shock to ALMP delivery due to the unprecedented social distancing rules, countries quickly started adjusting their ALMP strategies and design to meet the new labour market challenges in the changed working environment. Further changes in the mix and targeting of ALMPs might be needed as countries enter the recovery period. Programmes to upskill and reskill displaced workers, unemployed people and those at risk of job loss are particularly needed during the crisis while social distancing restrictions prevail to facilitate transitions across firms, sectors and occupations. As economies start opening up, well-targeted employment incentives, such as hiring subsidies should temporarily gain importance to support labour demand and economic recovery. Start-up incentives, although usually small in scale, would be needed beyond the short-term to support job creation, including in specific sectors and locations. Support to vulnerable groups facing major labour market integration obstacles via cross-policy responses and intensive ALMPs (such as rehabilitation and supported employment) needs to remain in the PES agenda to build inclusive labour markets along the recovery process. ALMP measures to increase the employability and skills of PES clients need to remain of high importance even when unemployment starts falling, considering that the most employable clients will be leaving the PES registers first.

In 2020, countries made extensive alterations across the suite of ALMPs, adjusting content to support the reallocation of labour from declining to growing firms, including across sectors and regions, changing delivery models and increasing the number of places available (Figure 3.9 and OECD (2021[13]) for information by country). Existing classroom-based training programmes have been moved online and additional courses added to both address the needs of social distancing and increase access to training. While the suspensions or postponement of workplace training was widespread during periods of lockdowns, about a quarter of countries have also added new places to on-the-job training. Beyond

measures to upskill or reskill jobseekers, countries across the OECD and EU also expanded existing measures (or introduced new ones) to foster job creation and increase the demand for labour. Sixty-two percent of OECD and EU countries have scaled up their employment incentives, 42% of countries lowered non-wage labour costs for some or all employers, 31% of countries introduced or expanded public sector direct job creation programmes and 22% of countries changed existing (or introduced new) targeted start-up incentives. The first two sub-sections analyse countries' alterations of these different types of ALMPs, based on responses to the OECD/EC questionnaire. The third section zooms in on the general pathways for the most vulnerable groups, who had poorer labour market outcomes already before the onset of the current crisis. The final sub-section calls for rigorous evaluations of both existing and new policies and programmes and identifies four factors that can enable this process.

Figure 3.9. Countries have made extensive adjustments to their active labour market policies

Share of countries having made adjustments



Note: "Reductions in social security contributions" includes countries with stock subsidies that are either i) universal (all employers for all employees) or ii) targeted (certain employers or employees only) and universal hiring subsidies (no country reported targeted hiring subsidies).
Source: OECD (2021[13]), "Active labour market policy measures to mitigate the rise in (long-term) unemployment: A summary of country responses to the OECD/EC questionnaire", https://www.oecd.org/els/emp/almpmeasuresCOVID-19.pdf.

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3.4.1. Supporting reallocation of workers across sectors and occupations through training

The combination of specific shocks to sectors and industries alongside rapid adoption of new labour-saving technologies and ways of working, may result in an impetus for greater reskilling of the workforce (OECD, 2020[39]). Persistent job losses in some sectors (e.g. hospitality, travel and tourism) and job creation in others (e.g. technology and care services) may leave economies with a surfeit of some skills and a deficit of others. Furthermore, as Chapter 1 demonstrated, unemployment is likely to remain higher and unemployment spells longer than prior to the crisis for some time, providing greater scope for investment in training, notwithstanding sectoral imbalances. Lessons can be drawn from past analyses to provide insight into policies countries may adopt to help them weather any mismatches that arise between demand and supply for skills. Strategies that support effective re-allocation of workers that have been displaced and provide skills needed by employers, will be crucial to ensure that any negative effects of the COVID-19 crisis to workers and firms are quickly left behind. Supporting displaced workers will require targeted

services and programmes, such as job-search assistance and re-training tailored to their occupations and sectors to help them get back to work quickly and prevent them from becoming trapped in long-term unemployment and benefit exhaustion (OECD, 2018[40]; 2018[41]). Moreover, skills investments made during this period could support the transition to greener jobs and help to respond to the digital transformation.

Training will be vital to match workers to jobs

Effective training programmes will be essential to ensure labour supply adequately meets labour demand both in the shorter term, as some industries face immediate shortages, and in the longer term as firms and sectors adjust post-crisis. However, even prior to the COVID-19 crisis, many adult learning systems failed to match investments in training with labour market needs. Adults in jobs at high risk of being automated were 30 percentage points less likely to train than adults in safer occupations (OECD, 2019[42]). Only about 13% of firm-provided training was fully aligned with the strategic needs of the company. Additionally, not all training was aimed at reskilling workers, about one-fifth of training hours were taken up by compulsory health and safety courses (OECD, 2019[43]). Countries will need to improve the responsiveness of training to changing demand, to ensure they are in a good position to meet this immediate needs as well as those emerging in the medium term. This will rely on good co-operation between employers, providers, government agencies, social partners and policy makers to deliver for jobseekers, workers and firms alike. In addition to targeting training on jobseekers with low or outdated skills, PES are increasingly targeting and tailoring training programmes on employers needing to upskill their existing staff due to restructuring and new technology, or needing labour with specific skills not available on the local labour market, such as in Estonia (OECD, 2021[44]), Germany (Mosley and Dohse, 2019[45]), some regions in Italy – Friuli-Venezia Giulia and Trento (OECD, 2019[46]) – or Slovenia (OECD, 2016[47]; European Commission, 2016[48]).

The current deep and widespread crisis could be the occasion to scale up adult learning opportunities that facilitate labour reallocation from declining occupations and sectors to emerging ones, taking advantage of longer unemployment spells and periods of idleness in the context of short-term work schemes. Empirical evidence has shown that training programmes are particularly effective during recessions. In their meta-analysis of over 200 studies Card, Kluve and Weber (2018[9]) compare the effectiveness of different types of ALMPs over the business cycle. Of all the types of programmes studied – training, job-search assistance, private sector subsidies, and public works are examined – they find that the most positive effects tend to be associated with training programmes and private sector subsidies (which are discussed in Section 3.4.2). In their classification, the latter includes on-the-job or classroom-based training. The beneficial effects are particularly pronounced when examining outcomes beyond the short term, more than one year after the end of the training. In addition to this, training programmes can reduce inequalities resulting from job losses, as they tend to produce larger positive impacts for low-skilled and vulnerable groups (this is discussed in more detail in Section 3.4.3)

Expanding longer-term training programmes during recessions makes sense because of diminished opportunity costs. While enrolled in a training programme, participants are less likely to enter unsubsidised employment due to a combination of decreased job-search intensity and a diminished willingness to accept a job offer. Evidence of such lock-in effects is well-documented (e.g. Forslund, Fredriksson, and Vikström (2011[49])), but the associated costs are lower when job vacancies are scarcer. Evidence shows that firms' job creation responses following a major reallocation shock lag behind the job destruction response by at least one year (Barrero, Bloom and Davis, 2020[50]), supporting the view that the opportunity costs of any lock-in effects may be lower in the current context. An additional argument for increased training is that recessions tend to be associated with periods of accelerated structural change entailing a reallocation of workers across industries and occupations, meaning that a large share of jobseekers may need to acquire new skills to become reemployed without incurring significant earnings losses (see also Chapter 1).

There are several arguments in favour of expanding short-term training as an immediate response to COVID-19, in addition to reviewing longer-term provision. Countries should enable and encourage jobseekers and workers to move from firms and sectors that operate below capacity to those that have expanded as demand shifts due to COVID-19. This could be supported through increasing the number of places and variety of short-term programmes, such as short vocational training, general and remedial training and internships, as well as training programmes tailored jointly with employers in acute need for skilled labour. For example, in July 2020 Ireland announced funding for an extra 12 500 places using its *Training Support Grant*, designed to fund quick access to short-term training or to renew or obtain professional certifications. This will facilitate the flow of workers to the sectors that need them most and provide capacity, ensuring workers have the skills needed to quickly assimilate in their new roles. In addition, COVID-19 has introduced pressures in some industries – notably health care – hence responsive and rapid provision of training is vital to meet demand. In Estonia, a collaboration between care homes, ministries, the Unemployment Insurance Fund and health care schools led to a road from recruitment to introductory e-training to being operational at work in only a few weeks. This provided care homes with needed labour force and gave opportunities to people whose job was affected by the crisis.

Similarly, in the short term, governments may also focus attention on those workers at risk of displacement. France provides two illustrations of policy interventions in this area. Firstly, it has sought to supplement its existing short-time work (STW) scheme with a training subsidy that was originally developed for firms undergoing structural changes. The *FNE Formation* fully covers training costs (OECD, 2020[51]) and government compensates workers for 84% of the gross wage but 100% if they participate in training (cf. Chapter 2 for more details). This encourages the productive use of time that may otherwise be lost due to the pandemic and may help to bring gains to productivity in the longer term. Secondly, the introduction of *Transco* in January 2021 provides funding for the re-training of workers at risk of redundancy; fully covering training costs for very-small and small to medium sized enterprises (or 75% and 45% of costs for larger firms with over 300 and 1 000 workers respectively). This will help to pre-empt potential disengagement from the labour market for workers in firms that are struggling due to the pandemic.

Acting early has proved effective prior to the current crisis. The Swedish Job Security Councils (*Trygghetsråden*) are a good example targeting workers at risk of collective dismissals, due to company closure or restructuring for technological or economic reasons (OECD, 2018[41]).The Councils have been relatively successful at placing workers in further training or sustainable employment. Along the same lines, the 2018 Australian Stronger Transitions Package targeted workers in five regions (it closed to new entrants in July 2020) which are impacted by structural change and hence where expectations of future employment opportunities are low. The package includes a set of tailored interventions that come into action before redundancies have taken place. Training measures include comprehensive skills assessments; job search preparation; resilience training; language, literacy and numeracy support; digital literacy training; exploring self-employment options and industry experiences (OECD, 2019[52]).

Shortening the average duration of programmes or introducing a modular format is another option for scaling up the provision of training, to accommodate demand for training in the near term. In addition, modular training programmes which take into account an individual's prior learning allows the content of courses to be tailored to participants' specific existing knowledge and interests. For example, *Bruxelles Formation* in Belgium (Brussels) have offered additional online training solutions with blended-learning modules that take account of trainees' IT numeracy and IT equipment available to them. In the medium term, countries would need to ensure that training modules provide certificates that feed into the national qualification framework so that learners can cumulate courses and ultimately acquire a qualification.

Publicly subsidised training programmes should be responsive to employers' needs. Many OECD countries conduct skills assessment and anticipation exercises that can guide their expenditures on adult learning investments (OECD, 2019[43]). To the extent that cross-sectoral imbalances in labour and skill demand persist as economies open up, countries will also benefit from further developing their skill assessment and anticipation, and skills profiling tools, as well as their career guidance systems, which can

guide workers to the most efficient job transition (OECD, 2020[39]). Tools to support firms in clearly identifying skill needs are also important, particularly for SMEs. In Lombardy, Italy, the *T.I.M.E.* pilot programme (Training Innovation Management Experience) provides personalised counselling services to SMEs managers in order to guide them through the steps needed for an effective identification of their company skill needs and to plan adequate skill development programmes (OECD, forthcoming[53]).

One common challenge is co-ordinating the efforts across various private and public actors to streamline the decision-making and build a common evidence base (OECD, 2019[43]). In France, the Employment and Skills Network (*Réseau Emplois Compétences*) was created in 2015 to co-ordinate the parallel skills assessments taking place at the national, regional and sectoral levels, with participants sharing their experience, methods and tools. Estonia introduced a legal obligation in 2015 for stakeholder involvement in the governance of skills anticipation (Box 3.5). The System of Labour Market Monitoring and Future Skills Forecasting (*Tööjõu- ja oskuste vajaduse seire- ja prognoosisüsteem* called OSKA) incorporates five government ministries, social partners, education institutions, PES, researchers and experts from economic sectors to produce quantitative skill forecasts in specific sectors as well as qualitative insights.

In some countries (e.g. Austria, Belgium (Flanders), Estonia), additional income support or grants are available for training in occupations with shortages; other countries (e.g. Chile, Denmark, the United States) restrict publicly-funded training programmes to those identified as being in short supply in the local labour market (OECD, 2019[43]). It will also be important to consider the formal recognition of the qualifications of new jobseekers – including skills learned on-the-job so that employers can effectively fill vacancies with suitable candidates. Validation arrangements for formally recognising such skills are now in place in all EU countries, albeit with considerable differences in how broadly on-the-job skills can be recognised as a substitute for credentials otherwise obtained with formal education or training (Cefedop, 2019[54]).

Box 3.5. The Estonian skills assessment and anticipation exercise (OSKA)

Estonia's skills assessment and anticipation exercise (OSKA) implemented since 2015 analyses the needs for labour and skills for the 10 years ahead, providing recommendations for improvements for the stakeholders of education and training system in addition to the forecasts of the labour market needs. OSKA methodology combines qualitative and quantitative methods, involving individual interviews and group discussions with experts of specific sectors and analysis of linked administrative and survey data. Each year, five economic sectors are covered in-depth, while more general forecasts are provided across the labour market.

OSKA is a great example of cross-policy and cross-institutional co-operation. The high level management body includes high-level representatives of five ministries (responsible for education, economy, social affairs and employment, finance, and interior affairs and integration), the social partners, the central bank and the PES. The methodology of OSKA is developed and fine-tuned by OSKA Panel of Advisors comprising key experts of the organisations represented in the management body as well as the best labour market and education experts from the Estonian universities, research organisations and think tanks. A good co-operation of stakeholders via the management and advisory bodies has been instrumental for the success of OSKA, which has been possible due to a high acceptance of the necessity for the skills assessment and anticipation exercise. The relevance of OSKA is enforced by the government, which discusses every year OSKA activities and recommendations.

The Estonian PES (EUIF) uses OSKA assessments on future skill needs systematically when providing training aiming to prevent unemployment. The unemployment prevention programme was introduced in 2017 to target those employed people that are at risk of losing their job due to their low qualification or whose changed health situation restrains them to continue on the same occupation. The same

programme supports also employers hiring new employees needing skills in fields that are identified to be scarce by OSKA, or retraining their existing staff due restructuring, new technology or new qualification requirements. Since 2018, the EUIF relies on OSKA and the short-term skills assessment and anticipation exercise conducted by the EUIF itself (the Occupational Barometer) for all labour market training programmes for jobseekers. In addition, OSKA assessments for skill needs are used in the planning phase of formal and non-formal education in the education sector, although in the implementation it has proved difficult to get rid of programmes that have been traditionally supplied and demanded, but no longer needed in the labour market in the same volume.

Assessments of OSKA by the think-tank Praxis in 2018 and Cedefop in 2020 (Cedefop, 2020[55]; Melesk, Haaristo and Haugas, 2018[56]) deemed that OSKA has been successful in creating practical and useful labour market intelligence, and that the assessments of skill needs are accepted and widely used by the stakeholders in policy design and implementation.

Source: Cedefop (2020[55]); Strengthening skills anticipation and matching in Estonia: capitalising on OSKA's potential to realise national ambitions, https://www.cedefop.europa.eu/files/4183_en.pdf; Estonian Unemployment Insurance Fund (2020[57]), Occupational barometer, https://www.tootukassa.ee/eng/baromeeter; Sihtasutus Kutsekoda (2020[58]), What is OSKA?, https://oska.kutsekoda.ee/en/; Melesk, Haaristo and Haugas (2018[56]), Tööjõuvajaduse seire- ja prognoosisüsteemi OSKA rakendamise analüüs, Poliitikauuringute Keskus Praxis, http://www.praxis.ee/wp-content/uploads/2018/04/OSKA-rakendamise-uuring_Praxis.pdf; OECD (2021[44]), Improving the Provision of Active Labour Market Policies in Estonia, https://doi.org/10.1787/31f72c5b-en.

At the same time, countries should be cautious about moving too strongly toward a "train-first", rather than "work-first", strategy. Investment in training tends to be more expensive than interventions offering job-search assistance (Martin, 2016[59]), increasing the stakes that public funds may be used inefficiently. In addition, high-quality training programmes take time to be established, and existing providers of high-quality services may find it difficult to rapidly expand capacity while maintaining a consistent level of quality. Countries may also lack the administrative capacity to monitor the quality or relevance of training provided by either public or private training providers, thus increasing the likelihood that such programmes are ineffective. As a minimum, countries may impose a minimum service quality requirement, such as achieving a basic client satisfaction score, to avoid instances of egregiously poor training. Setting up quality assurance for non-formal learning would take longer (OECD, 2021[60]) but quicker solutions could be envisaged. In 2014, France set up the *Datadock* system whereby training providers self-report along some key dimensions of provision quality. The system will be replaced by a fully-fledged quality assurance mechanism but has worked well in connection with training provided by the French Individual Learning Account (the *Compte Personnel de Formation*). Another option is to link a small proportion of fees to outcomes. For example, training funded by the Skills Funding Agency in the United Kingdom through the Adult Skills Budgets had 20% outcome-based component linked to employment of training participants (OECD, 2014[3]).

The current crisis has emphasised the need to boost digital skills

The crisis has highlighted that the continued development of online learning will be fundamental in the future of adult learning systems (OECD, 2020[61]). The nature of social distancing policies has sped up digitalisation trends and has put more primacy on the need for countries to invest in digital training and skills. Enabling jobseekers to conduct job search and training online allows greater immediate participation and provides benefits for future utilisation of this mode of delivery. It also allows for more efficient provision of training as content is easy to adjust and can be delivered to customers' timescales and needs. As the previous section highlighted, it will be important to ensure equity in digital access, as the development of basic digital skills will be fundamental to ensure the returns to online learning are shared among the population.

Countries that had existing online training solutions have been able to adjust rapidly to continue training provision, particularly during the initial months of the pandemic (OECD, 2020[11]). In France, over 150 new training courses have become available online on the *Emploi Store*. In Estonia, the PES quickly developed e-learning for care workers who were in high demand during the crisis in conjunction with relevant stakeholders. The Dutch PES, which already offered webinars prior to the pandemic, has increased their frequency and capacity. They can now accommodate several hundred clients in a live session, with one PES staff member presenting and several others simultaneously answering questions in the chatroom (WAPES, 2020[62]). These responses during the crisis neatly demonstrate the virtues of flexibility and scalability that online training embodies and that broadening the range of courses can make online training more inclusive, opening it up to new professions and industries (OECD, 2020[61]).

During the pandemic, several online learning platforms have made their content freely available for jobseekers, including some major platforms offering massive open online courses (MOOCs). For example, the French national platform for MOOCs, France Université Numérique, worked in collaboration with partner institutions – including leading French universities – to freely offer its MOOCs to interested users (OECD, 2020[63]). MOOCs offer a particularly interesting proposition in the current context: they offer virtually unlimited participation in interactive courses, incorporating mechanisms such as peer grading to ensure scalability, and are commonly offered in short modular courses. Previously users were predominantly highly educated men, so communication will be important to increase uptake amongst jobseekers and the low skilled, and ensuring that women or other socio-economic groups are not excluded (OECD, 2019[64]).

Basic computer literacy training can allow low-skilled jobseekers to acquire digital skills that are now required in almost every occupation, as well as necessary for job search. Many countries have set up programmes targeting adults with very low ICT literacy skills (OECD, 2019[43]). Basic computer literacy training can allow low-skilled jobseekers to acquire digital skills that are now required in almost every occupation, as well as necessary for job search. Many countries have set up programmes targeting adults with very low ICT literacy skills (OECD, 2019[43]). For example, in the United Kingdom, low-skilled adults have access to fully funded digital skills programmes, similar to existing maths and English programmes. Greece provides ICT e-training for NEETs and vulnerable groups. The municipality of Ljubljana in Slovenia offers over 55-year-old citizens free modular computer literacy courses, 20-35 hours long and catering to those with differing initial computer skills. These courses can provide a stepping-stone for individuals to access additional resources online and offer direct benefits to PES, facilitating participation in online services to better match individuals to vacancies.

Portugal has introduced a comprehensive suite of digital training programmes, to equip its workforce with the skills needed to succeed in the digital age through its *Activar.PT* programme. It has worked with private sector stakeholders to quickly identify skills gaps and create accredited training programmes for unemployed young adults and vulnerable groups in a range of training paths. It has simultaneously introduced the *Digital guarantee* to ensure that by 2023 all unemployed people have a digital training offer suitable for their level of qualification and skills profile. These measures will provide individuals with the skillsets to flourish in a modern digital economy.

3.4.2. Measures to increase labour demand

As OECD countries starts engaging in a recovery from the COVID-19 crisis, it is important to support job creation temporarily through scaling up and introducing new measures to support the demand for labour and economic recovery when the pandemic gets under control. This support can take the form of employment subsidies to support the hiring of workers, public works programmes that directly create public sector jobs and business start-up incentives for jobseekers to encourage take up self-employment.[13] During the pandemic, there is some evidence of reduced job-search efforts in some countries (cf. Chapter 1, and Forsythe et al. (2020[65]) and Hensvik, Le Barbanchon and Rathelot (2021[66]) for evidence from the United States and Sweden respectively) and a relatively tight labour market, suggesting that subsidies to

support labour demand could result in deadweight losses during these periods. However, these measures are likely to become particularly relevant after the lockdown periods and in the early phases of the recovery.

This section provides a short overview on the effectiveness of these different types of ALMPs and how countries used and continue to use these measures as part of their labour market policy responses to the COVID-19 crisis in 2020 and 2021. Beyond these more narrowly targeted ALMPs, countries across the OECD and EU have introduced other public policy initiatives such as infrastructure projects and restructuring support for troubled firms and industries. Such policies fall outside the scope of this chapter, even though they are motivated in part by the desire to create or protect jobs.

Stimulating labour demand through hiring subsidies and employment incentives

Time-limited, well-designed and targeted hiring subsidies can be a cost-effective way to reduce unemployment, strengthen the employability of workers and support the most vulnerable population groups (Kluve, 2010[67]; Brown, 2015[68]). What is more, such support is easier to scale up operationally than many other types of ALMPs. The challenge is to design programmes that reach the groups most heavily affected by the crisis, while ensuring that supported jobs do not displace ordinary employment and that take up by employers is sufficiently high. Although restricting the availability of these incentives to specific groups limits their use as a general tool to manage unemployment, good targeting of such measures makes it easier to ensure cost-effectiveness. Following the GFC, many OECD countries scaled up their employment subsidy programmes or targeted them more clearly at specific groups, such as long-term unemployed, persons with disabilities, youth, older workers, certain regions or sectors (OECD, 2010[69]). Over the course of 2020 and early 2021 nearly two-thirds of OECD and EU countries already scaled up (or are planning to do so) their employment incentives to stimulate labour demand – see Figure 3.9 and OECD (2021[13]) for information by country. While some countries introduced new schemes (e.g. Chile, Latvia, the United Kingdom), most countries increased the coverage of existing hiring subsidies. Some countries introduced subsidies in the form of reductions or waivers of social security contributions for larger groups, beyond the unemployed or inactive persons (see Box 3.6).

Well-designed and targeted hiring subsidies tend to have a greater positive impact on post-participation labour market outcomes than many other ALMPs (Kluve, 2010[67]; Brown, 2015[68]). However, to derive the net employment impact of employment subsidies, it is important to take into account their possible indirect effects, notably deadweight losses, substitution and displacement effects and efficiency losses. Deadweight loss arises when subsidies support the hiring (or retention) of certain workers that would have anyway been hired or retained even without the subsidy. Substitution or displacement effects arise when eligible workers replace otherwise similar but ineligible persons – see Brown (2015[68]) for a discussion of the indirect effects of employment subsidies and their net impact on employment. Efficiency costs arise when employment subsidies lead to higher wages than the workers' productivity or to hires beyond the actual demand.

Targeting of employment incentives to groups in need and those who benefit the most from participation can help reduce deadweight losses and increase cost-effectiveness – e.g. Martin and Grubb (2002[70]) and Bernhard, Gartner and Stephan (2008[71]). Beyond their impact on net employment (which may be limited), these targeted hiring subsidies can be effective in promoting a more equal distribution of unemployment (OECD, 2010[69]). Recessions further justify the need for targeting of employment subsidies to prevent a disproportionate impact on disadvantaged groups and minimise the risk that these groups disconnect from the labour market. In line with these arguments, most OECD countries target employment subsidies to specific groups such as the long-term unemployed, youth, older persons and those with disabilities and may make them available for new hires only. Moreover, targeting subsidies to the unemployed reduces the total cost of the programme by potentially reducing public expenditure on unemployment benefits or other benefits. Although tight targeting is important to increase the effectiveness of employment subsidies, it can also lead to stigmatisation of participants, who are perceived as low-productivity workers (Brown, 2015[68]; Burtless, 1985[72]).

To avoid displacement effects and ensure positive net employment effects, some programmes provide the subsidy conditional on increases in net employment at the firm level to ensure beneficiaries do not displace other workers (Boockmann, 2015[73]). These stringent conditions, as well as the heavy monitoring which is sometimes attached to hiring subsidies, might deter employers and lead to low participation by employers (Burtless, 1985[72]; Neumark, 2013[74]), particularly when the amount of the subsidy is relatively small. However, the level of bureaucracy could be set off by enhancing use of administrative data and digitalisation. For example, the Estonian PES administers employment incentives by using near-live data from the Tax and Customs Board, freeing employers using the scheme from monthly reporting.

Among the 28 countries that expanded existing or introduced new hiring subsidies in response to the COVID-19 crisis, 12 use these measures especially to support the employment of young jobseekers (Australia, Chile, France, Greece, Hungary, Ireland, Korea, Luxembourg, New Zealand, Portugal, Romania and the United Kingdom) or the long-term unemployed (Flanders and Wallonia regions of Belgium), Greece, Hungary, Korea, Portugal and Sweden). Other target groups include people with disabilities (Chile and France), older unemployed (Portugal and Romania) and other disadvantaged groups (e.g. Māori in New Zealand and victims of the armed conflict in Colombia). Some of these measures are still available, while in some countries the measures only covered a short period of time (OECD, 2021[13]).[14]

Box 3.6. Hiring subsidies in the form of reductions or waivers of social security contributions

In some cases hiring subsidies that do not target only unemployed or inactive persons[1] – often in the form of reductions or waivers of social security contributions – can produce positive results, especially when temporary and implemented in challenging economic conditions. For instance, temporary hiring subsidies that were not anticipated and were made available for jobs with rigid wages were found to produce positive results in France (Cahuc, Carcillo and Le Barbanchon, 2018[75]) and the United States (Neumark and Grijalva, 2017[76]) following the GFC. In August 2020, Italy introduced an exemption from social security contributions paid by employers for six months for companies hiring new workers on open-ended contracts, provided they increase their overall workforce. An exemption from social security contributions paid by employers was also available for employers in the tourism sector for three months, regardless of contract type and a net increase in the workforce. Chile introduced a hiring incentive available for all newly hired workers, but offers higher rates to employers hiring women, youth and people with disabilities.

Beyond such hiring subsidies, 15 countries introduced reductions in social security contributions also applying to existing staff – see Figure 3.9 and OECD (2021[13]) for information by country. Such stock subsidies can help boost employment, but they are expensive and involve deadweight losses by subsidising jobs that would have existed without the subsidy (OECD, 2010[69]). Costa Rica, Iceland, Norway and Sweden introduced temporary reductions in social security contributions applying to all employers. The remaining countries targeted the reductions to particular employers such as SMEs (e.g. the Czech Republic, Estonia, Korea, Poland and Portugal) and companies or sectors hit by the pandemic (e.g. Hungary, Portugal and Spain).

1. Most such measures are not considered ALMPs, as they are usually not targeted on the ALMP target groups, including unemployed persons, employed at risk and inactive individuals who would like to work.

Source: Cahuc, Carcillo and Le Barbanchon (2018[75]), "The Effectiveness of Hiring Credits", http://dx.doi.org/10.1093/restud/rdy011; Neumark and Grijalva (2017[76]), "The Employment Effects of State Hiring Credits", http://dx.doi.org/10.1177/0019793916683930; OECD (2021[13]), *Active labour market policy measures to mitigate the rise in (long-term) unemployment: A summary of country responses to the OECD/EC questionnaire*, https://www.oecd.org/els/emp/almpmeasuresCOVID-19.pdf; OECD (2010[69]), *OECD Employment Outlook 2010: Moving beyond the Jobs Crisis*, https://dx.doi.org/10.1787/empl_outlook-2010-en.

Using public works as transitional support to the most vulnerable

The effectiveness of direct job creation programmes,[15] such as public works, in bringing participants back to open market jobs is questionable. The meta analysis of the literature by Card, Kluve and Weber (2018[9]) finds that these programmes are generally ineffective in the short, medium and longer term. This may be why Denmark, Estonia, Israel, Norway, and Switzerland do not use public work schemes as part of their ALMP mix. Moreover, many countries that have such programmes have reduced their spending on direct job creation programmes relative to other types of programmes. The relative expenditure on direct job creation has fallen in six out of ten countries between 2008 and 2018 and a higher share of these countries' ALMP budget is now spent on other ALMP categories. In the remaining countries, the relative expenditure on public work schemes has increased over the same period.[16]

Although these schemes are not effective in bringing people back to open market jobs, they may be useful in times of crisis to provide some complementary income to vulnerable households, build local public infrastructure, services and social capital (ILO, 2020[77]). However, they should be targeted on very disadvantaged groups, of temporary nature and well integrated in broader strategies to address unemployment. Following the rise in (long-term) unemployed in the aftermath of the GFC, many OECD countries scaled up their public works programmes to reduce unemployment and some introduced programmes for a limited amount of time. Responses to the OECD/EC ALMP questionnaire show that around a third of OECD and EU countries introduced or expanded direct job creation programmes since the start of the COVID-19 crisis. Hungary, Ireland, Luxembourg and Slovenia have allocated additional budget to existing schemes to create additional jobs. In Japan, New Zealand and Spain jobs are created mainly by regional and local levels of government.

Start-up incentives to support prospective entrepreneurs and keep existing start-ups going

Over the course of 2020, the primary concern for countries has been providing support to existing self-employed who often could not continue their activity or could only partly continue their activity because of lockdowns or sickness (OECD, 2020[78]). Given the specific circumstances SMEs and self-employed are facing, countries have put in place special measures to support them. The most widely used instruments in response to the outbreak were income and profit tax deferrals, loan guarantees and direct lending to SMEs, and wage subsidies (OECD, 2020[18]). In the Netherlands support for the self-employed moved to the next phase as of January 2021 to prepare those benefitting from government support for a new future, either as an independent entrepreneur or as an employee. Municipalities will work with independent entrepreneurs to identify whether and what support the self-employed person needs and provide them with coaching, advice, further training or retraining and reorientation. In 2020, Lithuania introduced extra support for self-employed individuals who recently profited from its targeted start-up incentives.

Beyond support for existing self-employed about four in ten OECD countries[17] run start-up incentives programmes that promote entrepreneurship by encouraging the unemployed and other target groups to start their own business or to become self-employed. Evaluations of start-up incentives in OECD countries suggest that these programmes can reliably create employment options where few others are available, including in the long-term – see for example Wolff and Nivorozhkin (2012[79]), Caliendo et al. (2016[80]), Caliendo and Künn (2011[81]), Wolff et al. (2016[82]). About a fifth of countries expanded start-up incentive programmes targeted on unemployed and other disadvantaged groups in response to the COVID-19 crisis (OECD, 2021[13]). For example, Australia, Belgium (Brussels and Flanders), and Estonia adjusted their existing start-up incentive programmes through increasing the financial support available to jobseekers starting their own business. Sweden extended the duration of an existing programme and the Slovak Republic introduced a new start-up incentive programme called *Work, change your life*. Portugal introduced *Empreender2020* a national competition for start-up projects launched by young unemployed people. Successful applicants receive advice and technical training during the first year of their start-up.

3.4.3. Addressing the needs of vulnerable groups

The labour market consequences of COVID-19 have been worse for groups, who had poorer labour market outcomes already before the onset of the crisis. In many OECD countries, employment rates and working hours decreased most for low-skilled and low-educated workers, workers in low-paid occupations, youth and workers in non-standard jobs, such as part-time, temporary and self-employed workers (Chapter 1). In addition, sectors that traditionally employ these groups are likely to struggle economically for a longer period even when economies will start a steady recovery, widening the socio-economic gaps in labour market outcomes and poverty. Furthermore, the drop in labour demand has increased the competition for the fewer vacancies available, pushing people with already weak labour market attachment even further away and increasing the number of discouraged workers. The share of people with weak labour market attachment was substantial already before the COVID-19 breakout as more than a third of 15-74 year-olds were not in employment in the OECD countries in 2019.[18]

This section focuses on vulnerable groups who are more likely to be only marginally attached to the labour market, although they could be available for the labour market with appropriate ALMP support co-ordinated with other services.[19] Many of these people face major or even multiple labour market integration obstacles, such as low skills, care obligations, health limitations, addictions or geographic mobility challenges (OECD (2021[44]), Fernandez et al. (2016[83])). Interventions of other services (such as health and social services to combat addictions or health limitations) need to be at times provided before effective provision of ALMPs becomes possible, and need to continue going hand-in-hand throughout the labour market integration process.

Although the individual circumstances and combinations of labour market challenges are often unique, some labour market integration obstacles affect certain groups more than others, underlining careful targeting and monitoring of ALMPs and other interventions to achieve an inclusive labour market (OECD, 2021[44]). For example, care obligations concern a significantly higher share of women than men (and this gap has widened due to COVID-19, see Chapter 1), a lack of language skills is a greater challenge among jobseekers with a migrant background, health limitations become more prominent with age, and young people are in worse labour market position due to their scarcer work experience. To address the challenges of these specific socio-economic groups, the EU has reinforced its Youth Guarantee, many individual OECD countries have developed cross-policy strategies to support young people (OECD, 2021[84]), and close to half of the PES in the EU have strategies to promote equal employment opportunities for men and women, and fight against gender discrimination (European Commission, 2020[85]). Nevertheless, the people in particularly vulnerable labour market situations have often multiple labour market integration obstacles beyond the obstacles shared with their peers, requiring more intensive support than outlined in general strategies.

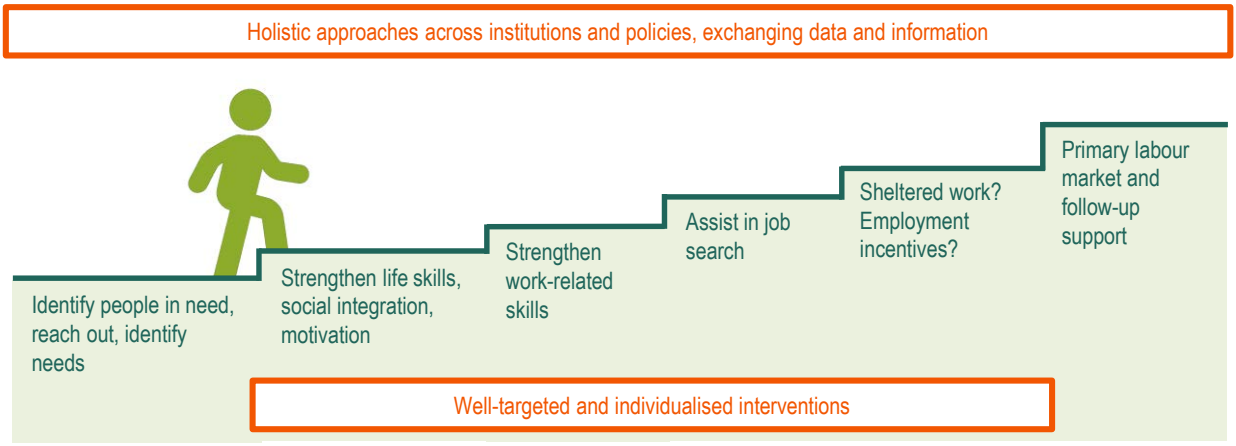
In addition to supporting people at risk of job loss and displaced workers due to COVID-19, PES need to find and allocate resources to also continue supporting vulnerable groups to prevent their further marginalisation, whether by adapting the PES internal budgets and approaches, or contracting some activities out to NGOs and the private sector. This subsection outlines the ALMP support that vulnerable groups with weak attachment to the labour market due to their major labour market integration obstacles require to access good jobs.

PES need to provide individual comprehensive support to vulnerable groups throughout the labour market integration pathway

It is crucial to continue supporting the most vulnerable groups during the COVID-19 crisis, as preparing them for labour market integration takes time. Addressing their employability now increases the chances that the vulnerable groups become ready for labour market integration when the economies start to recover and employers' needs for labour increase. The labour market inclusion pathways can involve many of the different ALMPs discussed in the previous sections of this chapter, such as training to increase digital skills

to make the person able to look for job, followed by job search assistance, and potentially employment subsidies. As the most vulnerable groups face often very specific or even multiple obstacles, it is important to provide them with individualised support, and at times even tailor-made support, to meet their complex needs. This often involves a step-by-step approach which relies on the co-operation between institutions and policy domains, as other types of services (social, health, education, childcare, housing and beyond) as well as social protection measures and benefits might be needed before as well as during ALMP provision to tackle the social integration obstacles more generally (Figure 3.10). For example, a key initiative *1 jeune 1 solution* in France addressing COVID-19 challenges in the labour market and targeting youth living in disadvantaged neighbourhoods, aims to offer youth a comprehensive package of ALMPs to address their individual obstacles, involving recruitment support, apprenticeships, employment incentives, training and beyond. Canada's Opportunities Fund for Persons with Disabilities programme uses an "escalator" model outlining the different steps and interventions needed for labour market integration.

Figure 3.10. Key features of successful programmes for vulnerable groups



The first step in the labour market integration pathway is identifying the people in need of support and their challenges. Using administrative data (particularly using personal data) can make the support to vulnerable groups more effective and efficient, but also requires cautious practices to comply with data protection regulations:

- The key to improving employment support to vulnerable groups is a better understanding of which groups are not contacting PES (or other relevant institutions) and receiving support and why, the labour market obstacles they face and how well the ALMPs provided to these groups match with their needs. It is crucial to identify people that are only marginally attached to the labour market and whose labour market situation could be improved by ALMPs, as well as those who should be supported with social, health or education services first. Analysing linked administrative data from different registers is best suited to generate the relevant knowledge (see OECD (2021[44]) for a recent example of such work in Estonia).
- As vulnerable groups are often less likely to contact PES themselves (e.g. see Figure 3.2 on youth), it is important that PES make more efforts to proactively reach out to these groups. While the channels to personally reach out to them tend to be limited for the PES, co-operating with other providers of public services and NGOs can be effective. Furthermore, using administrative data can enable the providers of public services to track people who could need support, but do not contact any of the institutions (for example, practiced in Estonia to reach out to young people not in education, employment or training).[20]

- Among the clients that PES establish contact with, it is necessary to identify the vulnerable groups and their needs early. Quantitative profiling tools using administrative (and survey) data can be effective and efficient tools to identify the clients needing additional support as well as target the ALMPs more effectively, which is particularly important in times of high inflows of clients and limited staff numbers. These tools are used today by more and more PES, and are most advanced in Australia, Belgium (Flanders), Estonia, the Netherlands and the United States (Desiere, Langenbucher and Struyven, 2019[32]).

For some vulnerable groups, one step on the pathway to labour market integration can be sheltered or supported employment or some other type of support involving the social economy, although the effectiveness of these programmes is highly dependent on their exact design. In Portugal, the involvement of the social economy is one of the elements in the strategy to respond to COVID-19 approved in June 2020 (*ATIVAR.PT*), foreseeing a co-operation between local authorities, the social economy and other local actors to identify and refer the most disadvantaged people to jobs and training programmes.

Sheltered and supported employment should only be provided simultaneously with training and mentoring and still aim at the integration into the primary labour market in the longer run to be effective, such as done already for many years in Austria, where the PES co-operates with a wide network of companies that pursue a social mission (Hiebl, 2020[86]).[21] A French experiment implemented since 2016 called *Territories of zero long-term unemployment* provides a framework for local communities to create jobs in the social economy for the long-term unemployed (TZCLD, 2020[87]), although this scheme does not (yet) provide effective and efficient outcomes according to interim impact evaluation results as its targeting is too wide and it does not have sufficiently strong training and counselling components (DARES, 2019[88]). A new experiment involving the social economy launched in Austria partly as a response to COVID-19 at the end of 2020 (University of Oxford, 2020[89]) addresses the vulnerable groups' needs for training, counselling and social services better than the French scheme, but does not target only the most vulnerable either.

Once a vulnerable person has successfully entered the primary labour market, they might need continued support from PES (involving contracted private providers, social services and other types of service providers if needed) to stay in employment. The positive evaluation results in Germany (Staible, 2017[90]), and Denmark and France (Scharle, Weber and Puchwein Roberts, 2014[91]) of post-placement support and counselling to vulnerable groups has inspired Estonia's strategy to tackle COVID-19 challenges. Since the beginning of 2021, Estonia has introduced systematic follow-up support to groups at risk of rapid return to unemployment due to health limitations, lack of work experience, previous long-term unemployment or other labour market integration obstacles. Case managers in the Estonian PES continue counselling during the first six months of employment, keeping in touch with the client as well as the employer and, when necessary, involving the local social workers or other service providers (Sotsiaalministeerium, 2020[92]).

In addition to ALMPs, vulnerable groups need often comprehensive integrated approaches involving social, health, education measures and beyond. Nevertheless, achieving co-operation and integration of services to support vulnerable groups holistically is often very cumbersome. A Eurofound (2017[93]) study among EU countries shows that poor co-ordination of employment and other services tends to be one of the key issues limiting effective support to people furthest from the labour market, which can be exacerbated when the responsibilities for the services lie in different levels of governance. Even if services are formally integrated to one-stop-shops, their success is largely determined by co-operation practices and data exchange. The results of integrated employment and social services have been successful in the Basque county in Spain as it was possible to establish a common IT platform enabling proper data exchange, although establishing this took years (Gago, 2019[94]; OECD, 2020[95]). A Finnish experiment to move PES counsellors to municipalities was found to produce good results as well, but only because the capacity and financing available for ALMPs had increased (Arnkil, 2019[96]; Scharle et al., 2018[97]). Nevertheless, Finland continues with experiments (although with some delay due to COVID-19) to provide integrated services and has allocated additional resources for these experiments targeting youth, immigrants and long-term unemployed as a part of the strategy to tackle COVID-19 challenges (Ministry of Economic Affairs and Employment, 2020[98]).

When the institutions providing employment services or those providing social services are well-developed and have high capacity, platforms for co-operation practices and (virtual) one-stop-shops could be envisaged without changing the overall institutional set-up. These practices are successful when all parties have a willingness to co-operate and the necessary funding to do so. Practices based on voluntary co-operation between employment and social services have been tested in many countries, such as Belgium (Flanders), France, Slovenia and Sweden. For example, France has been successful with its initiative *l'accompagnement global* targeted on people with multiple labour market obstacles registering with PES, introduced in 2014. Jobseekers benefitting from this programme are supported by a PES caseworker and a local social worker. While the PES caseworker identifies the labour market obstacles and sets up an individual action plan to find employment, the social worker addresses social problems, related to housing or financial difficulties. The impact evaluation results indicate that the programme increases the probability to find stable employment within six months after entering the programme by 27% (Pôle Emploi, 2018[99]).

As the vulnerable groups generally need more activities to reach out to them, networking with other institutions, intensive counselling and motivation, and more follow-up support than other groups, their successful integration into labour market requires more attention by employment counsellors. Furthermore, while many processes in PES can be automated and digitalised to increase efficiency, counselling vulnerable groups is one field that still requires more interaction and face-to-face meetings with PES counsellors, also due to the often lower digital skills and/or more limited access to internet and devices among the vulnerable groups. Several PES, such as in France, Luxembourg, Korea and the United Kingdom, plan to hire additional staff particularly dedicated to implementing programmes for specific vulnerable groups in 2021 within their response to COVID-19 challenges (see Section 3.3.1).

Financial difficulties and mental health problems need particular attention in the aftermath of COVID-19

The health and economic crisis caused by COVID-19 has particularly amplified two labour market integration obstacles that PES together with other service providers need to address – high debts and mental health challenges. Both of these can severely constraint jobseeker's capacity for job search.

Although countries across the OECD have made more efforts to secure incomes during this crisis than any previous crisis by providing more generous job retention schemes or unemployment benefits (see Chapters 1 and 2), many households have seen their income fall significantly. For example, the income of a third of new claimants of Universal Credit in the United Kingdom was almost twice as small in January 2021 as the pre-COVID-19 level, with a fifth of households not being able to pay their essential bills on time, and a third having higher debts than a year before (Brewer and Handscomb, 2021[100]).

Only a few PES have more elaborate approaches to support jobseekers with high debts, most notably (ranking by how well debt relief is integrated in PES services) Austria, Norway, Estonia, the Netherlands, Germany and Finland (Sol, 2016[101]). These approaches can involve training counsellors to detect labour market integration barriers related to financial difficulties and debts, guidelines for counsellors about how to address these challenges, services for jobseekers to address the challenge (e.g. debt counselling), counselling to employers who hire jobseekers with financial difficulties, as well as measures to prevent debts among jobseekers. Nevertheless, regardless how developed the specific services to address debts are by the PES, other national and local level providers are often available to provide additional services to jobseekers to relieve the financial distress. Thus, it is crucial that PES are able to detect the needs for additional support and co-operate with other providers who might provide complimentary or more suitable services.

Subsequent to the COVID-19 outbreak, PES clients are particularly at risk of mental health challenges. Joblessness can have negative effects on health, particularly mental health in any economic situation – see an extensive meta-analysis by Paul and Moser (2009[102]). A global health crisis together with

restrictions on social interaction and activities can further elevate the rates of stress, anxiety and loneliness, as well as increase alcohol and drug use (WHO Europe, 2020[103]). At the onset of the COVID-19 crisis, the incidence of mental distress and mental health conditions increased significantly across the OECD (OECD, 2021[104]).

PES can have a critical role in identifying early mental ill health (OECD, 2015[105]), as they often are the first public institution newly laid-off people are in contact with. PES counsellors need to consider that mental health poses a significant barrier to finding employment, and is a crucial risk factor to long-term unemployment. While mandatory participation in psychological counselling as benefit conditionality is contraindicated, PES case workers' role can be advising their clients to get counselling in case they see a need. As outlined in the OECD Recommendation of the Council on Integrated Mental Health, Skills and Work Policy (OECD, 2015[106]), awareness and understanding of mental health issues among caseworkers is key to ensuring that appropriate and timely mental health support is available to jobseekers experiencing mental health issues. Regardless whether PES provide psychological counselling in-house or not, PES need to direct the people to the service providers, e.g. social service providers, health service providers, providers outsourced by PES or providers in-house in the PES. The take-up of mental health support might be higher if it can be provided more discreetly and the client can choose the provider. For example, the Estonian PES allows the clients to choose the specific provider for psychological, addiction or debt counselling from a list of accredited service providers since 2021 (Sotsiaalministeerium, 2020[92]). This would enable also people from small communities to choose a provider further away, ensuring more anonymity, which may be crucial in the context of widespread stigma against individuals experiencing mental health issues. Finland rolled out one-stop-shops for young people involving a wide range of professionals in 2018 (Savolainen, 2018[107]). The key staff are youth and employment counsellors from PES and social workers from municipalities, but also psychologists, nurses, outreach workers and education counsellors. In 2021, the Finnish Government is investing further in these youth centres, particularly aiming at boosting mental health services for the young and start providing short-term psychotherapy (Ministry of Economic Affairs and Employment, 2020[98]).

3.4.4. Strengthening evaluation of programmes

The OECD Jobs Strategy (OECD, 2018[40]) calls for rigorous evaluations of policy reforms to inform policy making and adjust or terminate inefficient measures and services. Policies built on a strong evidence base help to improve the quality, responsiveness and accessibility of public services and should be an integral part of the policy making cycle (OECD, 2019[108]). This is even more important in the context of tight budgets, when governments face pressure to provide good value for money. Countries should commit to improving the efficient and effective use of public finances to ensure that funds are spent on activities that provide the highest possible economic and social return (Crato and Paruolo, 2019[109]).

Evaluating the policies and programmes that countries introduce to address the new challenges arising from the COVID-19 pandemic and identifying which are inefficient and need to be adapted or terminated, is of utmost importance given limited resources. Furthermore, carefully evaluating how the impact of these policies varies over the business cycle and across groups may help policy makers to decide the optimal mix of measures at a given point. Among the possible evaluation methods (counterfactual impact evaluations, randomised controlled trials (RCTs), process evaluations, cost-benefit analyses), counterfactual impact evaluations determine what would have happened to programme participants (the treated group) had they not participated.

Following the GFC, a growing body of research using counterfactual impact evaluations helped to gain a good understanding of which ALMPs work, in what context and for which groups (Card, Kluve and Weber, 2018[9]). Moreover, there has been a rise in experimentation in ALMPs, through the use of RCTs – see Levy-Yeyati et al. (2019[110]) for a review of RCT evaluations of ALMPs. Nevertheless, the results of the impact evaluations carried out over the past decade may be of limited use today, when the context and

prevailing labour market conditions are substantially different. It is well established that besides the design and delivery of ALMPs, contextual factors determine the effectiveness of ALMPs. It is therefore crucial to integrate a monitoring and evaluation framework in the new and adapted programmes designed to respond to the current crisis. Many countries have such mechanisms embedded in their policy making processes, while others are currently building these mechanisms or conduct ad hoc evaluations of their labour market policies (OECD, 2020[111]). Given the nature of this crisis, it is important to look beyond employment outcomes and also evaluate social and human capital outcomes.

More generally, countries that have an established culture of evidence-based policy making and well-developed data infrastructure, are in a better position today to design and carry out counterfactual impact evaluations of the new policies and programmes they implemented to address the labour market consequences of the pandemic (OECD, 2020[111]). Many OECD countries that do not have such established mechanisms are looking into ways to build their capacity to evaluate the impact of their policies in a regular, rigorous and timely manner – see OECD (2020[112]) for a recent report on Spain.[22] At least four main factors are important in this process:

- Modern well-developed data infrastructure and technical solutions to link data across registers, store and share data with internal and external actors are key enablers of evidence-based policy making. In many countries, this capacity is driven by one or different institutions responsible for linking the data across registers. A good example is the Secure Data Services, a new platform in the Central Bureau of Statistics of the Netherlands, where government agencies can store and have their (privacy sensitive) data analysed in a secure environment for statistical and scientific research (Kartopawiro, 2019[113]). These institutions have effective solutions to address data privacy issues and standardised and efficient procedures to deal with data requests.
- Public institutions need to have a minimum level of analytical capacity and skills to conduct policy evaluation in house, but also to commission such research to a third party. Public institutions may thus benefit by building strong links with the research community, by liberalising the access to administrative data, hiring academic profiles, and fostering close co-operation with other institutions.
- Evaluation mechanisms built into policy design may be the most effective way to carry out policy monitoring and evaluation. This can take the form of experimentation of new measures through pilots and, if possible, with random assignment design before any larger-scale implementation. For example, Finland has allocated additional funds for pilots to test the integrated employment and social services in municipalities in 2021 and Sweden has continued its pilots to test the new model for employment services throughout the pandemic.
- A legal mandate for policy evaluation and clear leadership is a driver of evidence-based policy making. Recognising the importance of evidence-based policy making, some countries have institutionalised impact evaluations through legal requirements, which make the evaluation of policies and programmes an imperative. A strong culture of evidence-based policy making is conducive to the data investments needed and to building analytical capacity necessary to conduct impact evaluations. A recent example in this area is the legal changes that were introduced with Spain's new minimum income scheme to mandate the evaluation of the scheme and its inclusion pathways and guarantee access to the necessary data for that purpose.

In addition to counterfactual impact evaluations that allow estimating the net impact of a policy but often take time to be put in place and produce results, process evaluation can be a useful tool in the hands of policy makers. Process evaluation, through surveys, interviews or focus groups, provides insights on whether a policy or programme is being implemented as intended. It helps to provide information on policy or programme improvement, modification and management through providing insights into what is working well and what is not. Moreover, it is important to also conduct cost-benefit analyses which are often based on the results of counterfactual impact evaluations and aim to determine whether the benefits derived from a specific measure outweigh its cost.

3.5. Concluding remarks

ALMPs can play a key role in supporting the recovery of economies from the unprecedented COVID-19 crisis, by helping jobseekers find jobs, making training available to those most in need and providing comprehensive support to those who are struggling in the labour market. This chapter has documented how governments across the OECD and EU have planned to move from a crisis management mode to setting up medium- to longer-term strategies in response to the jobs crisis by redesigning and scaling up ALMPs and increasing funding for their PES. In the aftermath of the COVID-19 crisis, substantial additional resources will be needed for ALMPs and many, but not all, countries have already increased their expenditure in this area. Governments will also need to consider how in future they can scale up ALMPs and adjust the ALMP mix to the changed needs in both a timely and effective manner during a recession. A key element will be investment in the digital infrastructure of employment services. Those PES that had fully fledged digital tools in place prior to the COVID-19 outbreak have been able to serve their clients better through the seamless payment of income support (unemployment and related benefits as well as job retention benefits), support to jobseekers via remote communications and referrals to online training solutions. Many countries have made quantum-leap changes in the digitalisation of employment services over the course of 2020 and 2021. Nevertheless, there are still large differences between countries, so additional investments in digital capacity, channel management, automation and efficient internal processes are required in many countries, and this process will take time.

This chapter has presented the actions taken by countries in the field of ALMPs to address the labour market consequences of the pandemic but it has not drawn lessons regarding their effectiveness, as the data that would allow to assess them will take time to be released. Moreover, their effectiveness will depend on the way these policies are implemented, which also needs to be monitored closely. Going forward, it will be important to ground policy responses to the current crisis upon a strong evidence base to ensure that funding for ALMPs provides the highest possible economic and social return on investment. There are many lessons to be drawn from the GFC crisis and a rich and growing body of evidence on “what works and for whom” has been built up in its aftermath. Nevertheless, new evaluations will be required, as the context and prevailing labour market conditions are different from the GFC in many respects. Given the speed at which the recent changes were introduced by most countries, it was difficult to include an experimental evaluation angle already in the policy design, unless the countries had an appropriate system in place before. Indeed, while a number of countries have long-standing experience in developing evidence-based policies, others are now developing the capacity to evaluate the impact of their policies in a regular, rigorous and timely manner. Once the data become available, it will be important for countries to evaluate new policies and programmes introduced in response to the COVID-19 crisis, to identify those that are less effective and which need to be adapted or terminated. These efforts should be best embedded in a broader framework of evidence-based policy making that would enable countries to conduct regular and timely evaluations of their policies.

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Annex 3.A. Additional information on the institutional set-up of ALMP provision

Annex Table 3.A.1. Dashboard of institutional set-up of ALMP provision

	Capacity of ALMP system (2018)			Organisational set-up (2020)				Regulatory set-up (2020)	
	Spending on ALMP measures (cat. 2-7) per unemployed, as a percentage of per capita GDP	Spending on placement and related services (cat. 1.1) per unemployed, as a percentage of per capita GDP	ALMP spending excluding administration costs (cat. 1.1, 2-7)/ PLMP spending (cat. 8-9)	PES organisational set-up (autonomy)	Role of PrES	PES involvement in policy design	Role of the social partners	Legal flexibility: Can conditions of specific ALMPs be changed without amending the law in the parliament?	Legal and regulatory complexity: How many different types of regulations exist to set the conditions of specific ALMPs?
Australia	3.2	2.5	0.29	1	3	4	advisory	yes	6
Austria	23.4	4.4	0.52	3	3	4	supervisory	partially	2
Belgium	21.0	8.4	0.63	5	3	4	supervisory	yes	1
Bulgaria	4.4	0.5	0.36	2	2	4	advisory	partially	2
Canada	3.2	1.0	0.27	5	1	4	no or limited	yes	1
Chile	2.7	0.6	0.30	2	1	4	advisory	n/a	n/a
Colombia	n/a	n/a	n/a	4	2	0	advisory	yes	2
Costa Rica	n/a	n/a	n/a	2	1	4	supervisory	yes	1
Czech Republic	16.7	2.6	1.57	2	1	4	advisory	yes	1
Croatia	6.5	0.6	2.13	3	1	4	supervisory	yes	1
Cyprus	2.1	0.3	0.21	1	1	4	advisory	yes	1
Denmark	60.4	2.0	1.59	4	1	4	supervisory	partially	2
Estonia	11.6	3.5	1.08	3	1	4	supervisory	partially	3
Finland	21.6	2.5	0.69	1	3	4	no or limited	partially	2

	Capacity of ALMP system (2018)			Organisational set-up (2020)				Regulatory set-up (2020)	
	Spending on ALMP measures (cat. 2-7) per unemployed, as a percentage of per capita GDP	Spending on placement and related services (cat. 1.1) per unemployed, as a percentage of per capita GDP	ALMP spending excluding administration costs (cat. 1.1, 2-7)/ PLMP spending (cat. 8-9)	PES organisational set-up (autonomy)	Role of PrES	PES involvement in policy design	Role of the social partners	Legal flexibility: Can conditions of specific ALMPs be changed without amending the law in the parliament?	Legal and regulatory complexity: How many different types of regulations exist to set the conditions of specific ALMPs?
France	12.5	1.0	0.29	3	3	4	supervisory	partially	6
Germany	14.2	12.5	0.67	3	1	4	supervisory	partially	4
Greece	2.4	0.1	0.40	3	2	4	supervisory	partially	2
Hungary	32.1	2.3	3.05	1	3	3	advisory	partially	3
Iceland	n/a	n/a	n/a	3	2	4	supervisory	yes	1
Ireland	11.6	0.4	0.47	1	3	4	no or limited	yes	1
Israel	6.7	1.5	0.37	2	1	4	no or limited	yes	4
Italy	7.9	0.0	0.32	4	3	4	no or limited	partially	4
Japan	6.9	0.8	0.63	1	1	3	advisory	yes	3
Korea	14.8	1.9	0.92	2	3	4	advisory	yes	1
Latvia	3.2	0.5	0.35	2	2	4	advisory	yes	1
Lithuania	6.8	0.6	0.62	2	2	4	advisory	no	1
Luxembourg	24.1	1.1	1.28	1	1	4	advisory	partially	4
Malta	6.2	4.3	3.00	2	3	4	advisory	yes	1
Mexico	0.00	0.0	n/a	2	2	4	no or limited	partially	3
Netherlands	18.0	3.9	0.33	2	2	4	advisory	yes	1
New Zealand	4.1	4.5	0.60	1	3	3	no or limited	yes	1
Norway	14.1	4.5	1.00	2	3	4	no or limited	yes	1
Poland	17.3	1.7	2.20	5	3	4	advisory	partially	2
Portugal	8.4	0.3	0.33	3	1	4	supervisory	yes	3
Romania	1.1	0.6	0.68	3	2	4	supervisory	no	1
Slovak Republic	6.1	0.1	0.65	2	1	4	advisory	yes	3
Slovenia	6.3	1.6	0.53	3	1	4	supervisory	yes	4
Spain	7.4	0.9	0.43	4	2	n/a	advisory	yes	4

	Capacity of ALMP system (2018)			Organisational set-up (2020)				Regulatory set-up (2020)	
	Spending on ALMP measures (cat. 2-7) per unemployed, as a percentage of per capita GDP	Spending on placement and related services (cat. 1.1) per unemployed, as a percentage of per capita GDP	ALMP spending excluding administration costs (cat. 1.1, 2-7)/ PLMP spending (cat. 8-9)	PES organisational set-up (autonomy)	Role of PrES	PES involvement in policy design	Role of the social partners	Legal flexibility: Can conditions of specific ALMPs be changed without amending the law in the parliament?	Legal and regulatory complexity: How many different types of regulations exist to set the conditions of specific ALMPs?
Sweden	23.7	5.2	2.17	2	3	3	no or limited	yes	2
Switzerland	17.7	1.9	0.92	4	1	4	supervisory	yes	1
Turkey	n/a	n/a	n/a	3	2	4	advisory	partially	2
United Kingdom	n/a	n/a	n/a	1	3	4	no or limited	yes	1
United States	4.1	0.5	0.60	5	3	n/a	n/a	n/a	n/a

Note: *Public employment service (PES)* is a public body whose main responsibility is to actively facilitate the integration of jobseekers into the labour market and which implements employment services (providing placement and related services as defined by category 1.1 in the methodology of the *OECD Employment and Labour Market Statistics database*, https://doi.org/10.1787/data-00312-en and *European Commission Labour Market Policy database* https://webgate.ec.europa.eu/empl/redisstat/databrowser/explore/all/lmp?lang=en&display=card&sort=category: services that facilitate the integration of jobseekers in the labour market or which assist employers in recruiting and selecting staff, including the provision of self-service facilities such as on-line job-banks), potentially in addition to other active labour market policies (training, employment incentives, sheltered and supported employment and rehabilitation, direct job creation, start-up incentives), and which optionally fulfils additional public functions. Only the mainstream / first tier system mapped in the table under *PES organisational set-up*, while alternative systems are present (e.g. local authorities provide additional employment services).
Private employment service (PrES) is a private company or an NGO providing employment services (category 1.1 of labour market policies according to the OECD/EC methodology, i.e. placement and related services), regardless of the financing source (i.e. regardless of having a contract with the public sector or not).
ALMP: Active Labour Marker Policy. ALMP category 1.1 refers to placement and related services, i.e. employment services; ALMP category 1.2 refers to expenditures on labour market policy administration and other service and activities of PES beyond labour market policies; ALMP categories 2 to 7 refer to training, employment incentives, supported employment and rehabilitation, direct jobs creation and start-up incentives. ALMP category 1.2 is excluded from the table as the responsibilities beyond placement services and ALMP measures differ greatly across PES and thus these expenditures are not comparable. Only about half of the PES in the European Economic Area are (partially or fully) responsible for unemployment benefit schemes and in addition, some PES are responsible for administering a variety of different services, measures and benefits (Peters, 2020[5]).
PLMP: Passive Labour Market Policy. PLMPs include categories 8 and 9 and refer to out-of-work income maintenance and support (above all unemployment benefits) and early retirement.
Estimations for cat. 1.1 for Bulgaria and Switzerland. Canada: data on labour market policies include federal expenditures on programmes implemented by the provinces and territories, but do not generally include the provinces' additional or complementary funding of these programmes.
PES organisational set-up: 1=Department in a ministry co-ordinating public/private providers; 2=National level PES (a separate public agency and not a fully-integrated department in a ministry) fully managed by a ministry; 3=National level PES with a tripartite management body; 4=Sub-national PES with a national co-ordinating agency; 5=Sub-national PES without a national co-ordinating agency.
Role of PrES: 1=Mainly public providers; 2=Private providers relevant in addition to public providers; 3=Services fully or partially contracted out. Category 2 includes those countries that replied that PrES provide employment services, but did not reply that employment services are contracted out to PrES.

PES involvement in policy design: whether PES is involved (consulted with, partly decides or fully decides) in designing (i) ALMP strategy, (ii) ALMP accountability framework, monitoring and evaluation framework, (iii) ALMP interventions, (iv) ALMP budget. 4=PES is involved in all four activities; 3=PES is involved in three of the activities; 2=PES is involved in two of the activities; 1=PES is involved in one of the activities; 0=PES is not involved in policy design.
Role of the social partners: role of the social partners in the organisational set-up of ALMP provision.
Conditions of specific ALMPs: eligibility criteria, durations, amounts etc. relevant for implementing each ALMP. The types of regulations to set the general groups eligible for ALMPs, list of specific ALMPs, target groups of specific ALMPs, and ALMP budgets are presented in Lauringson and Luske (forthcoming[1]).
Note on *Legal and regulatory complexity: How many different types of regulations exist to set the conditions of specific ALMPs*?: In Belgium, the conditions of specific ALMPs are set by one type of regulation in each region, although slightly differently across regions (by a decision of the PES supervisory body in the Brussels region, and by a decree of the government in Flanders and Wallonia).
"n/a" refers to "not available".
Source: Responses to OECD/EC questionnaire "Active labour market policy measures to mitigate the rise in (long-term) unemployment", *OECD Employment and Labour Market Statistics database*, https://doi.org/10.1787/data-00312-en and *European Commission Labour Market Policy database* https://webgate.ec.europa.eu/empl/redisstat/databrowser/explore/all/lmp?lang=en&display=card&sort=category.

StatLink https://stat.link/spjbe5

Notes

[1] Public employment service as a public body whose main responsibility is to actively facilitate the integration of jobseekers into the labour market and which implements employment services (providing placement and related services as defined by category 1.1 in the methodology of the *OECD Employment and Labour Market Statistics database*, https://doi.org/10.1787/data-00312-en and *European Commission Labour Market Policy database* https://webgate.ec.europa.eu/empl/redisstat/databrowser/explore/all/lmp?lang=en&display=card&sort=category: services that facilitate the integration of jobseekers in the labour market or which assist employers in recruiting and selecting staff, including the provision of self-service facilities such as on-line job-banks), potentially in addition to other active labour market policies (training, employment incentives, sheltered and supported employment and rehabilitation, direct job creation, start-up incentives), and which optionally fulfils additional public functions.

[2] Private companies and NGOs providing employment services (category 1.1 of labour market policies according to the OECD/EC methodology, i.e. placement and related services), regardless of the financing source (i.e. regardless of having a contract with the public sector or not).

[3] One of the factors determining registration with PES might be the obligation to do so in order to receive unemployment benefits. This obligation does not hold for private employment services that jobseekers approach on a voluntary basis.

[4] The fact that young people are less likely to register with the PES than other groups might reflect that in many countries, youth with limited or no employment experience do not meet the entitlement criteria for receiving unemployment benefits. For some young people, their lower use of the PES may also reflect greater use of alternative online sources of information on job vacancies.

[5] This section discusses only the regulatory set-up for ALMPs and not the content of regulations per se, such as ALMP design features and their adequacy or the promotion of co-operation between public and private providers. In case an ALMP system is set up well (adequate organisational set-up, regulatory set-up and capacity), it should lead to such a content of regulations that enables effective and efficient ALMP provision that meets the labour market needs.

[6] See a more detailed discussion on the role of social partners in the ALMP systems in Lauringson and Luske (forthcoming[1]).

[7] Although the level of digitalisation and automation might have an even greater role to increase PES capacity regarding administering labour market policies (category 1.2 in the OECD/EC methodology) than regarding placement and related services or ALMP measures.

[8] For a review of macroeconomic evidence on the impact of ALMPs on unemployment see Martin (2015[114]).

[9] In the OECD's Labour Market Programme database these services are reported in Category 1 *Public employment services and administration*.

[10] In the OECD's Labour Market Programme database these measures are reported in Categories 2 to 7.

[11] The Workforce Development Agreements are bilateral transfer agreements between the Government of Canada and individual provinces and territories, which provide funding for the development and delivery

of programmes and services that help Canadians get training, develop their skills and gain work experience.

[12] Data on labour market programme expenditure is available with a two-year time lag only.

[13] While employment incentives and public works could support labour demand particularly during the economic crisis and recovery, business start-up subsidies can be an effective tool though economic cycles to bring people from unemployment to self-employment, as well as to create additional jobs, although the low size of the potential target group limits its wide-scale use (Brown and Koettl, 2015[8]).

[14] For example, France introduced new recruitment incentives for youth and people with disabilities to be recruited on fixed-term or permanent contracts, which were open for application until early 2021. In Hungary, a wage subsidy was available between May and August 2020 and supported the hiring of 39 000 jobseekers; a new programme was introduced in October 2020, covering 50% of wages. Ireland introduced additional subsidies under its *JobsPlus* scheme to support the hiring of registered unemployed under the age of 30 over the course of two years. The United Kingdom introduced a new scheme, *Kickstart*, to create six-month work placements for benefit recipients aged 16-24 who are risk of long-term unemployment and will accept applications from employers until December 2021. Slovenia extended the coverage of its existing employment incentive scheme *Employ.me* to also cover unemployed individuals over 30 years old who lost their job due to the pandemic. *Mana in Mahi* (Strength in Work) in New Zealand combines employment with apprenticeship or formal industry qualification to upskill Māori and provide them with meaningful employment opportunities. In Greece, an important aspect in supporting job creation and take-up of employment incentives was to enable online applications and accelerate the application procedure.

[15] Direct job creation programmes included here are different from public sector job creation schemes, such as large infrastructure projects – as planned e.g. in Iceland and Mexico. Direct job creation programmes create additional jobs, usually of community benefit or socially useful, which are temporary and have a non-market character. Individuals targeted by such programmes are usually long-term unemployed or persons otherwise difficult to place. Although in the context of the COVID-19 crisis such criteria may be relaxed. Latvia, for example, extended the eligibility for public works to all unemployed persons not receiving unemployment benefits regardless of the duration of unemployment.

[16] Calculations are based on the OECD/EC Labour Market Programme Database, Labour market programmes: Expenditure and participants, http://dx.doi.org/10.1787/data-00312-en.

[17] In the OECD's Labour Market Programme database (https://doi.org/10.1787/data-00312-en) 13 out of 32 countries, for which labour market programme data is available, reported expenditure on Category 7 *Start-up incentives* in 2018.

[18] Unweighted cross-country average.

[19] I.e. the section does not include groups who are fully unavailable for the labour market (in full-time studies, severely ill, not in working age, etc.).

[20] In Estonia, the Youth Guarantee Support System implemented in 2018 is a tool for the municipalities to reach out to young people not in education, employment or training and support them to continue their education, integrate into the labour market and contact PES or other institutions. The tool links data from nine registers to detect the young people in need of support (Kõiv, 2018[115]).

[21] Austrian programmes involving social enterprises have been evaluated on several occasions (see e.g. Eppel, Horvath and Mahringer (2014[117]) and Hausegger et al. (2010[116])) and have been found to strengthen participants' labour market participation and unsubsidised employment in the primary labour market significantly. The positive effects are particularly pronounced for women, older workers and people with disabilities.

[22] The OECD and the EC co-operate in this area to support countries in building or strengthening their capacity to conduct counterfactual impact evaluations of their labour market and social policies through the use of linked administrative and survey data. This joint OECD-EC project is likely to include evaluations of measures that were developed or adapted during the pandemic, for which the required data are available.

4 The rise of domestic outsourcing and its implications for low-pay occupations

An increasing share of workers in OECD countries are legally employed by one firm but in practice work for another. Cleaners, security guards and cafeteria staff are examples of occupations where workers often physically work on the premises of one firm, but their legal employer is a third-party support services firm. Such third-party employment relationships are often referred to as “domestic outsourcing” or “market-mediated work arrangements”. This chapter focuses on documenting the nature, trends in, as well as the consequences of, domestic outsourcing for productivity, employment and job quality, focusing especially on some low-wage occupations. The chapter provides examples of different forms of domestic outsourcing before measuring its prevalence across OECD countries. It then shows the potential impact of the COVID-19 crisis. The chapter concludes by highlighting some of the implications of domestic outsourcing for job quality and inequality, and discusses some policy responses.

In Brief

Key findings

An increasing share of workers in OECD countries are legally employed by one firm but in practice work for another. For example, cleaners, security guards and cafeteria staff often physically work on the premises of one firm, but their legal employer is a third-party support services firm. This is also the case for most temporary work agency jobs, and a sizeable share of the self-employed without employees. For these workers, the firm that supervises and monitors their work is not the same as the firm with which they have an employment contract.

Such third-party employment relationships are often referred to as “domestic outsourcing” or “market-mediated work arrangements”. The concept encompasses the contracting out of work from a lead firm to a contracting firm (including one-person firms), for which the lead firm has a continuing need. The lead firm supervises or monitors the workers in these arrangements, but the third-party contracting firm is their legal employer.

Domestic outsourcing may bring advantages, but it may also come with risks. For example, the lead firm may be able to take advantage of higher productivity or cost savings from contracting out services to other firms. This could bring productivity gains and higher earnings for workers remaining in the lead firm. However, there is also a risk that workers whose jobs are outsourced end up having lower pay and inferior working conditions. Whether one is employed directly by a lead firm or by a third-party contracting firm may also matter for job quality: certain employers pay more, provide better non-pecuniary benefits and provide more job security. The rise in domestic outsourcing, therefore, may have important implications for overall inequality and well-being.

This chapter analyses the nature and development of domestic outsourcing and its consequences for productivity, employment and job quality, focusing especially on low-wage occupations. The chapter provides examples of the different forms that outsourcing can take, and reviews the literature on why firms make use of domestic outsourcing. It then turns to measures of domestic outsourcing to track its prevalence across OECD countries, before examining the potential impact of the COVID-19 crisis. The chapter concludes by highlighting some of the implications of domestic outsourcing for job quality and inequality, and by discussing some policy responses.

The key findings are:

- Measuring firm-to-firm outsourcing and sub-contracting is challenging. However, the chapter identifies three common features that typically characterise a domestic outsourcing arrangement between a lead firm and a third-party contracting firm: the lead firm has a **continuing** need for primarily **labour** services provided by the contractor firm, and the lead firm exerts significant **supervision or control** without being the legal employer.
- The available evidence suggests that domestic outsourcing, as measured by firm-to-firm contracting of services, is on the rise in many OECD countries. Employment has grown substantially in the administrative and support services industry, which primarily provides general business support services to other firms. Examples include cleaning and security services, temporary agency employment, call centres and back-office support operations such as mailrooms.

- From 1995 to 2018, the share of total employment in administrative and support services, which typically include many domestic outsourcing activities, increased from 3.6% to 6.3% in OECD countries. This is faster than overall service employment growth.
- Across OECD countries, cleaners and guards are increasingly concentrated in the administrative and support services industry, which can be interpreted as evidence of an increase in domestic outsourcing for these occupations. While firms in every industry employ cleaners and security guards, those employed in the administrative and support services industry are very likely to be working in outsourced jobs.
- On average across OECD countries, the share of guards working in the administrative and support services industry increased from 38% to 54% between 1995 and 2019, while the share of cleaners employed in this industry increased from 16% to 31% over the same period.
- Although cleaners and security guards represent a small share of overall domestic outsourcing, it is nonetheless useful to look at these occupations in detail because they can be measured accurately and are comparable between countries. Outsourcing is not limited to these occupations, however, and results for these occupations may not hold for other outsourced occupations. The literature finds similar outsourcing arrangements for cafeteria workers, truck and forklift drivers, and logistics occupations such as warehouse workers.
- Although it is too soon to draw definitive conclusions, there is some indication that, in certain countries and occupations, the share of jobs that are outsourced increased in the immediate aftermath of the COVID-19 crisis. When this occurred, it was usually not because the number of outsourced jobs grew, but because the number of in-house jobs fell more than the number of outsourced ones. However, at the end of 2020, the outsourced and in-house sectors of both guards and cleaners had contracted in a similar way. Overall, the employment of administrative and support services has contracted more than that of the whole private sector during the crisis.
- In the case of low-pay occupations, there is evidence that domestic outsourcing often leads to worse job quality for the workers concerned. This chapter finds that cleaners and guards employed by third-party contracting firms tend to earn less than those whose jobs are in-house. This suggests that domestic outsourcing may be an important contributor to inequality in the labour market.
- The effects of outsourcing on the non-wage aspects of job quality for guards and cleaners are mixed. Cleaners and guards employed by third-party contracting firms are more likely to work part-time and less likely to train, but they are more likely to be employed on an open-ended contract.
- Policy makers may wish to consider policies aimed at preserving the positive aspects of outsourcing while improving the job quality for affected workers. These include policies that confer employer responsibilities on both lead and third-party contracting firms and ensure that outsourced jobs do not fall under a less advantageous collective bargaining agreement (or under no agreement at all). Finally, labour law could allow those in outsourced jobs access to internal training and employment opportunities at lead firms.

Introduction

The COVID-19 crisis has demonstrated the precarious labour market position of many workers across OECD countries – particularly those in non-standard employment relationships. While many firms, often with help from governments, took measures to protect their employees, some workers found that this protection only applied to dependent employees of the firm, and not to sub-contractors or own-account workers, even though they might have been working at the same physical address. This was often the case with cleaners sub-contracted to work in government offices, and security guards in supermarkets, for example.[1] Indeed, many sub-contractors and own-account workers found that they did not enjoy the same levels of job security, workplace health standards and overall job quality as dependent employees whom they worked alongside. However, many OECD governments provided more emergency support to own-account and other less protected workers than in previous crises (OECD, 2020[1]).

The focus of this chapter is on this disconnect between the legal employers of workers and the firms for whom they ostensibly work. Often referred to as "domestic outsourcing", the concept encompasses the contracting out of a continuing labour need from a lead firm to a contracting firm. Examples include cafeteria workers, cleaners and guards provided through an administrative and support services firm. They are the colleagues one sees every day, but who wear a different colour badge. Similarly, most temporary agency work is a form of domestic outsourcing. Firms may also hire the self-employed as a separate legal entity rather than a dependent employee. What binds these arrangements is a legal contract between firms to meet a continuing labour demand, which replaces the direct contractual agreement between a firm and a worker as a dependent employee.

Domestic outsourcing in its various guises is not new. Temporary work agencies have existed since the beginning of the 20th century. They were initially banned in many European countries due to fears that they exploited workers (Houseman, 2014[2]), but they have now become one of the most regulated aspects of domestic outsourcing, from which lessons could be drawn for regulating domestic outsourcing more generally. Researchers have been documenting the rise of firm-to-firm domestic service outsourcing in the United States since at least the late 1980s, as firms began to use employment agencies to contract out work that was traditionally performed in-house. Franchising, a ubiquitous business format in the fast food industry, has been around since at least the 1960s (Callaci, 2018[3]) in the United States, and can now be observed in many other OECD countries. And some of the world's largest companies now exist solely to lease workers to other firms, to manage their cafeterias, staff their mailrooms or run their warehouses, for example (Weber, 2017[4]).

Although domestic outsourcing has a long history, certain aspects have received relatively little interest from researchers and policy makers. Productivity, for example, could increase when firms decide to contract with a third-party firm to meet their labour demand. This has the potential to increase earnings and employment in the lead firm, and possibly employment overall. However, the effects of domestic outsourcing on productivity still need to be confirmed empirically, and are an open question for researchers and policy makers. What little is known about the effects of domestic outsourcing on workers and the economy is confined either to specific forms of outsourcing (e.g. temporary work agency employment, own-account work) or to a limited set of countries.[2]

Recent research, however, shows that domestic outsourcing is a growing phenomenon which often results in lower wages and rising inequality, particularly in the case of low-wage occupations (Bilal and Lhuillier, 2020[5]; Dube and Kaplan, 2010[6]; Goldschmidt and Schmieder, 2017[7]). Similarly, franchising has been shown to lead to lower wages and a higher incidence of labour law violations (Freedman and Kosová, 2014[8]; Ji and Weil, 2015[9]; Krueger, 1991[10]). Evidence on temporary work agency employment is more mixed, as it is sometimes found to offer a stepping stone into larger firms (Autor, 2001[11]; Jahn and Rosholm, 2014[12]), but possibly also lower wages (Drenik et al., 2020[13]). Weil, (2014[14]) argues that domestic outsourcing is resulting in a "fissuring of the workplace" with firms employing workers core to their central business while contracting out the rest of their labour requirements to third-party firms.

This chapter presents new research on firm-to-firm outsourcing of primarily low-paid occupations. The reasons for focusing on low-paid occupations include data availability and comparability across countries. Domestic outsourcing may also have particularly negative consequences for these occupations, which could have implications for overall inequality. The chapter focuses on the rise in firm-to-firm outsourcing across OECD countries, the reasons why firms make use of such outsourcing, and its effects on job quality as well as its implications for productivity. The analysis will also show how domestic outsourcing relates to previous OECD work on temporary work agency employment (OECD, 2002[15]; OECD, 2013[16]; OECD, 2020[17]), and more recent work on some parts of the gig economy and the increasing use of own-account work (OECD, 2019[18]).

The chapter aims to fill some of the knowledge gaps on the cross-country scope of domestic outsourcing. First, it defines and measures the incidence of domestic outsourcing in OECD countries. It then offers a framework for understanding phenomena such as sub-contracting, temporary agency work, franchising and own-account work (Section 4.1). After defining and tracing the rise of domestic outsourcing, the chapter assesses how occupations and industries in which outsourcing is widely used have fared during the COVID-19 crisis (Section 4.2). The chapter then assesses some of the consequences of outsourcing for productivity, earnings, job quality and inequality (Section 4.3), before concluding with some remarks on how various policies may affect the incidence and consequences of outsourcing (Section 4.4).

4.1. Domestic outsourcing: What and why?

This section defines domestic outsourcing and documents its incidence across OECD countries as well as over time. First, the section gives a broad definition of domestic outsourcing encompassing the various forms reviewed in this chapter. The section then reviews the reasons why firms choose to outsource. Finally, the section documents the rise of outsourcing across countries. This will rely on aggregate data sources to build a broad overview of outsourcing industries before turning to labour force surveys to more precisely estimate the nature and scale of domestic outsourcing in some very specific occupations that are especially prone to outsourcing (cleaners and guards).

4.1.1. Defining domestic outsourcing

Domestic outsourcing concerns the boundaries of the firm and the choice of a lead firm to contract with a firm (or an individual) to provide (primarily) labour as an input to production in the lead firm. The concept is sometimes referred to as “market-mediated work arrangements” (Abraham and Taylor, 1996[19]). This definition, and indeed this chapter, focuses on primarily labour services. In the literature, domestic outsourcing is sometimes defined more generally to include any intermediate input to production, including goods (Bartel, Lach and Sicherman, 2012[20]; Bernhardt et al., 2016[21]; Weil, 2014[14]).

This definition includes work traditionally performed within the boundaries of the firm, as well as new activities firms have outsourced from their founding. The exact definition of domestic outsourcing is difficult to provide, as firms have always contracted with other firms for goods and services. This chapter defines domestic outsourcing with three main characteristics. Not all three features need be present simultaneously, but the existence of one or more is a good indication that the market-mediated work arrangement might be a form of domestic outsourcing.

The first feature of domestic outsourcing is *control*. This chapter focuses primarily on situations where workers are physically present on the premises of the lead firm. This allows the lead firm to at least monitor, if not supervise, the workers in the outsourced jobs. A lead firm would be unlikely to directly supervise its office cleaners, for example, but their work would be easy to monitor. The close proximity also reinforces the idea that the lead firm could just as easily employ these workers themselves.

Employment on the physical premises of the lead firm is not necessary for a lead firm to retain control. Franchised establishments, for example, are physically (and legally, see Box 4.1) separate entities from a lead firm, but in most cases the franchisor retains almost total control of the business operations. Another example concerns the choice of an online retailer to outsource its domestic warehousing workforce to a logistics firm. These workers would be considered outsourced. In this case, the lead firm likely retains tight control over the operation and may own the warehouse itself. The decision to outsource the labour provided by a third-party contracting firm may, therefore, benefit from economies of scale and the greater productivity offered by a specialised secondary firm (see Section 4.1.2). This chapter will limit the geographic proximity between lead and secondary firms to arrangements within national borders.[3]

The second feature of domestic outsourcing is that it tends to constitute a *continuing need for labour* fulfilled by the third-party contracting firm. This element excludes one-off arrangements aimed at filling a temporary need, and distinguishes these from situations where a lead firm replaces a continuing labour demand with an outside relationship on a more permanent basis. Examples of situations that are not domestic outsourcing might include a lead firm contracting an architect on a one-off basis to design a new building, or hiring a travel agency for sporadic travel arrangements. Temporary agency work seems as if it too would be excluded from domestic outsourcing (see further discussion below) as workers supplied by the agency may only have temporary spells at the lead firm. However, if the lead firm contracts with the temporary agency for a continuing labour demand, the relationship is more akin to outsourcing.

The third feature of the concept of domestic outsourcing adopted in this chapter is that the input is primarily *labour* rather than goods or other services. This isolates the concept from the make-or-buy decision of firms, and focuses on the lead firm's decision to hire labour directly or contract through a secondary firm.[4] A secondary firm providing security guards to work on the premises of a lead firm is an example of primarily labour services. The secondary firm is not producing a good, nor providing substantial capital to the labour input.

The rest of this section concretely defines the various forms of domestic outsourcing. The first is firm-to-firm contracting out of services, which constitutes the focus of this chapter. The section then moves to temporary agency work, and own-account self-employment.

Firm-to-firm outsourcing of services

The classic examples of domestic outsourcing concern low-wage work, which is complementary to the core function of the firm, such as cleaning, cafeteria and security services. Workers in these support functions perform labour within the physical boundaries of a lead firm on a regular and ongoing basis, but a secondary firm is often their legal employer. The lead firm is able to monitor their work, if not directly supervise and direct their tasks. Crucially, the lead firm chooses to contract with a secondary firm to provide these services instead of employing the workers directly in-house, as many companies did in the past. Thirty years prior, it was not uncommon for large firms to employ these occupations in-house, and many continue to do so today.[5]

Domestic outsourcing is not limited to support occupations. In certain industries, lead firms use secondary firms to provide labour for their core activities. Examples include housekeepers in hotels and cooks in restaurants. Franchising is also pervasive in these industries (hotels and limited-service restaurants). Business format franchising can be a form of outsourcing because although for all intents and purposes employees of franchisees work in an establishment identical to those run by a lead firm, the employees are legally employed by an often small, independent proprietor (see Box 4.1).

Box 4.1. Franchising: A little-explored form of domestic outsourcing

Franchising is a business model which may fall under domestic outsourcing. Franchising usually manifests itself in one of two forms, though in practice the line between the two can be fuzzy. The first form, "traditional franchising", involves an upstream manufacturer who contracts with many independent firms to sell their product. For example, petroleum companies often contract with independent petrol stations to sell petrol to consumers. The independently owned petrol stations operate under the petroleum firm's brand and exclusively sell their petroleum products, but they often sell other goods and services as well. Traditional franchising generally involves a contract to sell goods with the manufacturer, and there is often minimal control over how the business is run. Traditional franchising, therefore, would not meet the definition of domestic outsourcing offered in this chapter (see above).

The second form of franchising, "business format franchising", usually adheres to the definition presented in this chapter. Popular in the fast food and hotel industries, business format franchising consists of a lead firm (the franchisor) signing long-term contracts with many smaller independent firms (franchisees) to run the core business of the lead firm. The franchisor licenses the brand and may supply the product, while specifying almost all the details of how to run the business (the business format) by contract. Through point-of-sale technology, cameras and inspections from representatives, the franchisor is able to monitor the operations of franchisees closely. The franchisees (secondary firm) are legally independent firms with limited discretion concerning the management of the operations.

These franchising agreements often give the franchisor almost total control over how the franchisee must run their establishment. The layout of the establishment, operations and maintenance are almost completely stipulated in the franchising agreement. In some cases, the franchisor even owns the physical establishment and the franchisee must pay rent to the franchisor.

The main exception is the hiring and compensation schedules of workers within the franchisees, which are usually left to the owners and managers to specify. The franchisor's control over workers in franchised establishments is more nebulous, though legally the franchisee is considered the formal employer (Griffith, 2019[22]). Employees of franchisees could be employed by the franchisor in a vertically integrated firm. In some market segments it is not uncommon to see some franchisors rely almost completely on franchisees, while other firms run their establishments almost completely as a vertically integrated business. In practice, almost all franchisors choose to run some percentage of establishments themselves (Lafontaine and Slade, 2007[23]).

It is difficult to provide convincing estimates for the prevalence of franchising. Statistical agencies do not often inquire whether an establishment is affiliated with a franchise brand, or whether an establishment is a franchisee or a franchisor. One exception comes from the United States. Every five years, the U.S. Census Bureau conducts a census of establishments, and starting in 2007, this economic census began asking establishments whether they are operating under a franchise brand. In 2012, the last year for which data is available, over 60% of employment in fast-food and slightly less than 40% of employment in hotels was with a franchisee in the United States (U.S. Census Bureau, 2016[24]).

In some instances, domestic outsourcing touches on the core functions of a higher-paid workforce. Examples include government outsourcing of social care or employment services (OECD, 2017[25]), and hospitals' use of staffing firms for doctors (Cooper, Scott Morton and Shekita, 2020[26]). Even large, high value-added technology companies, for example, employ contractors through secondary staffing firms including in key software development roles. These workers are usually physically located on the premises of the lead firm and work side-by-side with regular employees. However, they generally earn less, receive fewer benefits, and do not have access to internal labour markets (Wakabayashi, 2019[27]).[6]

Most temporary agency work fits the definition of outsourcing

The use of temporary work agencies (TWA) can also fall within the confines of domestic outsourcing. Temporary work agencies have existed for decades, and many OECD governments allow and regulate the use of TWA employment. However, regulations vary between countries (OECD, 2020[17]; OECD, 2014[28]).

With TWA work, there is no ambiguity about supervision or control of the employee between the lead and contracting firm. In a TWA relationship, a contracting firm (the temporary work agency), with whom a worker has an employment contract, places the worker at the disposal of another firm (the lead firm) to perform work under the lead firm's supervision.[7] TWA working arrangements, therefore, easily meet two of the three characteristics of domestic outsourcing presented in this chapter: primarily labour services, and the lead firm's exercise of control.

TWA arrangements will often meet the definition of domestic outsourcing even if the length of the assignment of the TWA worker to the lead firm has a fixed, short, duration. In theory, temporary work agencies provide workers to a lead firm while the firm has a temporary vacancy, often due to uncertain or cyclical staffing needs. Many OECD countries restrict the amount of time a worker can be placed within a lead firm, though others do not. In the latter group, the tenure of agency workers placed at a lead firm can last several years (OECD, 2020[17]). In the former group, lead firms may use a sequence of fixed-term assignments of different workers on the same, permanent position. In practice, the boundary between what is temporary and ongoing is open for interpretation.

The definition in this chapter focuses on the continuity of the labour need of the lead firm and not the length of employment contract. For example, if a firm replaces a worker fulfilling a core and continuing labour need of the firm with a TWA replacement while the worker is on parental leave, this would constitute domestic outsourcing. The need for outside labour is temporary, but the labour function is continuing. The lead firm needs to replace the missing worker, and they could have hired the replacement directly on a temporary contract. In contrast, a technology firm hiring a worker to paint a wall would not meet the definition of outsourcing. The technology firm is unlikely to have a continuing need for painting services.

TWA employment is a unique form of domestic outsourcing because it is often heavily regulated in many OECD countries. Half of OECD countries place restrictions on the occupations and industries that may use TWA contracts (Turkey bands them entirely) – see OECD (2014[28]). Some countries also place restrictions on the contract duration and/or the number of contract renewals between a worker and the lead firm. Finally, some countries stipulate that pay and benefits for TWA workers should be maintained to the levels of the lead firm (OECD, 2013[16]). In sum, many of the components of domestic outsourcing are present in TWA employment, and some OECD governments have decided long ago to regulate its use. Temporary agency work, therefore, may even serve as a model for regulating other areas of domestic outsourcing (Section 4.4).

Own-account work often falls into a grey area

A firm's use of own-account workers is another arrangement that could fall under domestic outsourcing. When a firm hires a self-employed worker to meet a continuing labour demand, and the firm supervises or monitors the worker, this would be domestic outsourcing. The definition offered in this chapter, therefore, accommodates certain types of self-employment.

Self-employment that meets this chapter's definition of outsourcing may even be cases of "false self-employment" or fall in a "grey zone" between dependent and self-employment. False self-employment refers to situations where the worker is hired as self-employed, but when one looks at the reality of the working relationship, the individual really should be classified as an employee. The use of self-employment arrangements in such cases could be a mistake, but is often related to an attempt to avoid taxes and/or labour regulations (OECD, 2019[29]). Workers in a "grey zone" are workers who, while classified as self-employed in practice, exhibit some characteristics of both employees and the self-employed. One example

are the financially dependent self-employed. These workers are self-employed, but they depend for the majority of their earnings on a single client or employer.

The correct classification of workers is an important issue that has risen to the fore of the policy discussion in many OECD countries as a result of the rise in the platform economy. It is an issue that goes beyond the platform economy, however. In general, employees have more rights and protections than self-employed workers (OECD, 2019[30]). When firms (mis)classify workers as self-employed, the workers often miss out on rights and protections to which they are legally entitled. Most countries have criteria for classifying workers correctly and have measures in place for tackling false self-employment (OECD, 2019[29]). The exact relationship between domestic outsourcing, on the one hand, and false self-employment and the "grey zone", on the other, remains a topic for future research. However, the same motivations that are behind the rise in domestic outsourcing could also be behind the rise in false self-employment and the number of workers in the "grey zone".

4.1.2. Why do firms outsource work?

The previous section defined the various forms domestic outsourcing can take. This section lays out why firms would choose to hire employees through a separate firm rather than employing them directly. The focus of this section falls into two main categories: increasing productivity and greater flexibility, which secondary firms may offer, and reducing labour costs.

Productivity, flexibility, and employer learning

Firms may use outsourcing to take advantage of economies of scale and the expertise of the contracting firm. Firms may be too small to efficiently employ a cleaner or cafeteria worker on a continuing basis. Even larger firms, who have demand for numerous employees in support roles, may not need much more than basic services, and more complicated problems would require outside support anyway. For example, a firm may be able to gainfully employ a small IT department, but the work force may not have the expertise to handle more difficult problems. Likewise, a catering firm used for outsourcing cafeteria work may be able to provide a wider variety of rotating options and expanded staffing as needed.

In addition to economies of scale, firms may decide to outsource domestically in order to increase their flexibility. Firms faced with volatile and uncertain demand may choose to outsource so they can easily adjust their labour needs in response to changing market conditions. This is most obviously the case when applied to temporary work agencies (Houseman, 2001[31]), especially in the case of countries with strong employment protection for permanent employees. In this case, the use of outside employment agencies functions much like the use of temporary contracts in many European labour markets. The difference is that the lead firm contracts with the third-party contracting firm, and leaves the type of contract to be bargained between the third-party contracting firm and the worker.

The economies of scale, expertise and greater flexibility of contracting firms should lead to higher productivity. Domestic outsourcing should result in fewer idle resources, and therefore labour hoarding from the lead firm. Assuming the contracting firm can deploy the idle labour more efficiently (to other clients, for example), this should lead to higher productivity overall, and possibly lower costs for the lead firm. In addition, the expertise of the third-party contracting firm may give them superior knowledge of the labour market for support roles allowing for higher quality workers at lower cost due to fewer hiring frictions.

The productivity effects of outsourcing remain an open area of research with little in the way of concrete answers. Recent research is promising, showing that outsourcing events generally lead to higher employment and productivity for the lead firm (Section 4.3.1). Advances in information technology and artificial intelligence could enhance the benefits of outsourcing (Box 4.2) as well. Ultimately, how policy makers and analysts view outsourcing will likely hinge on whether it can deliver productivity gains, and whether those gains are fairly distributed.

Box 4.2. Artificial intelligence, information technology and the expansion of outsourcing

Given the many benefits to firms of outsourcing, why is outsourcing not more ubiquitous? Especially if outsourcing comes with significant flexibility over labour demand and cost reductions, one might expect firms to rely on outside firms more extensively. One barrier may be that it is too difficult and cumbersome for firms to write contracts stipulating everything outsourced workers or firms must do, and then to effectively monitor their performance.

Advances in technology are making it possible to better monitor workers, and to preserve quality standards while outsourcing. From a purely economic standpoint, a firm's decision to outsource partly depends on its ability to precisely define output, and/or its ability to monitor effort and quality. For example, one theory of why firms choose to franchise lies with the inability of a corporation to effectively monitor worker effort across thousands of distributed (usually retail) establishments. By franchising, the owner of a franchised establishment has a claim to some of the store's profits and finds it in her interest to closely monitor worker effort. At the same time, however, the owner of that same store can free-ride on the franchise brand, and may skimp on improvements to the store. There are trade-offs in the decision of whether or not to franchise.

Technology has lowered the costs for companies to monitor both quality standards and worker effort. Remote sensors, cheaper and smaller cameras, and geo-localisation, make it easier than ever for firms to monitor work, whether inside or outside the boundaries of the firm (Weil, 2014[14]). The ability to more easily contract with suppliers and monitor workers and sub-contractors should lead to more outsourcing (Hart, 2017[32]; Rogers, 2020[33]).

There is some empirical evidence supporting the notion that better information technology may lead to increased outsourcing. In the United States, the appearance of applications allowing for ride-sharing or room rentals led to a surge of own-account self-employment in these industries (Hathaway and Muro, 2016[34]). Bergeaud et al., (2020[35]) find that the rollout of broadband internet in France led to greater firm-to-frim outsourcing of support services and occupation clustering.

Third-party contracting firms may also provide screening of potential employees for lead firms. Exploring why temporary work agencies provide free general training to employees, Autor (2001[11]) argues that the training is really a screening mechanism to test ability type for a potential worker. Thus, employment agencies may be able to provide lead firms with higher quality workers than they could find on their own. In particular, for workers in core occupations who work on-site, the use of a secondary employer allows lead firms to learn about employees on the job, and eventually hire them as their own employees if their work merits it.

Reducing labour costs

Firms may outsource the work of support roles and even core functions to reduce wage and benefit costs. The clearest case is for firms covered by collective bargaining agreements. In countries with firm-level bargaining, outsourcing work from a unionised firm to a third-party firm likely implies a loss of collective bargaining coverage for affected workers. Third-party firms are generally under no obligation to honour collective agreements signed with the lead firm (Abraham and Taylor, 1996[19]). For countries with sectoral-level bargaining, similar arguments apply, with the administrative and support services sector (or generally the sector of the third-party contracting firm) likely finding itself covered by a sectoral agreement that allows for reduced wages and benefits for certain occupations, or no agreement at all.

More generally, outsourcing allows high-rent firms to exclude some workers from firm rents. Certain firms or industries are exceptionally profitable, whether due to high productivity, large economies of scale, or

their ability to take advantage of less competitive markets. Workers employed by these firms generally have access to the excess rents produced by these firms, which manifests itself in higher wages and benefits than would prevail in an average firm in a given industry based upon the workers' characteristics (Abowd, Kramarz and Margolis, 1999[36]; Card, Heining and Kline, 2013[37]). Workers within a firm tend to have a sense of equity among their peers (see Box 4.3). By outsourcing workers to secondary employers (even if they remain at the lead firm's physical location), this sense of equity may break down. Moving workers outside the boundary of the firm, therefore, may not only reduce the earnings of outsourced workers, but also increase the earnings of workers who remain in the firm (who obtain a larger share of the rents), which has implications for inequality overall.

Certain types of outsourcing may also exempt firms from payroll taxes or release the lead firm from liability for violation of employment laws. The self-employed – including the dependent self-employed and independent contractors – are often responsible for the firm's side of social security contributions. Depending on the country, shifting the employer side of payroll taxes onto the self-employed relieves the lead firm of substantial labour costs (Milanez and Bratta, 2019[38]). With franchising, the lead firm is generally not considered the legal employer of workers in franchised establishments, and cannot be held financially liable for employment law violations of franchisees (Callaci, 2018[3]). In both cases, the extent to which a lead firm can reduce their labour costs rests on the legal interpretation of a dependent employee.

In the case of both franchising and the employment of own-account workers, outsourcing complicates the application of anti-trust laws, often to the employer's benefit. Anti-trust laws usually prevent own-account workers from collectively bargaining as they are not considered employees, but a collection of independent sole proprietors. Attempts by own-account workers to collectively bargain are often seen as collusive by anti-trust authorities (OECD, 2019[29]).

In a different vein, the independent legal standing of franchisees often lands franchising in an ill-defined area of anti-trust enforcement. The lead firm, the franchisor, often retains a great deal of control over the operations of franchisees to the point where they potentially run afoul of anti-trust regulations. For example, they may push for adoption of anti-poaching agreements among franchisees, which helps to suppress the wages of employees (Krueger and Ashenfelter, 2018[39]). With anti-poaching agreements, employees with one establishment are barred from being hired by competitors, which greatly reduces employees' bargaining power in the labour market.[8]

Box 4.3. Fairness and within-firm inequality

One question that lingers over the discussion of domestic outsourcing and wages is why some firms would systematically pay wages above the market rate. For firms covered by a collective agreement this is clear and well established: collectively bargained wages are generally higher than what the average worker can bargain for individually, particularly at the firm level (OECD, 2018[40]). For workers in firms not covered by a collective agreement, why would a firm choose to share additional rents with workers, especially workers in support occupations such as cleaners, guards and IT workers?

There is both theory and empirical evidence that workers care not only about their own wages, but also about those of their co-workers. In theory, if workers' effort is tied to their perception being treated fairly as measured by their wage gap with their peers, firms are perfectly rational in compressing wages and offering workers a share of firm rents. Empirically, recent studies provide evidence for this proposition. Separations, and especially quits, rise and productivity falls in response to increasing wage gaps between a worker and his or her peers (Breza, Kaur and Shamdasani, 2017[41]; Dube, Giuliano and Leonard, 2019[42]). In addition to perceptions about their own wages, productivity also may drop if workers perceive their colleagues to have been treated unfairly (Drzensky and Heinz, 2015[43]; Heinz et al., 2020[44]).

As it relates to domestic outsourcing, the key question is whether such fairness concerns extend to workers beyond the boundaries of the firm. For franchising and other outsourcing arrangements, where workers are physically disconnected from the lead firm, this is unlikely to be the case. Even more interesting are arrangements where the outsourced workers are physically present and working side-by-side with employees of the lead firm. Although this is an area of ongoing research, the early research appears to point to wage losses for workers once their jobs are outsourced outside the boundaries of the firm (Section 4.3.2).

4.1.3. The rise of domestic outsourcing

This section will dive into the various forms of domestic outsourcing and chart their incidence over time and across countries using both aggregate and micro-data sources. The section will focus primarily on measuring the contracting out of firm-to-firm labour services, but it will also touch on temporary work agency (TWA) employment and own-account work.

Domestic outsourcing and firm-to-firm contracting of services is on the rise

Measuring firm-to-firm outsourcing and sub-contracting is challenging. In general, one needs both detailed industry information on firms and exact occupation assignment for workers. A worker driving a forklift in the warehouse of a manufacturing plant should not be considered outsourced, but a worker driving the same forklift in a manufacturing plant who is, in fact, employed by a logistics firm or an employment agency, matches the definition of "outsourced". The level of detail needed to make this distinction is often higher than what is available in public datasets and on a cross-country comparable basis.

There are nevertheless some industries and occupations that may act as a proxy into the extent of outsourcing in OECD countries. For example, employment in the administrative and support services industry provides a broad measure across countries of the growth of domestic outsourcing (Bernhardt et al., 2016[21]).[9] This industry captures general business support services provided to other firms.[10] Examples include temporary employment agencies, travel agencies, as well as cleaning and security services to firms. While not all workers employed in this industry meet the definition of domestic outsourcing, the industry as a whole nonetheless provides a broad, standardised, cross-country proxy of the tendency to contract employment with other firms (Goldschmidt and Schmieder, 2017[7]).

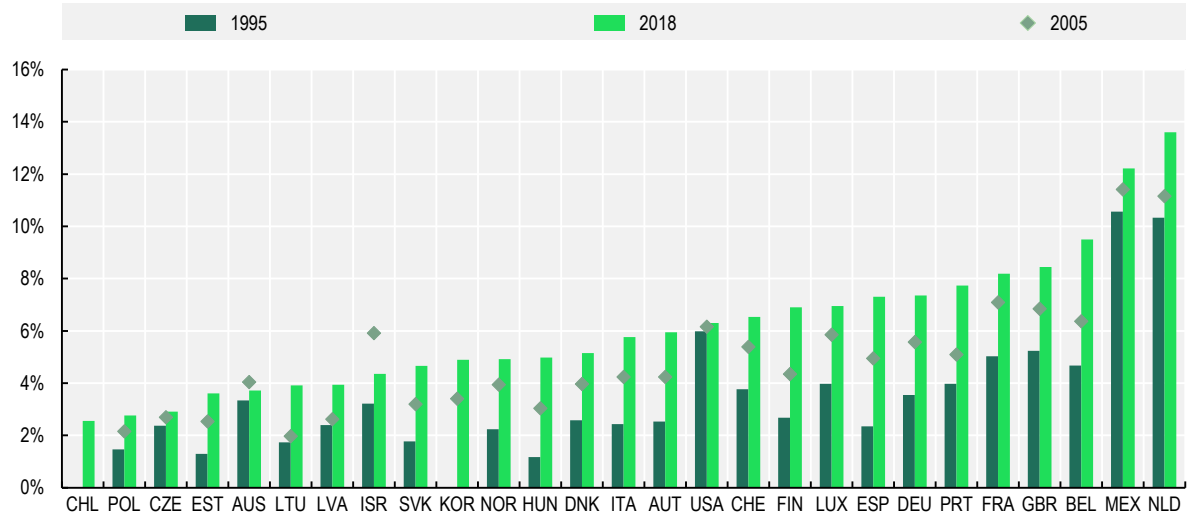
Over the past 20 years, employment has grown briskly in the administrative and support services industry. From 1995 to 2005, the share of total employment in this industry grew from 3.6% to 4.9% (Figure 4.1). From 2005 to 2018, it continued to rise to 6.3% of total employment, outpacing service industry growth over the same time span.

There is considerable variation across OECD countries. In 2018, the share of employment in administrative and support services was over 12% in Mexico and the Netherlands. In contrast, the share in Chile, the Czech Republic and Poland was below 3%.

The rise of firm-to-firm outsourcing is evident not only in employment shares in certain industries, but also in purchases between firms. National accounts data show that OECD countries are increasingly purchasing more business services from other firms. From 2005 to 2015, firms' purchases of "Other Business Sector Services" grew from 10.6% to 12.4% with almost all countries experiencing an increase (Annex Figure 4.A.1). Indeed, there is evidence that the rise of service outsourcing is one of the main causes of the increase of services in general (Berlingieri, 2013[45]).

Figure 4.1. Employment in support services industries has grown in almost all OECD countries

Share of total employment in administrative and support service activities, 1995-2018[1]



Note: Industry classification ISIC Rev 4. Administrative and Support Activities [N].
1. Year 1995 refers to 1998 for the United States, 2005 refers to 2007 for Korea, and 2018 refers to 2017 for France.
Source: *OECD STAN Industrial Analysis* (2020 ed.), http://stats.oecd.org//Index.aspx?QueryId=95267.

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The focus on administrative and support services neither captures the entire scope of outsourcing, nor does it provide a very precise measure. Outsourcing is prevalent in other occupations and industries, which are not amenable to easy measurement for cross-country comparisons with publicly available datasets. Box 4.4 provides a more in-depth discussion of some of these occupations and industries. At the same time, administrative and support services will contain some employees who are not outsourced. For example, many workers in travel agencies (a sub-sector of this industry) do not meet the definition of outsourcing (e.g. travel agents booking family vacations).

Looking in greater detail at the administrative and services industry, some sub-industries where domestic outsourcing is more prevalent have seen rapid employment growth since 1995. Figure 4.2 shows the administrative and service section (1-digit industry) broken out into a few of its main divisions (2-digit industries). Panel A shows investigative services and services to buildings and landscape activities. These divisions include security guard work, as well as cleaners and other maintenance of buildings.[11] Panel B contains employment in "employment activities". These are firms that provide human resource services to firms, as well as directly providing employees to other firms on a temporary basis including temporary work agencies. Both these groups have almost doubled their share of overall employment since 1995 (on average across countries). The share of employment in security activities and services to buildings has increased from 2% in 1995 to nearly 3.5% – with the highest shares in Spain and the Netherlands (around 5%). Similarly, the share of employment in employment activities increased from just over 1% in 1995 to over 2.5% in 2018. The Netherlands and Mexico have the highest share of employment in employment activities with about 8% and over 10%, respectively.

The focus so far on industries – however detailed – makes for a loose definition of outsourcing. A manager of a firm providing security services to a supermarket would likely not hold an outsourced job, but a guard employed by that same firm and charged with security on the premises of the supermarket would. To provide a more precise measure of outsourcing, and to facilitate comparisons between workers employed by a lead firm and those whose jobs are outsourced, it is necessary to focus on key occupations in addition to the industry of employment.

Figure 4.2. Employment in industries most representative of outsourcing is growing across OECD countries

Share of total employment in security and investigation activities; services to buildings and landscape activities; office administrative, office support and other business support activities, 1995-2018[1]

Note: Panel A covers Security activities and services to buildings ISIC Rev. 4 divisions 80-82 which includes Security and Investigation Activities (80), Services to Buildings and landscape activities (81) and Office administrative, office support and other business support activities (82). Panel B covers ISIC Rev. 4 division 78.

1. Year 2005 refers to 2006 for Korea and 2009 for Switzerland. Year 2018 refers to 2017 for Australia, France, Italy, Latvia, Lithuania and Portugal.

Source: *OECD Structural Analysis (STAN) Database*, https://stats.oecd.org/Index.aspx?DataSetCode=STANI4_2016.

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The following analysis focuses on specific occupations in particular industries known to employ workers who are then outsourced. In particular, the chapter will follow Dube and Kaplan (2010[6]) who focus on cleaners and guards in the administrative and support services industry. There are several arguments for the focus on cleaners and guards. First, these occupations are relatively similar across countries, and the tasks and skills needed to perform these occupations have changed little over the past 30 years. Second, in most occupational classification systems, cleaners and guards are denoted as specific, unique occupations and

are not lumped together with occupations performing markedly different tasks. This makes them easily identifiable. Firms in a diverse set of industries employ cleaners and guards, but when they are employed in the administrative and support services industry, workers in these occupations are highly likely to work in outsourced jobs. Finally, cleaners and guards are generally mid- to low-paying occupations. If outsourcing these jobs reduces wages, outsourcing would have important implications for inequality.

It is important to stress that cleaners and guards only represent two small, typical cases of occupations where outsourcing is prevalent. Anecdotally, outsourcing is becoming more common across a range of occupations, however these do not always lend themselves to easy measurement. Some occupations, for example high-skill information technology services, appear to be increasingly outsourced, but unlike guards and cleaners, their task content varies both over time and across countries which makes comparisons between countries or years difficult. Other occupations, for example cooks and canteen workers, are difficult to distinguish as outsourced in public-use, cross-country comparable survey data either because they are too broadly defined in existing occupation taxonomies, or because the industry classification needed to capture outsourcing is too narrow to be released by statistical agencies. The range of occupations and industries varies greatly, and with the aid of more detailed administrative data, some of these industries and occupations could be brought to light (Box 4.4).

Box 4.4. Outsourcing is not limited to cleaners and guards

Industries and occupations where outsourcing is common

Cleaners and guards are only two of many occupations where outsourcing is prevalent. This chapter focuses on these two occupations because they can often be easily identified as outsourced in labour force surveys. However, there are many other examples of occupations where outsourcing, at least anecdotally, appears to have become more common. Using administrative data, Goldschmidt and Schmieder (2017[7]) show that outsourcing has also grown in occupations like warehouse handlers, drivers and canteen workers. Dey, Houseman and Polivka (2012[46]) note that employment agencies are also heavily used by manufacturing industries for line work in the United States, which would previously have been done in-house by production workers employed by the lead firm.

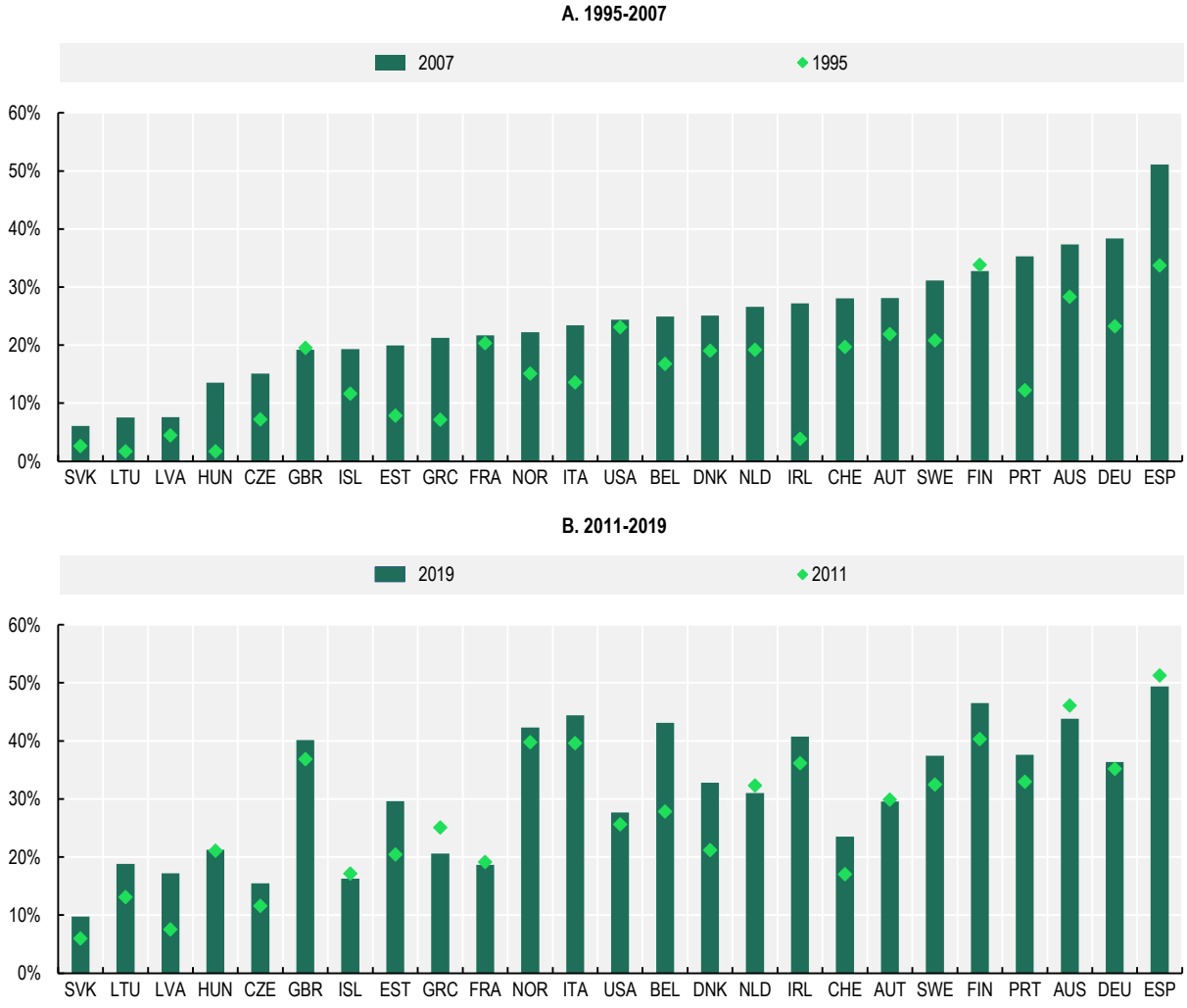
Case studies from experts reveal an even wider range of industries and occupations impacted by outsourcing. Call centre operators, maids in hotels, fast-food workers, and general trucking are all occupations where outsourcing appears to be prevalent (Weil, 2019[47]). At the other end of the wage distribution, information technology services, accounting services, and general management consultancies are examples of industries that rely on firms outsourcing labour services for their business.

Across OECD countries in the sample, cleaners are increasingly concentrated in the administrative and support services industry, which suggests that their jobs are increasingly being outsourced. From 1995 to 2007, the share of cleaners employed in this industry increased from 16% to 24% (Figure 4.3). From 2011 to 2019, the share of cleaners in this industry further increased from 27% to 31%. Italy, Spain and Finland had the highest share of cleaners outsourced in 2019, at over 40%.[12] In contrast, the lowest shares were found in the Slovak Republic and the Czech Republic.[13]

At least between 1995 and 2007, firms appear to have increasingly outsourced security services as well. On average across countries, the share of guards working in the administrative and services industry increased from 38% to 53% over this period (Figure 4.4). From 2011 to 2019, this share held steady at 54%. The highest share of guards working in the administrative and services industry in 2019 is found in Estonia, Ireland and Italy. The lowest shares are found in Iceland and Switzerland.

Figure 4.3. Cleaners are increasingly employed in the administrative and support services industry

Share of cleaners outsourced 1995-2007[1] and 2011-2019[2]



Note: For European countries up to 2007, cleaners are defined as ISCO-88 occupation code 913 or 914, "Domestic and related helpers, cleaners and launderers", and "Building caretakers, window and related cleaners", respectively. The administrative and support services industry is section K in NACE Rev. 1, "Real estate, renting and business activities". Private households with employed persons not included. As of 2011, cleaners are defined by ISCO-08 code 911 or 515, "Domestic, Hotel and Office Cleaners and Helpers", and "Building and Housekeeping Supervisors", respectively. For the United States up to 2002, cleaners are defined by 1980 SOC occupation code 453, "Janitors and Cleaners". Activities of households as employers not included. As of 2003, cleaners are defined by 2002 SOC and 2012 SOC occupation code 4220, "Janitors and Building Cleaners". For Australia, cleaners are defined by ANZSCO-06 code 81, "Cleaners and Laundry Workers". ISCO-88 shifted to ISCO-08 occupation codes in 2011 and NACE Rev. 1 to NACE Rev. 2 industry codes in the 2008 EU-LFS necessitating a break in the series.
1. Year 1995 refers to 1996 for Hungary, to 1997 for the Czech Republic, Estonia, Finland and Sweden, to 1998 for Latvia, Lithuania and the Slovak Republic and to 2001 for Australia.
2. Year 2019 refers to 2018 for Norway.
Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

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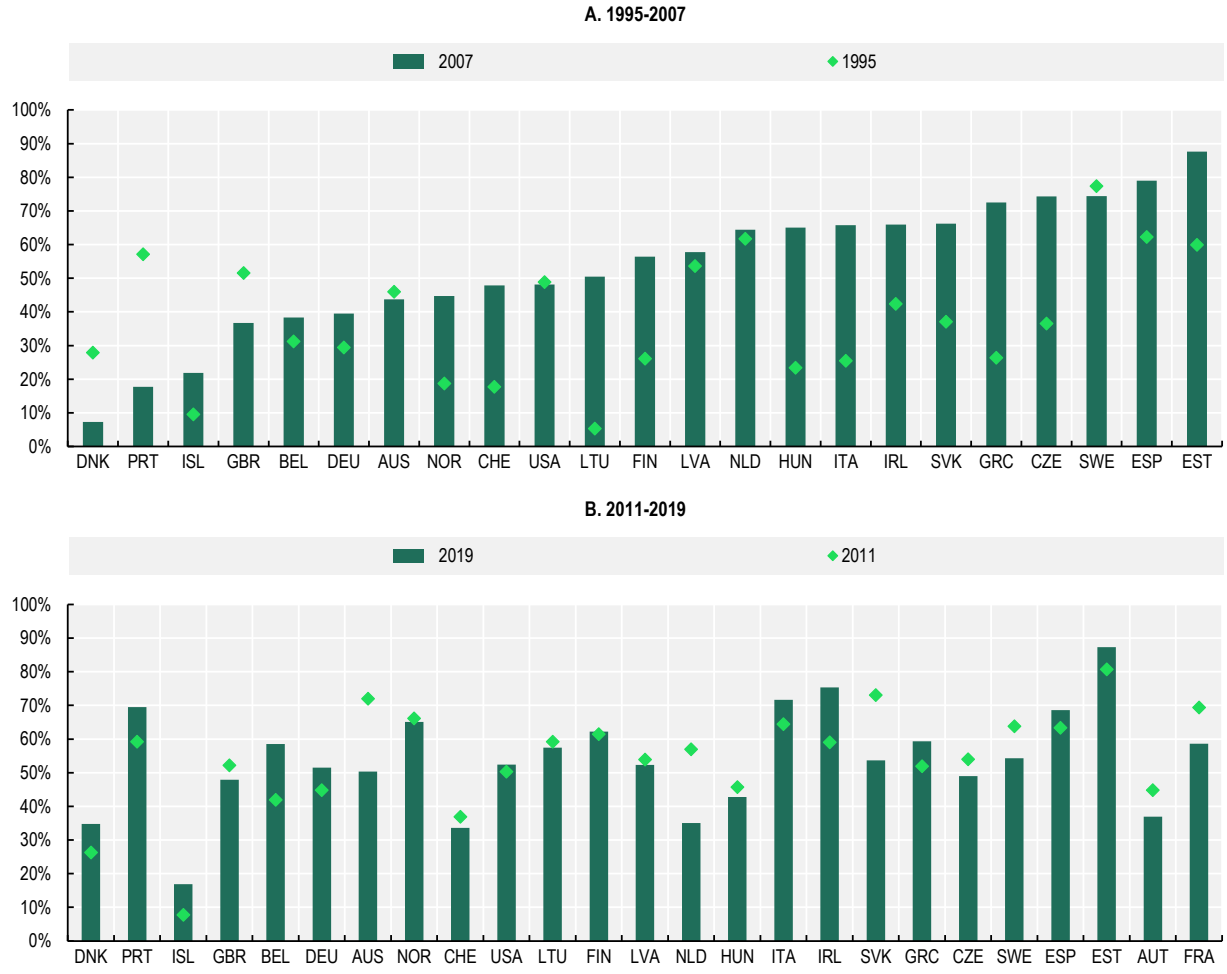
Figure 4.4. Security guards are increasingly concentrated in the administrative and services industry

Share of guards outsourced 1995-2007[1] and 2011-2019[2]



Note: For European countries up to 2007, guards are defined as ISCO-88 occupation code 516, "Protective services workers". The administrative and support services industry is section K in NACE Rev. 1, "Real estate, renting and business activities". Public administration and defence not included. As of 2011, guards are defined by ISCO-08 code 541, "Protective services workers". Public administration and defence not included. For the United States up to 2002, guards are defined by 1980 SOC occupation code 426, "Guards and police except public service". Between 2003 and 2010, guards are defined by 2002 SOC occupation code 3920, "Security guards and gaming surveillance officers". As of 2011, guards are defined by 2011 SOC occupation code 3930, "Security guards and gaming surveillance officers". In Australia, guards are defined by ANZSCO-06 occupation code 44 "Protective Service Workers" with the exclusion of ISIC-88 code 75, "Public Administration and Defence". ISCO-88 shifted to ISCO-08 occupation codes in 2011 and NACE Rev. 1 to NACE Rev. 2 industry codes in the 2008 EU-LFS necessitating a break in the series.

1. Year 1995 refers to 1996 for Hungary, to 1997 for the Czech Republic, Estonia, Finland and Sweden, to 1998 for Latvia, Lithuania and the Slovak Republic and to 2001 for Australia.

2. Year 2019 refers to 2018 for Norway.

Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

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The growing share of cleaners and guards employed in the administrative and services industry is indicative of a general trend towards greater occupational segregation across firms. Researchers have documented an increased concentration of certain occupations within firms. This is also suggestive of domestic outsourcing. As firms contract out more of their workers, intermediate contracting firms will specialise more, and display greater homogeneity of occupations. Similarly, lead firms will shed many of their workers in supporting roles, also resulting in greater homogeneity in occupations. Using this insight, Handwerker and Spletzer, (2016[48]) find that between 2000 and 2011 in the United States, occupation-concentration within firms rose. Their results track well with the outsourcing of cleaners and guards, and other measures of outsourcing in the United States during this period. Using an enterprise survey from the United Kingdom, Cortes and Salvatori, (2019[49]) similarly find a rise in occupational concentration within establishments. Recent research from France finds rising occupational homogeneity within firms, and the authors show that it increased as broadband internet was introduced in France, which the authors relate to domestic outsourcing (Bergeaud et al., 2020[35]).

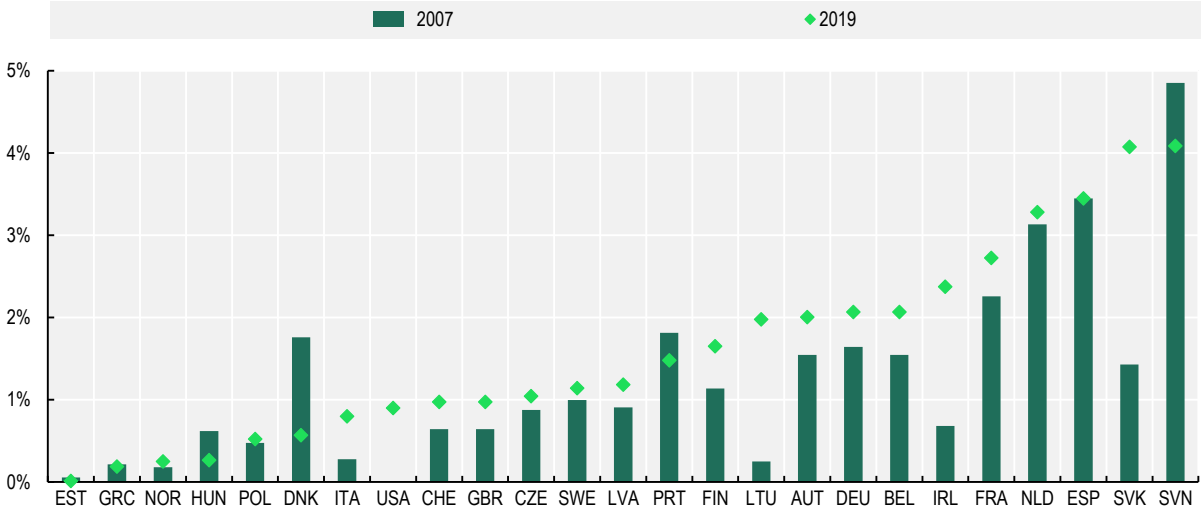
Employment in Temporary Work Agencies has risen slightly over the past decade

Employment with a temporary work agency represents a special case of administrative and support service employment. Employment with a temporary work agency would show under “Employment activities”. Contrary to other forms of outsourcing, questions about its use are often included in labour force surveys, which may be because of its long history as well as the policy attention it has received in the past.

Temporary work agency employment has increased, on average across OECD countries in the sample, although with significant cross-country heterogeneity. As noted previously, not all forms of TWA employment fall under domestic outsourcing, and one should interpret these trends with that in mind. From 2007 to 2019, the share of employment placed through a temporary work agency increased form 1.3% to 1.6% of total employment in OECD countries in the sample (Figure 4.5). The highest shares of TWA employment are found in Slovenia and the Slovak Republic, at over 4% of overall employment. In Estonia, Greece and Norway, temporary work agency employment is nearly non-existent, with shares of less than one tenth of a percent.

Figure 4.5. The share of temporary work agency employment is on the rise

Temporary agency employment as a share of all employment, 2007 and 2019



Note: Year 2007 refers to 2008 for Finland. Year 2019 refers to 2018 for Norway and to 2017 for the United States.
Source: The European Labour Force Survey (EU-LFS) and the Current Population Survey (CPS) May 2017 Contingent and Alternative Employment Arrangements supplement for the United States.

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Own-account work is falling slightly

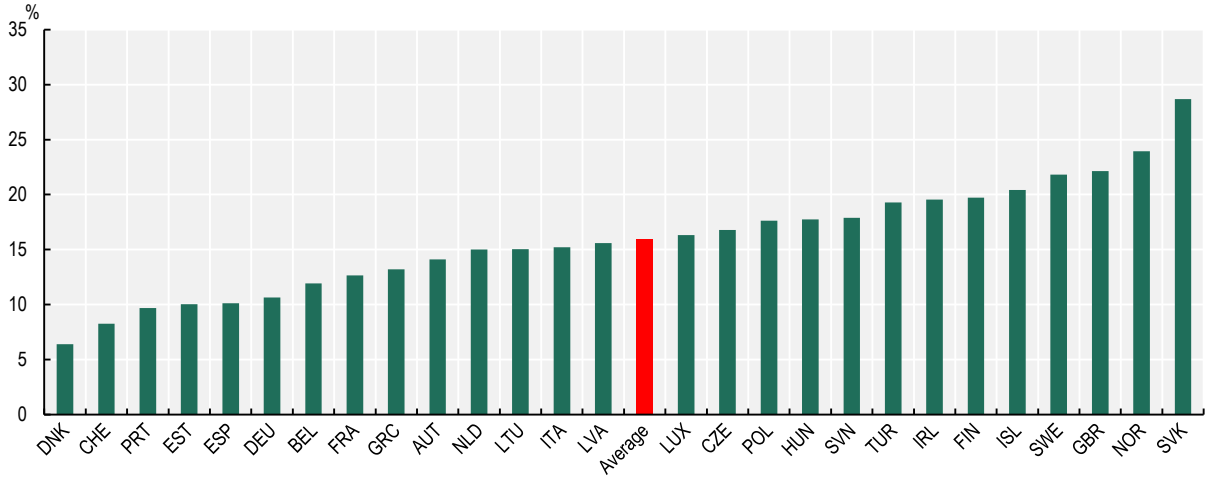
Some self-employed workers and, in particular, the financially dependent self-employed, represent a part of domestic outsourcing that is challenging to measure. Self-employment can take many forms, only some of which will constitute outsourcing. Financially dependent own-account workers are more likely to fall under the concept of domestic outsourcing, particularly in certain industries (e.g. delivery and logistics drivers).

It is difficult to find reliable and timely measures of the dependent self-employed, but they represent a non-negligible share of self-employment. Many OECD countries do not consistently measure the dependent self-employed population, and when they do, the definitions are not standard across countries. A special module of the European Labour Force Survey (EU-LFS) in 2017 finds that dependent self-employment comprises around 16% of self-employment (Figure 4.6). Moreover, there is evidence from other surveys that this share has grown in the last decade (OECD, 2019[29]).

This is in contrast to own-account self-employment generally, which has fallen slightly over the preceding 25 years across OECD countries. Own-account self-employment includes dependent self-employment, but it is a broader definition taking into account the self-employed with many clients, for example. The share of own-account employment fell from just below 10% in 1995 to just below 9% in 2019 (Annex Figure 4.A.2). Much of this share can be explained by a continuing decline in agriculture employment. In 2019, the countries with the largest shares of own-account work as a share of total employment were Greece and Turkey with the lowest shares found in Norway in Denmark.

Figure 4.6. The incidence of own-account workers who generally have one dominant client

Percentage of self-employed, 2017



Note: The average is unweighted and includes the countries shown.
Source: OECD (2019[50]), *OECD Employment Outlook 2019: The Future of Work*, https://doi.org/10.1787/9ee00155-en.

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4.2. Domestic outsourcing and COVID-19

The previous section charted the rise of domestic outsourcing over the past 25 years. In March of 2020, the COVID-19 pandemic created first a health, and then an employment crisis in OECD economies (Chapter 1). This section examines domestic outsourcing during the COVID-19 crisis. The dynamics of domestic outsourcing over the (still-ongoing at the time of printing) health crisis may shed insight into current trends, as well as help paint a more nuanced picture of the dynamics of portions of the low-wage labour market.

From a theoretical perspective, the impact of the COVID-19 crisis on domestic outsourcing is ambiguous. The COVID-19 health crisis may have accelerated the long-term trend towards greater outsourcing of support service occupations. Other broad labour market trends, such as job polarisation, have tended to accelerate during previous negative economic shocks. In fact, as far as job polarisation is concerned, much of the trend can be accounted for by the employment dynamics during recessions (Jaimovich and Siu, 2020[51]). It is possible that firms that let go of support occupations as a result of decreased sales and output during the crisis may later decide to rehire these services through third-party contracting firms when economic conditions improve. If this were the case, then one would see employment decline less in outsourcing industries and occupations during the COVID-19 crisis compared to other industries or in-house employment of similar occupations.

Conversely, domestic outsourcing may act as a buffer to variable firm labour demand. During a crisis, firms may hoard their own labour and, in case of a decline in sales and output, release their outsourced workers first. If this were the case, then one would expect to see a greater employment decline in outsourcing industries and occupations. This would give greater credence towards the claim that outsourcing helps firm flexibility (Section 4.1.2).

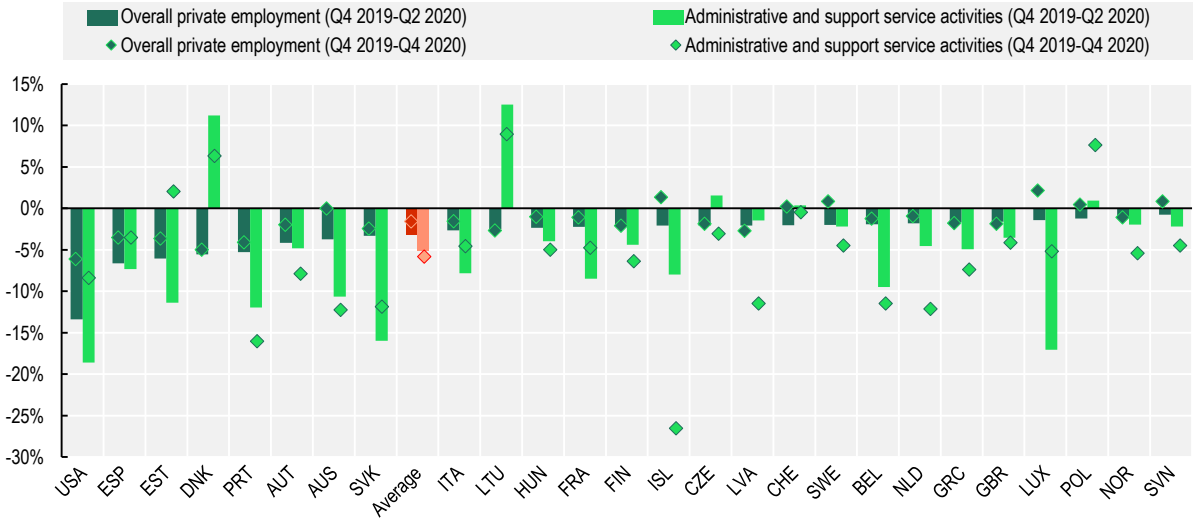
Figure 4.7 shows the change in employment for total private employment and the administrative and support activities industry. Recall that the administrative and support services industry primarily provides intermediate services to other firms with little knowledge transfer. While not all employment in this industry represents outsourcing, it provides an easily accessible cross-country comparison. The change shown is from the fourth quarter of 2019 (i.e. before COVID-19 began to circulate extensively in OECD countries) to the second and fourth quarters of 2020, respectively.

In the majority of OECD countries in the sample, the percentage change in employment in the administrative and support services industry was greater at the start of the COVID-19 crisis than the percentage change in employment in the private sector overall. Across OECD countries, the number of employees in the private sector decreased by 3.1% between the fourth quarter of 2019 and the second quarter of 2020 compared to 5.1% for administrative and support services.

Extending the analysis out to the fourth quarter of 2020 reinforces the greater sensitivity of administrative and support services to the COVID-19 employment shock. Employment in administrative and support services declined by 5.8% between the fourth quarter of 2019 and the fourth quarter of 2020. By comparison, overall private employment declined only by 1.5% over the same period.

Figure 4.7. Employment in administrative and support services declined more than employment overall

Percentage change in employment



Note: For the European countries, overall private employment is calculated as total employment less Public administration and defence; compulsory social security and Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use. For Australia and the United States, overall private employment is calculated as total employed less "Public administration and safety". The average is unweighted and includes the countries shown. Denmark, Iceland and the United Kingdom are updated to Q3 2020.
Source: Eurostat for the European countries, the United States Current Employment Statistics (CES) and the Australian Labour Force Survey.

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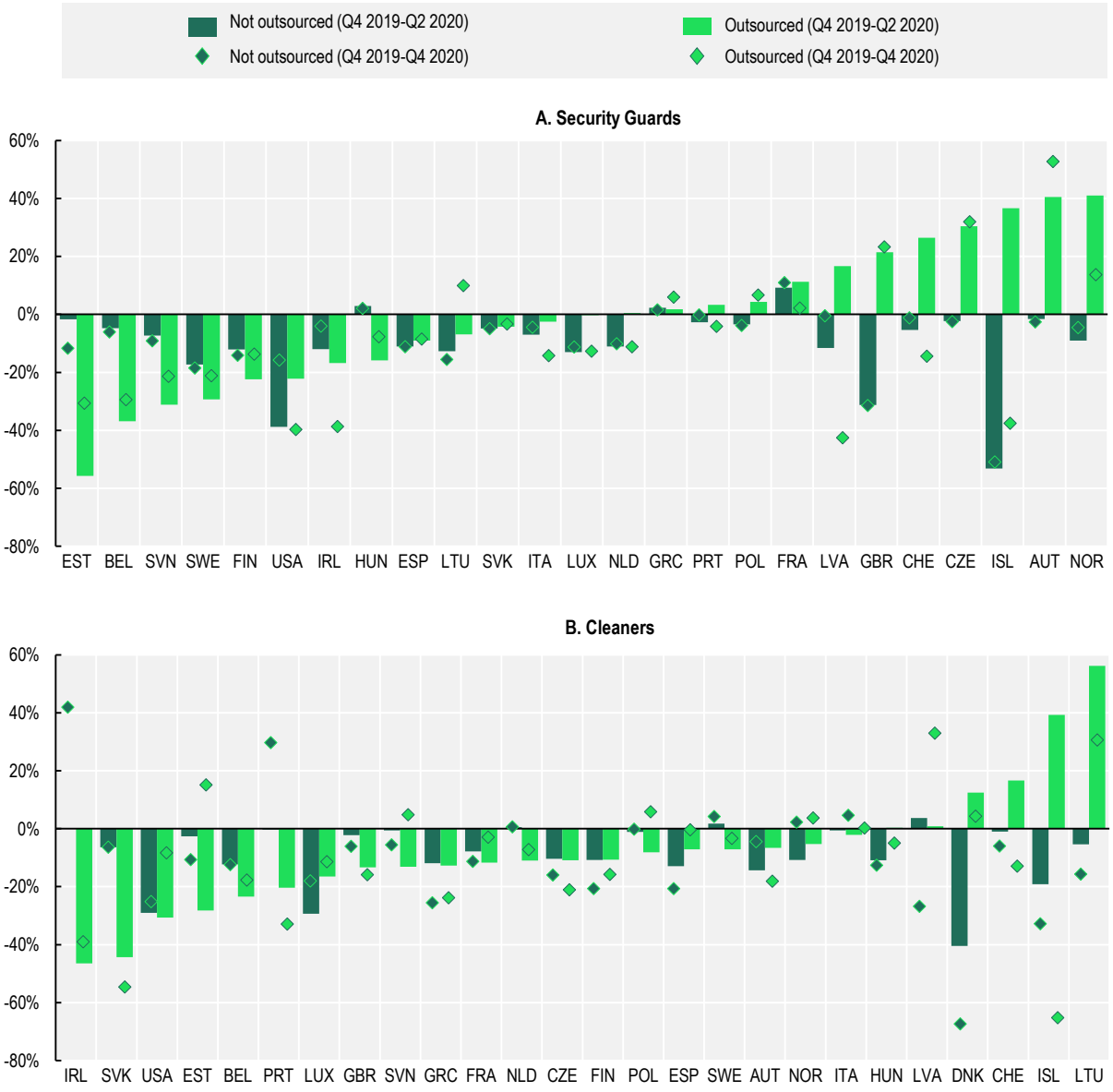
As previously discussed, employment in the administrative and support services sector is a rough measure of outsourcing. Certain non-outsourcing activities in this industry (e.g. travel agencies) have been particularly affected by the crisis, for example. What is presented in Figure 4.7 only allows for tentative conclusions about what happened to outsourced jobs. However, certain occupations within this sector are more likely to capture outsourcing. For example, Figure 4.8 shows how the COVID-19 crisis affected the number of employed guards and cleaners by their likely outsourcing status.

Employment among outsourced guards fell slightly at the start of COVID-19, while it decreased much more for guards who work in-house. Between the fourth quarter of 2019 and the second quarter of 2020, employment fell by 10% among non-outsourced guards, on average, and in all but two countries considered in the sample. Among outsourced guards, employment was unchanged, on average, between the fourth quarter of 2019 and the second quarter of 2020, although with significant heterogeneity across countries. Extending the analysis to the fourth quarter of 2020, employment among non-outsourced guards fell by 9% while it decreased by 8% among outsourced guards, suggesting more job destruction in the outsourced sector than in the in-house one in the second half of the year.

The difference in employment growth between cleaners whose jobs are outsourced and those whose jobs are not, was less extensive at the start of COVID-19 than for guards. On average, employment among cleaners who were not outsourced decreased by 9% while it decreased by 8% among outsourced cleaners between Q4 2019 and Q2 2020. Between Q4 2019 and Q4 2020, employment among outsourced and non-outsourced cleaners decreased by 10% with little discernible difference in employment changes between the two groups. In sum, a more precise measure of outsourcing showed that at the onset of the COVID-19 crisis, outsourcing may have accelerated – at least among guards. However, a year after, employment for cleaners and security guards adjusted at a similar rate whether the jobs were outsourced or not.

Figure 4.8. Guards experienced sharper declines in employment among workers who are not outsourced

Percentage change in employment



Note: For the European countries, guards are denoted by ISCO-08 sub-major group 54, "Protective Service workers", and are considered outsourced if they are employed in NACE Rev. 2 division 80, "Security and investigation activities." Cleaners are denoted by ISCO-08 sub-major group 91 "Cleaners and Helpers" and are considered outsourced if they are employed in NACE Rev 2. division 81, "Services to buildings and landscape activities." NACE Rev. 2 section "O", Public administration and defence; compulsory social security and section "T", Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use" are not included as valid sections for.non-outsourced cleaners and guards. Data from Denmark, Iceland, and the United Kingdom are updated to Q3.
Source: Eurostat for the European countries and the United States Current Population Survey (CPS).

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4.3. Domestic outsourcing may provide opportunities for OECD economies but its effects on job quality are mixed

One of the key questions looming over the rise of domestic outsourcing is what it means for workers and firms. There is a reasonable a priori case that firms outsource workers to realise productivity gains. If true, outsourcing holds the potential to benefit OECD economies. For workers, if outsourcing is accompanied by better pay and benefits, it is likely a welcome development. If, on the other hand, earnings and workplace amenities are reduced, this could lead to distress for many workers and possibly a rise in inequality overall. This section traces out the impact of outsourcing on five aspects of the labour market: productivity, earnings, working time, contract type (open-ended or temporary) and training.

The effects of outsourcing are mixed. There is recent, though tentative, evidence that firms that outsource realise productivity gains in the years that follow. There is more substantial evidence showing that, across a range of countries, outsourcing of low-pay jobs results in lower wages for affected workers. By contrast, the effects of outsourcing on other aspects of job quality are also mixed. Outsourced workers in low-pay occupations appear less likely to participate in training and more likely to work part-time involuntarily, but they are more likely to be on an open-ended contract.

4.3.1. Outsourcing may improve productivity

Whether outsourcing leads to the more productive provision of services is an open question in the academic literature and one of the most important questions hanging over the value of outsourcing from a policy perspective. If third-party firms can provide non-core functions of the firm more productively, this can, in theory, provide higher wages to workers (outsourced or incumbent) while giving the lead firms more room to invest, lower prices or increase employment.

There is some academic evidence pointing to weakly negative effects of outsourcing on productivity. This research relied on aggregate input-output data to measure domestic outsourcing and used within-country industry variation or cross-country variation by industry to identify the effect of outsourcing on productivity. Using data from Germany between 1995 and 2006 (Winkler, 2010[52]), or a panel of European OECD countries from 1996 to 2008 (Schwörer, 2012[53]), these studies found a weakly negative, but imprecisely estimated, effect of domestic outsourcing on productivity.

More recent research from France takes advantage of administrative data of workers and firms and finds a positive impact of domestic outsourcing on productivity. Bilal and Lhuillier (2020[5]) find that a 1 percentage point increase in outsourcing expenditures (as a share of the total wage bill) increases firm-level value added by 5%. Moreover, the authors find that this increase is equally split between higher labour productivity (2.6%), on the one hand, and higher employment (2.2%), on the other. Also for France, but using a different methodology, Le Moigne (2020[54]) finds similar average increases in productivity (1.96%) and slightly higher employment effects (4.5%) for firms that make use of outsourcing. Although these studies employ better data and empirical methodologies compared to earlier study, they are only a first step towards establishing a causal link between outsourcing and productivity.

4.3.2. Outsourced jobs pay less in low-pay occupations

Another salient dimension of domestic outsourcing is its impact on wages. Do outsourced workers, all else equal, earn more or less than similar workers employed directly by lead firms? The predictions of the various theories of outsourcing are ambiguous with regard to the direction of an outsourcing effect on wages. Theories that hypothesise outsourcing as a way to break union wage premiums, or disconnect support occupations from the rents generated by high-earning firms would predict a negative wage premium (Section 4.1.2). Conversely, if firms use outsourced workers to meet more flexible staffing needs

in the face of variable demand, or to realise productivity gains, firms may be willing to share these gains with workers in the form of higher wages.

This section uses labour force survey data to compare earnings differences between outsourced jobs compared to those retained in house. The analysis again focuses on guards and cleaners, which the academic literature regards as occupations typical of outsourcing. It is important to emphasise that while typical, it is not obvious that the results in this chapter would extend to other occupations – in particular to high-paid occupations – or outsourcing arrangements including temporary agency or own-account workers. The effects of outsourcing on job quality for other occupations and types of outsourcing remain a question for further research.

One complication that arises in comparing the earnings of outsourced workers, and workers in the same occupation whose jobs have not been outsourced, is that they have observable differences in characteristics such as gender, age and education, etc. In particular, across European OECD countries, outsourced workers in cleaners and security occupations tend to have lower education than non-outsourced workers in the same occupation. Similar differences are observable between outsourced and in-house workers in the United States and Australia as well.[14]

To correct for these observable differences (which could be confounding factors when looking at the impact of outsourcing on wages), this section measures wage differences based on a regression analysis. The empirical strategy will follow Dube and Kaplan (2010[6]) who measure wage differences between outsourced cleaners and guards, and those who are not outsourced, by using the industry of employment to proxy for whether a job is outsourced or not. The methodology of using the employer's industry for cleaners and guards to denote outsourcing is the same as that used to measure the incidence of outsourcing in Section 4.1.3.

The results should not be granted a causal interpretation. Even after controlling for observable differences between outsourced cleaners and guards, there may still be unobservable differences that influence earnings. However, Goldschmidt and Schmieder, (2017[7]) find that this methodology yields similar results to using matched employer-employee data and a more sophisticated empirical approach, which is better able to address differences in unobservable characteristics.

Employing this empirical strategy for cross-country comparisons is difficult due to data limitations. In most countries, earnings data combined with detailed occupation and industry information for each worker are often only found in administrative data, and even then, often not simultaneously. However, starting in 2009, the European Labour Force Survey began collecting data indicating in which decile of the monthly earnings distribution workers are located. The regression results in this section will use this information to examine how outsourcing shifts workers between earnings deciles (Box 4.5).

Figure 4.9 shows where earnings for cleaners fall in the earnings distribution and how outsourcing changes their relative standing. The dark line in each panel shows the complementary cumulative earnings distribution. That is, at each percentile, it shows the share of cleaners who earn more than that percentile. The earnings percentiles are calculated using the entire earnings distribution within a country, i.e. including all occupations and not just cleaners. The counterfactual distribution in the presence of outsourcing (light line), shows how outsourcing moves the distribution of outsourced cleaners across the monthly earnings distribution.[15] Figure 4.10 shows the exact same analysis but with guards rather than cleaners.

In Europe, Australia, and the United States, cleaners are unambiguously low-paid occupations. In Europe and Australia, median earnings for cleaners are between the 10th and 20th percentile of the earnings distribution. In the United States, median earnings for cleaners put them between the 20th and 30th percentile of the overall earnings distribution.[16]

The main finding is that, across European OECD countries in the sample, Australia as well as the United States, outsourcing appears primarily to shift low-pay cleaners further down the pay distribution. For cleaners in Europe (Figure 4.9, Panel A.), outsourcing moves cleaners down the earnings distribution

at almost every decile. This includes higher percentiles such as the 70th and 80th where few cleaners earn at these percentiles. Similar results obtain for a few large European OECD countries when analysed separately (Annex Figure 4.A.5).

For outsourced cleaners in Australia, the shift down the earnings distribution primarily occurs for the lowest paid cleaners. Cleaners who earn between the 10th and 40th percentiles drop down the earnings distribution when their jobs are outsourced (Figure 4.9, Panel B.). At higher deciles, the earnings of outsourced cleaners appear to be unaffected by outsourcing. Outsourced cleaners earn about 1% less, on average, than non-outsourced cleaners in Australia.[17]

In the United States, the pattern looks more similar to Europe than Australia. From the 10th to the 70th percentile, outsourced cleaners earn significantly less than their in-house peers (Figure 4.9, Panel C.). Taking the entire sample together, outsourced cleaners suffer a 5% wage penalty, on average, in the United States.

Before turning to the effects of outsourcing on guards, it is important to note that guards earn more, on average, than cleaners. This follows from looking at the actual pay distribution (dark line) in Figure 4.9 (cleaners) compared to Figure 4.10 (security guards), which represents the unadjusted earnings distributions of cleaners and guards, respectively. At every point on the x-axis, the dark line for security guards is above that of cleaners, showing that, at every decile, a greater share of security guards earn more at that decile than cleaners do. For Europe and Australia, the median guard earns between the 40th and 50th percentile of the earnings distribution. For the United States, the earnings for the median guard places them between the 30th and 40th percentile. This is perhaps not surprising, given the higher share of tertiary education among security guards compared to cleaners.

In Europe, guards whose jobs are outsourced earn less than guards who work in-house. The share of guards earning between the 30th and 90th percentile of monthly earnings drops significantly when guards are outsourced. With the median earnings for guards situated between the 40th and 50th percentile, this suggests that only a minority of high-paid guards are affected (Figure 4.10, Panel A.). As with cleaners, the results for guards are similar for a few disaggregated European OECD countries (Annex Figure 4.A.6).

In Australia, outsourced guards between the 40th and 70th percentile are more likely to fall down the earnings distribution. While the share of outsourced guards in the lower deciles of the earnings distribution are comparable to those of their non-outsourced peers, they are significantly less likely than non-outsourced guards to earn above the 50th percentile of earnings (Figure 4.10, Panel B.). Overall in Australia, guards earn 3.6% less than guards who are not outsourced.

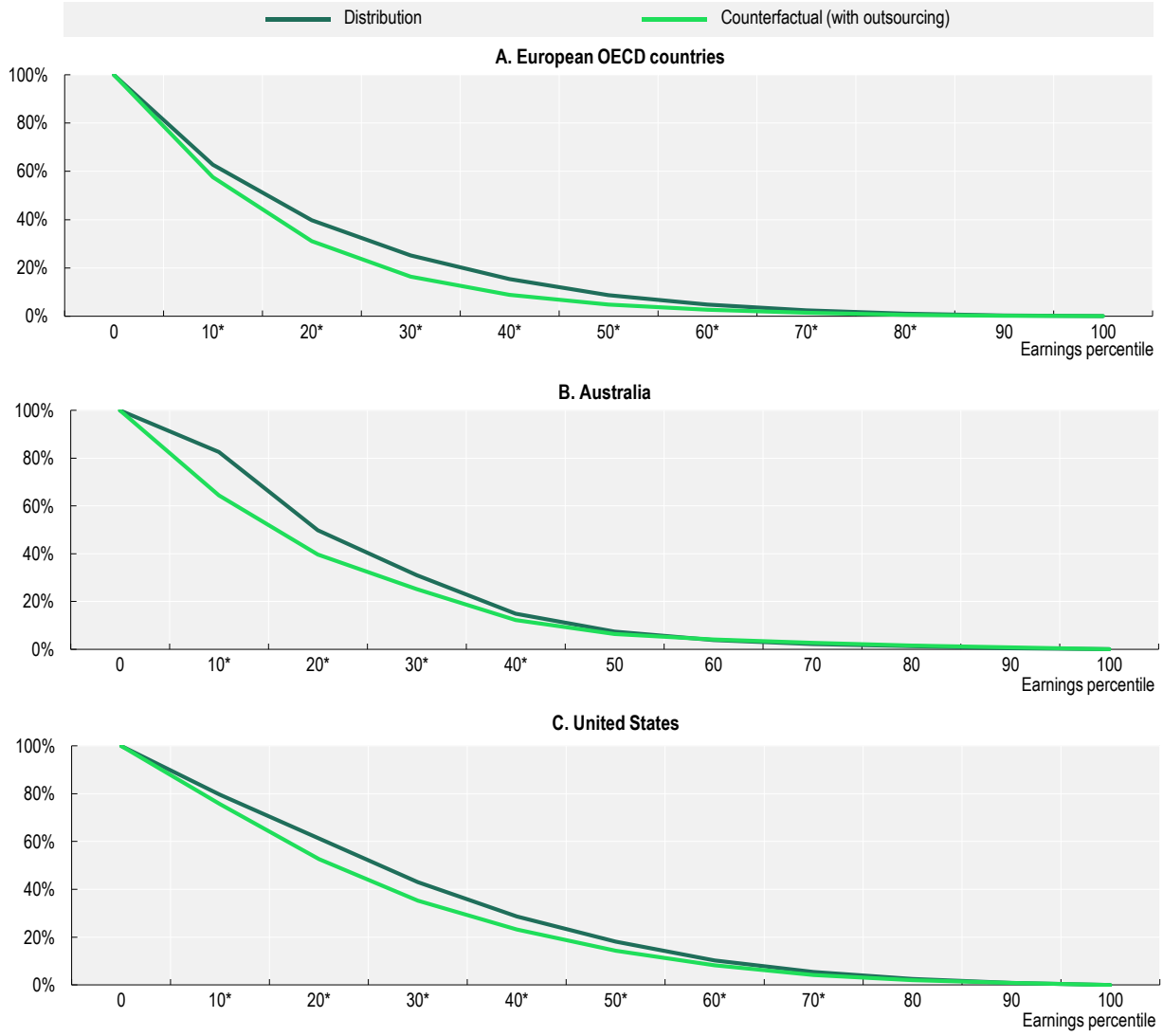
In the United States, outsourced security guards also fall down the earnings distribution. The wage penalties are more pronounced for outsourced guards who earn, on average, 7.7% less than their non-outsourced peers (Figure 4.10, Panel C).

Overall, the results of this section suggest that, in low-pay occupations, workers in outsourced jobs earn less than their peers in non-outsourced jobs. This effect is particularly strong for the highest-paid jobs within these occupations: the results suggest that the incidence of high- and middle-paid workers within these low-paid occupations is indeed much smaller if the jobs are outsourced. Although not explored in this chapter, one implication of outsourcing already low- and middle-pay jobs is higher inequality.

The results on the earnings or wage effects of outsourcing from the academic literature are similar to what is found in this chapter. This chapter is modelled after Dube and Kaplan (2010[6]), who analyse the effect of outsourcing on wage inequality in the United States. Employing a reweighting method to determine distributional effects of outsourcing, they find similar results with outsourcing shifting workers down from the middle and middle-upper part of the wage distribution. The authors conclude that “Overall, outsourcing appears to have altered the wage distribution by taking mid- to high-paying jobs and turning them into lower paying ones.”

Figure 4.9. Outsourcing of cleaners shifts workers down the earnings distribution

Complementary cumulative distribution and counterfactual complementary cumulative distribution for cleaners in the presence of outsourcing



Note: The darker line is one minus the cumulative distribution function for cleaners across the overall monthly earnings distribution. The lighter line is the regression-adjusted distribution for the effect of outsourcing. Regression is a linear probability model of whether a worker is above the given decile. Stars on the decile denote the difference is significant at the 95% confidence interval. Panel A consists of cleaners aged 20-64 years old (defined by ISCO-08 code 911 or 515, "Domestic, Hotel and Office Cleaners and Helpers", and "Building and Housekeeping Supervisors", respectively) across European OECD countries (excluding Turkey and including Iceland) over years 2011-18. Cleaners are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services". Panel B consists of employed cleaners aged 20 to 64 over the period 2001-19 who reported that their main occupation was Cleaner and Laundry Workers (ANZSCO 2006 Code 81). Cleaners were identified as outsourced if the reported industry for their main job was Building Cleaning, Pest Control, and Other Support Services (ANZSIC 2006 Code 73). The deciles were created using usual weekly earnings. Panel C consists of employed cleaners (excluding self-employed) aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Janitors and Building Cleaners (Census 2012 Occupation Code 4 220). Cleaners were identified as outsourced if the reported industry for their main job was Services to Buildings and Dwellings (Census 2002 Industry Code 7 690). The deciles were created using usual weekly earnings.

Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

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Box 4.5. Estimating earnings changes for outsourcing with distributions

The European Labour Force Survey (EU-LFS), like many labour force surveys, does not contain continuous wage or earnings data. Starting in 2009 in most countries, the EU-LFS does indicate in which decile in the monthly earnings distribution earnings from the main job falls. For example, for a worker in Denmark in 2012, the analyst would know that earnings from the main job placed that worker in between the 30th and 40th percentile of the monthly earnings distribution. Although these data will not allow the computation of an average earnings premium from outsourcing, they say something about how outsourcing moves workers within the overall earnings distribution.

Distribution regressions allow one to say how the effect of a given policy intervention varies across an arbitrary distribution. The idea is to divide an underlying distribution (monthly earnings, for example) into bins or cut-offs, and then estimate a parameter for groups below (or above) each point (Chernozhukov, Fernández-Val and Melly, 2013[55]). The method traces a set of parameter estimates, which can be used to construct a counterfactual distribution conditional on observable characteristics (Annex 4.B). For the purposes of outsourcing and the EU-LFS, the method will show how outsourcing shifts the distribution of monthly earnings among affected groups. The application in this chapter is most similar to applied work by Dube (2019[56]) but using decile indicators for monthly earnings rather than wages. The estimating equation is

$$y_{i,t,c,d} = \beta_d * outsource_{i,t,c} + \boldsymbol{X}_{i,t,c}\boldsymbol{\gamma} + \delta_t + \theta_c + \varepsilon_{i,t,c,d}.$$

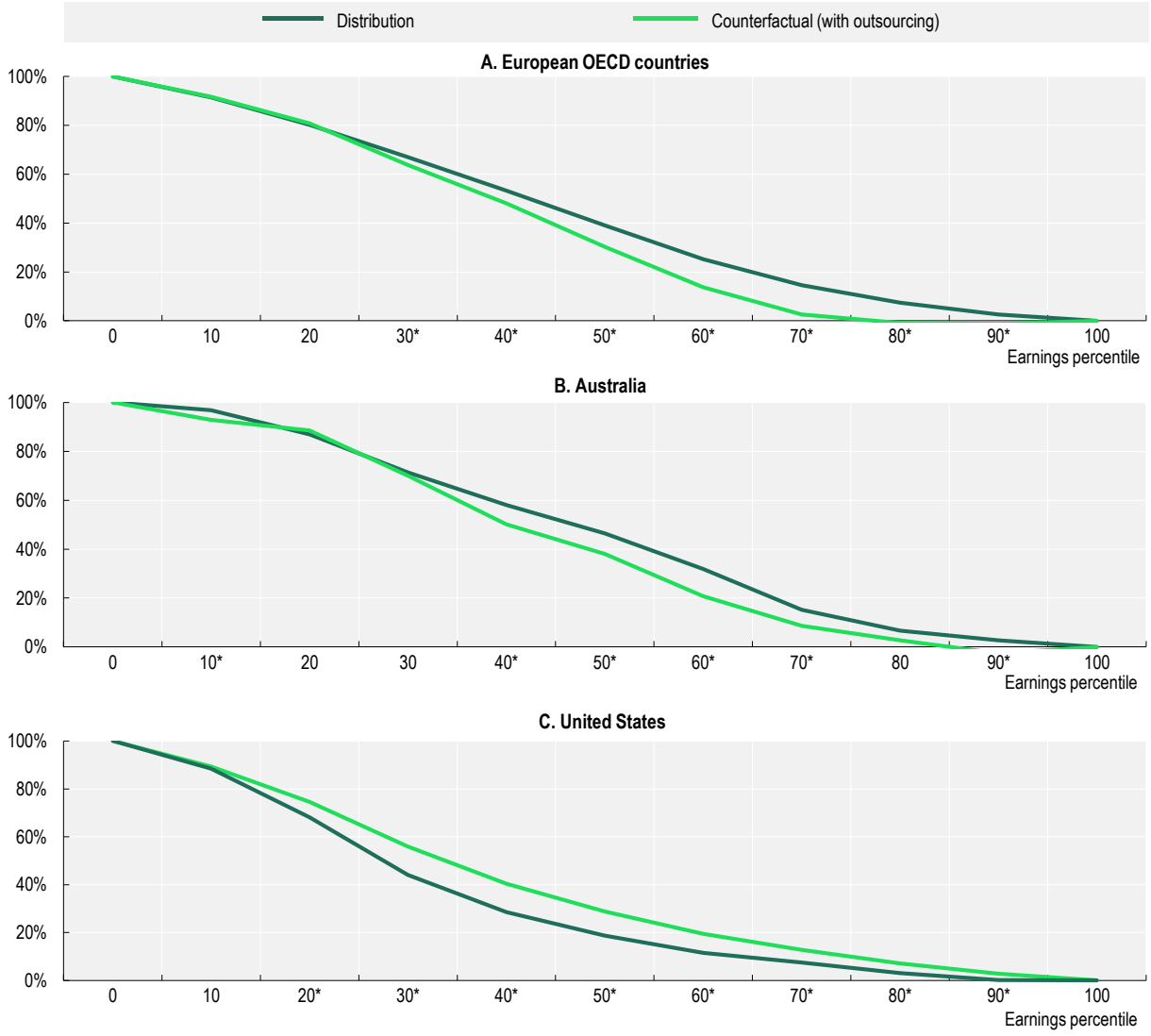
The dependent variable, $y_{i,t,c,d}$, is a binary indicator equal to one when individual i in country c at time t has monthly earnings greater than decile d. The variable $outsource_{i,t,c}$ is the indicator of interest and takes a value of one if either a cleaner or guard is working in the business services industry, $\boldsymbol{X}_{i,t,c}$ is a vector of individual and job characteristics including a non-parametric specification in age, education, sex and the log of usual hours worked. The indicators δ_t and θ_c capture year and country effects, respectively, while $\varepsilon_{i,t,c,d}$ is the error term. The equation is estimated as a linear probability model (ordinary least squares) separately for cleaners and security guards as well as for each node in the overall country earnings distribution.

The above equation has the form of a standard linear probability model, but the dependent variable and coefficient for outsourcing require further explanation. The mean of the dependent variable at each decile effectively traces out the cumulative distribution function of cleaners and guards, respectively, across the overall monthly earnings distribution. The theory is defined by the cumulative distribution function (CDF), but all results here are given by 1 – CDF to aid interpretation. The dependent variable is therefore, $y_{i,t,c,d} = \mathbf{1}\{g_{i,t,c} > d_{t,c}\}$, where $g_{i,t,c}$ is the decile of monthly earnings of person i in country c in year t. The set of estimated coefficients on the outsourced indicator, $\widehat{\beta_d}$, are estimated in d separate regressions and trace out the counterfactual cumulative distribution function in the presence of outsourcing. For each regression, the coefficient shows how outsourcing shifts workers at the margin above or below the given decile in the pay distribution. In words, the set of estimated coefficients shows how, all else equal, outsourcing shifts the distribution of monthly pay among cleaners and guards, respectively.

The earnings data from both Australia and the United States contain enough detail (estimates of hours and earnings) to compute average wage effects of outsourcing. The analysis calculates deciles in these countries in order to compare the effects to European OECD countries. The chapter reports the average effects to compare to the literature and confirm the distributional results.

Figure 4.10. Outsourcing of security guards shifts workers down the earnings distribution

Complementary cumulative distribution and counterfactual complementary cumulative distribution for guards in the presence of outsourcing



Note: The darker line is one minus the cumulative distribution function for security guards across the overall monthly earnings distribution. The lighter line is the regression-adjusted distribution for the effect of outsourcing. Regression is a linear probability model of whether a worker is above the given percentile. Stars on the percentile denote the difference is significant at the 95% confidence interval. Panel A consists of guards (defined by ISCO-08 code 541, "Protective services workers") across European OECD countries (excluding Turkey and including Iceland) over the period 2011-19. Guards are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services". Panel B consists of employed guards aged 20 to 64 over years 2001-19 who reported that their main occupation was Protective Service Workers (ANZSCO 2006 Code 44). The deciles in Australia were determined using usual weekly earnings. Guards were identified as outsourced if the reported industry for their main job was Other Business Activities (ISIC 3.1 Code 74). Panel C consists of employed (excluding self-employed) guards aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Guard (Census 2012 Occupation code 3930). Guards were identified as outsourced if their reported industry for their main job was Investigation and Security Services (Census 2002 Industry Code 7680). The deciles in the United States were created using usual weekly earnings.
Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

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Research for other OECD countries using better identification strategies and data confirm these results. Research using German administrative data finds that outsourcing leads to wage declines of up to 10% and similar distributional effects as found in this chapter for Europe (Goldschmidt and Schmieder, 2017[7]). Recent empirical work using French data also finds sizable wage declines for outsourced workers of around 14% to 15% (Bilal and Lhuillier, 2020[5]; Le Moigne, 2020[54]).

The negative wage effects of outsourcing are not only limited to jobs subcontracted to secondary firms. Academic studies have also found wage declines associated with franchising, including in key industries such as fast food (Krueger, 1991[10]) and the hotel industry (Freedman and Kosová, 2014[8]). In both studies, similar workers in essentially identical establishments earn less if they are employed by franchisees than if they are employed directly by an establishment run by the lead firm. In some emerging economies, wage declines are also found with temporary agency workers compared to similar workers with whom they work side-by side in the same firm (Drenik et al., 2020[13]), although this is unlikely to generalise to most OECD countries due to anti-discrimination regulations that often impose the same pay level for the same job (OECD, 2020[17]). In sum, moving workers in low-pay occupations outside the boundaries of a lead firm appears to result in wage declines for these workers and may be an important driver of overall earnings inequality (Box 4.6).

Box 4.6. Does outsourcing explain between-firm earnings inequality?

An emerging stylised fact about rising earnings inequality across OECD countries is that inequality between firms has risen more than inequality within firms. Researchers have confirmed this fact using high quality administrative data from the United States and other OECD countries covering close to the universe of firms and workers (Barth et al., 2016[57]; Song et al., 2019[58]; Criscuolo et al., 2020[59]).

Although the importance of rising between-firm wage inequality has been confirmed across many OECD countries, the reason for this phenomenon remains elusive. Many of the authors of these studies speculate that domestic outsourcing could play an important role in explaining the rise in between-firm wage inequality. With firm-to-firm outsourcing of complementary occupations to specialty service firms, complementary occupations that are less productive are segregated into separate firms. This leaves the higher productivity "core" occupations of the lead firm in place, which would generate rising between-firm earnings inequality. If productivity gains and/or higher profits from outsourcing are shared with remaining workers, outsourcing would also increase the higher rents paid by the lead firm.

The connection between outsourcing and rising between-firm earnings inequality is yet to be confirmed. However, just as with this chapter, recent studies of between-firm earnings inequality point to an important role for inter-industry earnings differentials, and especially the importance of occupations across industries and worksites (Haltiwanger and Spletzer, 2020[60]; Wilmers and Aeppli, 2021[61]).

4.3.3. The effects of outsourcing on other dimensions of job quality are mixed

Outsourced cleaners are more likely to involuntarily work part-time

One factor that often inhibits the earnings of low-wage workers is the unavailability of full-time hours. Workers across OECD countries are finding that underemployment is on the rise: many, and in particular low-wage, workers cannot find full-time employment; or they would like more hours than their employers are willing or able to provide (OECD, 2019[62]). This section turns to whether the working time for outsourced workers is different from similar workers who are employed in-house, and if it is, whether such hours differences are involuntary.[18]

Across OECD countries in the sample, outsourced cleaners are more likely to work part-time than non-outsourced cleaners. There is little difference in the incidence of part-time work for outsourced guards (Annex Figure 4.A.7). To estimate the difference in the incidence of part-time work between outsourced and in-house workers, the analysis again uses a linear probability model. The model is simpler than the one used for estimating differences in earnings (Section 4.3.2), and the dependent variable is a binary indicator of whether a worker worked part-time or not (see Annex 4.B).

The findings also suggest that the difference in the incidence of part-time work among cleaners does not appear to be voluntary. Figure 4.11 shows the incidence of involuntary part-time work between outsourced cleaners and guards adjusting for observable characteristics. In general, across OECD countries in the sample, outsourced cleaners are 7 percentage points more likely to work involuntarily part-time. The largest differences for cleaners are in Italy, Spain and Portugal. Although there is wide heterogeneity at the country level, on average there is little difference in the incidence of involuntary part-time work for guards.

Outsourced workers are less likely to participate in training

One theory for why wages may be lower for outsourced workers is reduced occupational mobility. Workers within a large firm with a diversity of occupations have access to internal job networks and training, which may facilitate their movement up the occupational job ladder into higher-paid occupations within that firm (Weil, 2014[14]). Having access to a continuum of occupations, which require progressively more qualifications and higher pay, may be enough for occupational mobility wage gains over a career. Recent research suggests that, if this ladder of occupational progression is removed as a result of outsourcing, workers who remain in the lead firm have much more difficulty being promoted (Le Moigne, 2020[54]).[19]

The data required to track occupational mobility within firms is beyond the scope of this chapter, but the analysis can examine one potential mechanism: training. The availability of an occupational ladder within firms is necessary for occupational mobility, but without training, it may not be sufficient. Training allows workers within firms to increase their competencies and skills, and compete for the higher paying jobs within a firm.

Security guards and cleaners are slightly less likely to receive training if they are outsourced. Security guards, in particular, experience a reduction in the probability of training if their jobs are outsourced. However, in many of the countries in the sample, the estimates are not statistically significant (Figure 4.12, Panel A). Exceptions are Australia, Sweden and France, where the probabilities of training are reduced by the greatest amount when workers are outsourced.

For cleaners, the estimates of the probability of training are more precise owing to greater sample sizes, but the pattern is largely the same (Panel B). Cleaners in Australia, France and the United Kingdom see the largest declines in the probability of training if their job is outsourced. Norway and the Slovak Republic are notable exceptions, as outsourced cleaners were more likely to train, all else equal, and the estimates are statistically significant.

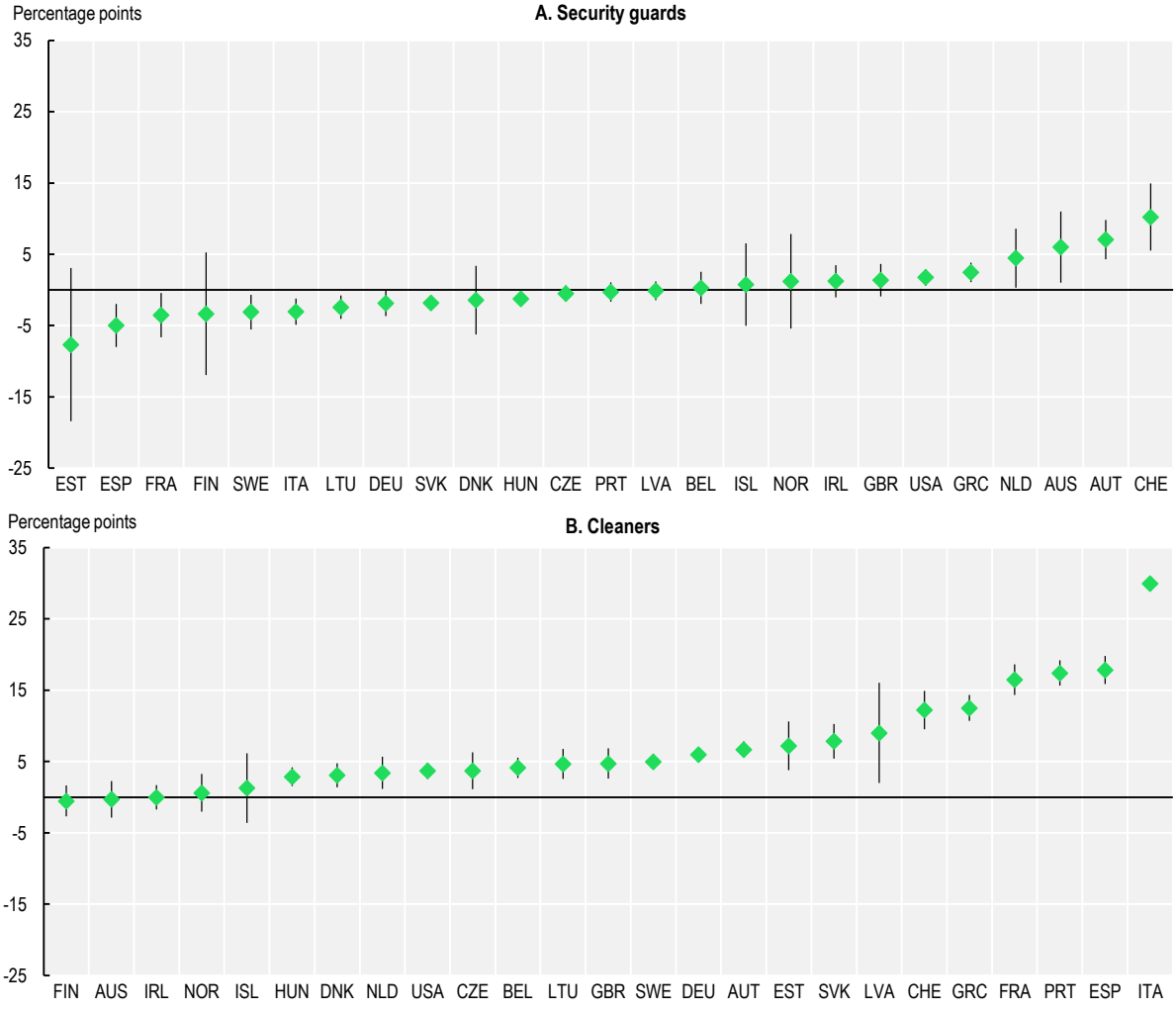
In European OECD countries, outsourced workers are more likely to be on an open-ended contract

Across the OECD, but in particular in European OECD countries, whether a worker receives an open-ended contract or a contract of fixed duration is an important dimension of job quality. The incidence of fixed-term contracts has been mostly stable across OECD countries over the last decade, though it has increased slightly for new hires (OECD, 2014[28]). An open question, especially given the flexibility outsourcing offers to employers, is whether outsourced workers are more likely to have a fixed-term contract.

The previous section showed that workers whose jobs are outsourced earn lower wages. It is theoretically unclear what that implies for other aspects of job quality. It is possible that the lower wages of outsourced workers signal a general decline in job quality, including a greater likelihood of having a fixed-term contract. In contrast, lower wages may be a trade-off workers take in return for more secure employment in the form of an open-ended contract. In this scenario, outsourced workers would be less likely to hold fixed-term contracts.

Figure 4.11. Outsourced workers are more likely to work part-time involuntarily

Percentage point change in marginal propensity to work part-time involuntarily, by country



Note: Diamonds show the percentage point change in the marginal propensity to work involuntarily part-time from a linear probability model. Vertical lines show the 95% confidence interval of the point estimates. The European countries cover guards and cleaners aged 20 to 64 over the period 2011-19. Involuntarily part-time workers are those working part-time, who would like to work more hours or cannot find full-time employment. The United States covers guards and cleaners aged 20 to 64 over the period 2011-19. Workers are considered part-time for economic reasons if they worked fewer than 35 hours per week for economic reasons and available for full-time employment. Australia covers guards and cleaners aged 20 to 64 over the period 2001-19. Workers are considered part-time if they reported working less than 35 hours per week and are unable to find full time work.
Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

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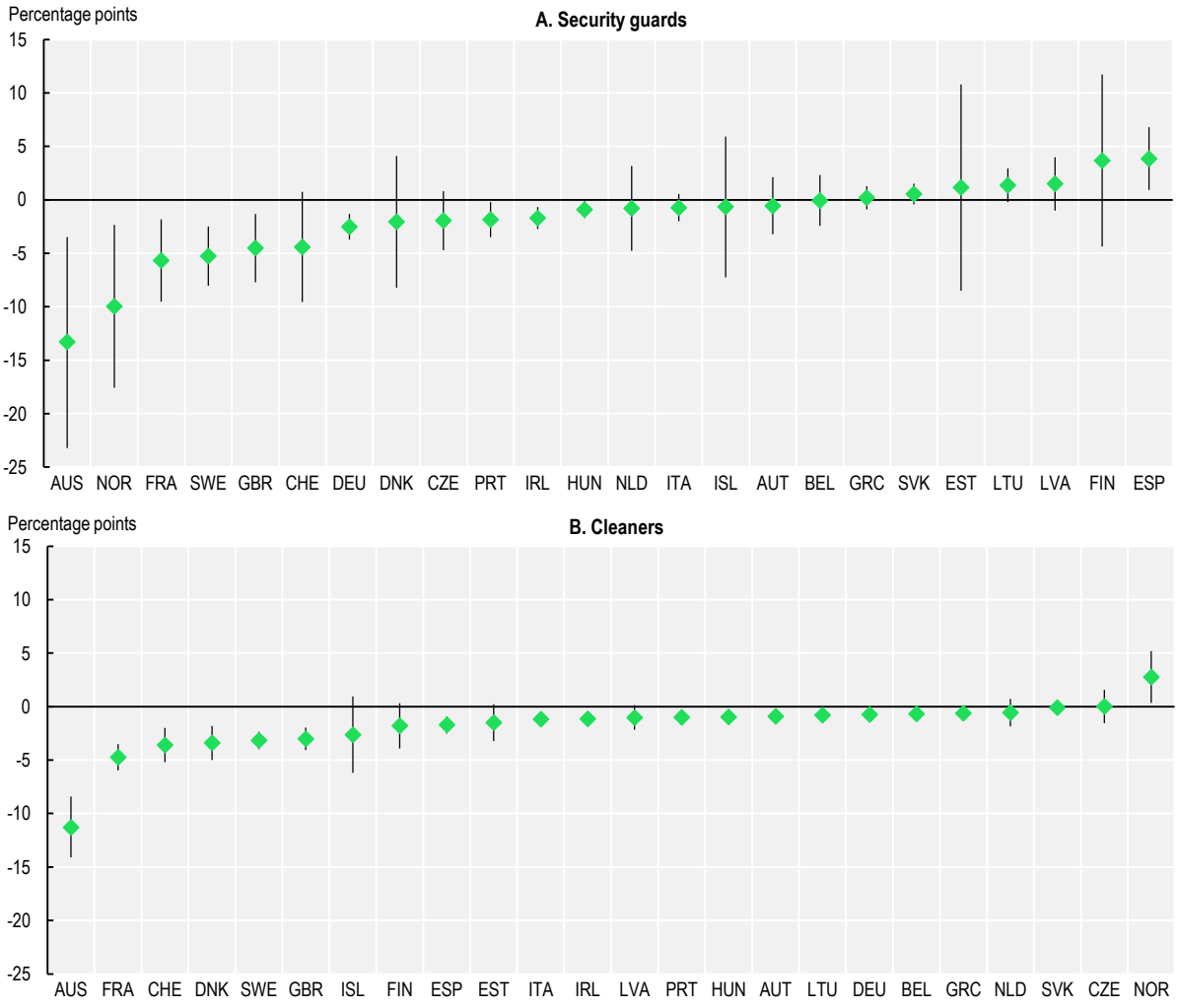
Figure 4.12. Outsourced workers are less likely to train

Percentage point change in marginal propensity to receive training if outsourced, by country



Note: Diamonds show the percentage point change in the marginal propensity to train from a linear probability model on the propensity to train if outsourced. Vertical lines show the 95% confidence interval of the point estimates. The European countries cover guards and cleaners aged 20 to 64 over the period 2011-19. A worker participated in training if they took part in instruction outside of the formal education system in the last four weeks. Australia covers guards and cleaners aged 20 to 64 over the period 2001-19. A worker is considered to have taken place in a training if they answer "Yes" to "In the past 12 months, have you taken part in any training or employment scheme as part of your job?"
Source: The European Labour Force Survey (EU-LFS) (European countries) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

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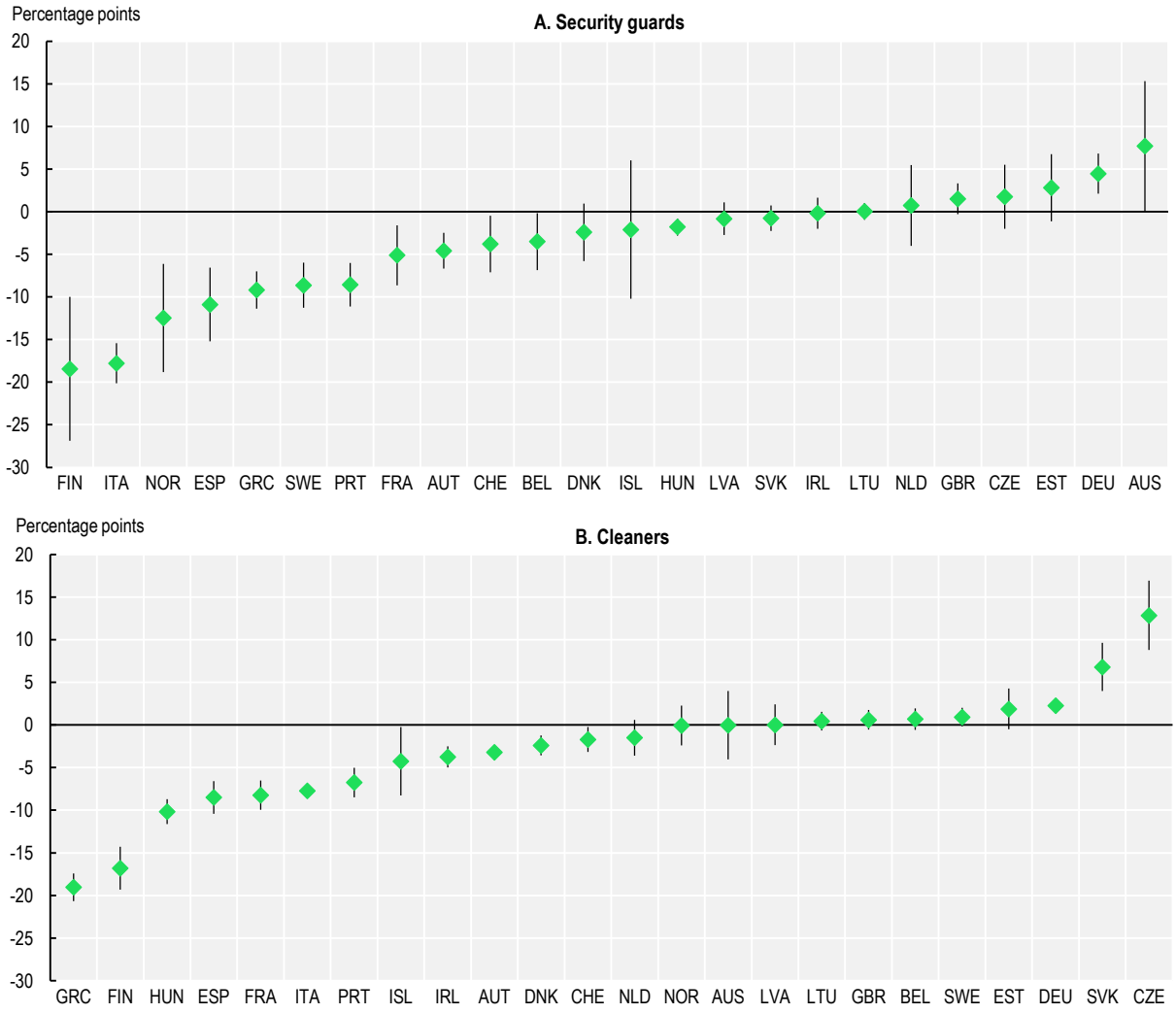
Across the OECD countries in the sample, outsourced workers are somewhat less likely to hold a fixed-term contract. Figure 4.13 plots the estimated coefficients for each country for both cleaners and security guards. As with part-time work and the incidence of training, estimates are the result of a linear probability model to adjust for observable differences between outsourced workers. For security guards, eight of the 17 countries show a significant decrease in the probability of holding a fixed-term contract for outsourced workers. In the Czech Republic, the Slovak Republic and Germany, outsourced security guards have a greater probability of being trained than their non-outsourced peers.

The same pattern holds for cleaners. For all countries in the sample (with the exception of the United Kingdom, Germany, the Slovak Republic and the Czech Republic), outsourced cleaners have a lower probability of holding a fixed-term contract (although the differences are not always statistically significant). In contrast to security guards, the estimated coefficients varied much less across countries with the majority hovering just below zero. In Greece, France and Hungary outsourced cleaners' probability of holding a fixed-term contract was 5 percentage points lower compared to non-outsourced workers.

Figure 4.13. Outsourced workers are less likely to be on a fixed-term contract

Percentage point change in marginal propensity to be on a fixed-term contract if outsourced, by country



Note: Diamonds show the percentage point change in the marginal propensity to work on a fixed-term contract from outsourcing using a linear probability model. Vertical lines show the 95% confidence interval of the point estimates. The European countries cover guards and cleaners aged 20 to 64 over the period 2011-19. Australia covers guards and cleaners over the period 2001-19. Workers with a fixed-term contract include workers who have a fixed-term or casual contract.

Source: The European Labour Force Survey (EU-LFS) (European countries) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

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4.3.4. Outsourcing, and the dual employers it often entails, may harm health, safety and labour standards compliance

The evidence presented so far in this chapter suggests that firms use outsourcing, among other reasons, to lower labour costs. The same competitive pressures that encourage firms to outsource workers may result in an environment that threatens occupational health and safety.

The structure of the employment relationships in outsourcing arrangements may lead to greater occupational injury. Since the lead firm does not directly employ outsourced workers, they may be operating in an unfamiliar environment with unfamiliar co-workers, equipment, and machinery (Menegatti, 2015[63]). In these triangular relationships, outsourced workers may also be unaware of who to report their injuries or grievances to before it is too late (Weil, 2020[64]). Since the relationship between workers and the host company is precarious, outsourced workers may be reluctant to complain in fear of losing their jobs, thus leaving incidents underreported (see Box 4.7).

Box 4.7. Franchising and occupational health

In May 2020, a multi-national coalition of unions filed suit with the OECD against McDonalds for "systematic sexual harassment". The OECD is not a judicial body, but its *Guidelines for Responsible Business Conduct* provide non-binding principles and standards for responsible business conduct, as well as a mediation and conciliation platform for resolving issues that may arise (OECD, 2011[65]). The complaint alleges that across OECD countries, female employees of the multinational corporation have been subjected to systematic harassment ranging from sexist comments to physical attacks (Zerouali, 2020[66]).

The franchising business likely plays a role in the alleged harassment. The franchisor, who often exerts control over employees and aspects of their working environment, is often able to deflect responsibility of non-compliance to the franchisees who are the legal employer. For example, in France, it is not mandatory for firms with less than 300 employees to have a *commission santé, sécurité et conditions de travail* (CSSCT), which is charged with helping to ensure the health and safety of employees in the firm. Many franchised brands collectively will have over 300 employees, but because they are broken up into independent franchisees, each a separate legal entity, it is unlikely most employees will be covered by a CSSCT. Regulatory thresholds, in particularly as regards health liabilities, have indeed been found to lead to affect the firm size distribution in France (Garicano, Lelarge and Van Reenen, 2016[67])

OECD countries take various approaches to ensure that occupational safety and health regulations cover all work arrangements. For example, Australia's harmonised Work Health and Safety laws place a statutory duty on "a person conducting business or undertaking", rather than an "employer" (Jhonstone and Stewart, 2015[68]). This includes, "employers, principal contractors, heath contractors, franchisors, and the Crown." Further, the duty of care is owed to "workers", rather than "employees." As a result, any worker assigned to work in the person's business or undertaking will be protected, including subcontractors and outworkers. This policy is in line with Weil's (2020[64]) suggestion that the most effective way to prevent incidents of workplace injuries among outsourced workers is to attach liability to work itself, rather than attaching it to the employer with whom a worker has a contract.

4.4. Concluding remarks

This chapter has documented trends in domestic outsourcing and examined some of its implications for OECD labour markets and job quality in low-paid occupations. Domestic outsourcing, or the contracting out of a firm's labour to third-party firms, is increasing in low-wage labour markets. The COVID-19 crisis has not dampened this trend and may have acted as an accelerant. The implications of domestic outsourcing for OECD labour markets and job quality offer reasons for both optimism and concern, which countries may want to address.

The analysis in this chapter and recent academic research suggest that domestic outsourcing may lead to higher earnings inequality. The results in this chapter, along with a growing body of academic research, suggest that the earnings penalties for at least some outsourced jobs are real. It is important to stress that the results in this chapter only hold for cleaners and guards. Academic research generally confirms these findings, but extends these results to a larger set of low-wage occupations. Further research is needed to see if these results hold for a broader set of occupations including high-wage occupations, and workers who remain in the lead firm after certain occupations are outsourced. Expanding the types of workers potentially impacted by outsourcing will also help determine the full impact of outsourcing on rising earnings inequality.

It is clear that there are practical and legitimate business needs for outsourcing some domestic employment. However, with the exception of the couple of recent studies for France highlighted in this chapter, the productivity gains resulting from outsourcing are still to be confirmed empirically and warrant further research.

While the incidence and implications of domestic outsourcing have received increased attention from researchers, it is a topic that has attracted relatively little interest from policy makers in recent years. This may be partly due to the fact that the concept is difficult to measure. There are some policies, however, that may allow OECD labour markets to capture productivity enhancements while allowing affected workers to enjoy some of the resulting benefits.

One policy area concerns the terms of employment when employees shift from one firm to another. For example, under an EU directive, when a firm moves employees to another firm due to a transfer, merger, divestiture or takeover, there is a legal requirement to maintain the pay, working conditions and collective agreements of the affected workers (EU Council Directive, 2001[69]). Whether this EU directive is applicable in the case of employee transfers while outsourcing, and how long the maintenance of employment conditions lasts in practice, is an open question and often depends on whether the outsourcing event qualifies as a transfer. In addition, a firm could always restructure its operations, eliminate certain jobs and resort to outsourced labour services provided by different staff hired by an outsourcing company, and thereby avoid the obligations imposed by the EU directive. In practice, the empirical findings in this chapter show that outsourced cleaners and guards earn less, and the academic literature tends to suggest that pay levels do not remain at their previous levels for workers in outsourced jobs (at least not for very long).

A second policy area that merits further examination concerns the labour laws that determine who is an employer and what responsibilities the various employing entities have towards workers. This becomes particularly challenging when there are three parties involved. There is extensive literature on regulations for temporary work agency employment (OECD, 2014[28]) that may be useful for outsourcing as well. Work health and safety laws in Australia, for example, place non-transferrable duties on principal contractors as well as those persons with management and control of workplaces. In English-speaking countries, discussion of outsourcing often focuses on the idea of granting joint employer status, in which both the lead and contracting firms would be considered legal employers of outsourced workers (OECD, 2019[29]). The full implications of these policies for outsourcing remain unclear, however.

Future policy discussions should also concentrate on the role of collective bargaining agreements. Many European OECD countries rely on sectoral agreements, but it is often unclear which agreement applies to

those in outsourced jobs. For example, if a manufacturing firm decides to outsource its security guards to a security firm, would the guards be covered by the manufacturing sector agreement or that of the support services industry? The regulation of temporary agency work may provide a model for domestic outsourcing more broadly. In the Netherlands, for example, temporary agency workers and certain other on-site contractors must be paid according to the lead firm's collective agreement for similar jobs (de Graaf-Zijl, Scheer and Bolhaar, 2018[70]). In addition, in a number of OECD countries, the collective agreement that applies to the temporary agency workforce is the one with the most favourable provisions for the worker (OECD, 2014[28]). Similar arrangements could be made to allow outsourced workers access to a lead firm's internal training and job opportunities.

The level of collective bargaining should also be considered. Australia has a form of wage regulation via the "Modern Awards" system, which is a combination of occupation- and industry-based wage floors (OECD, 2019[71]). This chapter finds that, regardless of the country and collective bargaining system, outsourcing leads to lower wages for outsourced workers. However, sectoral or national collective agreements may wish to consider certain inter-industry occupational wages, particularly for occupations found in almost all industries. This might prevent outsourcing decisions that bring no productivity improvement but are made purely with the aim of exploiting different wage levels for the same occupations in different industries where the tasks performed are largely the same.

The effects of employment protection legislation on the incidence of domestic outsourcing remains a question for future research. This chapter finds that outsourced cleaners and guards are more likely to be employed on indefinite contracts. For countries with strict or costly rules regulating dismissals of workers on permanent contracts, one possible interpretation of this result is that firms may prefer to outsource occupations that are not core to the firm's main business activity, but whose services they require on an open-ended basis, because terminating a contract for services is simpler and less risky than terminating a labour contract.[20] This interpretation is not confirmed in the chapter, but it serves to highlight the need for more research on the interplay between employment protection legislation and domestic outsourcing.

Finally, better data collection to identify the incidence and diversity of tripartite employment relationships is paramount. Currently, statistical agencies make some effort to identify temporary work agency employment, and some types of self-employment at irregular frequencies. This chapter argues that the extent of domestic outsourcing is much broader, and better data collection would help to confirm the extent of domestic outsourcing in a broader set of industries and occupations.

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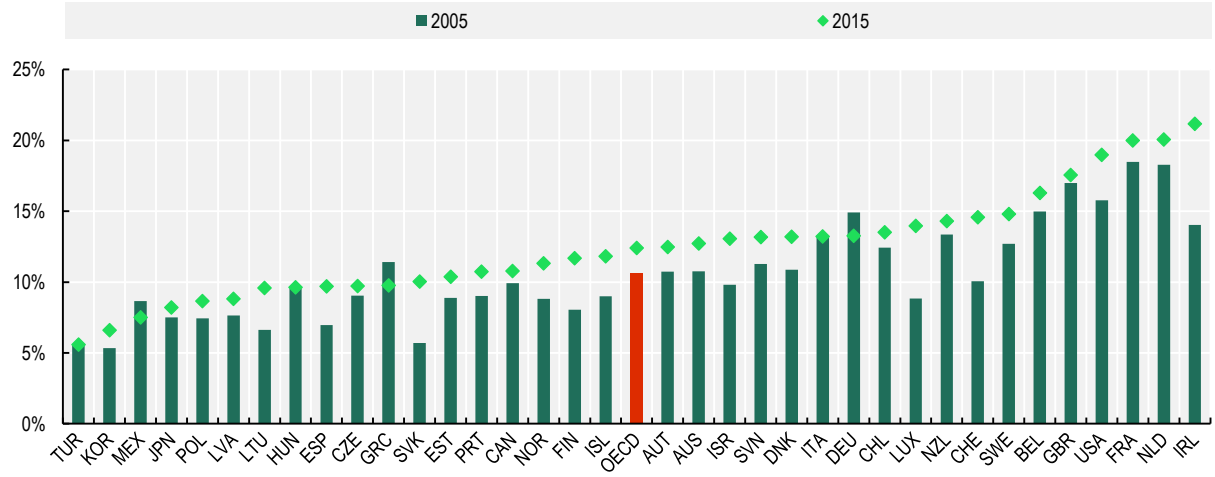
Annex 4.A. Additional figures

Annex Figure 4.A.1. Share of intermediate consumption spent on other business services, 2005 and 2015

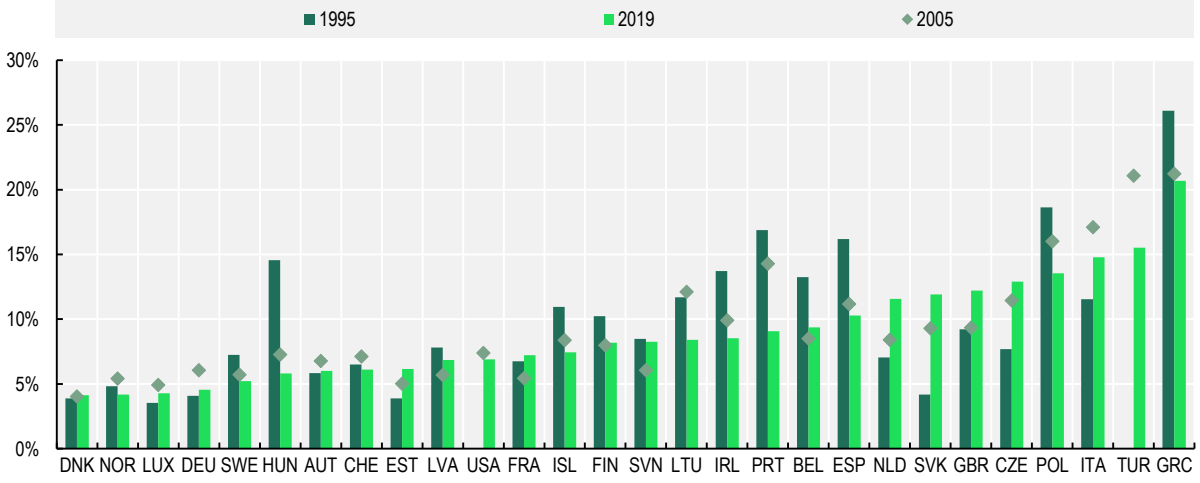


Note: The OECD is an unweighted average and excludes Colombia.
Source: OECD STAN Industrial Analysis (2020 ed.)

StatLink https://stat.link/ldp6hu

Annex Figure 4.A.2. Own-account work is falling slightly across the United States and European OECD countries

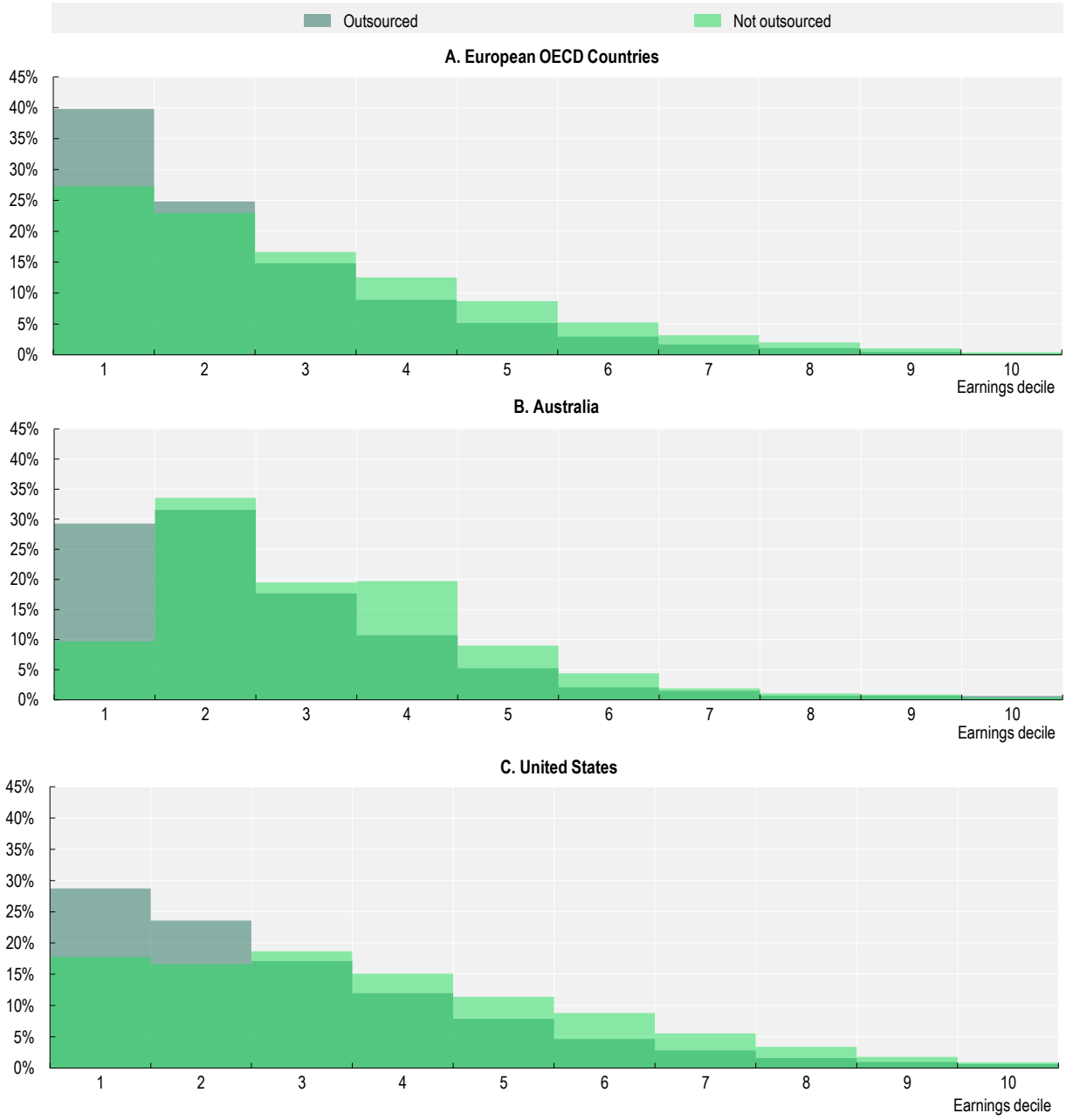
Own-account self-employed as a share of all employment, 1995, 2005 and 2019



Note: Year 1995 refers to 1996 for Hungary, Slovenia and Switzerland, to 1997 for the Czech Republic, Estonia and Poland and to 1998 for Austria, Latvia, Lithuania and the Slovak Republic. Year 2005 refers to 2006 for Turkey. Year 2019 refers to 2017 for the United States and the series to independent contractors.
Source: The European Labour Force Survey (EU-LFS) and the Current Population Survey (CPS) February 2005 and May 2017 Contingent and Alternative Employment Arrangements supplement for the United States.

StatLink https://stat.link/c84xwm

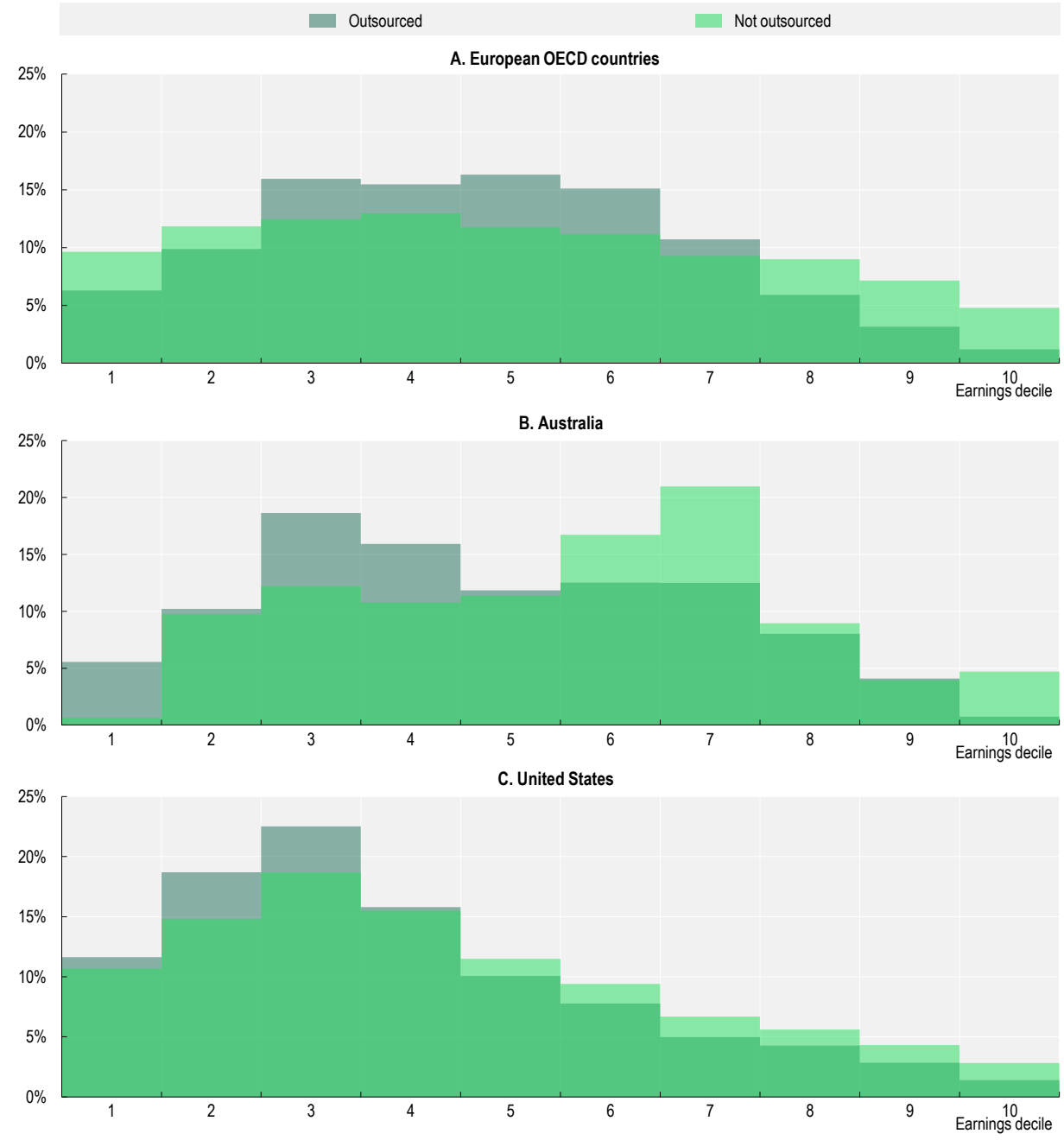
Annex Figure 4.A.3. Earnings distributions of cleaners, by outsourcing assignment



Note: Panel A consists of cleaners aged 20-64 years old (defined by ISCO 08 code 911 or 515, "Domestic, Hotel and Office Cleaners and Helpers", and "Building and Housekeeping Supervisors", respectively) across European OECD countries (excluding Turkey and including Iceland) over years 2011-18. Cleaners are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services". Panel B consists of employed cleaners aged 20 to 64 over the period 2001-19 who reported that their main occupation was Cleaner and Laundry Workers (ANZSCO 2006 Code 81). Cleaners were identified as outsourced if the reported industry for their main job was Building Cleaning, Pest Control, and Other Support Services (ANZSIC 2006 Code 73). The deciles were created using usual weekly earnings. Panel C consists of employed cleaners (excluding self-employed) aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Janitors and Building Cleaners (Census 2012 Occupation Code 4 220). Cleaners were identified as outsourced if the reported industry for their main job was Services to Buildings and Dwellings (Census 2002 Industry Code 7690). The deciles were created using usual weekly earnings.
Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/7q1wa6

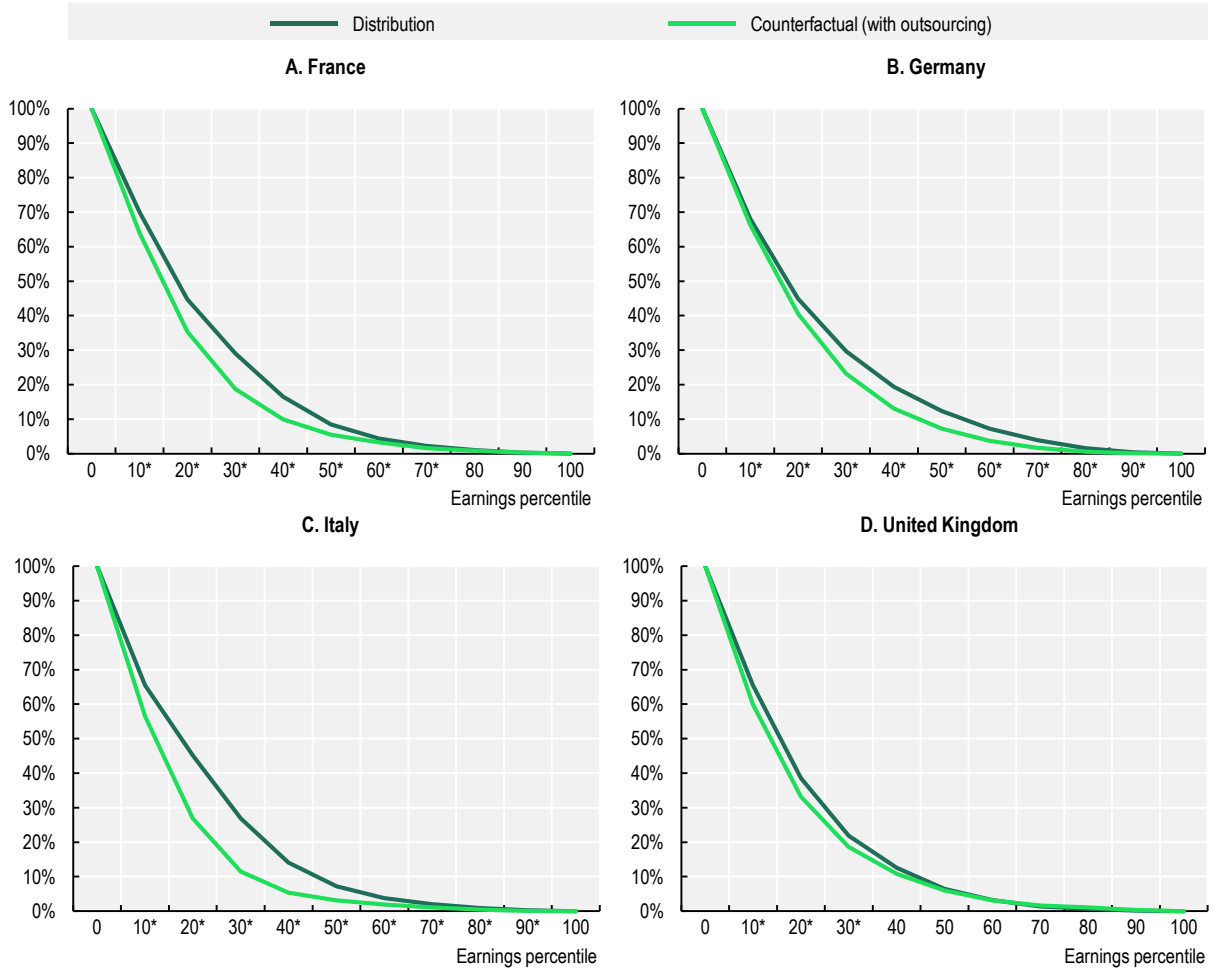
Annex Figure 4.A.4. Earnings distributions of guards, by outsourcing assignment



Note: Panel A consists of guards (defined by ISCO-08 code 541, "Protective services workers") across European OECD countries (excluding Turkey and including Iceland) over the period 2011-19. Guards are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services". Panel B consists of employed guards aged 20 to 64 over years 2001-19 who reported that their main occupation was Protective Service Workers (ANZSCO 2006 Code 44). The deciles in Australia were determined using usual weekly earnings. Guards were identified as outsourced if the reported industry for their main job was Other Business Activities (ISIC 3.1 Code 74). Panel C consists of employed (excluding self-employed) guards aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Guard (Census 2012 Occupation code 3930). Guards were identified as outsourced if their reported industry for their main job was Investigation and Security Services (Census 2002 Industry Code 7680). The deciles in the United States were created using usual weekly earnings.
Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/w708gs

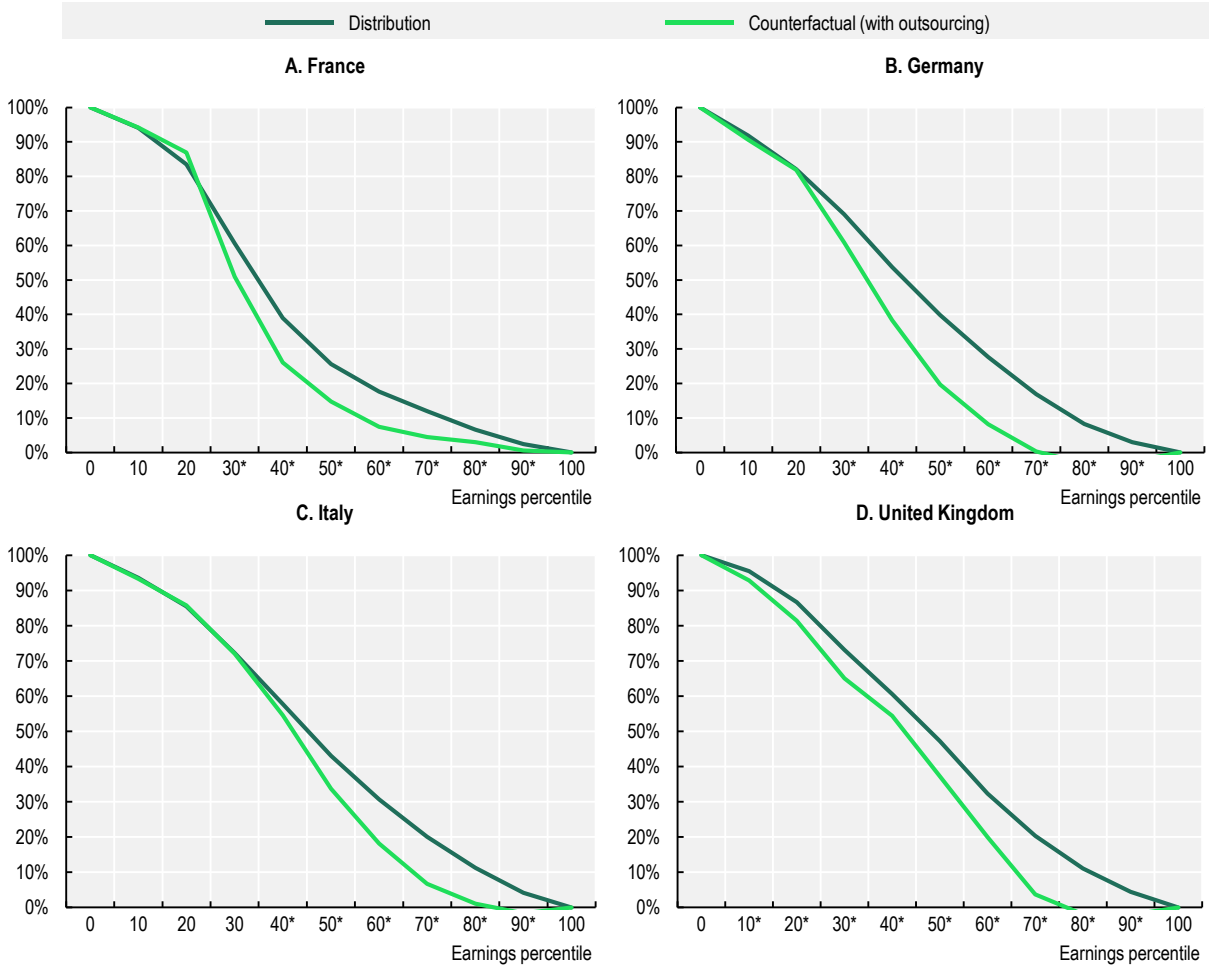
Annex Figure 4.A.5. Complementary cumulative distribution and counterfactual complementary cumulative distribution for cleaners in the presence of outsourcing, select European countries



Note: The darker line is one minus the cumulative distribution function for cleaners across the overall monthly earnings distribution. The lighter line is the regression-adjusted distribution for the effect of outsourcing. Regression is a linear probability model of whether a worker is above the given decile. Stars on the decile denote the difference is significant at the 95% confidence interval. The panels of cleaners aged 20-64 years old (defined by ISCO 08 code 911 or 515, "Domestic, Hotel and Office Cleaners and Helpers", and "Building and Housekeeping Supervisors", respectively) over years 2011-18. Cleaners are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services".
Source: The European Labour Force Survey (EU-LFS).

StatLink https://stat.link/487mix

Annex Figure 4.A.6. Complementary cumulative distribution and counterfactual complementary cumulative distribution for security guards in the presence of outsourcing, select European countries

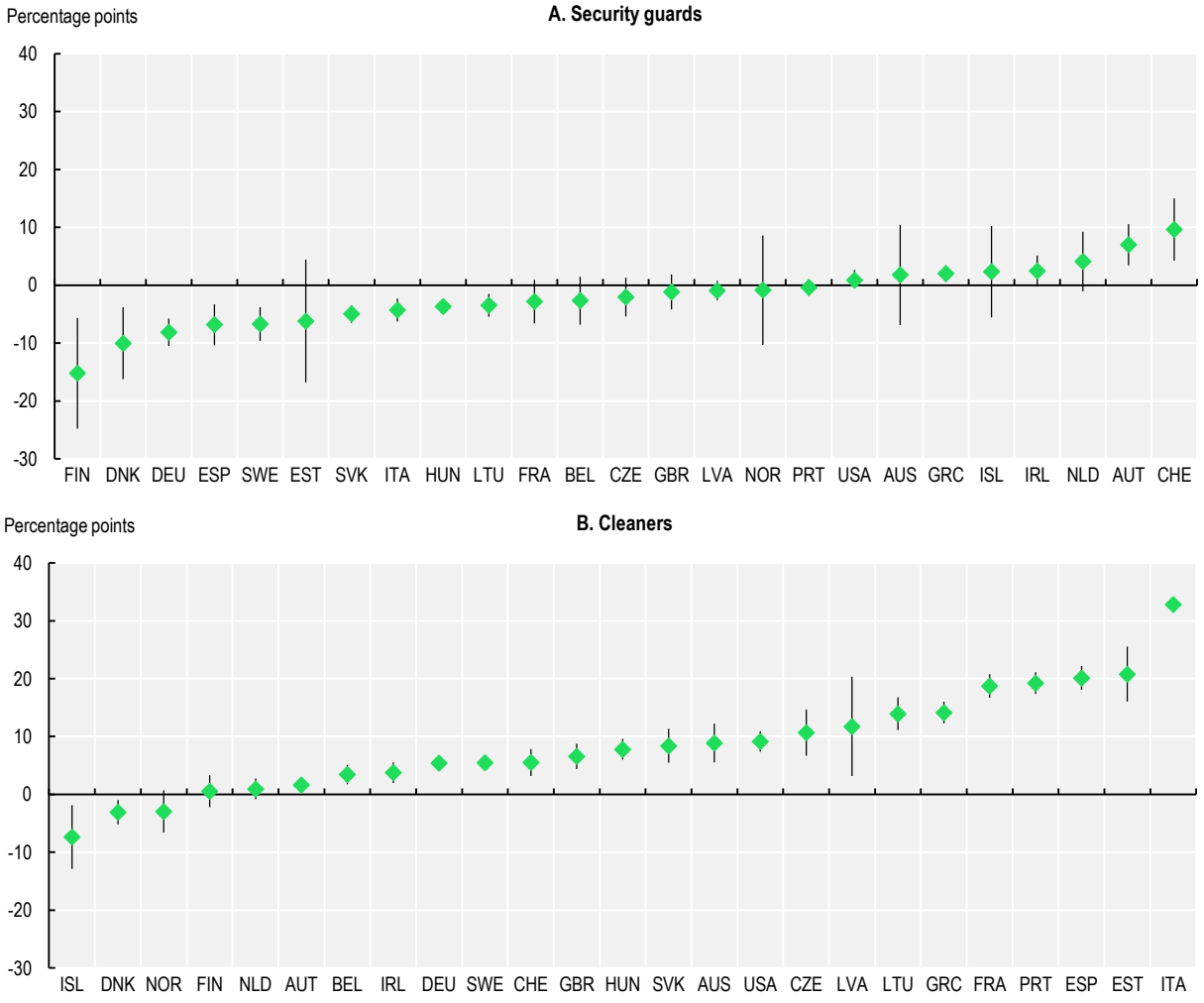


Note: The darker line is one minus the cumulative distribution function for security guards across the overall monthly earnings distribution. The lighter line is the regression-adjusted distribution for the effect of outsourcing. Regression is a linear probability model of whether a worker is above the given percentile. Stars on the percentile denote the difference is significant at the 95% confidence interval. The panels consist of guards (defined by ISCO-08 code 541, "Protective services workers") over the period 2011-19. Guards are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services".
Source: The European Labour Force Survey (EU-LFS).

StatLink https://stat.link/zfnd3s

Annex Figure 4.A.7. Outsourced cleaners are more likely to be hired part-time

Percentage point change in marginal propensity to work part-time, by country



Note: Diamonds show the percentage point change in the marginal propensity to work part-time from a linear probability model on the propensity to work part-time if outsourced. Vertical lines show the 95% confidence interval of the point estimates. The European countries cover 76 274 guards and 413 268 cleaners over the period 2011-19. The United States covers 6 988 guards and 16 884 cleaners aged 20 to 64 over the period 2011019. Workers are considered part-time for economic reasons if they reported their job is part-time. Australia covers 672 guards and 3 232 cleaners aged 20 to 64 over the period 2001-19. Workers are considered part-time if they reported working less than 35 hours per week.
Source: European Labour Force Survey (EU-LFS), HILDA, the United States Current Population Survey (CPS).

StatLink https://stat.link/sp4auw

Annex 4.B. Details on regression results

This annex provides supporting documentation and robustness checks for the regression results found in Section 4.3. The first subsection describes in more detail some considerations for estimating distribution regressions (Section 4.3.2) particularly as it relates to using the earnings decile indicators in the European Labour Force Survey (EU-LFS). The second subsection details the binary regression models for indicators of job quality (Section 4.3.3), and shows their robustness to some different modelling assumptions.

Discussion and robustness of distribution regressions for earnings

This section provides additional detail for the distribution regressions from Section 4.3.2. The discussion draws heavily on Chernozhukov, Fernández-Val and Melly, (2013[55]) (henceforth CFM) and Dube, (2019[56]). The section discusses practical considerations for distribution regressions as well as its advantages and shortcomings in general, but particularly as applied to the empirical work in this chapter using the European Labour Force Survey (EU-LFS). The discussion will also introduce some possible extensions for future work. The interested reader should consult CFM for a theoretical discussion and Dube for an applied example of the points discussed in this section.

Conditional distribution regressions allow one to characterise how a policy shifts the distribution of interest, and they have some advantages over estimating only the mean effect. The parameter estimate of a least squares regression of outsourcing a cleaner on log monthly earnings, for example, returns the approximate average percentage change in earnings from outsourcing. This is often a useful statistic, but it can also leave the analyst to wonder whether the result has economic or real-world significance (leaving aside statistical significance). A distribution regression allows one to make statements about how a policy may change the earnings distribution for treated units. In addition, and of particular interest when using the EU-LFS, distribution regressions do not require continuous real-valued measures of the outcome of interest. Access to the underlying continuous distribution of the outcome variable is desirable, as will be shown, but it is not necessary.

To fix ideas, the rest of this section proceeds by way of example. The example will consider the reverse cumulative distribution (RCDF) of monthly earnings of cleaners in a particular country in a fixed year, $F_A(y^*)$, where $y^* \in \mathrm{Y}$. The variable y^* is monthly earnings, and $\mathrm{Y} \subseteq \boldsymbol{R}^+$ is its support. The results in the literature are derived for the CDF, but this discussion will keep with the convention used in the text. Constraining the discussion to one occupation, in one country, in a fixed year simplifies the discussion without a loss of generality. The results generalise to guards as well.

In addition to the actual distribution of cleaners' earnings, one needs to estimate a distribution regression to construct the counterfactual distribution. The regressions in the text use a standard linear probability model, but the theory is flexible and neither the dependent variable nor the treatment need to be continuous. In addition, the model allows for common link functions including probit, logit, log-log etc. The distribution regression below is slightly altered from the one in the text:

$$y_{i,y^*} = \beta_{y^*} * outsource_i + \boldsymbol{X}_{i,} + \varepsilon_{i,y^*}$$

The dependent variable, y_{i,y^*}, is a binary indicator equal to one when a cleaner i has monthly earnings greater than y^*, $y_{i,y^*} = \mathbf{1}\{y_i^* > y^*\}$. The variable $outsource_{i,}$ is the indicator of interest and takes a value of one if a cleaner is working in the business services industry and 0 otherwise, while $\boldsymbol{X}_i$ is a vector of covariates. The last component, ε_{i,y^*}, is the error term. The counterfactual distribution, $F_B(y^*)$, is the result

of adding the result from the distribution regression to the actual distribution, $F_B(y^*) = F_A(y^*) + \hat{\beta}_{y^*}$. The resulting counterfactual distribution is the result of *conditioning*, or holding constant, the other covariates.

The difference between the more theoretical example discussed here, and the discussion in the text, is the choice of cut-offs for the family of regressions indexed by y^*. In theory, and in the example in this section, one could run an infinite number of regressions because they are defined by a cut-off in the set of the support of monthly earnings. In practice, one should run as many regressions (use as many cut-offs) as feasible. In addition, samples are finite in labour force surveys, and marginal changes in the cut-off will only provide additional information about the shape of the counterfactual distribution if they induce observations in the sample to cross the cut-off.

When using the EU-LFS for distribution regressions, one is additionally constrained by nine pre-selected cut-offs. The EU-LFS does not provide a continuous monthly earnings variable, rather an indicator for the earnings decile in which a given observation is located. The deciles are determined based on the *overall* monthly earnings distribution and not for a given subset of the data like cleaners, for example. One can only run a maximum of nine regressions corresponding to overall monthly earnings deciles one to nine.

The imposed choice of cut-offs by the EU-LFS creates some downsides to using distribution regressions. First, the number of cut-offs is relatively small, and they are not picked optimally to trace the most accurate counterfactual distribution possible. The latter point is well illustrated by focusing on cleaners. In most countries analysed in this chapter, over 80% of cleaners earn below the 50th percentile of overall monthly earnings. It is a low-pay occupation. If one is constrained to nine cut-offs in the distribution regressions, one would ideally locate all but probably one, or even all, of the cut-offs below the 50th percentile of overall earnings. This is where the distribution is dense in cleaners. With the EU-LFS, four cut-offs are located above the 50th percentile including cut-offs at the 80th and 90th percentile where the distribution of cleaners is sparse. These regressions will not provide much information, and in the regressions in this chapter, many of these regressions result in statistically insignificant estimates.

Second, the resulting distributions lack the correct scale. The figures in this chapter present the results of the conditional distribution regressions in a linearly interpolated continuous RCDF. The deciles are shown spaced in equal distances across the (latent) support of monthly earnings. Given the current earnings distributions in most OECD countries, this is not accurate. Most OECD countries have a long right tail in the earnings distribution. In practice, this means that the distance between the 40th and 50th percentiles of the earnings distribution will be much closer than the distance between the 80th and 90th percentiles, for example. For the results in this chapter, this has little practical importance, but it is worth bearing in mind for future work.

There are some advantages, however, to having a dataset with uniformly selected earnings percentiles across countries. The most obvious is that it allows for easy cross-country comparisons without the difficulty of harmonising the earnings distributions. There are OECD countries where the support of monthly earnings for cleaners, for example, may not overlap, or only slightly. If one wants to compare cleaners in these countries, constraining the results to percentiles of the overall earnings distribution is a convenient way to compare results. In addition, using percentiles of the overall earnings distribution makes practical salience easier to convey. Statements about the earnings distribution of cleaners is likely hard to conceptualise, but explaining how cleaners shift in the overall earnings distribution resonates more clearly. Finally, the extension of unconditional quantile partial effects falls out naturally from using percentiles of the underlying distribution.

Before moving on to some robustness checks, it is worth mentioning a nice complement to the distribution regressions, unconditional quantile partial effects (UQPE). UQPE give the effect of outsourcing (or any treatment) at arbitrary quantiles of the distribution of the dependent variable. The UQPE obtains by inverting the actual distribution and counterfactual distribution obtained from the distribution regressions, or by taking linear approximations using recentered influence functions (Firpo, Fortin and Lemieux, 2009[72]). UQPE is different from the conditional quantile partial effect (CQPE), which is the quantile

regression usually most familiar to social scientists (Koenker and Bassett, 1978[73]). UQPE controls for differences in the covariate distribution rather than conditioning on them (hence unconditional). For many policy interventions one would like to study, this is the ideal approach. For a univariate, binary, treatment like outsourcing, UQPE is simply the estimate from distribution regressions scaled by the density of the earnings distribution at that particular decile. The latter is hard to estimate precisely with deciles of the earnings distribution, but one can estimate it roughly from the data provided in the chapter if desired.

The following tables provide robustness checks to some of the assumptions and issues previously discussed in this section.

- Annex Table 4.B.1 gives the underlying parameter estimates from the distribution regressions found in figures Figure 4.9 and Figure 4.10, as well as for four additional countries whose results are depicted graphically in Figures Annex Figure 4.A.5 and Annex Figure 4.A.6. The additional countries, Germany, the United Kingdom, France and Italy are all large European OECD countries. The estimates of these four countries confirm the results of European OECD countries pooled in the chapter.
- Annex Table 4.B.2 shows the mean (ordinary least squares) effect of outsourcing on log usual earnings for the United States and Australia, which have a continuous monthly earnings variable. The results are negative, and consistent with the distribution results in the chapter. The chapter also includes a replication of Dube and Kaplan, (2010[6]) tables 3a and 3b, line 1. The results are close, but do not completely match, as might be expected. The chapter uses usual earnings and not wages.
- Annex Table 4.B.3 (cleaners) and Annex Table 4.B.4 (security guards) show the results from the linear probability model of the distribution regressions side-by-side with the same models estimated using logit and probit models. For both occupations and the three country groupings, the results are quite similar across models.
- Annex Table 4.B.5 shows comparison of the distribution regressions with a conditional quantile model (CQPE). These are the conditional quantile results for the effect of outsourcing on earnings, and only for the United States because one needs a continuous earnings variable. These are *not* the UQPE discussed above, but given the greater familiarity with this class of models, these results are included for comparison, though they need not produce the same results. In fact, (conditional) quantile regressions provide estimates of the effect of outsourcing on given conditional quantiles of earnings, which gives information on how outsourcing affects those with low or high earnings *within their demographic group*. For example, consider the first decile and a regression controlling for education levels only. The coefficient for the first decile would tell us how outsourcing affected those with low earnings within their educational group, and not, as distribution regressions or UQPE, the effect of outsourcing on the bottom decile of the distributions – see also Dube (2019[56]).

Annex Table 4.B.1. Results of distribution regressions by country

Dependent variable: Earnings decile							
	Country/Region						
	USA	AUS	Europe	DEU	GBR	FRA	ITA
Decile	**A. Cleaners**						
1	-0.04	-0.18	-0.05	-0.02	-0.06	-0.06	-0.09
	(0.006)	(0.014)	(0.003)	(0.005)	(0.011)	(0.009)	(0.004)
2	-0.09	-0.10	-0.09	-0.04	-0.05	-0.09	-0.18
	(0.008)	(0.015)	(0.003)	(0.005)	(0.012)	(0.009)	(0.005)
3	-0.08	-0.06	-0.09	-0.06	-0.03	-0.10	-0.15
	(0.008)	(0.014)	(0.003)	(0.005)	(0.011)	(0.009)	(0.004)
4	-0.05	-0.03	-0.07	-0.06	-0.02	-0.07	-0.09
	(0.008)	(0.011)	(0.002)	(0.004)	(0.010)	(0.007)	(0.003)
5	-0.04	-0.01	-0.04	-0.05	0.00	-0.03	-0.04
	(0.006)	(0.009)	(0.002)	(0.003)	(0.008)	(0.005)	(0.003)
6	-0.02	0.00	-0.02	-0.04	0.00	-0.01	-0.02
	(0.005)	(0.007)	(0.001)	(0.003)	(0.006)	(0.004)	(0.002)
7	-0.01	0.01	-0.01	-0.02	0.00	-0.01	-0.01
	(0.004)	(0.006)	(0.001)	(0.002)	(0.004)	(0.003)	(0.001)
8	0.00	0.00	0.00	-0.01	0.00	0.00	0.00
	(0.003)	(0.004)	(0.001)	(0.001)	(0.003)	(0.002)	(0.001)
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	(0.002)	(0.003)	(0.000)	(0.001)	(0.002)	(0.001)	(0.000)
Time Effects	X	X	X	X	X	X	X
Country Effects			X				
Region Effects	X	X					
Observations	16 200	3 232	305 311	67 444	4 339	18 058	51 347
Decile	**B. Guards**						
1	-0.01	-0.04	0.002	-0.01	-0.03	0.00	0.00
	(0.006)	(0.015)	(0.004)	(0.007)	(0.010)	(0.012)	(0.007)
2	-0.06	0.02	0.006	0.00	-0.05	0.03	0.00
	(0.009)	(0.026)	(0.006)	(0.010)	(0.017)	(0.020)	(0.010)
3	-0.12	-0.01	-0.031	-0.08	-0.08	-0.10	0.00
	(0.012)	(0.029)	(0.007)	(0.012)	(0.021)	(0.027)	(0.013)
4	-0.12	-0.08	-0.052	-0.15	-0.06	-0.13	-0.03
	(0.012)	(0.034)	(0.008)	(0.013)	(0.024)	(0.027)	(0.014)
5	-0.10	-0.08	-0.087	-0.20	-0.10	-0.11	-0.09
	(0.011)	(0.038)	(0.007)	(0.014)	(0.026)	(0.024)	(0.014)
6	-0.08	-0.11	-0.115	-0.19	-0.12	-0.10	-0.12
	(0.009)	(0.039)	(0.007)	(0.013)	(0.027)	(0.021)	(0.014)
7	-0.05	-0.07	-0.120	-0.17	-0.17	-0.08	-0.13
	(0.008)	(0.032)	(0.006)	(0.012)	(0.024)	(0.019)	(0.013)
8	-0.04	-0.04	-0.082	-0.11	-0.13	-0.04	-0.10
	(0.006)	(0.025)	(0.005)	(0.008)	(0.020)	(0.014)	(0.011)
9	-0.03	-0.05	-0.04	-0.06	-0.06	-0.02	-0.06
	(0.004)	(0.017)	(0.003)	(0.005)	(0.014)	(0.008)	(0.007)
Time Effects	X	X	X	X	X	X	X
Country Effects			X				
Region Effects	X	X					
Observations	6 695	672	55 470	7 660	1 265	2 045	7 636

Note: The dependent variable is monthly earnings in or above the reported decile. The deciles in Australia and the United States were determined using usual weekly earnings. For each decile, the reported coefficients refer to a binary indicator of outsourcing. In Panel A, For European OECD countries the sample consists of cleaners aged 20-64 years old (defined by ISCO 08 code 911 or 515, "Domestic, Hotel and Office Cleaners and Helpers", and "Building and Housekeeping Supervisors", respectively) across European OECD countries (excluding Turkey and including Iceland) over years 2011-18. Cleaners are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services". For Australia the sample consists of employed cleaners aged 20 to 64 over the period 2001-19 who reported that their main occupation was Cleaner and Laundry Workers (ANZSCO 2006 Code 81). Cleaners were identified as outsourced if the reported industry for their main job was Building Cleaning, Pest Control, and Other Support Services (ANZSIC 2006 Code 73). For the United States the sample consists of employed cleaners (excluding self-employed) aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Janitors and Building Cleaners (Census 2012 Occupation Code 4220). Cleaners were identified as outsourced if the reported industry for their main job was Services to Buildings and Dwellings (Census 2002 Industry Code 7690). In Panel B, for European countries the sample consists of guards (defined by ISCO-08 code 541, "Protective services workers") across European OECD countries (excluding Turkey and including Iceland) over the period 2011-19. Guards are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services". For Australia the sample consists of employed guards aged 20 to 64 over years 2001-19 who reported that their main occupation was Protective Service Workers (ANZSCO 2006 Code 44). Guards were identified as outsourced if the reported industry for their main job was Other Business Activities (ISIC 3.1 Code 74). For the United States the sample consists of employed (excluding self-employed) guards aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Guard (Census 2012 Occupation code 3930). Guards were identified as outsourced if their reported industry for their main job was Investigation and Security Services (Census 2002 Industry Code 7680). All models include control variables for time fixed effects, education, a log of hours per week, and an age polynomial. European OECD countries include country fixed effects while United States and Australia include region fixed effect.
Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/vpc1gq

Annex Table 4.B.2. Average effect of outsourcing on wages by gender

Effect of Outsourcing on Log Wages – the United States			
	(1) Baseline	(2) Baseline (Female)	(3) Baseline (Male)
A. Cleaners			
United States (2011-19)	-0.06	-0.05	-0.05
	(0.009)	(0.014)	(0.013)
Dube and Kaplan (1983-2000)	-0.06	-0.04	-0.05
	(0.006)	(0.010)	(0.008)
Australia (2001-19)	-0.01	-0.04	0.01
	(0.019)	(0.025)	(0.033)
B. Security Guards			
United States (2011-19)	-0.13	-0.10	-0.14
	(0.012)	(0.027)	(0.014)
Dube and Kaplan (1983-2000)	-0.21	-0.20	-0.21
	(0.010)	(0.028)	(0.011)
Australia (2001-19)	-0.10	-0.05	-0.13
	(0.037)	(0.096)	(0.042)

Note: The dependent variable for the United States is the log of weekly earnings divided by weekly hours. The sample consists of cleaners and guards whose reported occupation for their main job was Janitors and Building Cleaners (Census 2012 Occupation Code 4220) or Guard (Census 2012 Occupation code 3930). Cleaners were identified as outsourced if the reported industry for their main job was Services to Buildings and Dwellings (Census 2002 Industry Code 7690). Guards were identified as outsourced if their reported industry for their main job was Investigation and Security Services (Census 2002 Industry Code 7680). The dependent variable for the Australian model is the log of weekly earnings divided by weekly hours. The sample consists of cleaners and guards who reported that their main occupation was Cleaner and Laundry Workers (ANZSCO 2006 Code 81) or Protective Service Workers (ANZSCO 2006 Code 44). Cleaners were identified as outsourced if the reported industry for their main job was Building Cleaning, Pest Control, and Other Support Services (ANZSIC 2006 Code 73). Guards were identified as outsourced if their reported industry for their main job was Investigation and Security Services (Census 2002 Industry Code 7680). All models include control variables for time fixed effects, education, a log of hours per week, region fixed effects, and an age polynomial. The United States (2011-19) model and Australian (2001-19) model restricted age to 20 to 64 while the Dube and Kaplan model did not include any age restrictions.
Source: The Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/h16ekq

Annex Table 4.B.3. Results of distribution regressions for cleaners by country and model

Dependent variable: Earnings decile									
	Australia			United States			European OECD Countries		
Decile	OLS	Logit	Probit	OLS	Logit	Probit	OLS	Logit	Probit
1	-0.18	-0.18	-0.18	-0.04	-0.04	-0.04	-0.05	-0.04	-0.04
	(0.014)	(0.013)	(0.012)	(0.006)	(0.006)	(0.005)	(0.003)	(0.002)	(0.003)
2	-0.10	-0.09	-0.09	-0.09	-0.08	-0.08	-0.09	-0.07	-0.06
	(0.015)	(0.013)	(0.014)	(0.008)	(0.007)	(0.007)	(0.003)	(0.003)	(0.003)
3	-0.06	-0.05	-0.05	-0.08	-0.08	-0.08	-0.09	-0.08	-0.07
	(0.014)	(0.013)	(0.013)	(0.008)	(0.008)	(0.008)	(0.003)	(0.003)	(0.003)
4	-0.03	-0.03	-0.03	-0.05	-0.07	-0.06	-0.07	-0.06	-0.06
	(0.011)	(0.013)	(0.012)	(0.008)	(0.008)	(0.008)	(0.002)	(0.003)	(0.002)
5	-0.01	-0.02	-0.02	-0.04	-0.05	-0.05	-0.04	-0.04	-0.03
	(0.009)	(0.011)	(0.010)	(0.006)	(0.008)	(0.007)	(0.002)	(0.002)	(0.002)
6	0.00	-0.01	0.00	-0.02	-0.03	-0.03	-0.02	-0.02	-0.02
	(0.007)	(0.010)	(0.010)	(0.005)	(0.010)	(0.006)	(0.001)	(0.002)	(0.002)
7	0.01	0.00	0.01	-0.01	-0.02	-0.02	-0.01	-0.01	-0.01
	(0.006)	(0.010)	(0.010)	(0.004)	(0.007)	(0.005)	(0.001)	(0.001)	(0.001)
8	0.00	0.00	0.01	0.00	-0.01	-0.01	0.00	0.00	0.00
	(0.004)	(0.011)	(0.011)	(0.003)	(0.006)	(0.005)	(0.001)	(0.001)	(0.001)
9	0.00	-0.03	-0.03	0.00	0.00	0.00	0.00	0.00	0.00
	(0.003)	(0.044)	(0.042)	(0.002)	(0.006)	(0.005)	(0.000)	(0.000)	(0.000)
Time Effects	X	X	X	X	X	X	X	X	X
Country Effects							X	X	X
Region Effects	X	X	X	X	X	X			
Part-time effects					X	X			
Observations	3 232	2 785	2 785	16 200	16 697	16 697	305 298	305 298	305 298

Note: The dependent variable is monthly earnings in or above the reported decile. The deciles in Australia and the United States were determined using usual weekly earnings. For each decile, the reported coefficients refer to a binary indicator of outsourcing. In European OECD countries the sample consists of cleaners aged 20-64 years old (defined by ISCO 08 code 911 or 515, "Domestic, Hotel and Office Cleaners and Helpers", and "Building and Housekeeping Supervisors", respectively) across European OECD countries (excluding Turkey and including Iceland) over years 2011-18. Cleaners are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services". For Australia, the sample consists of employed cleaners aged 20 to 64 over the period 2001-19 who reported that their main occupation was Cleaner and Laundry Workers (ANZSCO 2006 Code 81). Cleaners were identified as outsourced if the reported industry for their main job was Building Cleaning, Pest Control, and Other Support Services (ANZSIC 2006 Code 73). For the United States, the sample consists of employed cleaners (excluding self-employed) aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Janitors and Building Cleaners (Census 2012 Occupation Code 4220). Cleaners were identified as outsourced if the reported industry for their main job was Services to Buildings and Dwellings (Census 2002 Industry Code 7690). All models include control variables for time fixed effects, education, a log of hours per week, and an age polynomial. European OECD countries include country fixed effects while United States and Australia include region fixed effect. the United States logit and probit models use part-time effects in replacement of log hours.

Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/1n08ha

Annex Table 4.B.4. Results of distribution regressions for security guards by country and model

Dependent variable: Earnings decile									
	Australia			United States			European OECD Countries		
Decile	OLS	Logit	Probit	OLS	Logit	Probit	OLS	Logit	Probit
1	-0.04	-0.33	-0.30	-0.01	-0.01	-0.02	0.00	0.01	0.01
	(0.015)	(0.109)	(0.092)	(0.006)	(0.006)	(0.007)	(0.004)	(0.003)	(0.003)
2	0.02	0.01	0.00	-0.06	-0.07	-0.07	0.01	0.01	0.01
	(0.026)	(0.033)	(0.030)	(0.009)	(0.009)	(0.009)	(0.006)	(0.005)	(0.006)
3	-0.01	-0.02	-0.02	-0.12	-0.11	-0.11	-0.03	-0.04	-0.03
	(0.029)	(0.028)	(0.026)	(0.012)	(0.011)	(0.011)	(0.007)	(0.007)	(0.007)
4	-0.08	-0.08	-0.08	-0.12	-0.11	-0.11	-0.05	-0.06	-0.05
	(0.034)	(0.031)	(0.029)	(0.012)	(0.011)	(0.011)	(0.008)	(0.008)	(0.008)
5	-0.08	-0.07	-0.07	-0.10	-0.09	-0.10	-0.09	-0.10	-0.08
	(0.038)	(0.035)	(0.034)	(0.011)	(0.010)	(0.010)	(0.007)	(0.007)	(0.007)
6	-0.11	-0.11	-0.10	-0.08	-0.07	-0.08	-0.11	-0.12	-0.10
	(0.039)	(0.037)	(0.036)	(0.009)	(0.009)	(0.009)	(0.007)	(0.006)	(0.006)
7	-0.07	-0.08	-0.07	-0.05	-0.05	-0.05	-0.12	-0.12	-0.11
	(0.032)	(0.040)	(0.038)	(0.008)	(0.013)	(0.009)	(0.006)	(0.005)	(0.005)
8	-0.04	-0.06	-0.05	-0.04	-0.04	-0.05	-0.08	-0.08	-0.07
	(0.025)	(0.038)	(0.033)	(0.006)	(0.007)	(0.008)	(0.005)	(0.005)	(0.004)
9	-0.05	-0.26	-0.24	-0.03	-0.03	-0.06	-0.04	-0.04	-0.03
	(0.017)	(0.078)	(0.061)	(0.004)	(0.005)	(0.008)	(0.003)	(0.003)	(0.003)
Time Effects	X	X	X	X	X	X	X	X	X
Country Effects							X	X	X
Region Effects	X	X	X	X	X	X			
Part-time Effects					X	X			
Observations	672	609	609	6 695	6 753	6 753	55 469	55 469	55 469

Note: The dependent variable is a monthly earnings in or above the reported decile. The deciles in Australia and the United States were determined using usual weekly earnings. For European countries the sample consists of guards (defined by ISCO-08 code 541, "Protective services workers") across European OECD countries (excluding Turkey and including Iceland) over the period 2011-19. Guards are outsourced if they work in NACE Rev. 2 Industry N "Administrative and support services". For Australia the sample consists of employed guards aged 20 to 64 over years 2001-19 who reported that their main occupation was Protective Service Workers (ANZSCO 2006 Code 44). Guards were identified as outsourced if the reported industry for their main job was Other Business Activities (ISIC 3.1 Code 74). For the United States the sample consists of employed (excluding self-employed) guards aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Guard (Census 2012 Occupation code 3930). Guards were identified as outsourced if their reported industry for their main job was Investigation and Security Services (Census 2002 Industry Code 7680). All models include control variables for time fixed effects, education, a log of hours per week, and an age polynomial. European OECD countries include country fixed effects while United States and Australia include region fixed effect. the United States logit and probit models use part-time effects in replacement of log hours.
Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/falvd7

Annex Table 4.B.5. Linear probability and conditional quantile models for cleaners and guards

	Dependent variable: log earnings decile			
	Cleaners		Guards	
	LPM	Quantile	LPM	Quantile
	(1)	(2)	(3)	(4)
Decile				
1	-0.04	-0.07	-0.01	-0.07
	(0.006)	(0.011)	(0.006)	(0.016)
2	-0.09	-0.07	-0.06	-0.09
	(0.008)	(0.009)	(0.009)	(0.014)
3	-0.08	-0.08	-0.12	-0.11
	(0.008)	(0.011)	(0.012)	(0.015)
4	-0.05	-0.09	-0.12	-0.12
	(0.008)	(0.009)	(0.012)	(0.013)
5	-0.04	-0.09	-0.10	-0.12
	(0.006)	(0.011)	(0.011)	(0.018)
6	-0.02	-0.09	-0.08	-0.13
	(0.005)	(0.009)	(0.009)	(0.014)
7	-0.01	-0.09	-0.05	-0.15
	(0.004)	(0.011)	(0.008)	(0.013)
8	0.00	-0.11	-0.04	-0.18
	(0.003)	(0.015)	(0.006)	(0.022)
9	0.00	-0.10	-0.03	-0.19
	(0.002)	(0.012)	(0.004)	(0.030)
Time Effects	X	X	X	X
Part-time Effects	X	X	X	X
Region Effects	X	X	X	X
Observations	16 200	16 182	6 695	6 979

Note: Models 1 and 2 use a sample consisting of employed cleaners (excluding self-employed) aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Janitors and Building Cleaners (Census 2012 Occupation Code 4220). Cleaners were identified as outsourced if the reported industry for their main job was Services to Buildings and Dwellings (Census 2002 Industry Code 7690). Models 3 and 4 use a sample consisting of employed (excluding self-employed) guards aged 20 to 64 over the period 2011-19 whose reported occupation for their main job was Guard (Census 2012 Occupation code 3930). Guards were identified as outsourced if their reported industry for their main job was Investigation and Security Services (Census 2002 Industry Code 7680). The dependent variable is usual weekly earnings. All models include control variables for time fixed effects, education, a log of hours per week, race, ethnicity, and an age polynomial. The quantile models use state fixed effects and year fixed effects, while the linear probability models uses state by year fixed effects.
Source: The Current Population Survey (CPS) (United States).

StatLink https://stat.link/ym4w29

Details on the regression results for working time, training and contract type

The results in this section provide documentation and support to the regression results on job quality in Section 4.3.3. The regression models are similar across the different dimensions of job quality. They all model a binary response as a linear probability model (LPM) estimated using ordinary least squares. The model has the following form,

$$y_{i,t} = \beta \ * outsource_{i,t} + \boldsymbol{X}_{i,t} + \delta_t + \varepsilon_{i,t}$$

Each equation is estimated separately for each country and each of the different dependent variables. The dependent variables, $y_{i,t}$, are binary indicators equal to one when individual i in time t meets the one of the three indicators of job quality: involuntary part-time employment, participation in job training and having

a fixed-term contract. The variable $outsource_{i,t}$ is the indicator of interest and takes a value of one if either a cleaner or guard is working in the business services industry. The vector $\boldsymbol{X}_{i,t}$ contains individual and job characteristics including a non-parametric specification in age, education, sex. The log of usual hours worked is excluded from the model on involuntary part-time work, but included in the two other models. The indicator δ_t captures year effects, while $\varepsilon_{i,t}$ is the error term. Standard errors are estimated using heteroskedastic-robust standard errors. The equations are estimated as linear probability models (ordinary least squares) separately for cleaners and security guards.

For robustness, the same model structure is estimated separately using probit and logit models. For cleaners and guards across countries, the probit and logit results are qualitatively similar to those of the linear probability model. All results are found in the following three tables:

- Annex Table 4.B.6 provides support for Figure 4.11, the probability of working involuntary part-time.
- Annex Table 4.B.7 provides support for Figure 4.12, the probability of participating in training.
- Annex Table 4.B.8 provides support for Figure 4.13, the probability of working on a fixed-term contract.

Annex Table 4.B.6. Change in marginal propensity to work part-time involuntarily by country and model

	Dependent variable: Involuntary part-time employment status					
	Cleaners			Guards		
	LPM	Probit	Logit	LPM	Probit	Logit
Country	(1)	(2)	(3)	(4)	(5)	(6)
AUS	0.00	0.00	0.00	0.06	0.08	0.08
	(0.013)	(0.014)	(0.014)	(0.025)	(0.039)	(0.043)
AUT	0.07	0.06	0.06	0.07	0.07	0.07
	(0.006)	(0.005)	(0.005)	(0.014)	(0.013)	(0.014)
BEL	0.04	0.04	0.04	0.00	0.00	0.00
	(0.007)	(0.007)	(0.007)	(0.012)	(0.011)	(0.012)
CHE	0.12	0.12	0.12	0.10	0.10	0.10
	(0.014)	(0.013)	(0.013)	(0.024)	(0.022)	(0.023)
CZE	0.04	0.03	0.03	-0.01	-0.01	-0.01
	(0.013)	(0.009)	(0.009)	(0.006)	(0.006)	(0.007)
DEU	0.06	0.06	0.06	-0.02	-0.02	-0.02
	(0.005)	(0.005)	(0.005)	(0.009)	(0.009)	(0.009)
DNK	0.03	0.03	0.03	-0.01	-0.01	-0.02
	(0.009)	(0.008)	(0.008)	(0.025)	(0.025)	(0.026)
EST	0.07	0.07	0.06	-0.08	-0.12	-0.10
	(0.017)	(0.014)	(0.014)	(0.055)	(0.041)	(0.038)
ESP	0.18	0.18	0.18	-0.05	-0.05	-0.05
	(0.010)	(0.010)	(0.009)	(0.015)	(0.013)	(0.014)
FIN	-0.01	-0.01	-0.01	-0.03	-0.04	-0.03
	(0.011)	(0.011)	(0.011)	(0.044)	(0.040)	(0.042)
FRA	0.16	0.16	0.16	-0.04	-0.04	-0.03
	(0.011)	(0.010)	(0.010)	(0.016)	(0.015)	(0.015)
GRC	0.13	0.12	0.11	0.02	0.03	0.03
	(0.009)	(0.008)	(0.008)	(0.007)	(0.007)	(0.008)
GBR	0.05	0.05	0.05	0.01	0.01	0.01
	(0.011)	(0.011)	(0.011)	(0.012)	(0.012)	(0.012)
HUN	0.03	0.03	0.03	-0.01	-0.01	-0.01

	Dependent variable: Involuntary part-time employment status					
	Cleaners			Guards		
	LPM	Probit	Logit	LPM	Probit	Logit
Country	(1)	(2)	(3)	(4)	(5)	(6)
	(0.007)	(0.006)	(0.006)	(0.003)	(0.003)	(0.003)
IRL	0.00	0.00	0.00	0.01	0.01	0.01
	(0.009)	(0.009)	(0.009)	(0.011)	(0.012)	(0.012)
ISL	0.01	0.01	0.01	0.01	0.01	0.01
	(0.025)	(0.023)	(0.023)	(0.029)	(0.024)	(0.025)
ITA	0.30	0.28	0.27	-0.03	-0.03	-0.03
	(0.005)	(0.004)	(0.004)	(0.009)	(0.008)	(0.008)
LTU	0.05	0.04	0.04	-0.02	-0.03	-0.03
	(0.011)	(0.009)	(0.009)	(0.008)	(0.008)	(0.011)
LVA	0.09	0.08	0.08	0.00	0.00	0.00
	(0.036)	(0.027)	(0.026)	(0.007)	(0.008)	(0.009)
NLD	0.03	0.03	0.03	0.04	0.05	0.04
	(0.011)	(0.011)	(0.011)	(0.021)	(0.020)	(0.021)
NOR	0.01	0.01	0.01	0.01	0.01	0.02
	(0.013)	(0.013)	(0.013)	(0.034)	(0.036)	(0.039)
PRT	0.17	0.16	0.16	0.00	0.00	0.00
	(0.009)	(0.008)	(0.008)	(0.007)	(0.006)	(0.007)
SVN	0.05	0.05	0.05	-0.03	-0.03	-0.03
	(0.005)	(0.005)	(0.005)	(0.012)	(0.012)	(0.012)
SVK	0.08	0.05	0.05	-0.02	-0.02	-0.03
	(0.012)	(0.007)	(0.006)	(0.004)	(0.005)	(0.006)
USA	0.04	0.04	0.03	0.02	0.04	0.02
	(0.006)	(0.005)	(0.005)	(0.006)	(0.039)	(0.006)

Note: Coefficients from columns (1) and (4) correspond to what is presented graphically in the text. The European countries cover guards and cleaners aged 20 to 64 over the period 2011-19. Involuntarily part-time workers are those working part-time, who would like to work more hours or cannot find full-time employment. The United States covers guards and cleaners aged 20 to 64 over the period 2011-19. Workers are considered part-time for economic reasons if they worked fewer than 35 hours per week for economic reasons and available for full-time employment. Australia covers guards and cleaners aged 20 to 64 over the period 2001-19. Workers are considered part-time if they reported working less than 35 hours per week and are unable to find full time work. All models include control variables for time fixed effects, education, and an age polynomial. European OECD countries include country fixed effects while United States and Australia include region fixed effect.
Source: The European Labour Force Survey (EU-LFS) (European countries), the Current Population Survey (CPS) (United States) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/3vf84l

Annex Table 4.B.7. Change in marginal propensity to train by country and model

	Dependent variable: Participation in training					
	Cleaners			Guards		
	LPM	Probit	Logit	LPM	Probit	Logit
Country	(1)	(2)	(3)	(4)	(5)	(6)
AUS	-0.11	-0.13	-0.13	-0.13	-0.14	-0.14
	(0.014)	(0.018)	(0.016)	(0.050)	(0.049)	(0.048)
AUT	-0.01	-0.01	-0.01	-0.01	0.00	0.00
	(0.003)	(0.003)	(0.003)	(0.014)	(0.014)	(0.014)
BEL	-0.01	-0.01	-0.01	0.00	0.00	0.00
	(0.003)	(0.003)	(0.003)	(0.013)	(0.012)	(0.012)
CHE	-0.04	-0.04	-0.04	-0.05	-0.05	-0.05
	(0.008)	(0.009)	(0.010)	(0.026)	(0.026)	(0.026)

	Dependent variable: Participation in training					
	Cleaners			Guards		
	LPM	Probit	Logit	LPM	Probit	Logit
Country	(1)	(2)	(3)	(4)	(5)	(6)
CZE	0.00	0.00	0.00	-0.02	-0.02	-0.02
	(0.008)	(0.009)	(0.009)	(0.014)	(0.013)	(0.014)
DEU	-0.01	-0.01	-0.01	-0.03	-0.03	-0.03
	(0.001)	(0.001)	(0.001)	(0.006)	(0.006)	(0.006)
DNK	-0.03	-0.03	-0.03	-0.02	-0.02	-0.02
	(0.026)	(0.009)	(0.009)	(0.032)	(0.032)	(0.033)
EST	-0.01	-0.02	-0.01	0.00	0.00	0.01
	(0.009)	(0.009)	(0.010)	(0.054)	(0.049)	(0.054)
ESP	-0.02	-0.02	-0.02	0.03	0.03	0.03
	(0.004)	(0.004)	(0.005)	(0.015)	(0.016)	(0.016)
FIN	-0.02	-0.02	-0.02	0.04	0.04	0.04
	(0.011)	(0.011)	(0.011)	(0.040)	(0.039)	(0.040)
FRA	-0.05	-0.05	-0.06	-0.05	-0.05	-0.05
	(0.006)	(0.009)	(0.009)	(0.020)	(0.018)	(0.019)
GRC	-0.01	-0.01	-0.01	0.00	0.00	0.00
	(0.001)	(0.002)	(0.003)	(0.006)	(0.005)	(0.005)
GBR	-0.02	-0.02	-0.03	-0.04	-0.04	-0.04
	(0.005)	(0.006)	(0.006)	(0.016)	(0.016)	(0.016)
HUN	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
IRL	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02
	(0.003)	(0.003)	(0.004)	(0.006)	(0.005)	(0.005)
ISL	-0.03	-0.03	-0.03	-0.01	-0.01	-0.01
	(0.018)	(0.019)	(0.020)	(0.034)	(0.036)	(0.037)
ITA	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(0.002)	(0.002)	(0.002)	(0.006)	(0.006)	(0.006)
LTU	-0.01	-0.01	-0.01	0.01	0.01	0.02
	(0.003)	(0.005)	(0.006)	(0.010)	(0.010)	(0.012)
LVA	-0.01	-0.01	-0.02	0.02	0.02	0.02
	(0.006)	(0.011)	(0.013)	(0.013)	(0.014)	(0.018)
NLD	-0.01	-0.01	-0.01	-0.01	-0.01	-0.01
	(0.007)	(0.007)	(0.007)	(0.020)	(0.020)	(0.020)
NOR	0.02	0.02	0.02	-0.10	-0.10	-0.10
	(0.012)	(0.012)	(0.012)	(0.039)	(0.034)	(0.034)
PRT	-0.01	-0.01	-0.01	-0.02	-0.02	-0.02
	(0.003)	(0.004)	(0.004)	(0.009)	(0.008)	(0.008)
SVN	-0.03	-0.03	-0.03	-0.05	0.05	-0.05
	(0.004)	(0.004)	(0.004)	(0.014)	(0.013)	(0.013)
SVK	0.00	0.00	0.00	0.01	0.01	0.01
	(0.003)	(0.004)	(0.004)	(0.005)	(0.005)	(0.005)

Note: Coefficients from columns (1) and (4) correspond to what is presented graphically in Figure 4.12. The European countries cover guards and cleaners aged 20 to 64 over the period 2011-19. A worker participated in training if they took part in instruction outside of the formal education system in the last four weeks. Australia covers guards and cleaners aged 20 to 64 over the period 2001-19. A worker is considered to have taken place in a training if they answer "Yes" to "In the past 12 months, have you taken part in any training or employment scheme as part of your job?" All models include control variables for time fixed effects, education, a log of hours per week, and an age polynomial. European OECD countries include country fixed effects while United States and Australia include region fixed effect.

Source: The European Labour Force Survey (EU-LFS) (European countries) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/apu0fc

Annex Table 4.B.8. Change in marginal propensity to be on a fixed-term contract if outsourced by country and model

	Dependent variable: Contract type					
	Cleaners			Guards		
	LPM	Probit	Logit	LPM	Probit	Logit
Country	(1)	(2)	(3)	(4)	(5)	(6)
AUS	0.00	0.00	0.00	0.08	0.07	0.07
	(0.020)	(0.020)	(0.020)	(0.039)	(0.035)	(0.033)
AUT	-0.03	-0.04	-0.04	-0.04	-0.04	-0.04
	(0.002)	(0.003)	(0.004)	(0.011)	(0.011)	(0.012)
BEL	0.00	0.00	0.00	-0.03	-0.03	-0.03
	(0.006)	(0.006)	(0.000)	(0.017)	(0.015)	(0.015)
CHE	-0.02	-0.02	-0.02	-0.04	-0.04	-0.04
	(0.008)	(0.007)	(0.008)	(0.016)	(0.016)	(0.018)
CZE	0.12	0.09	0.09	0.02	0.03	0.02
	(0.020)	(0.014)	(0.014)	(0.019)	(0.019)	(0.019)
DEU	0.03	0.03	0.02	0.04	0.04	0.04
	(0.004)	(0.004)	(0.004)	(0.012)	(0.013)	(0.012)
DNK	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03
	(0.006)	(0.006)	(0.007)	(0.017)	(0.018)	(0.019)
EST	0.01	0.01	0.01	0.03	0.03	0.04
	(0.013)	(0.009)	(0.010)	(0.022)	(0.028)	(0.038)
ESP	-0.08	-0.08	-0.08	-0.12	-0.11	-0.11
	(0.010)	(0.010)	(0.010)	(0.023)	(0.020)	(0.020)
FIN	-0.17	-0.17	-0.18	-0.18	-0.16	-0.17
	(0.013)	(0.014)	(0.014)	(0.045)	(0.035)	(0.036)
FRA	-0.09	-0.09	-0.09	-0.04	-0.04	-0.04
	(0.008)	(0.009)	(0.010)	(0.017)	(0.016)	(0.016)
GRC	-0.19	-0.20	-0.21	-0.09	-0.09	-0.09
	(0.008)	(0.010)	(0.011)	(0.011)	(0.010)	(0.011)
GBR	0.01	0.01	0.01	0.02	0.02	0.02
	(0.006)	(0.005)	(0.005)	(0.010)	(0.009)	(0.009)
HUN	-0.11	-0.12	-0.13	-0.02	-0.03	-0.03
	(0.007)	(0.009)	(0.010)	(0.005)	(0.005)	(0.006)
IRL	-0.04	-0.04	-0.04	0.00	0.00	0.00
	(0.006)	(0.007)	(0.007)	(0.009)	(0.009)	(0.009)
ISL	-0.04	-0.04	-0.04	-0.02	0.01	-0.01
	(0.020)	(0.021)	(0.022)	(0.041)	(0.035)	(0.037)
ITA	-0.08	-0.07	-0.07	-0.18	-0.16	-0.16
	(0.004)	(0.004)	(0.004)	(0.012)	(0.010)	(0.009)
LTU	0.00	0.01	0.00	0.00	0.00	0.01
	(0.006)	(0.005)	(0.005)	(0.005)	(0.007)	(0.009)
LVA	0.00	0.00	0.00	-0.01	-0.01	-0.01
	(0.012)	(0.012)	(0.012)	(0.010)	(0.011)	(0.012)
NLD	-0.01	-0.01	-0.01	0.02	0.02	0.02
	(0.011)	(0.010)	(0.010)	(0.024)	(0.023)	(0.024)
NOR	0.00	0.00	0.00	-0.11	-0.12	-0.12
	(0.011)	(0.011)	(0.011)	(0.031)	(0.029)	(0.031)
PRT	-0.06	-0.06	-0.06	-0.09	-0.08	-0.08
	(0.009)	(0.009)	(0.009)	(0.014)	(0.012)	(0.012)
SVN	0.01	0.01	0.01	-0.07	-0.07	-0.07
	(0.006)	(0.005)	(0.005)	(0.014)	(0.013)	(0.013)

	Dependent variable: Contract type					
	Cleaners			Guards		
	LPM	Probit	Logit	LPM	Probit	Logit
Country	(1)	(2)	(3)	(4)	(5)	(6)
SVK	0.05	0.05	0.04	0.00	0.00	0.00
	(0.014)	(0.010)	(0.010)	(0.008)	(0.007)	(0.008)

Note: Coefficients from columns (1) and (4) correspond to what is presented graphically in Figure 4.13. The European countries cover guards and cleaners aged 20 to 64 over the period 2011-19. Australia covers guards and cleaners over the period 2001-19. Workers with a fixed-term contract include workers who have a fixed-term or casual contract. All models include control variables for time fixed effects, education, a log of hours per week, and an age polynomial. European OECD countries include country fixed effects while United States and Australia include region fixed effect.

Source: The European Labour Force Survey (EU-LFS) (European countries) and the Household, Income and Labour Dynamics in Australia (HILDA) Survey (Australia).

StatLink https://stat.link/t5ps1l

Notes

[1] See Ewing and Abdul (2020[74]) and Shenker (2020[75]).

[2] See OECD (2014[28]) for a summary on temporary work agency employment, and OECD (2019[29]) for a recent summary of own-account work.

[3] See OECD (2007[76]) for an overview of the effect of international trade on OECD labour markets, and WTO, (2019[77]) for issues around international trade in services.

[4] The literature on domestic outsourcing does not usually constrain the definition to labour services and includes intermediate goods production as well. The distinction ultimately rests on the assumption of what a firm could reasonably produce in-house. In order to side-step that discussion, this chapter limits itself to primarily labour services. However, many of the same issues arise in manufacturing supply chains (Weil, 2014[14]).

[5] A good illustration of domestic outsourcing in low-wage service jobs lies with the evolution of cleaners. A recent *New York Times* article compared the experience of cleaners at two different cutting-edge technology companies: Kodak in the 1980s and Apple today. Historically, cleaners at Kodak were regular Kodak employees. At Apple, cleaners work for a contractor employed by Apple. The depiction draws a direct link between the different employment trajectories and wages, as well as the considerable differences in terms of benefits, training opportunities and job security (Irwin, 2017[78]).

[6] Manufacturing firms are increasingly contracting with third-party contracting firms in occupations key to the core activity of the firms. Dey, Houseman and Polivka (2012[46]) argue that manufacturers increasingly rely on staffing companies to provide production workers, depressing published reports of manufacturing employment.

[7] In some cases, the TWA may act only as a mediator and not employ the worker directly. These cases would fall outside the bounds of an outsourcing relationship.

[8] Anti-poaching agreements are not necessarily unlawful since they are usually treated as vertical restraints. This occurs even if what these agreements essentially prevent in practice is horizontal competition across same level firms (that is different franchisees).

[9] This refers to section “N” in the in the International Standard of Industrial Classification of All Economic Activities (ISIC). Other classification systems contain similar groupings. The statistical classification of economic activities in the European Community (NACE, Rev. 2) contains the same section “N” denoting administrative and support service activities. In the North American Industrial Classification System (NAICS, 2017), the corresponding industry is “56”, Administrative and Support and Waste Management and Remediation Services.

[10] Section “M”, Professional, Scientific, and technical activities also provides intermediate services to businesses. However, these activities require a high degree of training and education as well as specialised knowledge transfer. Examples include legal and accounting services, pharmaceutical research or management consultancies. These activities often also constitute domestic outsourcing, though they mostly concern high-pay occupations. The effects of domestic outsourcing on these occupations may be quite different from those of low-pay occupations.

[11] For Panel A, these are divisions 80, Security and investigative activities; 81, Services to buildings and landscape activities and 82, Office administrative, office support and other business support activities. Employment by private households would not be included. For Panel B the division is 78, Employment activities.

[12] Changes in the international classification of occupations prevent a precise comparison of developments between 2007 and 2011.

[13] For cleaners, employment by private households was omitted from the analysis. For guards, similarly, public administration and defence was excluded. Including these industries lowers the shares in the administrative and support industry. However, trends in the shares over time are qualitatively unchanged.

[14] Across European OECD countries in the sample, 47.7% of outsourced cleaners lack an upper-secondary degree compared to 44.3% of cleaners who are not outsourced. Among security guards, this share for workers who are outsourced is 28.5% compared to 25.9% for non-outsourced workers. In the United States 34.6% of outsourced cleaners lack an upper-secondary degree, compared to 22.6% of non-outsourced cleaners. Among security guards in the United States, 6.3% of outsourced guards lack an upper secondary degree, compared to 4.8% of guards who are not outsourced. In Australia, this share for cleaners is 44.9% for outsourced workers and 53.8% for non-outsourced workers. Among security guards, 32.9% outsourced workers lack an upper-secondary degree compared to 25.0% of non-outsourced workers.

[15] The difference between the two lines at each decile, d, is the estimated coefficient $\widehat{\beta_d}$ explained in Box 4.5. Stars on the decile indicate whether the coefficient estimates are significant at the 95% confidence interval.

[16] For comparison, the unadjusted frequency distributions for cleaners and guards are found in Annex Figure 4.A.3 and Annex Figure 4.A.4, respectively.

[17] The earnings data from both Australia and the United States contain enough detail (estimates of hours and earnings) to also compute average wage effects of outsourcing using a linear regression model. They are computed using log wages.

[18] The earnings regressions in Section 4.3.2 control for usual hours worked. Differences in working time do not, therefore, appear to explain the differences in earnings between outsourced cleaners and guards.

[19] This “dynamic wage effect” through occupational mobility is different than the earnings effects analysed in this chapter, and they should be viewed as distinct.

[20] Moreover, termination of the contract for services by the lead firm is considered as a fair reason for worker dismissal by the contracting company in a number of OECD countries – see e.g. OECD (2014[28]), which limits the cost of dismissals for the contracting company.

5 Working time and its regulation in OECD countries: How much do we work and how?

Working time is a crucial variable shaping the labour market and its adaptability to shocks. It can affect key labour market outcomes, such as workers' well-being, productivity, wages and employment. Documenting how OECD countries regulate working time, and understanding how different regulatory settings shape working time outcomes is crucial for policy makers seeking to balance equity, efficiency and welfare considerations. This chapter offers a detailed review of regulations governing working hours, paid leave, and teleworking in OECD countries. It discusses the role of collective bargaining in negotiating working hours or working time arrangements, and how OECD countries have adapted their working time regulation during the COVID-19 crisis. The chapter also provides an update on working time patterns and trends in time use across OECD countries and socio-demographic groups. It measures how differences across workers in working time outcomes have changed over time and driven inequalities in work-life balance.

In Brief

Key findings

On average in OECD countries, *usual* weekly hours for full-time employees remained fairly constant between 1995 and 2019, despite small cross-country variations. The median full-time employee usually worked 40.5 hours per week in 2019, ranging from 37 hours in Denmark to 48 hours in Mexico and Colombia. Since the mid-2000s, the incidence of paid overtime has remained stable at just over 7.5% of full-time employees, while that of unpaid overtime decreased slightly, from 6.2% to 5.1%. For those working overtime, the average number of additional hours is considerable, amounting to 8.3 for paid overtime (7.7 for unpaid overtime), or one additional day per week in 2019.

Leisure accounts for the third largest share of people's time after personal care (which includes sleep) and paid work. Time allocated to leisure decreased by 1.5 hours per week for a full-time worker between the 1970s and the 2010s, on average in the 14 OECD countries for which data are available. This decrease started in the 1990s and accelerated over time. There are significant cross-country variations in work/leisure ratios: in the 2010s, Mexican workers spent more than three times as much time on paid work as on leisure, while Korean workers spent twice as much and German, Finnish and Norwegian workers spent about the same amount of time on both activities.

On average in the 11 OECD countries analysed, weekly hours *actually worked* per worker have decreased by 8 hours since 1970, but at a slowing pace (from 0.9% annually in the 1970s to 0.2% in the 2010s). Over the same period, hourly productivity has grown, also at a decreasing rate, from 3.7% annually in the 1970s to 0.7% in the 2010s. Comparing average trends in hours worked, leisure and productivity suggests that productivity growth has not led to extra leisure time for full-time employees.

Several insights emerge from this chapter's review of the way working hours, paid leave and teleworking were regulated in 2020 in OECD countries, both through legislation and collective bargaining:

- OECD countries can be clustered in six groups with different patterns of working hours governance. Those are characterised by the extent to which the limits on normal and maximum weekly hours can vary upwards: for example, in Chile, Israel and Mexico, rules are uniform – no variation is allowed, while some variation is possible either through derogation or averaging mechanisms in France or Lithuania; Austria, New Zealand or Sweden allow rules to vary to a larger degree. However, these patterns only affect usual weekly hours to a limited extent: in many countries where the possibility to exceed normal hours limits exists, it has no significant effect on median usual weekly hours – which are largely capped by statutory limits. Similarly, there is no strong relationship between patterns of governance and the frequency or duration of paid overtime.
- In the majority of OECD countries, workers are entitled to a minimum amount of statutory paid annual leave. In a number of countries, collective agreements provide for substantially longer annual leave than this statutory minimum. In almost all countries, the amount of paid leave actually taken is higher than the statutory minimum.
- Access to teleworking is not guaranteed in all OECD countries. Legal rights to request teleworking, where they exist, can cover all employees (as in New Zealand or Spain) or some categories (as in Lithuania). In the Netherlands, Portugal and the United Kingdom employees have an enforceable right to request teleworking, while in some other countries employers can

easily refuse to accommodate such requests. The way in which teleworkers' working conditions are regulated (comprehensively or not, through dedicated legal frameworks or national/sectoral collective agreements, etc.) also vary. These regulatory differences affect access in practice: while the use of teleworking remained limited until the COVID-19 outbreak, it was higher on average in countries where there was an enforceable right to request teleworking, and highest in countries where this right was granted through collective bargaining.

- OECD countries have used working time as an adjustment mechanism during the COVID-19 crisis. They introduced policies enabling to work longer hours, to take more paid leave, to facilitate averaging arrangements and to telework more easily – which was reflected in the surge in the incidence of teleworking, from 16% in 2019 to 37% of employees in March/April 2020.

Hours worked and working time arrangements vary significantly between different groups of workers:

- The prevalence of very short hours of work is higher and the prevalence of very long hours lower for women and low-educated workers, compared with men and highly educated workers respectively. However, while gender differences in working hours have been narrowing, educational gaps have been widening since 1999.
- Flexible working hours arrangements, which allow workers to choose their schedule, are most often used by highly educated and highly paid employees. The education gap in access to flexible hours has been widening over the past decade, while the income gap has narrowed. By contrast, the incidence of variable scheduling – whereby workers have no control over their schedule – is highest for employees without tertiary education and low-paid employees.
- Prior to the COVID-19 crisis, teleworking arrangements were most often used by men, highly educated and highly paid employees in the majority of OECD countries. Disparities between educational and income groups widened during the first lockdowns, when 55% of highly educated workers were able to work from home on average, against 19% of low educated workers.
- Available data for ten OECD countries reveal important work-leisure imbalances between men and women. Throughout the last 20 years, women have consistently enjoyed less leisure time per hour of work (paid and unpaid) than men. Ratios in the last decade are more comparable across educational groups, with workers of all education-levels spending on average 1.5 times as much time on work as on leisure. Higher paid workers spent on average less time on paid work and more time on leisure than lower-paid ones.
- The share of workers defined as "time-poor" (i.e. those for whom the share of time devoted to leisure and regenerative activities is less than 60% of the median) increased over time for the ten OECD countries for which data are available, rising from 1.4% on average in the 2000s to 1.8% in the 2010s for men, and from 1.3% to 1.8% for women. In the last 20 years, the incidence of time poverty was lowest for the most highly paid third of workers.
- There are also important differences in the amount of work needed to achieve a given level of material well-being. In several OECD countries in 2019, a single childless minimum wage worker had to work more than 40 hours per week (i.e. more than the limit on normal weekly hours in most countries) to escape poverty.
- Overall, 43% of workers in OECD countries were dissatisfied with the amount of time that they spent working in 2015, with working too much being the dominant cause of dissatisfaction. The development of innovative collective bargaining practices and firm-level experimentation around working time reduction in recent years might be a sign that this dissatisfaction is being heeded, although more research is needed to confirm this conjecture.

Introduction

Working time is a key component of people's working lives. Regulating its duration and its organisation is necessary to correct possible market failures (due e.g. to asymmetry in market power between workers and employers) leading to inadequate protection of workers' health and work-life balance, and to prevent negative externalities linked to excessive working hours or unpredictable schedules. Workers also need to be protected against the risks that unilateral cuts in working time and the corresponding reduction in income would pose to their material well-being. At the same time, worked hours being a production factor, the regulation of working time also impacts other key labour market outcomes, such as productivity and employment. In times of crisis, working time is a crucial policy instrument that can be adjusted to provide internal flexibility for firms. Therefore, understanding how different regulatory regimes relate to working time outcomes is key for policy makers seeking to balance equity, efficiency and welfare concerns.

This chapter focuses on three key dimensions of working time (see Box 5.1 for definitions): weekly working hours (both normal weekly hours excluding overtime and maximum weekly hours including overtime); paid leave and public holidays; and teleworking, as well as their corresponding outcomes (e.g. hours actually worked, leave effectively taken or actual incidence of teleworking). These have all been instrumental in providing internal flexibility to firms as a response to the COVID-19 crisis.

Section 5.1 documents the diversity of working time regulatory settings in OECD countries, looking both at the *governance* of working time rules (i.e. the way in which these rules are set, through law or through various types of collective bargaining, conditions for derogations, and the hierarchy between different types of statutory and negotiated rules) and the *content* of working time rules (such as the upper limits for weekly working hours, or the level of overtime premium). Taking into account the rules negotiated through collective bargaining is particularly important, since working time is typically one of the areas where social partners have margins of manoeuvre to factor in specific local needs, possibly leading to a large variation in practices (OECD, 2019[1]). Finally, the section reviews recent regulatory changes implemented as a response to the COVID-19 crisis.

This comprehensive picture of working time regulatory settings is an essential first step to assess how working time regulation may relate to actual *working time outcomes*. These, in turn, may impact *labour market outcomes*, such as workers' well-being, productivity and employment. This chapter concentrates on the first relationship, i.e. between rules and working time outcomes (see Figure 5.1).[1] While it is often overlooked or taken for granted in the literature, this relationship might be expected to vary substantially with, for instance, the degree of heterogeneity allowed in working time regulations.

Taking a longer-term perspective, Section 5.2 investigates if younger generations work less than their parents, by looking at how the usual full-time work week[2] has changed over time and across OECD countries. Fluctuations in the amount of time spent on work are mirrored by fluctuations in the amount of time spent on other activities outside of paid work. To get a better contextual grasp of development in working time, the section next reviews trends in time use, contrasting the shares of time spent on paid work, unpaid work, personal care, and leisure.

Finally, since national trends in working time may obscure changes in working time outcomes between socio-demographic groups, Section 5.3 exploits data from labour force and time-use surveys to assess disparities by gender, educational attainments and income groups, and the evolution of these disparities since the 1970s. The section presents trends in average hours worked, very long and very short hours, as well as various working time arrangements, disaggregated by groups. Patterns of mismatches between hours actually worked and the number of hours that workers would ideally like to spend working are also discussed.

Box 5.1. Glossary

Averaging arrangements: modalities used to average working hours, e.g. to exceed limits (both on normal and maximum hours) and/or overtime in any given week by smoothing the amount of hours on average, over a certain reference period.

Compressed working weeks: arrangements whereby a standard workweek is reduced to fewer than five days but workers work longer hours, thus keeping the number of hours per-week constant.

Derogations: derogations considered in this chapter are deviations *in peius,* i.e. deviations from the law and/or from higher-level rules that set a *lower* standard – i.e. provisions less favourable to workers. By default, it is almost always possible to deviate *in melius* from higher-level rules, i.e. to agree on a rule that is more favourable to workers. Deviations directly granted in the law also exist for particular groups, but they are not considered in this chapter as a source of variation from the norm: indeed such statutory derogations merely set different rules for different groups, but those rules are binding, and local actors cannot deviate from them.

Flexible working hours: arrangements whereby workers can choose their start and finish time.

Maximum working hours: maximum number of hours, including overtime, that workers are legally allowed to work.

Negotiated working hours: collectively agreed working hours set in collective agreements.

Normal working hours: number of working hours after which overtime conditions apply (or, put differently, working hours excluding overtime). In some countries, this number is set in the law (statutory normal working hours), in others it is set in collective agreements (negotiated normal working hours).

On-call contract: forms of employment where all or most working hours are set at the employer's discretion, from no guarantee of any hour ("zero hours contracts") to only a low guaranteed minimum. This should not be confused with "on-call duty", which refers to periods of time during which the employee is expected to be work-ready, in the context of a traditional full-time or part-time contract.

Overtime hours: hours worked in excess of normal hours, that are subjected to specific conditions, such as workers' possibility to refuse working overtime, or the application of overtime compensation, in the form of higher pay rates, or additional time-off.

Paid leave: annual period of time (usually expressed in number of days) during which workers can take time away from their work while continuing to receive pay and to be entitled to social protection, giving them the opportunity for extended rest and recreation. Paid leave is available in addition to public holidays, sick leave, weekly rest, maternity, long service leave and parental leave.

Public holidays: variety of cultural and religious non-working holidays that can be enshrined in statutory legislation at national or federal level, negotiated in collective agreements, or can exist de facto as unwritten cultural traditions.

Statutory working hours: the legal threshold after which overtime starts, as set in the law. They represent neither minimum (as workers may work part-time work) nor maximum hours (as workers can work overtime).

Teleworking: form of organising and/or performing work, using information technology, in the context of an employment contract/relationship, where work, which could also be performed at the employer's premises, is carried out away from those premises on a regular or occasional basis.

Time-saving account: also known as time banking or working time account, such account allows the worker to build up "credits" by working overtime (paid at the normal hours rate), or to owe "debits" in hours worked (by taking advance leave), up to a maximum amount. Credits can be used as leave at a later date or traded against financial compensation.

Usual (weekly) hours: the number of hours individually worked by an employee during a normal week without any extra-ordinary events (such as leave, public holidays, strikes, or sickness), and without extraordinary overtime in addition to planned contractual overtime, as set in some employment contracts.

Variable scheduling work: contracts with regularly and unpredictably changing schedules (e.g. variable shift scheduling and on-call contracts).

5.1. How do OECD countries regulate working time? A focus on working hours, paid leave and teleworking

Accounting for the regulatory setting that effectively apply to working time is key to derive expectations about how bindings rules are, and therefore how much variations can be expected in a given governance context. Drawing on the OECD Policy Questionnaire on Working Time Regulation (Box 5.2) this section documents in details the regulation of working hours, paid leave and public holidays, and teleworking at the beginning of 2020.[3] It then presents synthetic information on the governance of working time and information on the *content* of the rules (statutory and negotiated)[4] contrasting it to the latest available data on actual working time outcomes. Doing this allows gauging to what extent variation in regulations actually matters in producing variations in working time outcomes observed in practice.

Box 5.2. The OECD Policy Questionnaire on Working Time Regulation

Descriptions of working time regulatory settings in OECD countries presented in this chapter mainly rely on responses to the detailed policy questionnaires that were sent to Labour Ministries, employer organisations and trade unions in 2020. These responses, which inform Section 5.1 of the chapter usually correspond to the situation in 2020 prior to the COVID-19 crisis, except in the specific section on recent adjustments to regulation as a response to the COVID-19 crisis.

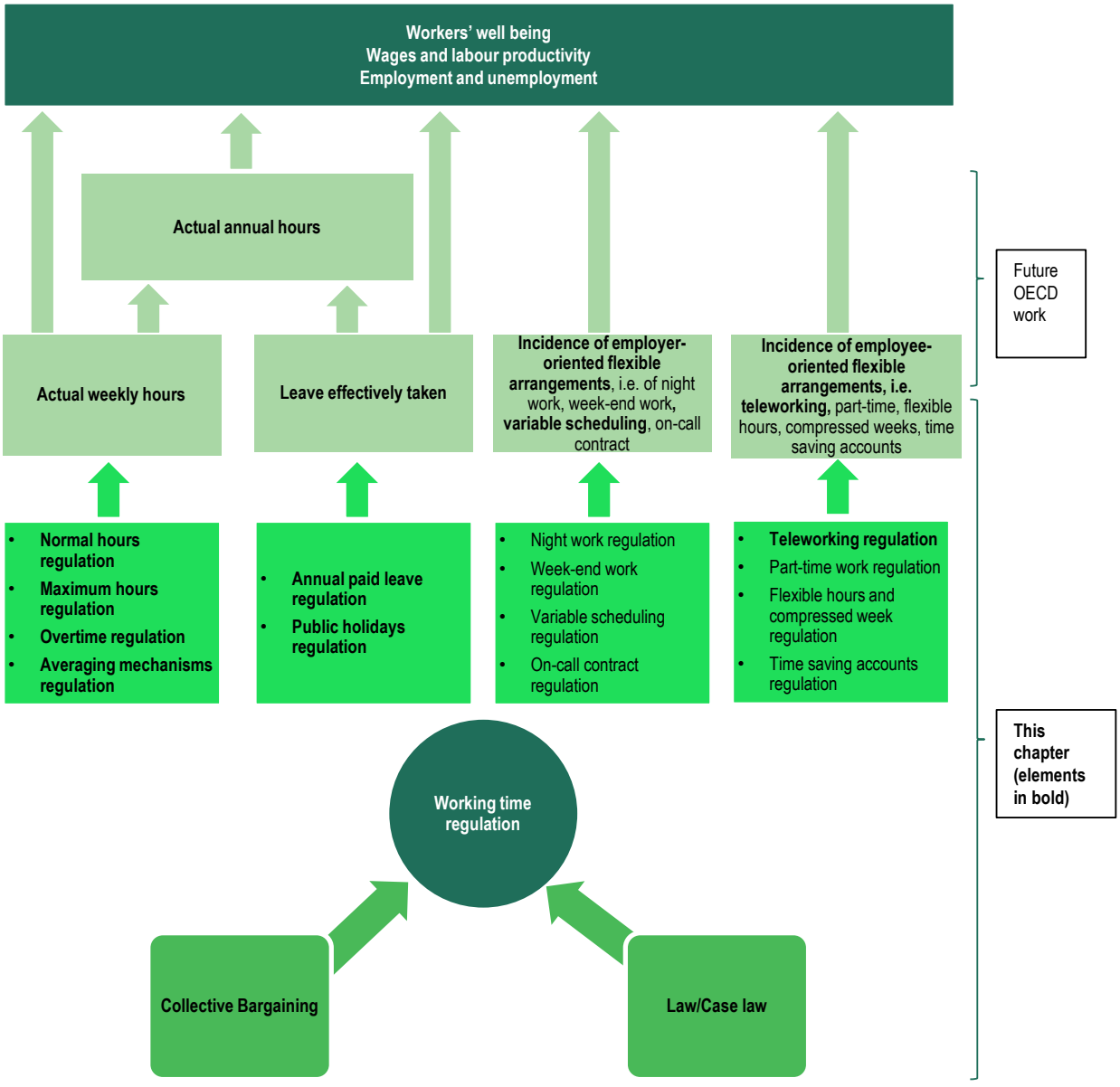
The questionnaires collected information on both statutory and negotiated rules in a number of areas of working time regulation. For information on regulation of working time that is set through collective bargaining, questions referred to the most frequent or the average clause among all workers covered by collective bargaining in the country.

The questionnaire was structured along six main blocks. The first block introduced the general organisation and governance of working time regulation (e.g. the hierarchy between statutory and negotiated norms and the degree of flexibility in deviating from standards set in the law or in collective agreements at higher levels). The second block was dedicated to the regulation of the amount of hours worked (daily and weekly working hours, as well as overtime). The third block examined the regulation of leave and public holidays. The fourth block looked at the regulation of the organisation of working time (e.g. unsocial hours and flexible working time arrangements). The fifth block collected information related to the existence of short-time work and more generally job retention schemes and how they have been adjusted as a response to the COVID-19 crisis (this information was exploited in Chapter 3 of this volume). Finally, the sixth block focused on recent reforms of working time regulation.

Questionnaires were pre-filled by the Secretariat and checked by contact points in Labour Ministries and social partners through the Trade Union Advisory Council and Business@OECD networks. Information for Canada presented in this chapter refers to the federal level.[1] The information has been complemented and cross-checked with existing information from the OECD and other publicly available sources (government websites, other international organisation, and relevant research literature).

1. While detailed information was also received on regulation at provincial levels, it was not feasible to include all the different rules in this chapter, given the amount of variation between provincial regulations. Hence, most of the data on regulation related to Canada presented here refer to the Canadian Labour Code; the latter regulates the federally regulated private sector, or about 6% of the Canadian workforce. Labour standards for other sectors – such as manufacturing, construction, primary industries, and wholesale and retail trade – fall within the exclusive jurisdiction of the provinces and territories.

Figure 5.1. Working time regulation, labour market performance and workers' well-being



5.1.1. Weekly working hours

Regulatory settings of weekly working hours across OECD countries

In almost all OECD countries, limits on weekly working hours – both normal hours (excluding overtime) and maximum hours (including overtime) − and on overtime exist to prevent excessively long hours that may be detrimental to workers' health and well-being (Pega et al., 2021[2]) and to productivity. Often, derogations to these rules (in the sense of rules being *exceeded*)[5] and/or averaging mechanisms giving employers the possibility to increase working hours beyond these maxima under particular circumstances exist as well.

Three main types of rules can be found in OECD countries, often used in combination: i) rules setting limits on weekly working hours (both on normal and on maximum hours);[6] ii) rules defining the conditions for the use and duration of overtime; and iii) rules defining the conditions of averaging − e.g. the possibility to exceed limits (both on normal and maximum hours) and/or on overtime in any given week by smoothing the amount of hours on average, over a certain reference period. These rules may be set by statutory law, by collective agreements, or be left to individual negotiations in some contexts.

Normal weekly hours

In the majority of OECD countries, the statutory limit for normal weekly hours is set at 40 hours a week, based on a five-day working week and eight-hour working days. Higher statutory maxima exist in Chile, Colombia, Israel, Mexico and Turkey. Belgium, France[7] and Australia[8] have a lower limit. In some other countries, there is no statutory limit on normal weekly hours: this is the case in Denmark, Germany, the Netherlands, Switzerland and the United Kingdom (see Annex Table 5.A.1). As mentioned above, these statutory limits can be exceeded through derogations allowing collective bargaining at the sectoral or at the firm level to overrule the limits set in the law:[9] this is the case for instance in Austria, Belgium, New Zealand, Norway, Slovenia, Spain and Sweden.[10] In some cases – for instance in Colombia – the normal weekly hours limit can be exceeded by mutual agreement between the employee and employer.

In many cases, employers can also exceed the default limit on normal weekly hours through averaging working hours over a reference period longer than a week, to determine the end of normal working hours, and the start of overtime (i.e. the point at which overtime pay rates start being paid, and in some cases, where a different tax treatment applies). This option exists in several countries, with different procedural requirements and modalities:[11] in Belgium, Greece, Japan, Portugal and Sweden (where it needs to be agreed by collective agreement) and in Australia, Austria, Colombia, Finland,[12] Norway, and Spain (where employees must consent to it). Finally in Canada, France, Hungary,[13] Italy, Korea, Lithuania, Poland and Turkey, employers can unilaterally decide to use such averaging mechanisms for normal weekly hours. Significant differences in the parameters of averaging exist across OECD countries: in Australia, Colombia, France, Lithuania and Spain, for instance, the law stipulates a binding maximum period over which it is possible to average; in Belgium, Finland, Greece, Italy, Japan, Korea, Poland, Turkey and the United Kingdom, social partners can exceed the default maximum averaging period up to a higher binding ceiling. Independently of how they are set, maximum averaging periods for normal weekly hours vary quite substantially: where they are binding and set in the law, they range from 3 weeks in Colombia to 52 weeks in Spain, while they range from 6 to 12 weeks in Norway to 52 weeks in Belgium, where they are agreed upon collectively (see Annex Table 5.A.3).

Other factors beyond working time regulation are likely to affect working time outcomes. Nonetheless, understanding with precision the manner in and extent to which limits on normal weekly hours apply or are likely to be exceeded or bypassed in practice is crucial to go beyond "*de jure*" statutory limits on working hours, and to assess the expected degree of variation between statutory rules and outcomes. The governance of working hours in each country produces rules that are more or less binding; the more binding the rules, the more uniform the expected outcomes, and the larger the expected role of regulation

in determining working time outcomes. In what follows, countries are clustered in six groups with different patterns of governance of normal weekly hours, according to how *binding* limits on normal hours are − accounting for possible derogations at lower levels of norms − and how *easily* averaging mechanisms for normal hours can be introduced (for a more detailed explanation of the clustering logic applied, see Annex Table 5.A.6):

- In Chile, Estonia, Israel, Latvia, Mexico and the Slovak Republic, rules governing normal hours are uniform, with a binding upper limit that corresponds most frequently to the statutory default, and no possibility to derogate from it nor to use averaging mechanisms.
- In Australia, Belgium, Finland, Greece, Portugal and Japan, rules governing normal hours are mostly uniform, with a limited possibility for variation. The upper limit on normal hours (either the statutory default or the one collectively negotiated at the national level) is binding, with no possibility to derogate from it. Yet there is a limited possibility to use averaging mechanisms through collective agreement (or with the employee's consent in Australia[14] and Finland).
- Canada, the Czech Republic, France, Hungary, Italy, Korea,[15] Lithuania, Poland, and Turkey allow for a more extensive variation in normal hours rules. The upper limit (most frequently the statutory default, except in Canada and Italy where it is negotiated) is binding, with no derogation allowed, but employers can unilaterally decide to use averaging mechanisms. Hence the regulation of normal hours is likely to be mixed, neither uniform nor fully heterogeneous. Slovenia and the United States[16] are also in this group, since it is not possible to use averaging mechanisms, but the upper limit on normal hours can be exceeded through derogations at lower levels of bargaining (including individual agreements, e.g. in the United States).
- Austria, Colombia, New Zealand, Norway, Spain and Sweden, allow for large variation in normal hours rules: the default upper limit (most frequently negotiated at the national or sectoral level) can be exceeded through derogations at lower levels[17] of bargaining, and there is a (limited) possibility to use averaging with the employee's consent or through collective agreement. The regulation of normal hours is thus likely to be mostly heterogeneous.
- In Denmark, Germany, the Netherlands and Switzerland, rules governing normal hours are fully heterogeneous: there are no statutory nor centrally bargained upper limit on normal hours and limits are mostly negotiated at the firm-level (except in Denmark and the Netherlands, where the sectoral level dominates).
- Finally, in the United Kingdom, normal hours are unregulated, and usually left to be determined in individual contracts with no higher-level limits. Neither are there any statutory nor centrally bargained limit on maximum weekly hours or overtime (see below).

Maximum weekly hours and overtime

Countries may also fix limits on maximum weekly hours (i.e. including overtime) (see Annex Table 5.A.2).[18] This is the case in a large majority of OECD countries, and notably in most EU Member States and Norway which limit the maximum weekly hours to 48 hours on average over four months, in line with the EU Working Time Directive.[19] In addition to rules on maximum hours, some countries have dedicated limits on the quantity of overtime work that can be performed in a given period of time. For instance, in Belgium, overtime is limited to a maximum of 143 hours within the period of reference used for averaging;[20] in Chile, overtime is limited to 12 hours per week; in Switzerland, it is limited to 2 hours per day, and 170 hours per year.[21] Limits go up to 45 hours per month and 360 hours per year of overtime in Japan (see Annex Table 5.A.2). In Australia,[22] New Zealand and the United Kingdom,[23] there are neither dedicated limits on overtime nor on maximum hours.

As with the limits on normal hours, limits on both overtime and on maximum hours can be binding (this is the case for instance in Finland, Mexico, the Netherlands, and Turkey), or might be exceeded[24] through collective agreements (e.g. in Canada, Norway and Spain) or through individual agreements (e.g. in the

Czech Republic, or Hungary) – see Annex Table 5.A.7. Even where derogations are not possible, limits on overtime and/or maximum hours may still be bypassed through averaging mechanisms (in some cases, averaging is possible in combination with derogations). While the averaging of normal hours is a way to delay the *starting point* of overtime in any given week, averaging maximum hours or the quantity of overtime is a means of bypassing the *upper* legal limit of overtime in any given week, provided this is compensated over the reference period. As for normal hours, procedural requirements and modalities vary across OECD countries. In Austria and Denmark, averaging of maximum weekly hours requires a collective agreement. In Estonia, Germany, Latvia, Norway and Portugal, the averaging of maximum weekly hours (and the maximum quantity of overtime in the Czech Republic and the Slovak Republic) can be introduced pending employees' consent. In Hungary,[25] the Netherlands, Slovenia or Sweden, maximum weekly hours (and the quantity of overtime in Switzerland) can be averaged unilaterally by employers. The maximum duration for averaging might be binding, it might be extendable by agreement under a ceiling (e.g. in Hungary or in the Netherlands), or in some cases (as in Austria and Denmark) there might be no binding limits on the duration of the averaging period for maximum weekly hours that can be negotiated (see Annex Table 5.A.3). In practice, maximum averaging periods for maximum hours or overtime vary across countries (and often, across sectors within countries), ranging e.g. from 6 to 12 weeks in Norway (most frequently negotiated provisions), to 52 weeks in Estonia.

Another source of variation between countries comes from overtime compensation. Most countries establish a minimum compensation for overtime hours. The latter can be either binding (meaning that lower level agreements can only set a higher compensation rate) – this is the case e.g. in Belgium,[26] Israel, Italy, Portugal, Slovenia or the United States[27] (see Annex Table 5.A.2), or there can be a possibility to agree on a lower compensation at lower levels (e.g. in Germany, Japan, or Latvia). Compensation can often take the form of a higher rate of pay, or of compensatory time-off (or it can be a combination of both). It ranges from a minimum rate of 110% in France and Italy, to 200% in Latvia and Mexico, and 150% in most countries. In Australia and Sweden, minimum compensation rates are determined in sectoral and firm-level agreements (and in industry-wide modern awards in Australia), and are therefore only relevant to covered workers. There are no provisions guaranteeing a minimum overtime rate higher than the wage rate for normal hours at all in New Zealand and the United Kingdom.

Following the same logic as exposed above for normal hours, the governance of overtime and maximum weekly hours across OECD countries can be described in terms of how *binding* the limits on overtime and maximum hours are and how *easily* averaging mechanisms for overtime or maximum hours can be introduced. Using these two criteria, OECD countries can again be clustered in six groups with different patterns of governance of overtime and maximum weekly hours (see details of the logic applied in Annex Table 5.A.7):

- In Chile, Greece, Israel, Mexico, Poland and Turkey, rules governing maximum weekly hours/overtime are uniform. The upper limit (that corresponds most frequently to the statutory default) is binding, with no possibility to derogate from it, nor to bypass it using averaging mechanisms. In all these countries there is a binding minimum compensation for overtime hours.
- In Belgium, the Czech Republic, Denmark, Latvia, and the Slovak Republic, rules governing maximum weekly hours/overtime are likely to be mostly uniform**.** The upper limit (most frequently the statutory default) is binding, but there is a limited possibility to use averaging mechanisms, only with the employee's consent or through a collective agreement. In all these countries but Latvia and Denmark, there is a binding minimum compensation for overtime hours (in Latvia a lower minimum can be agreed upon, in Denmark there is no encompassing minimum compensation).
- In Colombia, Finland, France, Germany, Italy, Japan, Korea, Lithuania, the Netherlands, Spain, Switzerland and the United States, the regulation governing maximum hours/overtime is likely to be mixed between uniform and heterogeneous.

  - In Finland, Germany,[28] Korea,[29] the Netherlands and Switzerland, the binding upper limit can be bypassed relatively easily, since employers can unilaterally decide to use averaging mechanisms. The minimum compensation for overtime is binding in the Netherlands and Korea, but it can be lowered in collective agreements in Finland, Germany and Switzerland.
  - In Colombia, France, Italy, Japan, Lithuania, Spain, and the United States, averaging is not possible, but the upper limit on maximum weekly hours (statutory or negotiated at a central level) can be exceeded through derogations at lower levels of bargaining (including through individual agreements in the United States). Except in Japan, the minimum compensation in these countries is binding.
- In Austria, Canada, Estonia, Norway and Portugal, maximum hours/overtime rules are likely to be mostly heterogeneous: upper limits (statutory default or collectively negotiated at the national or sectoral level) can be exceeded through derogations at lower levels of bargaining, *and* there is a limited possibility to use averaging with the employee's consent in most countries, or through collective agreement in Austria and Canada.[30] In all these countries, there is a binding minimum compensation for overtime hours.
- In Hungary, Slovenia and Sweden, maximum hours/overtime rules are likely to be fully heterogeneous: existing limits can be exceeded through derogations at lower levels of bargaining, and there is a unilateral possibility for employers to use averaging mechanisms. While the minimum compensation is binding in Hungary and Slovenia, there is no encompassing minimum compensation rate in Sweden.
- Finally, in Australia, New Zealand and the United Kingdom, maximum hours are unregulated: overtime / maximum weekly hours are usually left to be determined in individual contracts with no higher levels limits;[31] there are no encompassing minimum compensation for overtime hours.

Patterns of working hours governance across OECD countries

Table 5.1 combines the two previous country groupings, to capture the overall governance of weekly hours across OECD countries. Six patterns of governance of working hours emerge, which can be expected to produce more or less heterogeneous rules governing working hours:

- **Countries with uniform rules for both normal and maximum hours:** in this group, upper limits on weekly hours (both normal and maximum hours) are set in the law or in cross-sectoral/sectoral agreements. Limits are binding (no derogations are allowed), and bypassing them with averaging mechanisms is only possible with employees' consent or a collective agreement. The majority of workers in this group of countries is subject to similar rules, with relatively little variation.[32] Belgium, Chile, Israel, Greece, Latvia, Mexico and the Slovak Republic fall into that category.
- **Countries allowing for some variation in both normal and maximum hours rules:** upper limits on weekly hours (both normal and maximum hours) are set in the law or in cross-sectoral/sectoral agreements. However, limits can either be exceeded through derogations at lower levels of bargaining, or be bypassed through averaging mechanisms unilaterally introduced by employers. Heterogeneity can be expected to be higher in this group of countries compared with the previous one. France, Italy, Korea, Lithuania and the United States are in this group.
- **Countries allowing for a more extensive variation in both normal and maximum hours rules:** upper limits on normal hours are either non-existent, can be exceeded through derogations (sometimes in combination with averaging), or can be bypassed through unilateral averaging; the upper limit on maximum hours can be exceeded through derogations (sometimes in combination with averaging) or bypassed through unilateral averaging. Within this group, Colombia, Germany, the Netherlands, Spain, and Switzerland allow for limited local variation of the maximum hours limit, but more extensive variation for normal hours; Canada, Hungary and Slovenia allow for a limited variation of the limit on normal hours, but more extensive variations

for maximum hours; and Austria, New-Zealand, Norway and Sweden allow for extensive variations on both dimensions. Hence, heterogeneity could be highest in this group compared with the two previous ones.

- **Countries with uniform rules for normal hours, but allowing for variation of maximum hours rules**: in this group, upper limits on normal hours are set in the law or in cross-sectoral/sectoral agreements; limits are binding (no derogations are allowed), and bypassing them with averaging mechanisms is only possible with employees' consent or a collective agreement. By contrast, the upper limit on maximum hours can be bypassed through averaging mechanisms introduced unilaterally by employers, and / or exceeded through derogations. Hence the majority of workers is subject to similar rules governing normal hours, but potentially to different rules for maximum hours. Australia, Finland, Japan and Portugal belong to this category.
- Countries with uniform rules for maximum hours, but allowing for variation of normal hours rules: in this group, upper limits on maximum hours are set in the law or in cross-sectoral/sectoral agreements; limits are binding (no derogations are allowed), and bypassing them with averaging mechanisms is only possible with employees' consent or a collective agreement. By contrast, the upper limit on normal hours can be adapted locally through averaging mechanisms introduced unilaterally by employers, and/or through derogations. Hence the majority of workers is subject to similar rules governing maximum hours, but potentially to different rules governing normal hours. The Czech Republic, Denmark, Estonia, Poland, and Turkey are in this group.
- **Countries where working hours are largely unregulated**: there are no binding limits on either normal or maximum working hours; the United Kingdom is in this group.

This grouping is inevitably a simplification of the complexity of the governance of working hours. It necessarily focuses on some aspects (here, the rules governing the *limits* to normal and maximum hours), to the detriment of others.[33] Moreover, the logic behind this clustering exercise focuses on one dimension (the heterogeneity vs. uniformity of rules and expected outcomes), while others could have been considered. More generally, in focusing on the *governance* of working hours, it does not account for the *contents* of rules themselves (although information on this is presented in Annex 5.A), which obviously matter for outcomes irrespective of their uniform or heterogeneous nature. Nonetheless, this clustering exercise adds nuance to the estimation of the relationship between working time regulation and working time outcomes. Indeed, it suggests that there are significant sources of heterogeneity in rules governing working hours in some countries, which should be accounted for when assessing the impact of working time regulation reforms on labour market outcomes (put differently, the "bite" of reforms is likely to vary between countries, depending on the degree of uniformity of their working time regulation).

Table 5.1. Working hours governance across OECD countries in 2020

Regulation of maximum hours / overtime	Regulation of normal hours: Uniform	Mostly uniform	Mixed	Mostly heterogeneous	Heterogeneous	Unregulated
Uniform	Chile Israel Mexico	Greece	Poland Turkey	Estonia		
Mostly uniform	Latvia Slovak Rep.	Belgium	Czech Rep.		Denmark	
Mixed		Finland Japan	France Italy Korea Lithuania United States	Colombia Spain	Germany Netherlands Switzerland	
Mostly heterogeneous		Portugal	Canada	Austria Norway		
Heterogeneous			Hungary Slovenia	Sweden		
Unregulated		Australia		New Zealand		United Kingdom

Note: On colour codes: countries are classified in six regimes as follows:
Uniform regulation
Variation possible on normal hours and uniform regulation on maximum hours/overtime
Uniform regulation on normal hours and variation possible on maximum hours/overtime
Allowing limited variation
Allowing extensive variation
Unregulated
Source: OECD Policy Questionnaire on Working Time Regulation, 2020.

Working hours regulation and hours worked

A good metric to capture how much a typical full-time employee works in any given week is median *usual* hours in the main job. Usual hours refer to the number of hours that full-time employees effectively work on average in a "normal" week (excluding the effect of particular events such as leave, public holidays, strikes, or sickness, that may affect working hours in any particular week – see Box 5.3 for more details).[34] On average in the OECD,[35] the median full-time employee usually worked 40.5 hours per week in 2019.[36] Across countries, median usual hours ranged in 2019 from 37 hours per week in Denmark to 48 hours in Mexico and Colombia – see Annex Figure 5.A.1.

Outcomes observed reflect, at least to some extent, the *content* of rules on weekly working hours. The very high statutory limits on normal weekly hours in Chile, Colombia, Israel, Mexico and Turkey go hand

in hand with a high median in usual weekly hours. Countries where normal weekly hours are regulated through locally negotiated limits (e.g. Denmark, Germany or the Netherlands) do not display a particularly high median in usual weekly hours compared to the OECD average – which is coherent with the fact that negotiated limits[37] were systematically lower or equal to limits set by statutory law[38] in OECD countries for which data exist (see Annex Figure 5.A.1).

Importantly, in most countries for which data are available, median usual weekly hours remain at or under the applicable upper statutory limit in normal hours[39] (Figure 5.2); in other words, statutory limits appear to act as a cap on hours in practice. By contrast, in most countries, usual weekly hours observed are higher than the negotiated limit on working hours indicated on the chart, pointing to the use of sectoral derogations – indeed data on negotiated limits presented in this chapter are often derived from available information on particular sectors.

Box 5.3. Defining and measuring working hours

The term *working hours* refers to several concepts. It can refer to a *rule*: the amount of work for which a worker is employed (contractual hours), or the amount of work for which she can legally be employed on the basis of the regulation she is subjected to (statutory working hours, negotiated working hours). It can also refer to the number of hours *actually* worked by this employee: in this case, a further distinction exist between *actual* working hours and *usual* working hours.

Actual hours, as defined in the 1962 ILO *Resolution concerning statistics of hours of work*, refer to *all* hours *effectively* spent working, including overtime hours and excluding absences (International Labour Organisation, 1962[3]). Although not explicitly stated in the resolution, actual hours of work routinely include both paid and unpaid hours at work. **Usual hours of work** are hours that an employee typically works over a definite amount of time (e.g. a day, a week, or a month), in the absence of any extra-ordinary events (such as leave, public holidays, strikes, or sickness), and without extra-ordinary overtime in addition to the regular overtime potentially included in her contract.

Data on hours actually worked (actual and usual hours) are collected in two main data sources: **household-based surveys**, such as labour force surveys (LFS) – which can be complemented with time-use surveys, the latter being more irregular and with smaller sample sizes – and **establishment surveys**, such as the European Structure of Earnings Survey (EU-SES).

There are some limitations to using household-based surveys, and labour force surveys in particular; first, while the European Union – Labour Force Survey (EU LFS) recently moved toward ongoing data collection, most other OECD countries do it on a discontinuous (albeit regular) basis such as one week per month or one week per quarter. This can affect the accuracy of data on both hours actually worked and hours not worked, since by nature, it does not account for unexpected irregularities in hours worked and hours not worked – for example, hours not worked on holidays, in bad weather, or because of school closings. Second, LFS data depend on respondent recall and proxy responses, so hours worked and not worked may not be correctly reported due to faulty memory or lack of information.[1] Finally, LFS data only cover resident employees. In countries, such as Belgium, Luxembourg or Switzerland, with many cross-border workers, employment data from this source may not correspond to those employed in the country's production of output, thus affecting working hours measures.

Data on working hours available in **establishment surveys** are generally considered more reliable than data based on individual recall, since they are extracted from payroll information. However, establishment survey data only cover *paid* hours, rather than all hours actually worked. In addition, both the practice and reporting of data collection of paid hours differ widely across OECD countries, making cross-country comparisons difficult. In some countries, such as Norway, sick leave or maternity leave are paid by the government or social partners, and are not captured in paid hours in establishment

surveys; in other countries, such as the United States, paid sick leave is provided by employers, and is thus counted as hours paid in the establishment surveys. Finally, establishment surveys may not be representative of all industries (historically they mainly used to cover the manufacturing sector, although recently coverage has been expanded to include the service sector).

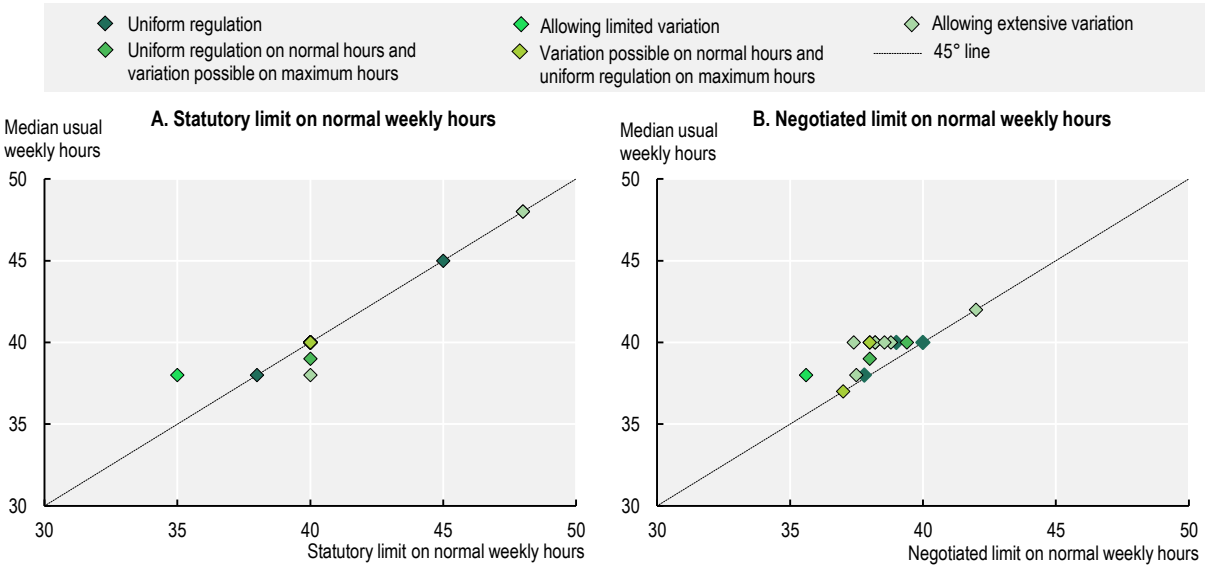
Since cross-country comparison is key in this chapter, data from labour force surveys is favoured to measure usual and actual hours of work.

1. However, concerns over respondent error in labour force surveys seem to be less of a problem than previously thought. The advent of time-use surveys has led to research that compares short-term recall of hours worked and longer term recall used in household surveys. For example, comparisons between the 1998 Canadian Labour Force Survey and Time Use Survey found that, overall, average numbers of hours worked were similar between the two surveys. A study based on American data (Fleck, 2009[4]) showed that time-use survey responses accurately reflected hours worked when the data were collected in or near the reference period, but that hours reported were 5% lower in data collected during later weeks. Usual concerns remain over proxy responses.

In order to explore how the *governance* of working hours regulation relate to median usual hours worked across OECD countries, Figure 5.2 compares statutory and negotiated provisions on normal weekly hours with data on median usual hours worked, by patterns of governance identified in Table 5.1.[40] Figure 5.2 does not reveal any particular relationship between governance patterns and the content of statutory and negotiated provisions, as countries do not cluster by type of governance on the Y-axis. Looking at Figure 5.2, the extent to which the degree of uniformity versus heterogeneity of rules affects actual outcomes is not obvious: countries are close to the 45 degrees lines in both panels, irrespective of their governance patterns. In accordance with expectations, in countries with a uniform regulation of normal hours, usual hours observed for the median full-time employee tend to follow the statutory limit[41] (see Annex Figure 5.A.1).The same holds true in three out of four countries allowing for a limited variation of normal hours regulation.[42] There is slightly more divergence between the median usual week and regulatory limits in countries where more variation in normal weekly hours are possible. Interestingly, variations go in both directions: in Germany and the Netherlands, the median in usual weekly hours is higher than regulatory limits; but in Norway, it is lower than these limits. Importantly, however, there is no deviation between the statutory limit and median usual hours in close to 80% of countries which, in theory, allow for more variation. Furthermore, the data do not show more dispersion *between workers* in countries allowing for more variation in working hours rules.[43] In fact, the highest standard deviations in usual weekly hours are observed in Mexico,[44] where working hours rules are, in theory, uniform, and in Colombia, which allows for extensive variation. By contrast, the lowest standard deviation is observed in Switzerland, which also allows for extensive variation. Correlations between governance patterns and standard deviations in usual weekly hours are not statistically significant.[45]

All in all, Figure 5.2 suggests that where the possibility to deviate (*in peius*) from default limits on normal hours exist, it does not seem to be widely used, while in some cases where the regulation is, in theory, uniform, with no possibility for variation, these regulations might not be fully enforced. In other words, the relationship between working hours regulation and working time outcomes is not a straightforward one, even when considering different sources of rules and their articulation. This finding should inform future research on the relationship between working time outcomes and labour market outcomes (the second relationship in Figure 5.1); it also confirms that other factors beyond regulation (e.g. taxes and transfers, or cyclical effects) are likely to matter in determining working time outcomes.

Figure 5.2. Statutory and negotiated limits on normal weekly hours and median usual weekly hours of full-time employees across OECD countries, 2019

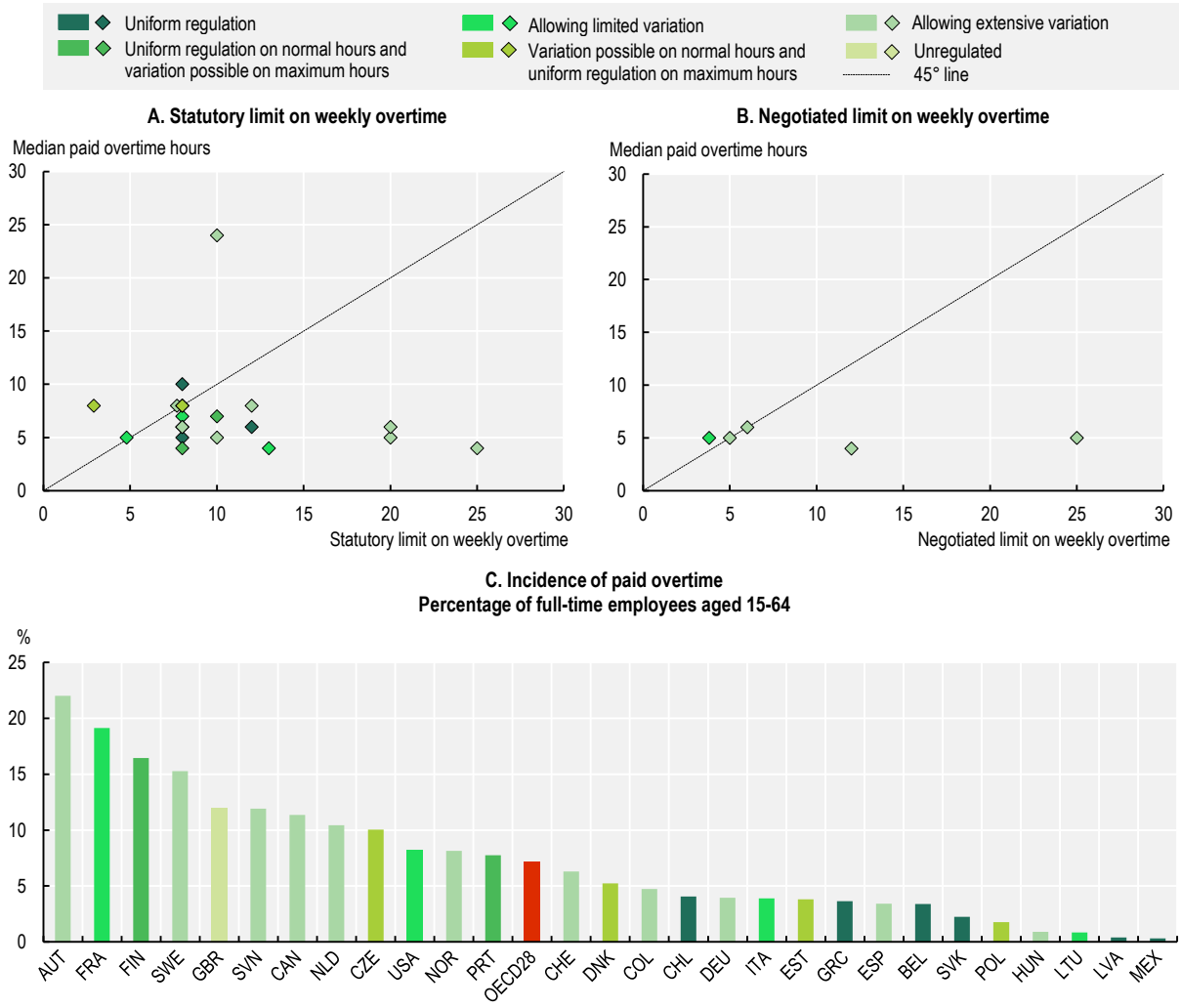


Note: Usual hours worked definitions:
Canada: normal paid or contractual hours, not counting any overtime.
Chile: weekly hours in main job, that the employee agrees to work or that are included in the employment contract or work agreement.
Colombia: number of hours normally worked in main job. Hours normally worked do not necessarily coincide with hours indicated in the employment contract.
European countries: modal value of the actual hours worked per week over a long reference period, excluding weeks when an absence from work occurs (e.g. holidays, leaves, strikes, etc.). The "long reference period" is at least the last four weeks and at most the last three months without counting any absence from work. When such a long reference period cannot be identified (because the working hours vary from week to week, or the person has just started a new job), the weekly usual hours worked may refer to (i) the contractual hours of work in the reference week, for those who have an employment contract, plus regular overtime if the worker is expected to work overtime or (ii) an average of the actual hours worked in the last four weeks, plus the hours of absence of work in the last four weeks.
Mexico: actual hours worked during the reference week that the employee considers as hours usually worked in main job (Question Q5b: What days and how many hours did you work last week? and Question Q5c. Is this the number of hours you usually work?). These hours include waiting time, work preparation, maintenance and cleaning of the business unit's facilities.
United States: normal work schedule that represent 50% of the time or more, or the most frequent schedule during the past four or five months.
For further explanations on the country groupings and the regulation of normal and maximum hours, see Table 5.1, and Annex Tables 5.A.6 and 5.A.7. See Annex Figure 5.A.1 for detailed results by country. Note that although all countries are represented in the graph, not all are visible, since a lot of countries cluster under the same co-ordinate (e.g. (40,40)).
Source: OECD Policy Questionnaire on Working Time Regulation, 2020; OECD estimates based on the Canadian Labour Force Survey (CLFS) for Canada, the Encuesta Nacional de Empleo (ENE) for Chile, the Gran Encuesta Integrada de hogares (GEIH) for Colombia, the European Union Labour Force Survey (EU-LFS) for the European countries, the Encuesta Nacional de Ocupación y Empleo (ENOE) for Mexico and the Current Population Survey (CPS) for the United States.

StatLink https://stat.link/exvlps

Turning to overtime, Figure 5.3 shows statutory and negotiated[46] limits on weekly overtime, as well as the incidence and median hours of overtime per full-time employee in OECD countries in 2019, by patterns of working hours governance. Measurements of overtime are clouded by several issues that should be taken into account from the outset and kept in mind when analysing the data in Figure 5.3 (and Annex Figure 5.A.2). Overtime hours are often not accurately recorded (Green, 2017[5]), which means that the data limitations inherent in any survey (wrong recollection, approximation, etc.) are probably heightened. Measurement of *unpaid overtime* is likely to be particularly patchy. For that reason, Figure 5.3 focuses on *paid* overtime – which is also more likely to be directly related to working time regulation than unpaid overtime (however see Figure 5.9, Annex Figure 5.A.2 and the brief discussion below for data on unpaid overtime).

Figure 5.3. Statutory and negotiated limits on weekly overtime and actual weekly paid overtime for full-time employees, 2019



Note: The Y-axis in Panels A and B refers to median weekly hours of paid overtime for full-time employees reporting paid overtime. The statutory weekly overtime limit in France, Estonia, Finland, Greece, Canada and Belgium are calculated as the difference between the limits on weekly normal hours and weekly maximum hours. The statutory weekly overtime limit is calculated from the yearly overtime limit in Hungary, Italy, Poland and Turkey, and from the daily overtime limit in Slovenia, Portugal, Sweden and Switzerland. Data on the incidence and median hours of overtime in Norway and Latvia are from 2018. Data on the incidence and median hours of overtime in Chile, Mexico and the United States are for overtime in general (the data available do not specify whether this correspond to paid overtime, unpaid overtime, or both). OECD28 is the unweighted average of the 28 OECD countries shown in this Chart (excluding Australia, Costa Rica, Iceland, Ireland, Israel, Japan, Korea, Luxembourg, New Zealand and Turkey). For further details and explanations on the country grouping, see Table 5.1, Annex Tables 5.A.6 and 5.A.7; see Annex Table 5.A.2 for details on the regulation of maximum hours and /or overtime; and see Annex Figure 5.A.2 for detailed results on incidence and median hours of paid overtime by country.

Source: OECD Policy Questionnaire on Working Time Regulation, 2020; OECD estimates based on the Canadian Labour Force Survey (CLFS) for Canada, the Encuesta Nacional de Empleo (ENE) for Chile, the Gran Encuesta Integrada de hogares (GEIH) for Colombia, the European Union Labour Force Survey (EU-LFS) for the European countries, the Encuesta Nacional de Ocupación y Empleo (ENOE) for Mexico and the Current Population Survey (CPS) for the United States.

StatLink https://stat.link/xotwgp

On average in OECD countries for which data are available, 7.7% of full-time employees worked paid overtime in 2019. The incidence of paid overtime ranged from 0.4% of full-time employees in Latvia to 22% in Austria. On average across OECD countries, among employees that reported paid overtime, the median amount of reported hours was 8.3 hours, i.e. about *one additional day* of work per week. However, this figure varied largely across countries, ranging from 5.7 hours in Latvia, to 20 hours in Switzerland. In parallel, 5.1% of full-time employees on average worked *unpaid* overtime in 2019, ranging from 0.02% in Latvia, to 25.4% in the Netherlands. The median amount of *unpaid* overtime was 7.7 hours, among those who reported it, on average across countries, ranging from 5.9 hours in Lithuania, to 11.3 hours of weekly unpaid overtime on average in Switzerland (see Figure 5.9 for detailed data on paid and unpaid overtime).

Simply eyeballing Figure 5.3 and Annex Figure 5.A.2, there does not seem to be a clear-cut link between the incidence and median hours of paid overtime: some countries have a high incidence, but a low amount of weekly paid overtime (e.g. Austria, Finland), some have a low incidence, but a high median (Estonia, Greece, the Slovak Republic, or the United Kingdom), while some have both a high incidence and a high median (e.g. the Czech Republic) (here again several countries may hide behind the same point in the scatterplot – see Annex Figure 5.A.2 for the detailed data).

Where data on both statutory rules and negotiated provisions could be collected, there is no clear pattern in the relationship between statutory and negotiated provisions: in Italy and Sweden, negotiated provisions tend to fix a lower limit on weekly overtime than that authorised in the law (although in both cases social partners *could* negotiate a higher limit), while the reverse is true in Norway (see Annex Figure 5.A.2).

Here again, Figure 5.3 does not display a clear-cut relationship between the degree of variation allowed in the rules and the actual degree of variation in outcomes observed. The median amount of paid overtime for full-time employees tend to stay within the limits fixed in the law or in higher level collective agreements in most countries[47] that give extensive possibility for the upper limit on overtime to vary. By contrast in some countries where the upper limit on weekly overtime is supposed to be uniform, with only limited possibilities to bypass it through averaging mechanisms agreed upon in collective agreement, the median amount of paid overtime observed is higher than the binding limit – which points to rule evasion or lack of enforcement of the binding limit (this is the case in the Slovak Republic and Poland, see Annex Figure 5.A.2).[48] More generally correlations between governance patterns and standard deviations in the median amount of paid and unpaid overtime are not statistically significant.

Finally, Figure 5.3 shows that the way that overtime rules are set are only one of the factors shaping actual overtime outcomes on the ground. There is no strong relationship between particular governance patterns and levels of incidence or average hours of paid overtime: irrespective of their governance patterns, there are countries below *and* above the OECD average for both incidence and average hours (see Figure 5.3 and Annex Figure 5.A.2). Figure 5.3 also shows that there is a large variation in the incidence and median hours of overtime actually measured *within* the groups of countries identified above for their similarities in terms of governance.

This last point is not necessarily surprising since governance patterns are based on information on overtime *limits*: variation in the incidence of overtime might be more directly related to variation in the rules for minimum compensation of overtime detailed in Annex Table 5.A.2. As shown in Panel C, the incidence of paid overtime is above average in Sweden and the United Kingdom, where there are no encompassing minimum compensation for overtime hours; it is the second highest in France, where a binding minimum compensation exists, but is the lowest of the OECD (at 110% of the normal rate, as in Italy). Similarly, the lowest incidence of paid overtime is observed in Mexico, where the existing binding minimum compensation is the highest in the OECD (at 200% of normal wage and 300% after 9 hours). However, the highest incidence is observed in Austria, where there is a binding minimum compensation that is comparable to the OECD average (at 150% of normal wage); and in Latvia, where the incidence is really close to that observed in Mexico, the minimum compensation is higher than average (200%), but it is not binding. In other words, variation in incidence appears at best partly related to variation in minimum compensation rules.

Beyond regulatory settings and the size of the overtime premium, many other factors are influencing the quantity of overtime work. Workers' supply of overtime is likely to be correlated with both their position in the wage distribution and the shape of that distribution: on the one hand, working overtime may be a necessity to make ends meet for low-paid workers; Anxo and Karlsson (2019[6]) found for instance a positive correlation between the incidence of low-paid jobs and of paid overtime. On the other hand, the possibility to work paid overtime might not be available in the lowest-paid jobs,[49] and be more frequent in higher-paid jobs. The tax treatment of overtime is likely to be another relevant factor – see e.g. Cahuc and Carcillo (2014[7]). Finally, social and cultural norms around overtime work are also likely to play a role.

5.1.2. Annual paid leave and public holiday

Regulatory settings of paid leave and public holidays across OECD countries

In the majority of OECD countries, employees are entitled to annual paid leave, e.g. to a period during which they can take time away from their work while continuing to receive their wage and remaining entitled to social protection. Workers can take a specified number of days or weeks of leave. Paid leave is available in addition to public holidays, sick leave, weekly rest, parental leave, etc. Annual paid leave, together with public holidays is an important factor for workers' well-being and for preserving human capital,[50] and a key determinant of the overall amount of working time each year. Paid leave can be regulated at different institutional levels, but is in general framed by national and international legislations (e.g. the EU Working Time Directive (Directive 2003/88/EC),[51] the ILO Holidays with Pay Convention 132)[52] that establish statutory *minimum* standards that can be further specified in collective agreements – at national, sectoral or firm level − or in the individual contract (for detailed content on statutory and negotiated paid leave and public holidays, see Annex Tables 5.A.4 and 5.A.5). Generally, the regulations on paid leave laid down in collective agreements are more generous than statutory entitlements (e.g. derogations to the law providing less generous leave are not allowed).

The *minimum* statutory amount of annual *paid leave* differs across OECD countries: while no statutory requirement exists in the United States,[53] minimum entitlements vary from 6 days in Mexico to 25 days in some European countries.[54] In many OECD countries, legislation sets a 20-day minimum entitlement. This is the case in Australia, New-Zealand, Switzerland and the majority of EU Member States in line with the EU Working Time Directive. In Austria, Denmark, France, Luxembourg and Sweden, the statutory minimum paid leave is 25 days, while in Portugal and Spain it is 22 days (Figure 5.4). The total amount of paid leave days may however depend on a number of factors, such as region, type of contract,[55] occupation, years of service, sectors of the economy, or age. In many OECD countries, it increases with duration of service in the firm. In some countries (e.g. the Czech Republic, France, Sweden), access to paid leave may be granted before one year of service (see Annex Table 5.A.4). In many cases, these aspects are defined in collective agreements at various levels or determined in individual contracts.

Data on negotiated paid leave are patchy, as collectively agreed rules are often too complex to allow producing even a rough general estimate. When available, data should thus be interpreted with caution given the diversity of rules applying. With these caveats in mind, data collected via the OECD Policy Questionnaire on Working Time Regulation and completed with information from Cabrita and Brandsma (2019[8]) on the most frequent clause on paid leave among all employees covered by collective bargaining, suggest that collective agreements can provide for substantially longer annual leave than the statutory provision (typically between 2.5 and 10 additional days,[56] see Figure 5.5). In the Czech Republic, Finland, Italy, Latvia, Switzerland, the Slovak Republic and the United Kingdom, collective agreements typically provide up to 5 extra days per year. In the Netherlands, data suggest that workers covered by collective agreements generally benefit from 5.6 additional days of paid leave annually. In Sweden, negotiated annual paid leave is, on average 27.5 days long (i.e. 2.5 days longer than provided in the law). At 30 days, Denmark and Germany have the longest collectively agreed typical paid leave allowances, well above the statutory 25 days. In New-Zealand, 29% of employees covered by collective agreements have a higher

entitlement to annual leave than the statutory minimum amount (Blumenfeld, Ryall and Kiely, 2015[9]).[57] As mentioned above, collective agreements may grant even more days of paid leave in certain sectors[58] or regions,[59] sometimes depending on seniority.

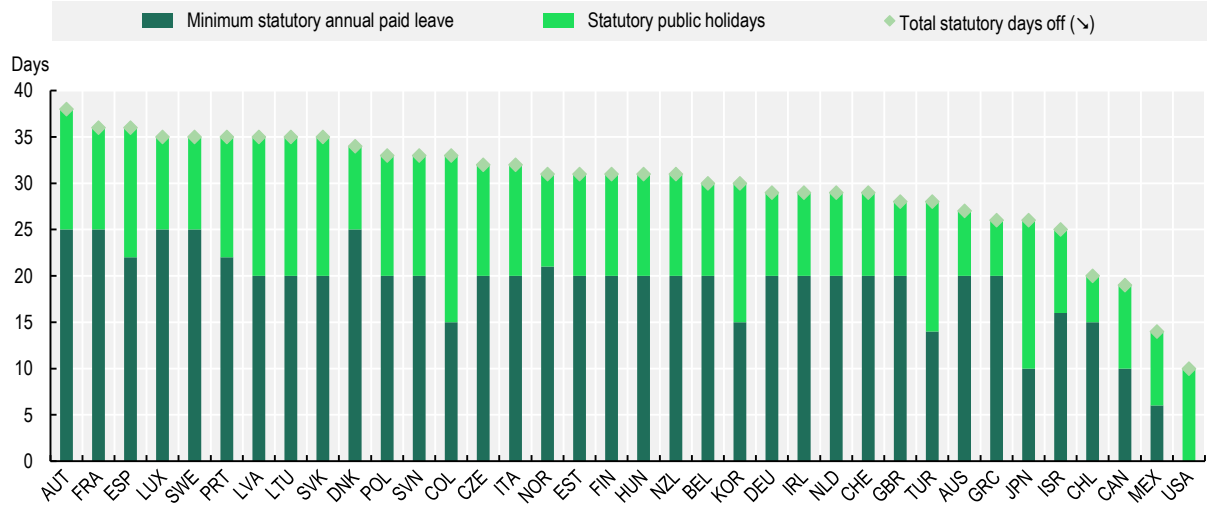
In addition to granting extra paid leave, collective agreements often grant employees an influence over the timing of their leave (although the employer generally has the ultimate power to decide when paid leave is taken): this is the case for instance in the Czech Republic, Germany, Hungary or Sweden, where intensive consultation or even bargaining with the employees or their representatives is required on this issue. In Japan and Korea, an employer can refuse an employee's choice of vacation days only if the normal operation of the enterprise would be disturbed.[60] Generally, paid annual leave cannot be exchanged for financial compensation.

National public holidays come in addition to paid leave. These holidays may vary by year. While all OECD countries have a number of established public holidays (e.g. up to 18 days in Colombia), not all countries grant *statutory paid* public holidays (Figure 5.4).

In most countries, public holidays are set in legislation, and some[61] or all of them are made into *paid* holidays; in some others, setting up the list of paid public holidays is left to collective bargaining at various levels, or to individual contracts. In the Netherlands or Sweden, for instance, collective agreements at national or sectoral level generally grant paid public holidays. In Japan, the United States and the United Kingdom, this is a matter for firm-level agreements or individual contracts. Furthermore, in some countries, derogations to the law exist that allow employers to require employees to work on a public holiday (e.g. in Belgium, Canada, France, Lithuania and New Zealand, see Annex Table 5.A.4), with financial compensation or time off. In Canada and New Zealand, for instance, employees working on a public holiday are paid 1.5 times their regular rate; in New- Zealand they are given another day off.

Figure 5.4. Statutory annual paid leave and public holidays in OECD countries

Number of days per year, 2020



Note: Figures for paid leave refer to an employee working 5 days a week, with a job tenure of at least one year. There is no minimum statutory annual paid leave in the United States because no permanent federal law requires employers to provide employees with paid vacation leave. No data for Iceland. See Annex Tables 5.A.4 and 5.A.5 for further explanations.
Source: OECD Policy Questionnaire on Working Time Regulation, 2020 and Cabrita and Brandsma, (2019[8]).

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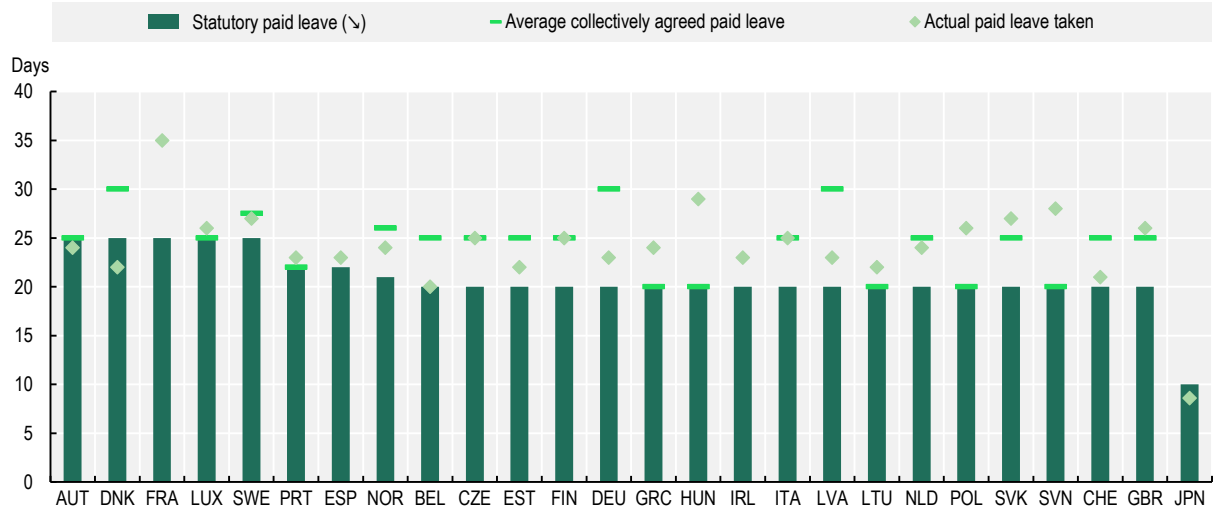
Paid leave regulation and leave actually taken

Figure 5.5 compares paid leave entitlements (both statutory and negotiated ones) and leave effectively taken by employees.[62] Several insights emerge from this comparison. First, in all countries, except for Denmark and Japan, the average number of paid leave days actually taken is higher than the statutory minimum where it exists. The difference is particularly striking in France where the annual average number of days in paid leave was 35 in 2019, well above the statutory provision of 25 days, possibly due to the existence of negotiated paid leave[63] and to the working time reduction scheme, *Réductions du Temps de Travail* (RTT).[64] By contrast, in Japan, the average amount of paid leave taken is below the statutory provision (and well below the amount of leave effectively taken in other countries). In the United States, although there is no legally mandated paid leave, 85% of civilian workers have access to personal leave, sick leave, paid family leave, or vacation. Workers with consolidated leave plans (which provide a single amount of time off for workers to use for multiple purposes including vacation) have access to an average of 14 days of paid leave for their use after one year of service, while workers with no consolidated leave plan have access to an average of 9 days of paid leave for their use after one year of service[65] (Bureau of Labour Statistics, US Department of Labor, 2019[10]).

Figure 5.5. Annual paid leave entitlement (statutory and negotiated) and actual paid leave taken

Average number of days per year, 2020 or latest year available



Note: Statutory paid leave: data for Hungary refer to the entitlement for workers up to 25 years old. After this age, the number of annual vacation days is raised by 1 day every 3 years for workers in their twenties, and every 2 years for workers in their thirties and forties. Data for the Slovak Republic refer to employees below 33 years old. After this age the number of days is increased to 25.
Negotiated paid leave: In Hungary, Lithuania and Poland, the number of negotiated paid leave is the same as that regulated by law. Information is missing for Japan due to the extreme variation of leave schemes at the firm level. For Switzerland, the data refer to the number of days for employees aged 20 to 40 in the metal, machinery and electronic industry (the number of days increases to 27 and to 30 days for employees aged respectively 40-49 and 50 or more). No data available for France, Ireland and Spain.
Actual paid leave taken: annual average number of days in paid leave. This refers to all sectors (except agriculture and activities of private households) for the Czech Republic, Estonia, Germany, Hungary, Ireland, Latvia, Lithuania, the Netherlands, Norway, Poland, the Slovak Republic, Slovenia, Spain, Switzerland and the United Kingdom; to firms with more than ten employees for Denmark, Finland, France and Luxembourg; and to firm with ten employees and more excluding public administration for Austria, Belgium, Greece and Portugal. The Japanese figure refers to regular employees in firms with 30 or more employees of the non-agricultural private sector. Statistics refer to 2018 for the European countries and 2013 for Japan.
For further information on statutory and negotiated paid leave, see Annex Tables 5.A.4 and 5.A.5.
Source: OECD Policy Questionnaire on Working Time Regulation, 2020, Eurofound (2019) and Eurostat, Structure of Earnings Survey (SES) 2018 for the European countries, and the General Survey on Working Conditions, 2013 for Japan.

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Second, in countries where information on additional days provided through collective bargaining exists, two main patterns emerge: in a first group of countries (the Czech Republic, Finland, Italy, the Netherlands, Norway, Sweden and the United- Kingdom), the average amount of leave effectively taken is *at* or *close to* the negotiated provisions. In a second group (Belgium, Denmark, Estonia, Germany, Latvia and Switzerland), the amount of leave actually taken is *below* the negotiated provisions: in the case of Denmark and Germany, differences between collectively agreed paid leave (which are among the most generous in OECD countries) and average leave effectively taken are particularly marked. These patterns are however not straightforward to interpret as they do not account for the share of workers actually covered by collective agreements.

5.1.3. Teleworking

Regulatory settings of teleworking across OECD countries

While it prominently came to the fore during the COVID-19 crisis, teleworking (see Box 5.4 for a discussion about the different ways of defining the concept) had started being regulated in some OECD countries long before that. For instance, in European Union countries, the 2002 Framework Agreement on Telework signed by European social partners had led most signatory countries to define clear rules surrounding the practice of employees working away from the employers' premises in laws or central collective agreements.

Since 2010, the issue of *access to teleworking* has been the object of reforms in several countries. For instance, in the United Kingdom, the Flexible Working Regulations Act of 2014 introduced the right to request flexible working arrangements (including teleworking) for all employees with at least six months of service (excluding agency workers). Employers' ground for refusal was limited to business reasons. A similar reform was implemented in New Zealand in 2015, when an amendment to the Employment Relations Act allowed all employees (and not only, as was previously the case, those with caring responsibility) to request flexible work arrangements (including teleworking).

As of 2020, access to teleworking for workers is associated with different legal guarantees across OECD countries. In some, a statutory right to request teleworking is inscribed in the law; it can be more or less extensive (i.e. for all employees as in Spain or New Zealand or only for e.g. pregnant women, carers or workers with specific medical conditions, as in Lithuania), more or less conditional (i.e. enforceable for any reason as in the Netherlands, Portugal or the United Kingdom, or reserved to particular motives, e.g. work-life balance, as in Australia or Spain), and crucially, more or less enforceable, with limited possibilities for employers to refuse to accommodate employees' requests in some countries, and no justifications needed for refusal in others, see Table 5.2. Where no statutory right to request teleworking exist, a majority of workers might be covered by a collective agreement effectively granting them this right, either at the national, sectoral or firm-level. By contrast, in a third group of countries, even though the possibility to telework might be inscribed in the law, the conditions of access to teleworking are left entirely to negotiation in individual contracts (or to firm-level agreements covering only a minority of workers).

In addition to guaranteeing workers a right to request teleworking, some countries aimed to encourage its development by introducing dedicated financial incentives for employers. In Poland, a 2014 amendment to the Act on Employment Promotion and Labour Market Institutions introduced grants for employers creating teleworking jobs for unemployed parents of a child under six years old, or for an unemployed carer who resigned from their previous jobs to take care of their child or dependant.

Box 5.4. Defining and measuring teleworking

Different definitions of teleworking – and related cross-country data sources – are available for OECD countries. According to the most precise definition (found in Working Conditions Surveys) teleworking corresponds to situations where workers use information and communication technologies (ICTs) to work in a location other than the employer's premises. Data sources based on this precise definition, however have a limited time coverage. Other data sources based on a looser definition of teleworking (which might not allow capturing the phenomenon as precisely) by contrast, allow analysing the evolution of the incidence of teleworking in OECD countries. Recognising the advantages and limitations of various data sources, this chapter uses several of them, on a case by case basis.

Teleworkers as "employees usually or occasionally working from home": The EU-LFS data

The European Union Labour Force Surveys, compiled and harmonised by Eurostat, provide annual data on teleworking, defined as "employees working from home", for European countries, Norway, Iceland and Switzerland, from 2000 onwards. They can be combined with data from the American Time Use Survey (ATUS) for the years 2003 to 2019. The underlying definition in the EU-LFS leads to a somewhat imprecise measure, since it excludes employees working remotely outside of their home but from another remote location not provided by the employer; it might also include employees working from home *not* using ICTs. However, this is the only comparable source that allows looking at the evolution of teleworking over time in these countries (over 20 years). In the chapter, the EU-LFS is used to compare the use of teleworking between countries by type of teleworking governance in the pre-COVID period (Figure 5.6), and the surge in teleworking during the COVID-19 crisis (Figure 5.7).

Teleworkers as "employees using ICTs always or most of the time, working in at least one other location than the employer's premises several times a month": Working Conditions Surveys

The European, American, and Korean Working Conditions Surveys all contain data on teleworking based on a comparable and precise definition, namely employees regularly using ICTs, and working in at least one other location than the employer's premises several times a month. In addition, these sources are best adapted to an analysis of teleworking by socio-demographic groups, since they contain a rich array of other socio-demographic variables. The downside of using these sources is that there is only one data point (2015 for the European and American surveys, 2017 for Korea). In the chapter, these sources are used to compare the incidence of teleworking across groups (Figure 5.15).

Teleworkers as "workers working from home who were usually employed before the onset of the COVID-19 crisis": The RePeAt data

The Representations, Perceptions and Attitudes on the COVID-19 crisis (RePeAt) survey collected data on workers working from home, at their usual workplace, or having stopped work altogether, as the first lockdowns went into effect in March and April 2020. It covered 11 OECD countries (Australia, Austria, Canada, France, Germany, Italy, New Zealand, Poland, Sweden, the United Kingdom and the United States) – see Foucault and Galasso (2020[11]) for more details. It is the only comparable source that allows measuring the incidence of teleworking (albeit loosely defined), during the first months of the pandemic. It also contains workers' characteristics and can be used for analyses by groups. In this chapter, this source is used to look at the surge in teleworking during the COVID-19 crisis (Figure 5.7) as well as the profile of workers who teleworked in the first few months of the crisis (Figure 5.16).

Beyond access, regulations affecting *working conditions* of teleworkers have also evolved in many OECD countries in the last decade. For instance, the issue of who bears the cost of the teleworking equipment has been the object of regulations (often court decisions): in 2020 (in a case dating back from 2019 and the pre-COVID period) the Swiss Federal Supreme Court ruled in favour of an employee's request to have her employer compensate her for teleworking costs. Similar judgments were pronounced e.g. in California, where employers have been required to reimburse a reasonable percentage of employees' phone and internet costs. In Canada, the government introduced the possibility for those working from home to deduct employment expenses from their taxable income.

As of 2020, regulations of the working conditions of teleworkers were more or less extensive across countries, ranging from rules about the process of establishing teleworking arrangements (for instance that it has to be voluntary, reversible, etc.) to anti-discrimination provisions, rules about employers' liabilities for occupational safety and health, working schedules and overtime, data privacy and cyber-security, and the cost of equipment and maintenance. These legal frameworks are sometimes set up in dedicated laws, or included in general labour laws (as in Australia, Chile, Greece, Lithuania, Portugal, Spain and Turkey, as well as Belgium and Italy for occasional teleworking) or in national or sectoral collective agreements (as in Austria, Denmark, France, Estonia, Greece and Belgium and Italy for regular teleworking). In some countries, there are no specific laws or provisions nor collective agreements, but the usual labour protection provisions apply to teleworkers without distinction (this is the case e.g. in Finland, Germany, Latvia, the Netherlands, Slovenia, Sweden, the United Kingdom and the United States).

Considering the regulation of these two main aspects e.g. access to teleworking and the working conditions of teleworkers, four patterns of teleworking governance are identified across OECD countries in 2020,[66] which are summarised in Table 5.2:

- In Australia, Austria, Italy (in the case of occasional teleworking, or "agile work"),[67] Lithuania, the Netherlands, Portugal, Spain,[68] Sweden, and the United Kingdom, there is an enforceable right to request teleworking − granted in the law or in collective agreements covering a large part of the workforce in Austria and Sweden – for at least for *some* categories of workers. Teleworkers' working conditions are defined in an encompassing[69] legal framework.
- In Denmark, Norway, Canada[70] and New Zealand, there is an enforceable right to request teleworking (centrally negotiated in Norway, and statutory in Canada and New Zealand). But rules on working conditions are left to lower level negotiations and there are no binding legislation or higher level agreement on the issue (although there might be non-binding guidelines).
- In Italy for regular teleworking, Belgium,[71] as well as Chile, Estonia, Finland, France, Germany, Greece, Japan, Latvia, Poland, Slovenia, Turkey and the United States, there are either no right to request teleworking or unenforceable ones (with unlimited reasons for employers to refuse employees' requests). Yet working conditions for teleworkers are laid out in encompassing legal frameworks.
- Finally, in the Czech Republic, Hungary, Israel, Korea, Mexico, the Slovak Republic and Switzerland, the issue of access to teleworking is left entirely to individual contracts or firm-level agreements, and legal frameworks specifying teleworkers' working conditions are either very minimalistic, or entirely absent.

Table 5.2. Four types of teleworking governance across OECD countries

Enforceable right to request and encompassing legal framework				Enforceable right to request, no encompassing legal framework			Unenforceable or no right to request, encompassing legal framework	No right to request, partial or no legal framework
Access through CB	Statutory access			Access through CB	Statutory access			
	For all, conditional	For some			Unconditional			
		Conditional	Unconditional		For all	For some		
Austria Sweden	Spain	Australia	Italy (OT) Lithuania Netherlands Portugal United Kingdom	Denmark Norway	New Zeal and	Canada	Belgium (OT)[1] Belgium (RT) Chile[1] Estonia Finland France[1] Germany Greece Italy (RT) Japan Latvia Poland[1] Slovenia Turkey United States	Czech Rep. Hungary Israel Korea Mexico[2] Slovak Rep[2] Switzerland[2]

Note: CB: collective bargaining; OT: occasional teleworking; RT: regular teleworking.
1. There is a formal unconditional statutory right to request teleworking for all in Chile, France, Poland, and Belgium (for occasional teleworking) however employers can refuse employee's request for an unlimited number of reasons, hence that right is not enforceable.
2. There are no legal framework around the practice of teleworking in Mexico, the Slovak Republic and Switzerland (there is a partial framework in other countries in this column). Note that since this information was collected, Mexico has introduced a new law on teleworking which introduces a legal framework, see Section 5.1.4 below.
Source: OECD Policy Questionnaire on Working Time Regulation, 2020.

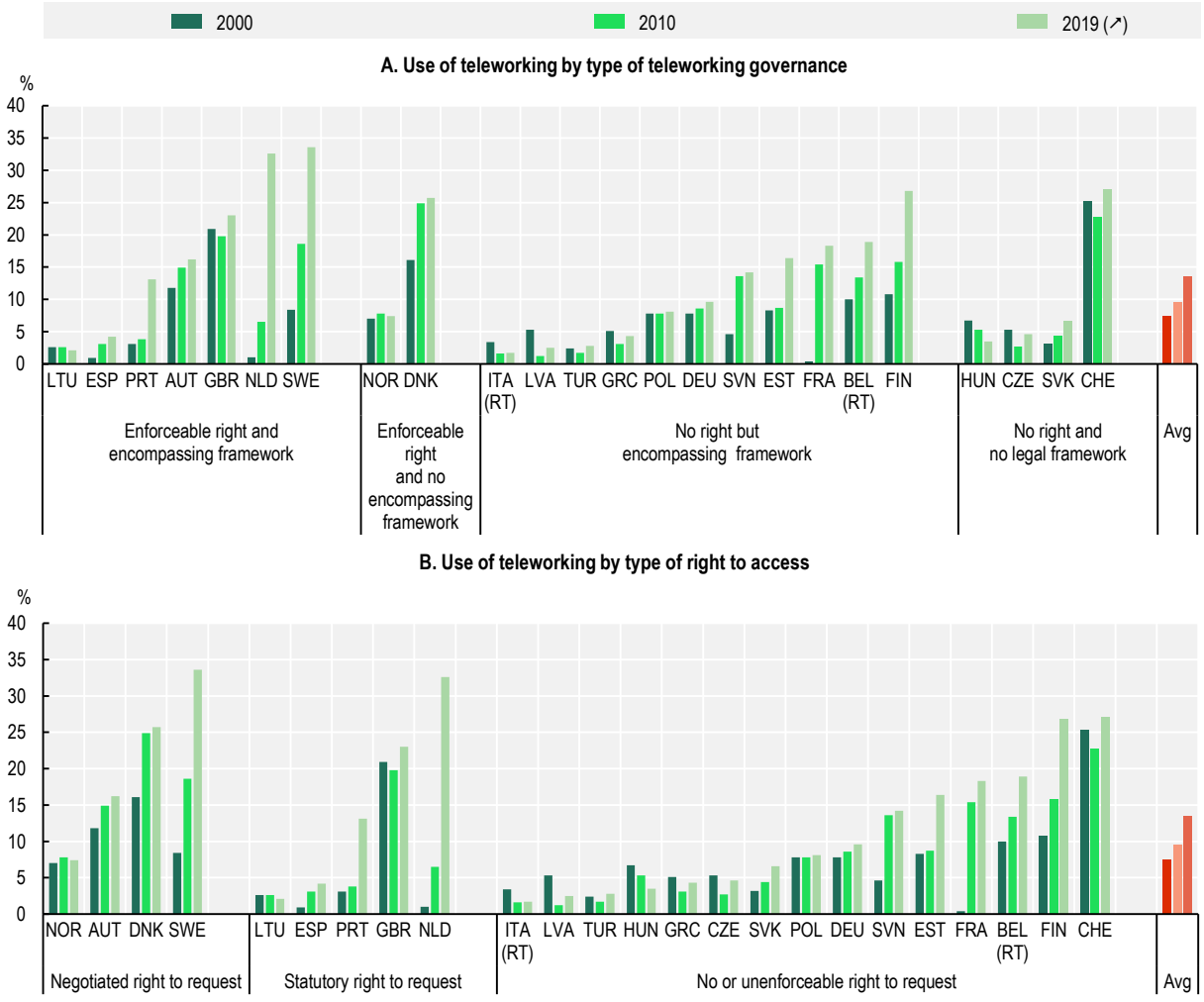
Teleworking regulation and the use of teleworking before the COVID-19 crisis

Despite the changes in regulations discussed above, the take-up of teleworking in OECD countries had, until the outbreak of the COVID-19 crisis, remained rather limited. In the EU in 2015, according to European Working Conditions Survey data, only 3% of employees regularly worked from home, a further 5% "highly mobile" employees worked regularly from several locations (including home), and another 10% of workers occasionally worked from home. These numbers increased only modestly over the years, going up from 7.4% of employees on average across European Union countries for which data are available (see Figure 5.6) in 2000, to 13.5% in 2019 (according to EU LFS data).

These differences in the use of teleworking across OECD countries might be partly attributable to the patterns of regulation identified above – although caution should be applied in drawing strong conclusions here. As shown in Panel A, Figure 5.6 the incidence of teleworking has been rising since 2000 in countries where an enforceable right to request teleworking exists (except in Lithuania). In most countries with no enforceable right to request teleworking and no encompassing legal framework, the incidence of teleworking had been stagnating below 10% since 2000. Finally, the incidence of teleworking was highest on average − and most steadily rising since 2000 − in countries where access to teleworking is granted trough collective bargaining, while it was below average (but rising) in countries where access is statutory − with the exception of the United Kingdom and the Netherlands in recent years. This is not really surprising when considering that in almost all countries where the right to request teleworking is statutory, this right does not apply to all workers but only to specific categories of workers.[72] By contrast, the right to request teleworking, when negotiated through collective bargaining, often is more encompassing.

Figure 5.6. Use of teleworking by type of teleworking governance in the pre-COVID period

Percentage of employees (15-64) usually or occasionally working at home



Note: Average ("Avg") is the unweighted average of the 24 OECD countries shown in this chart. 2000 refers to 2001 for Poland, the Slovak Republic and Switzerland, to 2003 for Latvia, and to 2006 for Turkey. RT: regular teleworking.
Source: OECD calculations based on annual results from the European Union Labour Force Survey (EU-LFS) published by Eurostat (employed persons working from home, lfsa_ehomp).

StatLink https://stat.link/fmvlua

Importantly, however, these averages hide important variation within groups: in the group of countries with a negotiated right to request teleworking, the proportion of teleworkers amounted to only 7.4% in Norway, against 33.6% in Sweden in 2019; and while 18.3% of French workers were teleworking in the absence of any statutory or negotiated enforceable right to request teleworking, this was the case for only 2.5% of Latvian workers in the same situation. These intra-group variations suggest that regulation is only one of the elements influencing the take-up of teleworking in practice. Technical limits to teleworking (i.e. the fact that not all jobs can be done remotely since some require a significant amount of physical tasks, that not all firms are equipped with the adequate infrastructure, and that some regions might not have yet benefited from the roll-out of fast broad-band connections – see e.g. OECD (2020[12]) – also matter in explaining

cross-country and within-country variations, since the proportion of jobs that are "teleworkable" is not the same in all countries[73] – see e.g. OECD (2020[13]; 2021[14]; 2020[15]). The development of teleworking is also likely to be driven by the desire to avoid commuting time, and therefore to differ across regions. Yet another factor that is likely to matter is variation in national management culture. The importance of the latter was particularly highlighted during the COVID-19 crisis, where the important and rapid deployment of teleworking in many countries as an answer to the health crisis (see Section 5.1.4 and Box 5.5) indicate that substantial non-technical obstacles, such as cultural obstacles and workers' fear of stigmatisation, might have been hindering this development in the pre-crisis context.

5.1.4. Recent adjustments following the COVID-19 crisis

Changes in working hours regulation

If the unprecedented reduction in hours worked in 2020 across the OECD was largely shaped by a massive reliance on job retention schemes in many countries, notably through publicly subsidised reductions in working time (see Chapters 1 and 2), information collected in the OECD policy questionnaire showed that a few regulatory changes in the limits on working hours, the conditions for the use and duration of overtime or the averaging arrangements were also introduced to facilitate firms' adjustment to the COVID-19 crisis.

In France, for instance, the March 2020 ordinances temporarily authorised firms in strategic sectors to increase the maximum daily working hours from 10 to 12 hours,[74] the maximum weekly total hours from 48 to 60 hours and changed the averaging rules for normal hours from 44 to 46 hours on average for 12 consecutive weeks. In Germany, the April 2020 Working Hours Ordinance authorised an extension of daily working time up to 12 hours, while the weekly working time could be extended beyond 60 hours in exceptional cases. In Greece, between March and August 2020, employers who had exhausted the legally prescribed overtime ceilings of their workers, could use overtime without approval from the Ministry of Labour and Social Affairs in the respect of maximum daily limits. In Israel, the Ministry of Labour introduced in March 2020 a temporary permission to work additional hours up to 67 hours a week (including overtime) but no longer than 90 extra hours a month. The permission also included the possibility to work up to 14 hours a day including overtime, up to 8 times a month. In Portugal, the annual limits on the duration of overtime were suspended in March 2020 for essential public services workers, and workers in private charitable institutions, non-profit associations, co-operatives and other social economy entities that carry out essential activities in the social and health area. In Norway and Sweden,[75] national-level collective agreements gave room for more flexibility to actors at the local level regarding the extended use of overtime.

Changes in paid leave regulation

To face the challenges posed by the COVID-19 crisis, different measures were introduced across OECD countries to adjust the regulation of paid leave, either through ordinance, decree, statutory reform or collective bargaining. Some aimed at smoothing the potential accumulation of paid leave and at offering greater flexibility to employers, allowing them to mandate employees to take leave or to modify the modalities of leave request (by e.g. fragmenting employees' paid leave in several blocks, reducing notification periods, etc.). In Austria, employers were allowed to unilaterally mandate the use of vacation days during the COVID-19 crisis.[76] Some countries also authorised employers to suspend or postpone the employee's paid leave if deemed necessary in specific sectors or occupations, such as health care and social service or caregivers (that was the case in e.g. Finland).[77]

In parallel, regulations were also adjusted in some OECD countries to offer employees the possibility to postpone their paid leave to the following year, exchange days off against money or to take additional leave at a lower rate than normal pay or even unpaid, pending employer's approval (as in Australia).[78] In Spain, a royal decree-law was introduced in March 2020, regulating recoverable paid leave for employees

who do not provide essential services, in order to reduce population mobility. In the United Kingdom, a temporary law was introduced in May 2020 to allow employees to carry over into their next two years up to four weeks of paid leave, if they could not take it due to the impacts of the pandemic.

Changes in teleworking regulation

As outlined above, surveys conducted in mid-April 2020 showed a massive surge in the share of employees working from home, from 16% of employees before the crisis, to 37%[79] in March 2020 (Figure 5.7). This large and rapid increase in the incidence of teleworking was observed in most OECD countries, independently of whether and how they granted workers access to teleworking in the pre-crisis context. This generalised surge is not surprising since the large recourse to teleworking was mandatory where possible in many countries, to try and contain the spread of COVID-19 during the first wave of the pandemic.

Many countries sought to encourage the recourse to teleworking by introducing temporary amendments to their pre-existing regulation on teleworking. Poland and Colombia[80] introduced a new status for "exceptional teleworking" with simplified rules. Some countries allowed employers to unilaterally impose teleworking to employees (this was the case e.g. in Hungary, Lithuania, the Slovak Republic, Greece and Italy). In other cases (e.g. in Italy and Greece) countries granted a temporary unconditional right to telework for all employees in "teleworkable jobs" (i.e. jobs that could technically be done from home). Spain granted an unconditional right to telework to students and victims of gender-based violence. Others, such as Portugal and Belgium, mandated the use of teleworking for all teleworkable jobs. Several countries simplified the procedures to request and notify teleworking (e.g. Italy, Australia, and Turkey).

Some countries offered financial support for firms transitioning to teleworking arrangements: Japan and Germany reimbursed part of firms' cost, Belgium allowed employers to grant a tax-and-social-security-free allowance to their employees to cover teleworking-related costs. Belgium, France, Germany, Luxembourg and the Netherlands concluded tax agreements to allow cross-border workers working from home to still be taxed in the country of employment rather than that of residence. In Austria, in the face of the rising numbers of teleworkers during the pandemic, accidents occurring while working from home until the end of 2020 were classified as work accidents and covered under the work accident insurance.

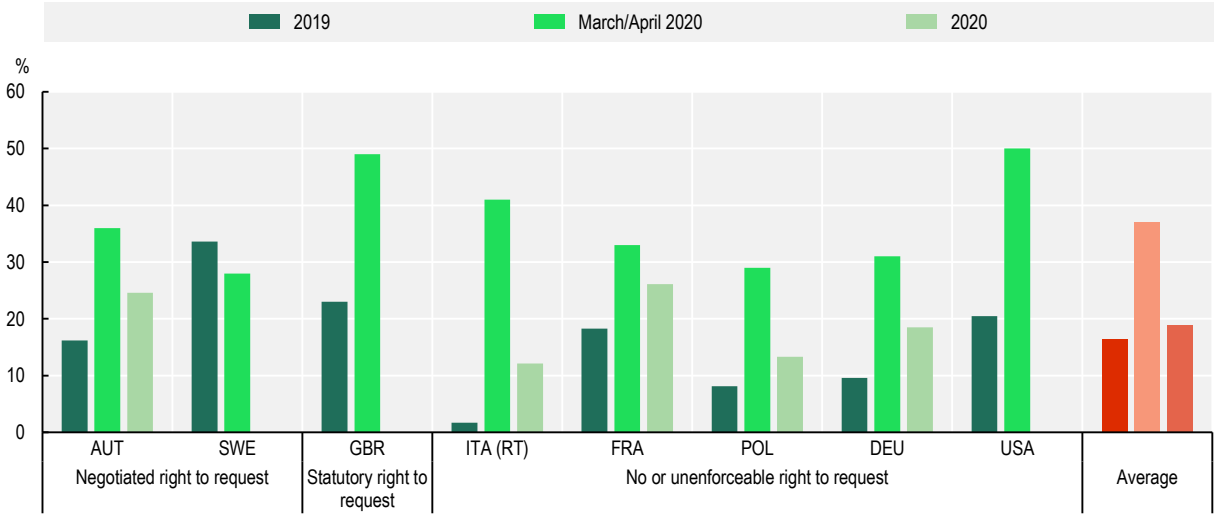
In addition to temporary measures during the outbreak, the forced collective experiment with teleworking brought by the health crisis hurried some countries into more permanent changes, either by encouraging social partners to initiate negotiations on the issue, as in Japan, or by encouraging governments to put forward reform proposals that had been in the pipeline for some time, as in Chile or Germany, where discussions are ongoing around a proposed "Mobile Work Act", which would introduce, among other things, an enforceable right to request teleworking (employers would have to motivate their refusal), and a mobile work accident insurance. In January 2021, Mexico adopted a new regulation on teleworking which introduced a requirement for employers to detail teleworking conditions in written contracts, established employers' responsibility for teleworking equipment and costs (including e.g. electricity and internet costs), and protected employee's privacy as well as their right to disconnect. In April 2021, Austria also introduced a new "home office package",[81] which, among other things, spelled out the conditions of access to teleworking (via individual and collective agreements), as well as employers and employees' liabilities regarding work equipment and occupational health and safety. The COVID-related regulation on occupational accidents (establishing employer liability for work accidents in the home office) was made permanent, but limited to the employee's home (excluding other places of remote work). Following a consultation with the social partners, Turkey also introduced a new regulation on teleworking in March 2021, which clarified the legal framework surrounding its practice.

The generalised experiment in mass teleworking has made one issue particularly salient to regulators and the general public, namely that of the risk of work intensification, degraded work-life balance and blurring of the boundaries between working and non-working times and spaces linked to the introduction of work

into workers' private sphere (OECD, 2020[16]; Mann and Holdsworth, 2003[17]). Although "right to disconnect" legislations already existed prior to the pandemic (e.g. in France, and in Chile),[82] they are now being discussed in an increasing number of contexts. For instance, in January 2021 the European Parliament adopted a text calling on the European Commission to put forward a legislation recognising the right to disconnect as a fundamental right, and the need to ensure that workers exercising it face no repercussion. In June 2020 the European social partners adopted a Framework Agreement on Digitalisation specifying the "modalities of connecting and disconnecting" including a series of preventive measures aimed at guaranteeing workers' right to disconnect. The new Mexican legislation on teleworking also mentions employees' right to disconnect.

Figure 5.7. The surge in teleworking during the COVID-19 crisis by type of regulatory access

Percentage of employees aged 15-64



Note: Statistics for the years 2019 and 2020 refer to the share of employees (aged 15-64) working usually or occasionally from home, and to the share of workers working from home in March/April 2020 who were usually employed before the onset of the COVID-19 crisis. "Average" is the unweighted average of the eight (five for the year 2020) OECD countries shown in this chart. RT: regular teleworking.
Source: OECD calculations based on annual results from the European Union Labour Force Survey (EU-LFS) published by Eurostat (employed persons working from home, lfsa_ehomp) for the European countries in 2019 and 2020, results from the American Time Use Survey (ATUS) 2019 published by the Bureau of Labor Statistics (BLS) for the United States, and Foucault and Galasso (2020[11]) based on the REPEAT (REpresentations, PErceptions and ATtitudes on the COVID-19) survey for all countries in March/April 2020.

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Overall, the pandemic crisis brought forward a lot of regulatory changes around teleworking across OECD countries, which might in part sustain the higher incidence of teleworking as a new mode of working as the crisis subsides. This is all the more likely that the crisis might have also helped overcoming the barriers linked to cultural reluctance to teleworking: a US-based study argues that because of diminished stigma and better-than-expected experiences with working from home for both employers and workers (among other factors), teleworking is likely to stick, and estimates that about 22% of working days in the United States are likely to be teleworking days in the future, compared with 5% pre-crisis (Barrero, Bloom and Davis, 2020[18]).

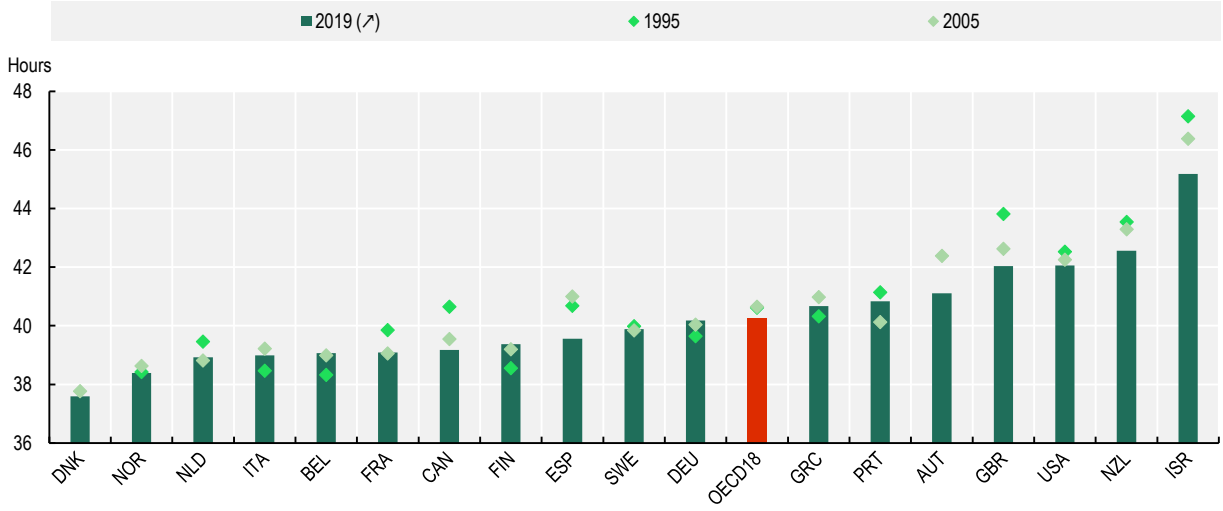
5.2. Trends in working time and leisure across OECD countries

As shown in Section 5.1, working hours and work organisation, while partly influenced by differences in the content and governance of regulation, are likely to evolve with other factors, including labour force participation,[83] changes in taxation and social protection, phases of the business cycle, as well as cultural trends. The incidence of teleworking, for instance, is likely to be fostered by attitudinal changes, or digital skills or IT infrastructure. Evolutions in working hours are likely to reflect a number of cyclical and structural effects, such as sectoral and occupational shifts, or technological change modifying the amount of time allocated to unpaid work, changes in productivity, wages level, etc., but also evolutions of societal norms.

5.2.1. Do employees still work less than their parents?

The idea that productivity increases, driven notably by technological progress, would go hand in hand with diminishing working hours, goes back a long way and held true, when referring to *actual* hours, for most of the 20th century: generations after generations, workers used to work less than their parents (Maddison, 1995[19]). However, when focusing on median *usual* hours worked by full-time employees over the last 25 years, this view is not borne out in the data. Although there was a diversity of small variations across countries – with average usual hours for full-time employees slightly increasing on average in the 2010s in Belgium, Finland, Italy, Greece, and Portugal, stagnating on average in the United States, and slightly decreasing in other countries (see Annex Figure 5.A.3), average weekly hours usually worked by full-time employees were in fact largely stable (from 40.6 in 1995 to 40.3 hours in 2019[84] on average in the OECD, see Figure 5.8.

Figure 5.8. Average weekly hours usually worked per full-time employee in OECD countries, 1995-2019



Note: Data for OECD 2018 in 1995 and in 2005 overlap on the figure. No data for Austria in 1995 due to a new categorisation of full-time job based on self-assessment since 2004 (based on a usual hours criterion with a 35 hours cut-off in the main job before that year); 2005 refers to 2007 for Denmark due to the introduction of a new weighting scheme. Results for Israel are not fully comparable before 2012 due to the change from a quarterly to a monthly Labour Force Survey and changes in the definitions from "civilian labour force" to "total labour force" (including those who are in compulsory or permanent military service). OECD18 is the unweighted average of the 18 OECD countries shown in this Chart. See Annex Figure 5.A.3 for time series.
Source: OECD estimates based on the Canadian Labour Force Survey (CLFS) for Canada, the European Union Labour Force Survey (EU-LFS) for the European countries, and the Current Population Survey (CPS) for the United States; and the OECD Employment Database, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm, for Israel and New Zealand.

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Since data on usual hours do not include overtime,[85] Figure 5.9 displays trends in paid and unpaid overtime for full-time employees in OECD countries for which data are available over the last decade. The average incidence of paid overtime per employee remained relatively stable between 2006 and 2019. By contrast, weekly hours of paid overtime per worker reporting it fell by about one hour between 2006 and 2019. As for the incidence of unpaid overtime, it slightly decreased on average, from 6.2% in 2006 to 5.1% of employees in 2019. Those working unpaid overtime in 2019 also worked on average close to one hour less each week than in 2006.

Beyond average trends in the incidence of paid and unpaid overtime, there are some variation across countries. In Portugal, the incidence of both paid and unpaid overtime increased noticeably, reaching 7.7% in 2019, up from 3.9% (4.9% for unpaid overtime) in 2006, while they both decreased in Greece in the same period. In Slovenia, the incidence of paid overtime increased from 8.9% to 11.9% – while that of unpaid overtime decreased from 6.2% to 3.3%. The incidence of paid overtime increased noticeably in Finland from 9.6% to 16.4%, and most strikingly in France, from 4.3% in 2006 to 19.1% in 2019.[86] The incidence of unpaid overtime decreased most strongly in Austria (reaching 3.5% of full-time employees in 2019, down from 9.8% in 2006), while it increased noticeably in Denmark, from 2% to 6% of employees.

Looking at trends in usual weekly hours and weekly overtime illustrates how the usual week of the average full-time employee in the OECD has evolved in the last decades. This metric is informative and easy to understand. However, it cannot be used to assess how the *overall quantity of work* per full-time employee changed over time, since the latter is also a function of the number of weeks worked (and number of days off taken), in addition to the usual amount of work per week. However, there are no sources allowing for a reliable comparison of days off taken across countries. Instead, Figure 5.10 complements the previous figures and helps assessing the evolution of the overall quantity of work per full-time employee by showing the evolution of average *annual* hours actually worked per worker between 1970 (where possible, see Panel A) and 2019, and decomposing it into the effect of changes in the share of part-time and full-time jobs, and of changes in hours worked respectively by full-time and part-time workers.

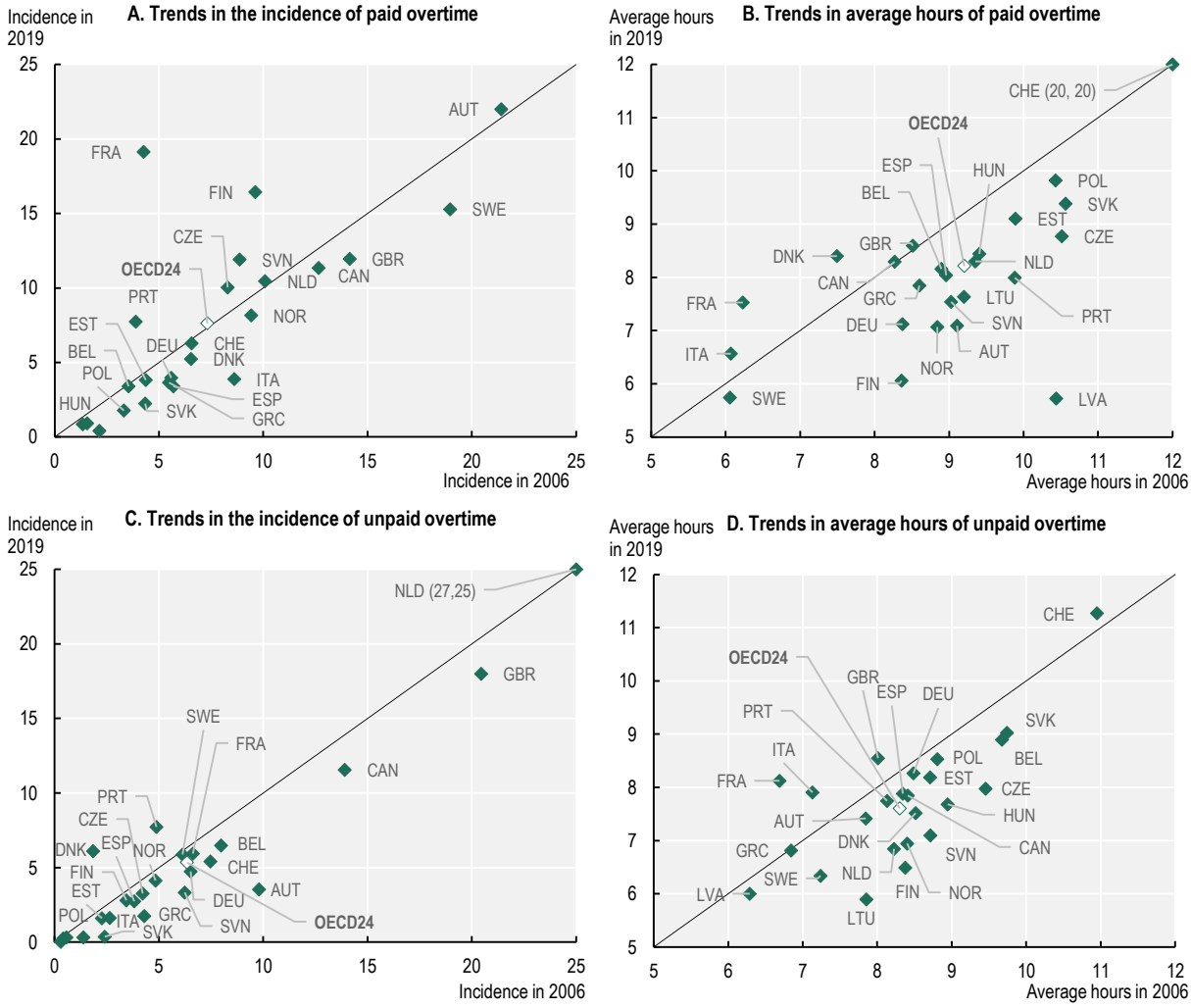
Between 1985 and 1995 (Panel B) the decrease in average actual hours for the OECD average was primarily attributable to the reduction in the share of full-time employees in total employment (except in Denmark, where it was due to the reduction in hours worked by full-time employees). Between 1995 and 2019 (Panel A), and between 2000 and 2019 (Panel C) the decrease was first and foremost due to the reduction in hours worked by full-time employees, and to a smaller extent, by the reduction in the share of full-time employees in total employment. In other words, for all countries in which data are available, actual hours for full-time workers decreased more since 1995 than between 1985 and 1995.

In OECD countries for which data are available over the whole 1970-2019 period, annual hours actually worked per employed decreased by 17.9% (0.4% annually). However, this decrease was not constant but decelerated over time: hours actually worked decreased by 0.8% annually between 1970 and 1985, by 0.2% annually between 1985 and 2000, and by 0.3% annually between 2000 and 2019. In countries for which data only go back to 1995, annual actual hours decreased on average by 6% (0.3% annually). Finally, in countries for which data only go back to the 2000s, annual actual hours decreased on average by just under 4% (0.2% annually). These data also point towards a deceleration in the reduction of actual working time. This confirms previous findings according to which the historical trend towards lower working hours which could be traced back to the 19th century in most OECD countries has considerably slowed down – if not almost halted, see e.g. Evans, Lippoldt and Marianna (2001[20]), Bangham (2020[21]).

The 6% decrease in actual hours worked over the 1995-2019 period (which, as shown above, is primarily due to a decrease in hours worked by full-time employees) is not inconsistent with the stagnation in usual weekly hours documented over the same period (Figure 5.8.) and the limited reduction in overtime hours[87] (Figure 5.9): taken together these trends suggest that variations in actual hours are likely to owe to a reduction of the *number of weeks* actually worked (rather than the amount of hours worked each week).

Figure 5.9. Trends in paid and unpaid overtime across OECD countries

Percentage of full-time employees aged 15-64 and hours spent on overtime for those doing it, 2006 and 2019



Note: 2006 refers to 2010 for Switzerland and 2019 refers to 2018 for Norway. OECD24 is the unweighted average of the 24 OECD countries shown in this chart (excluding Australia, Chile, Colombia, Costa Rica, Iceland, Ireland, Israel, Japan, Korea, Luxembourg, Mexico, New Zealand, Turkey and the United States).

Source: OECD calculations based on the Canadian Labour Force Survey (CLFS) and the European Union Labour Force Survey (EU-LFS).

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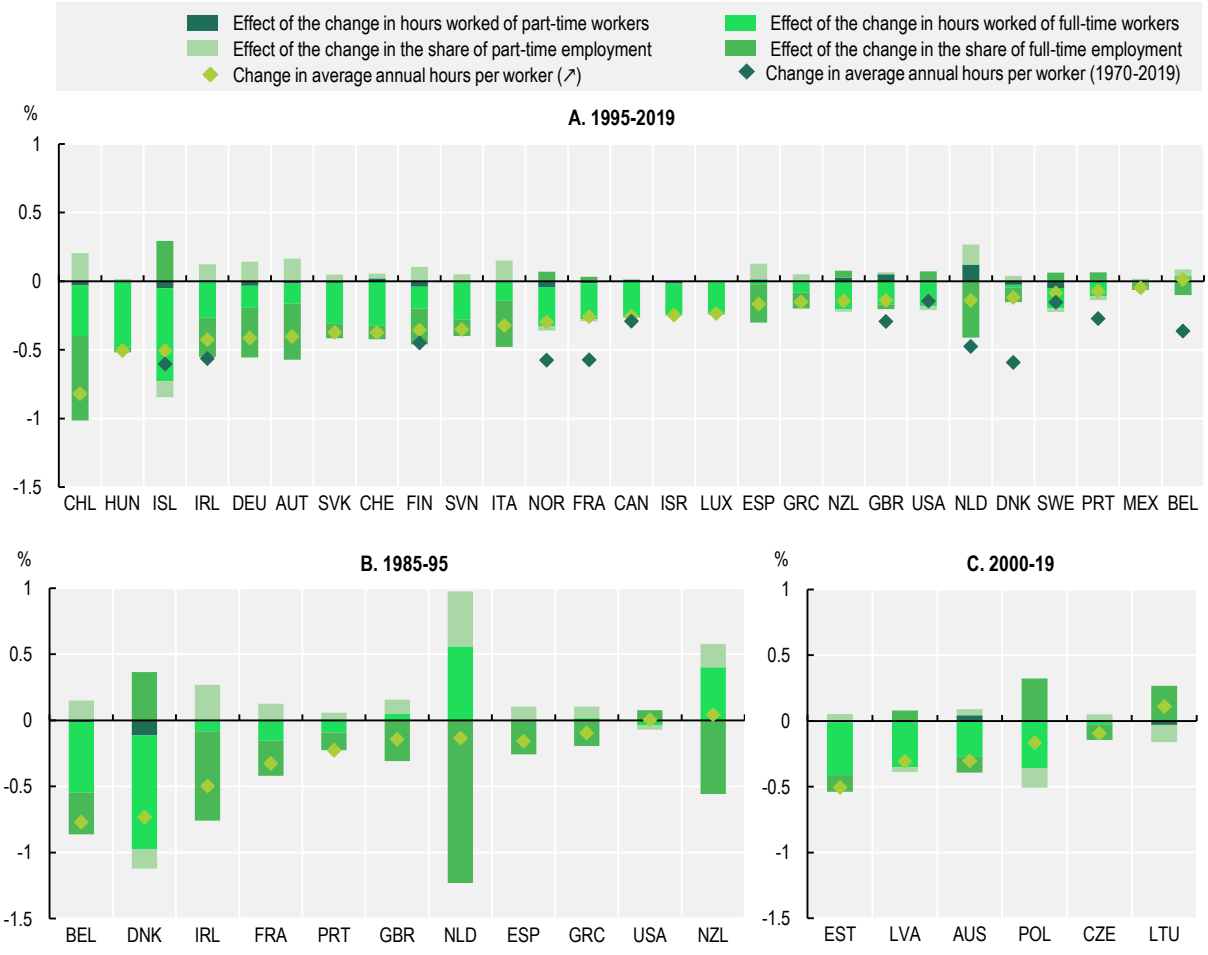
Figure 5.10. Understanding changes in hours actually worked: More part-time or shorter full-time jobs?

Annual average percentage change in average annual hours worked per employed



Note: 1995-2018 for Belgium, 1996-2019 for Chile, Norway, Slovenia and Switzerland in Panel A. 1986-95 for New Zealand and Portugal and 1987-95 for Spain in Panel B. 2001-18 for Australia and 2001-19 for the Czech Republic and Poland in Panel C. No data for Colombia, Korea and Turkey.
Source: Calculations based on the OECD Employment Database, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm.

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5.2.2. Time for what? Time use patterns across OECD countries

To get a better contextual grasp of evolutions in working time, this section reviews trends in time use, contrasting the shares of time spent on paid work, unpaid work including childcare activities, personal care, and leisure derived from time-use surveys.[88] These surveys record information on how individuals allocate their time across different daily activities, through the use of time-diaries. This information on daily activities is then re-coded into a set of descriptive categories, so that a 24-hour period (or 1 440 minutes) can be split into a sequence of time spent on main activities.[89]

Figure 5.11 shows that leisure time has slightly decreased on average across OECD countries for which data are available. Compared to the 1970s, the daily leisure time of a full-time worker aged 15-64

decreased by 15 minutes on average in the 2010s (1.5 hours per week). While the average time spent on leisure increased between the 1970s and the 1980s, it decreased in following decades, at an accelerating rate. In the 2010s, average time spent on leisure decreased in 8 out of 13 countries for which data are available: for instance, it dropped by 14% in Korea, by 11% in Spain, by 6% in the Netherlands, by 5% in Hungary and by 1% in the United States. Other studies observed similar patterns in leisure time for the United States, i.e. a modest increase in average time spent on leisure from the 1960s until the 2000s, followed by a *decrease* afterwards – see e.g. Ramey and Francis (2009[22]).

Figure 5.11 also considers the share of time allocated to each of the five above-mentioned categories of activities, over a 24-hour period, and how these shares have evolved over the last 50 years. Not surprisingly, in all countries considered, most of the time is allocated to personal care activities (which include sleeping); this proportion increased on average over the last two decades (by 1.4% in the 2000s and by 2.1% in the 2010s). Cross-country variation in the proportion of time allocated to personal care is relatively small, and ranged from 38% in Mexico to 46% in Korea in the 2010s.

After personal care activities, paid work is the next item on which people spend most of their time, even if this proportion declined since the 1970s on average.[90] By contrast with time spent on personal care, the proportion of total time dedicated to paid work varied much more across OECD countries for which data are available, ranging from 20% in Finland to 32% in Mexico in the 2010s.

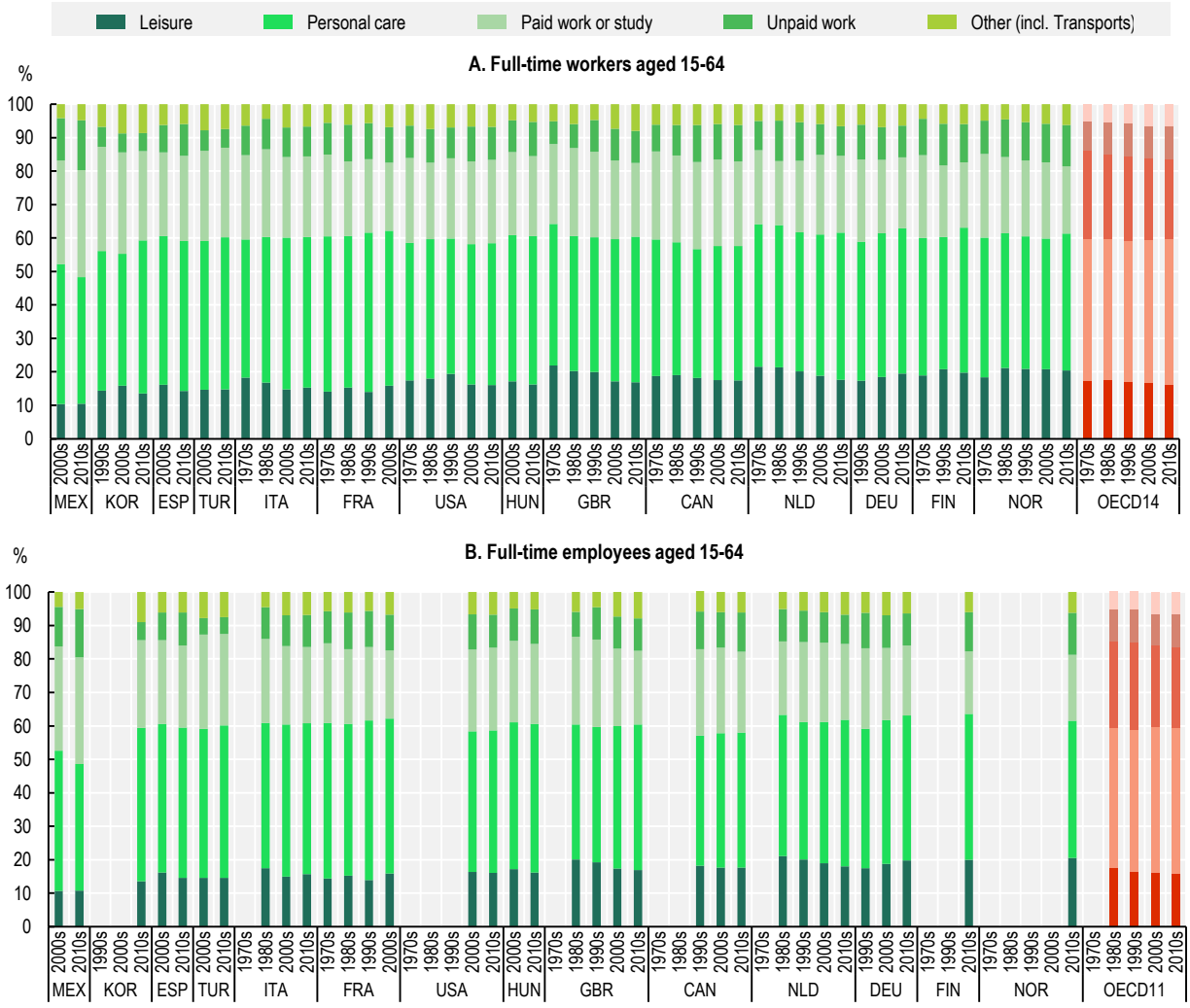
Time dedicated to leisure comes as the third item on which individuals spend their day – about 16.5% of total time was, on average, spent on leisure in the 2010s and 2000s. Bearing in mind the caveats related to cross-country comparisons, the average time allocated to leisure in the 2010s varied from about 2 hours and a half per day (or about 10% of total time) in Mexico, to 4 hours and 44 minutes (or 20% of total time) in Finland, among the 13 OECD countries for which data are available in the 2010s (Figure 5.11).

Finally, the share of time allocated to unpaid work amounted to 11% on average in the 2010s, and was rather stable throughout the last decades; however this share varies a lot between countries, ranging from 5.4% in Korea to 15% in Mexico in the 2010s. These cross-country differences are likely to owe in part to demographic and cultural patterns, especially since childcare activities are included in this category.

While the order between the broad categories (with personal care taking the most time, and unpaid work the least) is consistent across countries, there are some cross-country variations in the work-leisure balance *between* categories. For instance, in the 2010s, Mexican workers spent more than three times as much on paid work as on leisure, while Korean workers spent twice as much; workers in Canada, Italy, Spain, Hungary, Turkey and the United States spent between 1.5 and 1.8 times as much on paid work as on leisure, while those in the Netherlands and the United Kingdom spent 1.3 times as much, and those in Germany, Finland and Norway spent about the same amount of time on both activities.

Figure 5.11. Trends in time use across OECD countries

Percentage distribution of average time spent per day



Note: Statistics refer to the primary activity, defined as the activity that the respondent first reported, as her main activity, excluding any secondary activity done simultaneously. In order to facilitate comparison over time, transport time (as well as commuting time to and from paid work or study) has been treated separately. As a result, the five broad categories of activity presented in this chart differ from those currently used in the OECD Time Use Database (see: https://stats.oecd.org/Index.aspx?DataSetCode=TIME_USE). Time use data shown here are grouped in five broad categories: 1) paid work or study, which includes work-related activities, e.g. time spent on paid work (full or part time), studying, and time spent looking for a job; 2) unpaid work, which includes domestic activities (cleaning, shopping, etc.) and time spent caring for household and non-household members; 3) personal care, which relates to all regenerative activities, such as sleeping, eating, grooming, health related self-care, etc.; 4) leisure which concerns a wide range of indoor and outdoor activities, such as sports, entertainment, socialising with friends and family; and 5) others (including transports) which includes all activities not covered elsewhere (e.g. religious activities and civic obligations, but also time spent going places and commuting). However, travel time as part of paid work activities and pleasure drives are classified in category 1 (paid work or study) and category 4 (leisure) respectively. To correct for potential imbalances in the repartition of week-ends and weekdays, results are first averaged by day of interview, and then over each week.

Estimates for Mexico are not fully comparable, due to methodological differences in survey design which do not comply with standardised guidelines. Germany in the 1990s refers to West Germany only. Countries are ordered by ascending order in time spent in leisure of full-time workers (Panel A) in the 2010s (in the 2000s for France).

OECD14 is the chained unweighted averages of the 14 OECD countries shown in Panel A based on the decades available. Trends are similar when calculating simple (not chained) averages, restricting the country sample to the seven countries for which data cover each year in the entire period. Statistics for the 2000s are based on the 14 OECD countries where data are available; statistics for the 2010s are based on the unweighted average change between the 2000s and the 2010s for 13 OECD countries (excluding France where data are not available for the 2010s); statistics for the 1990s are based on the unweighted average change between the 1990s and the 2000s for 10 countries (excluding Hungary, Mexico, Spain and Turkey where data are not available for the 1990s); and statistics for the 1980s and 1970s are based on the unweighted average change between the 1980s and the 1990s and the 1970s and the 1980s for the eight OECD countries where data are available for these periods (excluding Germany, Hungary, Korea, Mexico, Spain and Turkey). OECD11 is the chained unweighted averages of the 11 OECD countries shown in Panel B, based on the decades available, constructed following the same methodology described above for OECD14.
Source: OECD estimates based on the Multinational Time Use Study (MTUS) and national Time Use Surveys.

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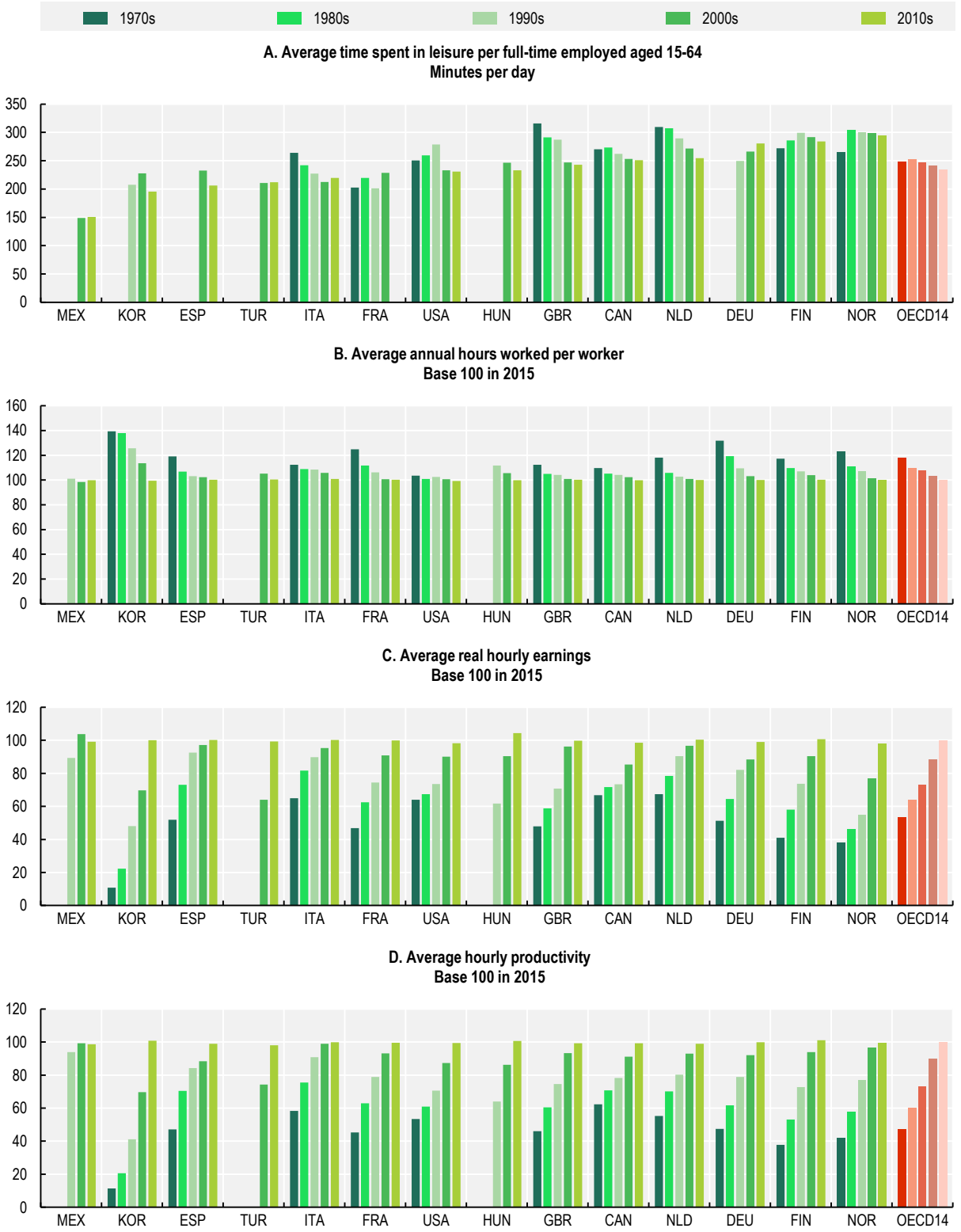
Historically, societies where hourly productivity went up have often chosen to trade-off additional gains in output per worker (and potential further gains in wages) for more time for other activities, leading to parallel trends in hourly productivity and in average time spent on non-working activities (Huberman and Minns, 2007[23]). Figure 5.12 contrasts trends in average time spent on leisure, in hourly productivity, as well as in average hours worked per employed and average real hourly earnings, in OECD countries where this is doable. This helps shedding light on the decrease in leisure documented in Figure 5.11.

Figure 5.12 shows a decreasing trend in actual hours per worker in the 14 countries reviewed (Panel B). However, in most countries (except in Italy, Korea and the United States), most of the decrease happened between the 1970s and the 1980s; starting in the 1990s, hours decreased at a much slower pace. On average in the 11 countries for which data are available over the past five decades, hours actually worked decreased but at a slowing pace, from 0.9% annually in the 1970s, to 0.2% in the 2010s. This is consistent with the slowing down of the reduction in actual hours observed on Figure 5.10.

Figure 5.12 confirms that the average time spent on leisure has decreased in the past five decades. By contrast, since the 1970s, hourly productivity has increased – albeit at a decreasing pace. The annual growth rate of hourly productivity has slowed down from 3.7% in the 1970s, to 2.4% in the 1980s, 2.1% in the 1990s, 1.2% in the 2000s and 0.7% in the 2010s. Annual growth rates of average hourly earnings were by and large aligned to those of hourly productivity – at 4.1% on average in the 1970s, 1.7% in the 1980s, 1.4% in the 1990s, 1.8% in the 2000s and 0.8% in the 2010s. These parallel trends suggest that, on average, while changes in productivity have been reflected in changes in hourly earnings, productivity increases have not led to extra leisure time for full-time employees.[91] This is consistent with findings in previous studies for particular countries, which have pointed to a gap between trends in leisure and hours worked on the one hand, and trends in hourly productivity on the other – see e.g. Ramey and Francis (2009[22]) on the United States.

This finding is sometimes pitted against Keynes' 1930 prognosis that productivity would increase by four to eight times between 1930 and 2030, and that this rise in productivity would translate into a large increase in leisure and a drastic fall of average working hours to 15 hours a week (Keynes, 1930[24]). Looking at the United States, Ramey and Francis (2009[22]) note that while the predicted rise in productivity turned out to be rather accurate, the associated dramatic rise in leisure did not materialise. Figure 5.12 confirms that the increase in hourly productivity on average in the last 50 years did not translate into an increase in leisure, but was instead paralleled by a *decrease* in leisure time. One possible explanation for this is that workers have opted for increases in hourly wages instead of reduction in hours worked.

Figure 5.12. Trends in average hours worked per person in employment, in leisure per person in employment, in average hourly earnings, and in hourly productivity



Note: Statistics on time spent in leisure refer to the primary activity, defined as the activity that the respondent reported as her main activity, excluding any secondary activity done simultaneously. Leisure includes a wide range of indoor and outdoor activities, such as sports, entertainment, socialising with friends and family, excluding transport time related to leisure excepted pleasure drives. To correct for potential imbalances in the repartition of week-ends and weekdays, results are first averaged by day of interview, and then over each week.
Annual hours worked per employed is defined as the total hours worked in the economy divided by the number of employed persons. Real hourly earnings is defined as the total wages and salaries deflated by the final consumption price index and divided by total hours worked. Hourly productivity is defined as real GDP divided by total hours worked.
OECD14 is the chained unweighted averages of the 14 OECD countries shown in this chart and based on the decades available for time spent on leisure (Panel A). Trends are similar when calculating simple (not chained) averages, restricting the country sample to the seven countries for which data cover the entire period. Statistics for the 2000s are based on the 14 OECD countries where data are available; statistics for the 2010s are based on the unweighted average change between the 2000s and the 2010s for 13 OECD countries (excluding France where data on leisure is not available for the 2010s); statistics for the 1990s are based on the unweighted average change between the 1990s and the 2000s for 10 countries (excluding Hungary, Mexico, Spain and Turkey where data on leisure are not available for the 1990s); and statistics for the 1980s and 1970s are based on the unweighted average change between the 1980s and the 1990s and the 1970s and the 1980s for the eight OECD countries where data on leisure are available for these periods (excluding Germany, Hungary, Korea, Mexico, Spain and Turkey). Countries are ordered by ascending order in time spent in leisure of full-time workers (Panel A) in the 2010s (in the 2000s for France).
Source: OECD calculations based on national Time Use Surveys, OECD (2021), "GDP per capita and productivity growth", *OECD Productivity Statistics* (database), https://doi.org/10.1787/data-00685-en and OECD (2021), "Aggregate National Accounts, SNA 2008 (or SNA 1993): Gross domestic product", *OECD National Accounts Statistics* (database), https://doi.org/10.1787/data-00001-en.

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Indeed, beyond Keynes's prophecy, a potential factor behind the slowing down in the rise of leisure time in the last decades could be the declining wage growth observed since the late 1990s. Productivity gains being less distributed in the form of higher wages, demand for additional leisure (or lower hours with no change in hourly wage) might have gone down in particular for workers struggling to make ends meet. In addition, the decline in wage growth is often interpreted as a sign of decreasing worker bargaining power; as shown in Huberman and Minns (2007[23]) description of long term trends in work and leisure across OECD countries, trade unions and workers' representatives were instrumental in securing the legislative changes that materialised the increase in leisure in the form of paid leave, in the period leading up to and immediately following World War II. The decreasing trend in leisure could therefore be seen as linked to the decrease in worker's bargaining power and decline in trade union density observed in recent decades (OECD, 2019[1]) – on the point of the link between declining worker bargaining power and declining labour share, see also (Autor et al., 2017[25]; Barkai, 2020[26]; Bell, Bukowski and Machin, 2060[27]; Bental and Demougin, 2010[28]; Ciminelli, Duval and Furceri, 2018[29]; De Loecker and Eeckhout, 2017[30])

This decline in bargaining power is likely to have affected different groups of workers differently. Similarly, trends in hours worked and time spent on non-work activities are likely to have evolved differently for different groups. In that sense, looking at aggregate trends is necessary but insufficient to get a full picture of changes in working time over the last decades. The next section therefore turns to this issue, looking at trends in hours, working arrangements and work-leisure balances across gender, education and income level groups.

5.3. Working time across groups: Mind the gap?

Aggregate trends in working time may hide changes in the distribution of hours and flexible working time arrangements between socio-economic groups. Such differences are particularly important to document, since they can amount to growing divides over time in work-life balance, working conditions and time poverty (defined as a lack of sufficient discretionary time after engaging in paid and unpaid work and regenerative activities) across groups, with direct implications for job quality and workers' well-being (Cazes, Hijzen and Saint-Martin, 2015[31]). Indeed, insufficient working hours may result in low earnings, while excessively long hours may have negative effects on individuals' health and well-being (Pega et al.,

2021[2]) and increase job strain; and uncertain schedules may create earnings insecurity and disrupt work-life balance.

This section exploits data from labour force surveys and time-use surveys to assess the degree of working time disparity between men and women, workers at different levels of education, as well as workers in different income groups. It also investigates the degree of mismatch between the time that workers in different groups would ideally like to devote to work and the time they actually spend working. It reviews recent initiatives in collective bargaining and recent experiments at the firm level that aim to better take into account workers' preferences when it comes to working time.

5.3.1. Changes in the distribution of weekly working hours across groups

Beyond the aggregate patterns documented in Section 5.2, Figure 5.13 looks at the distribution of hours usually worked during the week and its evolution between 1999 and 2019[92] by groups for the OECD average.[93] It shows the share of employees working very short hours[94] (i.e. less than 10 hours per week) or very long hours (i.e. more than 48 hours per week). This allows assessing whether the distribution of hours has polarised further, and which groups of workers have been most affected.

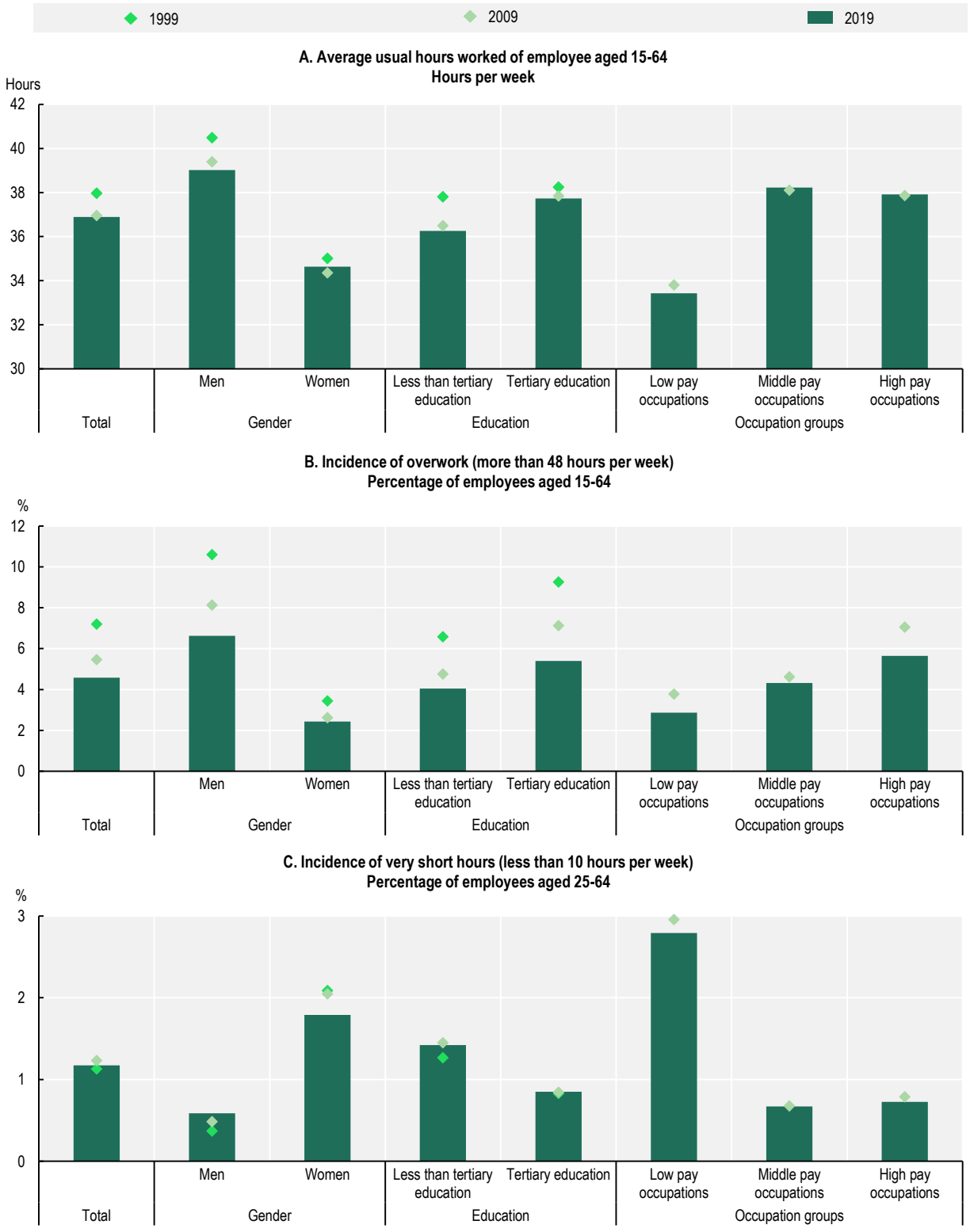
Data on Figure 5.13 reveal that women consistently worked less hours than men on average throughout the 1999-2019 period (Panel A). Accordingly, the incidence of very short hours was also higher for women over that period (Panel C), while the incidence of long hours was lower (Panel B). However, these gender spreads narrowed over time: the gap in average hours and in the incidence of long hours slightly decreased (as average hours and the incidence of long hours decreased more for men than for women), while the gender gap in the incidence of very short hours decreased very substantially, as the share of women working less than 10 hours per week decreased at the same time as that of men in very short hours work increased.

Those average gender time gaps hide important differences between countries, both in levels and in trends (see Annex Figures 5.A.4, 5.A.5 and 5.A.6 for more details). In 2019, the gender gap in hours worked was highest in Switzerland (where men worked on average 9.3 hours more than women each week), and smallest in Lithuania, where the difference amounted to 0.9 hours. Between 1999 and 2019, the gap increased in Austria and Italy (by 2.3 hours and 1.3 hours respectively), while it decreased by 7.5 hours in Iceland. These differences reflect a number of factors, including institutional, cultural – e.g. attitudes towards female employment and gender equality – or structural ones – e.g. female labour force participation rate, employment structure, size and composition of part-time employment, etc. – for a review of this discussion see e.g. (Eurofound, 2018[32]; OECD, 2010[33]; OECD, 2016[34]; Rubery, Fagan and Smith, 1995[35]).

Significant differences also exist on average between workers with different education levels. Workers without tertiary education worked less hours than highly educated workers throughout the 1999-2019 period (Panel A). The incidence of very long hours was lower for workers without tertiary education than for highly educated workers (Panel B).Those without tertiary education were more often working very short hours than highly educated workers (Panel C), both in 1999 and 2019. Contrary to gender gaps, education gaps in average weekly hours and in the incidence of very short hours actually widened in a majority of countries over the period. By contrast, the gap in the incidence of very long hours narrowed, as the incidence of overwork for highly educated workers decreased more dramatically than that faced by those without higher education. Here as well, the OECD average masks differences across countries (see Annex Figures 5.A.4, 5.A.5 and 5.A.6 for more details).

Figure 5.13. Changes in the distribution of weekly hours by gender, education and occupation group

OECD unweighted averages



Note: Statistics refer to the unweighted averages of 28 OECD countries (excluding Australia, Chile, Colombia, Costa Rica, Israel, Japan, Korea, Mexico, New Zealand and Turkey). "Very long hours" refer to the incidence of employees working more than 48 hours during the reference week while "very short hours" refer to the incidence of employees working less than 10 hours during the reference week (excluding employees aged 15-24). Occupation groups are defined as follows: high pay occupations refer to the ISCO-08 one-digit occupations 1-3; middle pay occupations to the ISCO-08 one-digit occupations 4, 7, 8 and low pay occupations to the ISCO-88 one-digit occupations 5 and 9. See Annex Figures 5.A.4, 5.A.5 and 5.A.6 for detailed results by country.
Source: OECD calculations based on the European Union Labour Force Survey (EULFS), the Canadian Labour Force Survey (CLFS) for Canada, the Encuesta Nacional de Empleo (ECE) for Chile, the Gran Encuesta Integrada de Hogares (GEIH) for Colombia, The Encuesta Nacional de Ocupación y Empleo (ENOE) for Mexico and the Current Population Survey (CPS) for the United States.

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Finally, differences in the distribution of hours are the starkest between workers in high-, middle- and low-pay occupations. On average across the OECD, workers in low-pay occupations worked much fewer hours than those in middle-and high-pay occupations, consistently throughout the 2009-19 period (Panel A). Accordingly, the incidence of very short-hours was also much higher for those in low-pay occupations than for others (Panel C). The incidence of very long hours was lowest for those in low-pay occupations, and highest for those in high-pay ones (Panel B). Moreover, gaps in average hours and in the incidence of very short hours between workers in high-pay and low pay occupations widened on average for the OECD between 2009 and 2019. By contrast, the gap in the incidence of very long hours narrowed.

Again, these results for the OECD average hide differences across countries, and even reverse patterns in Mexico and Greece, where workers in low-pay occupations worked longer hours than those in high-pay ones in 2019 (see Annex Figures 5.A.4, 5.A.5 and 5.A.6). In Mexico and Chile, the share of those in low-pay occupations working more than 48 hours a week is also higher than that of workers in high-pay occupations; the incidence of very short-hours work (less than 10 hours a week) is also higher among workers in low-pay occupations in both countries.

5.3.2. Who is flexible? Changes in the distribution of working arrangements

Flexible working time arrangements can provide employers with room for adjustment in the production process, but in some cases, they can also improve the work-life balance of employees (OECD, 2016[34]; Eurofound, 2016[36]). Working time flexibility can help working parents to reconcile their work schedule with childcare and/or school hours, and can make an important contribution to employees' satisfaction with their work-life balance (Cazes, Hijzen and Saint-Martin, 2015[31]). However, depending on their design, flexible arrangements may also come at the expense of lower earnings and have detrimental effects on health in the long-run, even when chosen by the employees. This section documents, where available,[95] the distribution across workers of three flexible working time arrangements, namely variable scheduling work (whereby employees have little to no control over their schedules), flexible working hours (whereby workers can choose their start and finish times) and teleworking.

As shown in Figure 5.14, the share of workers with access to flexible hours slightly increased from 25.5% in 2005 to 27.2% in 2015 on average for the OECD. While the trend was similar in the majority of countries for which data are available, proportions varied considerably across countries, ranging from 7.2% in Korea to almost 50% in the United States and slightly more in the Nordic countries in 2015 (see Annex Figure 5.A.8). Looking at the distribution of flexible working hours by gender, education and monthly earnings suggests that flexible hours were most often used by highly paid employees with higher education, with no particular gender pattern. The incidence of flexible hours among men and women was about the same on average in 2015, while it was higher for workers with higher education compared to those without (36.2% versus 22%), and for highly paid workers (36.3%) compared to low-paid workers (21.9%) (Panel A of Figure 5.14). These differences held over time: the education and earnings ratios remained inferior to 1 in 2005, 2010 and 2015 (Panel B). These results confirm previous studies showing

that education and pay levels are important determinants of access to flexible hours arrangements (OECD, 2016[34]).

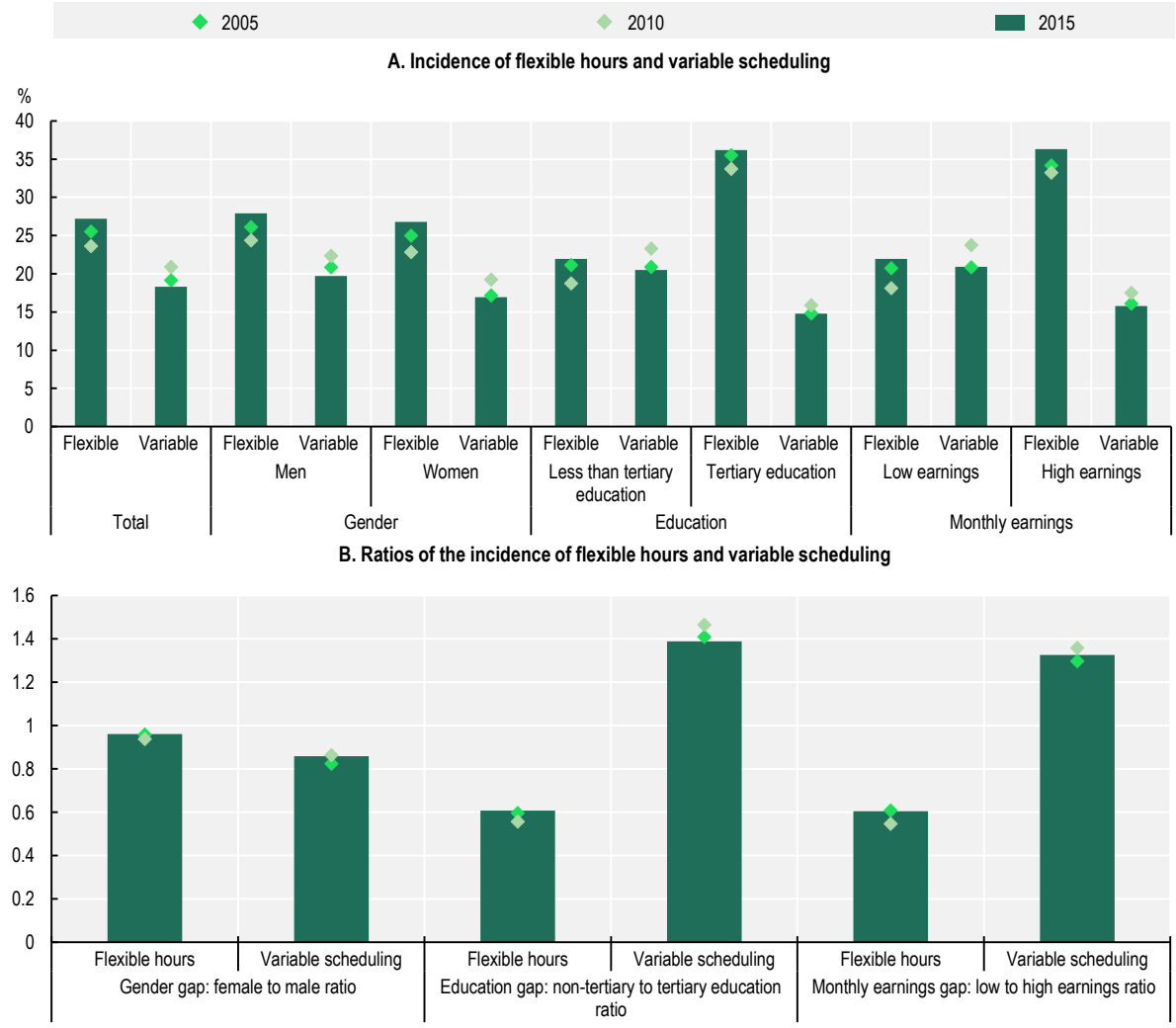
While flexible hours arrangements may be defined as employee-friendly working arrangements – if not necessarily healthy – since they offer workers the opportunity to choose and control their schedule, variable scheduling arrangements, such as on-call work and variable shift work are involuntary options, that are in nature unpredictable and disruptive from a work-life balance perspective.[96] The incidence of variable scheduling arrangements slightly declined on average in the OECD from 19.2% in 2005 to 18.3% in 2015 (Figure 5.14). There were significant differences across countries, in part reflecting structural differences in sectoral and occupational composition: 9.8% of employees were engaged on average in variable scheduling in the Netherlands compared to 31.9% in the Slovak Republic in 2015 (see Annex Figure 5.A.9). Taken together Panels A and B of Figure 5.14 suggest that variable scheduling mostly concerns low-paid employees and those without higher education. In 2015, 21.9% of low-paid employees and 20.5% of those without higher education had variable scheduling, compared to 15.8% of highly paid employees and 14.8% of those with higher education. These proportions were stable between 2005 and 2015. The incidence of variable scheduling for men (19.7%) was also higher than for women (16.9%) on average in 2015, and this held between 2005 and 2015.

Figure 5.15 shows the incidence of teleworking across groups in the 28 OECD countries for which data are available in 2015. It reveals a clear divide between those who can telework and those who cannot. First, in the majority of countries, the share of men teleworking was higher than that of women − and in some cases much higher (e.g. in Austria, Luxembourg and Norway, see Panel A). Second, the incidence of teleworking increased both with educational attainments and earnings (Panel B and C): only 3.1% of employees without higher education on average were teleworking in 2015, compared to 15.6% for highly educated workers, while only 4.5% of low-paid workers were teleworking, against 16.3% for the high-paid.

In addition to socio-demographics characteristic, access to teleworking depends on other factors, including region of residence (those living in cities are more likely to be in teleworkable occupations compared to those living in rural areas), firm size (since medium and large firms concentrate more teleworkable occupations than small enterprises), occupations and work organisation (Fana, 2020[37]).

Figure 5.14. Changes in the distribution of working time arrangements across groups

Employees aged 15-64, OECD unweighted averages, 2005, 2010 and 2015



Note: Flexible working hours refer to the situation of employees who can either fully determine or at least adapt within certain limits their working hours (e.g. flexitime).

Variable hours scheduling refers to situation of employees for which working time arrangement is set by the employer or who have to choose between fixed several fixed hours schedules determined by the employer (e.g. shift work) and who are informed about changes in their work schedules at relatively short notice.

Statistics refer to the unweighted averages of 28 OECD countries: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Korea, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. Averages in 2005 and 2010 are estimated by chaining the unweighted averages based on 26 countries (excluding Switzerland and the United States) in 2010-15, and the unweighted average based on 25 countries (excluding Korea, Switzerland and the United States) in 2005-10. Earnings categories refer to the 1st and last terciles of the distribution of the net monthly earnings from the main job. The gender gap refers to the ratio of the incidence of women over the incidence of men and the education and earnings gaps refer, respectively, to the ratio of non-tertiary education to tertiary education and to the ratio of low earnings to high earnings. See Annex Figures 5.A.8 and 5.A.9 for detailed results by country. 2010 and 2015 refer, respectively to 2011 and 2017 for Korea.

Source: OECD calculations based on the 4th, 5th and 6th European Working Conditions Survey (EWCS), the 1st, 3rd and 5th Korean Working Conditions Survey and the American Working Conditions Survey (AWCS) 2015.

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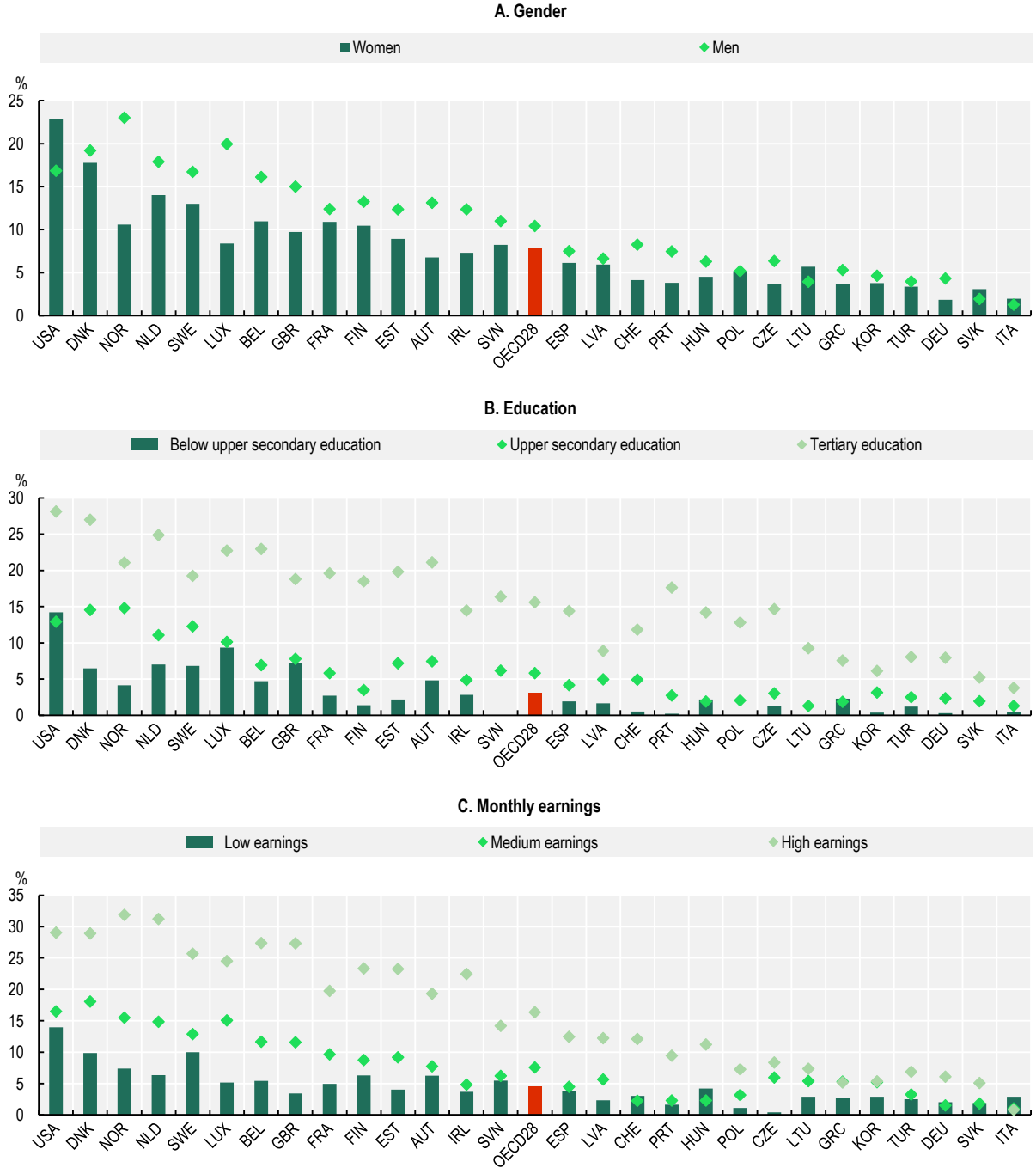
Figure 5.15. The incidence of teleworking across groups

Incidence of regular teleworking (whether home-based or mobile), percentage of employees aged 15-64, 2015



Note: Statistics shown in this Chart refer to all employees using ICT always or almost all of the time and working in at least one other location than the employer's premises several times a month (either at home at least several times a month and in all other locations (except the employer's premises) less often than several times a month, or at least several times a week in at least two locations other than the employer's premises, or working daily in at least one other location). 2015 refers to 2017 for Korea. Countries are ordered by descending order of the overall incidence (Panel A). Monthly earnings (Panel C) categories refer to the terciles of the net monthly earnings in the main job. Results are comparable when using data from the EU-LFS for 2019 (see Box 5.4 for a discussion of the differences between sources on teleworking).
Source: OECD calculations based on the American Working Conditions Survey 2015, the European Working Conditions Survey 2015 and the Korean Working Conditions Survey 2017.

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Box 5.5. Who teleworked during the COVID-19 crisis?

In light of the widespread development of teleworking during the COVID-19 crisis, how have inequalities between groups in access to teleworking, documented above, evolved? Drawing on survey data collected in April 2020 in Australia, Austria, France, Germany, Italy, Poland, Sweden, the United Kingdom and the United States (Galasso and Foucault, 2020[11]), Figure 5.16 below shows that, while comparable shares of men and women were able to work from home,[1] the use of teleworking during the first lockdowns in the COVID-19 crisis was characterised by very stark education and income gradients. On average, across these countries, 55% of college educated workers were able to work from home in April 2020, against 19% of those with no high school diploma. By contrast, 38% of the latter had to stop working altogether, compared with 16% of college educated workers. A similar pattern is observed with earnings groups: about 29% of workers in the first quartile could work from home, 41% went to work as usual, and 30% had to stop working, compared to respectively 50%, 36% and 14% of those in the highest quartile.

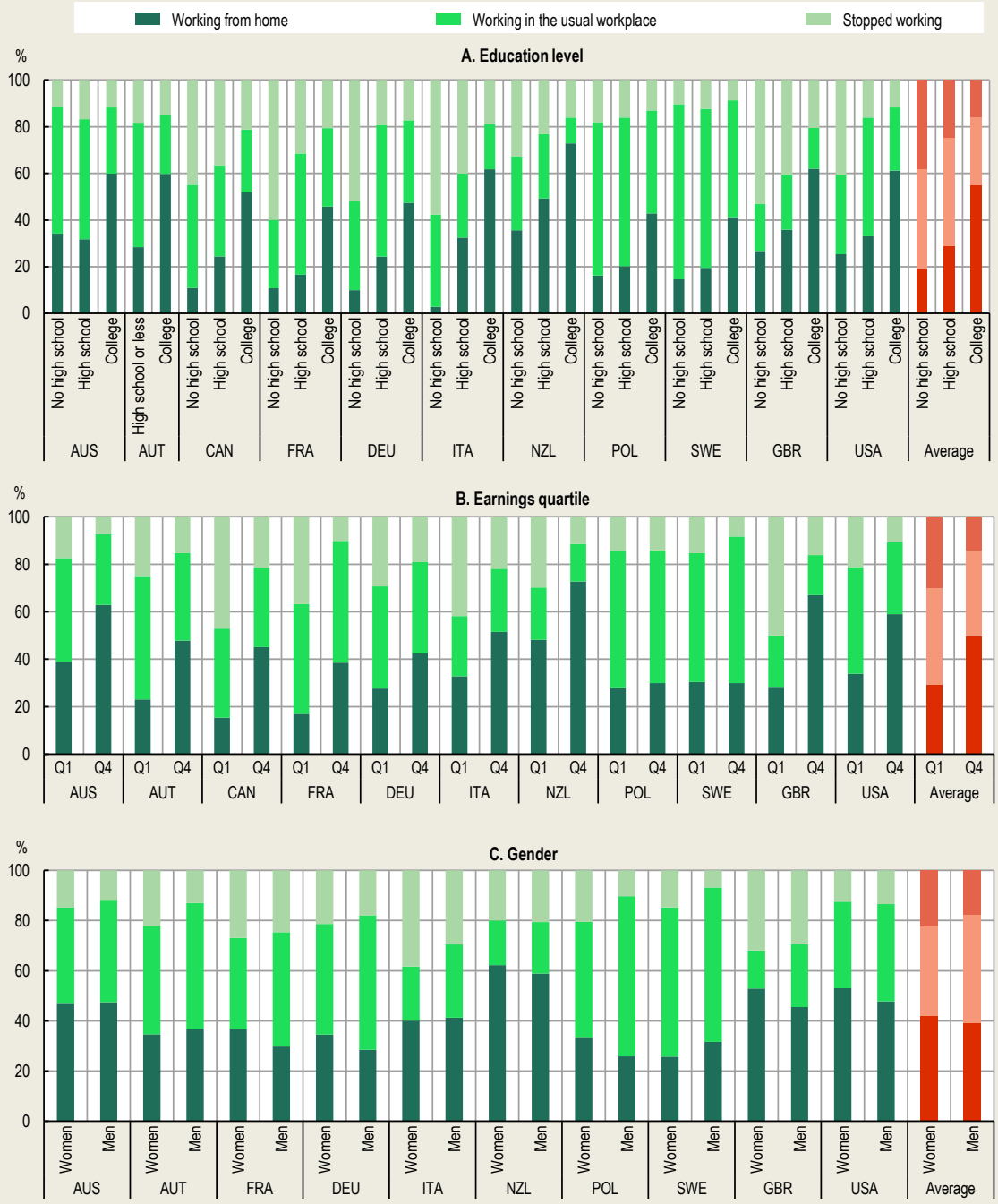
The surge of teleworking witnessed during the crisis, as countries went into lockdowns, may only be partly transferable to teleworking during normal times. Indeed, although during lockdowns all tasks associated with a job had to be performed remotely, such a "full teleworking mode" might have amounted to a loss of quality in service for jobs that involve social tasks (e.g. selling, teaching, caring for others, working with the public). Therefore this extent of teleworking, even if doable, might not be seen as desirable in normal times. According to a 2020 study (Fana, 2020[37]), while 37% of jobs in the European Union can be done remotely, only 13% of those actually involve no or limited social tasks, and could be performed entirely remotely, without a loss of quality – see also OECD (2020[13]) and Galasso and Foucault (2020[11]). Besides, a full teleworking mode might have a negative impact on innovation, as activities sparking team creativity (e.g. brainstorming sessions) might benefit from a physical presence. Finally, workers suffering from social isolation, as well as those whose working conditions at home are degraded compared to being in the office (due to, e.g. lack of space, or the presence of other family members) might prefer a different balance between teleworking and working in the office in normal times, than that experienced during the COVID-19 crisis.

For all these reasons, a hybrid model of "blended working" including a substantively higher share of teleworking − albeit not in the proportion observed during the pandemic − is likely to emerge. In the United States, an estimated 17% of full work days on average are likely to become additional teleworking days in the post-pandemic world, compared with the pre-existing situation, totalling 22% of all full work days supplied from home (Barrero, Bloom and Davis, 2020[18]).

Nevertheless, even if teleworking does not become the norm, the experiment of the first lockdowns highlighted the fact that, in the absence of targeted measures to reduce gaps in the ability to telework among low-paid, low-skill jobs, the rise of teleworking in a post COVID-19 world could exacerbate disparities in working conditions between groups in the long-run. Targeted investments in technology and in training might be necessary – although some jobs will simply not be teleworkable. Further, changes in regulation designed to help overcome the cultural barriers to teleworking in low-skilled occupations might also be needed. Fana et al. (2020[37]) have shown that the highest gap between potential (i.e. technically possible) and actual teleworking was observed for lower-level white-collar occupations (and, in particular, workers in public administration). They argue that work organisation, position in the occupational hierarchy and associated levels of granted autonomy matter in explaining differences in access to teleworking.

Figure 5.16. Who teleworked during the COVID-19 crisis?

Use of teleworking during the first lockdown by group as a percentage of total workers usually employed before the onset of the crisis, selected OECD countries



Note: "Average" is the unweighted average of the OECD countries shown.
Source: Foucault and Galasso (2020[11]), *Working during COVID-19: Cross-country evidence from real-time survey data,* (available at: https://dx.doi.org/10.1787/34a2c306-en) based on the REPEAT (REpresentations, PErcepions and ATtitudes on the COVID-19) survey.

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1. However, more women than men had to stop working, and more men than women kept going to their usual places of work.

5.3.3. Work-leisure balance and time poverty across groups

Another key aspect in considering disparities related to working time across groups is work-leisure balance. Going beyond aggregate trends in time use shown in Section 5.2.2, Figure 5.17. displays trends in time spent on the main categories identified before (e.g. paid work, unpaid work, personal care and leisure) by gender, education level, and household income terciles, since the 2000s. Data reveal some stark contrasts in the time allocation across groups.

Throughout the last 20 years, in the ten OECD countries for which data are available, men consistently spent a larger portion of their day on work-related activities (e.g. paid work, studying, looking for a job) than women. In fact, this gap slightly increased from a 49 minutes per day difference on average in the 2000s, to a 50 minutes difference in the 2010s. Although the gap between the male and female labour market participation rates narrowed from 21.6% on average across the OECD in 2000, to 15.6% in 2019,[97] women consistently spent more time that men on unpaid work throughout the period, with the gap in time spent on unpaid work slightly increasing, from 84 minutes per day on average in the 2000s, to 85 minutes in the 2010s. Furthermore, in countries reviewed, women consistently spent less time in leisure than men over the past two decades (36 minutes less on average in both decades). Overall, women and men had comparable paid work-leisure balance (as measured by the ratio between the share of time spent on paid work and the share of time spent on leisure), but women had a more negative overall work-leisure balance (defined as the ratio between the share of paid *and* unpaid work to the share of leisure) than men; in the 2010s women still spent 2.4 times more time on work (paid and unpaid) than on leisure, while men spent 1.9 times more on work (paid and unpaid) than on leisure.

Turning to patterns by levels of education, on average across countries, workers with upper-secondary education spent the most time in paid work and those with tertiary education the least, in both decades. In the 2010s, all workers, irrespective of their level of education, spent about 1.5 times as much time on paid work as they did on leisure. All workers also had comparable overall work-leisure balance, spending about 2.1 more time on work (paid and unpaid) than on leisure.

Finally, when considering patterns of time use across household income groups[98] Figure 5.17 shows that on average, time spent on paid work tend to decrease with income, while time spent on leisure tend to increase with income.

While looking at the relative shares of time devoted to each activity is important to capture possible imbalances between work (paid and unpaid) and other personal activities, people's work-life balance should also be measured in absolute term. Indeed, below a certain threshold, the share of time available for leisure and personal care – in particular, regenerative activities like sleeping and eating – becomes fundamentally detrimental. This idea underlines the concept of "time poverty". Following the literature – see e.g. (Bardasi and Wodon, 2010[38]), individuals are defined as time poor when the time they have left for non-working activities is lower than 60% of the median share of time for leisure and personal care. Figure 5.18 considers trends in the incidence of time poverty.

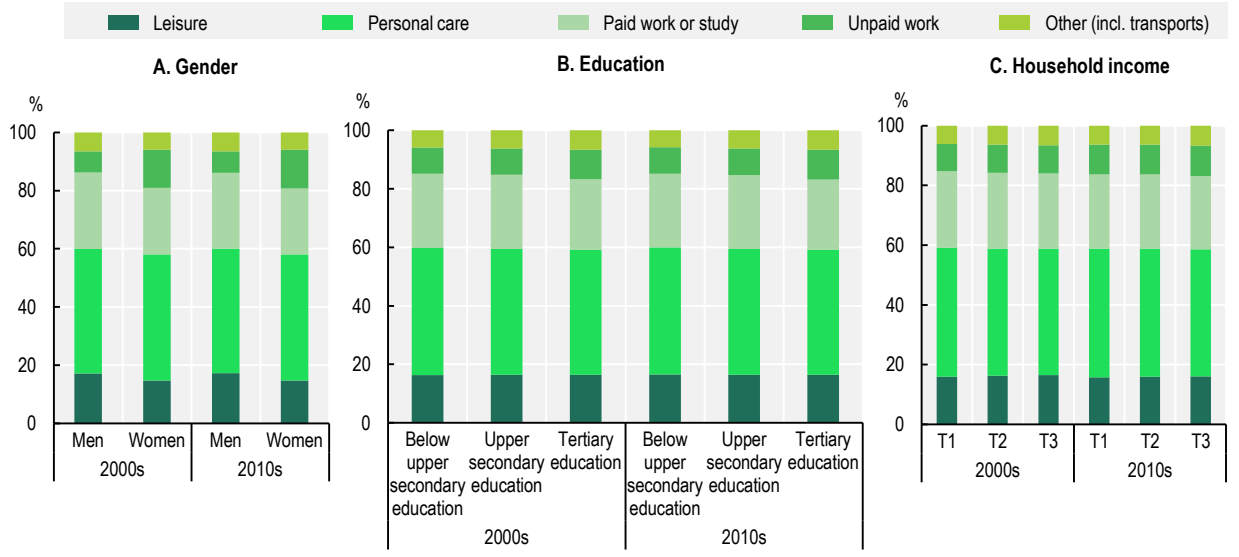
The incidence of time poverty increased over time on average across the ten countries for which data are available, going from 1.4% of men in the 2000s to 1.8% in the 2010s, and from 1.3% to 1.8% of women for the same period. While the incidence of time poverty was highest for highly educated individuals in the 2000s, it rose most strongly for workers with the lowest level of education in the last decade. Finally, Figure 5.18 considers the incidence of time poverty in different income groups in the 2000s and 2010s in the 10 countries where this is doable; in the 2010s, time poverty was highest (at 1.8%, up from 1.5% in the 2000s) for workers in the medium income group, followed by those in the poorest group (at 1.76%, up from 1.45 in the 2000s), while the incidence of time poverty was lowest (at 1.7%, up from 1.4% in the 2000s) for the most highly paid third of workers.

Taken together, Panel C in both Figure 5.17 and Figure 5.18 shed light on disparities in the value of one working hour across individuals. While these disparities are often conceived as disparities in hourly wages,

they may also be envisaged in terms of the quantity of work necessary to attain a given level of income for different individuals (e.g. the size of the work "effort"). Understanding these disparities in work effort at a given level of income is crucial to assess the implications of changes in hours distribution across groups. Figure 5.19 looks at the number of hours of work needed to escape poverty − defined as 50% of median equivalised disposable income − for an individual paid at respectively the minimum and the average wage in 2001 and 2019. On average in 2019, a single childless worker had to work 33 hours at the minimum wage to escape poverty compared with 13 hours at the average wage. While the number of hours needed at the average wage remained relatively constant between 2001 and 2019, a single childless worker paid the minimum wage needed to work 6 hours less in 2019 than in 2001. However, in the Czech Republic, Latvia, Luxembourg and the United States, a single childless worker paid at the minimum wage still had to work *more* than 40 hours per week (i.e. more than the upper limit on normal weekly hours in most OECD countries) to escape poverty in 2019. In the United States in 2019, a single individual taking up a job paid at the federal minimum wage would have had to work 60 hours a week to escape poverty (up from 54 hours in 2001, and compared to 16 hours at the average wage).[99]

Figure 5.17. Trends in time use by gender, education and household income

Percentage distribution of time use among full-time employees aged 15-64, OECD unweighted averages



Note: For further details on the definition of activities and data limitation, see the note of Figure 5.11. Statistics shown in Panels A and B are the unweighted averages of the ten following OECD countries: Canada, Germany, Hungary, Italy, Mexico, the Netherlands, Spain, Turkey, the United Kingdom and the United States. Statistics in Panel C are the unweighted averages of the eight following OECD countries: Canada, Germany, Mexico, the Netherlands, Spain, Turkey, the United Kingdom and the United States. Categories of household income refer to the terciles of household income by unit of consumption (T1 for the first tercile to T3 for the last tercile).
Source: OECD estimates based on the Multinational Time Use Study (MTUS) and national Time Use Surveys.

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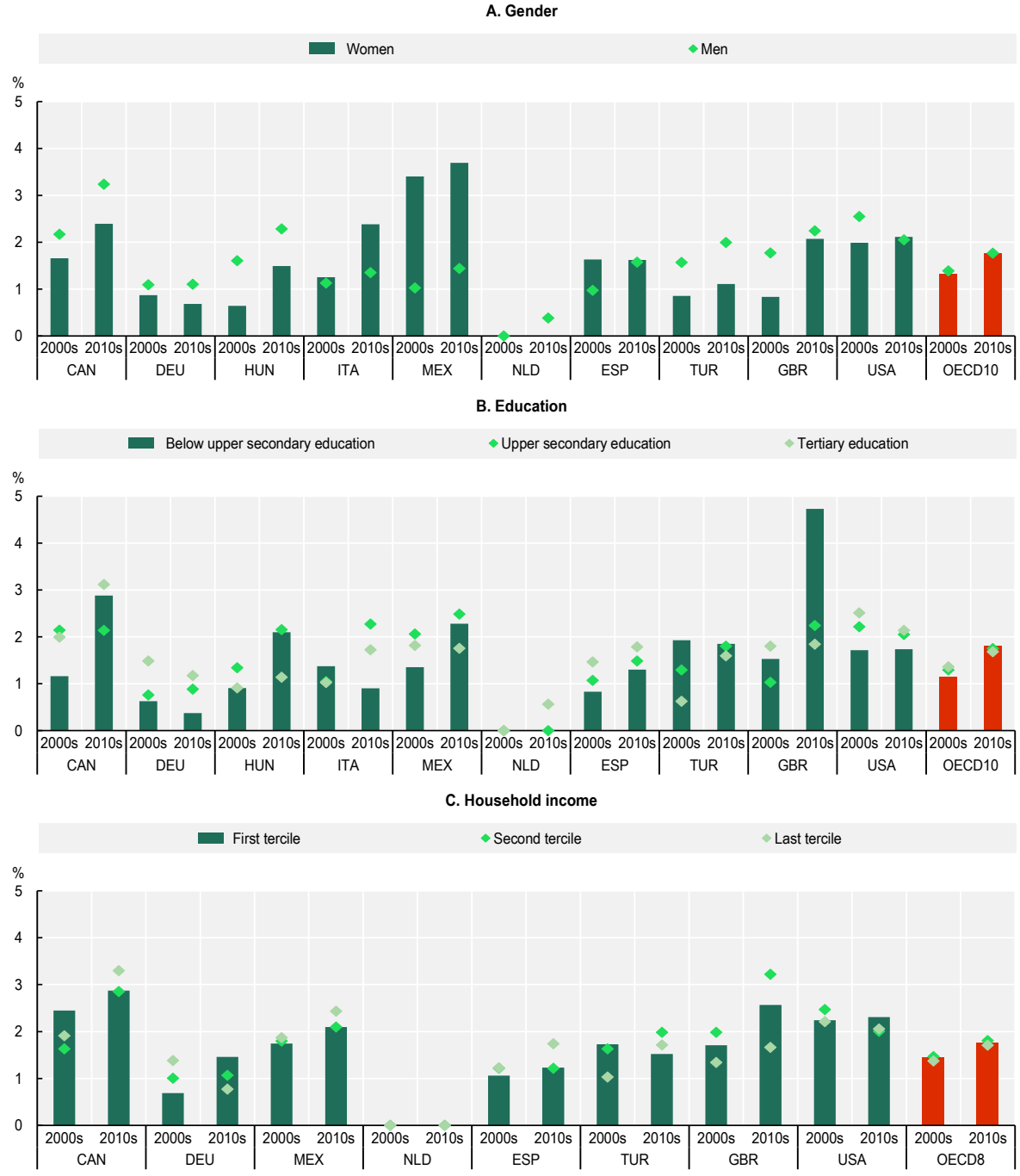
Figure 5.18. Trends in the incidence of time poverty by gender, education and household income

Percentage of full-time employees aged 15-64



Note: Time poverty is defined as the share of full-time employees aged 15-64 whose share of time devoted to personal care and leisure is less than 60% of the time devoted to these activities by the median full-time worker aged 25-64. OECD10 (Panels A and B) and OECD8 (Panel C) are the unweighted averages of the OECD countries: shown in the chart. Categories of household income refer to the terciles of household income by unit of consumption (T1 for the first tercile to T3 for the last tercile). Results for the Netherlands in Panel C refer to the only year for which data by household income are available in the 2010s (2016); in this year time poverty is always equal to 0 and consequently statistics shown in Panels C are not consistent with those in Panels A and B in the 2010s (based on the years 2011 and 2016). Statistics for women, for workers with below upper secondary education, and for those in the first and second income terciles are not visible on the graph because they are equal to 0.

Source: OECD estimates based on the Multinational Time Use Study (MTUS) and national Time Use Surveys.

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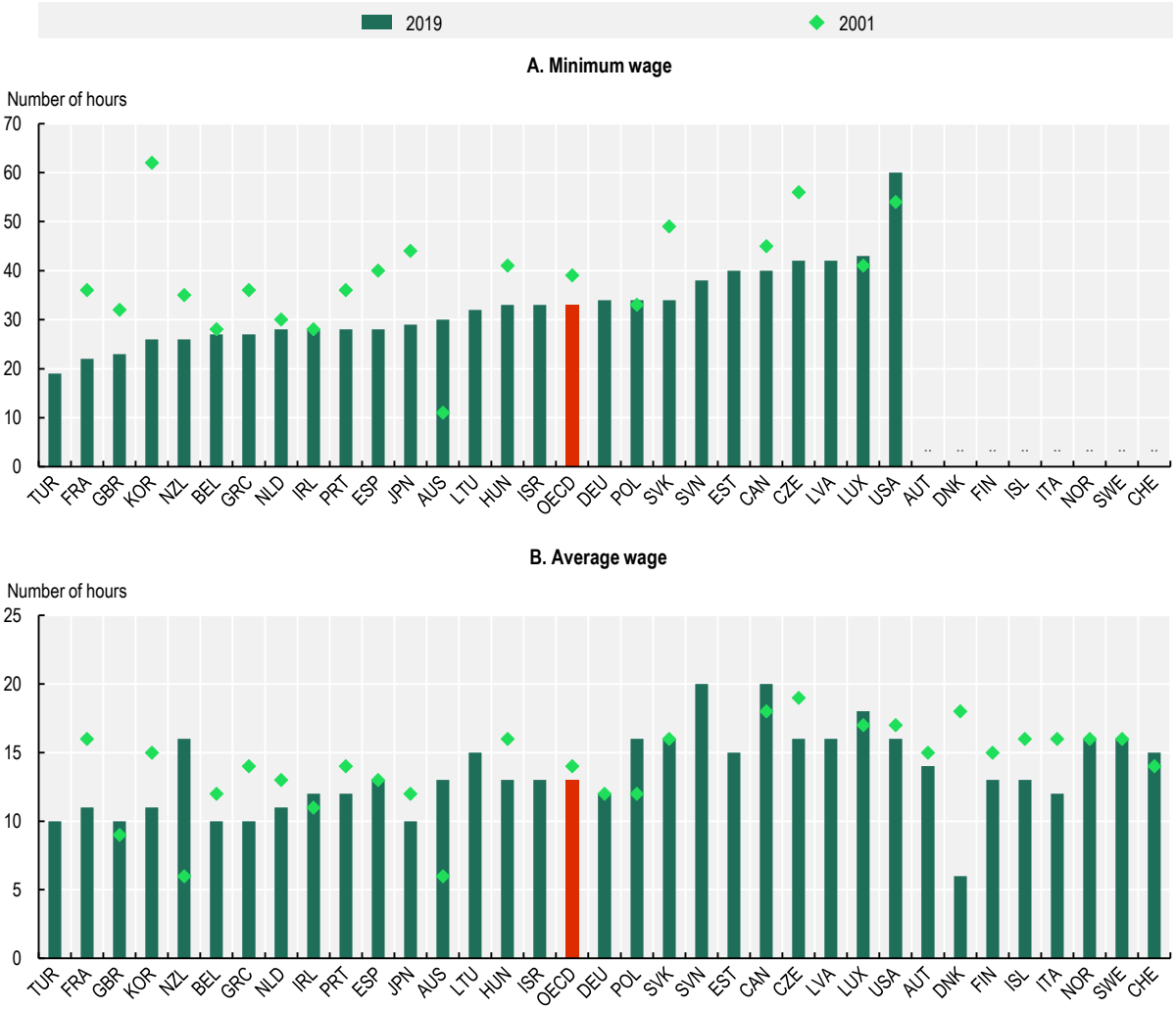
Figure 5.19. Trends in the number of hours of work needed to escape poverty at the minimum and average wage, 2001 and 2019



Note: Figures are based on taxes and benefits simulations, for a single person without children earning either the minimum wage or the average wage. The effect of tax systems is taken into account. Temporary in-work benefits and housing benefits are not included (since the former are temporary, and the take-up of housing benefits is low among low-income households). Countries are ordered by ascending order of the hours of work needed at the minimum wage in 2019 (Panel A).“..”: not applicable.
Source: OECD Employment Database, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm, based on the TAXBEN model.

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5.3.4. Mismatches between reality and preferences across groups

Finally, another important aspect of working time to consider is the extent of the mismatch between individual working time preferences and the time that they actually spend working. As shown in Figure 5.20, in 2015, 27% of employees aged 15-64 on average wished to work less than they did, while 16% wished to work more. The amount of mismatch, i.e. the share of employees dissatisfied with their working hours in one way or another, was relatively stable from 2010, at 43% of employees. On average, the proportion of workers wanting to work less was higher than the proportion of those wanting to work more, in all sub-groups represented on Figure 5.20, except for low-paid workers and those with less than secondary

education, for whom the reverse was true. 36% of highly paid workers, 31% of workers in the medium earnings group, and 32% of highly educated workers said they would wish to work less hours than they did in 2015. By contrast, 28% of low-paid workers and 24% of low-educated workers said they would like to work more. The total amount of mismatch was highest for low-paid workers, 47% of whom were dissatisfied with their hours, with 28% wanting to work more and 18% wanting to work less. 26% of women wanted to work less (compared to 28% of men), and 17% wanted to work more (compared to 14% of men).

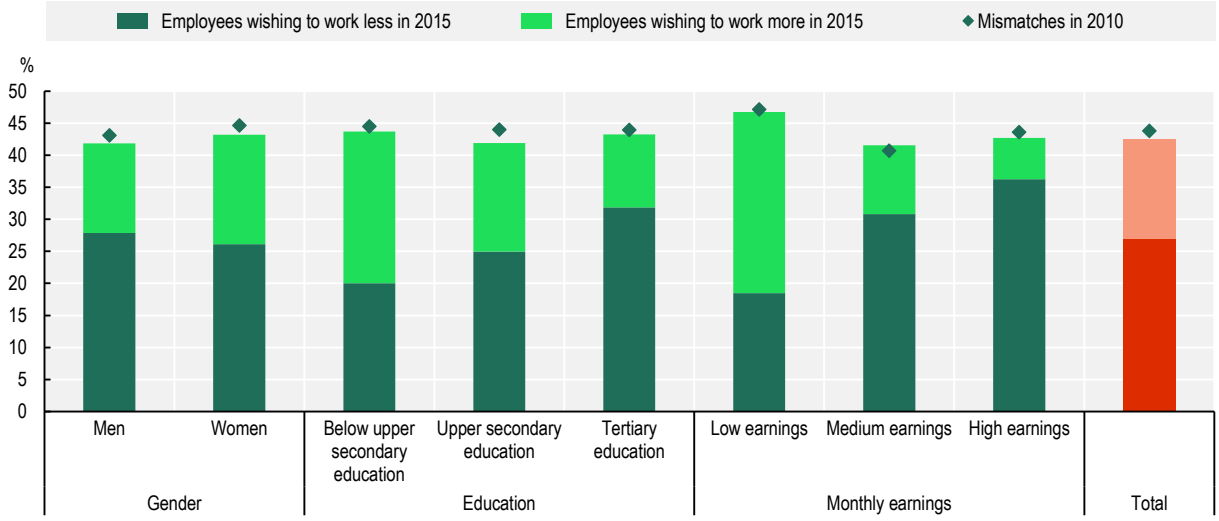
Several key insights can be drawn from these data. The first one relates to the impressive size of the mismatch: more than two fifth of workers across OECD countries for which data are available, 43%, are dissatisfied with the amount of time that they spend working. Second, working *too much* appears to be the dominant cause of dissatisfaction: more than a fourth of workers (28%) feel that they work more than they would like.

The third insight from Figure 5.20 reinforces the point outlined in Section 5.1.1 on overtime: in the same way that the supply of overtime is partly determined by the wage distribution, preferences regarding hours are clearly linked to one's position in the wage distribution, and cannot be abstracted from the issue of wage levels. Indeed, low paid and low educated workers, who are more likely to face difficulties in making ends meet, are the only two groups with a larger proportion of workers wanting to work more hours to increase their income than the proportion of those wanting less hours.

The proportion of women wanting to work more is also comparatively higher than that of men who express that wish. Indeed, women are largely over-represented in the group of involuntary part-timers (made of 65% of women in 2019), a group which has itself grown from 12% of total employment in 2000 to 15% in 2019.[100] Again, these statistics have to be considered in relation to the gender wage gap faced by women, whose hourly wage is on average lower than that of men[101] (and who also face a *gender time* gap, i.e. a lower availability to work since they are bearing a higher share of the household work burden) (OECD, 2020[39]).

Figure 5.20. Mismatches between preferred working time and actual working time by group

Percentage of employees aged 15-64, OECD unweighted average, 2010-15



Note: Unweighted average of 28 OECD countries: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Korea, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. Monthly earnings categories refer to the terciles of the net monthly earnings in main job. 2010 and 2015 refer, respectively to 2011 and 2017 for Korea.
Source: OECD calculations based on the 4th, 5th and 6th European Working Conditions Survey (EWCS), the 1st, 3rd and 5th Korean Working Conditions Survey (KWCS) and the American Working Conditions Survey (AWCS) 2015.

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Box 5.6. Preferences for more time-off: Towards a new equilibrium?

The important level of mismatch observed in the data, and in particular, the dissatisfaction with working too much expressed by a sizable share of workers might have started to be heeded in recent years. Indeed, a few interesting developments in collective bargaining practices, as well as the multiplication of experiments in working time reduction at the firm level, are testament to the fact that a renewed attention is being paid to this issue.

In recent years, collective bargaining in several countries has increasingly taken into account workers' preference for a reduction of working hours in several countries. In Austria, in the last few years, employees have been able to choose the "Freizeitoption", literally, the "leisure option", which gives them the opportunity to agree on additional free time instead of a wage increase. The option was used primarily in the collective agreements of the metal, metal trade, electrical and electronics, mineral oil and electricity industries. Similar developments have been observed in Germany, where collective agreements signed in 2018 in several sectors (the metal sector, but also public transport, and the public postal service) reflected a shift towards greater individual choice between working time reduction (e.g. from 35 hours to 28 hours per week in the metal sector) and wage increases. In these agreements, priority was clearly given to individuals' preferences over working time. The change in bargaining practice in the German metal industry followed a large-scale survey of about 700 000 employees which made evident the fact that many employees were dissatisfied with their hours of work (OECD, 2019[1]).

Employees' preferences for more time-off, as well as the desire to improve employees' work-life balance and firm productivity are also the main drivers behind several experiments in working time reduction conducted in private sector firms in recent years. In August 2019, Microsoft Japan trialled a four-days week for a month – and reported an increase in productivity compared with August 2018. In December 2020, Unilever New Zealand announced that it was launching a one-year long trial of a four-day week. Employees will be paid a 100% of their salaries, while working one day less per week (without increasing the number of hours per day: in other words this is a true reduction of working time, rather than a "compressed week" system – see Box 5.1). This experiment was inspired by that of another New Zealand firm, which permanently moved its 250 employees to a four-day week system in 2018, after a two-month trial revealed productivity gains and increases in well-being and job retention (Ainge Roy, 2018[40]).[1] In recent months, examples have been piling up in various sectors, from fast-food chains (Zetlin, 2019[41]) to digital marketing agency (Ribeiro, 2019[42]). Job postings data from July 2020, from American firm ZipRecruiter, show that in the United States, the percentage of firms offering 4-day workweeks to their employees has increased by more than 70% since 2018 (Cheng, 2020[43]).

Beyond cutting the number of days worked, other experiments have focused on reducing the number of hours worked each day. A German consultancy firm made headlines in 2017 by trialling – and later adopting – a system of 5 hours workday, paid 8 (Morath, 2019[44]). Several Swedish towns, following the example of the city of Gothenburg, also trialled reduced hours workday for municipal employees particularly at risk of burnout, like social and health workers (Alderman, 2016[45]).

While this renewed interest in reduced working time, aligned with workers' preferences expressed in surveys, has been so far contained to ad hoc collective agreements and private sector trials, in the context of the COVID-19 crisis the idea has been increasingly discussed in the media and in policy circles in several OECD countries, including Finland, New Zealand and Spain.

1. Note that results on productivity might be clouded by selection effects: firms which offer these working conditions are likely to be among the most productive to start with.

5.4. Concluding remarks

This chapter documents the diversity and complexity of national regulatory settings governing working hours, paid leave and teleworking in OECD countries, looking at both the governance and at the content of statutory and negotiated rules. The analysis confirms the importance of conducting such a comprehensive exercise to properly assess the relationship between working time regulation and working time outcomes. It identifies important differences between countries, both in terms of the nature and content of their regulatory settings, but also in terms of how much regulations actually affect working time outcomes in practice. These results are important for correctly informing policy makers on the link between working time regulatory changes and labour market outcomes, and suggest that both the governance and content of regulations should be taken into account when assessing the impact of working time reforms.

The chapter also provides an update on working time trends across OECD countries. It shows that usual weekly hours, and the incidence of paid overtime have remained relatively stable over recent decades. Actual hours of work have declined, but at a diminishing pace. In parallel, time spent on leisure has actually *decreased*. Taken together (for the OECD countries where data are available), parallel trends in average annual hours worked, average time spent on leisure, and hourly productivity suggest that productivity increases have not led to extra leisure time. One possible explanation for this is that workers faced with a decreasing labour share have opted for increases in hourly wages rather than reduction in hours worked. Further research should be undertaken at the country level to investigate the factors behind these developments and consider possible policy actions to ensure a better balance between work and leisure and address the mismatch between individuals' working time preferences and the time they actually spend working.

In addition, the chapter sheds light on significant differences between socio-demographic groups in the distribution of hours worked, working time arrangements and work-leisure balance. Further analyses will be necessary to understand the factors driving these differences at the country level, as well as to explore more precisely how they have evolved over time, to prevent growing divides in work-life balance, working conditions and time poverty. Moreover, as many regulatory changes were introduced during the COVID-19 crisis, it will also be key to explore how the various possibilities to work longer hours, adjust paid leave and expand teleworking have impacted working time outcomes across countries and for different groups.

Looking ahead, a second key object of research will be to explore how working time outcomes relate to labour market outcomes and workers' well-being in order to help policy makers to balance productivity, employment and welfare objectives when designing working time reforms. Moreover, since the various components of working time regulatory settings are likely to interact, a specific change in working time rules may affect several working time outcomes (e.g. a reform in working hours may lead to changes in the organisation of working time). Future research should thus look in detail at possible complementarities or trade-offs between the various components of working time regulatory settings.

Finally, while working hours and work organisation are influenced by differences in the content and governance of regulation, they are also likely to be affected by other factors, including labour force participation, changes in taxation and social protection, phases of the business cycle, and cultural trends. The use of teleworking, beyond the impact of the health crisis, will typically be shaped by attitudinal changes, and the development of IT infrastructure. Further detailed research is therefore needed on the interactions between working time regulatory settings with other key labour market institutions such as tax and social security systems.

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Annex 5.A. Additional graphs and tables

Annex Table 5.A.1. Detailed content on statutory and negotiated normal hours limits

Country	Statutory normal weekly hours (excluding overtime)	Negotiated normal weekly hours
Australia	38	38
Austria	40	38.8
Belgium	38	37.8
Canada	40	na
Chile	45	na
Colombia	48	na
Czech Republic	40	38
Denmark	No legal limit	37
Estonia	40	na
Finland	40	38
France	35	35.6
Germany	No legal limit	38.2
Greece	40	40
Hungary	40	na
Israel	42	42
Italy	40	38
Japan	40	38
Korea	40	40
Latvia	40	na
Lithuania	40	na
Mexico	48	na
Netherlands	No legal limit	37.4
New Zealand	40	40
Norway	40	37.5
Poland	40	na
Portugal	40	39.4
Slovak Republic	40	39
Slovenia	40	na
Spain	40	38.2
Sweden	40	37.1-40
Switzerland	No legal limit	42
Turkey	45	na
United Kingdom	No legal limit	na
United States	40	na

Note: na: not applicable.
Source: OECD Policy Questionnaire on Working Time Regulation, 2020.

Annex Table 5.A.2. Detailed content on statutory and negotiated maximum hours and / or overtime limits

Country	Statutory limit on maximum weekly hours (incl. overtime)	Negotiated limits on maximum weekly hours (incl. overtime)	Statutory limits on overtime	Negotiated limits on overtime	Statutory minimum monetary compensation	Negotiated minimum monetary compensation	Statutory minimum compensatory time-off	Negotiated minimum compensatory time-off
Australia	No statutory limit	No negotiated limit	No statutory limit	na	No statutory minimum	Typically between 150% and 250% in modern awards	No statutory minimum	No negotiated minimum
Austria	60 hours	60 hours	20 hours per week.	na	150%	na	150%	na
Belgium	50 hours	50 hours	No dedicated statutory limit, the maximum weekly hours limit apply, so de facto weekly limit: 50-38 = 12 hours	na	150%	na	na	na
Canada	48 hours	na	No dedicated statutory limit, the maximum weekly hours limit apply, so de facto weekly limit: 48-40 = 8 hours	m	150%	na	Employees can opt for paid time off + 50% of their usual wage instead of the 150% overtime rate by agreement between the employer and employee.	na
Chile	57 hours	na	12 hours per week	na	150%	na	No CTO	na
Colombia	60 hours	na	12 hours per week	na	125%	na	na	na
Czech Republic[1]	48 hours	na	8 hours per week, 150 hours per year.	na	125%	na	100%	na

Country	Statutory limit on maximum weekly hours (incl. overtime)	Negotiated limits on maximum weekly hours (incl. overtime)	Statutory limits on overtime	Negotiated limits on overtime	Statutory minimum monetary compensation	Negotiated minimum monetary compensation	Statutory minimum compensatory time-off	Negotiated minimum compensatory time-off
Denmark	48 hours	na	No dedicated statutory limit, the maximum weekly hours limit apply	na	No statutory minimum	Typically 150% for the first hour and 200% subsequently.	No statutory minimum	• Industrial agreement: any hours in excess of 37 hours per week may be taken as full days off subject to local negotiations with the individual employee. • Public sector: overtime mostly compensated with time off in lieu.
Estonia	48 hours	na	No dedicated statutory limit, the maximum weekly hours limit apply, so de facto weekly limit: 48-40 = 8 hours	na	150%	150%	100%	na
Finland	48 hours	60 hours	No dedicated statutory limit, the maximum weekly hours limit apply, so de facto weekly limit: 48-40 = 8 hours	Food industry: no dedicated limit, maximum weekly hours rules apply	First two hours: 150%; additional hours: 200%	Usually, the agreements uphold the statutory limits	No statutory minimum	na
France	48 hours	na	No dedicated statutory limit, the maximum weekly hours limit apply, so de facto weekly limit: 48-35 = 13 hours	na	110%	na	110%	na
Germany	48 hours	na	No dedicated statutory limit, the maximum weekly hours limit apply	• Metal sector, Saxony: 20 hours / month; • Banking industry: maximum hours rules (including overtime) apply (10 hours / day, 53 hours/ week).	No statutory minimum	Typically 125%	No statutory minimum	• In most of the analysed sectoral CA, overtime “should” or “can” be granted as leisure time. • Banking industry: the CA requires that overtime is compensated by leisure time.

Country	Statutory limit on maximum weekly hours (incl. overtime)	Negotiated limits on maximum weekly hours (incl. overtime)	Statutory limits on overtime	Negotiated limits on overtime	Statutory minimum monetary compensation	Negotiated minimum monetary compensation	Statutory minimum compensatory time-off	Negotiated minimum compensatory time-off
Greece[2]	48 hours	na	Overtime limits (set by law) depends on the sector of employment (industry, retail outlets, offices). But by default, the maximum weekly hours limit apply, so de facto weekly limit: 48-40 = 8 hours	na	120% for "extra hours", 140% for overtime hours, 160% after 120 hours annually, 180% for undeclared (unlawful) overtime.	na	No CTO	na
Hungary	48 hours	na	250 hours per calendar year + up to 150 hours per calendar year via written agreement between the employee and the employer or up to 300 hours per year and 100 hours of voluntary overtime (agreed individually) via CA..	na	150%	na	100%	na
Israel	58 hours	58 hours	16 hours a week	Usually, the agreements uphold the statutory limits	125% the first 2 daily hours, and then 150%.	Usually, the agreements uphold the statutory limits	na	na
Italy	48 hours	48 hours	250 hours per year	Metal sector: 200 hours per year	110%	na	No statutory minimum	m

Country	Statutory limit on maximum weekly hours (incl. overtime)	Negotiated limits on maximum weekly hours (incl. overtime)	Statutory limits on overtime	Negotiated limits on overtime	Statutory minimum monetary compensation	Negotiated minimum monetary compensation	Statutory minimum compensatory time-off	Negotiated minimum compensatory time-off
Japan	51.25 hours	Construction sector: 63 hours	45 hours per month, and 360 hours per year.	Construction sector: 23 hours per week	125%, 150% after 60 hours	Average clause: 128.4% for normal overtime, 149.5% for overtime exceeding 60 hours a month.	No CTO	No CTO
Korea	52 hours	52 hours	12 hours per week	12 hours per week	150%	na	No statutory minimum	na
Latvia	48 hours	na	8 hours per week on average over 4 months.	na	200%	Construction sector: 150%	200%	na
Lithuania	48 hours	na	8 hours per week, 180 hours per year	na	150%	na	150%	na
Mexico	No dedicated limit but overtime limit applies	na	9 hours per week	Usually, the agreements uphold the statutory limits	200%, 300% beyond 9 hours	na	No statutory minimum	na
Netherlands	60 hours	44 hours	No dedicated statutory limit, the maximum weekly hours limit apply	6 hours per week, 30 hours per quarter	No statutory minimum	Varying from 125 to 300%	No statutory minimum	na
New Zealand	No statutory limit.	No negotiated limit	No statutory limit.	No negotiated limit	No statutory minimum	Typically: 150%	No statutory minimum	CTO (at a 100% rate) is common in firm-level CA and in company policies
Norway	48 hours	na	10 hours per week, 25 hours per 4 weeks, 200 hours per year.	300 hours per year, 25 hours per week	140%	Typically: 150%	100% + 40% wage supplement	Usually, the agreements uphold the statutory limits
Poland	48 hours	na	150 hours per year.	na	150-200%	na	150%	na

Country	Statutory limit on maximum weekly hours (incl. overtime)	Negotiated limits on maximum weekly hours (incl. overtime)	Statutory limits on overtime	Negotiated limits on overtime	Statutory minimum monetary compensation	Negotiated minimum monetary compensation	Statutory minimum compensatory time-off	Negotiated minimum compensatory time-off
Portugal	48 hours	Construction sector: 40 hours	2 hours per day, 175 hours per year (150 for medium or large companies), up to 200 hours per year by CA.	na	125% for the first hour or part of an hour and 137.5% thereafter	na	100% of missing daily rest hours.	na
Slovak Republic	48 hours	na	8 hours / week, 150 hours/year., up to or 400 hours per year by agreement with the employee, excluding overtime work for which the employee received compensatory leave.	na	125%	na	100%	na
Slovenia	48 hours	na	2 hours per day, 8 hours per week, 20 hours a month, 170 hours a year	na	No statutory minimum	130% in the CA for Public Sector workers	No statutory minimum	na
Spain	No dedicated limit but overtime limit applies	na	4 hours per day, 80 hours per year, excluding overtime which has been compensated by rest within four months.	na	No statutory minimum	na	No statutory minimum	na

Country	Statutory limit on maximum weekly hours (incl. overtime)	Negotiated limits on maximum weekly hours (incl. overtime)	Statutory limits on overtime	Negotiated limits on overtime	Statutory minimum monetary compensation	Negotiated minimum monetary compensation	Statutory minimum compensatory time-off	Negotiated minimum compensatory time-off
Sweden	48 hours	na	5 hours per day, 48 hours for 4 weeks, 50 hours per month and 200 hours per year + extra-overtime in excess of general overtime up to 150 hours per year if there are special grounds for doing so and no other reasonable solution.	• Private sector: 50 hours per month, 150 hours per calendar year + an additional 150 hours per year for special reasons, if approved by the union. • National/public sector: 50 hours per month, 150 hours per calendar year. • Municipal sector: 50 hours per month, 200 hours per calendar year, + an additional 150 hours per year for special reasons, if other reasonable means are not available.	No statutory minimum	Private sector: weekdays, additional hours remunerated at monthly salary / 94; weekends and nights, additional hours remunerated at monthly salary / 72.	No statutory minimum	• It is quite common in the national public sector to exchange the right to compensation of overtime for more paid vacation days. • Private sector: by agreement between employees and employers, compensation can be taken out in time instead of money, at the rate of 1.5 or 2 hours per hour worked overtime
Switzerland	50 hours	Construction sector: 48 hours	2 hours per day, 170 hours per year (where the weekly maximum is 45 hours) or 140 hours per year (where the weekly maximum is 50 hours).	na	125%	Metal, machinery and electronic industry: 125%	100%	Metal, machinery and electronic industry: CTO at the rate of 1.25 hours per hour worked overtime
Turkey	66 hours	na	270 hours in a year.	na	150%	na	150%	na
United Kingdom	No statutory limit.[3]	na	No statutory limit.	No negotiated limit	No statutory minimum	na	No CTO	na
United States	No statutory limit.	na	No statutory limit	No negotiated limit	150%[4]	na	m	m

Note: CA: collective agreement; CTO: compensatory time-off; m: missing information; na: not applicable.
In most countries, additional provisions for emergency overtime work exist, that are not included in the limits indicated above. In most countries, minimum payments are higher when overtime happens during weekends and holiday. In most countries, managers are exempted from the limits on overtime.
1. Limits indicated here for the Czech Republic, are limits for "ordered" overtime that can be imposed by employers; in addition, limits for "agreed overtime" are as follow: maximum 8 hours on average in a reference period of 26 weeks, up to 52 weeks by collective agreement.
2. In Greece, hours between 40 and 45 are called "extra hours", while hours between 45 and 48 are "overtime hours'. Information reported here are for both.
3. In practice, there is a statutory limit at 48 hours, but individuals can agree to opt out, and in practice most contracts de facto include the opt-out.
4. for non-exempt employees covered by the Fair Labor Standards Act (FLSA).
Source: OECD Policy Questionnaire on Working Time Regulation, 2020.

Annex Table 5.A.3. Detailed content on statutory and negotiated averaging arrangements

Country	What is averaged?	Statutory default period	Higher maximum period through collective bargaining	Statutory maximum period	Can CB go beyond any limit in some cases
Australia	Normal weekly hours	na	na	26 weeks	No
Austria	Normal weekly hours and maximum weekly hours		Yes	52 weeks for organisational reasons, 26 otherwise.	Yes
Belgium	Normal weekly hours and maximum weekly hours	13 weeks	Yes	52 weeks	No
Canada	Normal weekly hours and maximum weekly hours	na	na	156 weeks (if no collective agreement)	Yes
Chile	na	na	na	na	na
Colombia	Normal weekly hours	na	na	3 weeks	No
Czech Republic.	Normal weekly hours and quantity of overtime	26 weeks	Yes	52 weeks	No
Denmark	Maximum weekly hours	na	na	16 weeks	Yes
Estonia	Maximum weekly hours	16 weeks	Yes	52 weeks	No
Finland	Normal weekly hours and maximum weekly hours	16 weeks	Yes	52 weeks	No
France	Normal weekly hours	na	na	12 weeks	No
Germany	Maximum weekly hours[1]	24 weeks	Yes	52 weeks	No[4]
Greece	Normal weekly hours	16 weeks	Yes	26 weeks	No
Hungary	Total hours	16 weeks	Yes	52 weeks	No
Israel	na	na	na	na	na
Italy	Normal weekly hours	16 weeks	Yes	52 weeks	No
Japan	Normal weekly hours	4 weeks	Yes	52 weeks	No
Korea	Normal weekly hours and maximum weekly hours	2 weeks	Yes	12 to 36 weeks	No
Latvia	Maximum weekly hours	4 weeks	Yes	52 weeks by CA / 12 by IA[5]	No
Lithuania	Normal weekly hours	na	na	12 weeks	No
Mexico	na	na	na	na	na
Netherlands	Maximum weekly hours	4 weeks	Yes	52 weeks	No
New Zealand	Normal weekly hours	na	na	na	na
Norway	Normal weekly hours and maximum weekly hours[2]	na	na	8 weeks (maximum hours); 52 weeks (normal hours)	No
Poland	Normal weekly hours	16 weeks	Yes	52 weeks	No
Portugal	Normal weekly hours and maximum weekly hours	16 to 26 weeks	Yes	52 weeks	No
Slovak Republic	Quantity of overtime	16 weeks	Yes	52 weeks	No
Slovenia	Maximum weekly hours	24 weeks	Yes	52 weeks	No
Spain	Normal weekly hours	na	na	52 weeks	No
Sweden	Normal weekly hours and maximum weekly hours	16 weeks	Yes	52 weeks	No
Switzerland	Quantity of overtime[3]	na	na	4 to 8 weeks	No
Turkey	Normal weekly hours	8 weeks	Yes	16 weeks	No
United Kingdom	Normal weekly hours	17 weeks	Yes	56 weeks	No
United States	na	na	na	na	na

Note: na: not applicable.
1. Maximum daily hours, but by extension, maximum weekly hours.
2. Averaging on both maximum weekly hours over 8 weeks and normal weekly hours over a year, and it varies depending on mode of agreement.
3. It is the quantity of extra hours that can be averaged (over normal hours, below overtime).
4. In Germany, the maximum averaging period of 52 weeks, related to the averaging of the 8 hours per day (48 hours per week) limit cannot be increased, even via collective bargaining. However, collective agreements can define longer averaging periods for averaging limits *below* 48 hours.
5. CA: "collective agreement"; IA: "individual agreement".
Source: OECD Policy Questionnaire on Working Time Regulation, 2020.

Annex Table 5.A.4. Detailed content on statutory and negotiated paid leave

Country	Minimum statutory annual paid leave		Negotiated annual paid leave
	Number of paid leave days (working days unless specified) for a standard worker	Specific rules	*Number of days of paid leave per year*
Australia	20 days	Shift workers may get up to 25 days (5 weeks)	4 weeks' paid annual leave, with an additional week for shift workers (negotiated at firm level, but almost always reflects award entitlement).
Austria	25 days	30 days if Saturday is a work day. After 25 years, 5 days (6 including Saturdays) are added.	m
Belgium	20 days	Figure refers to the private sector and differs between white and blue collar workers, younger workers and artists; the minimum statutory entitlement in the public sector is 24 days	Up to five additional days. Both at sector and firm levels, additional negotiated paid leave can vary by age, tenure, etc.
Canada	10 days	2 weeks (10 working days) after one year of service with the same employer, 15 days after 5 years and 20 days after 10 years. The vacation pay provisions of the Canada Labour Code do not apply to employees who are parties to a CA that provides rights and benefits at least as favourable as those in the Code and where there is a provision for a third party settlement in the CA. The settlement of disagreements relating to vacation pay are governed exclusively by the CA in these instances-> Governance.	Varies by Provinces. see in British Columbia: https://bcbargaining.ca; in Ontario's CA provisions vary widely based on industry, sector, size of workplace: https://www.sdc.gov.on.ca/sites/mol/drs/ca/Pages/default_en.aspx); in Québec: 2 weeks (10 days) after 1 year service, 3 weeks (15 days) after 3 years, 4 weeks after 10 years, 5 week after 20 years, 6 weeks (30 days) after 20 years: about 16% of unionised employees get the 6 weeks (30 days)
Chile	15 days	Workers entitled after one year of service. In addition to the 15 days, the parties could increase those days or pay vacation bonuses beyond the framework of the legislation. In addition, according to the law, employees with 10 or more years of service, continuous or not, receive an additional day of vacation for every subsequent 3 years of service worked for the same employer. In this case, only a maximum of 10 years worked for a former employer will be considered. For specific regions up to 20 days.	na
Colombia	15 days	m	m
Czech Republic	20 days	for public sector – 25 days (5 weeks); teachers and academics – 40 days (8 weeks); Certain categories of workers (physically or psychically demanding or dangerous work) – one additional week of annual paid leave.	5 additional days (1 week)
Denmark	25 days	m	30 days (collectively agreed minimum annual paid leave)

Country	Minimum statutory annual paid leave		Negotiated annual paid leave *Number of days of paid leave per year*
	Number of paid leave days (working days unless specified) for a standard worker	Specific rules	
Estonia	20 days	25 days (e.g. 35 calendar days for minors and employee with partial or no work ability and for seafarers), up to 40 days (56 calendar days) for educational staff (Employment Contracts Act, Articles 56, 57 and 58).	25 days (e.g. 35 calendar days) is the most common negotiated (firm-level agreements).
Finland	20 days	As a rule, employees are entitled to 4 weeks of summer holiday and 1 week of winter holiday. Many of the provisions concerning annual holidays are laid down in sectoral CA.	m
France	25 days	m	Firm level or sectoral negotiation can increase this figure
Germany	20 days	24 days for a 6 working days week	30 days (average, collectively agreed minimum annual paid leave). In industries where employees work 6 days a week, the collectively agreed leave can be up to 36 days, e.g. in retail or public service.
Greece	20 days	Entitlement increases after one year of service. 24 days for a 6 working days week. Varies by employer/firm.	23 days (according to the CA of Banks – O.T.O.E. upon completion of 5 years of service).
Hungary	20 days	Entitlement increases with age and number of dependent children. Young workers (under 18 years of age), employees working underground or exposed to ionizing radiation are each entitled to 5 working days of extra vacation per year. Specific rules applied to teachers and to health care service workers.	m
Iceland	na	na	m
Ireland	20 days	m	m
Israel	16 calendar days	16 calendar days for the first 5 years of service and up to 28 calendar days a year based on seniority in the firm.	Extra days in some sectors depending on seniority (and for family reasons in the cleaning and security sector).
Italy	20 days	m	25 days National sectoral contracts and firm-level agreements can provide a higher number of extra days
Japan	10 days	Employees are entitled after 6 consecutive months of service and for a minimum 80% schedule). Employees get more day additionally every year after that, but the maximum paid leave is 20 days per year.	Besides the annual paid leave, there is a variety of leave scheme such as refreshment leave, volunteer leave, anniversary leave, care leave, etc., but it depends on the firm level CA whether it is paid or not. Negotiations are made mostly for those leave schemes
Korea	15 days	16 days of paid leave of which 15 days of annual leave and one day during a nationally defined public holiday. Employees are entitled after one year of consecutive service and for a minimum 80% schedule). Employees get one day per month worked for any employee who has continuously worked for less than one year or who has worked less than 80% of one year	na
Latvia	20 days	Employees under 18 years of age shall be granted annual paid leave of one month.	na

Country	Minimum statutory annual paid leave		Negotiated annual paid leave *Number of days of paid leave per year*
	Number of paid leave days (working days unless specified) for a standard worker	Specific rules	
Lithuania	20 days	24 days for a 6 working day week. 25 days for employees under 18 years or single parents raising children; Employees whose work involves greater nervous, emotional or mental tension and occupational risk, as well those who have specific working conditions, are given up to 41 days (for a 5 working days week) and up to 50 days (for a 6 working days week).	na
Luxembourg	25 days	m	m
Mexico	6 days	Employees are entitled after one year of service. It then increases with seniority. Employees under 18 years are granted a minimum of 18 days	Most frequently 12 days
Netherlands	20 days	m	Additional 5 days (on average by CA).
New Zealand	20 days	Employees are entitled after 12 months of service, although an employer may allow an employee to take an agreed percentage of paid leave in advance.	Provision for more than 20 days is increasingly being made
Norway	21 days	Employees aged 60 and older are entitled to one additional week.	25 days (average of sector-level agreements)
Poland	20 days	Entitlement increases from 20 to 26 days after 10 years of employment	m
Portugal	22 days	During the first year, the employee is entitled to 2 working days per month of the duration of the contract, up to 20 days, after 6 months of work.	22 days
Slovak Republic.	20 days	25 days (employees aged 33 and older, or those with dependent children or in particularly difficult or harmful jobs). 40 days (research-pedagogical activity or scientific activities).	25 days (modal clause over covered workers in firm-level agreements)
Slovenia	20 days	m	na
Spain	22 days	m	30 days which will specified as to when there holidays are to be taken by the negotiations within the company's CA.
Sweden	25 days	m	27.3 days (average of sector-level agreements)
Switzerland	20 days	25 days for employees under 20 years	25 days (age 20+), 27 days (age 40+), 30 days (age 50+) (metal, machinery and electronic industry)
Turkey	14 days	Employees are entitled after one year tenure of service; after 5 years paid leave increase to 20 days; after 15 years 26 days.	na
United Kingdom	20 days	Except for domestic workers, workers in the air, rail, road, sea, inland waterway and lake transport sectors, other work at sea; or doctors in training, or specific services such as the armed forces or the police, or certain specific activities in the civil protection services	m
United States	No permanent federal law requires employers to provide employees with paid vacation leave.	m	m

Note: CA: collective agreement; m: missing information; na: not applicable.
Source: OECD Policy Questionnaire on Working Time Regulation, 2020.

Annex Table 5.A.5. Detailed content on public holidays provisions

Country	Annual public holidays (days)		Negotiated public holidays
	National	Specific rules	*Number of public holidays per year*
Australia	7 days	Additional can be set at State or regional levels	na – Public holidays fall outside the general scope of enterprise agreements. Number of public holidays is consequently not recorded in the Workplace Agreements Database.
Austria	13 days	m	m
Belgium	10 days	Public holidays falling on a Sunday are typically replaced. The number of days can be increased by Royal Decree. Dates and sectors can be determined by Royal Decree.	m
Canada	9 days	The Canada Labour Code provides for nine: New Year's Day, Good Friday, Victoria Day, Canada Day, Labour Day, Thanksgiving Day, Remembrance Day, Christmas Day, and Boxing Day. While many holidays are common across all provinces and territories (New Year's Day, Canada Day, Labour Day, and Christmas), others are specific to certain jurisdictions (e.g. *Fête nationale du Québec*).	Examples in the British Colombia bargaining database: https://bcbargaining.ca; in Ontario's CA provisions vary widely based on industry, sector, size of workplace, etc. (Ontario's CA https://www.sdc.gov.on.ca/sites/mol/drs/ca/Pages/default_en.aspx). In Québec: more than 63% of unionised employees get between 11-15 days per year
Chile	5 days	About 4 additional days fixed at regional level. Prohibition to work on public holidays does not apply for particular sectors or particular activities that are expressly set forth in Article 38 of Labour Code (e.g. activities that requires continuous work for technical reasons, employees who perform trade-related activities at commercial establishments, employees who render services in ships, ports sites, professional athletes, among others). Companies exempted from the above prohibition must compensate their employees with a paid day off in exchange for worked holidays.	na
Colombia	18 days	m	na
Czech Republic	12 days	m	na
Denmark	9 days	m	Up to 4-5 extra days as a supplement to the 9 public holidays set by law (at sector or firm levels)
Estonia	11 days	na	na
Finland	11 days	m	2 additional days
France	11 days	Public holidays are not systematically non-working days for all employees (except for 1st of may). Public holidays that would coincide with a rest day are generally not compensated.	Possibility to negotiate a compensation in case a public holiday coincide with a rest day.
Germany	9 days	The number of public holidays differs among the 16 Länder, from 10 to 14 days.	2019: 12.2 days, http://doku.iab.de/arbeitsmarktdaten/AZ-Komponenten_en.xlsx
Greece	6 days (plus one optional at the discretion of the employer)	m	Up to 4 extra days (for specific occupations, such as firefighters, craftsmen, workers in shipbuilding,) or for local holidays upon agreement with the Labour Inspectorate.
Hungary	11 days	m	na
Iceland	na	m	m
Ireland	9 days	m	m
Israel	9 days	m	At local level, municipalities may provide extra days.
Italy	12 days	m	m

Country	Annual public holidays (days)		Negotiated public holidays
	National	Specific rules	*Number of public holidays per year*
Japan	0	m	Up to 16 days
Korea	15 days	With the agreement of workers' representative, firms may arrange for employees to take alternative days off in lieu of public holidays: paid public holidays are gradually implemented depending on the size of businesses starting with firms with 300 or more employees in 2020 and including all firms with 5 or more employees from 2022 onwards.	na
Latvia	15 days	Once in 4 years (The closing day of the General Latvian Song and Dance Festival). Law On Holidays, Remembrance and Celebration Days	na
Lithuania	15 days	A holiday may only be a working day with the consent of the employee, except when working annualised hours or in the cases established in the CA.	na
Luxembourg	10 days	m	m
Mexico	8 days	m	m
Netherlands	9 days	The law sets out the public holidays, but in collective labour agreements is defined whether employees are free from work on public holidays (if it is not on Sunday). Normally New Year's day, Eastern (+ Monday), Kings Birthday, Ascension Day, Pentecost (+ Monday) and Christmas (2 days) are a holiday. In most sectors Liberation day is free once in 5 years. Only in some specific sectors Good Friday is a holiday.	9 days (Good Friday and Liberation Day depending on CAO): law says nothing about the payment of public holidays
New Zealand	11 days	Any employee who works on a public holiday is entitled to time and a half pay for all hours worked on that day. In addition, employees who work shifts and work on the public holiday get an alternative holiday for each public holiday or part of a public holiday the shift covers, only if they would have otherwise worked on that day of the week. Employees who are on-call and called-out, or not called out but had to stay at home are entitled to a full day's paid alternative holiday only if they would have otherwise worked on that day of the week. If a worker is on call, but doesn't have to limit activities, for example, if the employee can choose not to accept the call-out, then they only get an alternative holiday if they accept a call-out and they would have otherwise worked on that day.	Most, if not all, employers provide no more than the 11 statutory public holidays
Norway	10 days	Employees with a different religion (not observing the religious holidays in the statutory rules) can work on these religious public holidays in exchange for time off on holidays according to his or her religion.	Follows the statutory regulations.
Poland	13 days	m	na
Portugal	13 days	m	CA and employment agreements may only add to those mandatory public holidays, 2 other days (optional holidays) to be observed as public holidays (articles 235 and 236 of the Labour Code)

Country	Annual public holidays (days)		Negotiated public holidays
	National	Specific rules	*Number of public holidays per year*
Slovak Republic	15 days	During the holidays, in the retail sales, and under specific conditions, the employer may order the employee to work on specific days (Annex no. 1 of the Labour Code).	na
Slovenia	13 days	m	m
Spain	14 days	m	m
Sweden	10 days	m	There is a wide variety of CA, both in the public and private sectors and on the national and local levels, regarding days of leave in connection with public holidays, for example the day before Christmas Eve in the national public sector, Villkorsvtalet 7 kap. 7 §
Switzerland	9 days for most Cantons	varies between 9 and 13 days by Cantons	m
Turkey	15 days	m	na
United Kingdom	8 days	Contracts or agreements can include paid time off on bank holidays; Time off on bank holidays can be counted towards the statutory holiday entitlement	m
United States	10 days	m	m

Note: CA: collective agreement; m: missing information; na: not applicable.
Source: OECD Policy Questionnaire on Working Time Regulation, 2020.

Annex Table 5.A.6.The governance of normal weekly hours across OECD countries in 2020

Most uniform regulation		Normal weekly hours regulation							More possibility for local variations
		Binding upper limit on normal weekly hours (statutory or collectively agreed at central level)			Possibility to exceed the limit on normal weekly hours (by collective agreement / in individual contracts)		No limit on normal weekly hours		
		Binding upper limit on maximum weekly hours	Possibility to exceed the limit on maximum weekly hours	No limit on maximum working hours	Binding upper limit on maximum weekly hours	Possibility to exceed the limit on maximum weekly hours	Binding upper limit on maximum weekly hours	Possibility to exceed the limit on maximum weekly hours	No limit on maximum working hours
Averaging regulations for normal hours	Averaging of the normal hours limit is not possible	Chile Israel Latvia Mexico Slovak Republic	Estonia			Slovenia United States			
	Averaging of the normal hours limit requires a collective agreement	Belgium Greece Japan	Portugal			Sweden			
	Averaging of the normal hours limit requires employee's consent	Finland		Australia		Austria Colombia New Zealand Norway Spain			
	Averaging of the normal hours limit can be decided by employers	Korea Poland Turkey	Canada Czech Republic France Hungary Italy Lithuania						
More possibility for local variations	No upper limit on normal hours						Netherlands Switzerland	Denmark Germany	United Kingdom

Note: in dark green: countries where the limit on normal weekly hours (e.g. without overtime) corresponds most frequently to the statutory default; in light green: countries where the limit on normal weekly hours is most frequently determined at the national or sectoral level; in dark red: countries where the limit on normal weekly hours is most frequently determined at the firm level; in light red: countries where the limit on normal weekly hours is most frequently determined in individual contracts.
From this table, the following country groups are derived (these are used to construct Table 5.1)
Uniformly regulated countries: normal weekly hours are subjected to a binding upper limit (statutory default or collectively negotiated at the national or sectoral level), with no possibility to derogate from it or to use averaging mechanisms: Chile, Estonia, Israel, Latvia, Mexico, and the Slovak Republic.
Mostly uniformly regulated countries: normal weekly hours are subjected to a binding upper limit (statutory default or collectively negotiated at the national or sectoral level), with no possibility to derogate from it, but a limited possibility to use averaging through collective agreement (Belgium, Greece, Japan and Portugal), or with the employee's consent (Australia and Finland).
Mixed regulation countries, where normal weekly hours are subjected to either.
1) a binding upper limit (statutory default or collectively negotiated at the national or sectoral level) with no possibility to derogate from it, but a possibility for employers to use averaging via a unilateral decision: Canada, Czech Republic, France, Hungary, Korea, Lithuania, Poland, Turkey and Italy (where the upper limit is negotiated rather than statutory);
or 2) an upper limit (statutory default or collectively negotiated at the national or sectoral level) that can be exceeded through derogations at lower levels of bargaining (with no possibility to use averaging): Slovenia and the United States.
Mostly heterogeneously regulated countries: normal weekly hours are subjected to an upper limit (statutory default or collectively negotiated at the national or sectoral level) that can be exceeded through derogations at lower levels of bargaining, and where there is a limited possibility to use averaging, with the employee's consent or through a collective agreement: Austria, Colombia, New Zealand, Norway, Spain and Sweden.
Heterogeneously regulated countries: rules on normal weekly hours are most frequently set in sectoral (Denmark, the Netherlands) or firm-level agreements (Germany, Switzerland), and there are no statutory or centrally bargained limit.
Unregulated countries: normal weekly hours are usually left to be determined in individual contracts with no higher levels limits: the United Kingdom.
Source: OECD Policy Questionnaire on Working Time Regulation.

Annex Table 5.A.7. The governance of overtime /maximum weekly hours across OECD countries in 2020

Most uniform regulation		Overtime / maximum hours regulation						More possibility for local variations
		Binding upper limit on maximum hours (statutory or collectively agreed at central level)			Possibility to exceed the limit by collective agreements or in individual contracts			No upper limit and no minimum compensation
		Binding minimum compensation	Possibility to lower minimum compensation	No minimum compensation	Binding minimum compensation	Possibility to lower minimum compensation	No minimum compensation	
Averaging regulations for overtime / maximum hours	Averaging of the upper overtime limit is not possible	Chile Greece Israel Mexico Poland Turkey			Colombia France Italy Lithuania Spain United States	Japan		
	Averaging of the upper overtime limit requires a collective agreement	Belgium		Denmark	Austria Canada			
	Averaging of the upper overtime limit requires employee's consent	Czech Republic Slovak Republic	Latvia		Estonia Norway Portugal			
	Averaging of the upper overtime limit can be decided by employers	Korea Netherlands	Finland Germany Switzerland		Hungary Slovenia		Sweden	
More possibility for local variations	N/A (no upper overtime limit)							Australia New Zealand United Kingdom

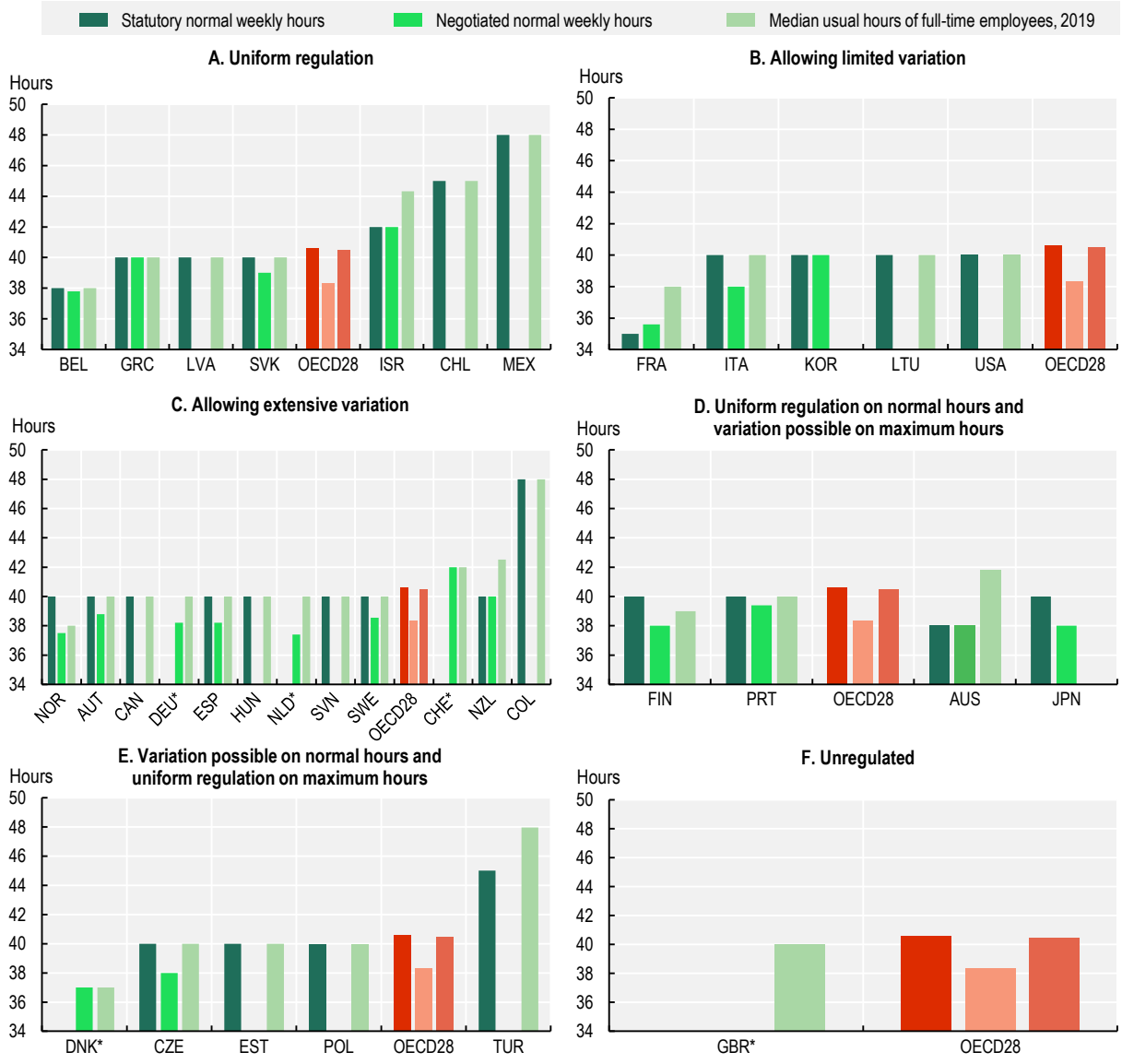
Note: in dark green: countries in which the upper limit on overtime / the maximum weekly hours limit (with overtime) corresponds most frequently to the statutory default; in light green: countries in which the upper limit on overtime / the maximum weekly hours limit is most frequently determined at the national or sectoral level; in dark red: countries in which the upper limit on overtime / the maximum weekly hours limit is most frequently determined at the firm level; in light red: countries in which the upper limit on overtime / the maximum weekly hours limit is most frequently determined in individual contracts. Uniform regulation: in Chile, Greece, Israel, Mexico, Poland and Turkey, the regulation of maximum weekly hours / overtime is centralised; the upper limit (statutory default) is binding, and cannot be derogated from, or bypassed using averaging mechanisms.

Mostly uniform regulation: in Belgium, the Czech Republic, Denmark Latvia, and the Slovak Republic, maximum hours/overtime are regulated mostly centrally since there is a binding upper limit (statutory default), but there is a limited possibility to use averaging mechanisms, with the employee's consent or through collective bargaining.
Mixed regulation:

- In Finland, Germany, Korea, the Netherlands and Switzerland, the regulation of maximum hours/overtime is mixed, with a binding upper limit (statutory default) which can be bypassed relatively easily, since employers can unilaterally decide to use averaging mechanisms.
- In Colombia, France, Japan, Italy, Lithuania, Spain, and the United States, the regulation if also mixed, with an upper limit that cannot be bypassed through averaging but that can be exceeded through derogations at lower levels of bargaining.

Mostly heterogeneous regulation: in Austria, Canada, Estonia, Norway and Portugal, maximum hours/overtime are mostly locally regulated as upper limits (statutory default or collectively negotiated at the national or sectoral level) can be exceeded through derogations at lower levels of bargaining, and there is a limited possibility to use averaging with the employee's consent or through collective agreement (Austria and Canada).
Heterogeneous regulation: in Hungary, Slovenia and Sweden, maximum hours/overtime are fully locally regulated: existing limits can be exceeded through derogations at lower levels of bargaining, and there is a unilateral possibility for employers to use averaging mechanisms.
Unregulated: in Australia, New Zealand and the United Kingdom, maximum hours/overtime are unregulated: overtime / maximum weekly hours are usually left to be determined in individual contracts with no higher levels limits.
Source: OECD Policy Questionnaire on Working Time Regulation.

Annex Figure 5.A.1. Statutory, negotiated and median usual weekly hours of full-time employees across OECD countries, 2019

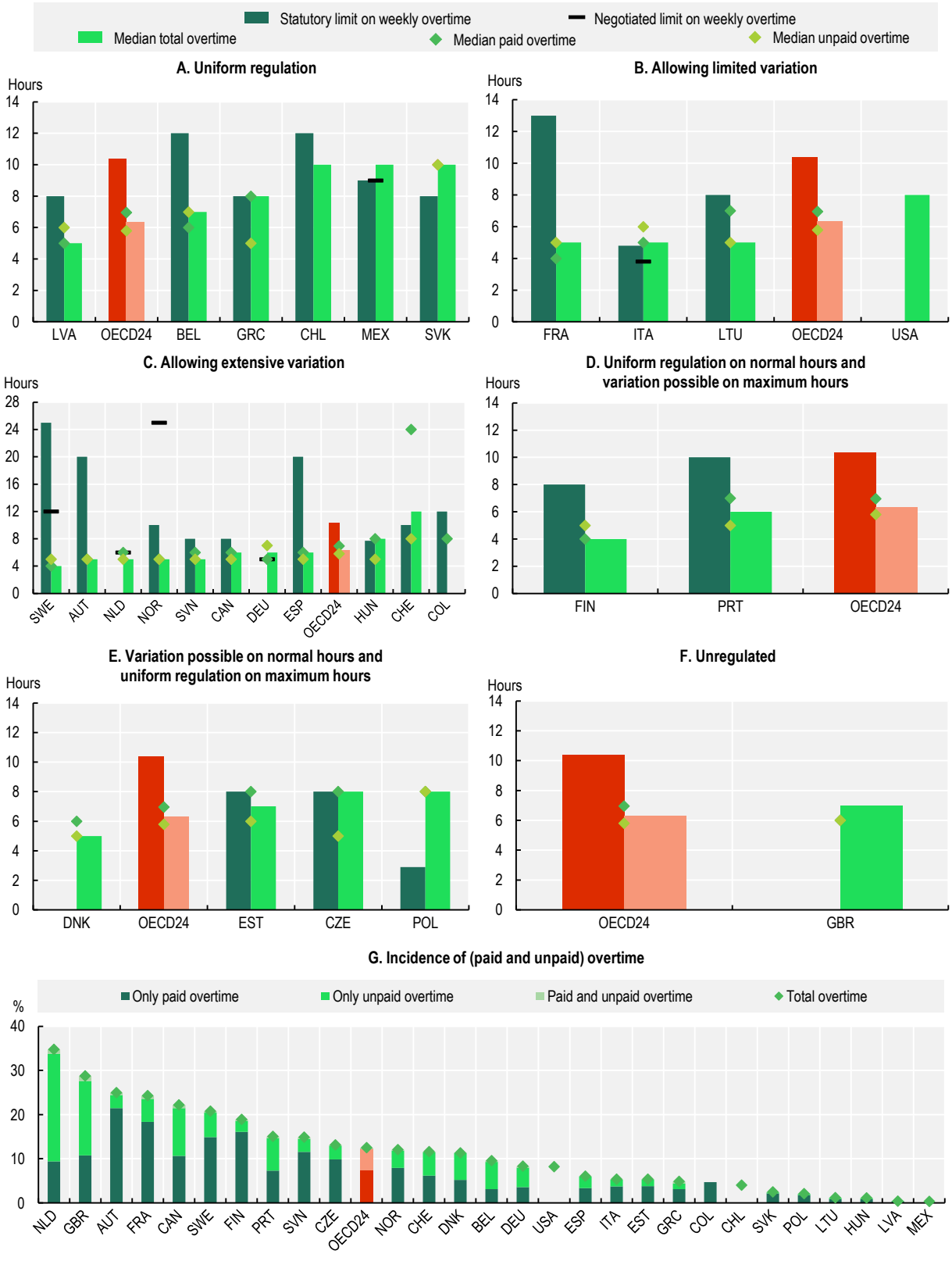


Note: Negotiated normal weekly hours in Australia refer to 36-40 hours and 37.1-40 hours in Sweden. Statistics shown are the median usual hours worked for full-time employees aged 15-64, except in Australia, Israel, New Zealand and Turkey where data on the *average* usual hours for full-time employees aged 15 or more are shown. Usual hours in Norway and Australia refer to 2018. Countries marked with a "*" are those for which there is no limit on normal weekly hours. OECD28 is the unweighted average of 28 OECD countries shown in this chart (excluding Australia, Costa Rica, Iceland, Ireland, Israel, Japan, Korea, Luxembourg, New Zealand and Turkey). Countries are ordered by ascending order of the median usual hours worked of full-time employees. For further details and explanations on the country grouping and the regulation of normal hours, see Table 5.1 and Annex Tables 5.A.1 and 5.A.6.

Source: OECD Policy Questionnaire on Working Time Regulation, 2020; OECD estimates based on the Canadian Labour Force Survey (CLFS) for Canada, the Encuesta Nacional de Empleo (ENE) for Chile, the Gran Encuesta Integrada de hogares (GEIH) for Colombia, the European Union Labour Force Survey (EU-LFS) for the European countries, the Encuesta Nacional de Ocupación y Empleo (ENOE) for Mexico and the Current Population Survey (CPS) for the United States; and the OECD Employment Database, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm, for Australia, Israel, New Zealand and Turkey.

StatLink https://stat.link/1m0hs8

Annex Figure 5.A.2. Statutory and negotiated limits on weekly overtime and median weekly hours of overtime of full-time employees reporting overtime by patterns of working hours regulation, 2019

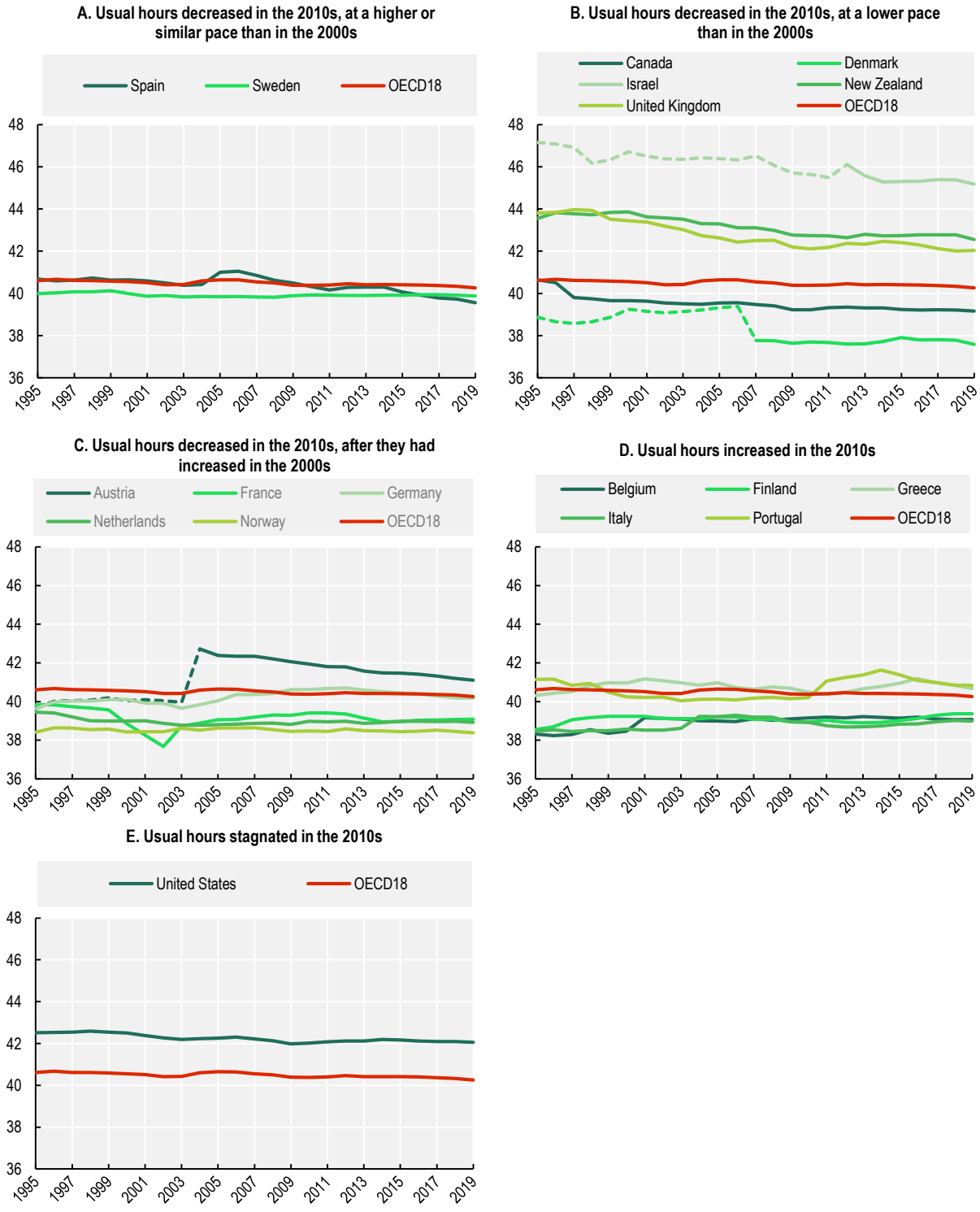


Note: The statutory weekly overtime limit in France, Estonia, Finland, Greece, Canada and Belgium are calculated as the difference between the limits on weekly normal hours and weekly maximum hours. The statutory weekly overtime limit is calculated from the yearly overtime limit in Hungary, Italy, Poland and Turkey, and from the daily overtime limit in Slovenia, Portugal, Sweden and Switzerland. Data on the incidence and median hours of overtime in Norway are from 2018. OECD24 is the unweighted average of the 24 OECD countries shown in this chart for which information on both paid and unpaid overtime is available (excluding Australia, Chile, Colombia, Costa Rica, Iceland, Ireland, Israel, Japan, Korea, Luxembourg, Mexico, New Zealand, Turkey and the United States). Countries are ordered by ascending order of the median total hours of overtime of full-time employees. For further details and explanations on the country grouping and the regulation of maximum hours, see Table 5.1, Annex Tables 5.A.2 and 5.A.7.

Source: OECD Policy Questionnaire on Working Time Regulation, 2020; OECD estimates based on the Canadian Labour Force Survey (CLFS) for Canada, the Encuesta Nacional de Empleo (ENE) for Chile, the Gran Encuesta Integrada de hogares (GEIH) for Colombia, the European Union Labour Force Survey (EU-LFS) for the European countries, the Encuesta Nacional de Ocupación y Empleo (ENOE) for Mexico and the Current Population Survey (CPS) for the United States.

StatLink https://stat.link/pvzjuk

Annex Figure 5.A.3. Trends in average weekly hours usually worked per full-time employee in OECD countries, 1995-2019

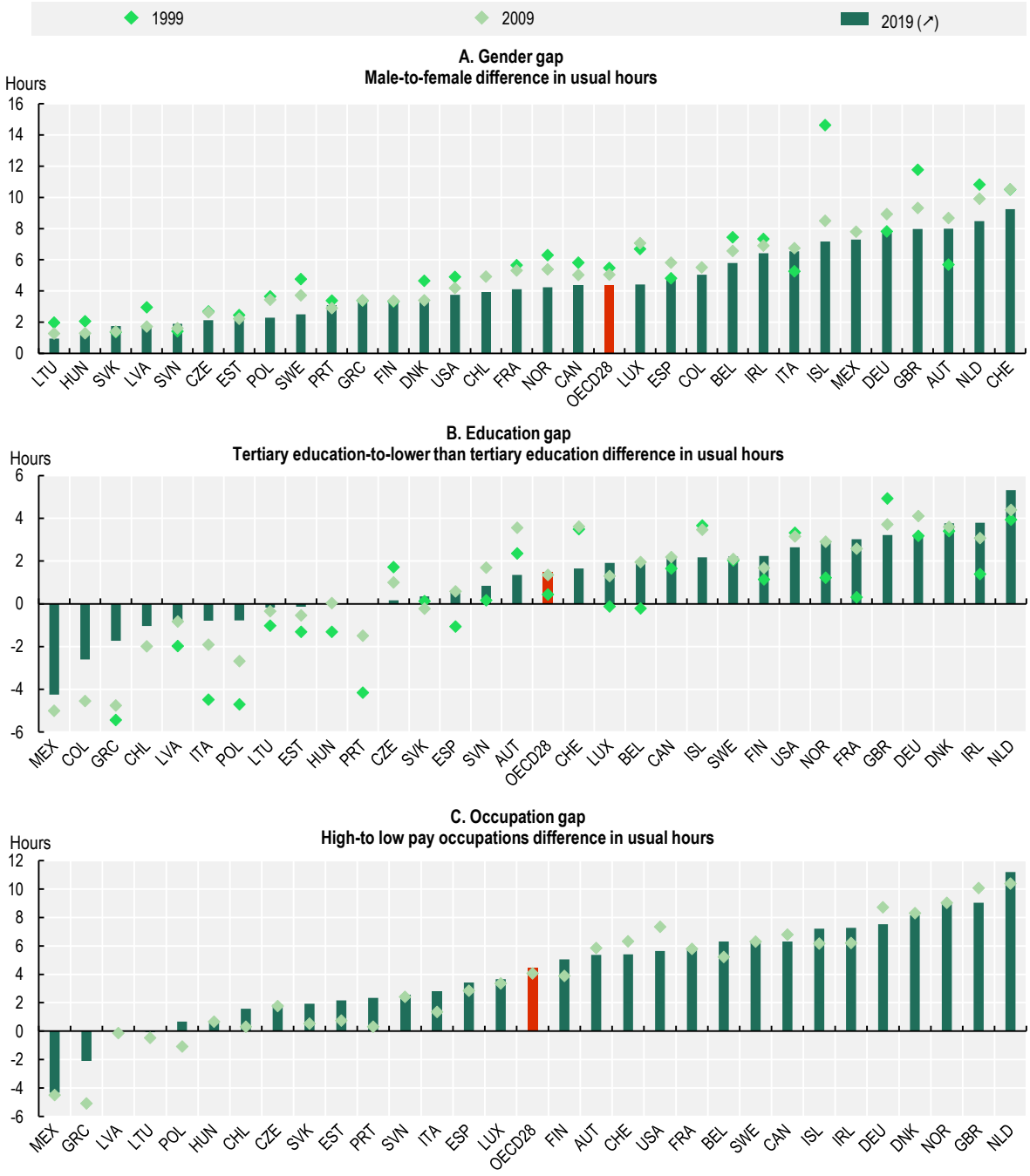


Note: Break in series for Austria in 2004 are due to a new categorisation of full-time job based on self-assessment (while it was previously based on a 35 hours cut-off before that year); breaks for Denmark in 2007 are due to the introduction of a new weighting scheme; and breaks for Israel are due to the change from a quarterly to a monthly Labour Force Survey and to changes in the definitions from "civilian labour force" to "total labour force" (including those who are in compulsory or permanent military service). Dashed lines refer to the series prior to the break in series (Austria, Denmark and Israel). The Netherlands are included in Panel C for simplification, although usual hours decreased in the 2010s after they had been stagnating in the 2000s. OECD18 is the unweighted average of the 18 OECD countries shown in this Chart.
Source: OECD estimates based on the Canadian Labour Force Survey (CLFS) for Canada, the European Union Labour Force Survey (EU-LFS) for the European countries, the Current Population Survey (CPS) for the United States; and the OECD Employment Database, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm, for Israel and New Zealand.

StatLink https://stat.link/im7tgz

Annex Figure 5.A.4. Trends in gaps of usual weekly hours worked by gender, education and occupation groups

Difference in usual weekly hours worked in the main job of employees aged 15-64



Note: OECD28 is the unweighted average of 28 OECD countries (excluding Australia, Chile, Colombia, Costa Rica, Israel, Japan, Korea, Mexico, New Zealand and Turkey). 1999 refers to 2001 for Poland (Panels A and B); and 2009 refers to 2010 for Chile. No data in 1999 for Chile, Colombia and Mexico. See the note in Figure 5.13 for the definition of occupation groups.

Source: OECD calculations based on the European Union Labour Force Survey (EU-LFS), the Canadian Labour Force Survey (CLFS) for Canada, the Encuesta Nacional de Empleo (ECE) for Chile, the Gran Encuesta Integrada de Hogares (GEIH) for Colombia, The Encuesta Nacional de Ocupación y Empleo (ENOE) for Mexico and the Current Population Survey (CPS) for the United States.

StatLink https://stat.link/3v1qb2

Annex Figure 5.A.5. Trends in gaps of the incidence of very long hours by gender, education and occupation groups

Percentage-point difference in the incidence of very long hours (more than 48 hours usually worked per week) in the main job of employees aged 15-64

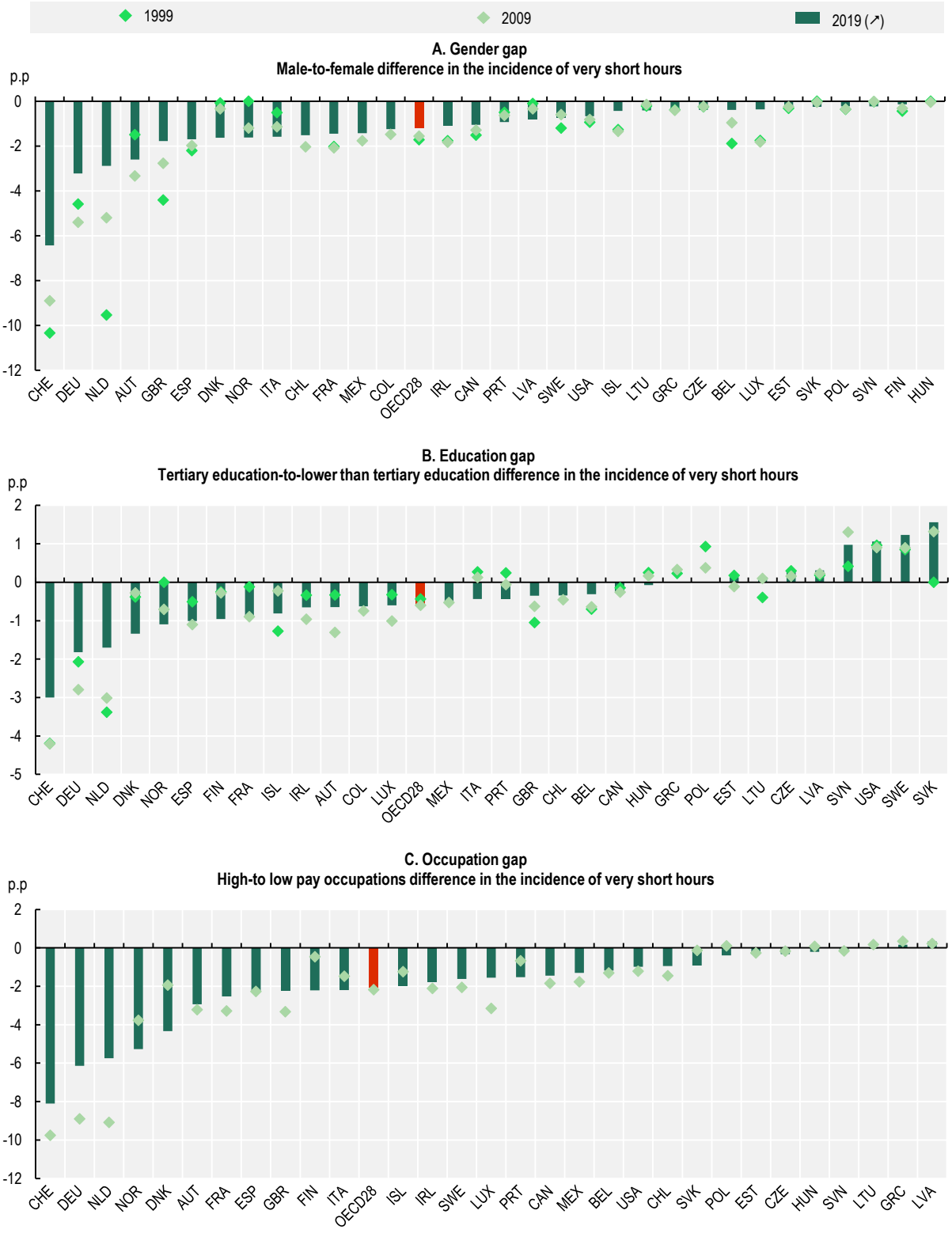
Note: OECD28 is the unweighted average of 28 OECD countries (excluding Australia, Chile, Colombia, Costa Rica, Israel, Japan, Korea, Mexico, New Zealand and Turkey). 1999 refers to 2001 for Poland (Panels A and B); and 2009 refers to 2010 for Chile. No data in 1999 for Chile, Colombia and Mexico. See the note in Figure 5.13 for the definition of the occupation groups.

Source: OECD calculations based on the European Union Labour Force Survey (EULFS), the Canadian Labour Force Survey (CLFS) for Canada, the Encuesta Nacional de Empleo (ECE) for Chile, the Gran Encuasta Integrada de Hogares (GEIH) for Colombia, the Encuesta Nacional de Ocupación y Empleo (ENOE) for Mexico and the Current Population Survey (CPS) for the United States.

StatLink https://stat.link/r8zfem

Annex Figure 5.A.6. Trends in gaps of the incidence of very short hours by gender, education and occupation groups

Percentage-point difference in the incidence of very short hours (less than 10 hours usually worked per week) in the main job of employees aged 25-64

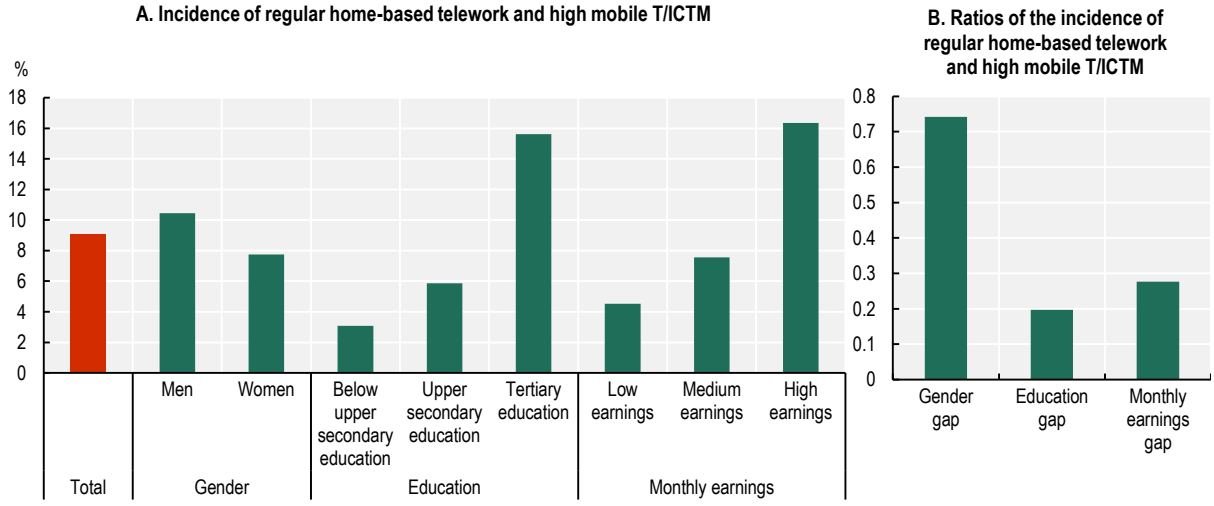


Note: OECD28 is the unweighted average of 28 OECD countries (excluding Australia, Chile, Colombia, Costa Rica, Israel, Japan, Korea, Mexico, New Zealand and Turkey). 1999 refers to 2001 for Poland (Panels A and B); and 2009 refers to 2010 for Chile. No data in 1999 for Chile, Colombia and Mexico. See the note in Figure 5.13 for the definition of the occupation groups.
Source: OECD calculations based on the European Union Labour Force Survey (EULFS), the Canadian Labour Force Survey (CLFS) for Canada, the Encuesta Nacional de Empleo (ECE) for Chile, the Gran Encuasta Integrada de Hogares (GEIH) for Colombia, the Encuesta Nacional de Ocupación y Empleo (ENOE) for Mexico and the Current Population Survey (CPS) for the United States.

StatLink https://stat.link/8nutoa

Annex Figure 5.A.7. The incidence of teleworking across groups

Employees aged 15-64, OECD unweighted averages, 2015

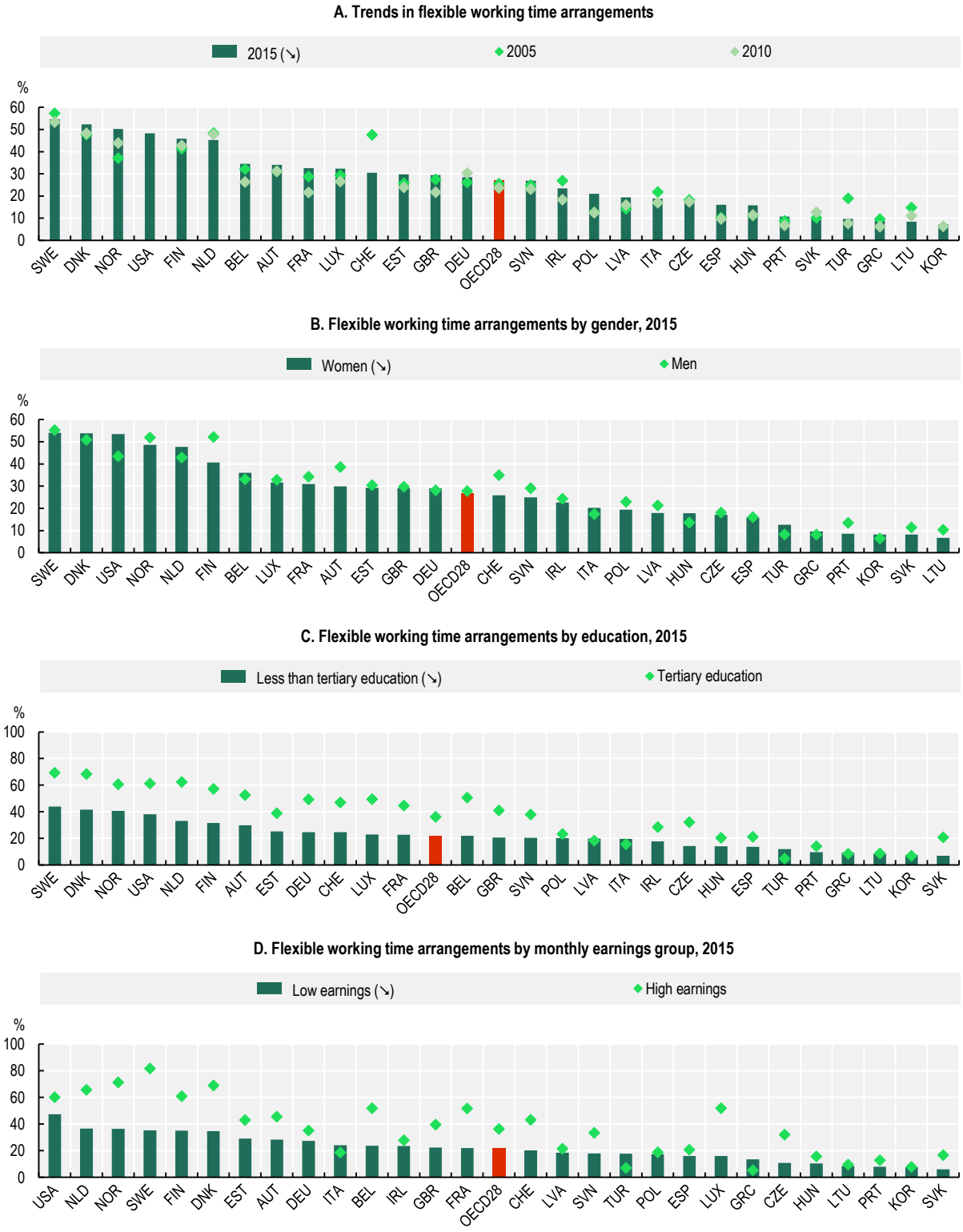


Note: Statistics shown in this chart refer to all employees using always or almost of all the time ICT and working in at least one other location than the employer's premises several times a month (either from home at least several times a month and in all other locations (except employer's premises) less often than several times a month or at least several times a week in at least two locations other than the employer's premises or working daily in at least one other location). Unweighted averages of 28 OECD countries: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Korea, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. Monthly earnings categories refer to the terciles of the net monthly earnings in the main job. The gender gap refers to the ratio of the incidence of women over the incidence of men and the education and earnings gaps refer, respectively, to the ratio of low-skilled to high-skilled and to the ratio of low earnings to high earnings. 2015 refers to 2017 for Korea.
Source: OECD calculations based on the 6th European Working Conditions Survey (EWCS), the 5th Korean Working Conditions Survey (KWCS) and the American Working Conditions Survey (AWCS) 2015.

StatLink https://stat.link/crghnf

Annex Figure 5.A.8. Trends and distribution of flexible working time arrangements across groups

Incidence of employees aged 15-64

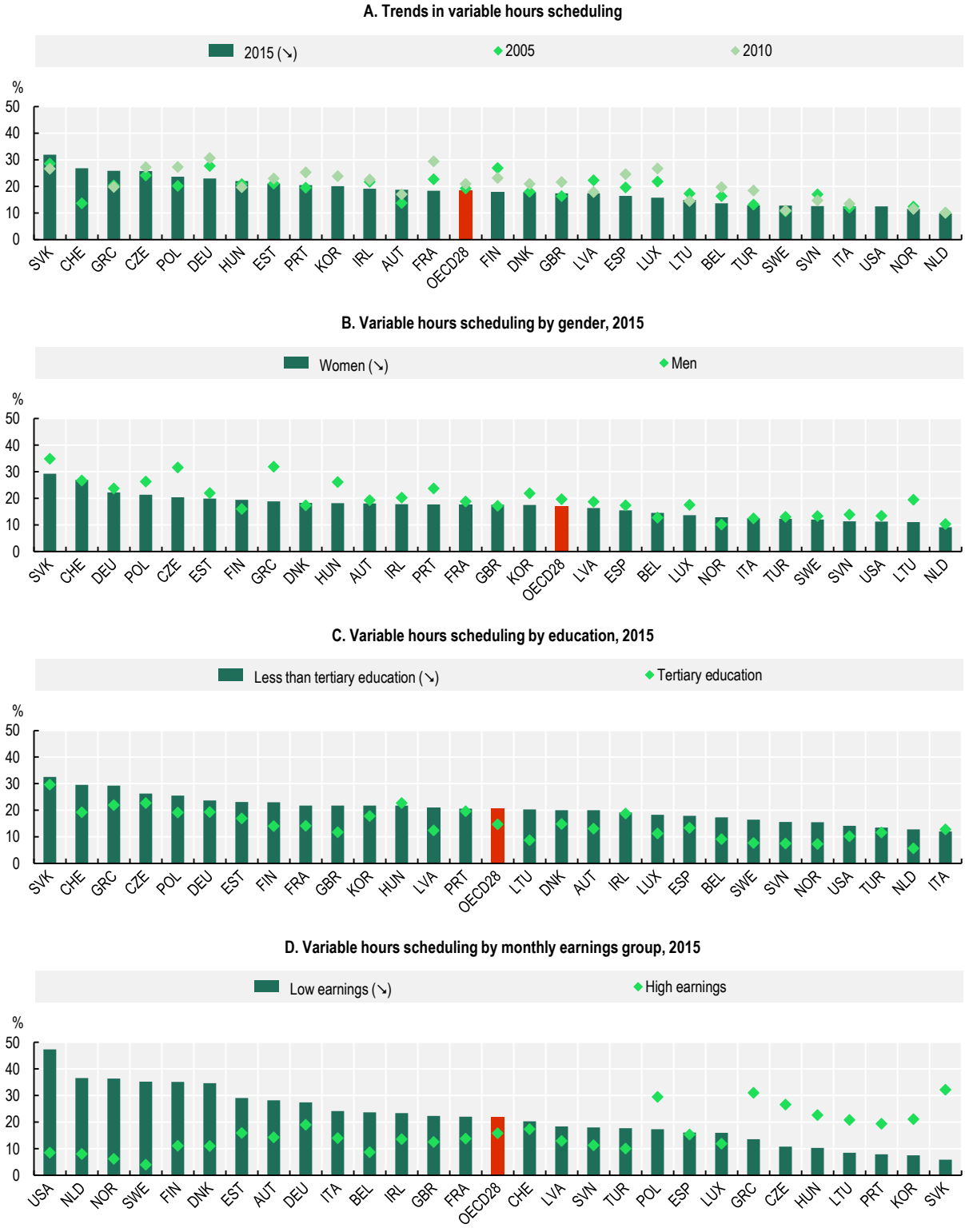


Note: Flexible working hours refer to the situation of employees who can either fully determine or at least adapt within certain limits their working hours (e.g. flexitime). Monthly earnings categories (Panel D) refer to the 1st and last terciles of the distribution of the net monthly earnings in the main job. OECD28 is the unweighted average of the 28 OECD countries shown in this chart. This average is estimated for 2005 and 2010 by chaining the unweighted averages based on 26 countries (excluding Switzerland and the United States) in 2010-15, and the unweighted average based on 25 countries (excluding Korea, Switzerland and the United States) in 2005-10. 2010 and 2015 refer, respectively to 2011 and 2017 for Korea. No data for Switzerland in 2010.
Source: OECD calculations based on the 4th, 5th and 6th European Working Conditions Survey (EWCS), the 1st, 3rd and 5th Korean Working Conditions Survey (KWCS) and the American Working Conditions Survey (AWCS) 2015.

StatLink https://stat.link/ixuzk4

Annex Figure 5.A.9. Trends and distribution of variable hours scheduling across groups

Incidence of employees aged 15-64



Note: Variable hours scheduling refers to situation of employees for which working time arrangement is set by the employer or who have to choose between fixed several fixed hours schedules determined by the employer (e.g. shift work) and who are informed about changes in their work schedules at relatively short notice. Monthly earnings categories (Panel D) refer to the 1st and last terciles of the distribution of the net monthly earnings in main job. OECD28 is the unweighted average of the 28 OECD countries shown in this chart. This average is estimated for 2005 and 2010 by chaining the unweighted averages based on 26 countries (excluding Switzerland and the United States) in 2010-15, and the unweighted average based on 25 countries (excluding Korea, Switzerland and the United States) in 2005-10. 2010 and 2015 refer, respectively to 2011 and 2017 for Korea. No data for Switzerland in 2010.
Source: OECD calculations based on the 4th, 5th and 6th European Working Conditions Survey (EWCS), the 1st, 3rd and 5th Korean Working Conditions Survey (KWCS) and the American Working Conditions Survey (AWCS) 2015.

StatLink https://stat.link/1pg5y8

Notes

[1] The second relationship, between working time outcomes and labour market outcomes such as productivity, employment and workers' well-being, will be the object of future OECD work.

[2] In general, except in some particular cases, the chapter focuses on rules for, and outcomes of, full-time employees. It should be noted that this might be less representative of the situation for the whole employed population in countries with high incidence of self-employment, like Italy, Greece or Poland, or in countries with a high incidence of part-time employment, such as the Netherlands.

[3] The data reported correspond to the pre COVID-19 situation and do not account for temporary changes introduced as a response to the pandemic, which are discussed in a dedicated section below.

[4] In the case of locally regulated regimes where firm-level agreements or even individual contracts dominate, the chapter could not always capture the content of the rules negotiated at these levels.

[5] Derogations are meant as deviation *in peius* (e.g. provisions that would be less favourable to workers) from higher-level rules. By default, it is almost always possible to deviate *in melius* from higher-level rules, i.e. to agree on a rule that is more favourable to workers.

[6] Daily working hours limits also apply in some contexts. Where daily limits but not weekly ones exist, daily limits have been multiplied by the number of working days to present weekly ones in the chapter.

[7] France has the lowest statutory limit among OECD countries since the Aubry law which introduced the 35-hour workweek in 2002.

[8] Beyond this statutory limit, effective limits on normal hours in Australia are often set at an industry and occupational level in modern awards and can also feature in enterprise agreements.

[9] Deviations directly granted in the law also exist for particular groups, but they are not considered in this section as a source of variation from the norm as such statutory derogations merely set a different ceiling for different groups, but that ceiling is binding, and local actors cannot deviate from the rules on the ground.

[10] Only at the sectoral / central level in Sweden.

[11] In many countries, there are *several* possible ways to introduce averaging, from least demanding on the employer (unilateral introduction), to more demanding (employee-employer agreement), to most demanding (collective bargaining agreement). Countries are classified according to the least demanding possibility existing (i.e. if in a country, it is *possible* for employers to introduced averaging unilaterally, even though this is sometimes done through collective bargaining, that country will be grouped with other countries where averaging can be unilaterally introduced).

[12] In Finland, averaging can be decided by simple agreement between employee and employer; however it is most often agreed upon through collective agreement.

[13] In Hungary, employers can unilaterally decide to define normal working hours not on a weekly basis, but over a longer period of time (called "time banking"): 4 months by default, 6 months in some cases (e.g. continuous shifts, seasonal work, stand-by jobs, etc.; a longer defining period of 36 months is also possible, but it requires a collective agreement). In the context of time banking, the overall limit of 48 hours per week (including overtime) must be respected *on average* over 4 or 6 months (and over a maximum of a year in the case of the 36 months "time banking" agreed upon by collective bargaining). So technically, employers can unilaterally decide to define normal working hours over 4 or 6 months, during which *total* hours must respect the 48 hours limit on average. Since this double mechanism can be used to delay the starting point of overtime rates, it is considered here an equivalent to normal hours averaging.

[14] In Australia, averaging arrangements can also be set in modern awards. However, countries are classified according to the least demanding possibility to introduce averaging existing, see Note 11.

[15] In Korea, employers can unilaterally decide to average normal hours *over a maximum averaging period of two weeks.* For longer averaging periods (3 or 6 months), a collective agreement is necessary. However, since countries are classified here according to the *least demanding possibility* existing (see Note 11), Korea is classified in this group.

[16] The normal hours limit in the United States stems from the provision in the Fair Labor Standards Act (FLSA) according to which employees must be paid overtime compensation when working more than 40 hours per week – which in practice, corresponds to the definition of a normal hours limit as defined in most OECD countries, and in this chapter. This limit does not apply to "exempt workers" under the FLSA (mainly workers employed as bona fide executive, administrative, professional, outside sales employees and agricultural workers. Exemptions are set at the federal level, and states cannot deviate from the provisions in the FLSA. For more details see, https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/fs17a_overview.pdf; https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/whdfs12.pdf).

[17] Sectoral only in Sweden.

[18] In some countries, limits on minimum daily rest may also exist, either in the law or in collective agreements. These can act as limits on maximum hours.

[19] In the EU Member States and Norway, collective bargaining on the length of working time takes place within the framework of the EU Directive on working time (Directive 2003/88/EC), which limits working hours inclusive of overtime to 48-hours per week on average over four months, and mandates a minimum daily rest period of 11 hours and a minimum uninterrupted weekly rest of 35 hours.

[20] After that limit, more overtime is possible but it has to be compensated with time-off.

[21] In cases where normal weekly hours are capped at 45 hours; in other cases, where normal weekly hours are capped at 50 hours, the maximum quantity of overtime is set at 140 hours per year.

[22] Although in Australia some awards may contain provisions on minimum daily rest. In addition, in Australia and New Zealand, employees can refuse a request to work overtime if the amount of additional hours is "unreasonable"; however this concept of unreasonable hours is not precisely defined but determined on a case by case basis (should the employee contest the request for overtime), based on factors including risks to health and safety, or family responsibilities.

[23] Although a statutory minimum daily rest of 11 hours apply. The United Kingdom formally introduced the European Union 48 hours limit, but with a broadly used individual opt-out system which largely reduces its

effect in practice. Employees have to individually consent to the opt-out, however the latter is sometimes attached to employment contracts, and employers can legally refuse to hire a new worker who declines to opt-out (Barnard, Deakin and Hobbs, 2003[50]). Note that this classification is aligned with the Eurofound classification of the United Kingdom in the "Unilateral working time regime" group where statutory legislation hardly plays a role and the most important institutional level for working time regulation is the individual one (Eurofound, 2016[36]).

[24] Derogations from the overtime / maximum hours limit considered in this chapter do not include derogations in cases of force majeure and emergency work – these exist in the majority of OECD countries, and do not represent a good measure of how binding and uniform vs. variable the regulation of maximum hours is. As with the limit on normal hours, there might also be deviations directly granted in the law for particular groups (for instance, in Belgium, the law sets a higher maximum hours limit in case of continuous work, and a higher limit can be granted for certain particular industries by Royal decree). However, these are not considered here as a source of variation from the norm, since such statutory derogations merely set a different ceiling for different groups, but that ceiling is binding, and local actors cannot deviate from the rules on the ground.

[25] See Note 13. The double mechanism of unilaterally introduced time banking to define normal schedules (and the start of overtime), and averaging of *total* hours within that time banking period, allow employers to unilaterally go beyond the 48 hours limit in any week within the averaging period, provided the limit is respected on average. This mechanism is an equivalent to averaging of maximum hours.

[26] Although in cases of unforeseen circumstances or exceptional increase in work, workers can renounce compensation in time for overtime hours in Belgium.

[27] Except for exempt workers under the FLSA, see Note 16.

[28] In Germany, employers can unilaterally extend the 48 hours limit up to 60 hours through averaging mechanisms. Derogations through collective bargaining are also possible, but only in the particular case of work characterised by substantial proportions of standby work. Since this is unlikely to correspond to the majority of cases, the maximum hours limit is considered "binding" for the purpose of this exercise.

[29] See Note 15. The same conditions apply to the averaging of maximum hours as to that of normal hours.

[30] Maximum hours can also be exceeded through an excess hours permit in Canada.

[31] Although, see Notes 22 and 23: in Australia and the United Kingdom, provisions on minimum daily rest act as a de facto limit on the maximum amount of work that can be performed.

[32] Except for statutory derogations for e.g. specific occupations that are fixed in the law, see Note 9.

[33] For instance the presence and binding nature of minimum compensation for overtime – although information on this is discussed above and in Annex Table 5.A.7).

[34] Usual hours considered here do not include overtime except for regular overtime determined by agreement between the employee and the employer.

[35] This unweighted average covers 28 OECD countries, excluding those for which data on median usual hours are unavailable (Australia, Israel, Japan, Korea, New Zealand and Turkey), and those for which information on the governance of working hours could not be collected (Costa Rica, Iceland, Ireland, and Luxembourg).

[36] This average falls down to 39.7 hours per week when excluding the countries with median usual hours superior or equal to 45 hours per week (namely Chile, Colombia and Mexico).

[37] Data on collectively agreed rules have been collected in the OECD questionnaires and generally refer to the average or most frequent clause among all covered workers by collective bargaining at the sectoral level (except for Japan and Estonia where it refers to the average of rules at the firm level). It should be borne in mind these data are patchy and often difficult to compare.

[38] Except in France, where the negotiated limit is higher than the statutory one, but where the statutory normal hours limit is also the lowest of the OECD. Moreover, the negotiated rules in France, although higher than the statutory one, remain low compared to other EU countries for which data on negotiated rules are available, with an average of 35.6 hours a week according to Cabrita and Brandsma (2019[8])). By contrast, France is one of the only countries where usual hours observed *exceed* the statutory limit on working hours.

[39] Except in France, where a typical full-time employee works *more* than the stipulated statutory weekly limit. This might be due to the prevalence of the "forfait jour" regime, which allows stipulating contractual hours above the statutory 35 hours limit, that are not counted as overtime, but are compensated through "reductions in working time" days *Réductions de Temps de travail*, or RTT, a lump-sum of time which workers accumulate and can use later. This regime concerns 1 in 8 employees in the private sector. See also Note 64.

[40] Although all countries are represented in the graph, they might not all be visible since many countries cluster behind similar co-ordinates, e.g. (40,40) – see Annex Figure 5.A.1 for more detailed data.

[41] However note that in Australia and Israel, where normal hours are uniformly regulated, *average* usual hours are higher than the statutory limit. Australia and Israel are, however, not represented on Figure 5.2 since data on *median* usual hours are lacking. In Finland, median usual hours are *below* the statutory limit, at 39 hours.

[42] The fourth one being France, see Note 39.

[43] Not shown in the chart.

[44] The high standard deviations in normal hours in Mexico might be partly attributable to the fact that Mexican labour law recognises three types of work shifts of different normal lengths: the day shift (8 hours), the night shift (7 hours), the mixed shift (7.30 hours). It should also be noted that data presented in Figure 5.2 for Mexico might suffer from selection bias, due to the way in which usual hours are identified: workers answering "no" to the question Q5c. in the Encuesta Nacional de Empleo e Occupacion (ENOE) "Is this the number of hours you usually work?" are dropped from the sample.

[45] Being in the group of countries allowing for extensive variation is *negatively* correlated with standard deviation in usual weekly hours, while being in the groups of countries with uniform regulation or allowing for a limited variation only is positively correlated to it – yet none of these correlations are statistically significant.

[46] For countries for which such data could be collected. In general, data on negotiated provisions correspond either to most frequent provisions, or to the negotiated provisions in one particular representative sector.

[47] Except in Switzerland, which is the clear outlier in Panel A of Figure 5.3.

[48] Another element pointing towards rules evasion / a lack of enforcement of rules on overtime is the non-negligible incidence of unpaid overtime, as well as the high average hours reported. A 2020 report by the European Agency for Safety and Health at Work suggests that awareness of psychosocial risks linked to prolonged hours is lagging behind in European workplaces, with only 29% of firms reporting that they would intervene to stop employees working excessively long hours. Reluctance to openly discuss these issues is cited as the number one issue preventing progress in this area (EU-OSHA, 2029[52]).

[49] By contrast, low-paid workers might work more *unpaid* overtime: for instance Green (2017[5]) showed that unrecorded and unpaid overtime hours ("off-the-clock work") in the United States were mainly driven by low-skill workers, those in non-supervisory positions and those paid by the hours. Low-paid workers are also more likely to work a second job rather than working paid overtime. These second jobs would not be counted as overtime. Accordingly, there is a positive and significant (although small, i.e. inferior or equal to 0.2) correlation between earnings and paid overtime hours for full-time employees reporting paid overtime in 12 of the 18 OECD countries where data are available.

[50] For firms, it contributes to preserving workers' human capital by providing a period of rest and recovery that enables them to remain productive. It can contribute to reduce absenteeism, and to increase workers' motivation. For workers, paid leave is not only a way to regenerate their own human resources, but a driver of well-being.

[51] The EU Working Time Directive (1993) establishes that "Member States shall take the measures necessary to ensure that every worker is entitled to paid annual leave of at least four weeks, which may not be replaced by an allowance in lieu".

[52] The ILO Holidays with Pay Convention 1970 (No. 132) entitles workers to take three weeks of paid leave each year. Those who have been employed for less than one year but longer than six months have a right to a proportional period of paid leave. The Convention also specifies that it should be possible for an employee to take two weeks of the annual leave in one block without interruption. The timing of the leave period should in principle be set by the employer, in consultation with the employee or his/her representatives.

[53] Although many employers in the United States grant at least some of their employees paid leave, there is no law that establishes a legal minimum entitlement.

[54] The ILO Convention prescribes three weeks of paid leave – a 15-day entitlement when expressed in working days and on the basis of a five-day working week.

[55] For instance in Australia shift workers may get up to 25 days.

[56] Possibly more in some collective agreements.

[57] These entitlements are primarily found in central government agreements, with fewer than 7% of private sector employees covered by collective agreements entitled to above statutory minimum leave (Blumenfeld, Ryall and Kiely, 2015[9]).

[58] For instance extra days are granted in the cleaning and security sector in Israel, in the banking sector in Greece, and, after five years of service, in the metal, machinery and electronic industry in Switzerland.

[59] This is the case in the Canadian Province of Quebec: up to 30 days for employees covered by a collective agreement and with 20 years of service in Quebec.

[60] In Korea, that is the case if normal operations are *greatly* disturbed. In Japan, another day of leave has to be granted in replacement.

[61] In France for instance, public holidays are not systematically non-working days for all employees, except for the 1st of May.

[62] Public holidays are not included here because available data sources on leave actually taken (e.g. the Structure of Earnings Survey for the European countries and the General Survey of working conditions for Japan) do not include them.

[63] Unfortunately no data on negotiated paid leave in France could be collected.

[64] This scheme is a particularity of the French system, whereby collective agreements stipulate that high-skilled workers and those in managerial positions are not subjected to the usual limits on normal weekly hours and overtime, but cumulate "reductions in working time" days (*Réductions de Temps de travail*, or RTT) as a lump sum (*forfait jour*) in compensation. The number of RTT days varies every year but is around 10 days annually. See also Note 39.

[65] Data for the United States refer to *access* to paid leave and not to leave effectively taken, and thus can not be compared with data represented in Figure 5.4.

[66] This analysis is based on information before the COVID-19 crisis and excludes potential ensuing changes in the legislation – for a summary of COVID-19 related evolutions to date, see 1.4 below.

[67] There are two types of teleworking in Italy. Occasional teleworking, "lavoro agile", falls in this first category. Regular teleworking falls in the third category, see below.

[68] In Spain, employees have a right to ask for teleworking for work-life balance adaptations; in this case, employers have to motivate their refusal and show that the request is *unreasonable*. When teleworking is asked for any other reason than work-life balance, however, employers can refuse without justification.

[69] "Encompassing" legal frameworks are defined as such if they regulate most working conditions of teleworkers. For instance, while most countries still do not mandate the recording of teleworkers' hours (Vargas Llave and Weber, 2020[49]), legal frameworks regulating most other aspects (e.g. occupational safety and health, cost of equipment, working hours, etc.) are still considered "encompassing". By contrast, regulations only stipulating the conditions for workers to request teleworking (e.g. by written demand) and for employers to respond (e.g. written notification within x months) are not considered encompassing.

[70] Note that in Canada, there are binding guidelines on how employees can request flexible work arrangements (including teleworking), and how employers must respond to those requests. However these do no constitute « encompassing » legal frameworks as defined in this section – see Note 69.

[71] There are two types of teleworking in Belgium, both fall within this third category, but occasional teleworking is regulated in the law, while regular teleworking is regulated in a central collective agreement.

[72] Such as for instance those with a minimum amount of service in the same company in Australia, the Netherlands and the United Kingdom; the victims of domestic violence in Portugal; workers with disability or chronic diseases in Italy, or employees with specific caring duties in Lithuania. Only in Spain and New Zealand is this right opened to all employees (but it is conditioned by the employee justifying work-life balance needs in Spain).

[73] According to a 2020 study, it ranged from just under 30% in the Slovak Republic, to 54% in Luxembourg (Fana, 2020[37]).

[74] The 25 March 2020 ordinance also allows the derogations to the minimum 11 hours daily rest from 11 to 9 hours and modify Sunday rest time.

[75] The Swedish Municipal Workers Union signed a crisis agreement for workers in municipalities which gives the employer the possibility to exceed 48 hours a week in case of special need for overtime. Employees are guaranteed 24 hours off work with pay after the crisis agreement expires and paid 120 to 150% of the regular pay per hour.

[76] See paragraph 1155(4) General Civil Code (Allgemeines Burgerliches Gesetzbuch, ABGB). This regulation ceased to apply on 31 December 2020.

[77] There were no changes to the Paid Act Leave, however a decree under the Emergency Powers Act active until 30 June 2020 enabled the health care and social services sector employers to suspend or postpone employee's paid leave if deemed necessary.

[78] The Fair Work Commission temporarily amended the majority of awards to provide two weeks of unpaid pandemic leave and give workers the ability to take twice as much annual leave at half their normal pay rate if their employer agreed.

[79] Statistics refer to the share of employees (aged 15-64) working usually or occasionally from home in 2019, and to the share of workers working from home in March/April 2020 who were usually employed before the onset of the COVID-19 crisis.

[80] The work at home ("trabajo en casa") status in Colombia is different from teleworking in that it is only accessible in exceptional circumstances preventing work to be performed on site. In parallel, the law 1221 of 2008 law regulates regular teleworking.

[81] BGBl. I Nr. 61/2021. At this occasion, the Austrian Parliament also stated that the *Working Hours Act (Arbeitszeitgesetz AZG)* and the *Rest Periods Act (Arbeitsruhegesetz ARG)* apply without restriction to teleworking.

[82] In Chile the law was introduced in March 2020, but negotiations on it had started before the COVID-19 outbreak.

[83] As a consequence, all the descriptive trends presented in Sections 5.2 and 5.3 below are likely to be at least partly attributable to composition effects.

[84] And 40.1 in 2020 – although note that this small drop is likely to be in large parts due to the pandemic context. Data for 2020 are not available in Germany, so this average is calculated with data for 2019 for this country.

[85] Except for regular overtime, e.g. overtime anticipated and explicitly agreed on in individual contracts.

[86] Changes in the statutory regulation of overtime might explain this surge in paid overtime in France: the use of paid overtime has indeed become more attractive since August 2016, when a law relaxed the terms and conditions for overtime compensation. In addition, since 1 January 2019, overtime pay is exempted from employees' social security contributions and income tax (Brunetto et al., 2019[46]).

[87] In addition to the relatively small reduction in the median amount of overtime observed, it is important to bear in mind that the reduction in overtime only applies the relatively small proportion of employees who are working overtime: in absolute terms, the reduction in hours of paid overtime is thus small.

[88] Time use data are grouped in five broad categories: 1) paid work, which includes work-related activities, e.g. time spent on paid work (full or part time), studying, time spent looking for a job; 2) unpaid work, which includes domestic activities (cleaning, shopping, etc.) and time spent caring for a child or another person; 3) personal care, which relates to all regenerative activities, such as sleeping, eating, grooming, health related self-care, etc.; 4) leisure which concerns a wide range of indoor and outdoor activities, such as sports, entertainment, socialising with friends and family; 5) unspecified time which includes all activities not covered elsewhere (including e.g. religious activities, but also time spent going places and commuting). Weights are applied to correct for potential imbalances in the repartition of week-ends and weekdays.

[89] Observing trends from these data, should, however, be done with caution due to the high frequency of breaks in the classification of activities. Confusion might also typically arise from the difficulty to distinguish between main and parallel activities when simultaneous activities are recorded. Other issues that may comparability across countries include differences in sample composition, the sampling of diaries, etc. – see OECD (2016[51]) for more details.

[90] The OECD average for time spent on paid work presented from this section differs from the data on hours worked presented in Section 5.2.1 in terms of data sources, of definition (here paid work covers all work-related activities, including time spent on studies and searching for a job), but also in terms of country coverage. Hence, the two statistics are not comparable.

[91] Although, as explained above, time spent on personal care has increased throughout that period.

[92] While these two years are chosen based on data availability, they are also comparable since they are years of expansion, but not “peak” years – i.e. they occupy similar positions in the business cycle. 2019 can be considered as “not peak” because, in the absence of COVID-19, economies would have continued to grow. Also, a sensitivity test of the results was carried out by smoothing the data over two consecutive years (i.e. 1999-2000, 2009-10 and 2018-19) but this does not change the conclusions based on the years as shown in the Figure 5.13.

[93] Australia, Japan, Korea and New-Zealand and Turkey are not covered in this OECD average due to data availability.

[94] Data on very-short hours do not include employees aged 15-24.

[95] Data are based for the European countries on the 4th, 5th and 6th waves of the European Working Conditions Survey (EWCS) for 2005, 2010 and 2015, on the 1srt, 3rd and 5th Korean Working Conditions Survey for Korea and on the American Working Conditions Survey for the United States (2015 only).

[96] Variable hours scheduling refers to arrangements in which employees’ schedule is set by the employer and changed at a relatively short notice.

[97] OECD Employment Database, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm.

[98] Although cross-country comparisons should be made with caution due to the relatively small sample sizes.

[99] Although it should be noted that a number of states in the United States have minimum wages that are higher than the federal one.

[100] OECD Employment Database, http://www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm, and Golden (2016[48]).

[101] Similarly, anecdotal evidence on the working time preferences of gig workers, and in particular delivery riders (who are not presented in Figure 5.20) show that a majority of them also wish to work more hours (Drahokoupil and Piasna, 2019[47]). The fragmented nature (and the low pay rate) of on-demand gig work means that in 2017, a majority of Deliveroo riders expressed a preference to work on average 9 hours more for the platform each week (with only 12.5% saying they would like to work fewer hours).

Annex A. Statistical annex

Sources and definitions

The tables of the statistical annex show data for all 38 OECD countries including Costa Rica, which became a Member of the OECD on 25 May 2021. Data for Brazil, China, India, Indonesia, the Russian Federation (Russia) and South Africa are included in a number of tables.

In general, *Tables A to K* and *Table M* report annual averages of monthly and quarterly estimates based on labour force surveys. Data for the remaining *Tables L*, *N*, *O*, *P* and *Q* are from a combination of survey and administrative sources. Those shown for a number of European countries in *Tables B*, *C*, *D*, *H, I*, *J*, *K* and *Table M* are data taken from the European Labour Force Survey (EU LFS), which are more comparable and sometime more consistent over time than national LFS results.

Data on employment, unemployment and the labour force are not necessarily the same as the series used for analyses and forecasting by the OECD Economics Department that are reported in the *OECD Economic Outlook* and included in Chapter 1 of this publication.

Data and indicators shown in the tables can also be found in the OECD central data repository *OECD.Stat* (http://stats.oecd.org) accessible from the web page dedicated to employment statistics (www.oecd.org/employment/database).

The OECD Employment database contains both raw data and indicators. It includes longer time series and more detailed datasets by individual characteristics such as age group, gender, educational attainment and employment characteristics on the main job such as employee job tenure, part time employment, involuntary part time employment, temporary employment, duration of unemployment. The database includes more data series than those shown in this annex, such as, the distribution of employment by weekly usual hours worked intervals, potential labour force such as people marginally attached to the labour force, etc. The datasets are documented with information on definitions, notes and sources used by member countries. The online database also contains additional series on working time, earnings and features of institutional and regulatory environments affecting the functioning of labour markets. Among these are the following:

- Annual hours worked for comparisons of trends over time.
- Average gross annual wages per dependent employee in full time equivalent unit.
- Distribution of gross earnings of full time workers by upper earnings decile cut offs and by gender to compute earnings dispersion measures.
- Statutory minimum wages: levels and ratio of minimum to median wages.
- Public expenditure on labour market programmes, number of beneficiaries and inflows into the labour market.
- Union members and employees.
- Synthetic indicators of employment protection.

Major breaks in series

Table A: Breaks in series have been adjusted in most countries to ensure that unemployment rates are consistent over time.

Tables B to K and Table M: Most of the breaks in series in the data shown in the tables occurred for any of the following reasons: changes in survey design, survey questionnaire, survey frequency and administration, revisions of data series based on updated population census results. These changes have affected the comparability over time of employment and/or unemployment levels and to a certain extent the ratios reported in the aforementioned tables:

- *Introduction of a continuous survey producing quarterly results:* Austria (2003/04), Brazil (2011/12), France (2002/03), Germany (2004/05), Hungary (2005/06, monthly results), Iceland (2002/03), Italy (2003/04), Luxembourg (2002/03, quarterly results as of 2007) and Turkey (2013/14).
- *Redesign of labour force survey:* Introduction of a new survey in Chile since April 2010 (see below), Germany (2010/11), Hungary (2002/03), Poland (2004/05), Portugal (2010/11) and Turkey (2004/05 from quarterly to monthly results). Israel (2011/12), change from quarterly to monthly survey results and a change from "civilian" to "total" labour force (including those who are in compulsory or permanent military service). New Zealand (2015/16), the survey includes non-civilian personnel. Annual results for Colombia in 2020 are averaged over three quarters (Q1, Q3 and Q4) as a result of the COVID-19 pandemic outburst and suspension of the survey in the 2nd quarter. Since July 2020, a new edition of the continuous quarterly survey was re-introduced in Mexico (Encuesta Nacional de Ocupación y Empleo, New edition ENOE^{N}) after its suspension in April 2020 following the COVID-19 pandemic outburst and lockdown measures. It was replaced in Q2 by a telephone interview survey (ETOE) with partial results. The annual results are averages of three quarters (Q1, Q3 and Q4). For the United Kingdom (2003/2004), data for *Tables B to D* are annual averages of quarterly estimates from the Annual Population Survey (APS); prior to 2004, they refer to the spring quarter (April-June) Labour Force Survey (LFS). Data for *Tables H, I, J, K* and *M* are annual averages of quarterly estimates from APS from 2016 onwards.
- *Change in the operational definition of employment:*
  - Neat application of the criterion of "at least one hour worked in a gainful job" in the Chilean *Nueva Encuesta Nacional de Empleo* (NENE), a quarterly continuous survey, from April 2010 onward.
- *Change in the operational definition of unemployment regarding:*
  - Active job-search methods: in particular a change from registration to contact with the public employment service: France (2002/03) and Spain (2000/01).
  - Duration of active job search: In Australia (2014/15), the duration of unemployment has been replaced by duration of job search. In Belgium (2010/11), the duration of job search has been changed from an unlimited duration to previous four weeks including the survey reference week. In Chile (2009/10), the duration of active job search has been shortened from last two months to previous four weeks including the survey reference week.

  - Availability to work criterion: In Sweden (2004/05), the work availability criterion changed from the reference week to two weeks from the reference week to be consistent with the operational definition in other EU countries. In Chile, the work availability criterion did not exist prior to 2010 in the *Encuesta Nacional de Empleo* (ENE) and has been introduced in the *Nueva Encuesta Nacional de Empleo* (NENE) since April 2010. It has been fixed to two weeks from the end of the reference week.
  - Persons on lay off considered as employed instead of unemployed: Norway (2005/06).
  - Other minor changes: Australia (2000/01) and Poland (2003/04).
- *Changes in the questionnaire with impact on employment and unemployment estimates:* Germany (2010/11): new questionnaire design ensures better coverage of small jobs. This leads to higher than normal annual employment increase. Impact on employment and unemployment statistics in New Zealand (2015/16) with the inclusion of army personnel. Spain (2004/05): impact on employment and unemployment and impact on unemployment estimates in Norway (2005/06) and Sweden (2004/05).
- *Change from seasonal to calendar quarters:* Switzerland (2009/10) and the United Kingdom (2005/06). However, there is no break in series between 2005 and 2006 for the United Kingdom as calendar quarter based historical series are available since 1992.
- *Introduction of new EU harmonised questionnaire:* Sweden (2004/05) and Turkey (2003/04).
- *Change in lower age limit from 16 to 15 years:* Iceland (2008/09), Norway (2005/06) and Sweden (2006/07).
- *Change in lower age limit from 15 to 16 years:* Italy (2007/08).
- *Change in upper age limit:* Russian Federation (Russia) (2016/17) from 15-72 to 15 and over.
- *Change in data collector in Denmark since the first quarter of 2017:* the LFS response rate has increased and has resulted in a significant break in series between 2016 and 2017.
- In Norway, since 2006, age is defined as years reached at the survey reference week, instead of completed years at the end of the year, as in previous years.
- *Inclusion of population controls based on census results in the estimation process:* Mexico (2009/10) and Turkey (2006/07).
- In Japan, data for *Table J* on temporary employees has a break in series between 2013 and 2017.

Table A. OECD unemployment rates

As a percentage of civilian labour force

Percentage

	1991	1995	2000	2007	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Australia	9.6	8.5	6.3	4.4	5.2	5.1	5.2	5.7	6.1	6.1	5.7	5.6	5.3	5.2	6.5
Austria	..	4.2	3.9	4.9	4.8	4.6	4.9	5.4	5.6	5.7	6.0	5.5	4.9	4.5	5.4
Belgium	6.4	9.7	6.9	7.5	8.3	7.2	7.6	8.5	8.5	8.5	7.9	7.1	6.0	5.4	5.6
Canada	10.3	9.5	6.8	6.1	8.1	7.6	7.3	7.1	6.9	6.9	7.1	6.4	5.9	5.7	9.6
Chile	8.2	7.3	9.7	7.1	8.2	7.1	6.5	6.1	6.5	6.3	6.7	7.0	7.4	7.2	10.8
Colombia	..	..	..	11.2	11.8	10.9	10.4	9.7	9.2	9.0	9.3	9.4	9.7	10.5	16.1
Costa Rica	..	..	..	..	..	10.2	10.1	9.5	9.6	9.6	9.5	9.2	10.2	11.8	19.7
Czech Republic	..	4.0	8.8	5.3	7.3	6.7	7.0	7.0	6.1	5.1	4.0	2.9	2.3	2.0	2.6
Denmark	7.9	6.7	4.3	3.8	7.8	7.8	7.8	7.4	6.9	6.3	6.0	5.8	5.1	5.1	5.7
Estonia	..	..	14.5	4.6	16.6	12.4	9.9	8.5	7.3	6.2	6.7	5.8	5.5	4.5	6.8
Finland	6.6	15.4	9.8	6.9	8.5	8.0	7.8	8.3	8.8	9.5	8.9	8.8	7.4	6.7	7.7
France	9.6	12.0	9.6	8.0	9.3	9.2	9.8	10.3	10.3	10.4	10.1	9.4	9.0	8.4	8.0
Germany	5.5	8.3	8.0	8.5	7.0	5.8	5.4	5.2	5.0	4.6	4.1	3.8	3.4	3.2	4.2 e
Greece	..	..	11.2	8.4	12.8	17.9	24.5	27.5	26.6	25.0	23.6	21.5	19.3	17.3	16.4
Hungary	..	..	6.3	7.4	10.8	10.7	10.7	9.9	7.5	6.6	5.0	4.1	3.6	3.3	4.1
Iceland	..	..	..	2.5	8.3	7.7	6.6	5.8	5.4	4.5	3.3	3.3	3.1	3.9	6.4
Ireland	14.8	12.3	4.5	5.0	14.6	15.4	15.5	13.8	11.9	10.0	8.4	6.7	5.8	5.0	5.7
Israel	..	6.9	8.8	7.3	6.6	5.6 |	6.9	6.2	5.9	5.2	4.8	4.2	4.0	3.8	4.3
Italy	8.5	11.2	10.1	6.2 p	8.5 p	8.5 p	10.9 p	12.4 p	12.8 p	12.0 p	11.8 p	11.3 p	10.7 p	10.0 p	9.3 p
Japan	2.1	3.2	4.7	3.8	5.1	4.6	4.4	4.0	3.6	3.4	3.1	2.8	2.4	2.4	2.8
Korea	2.5	2.1	4.4	3.3	3.7	3.4	3.2	3.1	3.5	3.6	3.7	3.7	3.8	3.8	3.9
Latvia	..	..	14.3	6.1	19.5	16.2	15.0	11.9	10.9	9.9	9.6	8.7	7.4	6.3	8.1
Lithuania	..	..	16.4	4.3	17.8	15.4	13.4	11.8	10.7	9.1	7.9	7.1	6.2	6.3	8.5
Luxembourg	1.7	2.9	2.2	4.2	4.6	4.8	5.1	5.9	6.1	6.5	6.3	5.6	5.5	5.6	6.8
Mexico	2.7	6.3	2.5	3.7	5.4	5.2	5.0	4.9	4.8	4.4	3.9	3.4	3.3	3.5	4.4 |
Netherlands	5.7	8.4	3.7	4.2	5.0	5.0	5.8	7.2	7.4	6.9	6.0	4.9	3.8	3.4	3.8
New Zealand	10.6	6.5	6.2	3.6	6.2	6.0	6.5	5.9	5.4	5.4	5.1	4.7	4.3	4.1	4.6
Norway	5.5	4.9	3.2	2.6	3.7	3.4	3.3	3.8	3.6	4.5	4.8	4.2	3.9	3.7	..
Poland	..	..	16.1	9.6	9.7	9.7	10.1	10.3	9.0	7.5	6.2	4.9	3.9	3.3	3.2
Portugal	4.2	7.2	5.1	9.1	12.0	13.5 |	16.6 p	17.2 p	14.7 p	13.0 p	11.5 p	9.2 p	7.2 p	6.7 p	7.1 p
Slovak Republic	..	..	18.9	11.2	14.5	13.7	14.0	14.2	13.2	11.5	9.7	8.1	6.5	5.8	6.7
Slovenia	..	..	6.7	4.9	7.3	8.2	8.9	10.2	9.8	9.0	8.0	6.6	5.2	4.5	5.0
Spain	15.5	20.8	11.9	8.2	19.9	21.4	24.8	26.1	24.5	22.1	19.7	17.2	15.3	14.1	15.5
Sweden	3.1	8.8	5.6	6.1	8.6	7.8	8.0	8.0	7.9	7.4	7.0	6.7	6.3	6.8	8.3 |
Switzerland	..	..	..	..	4.8	4.4	4.5	4.7	4.8	4.8	4.9	4.8	4.7	4.4	4.8
Turkey	..	..	..	9.2	11.2	9.1	8.4	9.1	10.0	10.3	10.9	10.9	11.0	13.7	13.1 |
United Kingdom	8.6	8.6	5.5	5.3	7.9	8.1	8.0	7.6	6.2	5.4	4.9	4.4	4.1	3.8	4.5
United States	6.8	5.6	4.0	4.6	9.6	9.0	8.1	7.4	6.2	5.3	4.9	4.4	3.9	3.7	8.1
OECD[1]	..	..	..	5.8 e	8.5 e	8.1 e	8.1 e	8.0 e	7.5 e	6.9 e	6.5 e	5.9 e	5.5 e	5.4 e	7.2 e

.. Not available; e Estimated value; p Provisional data; | Break in series

Note: The OECD unemployment rates are compiled for 38 OECD member countries and conform to the International Labour Office (ILO) guidelines. In so far as possible, the data have been adjusted to improve international comparability and ensure consistency over time. All series are benchmarked to labour-force-survey-based estimates. Data for the European Union member countries, Iceland, Norway, Switzerland and Turkey are produced by the Statistical Office of the European Communities (Eurostat) and data for the remaining OECD countries are produced by the OECD. Methodological notes: www.oecd.org/std/labourstatistics/44743407.pdf.

1. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm.

StatLink https://stat.link/uf2pij

Table B1. Employment/population ratios by selected age groups - Total

As a percentage of the population in each age group

Percentage

	Total (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	69.1	72.8	74.3	72.7	61.7	64.1	60.1	56.8	76.2	79.9	81.6	80.1	46.1	56.5	64.5	63.6
Austria	68.3	69.9	73.6	72.4	52.8	53.8	51.6	50.2	82.5	82.9	85.3	83.9	28.3	36.0	54.5	54.7
Belgium	60.5	62.0	65.3	64.7	29.1	27.5	26.6	24.1	77.4	79.7	80.8	80.3	26.3	34.4	52.1	53.3
Canada	70.9	73.3	74.2	70.0	56.2	60.2	57.8	49.5	79.9	81.9	83.1	79.5	48.1	56.2	62.6	60.4
Chile[1]	54.5	57.6	62.4	55.8	29.0	29.0	25.4	20.0	65.6	70.1	74.8	67.1	47.7	54.8	66.1	56.2
Colombia	..	60.2	65.2	57.5	..	38.0	40.7	34.2	..	72.0	76.4	68.0	..	51.9	61.3	54.3
Costa Rica	59.6	64.1	61.6	54.8	44.9	46.3	30.8	25.9	69.1	74.6	74.7	67.3	46.4	54.8	58.1	50.2
Czech Republic	65.2	66.1	75.1	74.4	38.3	28.5	28.0	25.1	81.6	83.5	87.4	86.5	36.3	46.0	66.7	68.2
Denmark	76.4	77.3	75.2	74.5	66.0	65.3	55.0	53.2	84.2	86.4	82.7	82.2	55.9	59.2	71.8	71.5
Estonia	60.6	69.6	75.2	73.8	34.9	34.6	40.7	34.7	74.4	84.6	84.2	83.0	42.8	59.4	72.1	73.5
Finland	67.5	70.5	73.1	72.2	42.9	46.4	46.3	43.0	80.9	83.3	83.2	82.4	42.3	55.0	66.8	67.5
France	62.7	63.8	65.5	65.3	30.4	30.6	29.7	28.5	79.6	81.4	80.9	80.8	29.9	38.2	53.0	53.8
Germany	65.6	69.0	76.7	..	47.2	45.9	48.5	..	79.3	80.3	85.4	..	37.6	51.3	72.7	..
Greece	56.5	60.9	56.5	56.3	27.6	24.0	14.6	13.8	70.5	75.4	70.8	70.4	39.0	42.7	43.2	44.6
Hungary	56.0	57.0	70.1	69.7	32.5	21.1	28.5	27.2	73.0	74.7	84.4	82.9	21.9	32.2	56.7	59.6
Iceland[2]	84.6	84.2	81.5	77.9	68.2	72.5	69.0	62.2	90.6	87.9	86.1	82.6	84.2	83.2	78.0	76.8
Ireland	65.4	71.8	69.8	68.1	50.4	63.0	41.2	37.0	75.4	78.6	80.3	79.1	45.9	54.4	62.9	62.9
Israel[3]	62.1	64.5	68.9	66.8	48.1	46.4	42.9	38.9	71.3	74.0	80.2	78.3	46.5	57.1	67.9	67.9
Italy[2]	53.9	58.6	59.0	58.1	27.8	24.5	18.5	16.8	68.0	73.4	70.5	69.6	27.7	33.7	54.3	54.2
Japan	68.9	70.7	77.6	77.3	42.7	41.4	47.4	46.4	78.6	80.2	85.8	85.4	62.8	66.1	76.3	76.7
Korea	61.5	64.1	66.8	65.9	29.4	26.3	26.5	25.2	72.3	74.1	76.4	74.9	57.8	60.6	66.9	66.6
Latvia	57.3	68.1	72.3	71.6	29.2	38.1	31.8	29.6	73.5	82.1	83.1	82.2	35.9	58.0	67.3	68.6
Lithuania	58.8	65.0	73.0	71.6	25.2	24.8	32.9	29.4	75.0	82.2	85.1	83.7	40.3	53.2	68.4	67.6
Luxembourg	62.7	64.2	67.9	67.2	31.8	22.5	28.7	24.9	78.2	81.9	84.3	84.0	27.2	32.0	43.1	44.0
Mexico	60.1	61.0	62.2	59.4	48.9	44.9	41.6	38.9	67.4	70.0	72.4	69.6	51.7	54.5	56.0	52.3
Netherlands	72.1	73.6	78.2	77.8	66.5	63.1	65.3	62.5	81.0	84.1	85.2	85.1	37.6	47.8	69.7	71.0
New Zealand	70.3	75.1	77.5	76.8	54.2	58.0	56.4	55.1	78.2	81.8	84.7	83.8	56.9	71.8	76.2	76.8
Norway[2]	77.5	76.8	75.3	74.7	57.6	54.5	50.0	49.3	85.3	85.7	83.6	82.7	65.2	69.0	72.8	72.8
Poland	55.0	57.0	68.2	68.7	24.5	25.8	31.7	28.4	70.9	74.9	82.9	83.3	28.4	29.7	49.5	51.8
Portugal	68.3	67.6	70.5	69.0	41.8	34.4	28.0	23.4	81.8	80.9	85.2	84.2	50.8	51.0	60.4	60.7
Slovak Republic	56.8	60.7	68.4	67.5	29.0	27.6	24.9	22.7	74.7	78.0	82.0	80.6	21.3	35.7	57.0	58.3
Slovenia	62.8	67.8	71.8	70.9	32.8	37.6	33.3	27.0	82.6	85.3	88.6	88.1	22.7	33.5	48.6	50.5
Spain[2]	57.4	66.8	64.3	61.9	36.3	43.0	24.9	20.7	68.4	77.1	75.8	73.1	37.0	44.5	53.8	54.7
Sweden[2]	74.3	74.2	77.1	75.5	46.7	42.1	43.8	39.4	83.8	86.1	86.4	85.0	65.1	70.1	77.9	77.8
Switzerland	78.3	78.6	80.5	79.9	65.0	62.6	61.2	59.4	85.4	86.1	87.5	87.0	63.3	67.2	73.0	73.5
Turkey	48.9	44.6	50.3	47.5	37.0	30.2	33.1	29.2	56.7	53.2	59.8	57.4	36.4	27.1	33.6	31.1
United Kingdom[2]	72.3	72.4	75.6	75.3	61.4	57.3	54.1	52.3	80.3	81.0	84.2	84.4	50.8	57.4	66.2	65.3
United States[2]	74.1	71.8	71.4	67.1	59.7	53.1	51.2	45.9	81.5	79.9	80.0	75.6	57.8	61.8	63.7	60.3
OECD[4]	65.5	66.2	68.7	66.3	45.6	43.1	42.5	39.0	75.9	76.8	78.7	76.3	47.5	53.4	62.0	60.4
Brazil	..	67.4	62.6	56.7	..	52.9	41.7	33.9	..	76.1	73.2	67.6	..	53.8	49.2	44.4
China[5]	79.3	..	..	..	61.9	..	..	..	88.0	..	..	..	59.2	..	..	..
India	58.2	..	46.5	..	41.3	..	20.0	..	67.4	..	58.9	..	54.1	..	46.5	..
Indonesia	65.0	62.0	65.9	..	41.5	39.5	39.3	..	75.6	71.4	75.8	..	67.8	66.9	68.0	..
Russia	63.3	68.5	70.8	70.0	34.6	33.7	28.1	26.6	80.2	84.7	87.0	85.8	34.8	52.0	49.6	50.7
South Africa	..	44.4	42.5	38.5	..	15.7	11.0	8.5	..	60.6	56.2	51.2	..	42.2	40.1	37.2

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/waqi0o

Table B2. Employment/population ratios by selected age groups - Men

As a percentage of the male population in each age group

Percentage

	Men (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	76.9	79.5	78.7	76.8	62.6	65.0	59.5	55.9	85.6	88.1	87.3	85.6	57.6	65.7	70.3	69.3
Austria	77.3	76.3	78.0	76.5	57.6	57.0	54.8	52.7	91.4	89.0	88.5	86.9	40.5	46.0	63.1	62.7
Belgium	69.5	68.7	68.9	68.4	32.8	29.9	27.3	25.6	87.3	87.0	84.7	84.2	36.4	42.9	57.3	58.7
Canada	76.2	77.1	77.1	73.2	56.7	59.8	56.6	49.3	85.8	86.1	86.6	83.1	57.4	63.3	68.2	66.1
Chile[1]	72.4	72.9	71.5	65.1	37.5	36.0	27.3	23.4	86.4	88.0	85.2	76.5	70.6	76.0	83.2	73.1
Colombia	..	75.2	77.6	70.8	..	47.9	48.9	42.9	..	88.9	89.4	82.2	..	72.8	79.6	72.4
Costa Rica	80.1	81.4	74.6	67.9	58.6	58.3	36.9	32.6	92.5	94.1	89.4	81.9	74.3	79.3	78.0	69.0
Czech Republic	73.6	74.8	81.9	81.4	42.8	32.8	31.6	30.4	89.3	91.7	94.5	93.8	51.7	59.6	74.7	75.2
Denmark	80.9	81.1	78.1	77.4	68.5	66.5	54.2	52.5	88.6	90.3	86.4	85.9	64.4	65.3	76.2	75.8
Estonia	64.1	73.2	78.6	76.0	40.8	39.1	43.2	35.9	75.8	89.4	89.4	87.5	51.0	58.1	69.2	68.4
Finland	70.5	72.4	74.3	73.7	45.7	47.9	47.2	44.4	84.1	85.9	85.6	84.7	43.7	55.1	64.8	66.6
France	69.5	68.7	68.8	68.5	33.9	33.7	31.5	30.4	88.0	87.7	85.2	85.0	34.1	40.6	55.4	56.0
Germany	72.9	74.7	80.5	..	49.7	48.2	50.6	..	87.2	86.4	89.6	..	46.4	59.4	77.1	..
Greece	71.5	74.2	65.9	65.2	32.7	29.1	15.9	15.9	88.5	90.1	80.8	79.7	55.2	59.1	56.1	57.0
Hungary	62.7	63.7	77.3	77.0	36.0	24.4	32.8	31.1	79.2	81.6	90.8	89.8	32.8	40.1	69.0	71.6
Iceland[2]	88.2	88.3	83.8	80.2	66.1	71.6	64.4	58.9	95.1	93.2	88.9	85.3	94.2	88.5	84.7	82.5
Ireland	76.5	80.5	75.1	73.5	54.2	66.8	41.4	37.5	88.2	87.8	86.7	85.6	64.4	68.3	70.9	70.4
Israel[3]	68.9	70.1	71.4	68.7	51.2	49.3	42.4	38.2	79.6	80.6	83.4	80.8	56.9	65.1	74.6	73.7
Italy[2]	68.2	70.6	68.0	67.2	33.2	29.4	21.6	20.5	84.9	87.4	80.8	80.1	40.9	45.0	64.6	64.5
Japan	80.9	81.7	84.1	83.8	42.5	41.3	46.4	45.6	93.4	92.8	93.1	92.7	78.4	81.5	86.8	87.1
Korea	73.2	74.9	75.7	74.8	24.6	21.3	23.1	21.8	88.0	87.3	86.6	85.1	68.6	74.8	78.1	77.7
Latvia	61.1	72.7	73.9	73.1	34.3	43.8	33.9	32.5	74.4	86.0	85.2	83.8	48.1	64.3	67.6	69.5
Lithuania	60.1	68.2	73.5	72.2	28.3	29.4	33.4	30.5	73.8	84.2	85.4	84.0	49.9	60.7	69.4	68.4
Luxembourg	75.0	72.3	72.1	70.4	35.3	26.5	31.1	25.3	92.8	92.2	88.6	88.0	37.9	35.6	48.9	47.3
Mexico	82.8	80.8	78.8	75.6	64.7	58.5	53.4	49.9	93.8	92.7	91.2	87.9	78.1	78.3	75.4	71.4
Netherlands	81.2	80.5	82.2	81.6	67.9	63.9	64.6	61.4	91.4	91.7	89.3	89.0	49.7	58.5	78.3	79.4
New Zealand	77.8	82.0	81.8	81.5	56.2	60.3	56.7	56.1	87.0	90.0	90.4	89.6	67.9	80.7	81.6	82.5
Norway[2]	81.3	79.5	77.4	76.6	59.4	52.8	49.5	48.8	88.9	89.1	85.9	84.9	71.4	73.8	76.8	76.4
Poland	61.2	63.6	75.3	75.9	27.3	29.2	35.4	32.3	77.6	81.1	89.2	89.7	36.7	41.4	61.0	63.7
Portugal	76.3	73.6	73.6	71.6	47.3	38.5	30.5	25.5	90.0	87.2	88.1	86.7	62.2	58.7	66.5	65.6
Slovak Republic	62.2	68.4	74.4	73.3	29.8	30.9	31.6	28.5	79.6	85.0	88.3	86.9	35.4	52.6	60.3	61.7
Slovenia	67.2	72.7	74.8	73.7	35.7	43.2	36.2	29.6	85.7	88.1	90.9	90.4	32.3	45.3	53.2	54.4
Spain[2]	72.7	77.3	69.9	67.3	43.2	48.6	27.1	22.7	85.6	87.5	81.6	78.8	55.2	59.6	61.1	61.6
Sweden[2]	76.3	76.5	78.8	77.3	47.9	41.9	42.7	39.0	85.9	89.0	88.9	87.7	67.7	73.1	80.0	79.9
Switzerland	87.3	85.6	84.5	83.9	66.5	65.4	60.8	59.4	95.2	93.6	92.0	91.4	77.0	76.4	79.4	79.2
Turkey	71.7	66.8	68.3	65.2	49.7	41.5	43.4	38.8	85.0	80.7	81.0	78.5	51.9	40.5	48.8	45.8
United Kingdom[2]	79.0	78.6	79.7	78.6	63.6	58.8	53.8	51.7	87.5	87.8	89.4	88.6	60.0	66.4	71.0	69.7
United States[2]	80.6	77.8	76.5	72.1	61.9	54.4	51.3	46.4	89.0	87.5	86.4	81.8	65.7	67.4	69.8	66.2
OECD[4]	76.1	75.8	76.3	73.7	50.3	47.4	45.6	42.2	88.2	87.9	87.3	84.8	59.2	64.0	70.6	68.9
Brazil	..	79.7	72.6	66.9	..	63.0	48.7	40.4	..	89.0	83.7	78.6	..	70.1	63.6	58.2
China[5]	84.6	..	..	..	61.8	..	..	..	94.2	..	..	..	70.4	..	..	..
India	81.1	..	71.9	..	57.2	..	31.5	..	93.8	..	91.1	..	78.7	..	74.9	..
Indonesia	80.7	78.2	80.6	..	48.8	48.7	46.3	..	95.0	91.1	93.6	..	83.6	82.8	82.9	..
Russia	67.6	72.0	75.9	74.9	38.2	36.6	31.1	29.7	82.7	87.0	90.5	89.2	46.8	63.9	60.4	61.0
South Africa	..	52.2	48.0	43.7	..	18.8	13.2	10.1	..	71.3	62.9	57.5	..	55.3	47.7	44.5

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/gfkxh3

Table B3. Employment/population ratios by selected age groups - Women

As a percentage of the female population in each age group

Percentage

	Women (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	61.3	66.1	70.0	68.6	60.8	63.2	60.8	57.7	67.0	71.9	76.0	74.8	34.2	47.3	59.0	58.2
Austria	59.4	63.5	69.2	68.3	48.1	50.6	48.4	47.8	73.6	76.7	82.1	80.8	16.8	26.5	46.0	47.0
Belgium	51.5	55.3	61.7	61.0	25.4	25.0	25.8	22.5	67.2	72.3	76.8	76.4	16.6	26.0	47.0	48.0
Canada	65.6	69.6	71.2	66.8	55.7	60.7	59.1	49.8	73.9	77.7	79.7	75.9	39.1	49.3	57.2	54.9
Chile[1]	36.8	42.3	53.3	46.6	20.2	21.7	23.3	16.5	45.0	52.3	64.8	57.6	26.6	35.1	49.7	40.6
Colombia	..	46.0	53.4	44.9	..	28.2	32.4	25.6	..	56.3	63.9	54.3	..	33.4	45.7	38.7
Costa Rica	38.8	46.3	48.6	41.4	30.2	33.3	23.8	18.1	45.7	55.2	60.0	52.5	20.3	31.2	40.1	32.9
Czech Republic	56.9	57.3	68.1	67.1	33.6	23.9	24.3	19.4	73.7	74.9	80.0	78.8	22.4	33.5	58.9	61.3
Denmark	71.7	73.4	72.2	71.4	63.4	64.0	55.8	54.0	79.9	82.5	78.9	78.3	46.7	53.1	67.5	67.2
Estonia	57.3	66.1	71.9	71.6	28.5	29.8	38.0	33.4	73.2	79.9	78.7	78.3	36.5	60.5	74.6	77.9
Finland	64.5	68.5	71.8	70.7	39.9	44.7	45.3	41.5	77.6	80.7	80.7	80.0	40.9	54.8	68.6	68.4
France	56.2	59.1	62.4	62.2	26.9	27.5	27.8	26.5	71.4	75.3	76.8	76.7	26.0	36.0	50.9	51.8
Germany	58.1	63.2	72.8	..	44.6	43.5	46.1	..	71.2	74.0	81.1	..	29.0	43.4	68.4	..
Greece	41.7	47.7	47.3	47.5	22.4	18.8	13.2	11.7	52.7	60.9	60.8	61.1	24.3	27.0	31.6	33.5
Hungary	49.6	50.7	63.0	62.3	28.8	17.7	24.0	23.1	66.9	67.9	78.0	75.9	13.1	25.8	46.2	49.2
Iceland[2]	81.0	79.7	79.1	75.5	70.5	73.4	74.0	65.8	86.0	82.1	83.0	79.5	74.4	77.7	71.2	71.0
Ireland	54.1	63.0	64.6	62.9	46.6	59.1	41.0	36.5	62.7	69.2	74.0	72.7	27.4	40.3	55.0	55.4
Israel[3]	55.5	59.0	66.4	64.9	44.8	43.4	43.4	39.7	63.5	67.7	77.0	75.8	36.8	49.3	61.5	62.4
Italy[2]	39.6	46.6	50.1	49.0	22.1	19.5	15.2	12.8	50.9	59.6	60.1	59.1	15.3	23.0	44.6	44.6
Japan	56.7	59.5	70.9	70.6	43.0	41.5	48.4	47.2	63.6	67.4	78.2	77.9	47.9	51.2	65.9	66.4
Korea	50.1	53.4	57.8	56.7	33.6	30.8	29.6	28.3	56.1	60.5	65.6	64.1	48.0	46.9	55.8	55.6
Latvia	53.8	63.9	70.7	70.2	23.8	32.2	29.5	26.7	72.6	78.4	81.0	80.6	26.8	53.4	67.1	67.9
Lithuania	57.5	62.0	72.5	71.0	22.1	20.0	32.3	28.3	76.1	80.2	84.8	83.4	33.0	47.5	67.5	66.9
Luxembourg	50.0	56.1	63.6	63.9	28.3	18.4	26.3	24.4	63.0	71.7	79.9	80.0	16.8	28.6	37.1	40.6
Mexico	39.6	43.6	47.0	44.6	34.0	32.2	29.8	27.7	44.3	50.6	55.7	53.3	27.7	33.1	39.4	35.9
Netherlands	62.7	66.5	74.1	73.9	65.1	62.2	66.0	63.6	70.3	76.4	81.1	81.2	25.5	37.1	61.2	62.6
New Zealand	63.1	68.6	73.2	72.2	52.1	55.6	56.0	54.0	69.9	74.2	79.2	78.0	46.1	63.2	71.1	71.4
Norway[2]	73.6	74.0	73.1	72.7	55.9	56.2	50.5	49.8	81.6	82.3	81.1	80.4	58.9	64.0	68.7	69.1
Poland	48.9	50.6	61.1	61.5	21.8	22.4	27.8	24.2	64.3	68.8	76.4	76.7	21.4	19.4	39.2	41.0
Portugal	60.5	61.8	67.6	66.6	36.1	30.2	25.5	21.2	73.9	74.8	82.5	81.8	40.9	44.3	55.1	56.5
Slovak Republic	51.5	53.0	62.4	61.7	28.2	24.1	17.8	16.5	69.8	71.0	75.4	74.0	9.8	21.2	53.9	55.2
Slovenia	58.4	62.6	68.6	67.8	29.7	31.4	29.9	24.0	79.3	82.4	86.1	85.6	13.8	22.2	44.0	46.6
Spain[2]	42.0	56.0	58.8	56.6	29.0	37.2	22.5	18.5	51.0	66.3	69.9	67.4	20.1	30.2	46.9	48.0
Sweden[2]	72.2	71.8	75.4	73.5	45.4	42.2	45.0	39.9	81.7	83.0	83.7	82.1	62.4	67.2	75.7	75.6
Switzerland	69.3	71.6	76.3	75.9	63.4	59.7	61.6	59.4	75.6	78.5	83.0	82.5	50.1	58.1	66.6	67.8
Turkey	26.2	22.8	32.2	29.7	24.8	19.3	22.6	19.2	27.6	25.6	38.4	36.2	21.5	14.6	18.8	16.7
United Kingdom[2]	65.7	66.4	71.6	72.0	59.1	55.8	54.4	53.0	73.2	74.4	79.1	80.3	41.8	48.8	61.5	61.1
United States[2]	67.8	65.9	66.3	62.2	57.4	51.8	51.1	45.3	74.2	72.5	73.7	69.6	50.6	56.6	58.0	54.8
OECD[4]	55.1	56.8	61.3	59.0	40.8	38.8	39.2	35.7	63.9	65.9	70.1	67.9	36.6	43.4	53.8	52.4
Brazil	..	55.9	53.3	47.4	..	42.7	34.6	27.2	..	64.3	63.7	57.8	..	39.5	36.8	32.5
China[5]	73.8	..	..	..	62.1	..	..	..	81.6	..	..	..	47.1	..	..	..
India	34.5	..	20.9	..	24.1	..	7.5	..	40.4	..	27.2	..	29.5	..	19.1	..
Indonesia	49.5	45.6	51.1	..	34.4	29.8	32.0	..	56.3	52.0	57.9	..	52.4	49.4	53.3	..
Russia	59.3	65.3	66.1	65.5	30.9	30.8	24.9	23.5	77.8	82.5	83.6	82.5	25.9	43.1	41.4	42.9
South Africa	..	37.4	37.0	33.4	..	12.6	8.9	6.9	..	51.2	49.5	44.8	..	31.8	34.0	31.4

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/nb6iha

Table C1. Labour force participation rates by selected age groups - Total

As a percentage of the population in each age group

Percentage

	Total (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	73.8	76.2	78.5	77.9	70.2	70.8	68.1	66.2	80.3	82.7	84.9	84.5	48.2	58.1	67.2	67.1
Austria	70.8	73.5	77.1	76.6	55.7	59.4	56.4	56.1	85.2	86.5	89.0	88.3	29.8	37.2	56.4	57.0
Belgium	65.1	67.1	69.0	68.6	35.3	33.9	31.0	28.4	82.4	85.3	84.8	84.5	27.1	35.9	54.3	55.6
Canada	76.2	78.1	78.7	77.4	64.4	67.6	64.9	61.9	84.8	86.3	87.3	86.2	50.9	59.3	66.2	65.7
Chile[1]	61.0	63.0	67.4	62.7	38.6	37.0	31.5	26.4	71.5	75.1	80.2	74.9	51.3	57.6	68.7	60.3
Colombia	..	68.0	73.2	68.8	..	48.8	51.4	46.9	..	79.1	84.0	79.8	..	55.2	65.5	60.6
Costa Rica	62.8	67.2	70.1	68.3	50.4	51.9	45.3	44.5	71.4	76.8	82.1	80.7	47.7	56.0	61.7	57.0
Czech Republic	71.6	69.8	76.7	76.4	46.1	31.9	29.7	27.3	88.4	87.8	89.1	88.7	38.2	48.2	68.0	69.6
Denmark	79.9	80.0	79.0	78.9	70.7	70.6	61.1	60.2	87.9	88.8	86.5	86.3	58.1	60.9	73.6	74.5
Estonia	71.1	73.0	78.8	79.4	44.8	38.4	45.5	42.2	86.6	88.3	87.7	88.2	48.3	61.6	75.2	78.6
Finland	74.9	75.7	78.4	78.4	53.8	55.0	55.3	53.8	87.9	88.0	87.7	87.5	46.6	58.8	71.5	73.0
France	68.6	69.4	71.7	71.0	36.5	38.0	36.9	35.6	86.3	87.5	87.4	86.9	31.8	40.0	56.9	57.1
Germany	71.1	75.6	79.2	..	51.5	52.0	51.4	..	85.3	87.2	88.0	..	42.9	57.2	74.7	..
Greece	63.8	66.5	68.4	67.4	39.0	31.0	22.5	21.2	78.1	81.8	85.4	84.0	40.5	44.2	49.8	50.8
Hungary	59.9	61.6	72.6	72.8	37.2	25.7	32.2	31.2	77.3	80.1	87.0	86.2	22.6	33.7	58.0	61.4
Iceland[2]	86.6	86.3	85.0	83.5	71.6	78.3	76.1	70.6	92.2	89.3	89.0	88.0	85.7	84.1	79.6	80.0
Ireland	68.1	75.5	73.1	71.7	54.2	69.4	47.1	43.7	78.3	82.1	83.5	82.4	45.9	54.7	63.5	63.9
Israel[3]	69.9	71.2	71.7	69.9	58.2	55.5	46.0	42.3	78.7	80.3	83.0	81.5	50.9	61.2	69.9	70.1
Italy[2]	60.3	62.4	65.7	64.1	39.5	30.8	26.1	23.8	74.3	77.5	78.1	76.5	29.0	34.5	57.4	57.1
Japan	72.5	73.6	79.5	79.6	47.0	44.9	49.2	48.6	81.9	83.3	87.9	87.9	66.5	68.4	77.9	78.7
Korea	64.5	66.4	69.5	68.6	33.0	28.8	29.6	28.2	75.2	76.5	79.1	77.8	59.6	61.9	68.9	68.8
Latvia	67.0	72.6	77.3	78.2	37.4	42.6	36.3	34.8	85.5	87.1	88.3	89.3	39.8	60.7	72.1	74.6
Lithuania	70.5	67.9	78.0	78.5	36.2	27.1	37.3	36.6	88.8	85.6	90.3	90.4	45.4	55.3	73.4	75.0
Luxembourg	64.2	66.9	72.0	72.2	34.0	26.5	34.6	32.4	79.8	84.7	88.5	89.1	27.6	32.7	45.0	45.9
Mexico	61.7	63.4	64.6	62.3	51.5	48.4	44.8	42.3	68.6	72.0	74.7	72.5	52.4	55.6	57.1	53.7
Netherlands	74.3	76.8	80.9	80.9	70.8	69.6	70.0	68.7	83.1	86.7	87.4	87.6	38.5	50.1	72.0	73.0
New Zealand	75.0	78.1	80.9	80.7	62.7	64.5	63.5	62.9	82.0	84.0	87.4	86.8	59.7	72.9	78.3	79.0
Norway[2]	80.2	78.8	78.3	78.2	64.4	58.8	55.5	55.6	87.4	87.4	86.3	86.0	65.8	69.6	74.0	74.3
Poland	65.8	63.2	70.6	71.0	37.8	33.0	35.2	31.8	82.4	81.7	85.3	85.6	31.3	31.8	50.7	52.9
Portugal	71.2	73.9	75.5	74.3	45.7	41.3	34.3	30.2	84.8	87.7	90.3	89.5	52.5	54.6	64.4	64.5
Slovak Republic	69.9	68.2	72.7	72.4	46.0	34.5	29.7	28.1	88.4	86.8	86.5	85.9	24.3	38.8	59.8	61.3
Slovenia	67.5	71.3	75.2	74.6	39.2	41.8	36.2	31.5	87.4	89.3	92.4	92.4	24.0	34.6	50.9	52.4
Spain[2]	66.7	72.8	75.0	73.4	48.5	52.5	36.9	33.5	78.0	83.1	87.0	85.5	40.9	47.4	61.6	62.5
Sweden[2]	79.0	79.1	82.9	82.5	52.9	52.1	54.7	51.9	88.2	90.0	91.2	91.2	69.3	73.0	81.7	82.6
Switzerland	80.5	81.6	84.3	84.1	68.3	67.4	66.5	65.0	87.4	88.9	91.3	91.2	65.1	69.3	76.0	76.5
Turkey	52.4	49.8	58.5	54.9	42.5	37.7	44.4	39.0	59.6	58.2	68.1	65.0	37.2	28.3	36.6	33.5
United Kingdom[2]	76.4	76.4	78.8	78.9	69.6	66.4	61.0	60.4	83.9	84.2	86.7	87.3	53.0	59.1	68.1	67.8
United States[2]	77.2	75.3	74.1	73.0	65.8	59.4	55.9	53.9	84.0	83.0	82.5	81.4	59.2	63.8	65.3	64.7
OECD[4]	69.9	70.5	72.8	71.5	51.9	49.4	48.1	45.9	80.2	80.9	82.8	81.6	50.0	55.6	64.4	63.8
Brazil	..	73.5	71.0	65.8	..	63.6	57.0	49.3	..	81.1	80.7	76.0	..	55.4	52.2	48.2
China[5]	82.3	..	..	..	67.9	..	..	..	90.5	..	..	..	59.4	..	..	..
India	60.9	..	51.1	..	45.9	..	27.9	..	69.4	..	62.4	..	55.0	..	48.1	..
Indonesia	69.4	68.7	69.8	..	51.8	52.8	48.3	..	77.8	75.8	78.2	..	68.1	68.4	68.8	..
Russia	70.9	72.9	74.2	74.3	43.6	39.4	33.2	32.2	88.3	89.2	90.7	90.6	37.5	53.7	51.1	52.6
South Africa	..	57.2	59.5	54.6	..	29.3	25.7	20.9	..	74.5	76.4	70.6	..	44.8	44.5	41.9

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/vb3fim

Table C2. Labour force participation rates by selected age groups - Men

As a percentage of the male population in each age group

Percentage

	Men (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	82.3	83.0	83.2	82.4	71.9	71.8	68.2	65.9	90.2	90.8	90.7	90.2	60.9	67.7	73.3	73.3
Austria	79.9	80.0	81.8	81.0	60.6	62.9	60.3	59.5	94.0	92.5	92.4	91.4	42.8	47.6	65.6	65.5
Belgium	73.7	73.6	73.1	72.6	38.7	36.1	32.5	30.3	91.8	92.5	89.3	88.7	37.5	44.4	59.8	61.5
Canada	81.9	82.4	82.2	81.1	65.8	68.0	64.5	62.2	91.0	91.0	91.1	90.1	60.7	66.8	72.4	72.1
Chile[1]	80.1	78.5	76.8	73.0	47.6	44.0	33.5	30.4	93.5	93.0	90.8	85.4	76.8	79.8	86.5	78.5
Colombia	..	82.6	84.6	81.4	..	58.2	58.6	54.6	..	95.2	95.6	92.8	..	77.7	85.2	80.8
Costa Rica	83.8	84.2	82.4	80.6	64.7	63.6	51.5	50.4	95.2	95.7	95.4	93.8	76.3	80.9	82.0	77.0
Czech Republic	79.4	78.1	83.4	83.3	51.3	36.7	33.4	32.8	94.9	95.0	95.9	95.8	54.5	62.4	76.2	76.5
Denmark	84.2	83.6	82.0	81.8	73.4	72.0	60.5	60.1	91.7	92.3	90.1	89.7	66.6	66.8	78.3	79.1
Estonia	76.3	77.5	82.0	81.8	52.1	44.3	47.9	43.5	89.2	93.2	92.4	92.8	60.0	62.4	72.9	74.2
Finland	77.6	77.4	80.1	80.2	56.4	56.3	56.8	56.0	90.7	90.3	90.3	90.0	48.1	59.2	70.5	72.5
France	75.1	74.4	75.3	74.5	40.2	41.5	39.8	38.2	94.2	93.8	91.9	91.5	35.9	42.6	59.4	59.4
Germany	78.9	81.8	83.5	..	54.7	54.9	54.2	..	93.4	93.8	92.7	..	52.4	65.8	79.5	..
Greece	77.4	78.4	76.7	75.5	41.7	34.4	23.9	23.1	94.4	94.6	93.2	91.6	57.3	60.9	63.8	64.5
Hungary	67.5	68.6	80.0	80.3	41.8	29.5	37.2	35.3	84.4	87.2	93.4	93.1	34.1	42.1	70.6	74.0
Iceland[2]	89.8	90.5	87.7	86.1	70.1	78.2	73.8	67.3	96.1	94.5	91.9	91.2	94.7	89.3	86.8	85.8
Ireland	79.9	84.7	79.1	77.6	58.1	74.5	48.2	44.2	92.0	91.6	90.6	89.5	64.4	68.9	72.1	72.4
Israel[3]	77.5	77.0	74.2	72.1	61.9	58.3	45.2	41.4	87.5	87.0	86.3	84.4	63.5	70.3	76.9	76.4
Italy[2]	74.3	74.3	75.0	73.5	44.6	36.0	29.8	28.5	90.6	91.0	88.5	87.0	42.7	46.2	68.6	68.0
Japan	85.2	85.2	86.4	86.5	47.4	45.1	48.3	48.0	97.1	96.3	95.5	95.5	84.1	84.9	88.8	89.7
Korea	77.2	77.9	78.8	77.9	28.5	24.0	26.0	24.6	92.2	90.5	89.8	88.3	71.3	76.8	81.1	80.6
Latvia	72.3	77.9	79.8	80.7	43.4	49.2	39.6	37.9	87.8	91.6	91.2	92.0	53.9	67.6	73.0	76.8
Lithuania	74.3	71.3	79.2	79.9	41.6	31.6	38.9	38.9	89.7	87.7	91.4	91.4	57.9	63.3	74.6	76.6
Luxembourg	76.4	75.0	76.4	75.4	37.4	30.6	37.8	33.7	94.2	94.9	92.8	92.8	38.6	36.4	51.2	49.7
Mexico	84.7	83.8	81.8	79.3	67.7	62.6	57.3	54.0	95.2	95.2	94.0	91.7	79.3	80.2	77.2	73.8
Netherlands	83.2	83.3	85.1	84.8	71.6	70.6	69.7	67.7	93.2	93.5	91.5	91.5	50.9	61.1	81.0	81.5
New Zealand	83.1	84.9	85.2	85.2	65.8	67.1	63.8	63.9	91.1	92.1	92.9	92.4	71.9	81.9	84.0	85.0
Norway[2]	84.2	81.6	80.7	80.4	66.4	57.5	55.2	55.5	91.2	90.8	88.9	88.5	72.3	74.6	78.4	78.2
Poland	71.7	70.0	77.7	78.3	40.9	36.5	39.2	36.1	88.3	87.9	91.5	92.1	40.4	44.8	62.6	65.3
Portugal	78.9	79.2	78.3	76.9	50.5	44.7	36.1	32.2	92.5	92.9	92.7	91.8	64.5	63.2	70.9	70.3
Slovak Republic	76.8	75.8	78.8	78.3	49.4	38.7	36.8	34.9	93.9	93.0	93.2	92.3	41.0	56.9	62.8	64.5
Slovenia	71.9	75.8	78.0	77.1	41.7	47.6	39.1	33.9	90.6	91.3	94.4	94.2	34.6	46.7	55.7	56.3
Spain[2]	80.4	82.6	79.9	78.2	53.6	57.3	39.3	36.0	93.0	92.5	91.7	90.1	60.5	62.8	69.2	69.6
Sweden[2]	81.5	81.4	84.6	84.6	54.4	51.5	53.6	52.0	90.7	92.9	93.6	93.8	72.6	76.4	84.2	85.5
Switzerland	89.4	88.2	88.3	88.1	70.5	70.2	66.6	65.4	96.7	95.8	95.4	95.4	79.3	78.4	82.8	82.9
Turkey	76.9	74.4	78.2	74.6	57.6	51.6	55.9	50.1	89.5	88.1	91.0	88.4	53.4	42.9	53.9	50.0
United Kingdom[2]	84.1	83.1	83.2	82.7	73.3	69.4	61.9	60.5	91.9	91.2	92.0	91.7	63.4	68.8	73.3	72.9
United States[2]	83.9	81.7	79.5	78.3	68.6	61.5	56.6	54.6	91.6	90.9	89.1	87.9	67.3	69.6	71.5	70.7
OECD[4]	80.9	80.4	80.7	79.4	57.2	54.2	51.8	49.5	92.6	92.2	91.6	90.4	62.5	66.8	73.6	72.8
Brazil	..	84.9	80.6	75.9	..	72.3	63.0	55.2	..	92.8	90.2	86.7	..	72.3	67.5	63.2
China[5]	87.8	..	..	..	68.0	..	..	..	96.8	..	..	..	70.8	..	..	..
India	84.9	..	79.0	..	63.6	..	43.7	..	96.7	..	96.5	..	80.0	..	77.6	..
Indonesia	85.8	85.6	85.3	..	60.8	63.6	56.7	..	97.6	95.9	96.8	..	83.9	84.8	84.0	..
Russia	75.9	76.9	79.7	79.5	47.5	42.7	36.6	35.6	91.4	92.0	94.4	94.1	50.6	66.3	62.7	63.7
South Africa	..	64.3	65.8	60.6	..	32.0	28.1	22.7	..	84.0	83.5	77.8	..	59.1	54.0	51.1

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/uxwmcl

Table C3. Labour force participation rates by selected age groups - Women

As a percentage of the female population in each age group

Percentage

	Women (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	65.3	69.4	73.9	73.4	68.5	69.7	68.0	66.5	70.5	74.8	79.3	78.9	35.3	48.6	61.3	61.2
Austria	61.8	67.1	72.3	72.1	50.8	56.0	52.5	52.8	76.3	80.5	85.7	85.1	17.6	27.5	47.4	48.8
Belgium	56.4	60.4	64.9	64.5	31.8	31.6	29.5	26.5	72.7	78.0	80.3	80.3	17.1	27.5	48.9	49.8
Canada	70.4	73.8	75.2	73.8	62.9	67.3	65.4	61.7	78.5	81.7	83.5	82.3	41.4	51.9	60.1	59.5
Chile[1]	42.1	47.6	58.0	52.5	29.4	29.7	29.1	22.2	49.7	57.3	70.0	64.3	27.8	36.8	51.6	43.6
Colombia	..	54.2	62.2	56.8	..	39.5	44.2	39.3	..	64.2	72.8	67.2	..	35.2	48.6	43.3
Costa Rica	41.6	49.7	57.6	55.7	35.2	39.2	38.0	37.9	47.7	57.8	68.8	67.4	21.0	31.9	43.3	38.7
Czech Republic	63.7	61.5	69.8	69.2	40.6	26.9	25.9	21.4	81.8	80.3	81.8	81.1	23.7	35.2	60.1	62.8
Denmark	75.6	76.3	76.0	76.0	67.8	69.1	61.8	60.4	84.0	85.3	82.8	82.9	48.9	55.0	69.0	70.0
Estonia	66.3	68.8	75.7	76.9	37.1	32.1	43.0	40.9	84.1	83.4	82.7	83.3	39.4	61.0	77.1	82.4
Finland	72.1	73.9	76.6	76.6	51.1	53.7	53.6	51.4	85.0	85.6	84.9	84.9	45.2	58.3	72.4	73.5
France	62.4	64.5	68.2	67.6	32.8	34.4	34.0	33.1	78.7	81.4	83.1	82.6	27.9	37.6	54.6	54.9
Germany	63.3	69.4	74.9	..	48.2	49.0	48.4	..	76.9	80.6	83.3	..	33.5	48.9	70.0	..
Greece	50.5	54.8	60.4	59.3	36.2	27.5	21.0	19.3	62.0	69.2	77.6	76.3	25.4	28.2	37.3	38.6
Hungary	52.6	54.9	65.3	65.3	32.5	21.8	26.9	26.9	70.5	73.2	80.6	79.1	13.3	26.9	47.2	50.6
Iceland[2]	83.3	81.8	82.0	80.7	73.2	78.5	78.6	74.0	88.2	83.6	85.9	84.5	76.8	78.5	72.3	74.2
Ireland	56.2	66.2	67.2	65.9	50.1	64.2	45.9	43.1	64.5	72.4	76.6	75.5	27.4	40.3	55.0	55.4
Israel[3]	62.5	65.5	69.2	67.7	54.3	52.5	46.8	43.2	70.3	73.9	79.9	78.7	39.1	52.4	63.2	63.9
Italy[2]	46.3	50.6	56.5	54.7	34.3	25.4	22.0	18.8	57.9	64.1	67.8	66.0	16.1	23.4	47.0	46.9
Japan	59.6	61.9	72.6	72.5	46.6	44.7	50.1	49.2	66.5	70.1	80.0	80.0	49.7	52.5	67.1	67.8
Korea	52.1	54.9	60.0	59.1	37.0	33.2	32.9	31.4	57.8	62.0	67.8	66.6	48.8	47.5	57.0	57.2
Latvia	62.1	67.8	75.0	75.8	31.2	35.8	32.8	31.5	83.3	82.8	85.5	86.6	29.2	55.7	71.4	72.9
Lithuania	67.1	64.9	76.9	77.2	30.5	22.3	35.6	34.2	87.9	83.6	89.2	89.4	35.9	49.2	72.5	73.6
Luxembourg	51.7	58.9	67.4	68.8	30.6	22.3	31.3	31.0	64.9	74.7	84.0	85.3	16.8	29.1	38.4	41.9
Mexico	41.0	45.4	48.8	46.7	36.3	35.1	32.4	30.4	45.4	52.3	57.5	55.4	28.0	33.4	39.8	36.4
Netherlands	65.2	70.2	76.7	77.0	70.0	68.5	70.3	69.9	72.7	79.8	83.3	83.7	25.9	38.9	63.1	64.4
New Zealand	67.2	71.5	76.7	76.1	59.5	61.9	63.2	61.8	73.4	76.5	82.0	81.3	47.8	64.1	73.1	73.5
Norway[2]	76.1	75.9	75.7	75.8	62.4	60.1	55.8	55.7	83.4	83.9	83.5	83.4	59.4	64.5	69.5	70.3
Poland	59.9	56.5	63.4	63.6	34.8	29.3	31.0	27.4	76.5	75.6	79.0	79.1	23.7	20.6	40.0	41.7
Portugal	63.8	68.7	72.9	71.8	40.9	37.8	32.5	28.1	77.3	82.7	88.0	87.4	42.0	47.0	58.8	59.5
Slovak Republic	63.2	60.7	66.4	66.4	42.6	30.1	22.2	21.0	82.9	80.5	79.6	79.3	10.7	23.3	56.9	58.3
Slovenia	62.9	66.6	72.2	71.9	36.4	35.4	33.0	28.7	84.2	87.3	90.4	90.3	14.1	23.1	46.0	48.5
Spain[2]	52.9	62.8	70.1	68.7	43.3	47.5	34.3	30.7	62.8	73.3	82.3	80.8	22.6	32.7	54.4	55.7
Sweden[2]	76.4	76.8	81.1	80.3	51.2	52.6	55.9	51.7	85.6	87.1	88.7	88.4	65.9	69.6	79.0	79.6
Switzerland	71.6	75.0	80.2	80.0	66.0	64.5	66.3	64.6	78.0	81.9	87.0	86.9	51.3	60.3	69.1	70.0
Turkey	28.0	25.7	38.7	35.0	28.1	24.4	32.6	27.4	28.9	28.0	45.1	41.6	21.6	14.8	19.6	17.3
United Kingdom[2]	69.0	69.8	74.4	75.1	65.8	63.5	60.0	60.2	76.1	77.4	81.5	82.8	43.1	49.8	63.1	63.0
United States[2]	70.7	69.1	68.9	67.8	63.0	57.2	55.1	53.2	76.7	75.4	76.0	75.1	51.9	58.3	59.6	59.0
OECD[4]	59.2	60.7	65.0	63.8	46.5	44.4	44.4	42.2	68.0	69.8	74.0	72.8	38.3	45.1	55.7	55.2
Brazil	..	62.8	62.2	56.6	..	54.7	50.8	43.2	..	70.2	71.9	66.5	..	40.6	39.0	35.3
China[5]	76.7	..	..	..	67.8	..	..	..	84.0	..	..	..	47.2	..	..	..
India	36.0	..	22.9	..	26.9	..	10.6	..	41.5	..	29.0	..	30.0	..	19.7	..
Indonesia	53.2	51.7	54.1	..	43.1	41.7	39.5	..	58.1	56.2	59.6	..	52.6	50.5	53.8	..
Russia	66.2	69.2	69.2	69.5	39.7	36.0	29.7	28.8	85.3	86.6	87.1	87.3	27.8	44.2	42.3	44.2
South Africa	..	50.8	53.4	48.6	..	26.6	23.2	19.1	..	66.2	69.2	63.5	..	33.3	36.9	34.5

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/sgfcz8

Table D1. Unemployment rates by selected age groups - Total

As a percentage of the total labour force in each age group

Percentage

	Total (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	6.4	4.4	5.3	6.6	12.1	9.4	11.7	14.2	5.0	3.4	4.0	5.2	4.5	2.7	4.0	5.1
Austria	3.5	4.9	4.6	5.4	5.1	9.4	8.5	10.5	3.1	4.2	4.2	5.0	5.2	3.4	3.4	4.0
Belgium	7.0	7.5	5.4	5.6	17.5	18.8	14.2	15.3	6.1	6.6	4.8	5.0	3.0	4.2	4.1	4.2
Canada	6.9	6.1	5.8	9.6	12.7	10.9	11.0	20.1	5.7	5.1	4.8	7.8	5.5	5.2	5.4	8.0
Chile[1]	10.7	8.7	7.4	11.0	25.0	21.6	19.1	24.1	8.2	6.6	6.8	10.4	7.0	4.7	3.8	6.9
Colombia	..	11.5	10.8	16.4	..	22.2	20.8	27.1	..	9.0	9.0	14.7	..	5.9	6.3	10.5
Costa Rica	5.2	4.6	12.0	19.7	11.0	10.8	32.0	41.9	3.2	2.8	9.0	16.6	2.8	2.0	5.8	12.0
Czech Republic	8.8	5.4	2.1	2.6	17.0	10.7	5.6	8.0	7.7	4.9	1.8	2.4	5.2	4.6	2.0	2.0
Denmark	4.5	3.4	4.9	5.7	6.6	7.5	10.1	11.6	4.1	2.7	4.4	4.8	3.8	2.8	2.4	4.1
Estonia	14.8	4.7	4.6	7.0	22.2	9.9	10.7	17.9	14.0	4.2	4.0	5.9	11.5	3.6	4.0	6.5
Finland	9.8	6.9	6.8	7.9	20.3	15.7	16.3	20.0	8.0	5.3	5.1	5.8	9.4	6.5	6.6	7.5
France	8.6	8.0	8.5	8.1	16.7	19.4	19.6	20.2	7.8	7.0	7.5	7.1	5.9	4.5	6.8	5.8
Germany	7.8	8.7	3.2	..	8.4	11.7	5.8	..	7.0	8.0	3.0	..	12.3	10.3	2.7	..
Greece	11.6	8.5	17.5	16.5	29.2	22.7	35.2	35.0	9.7	7.8	17.1	16.2	3.9	3.4	13.4	12.2
Hungary	6.4	7.5	3.5	4.3	12.7	18.0	11.4	12.8	5.7	6.9	3.0	3.8	3.0	4.4	2.2	3.0
Iceland[2]	2.3	2.5	4.0	6.7	4.7	7.5	9.3	11.8	1.7	1.5	3.3	6.2	1.7	1.0	2.0	4.0
Ireland	4.0	4.9	4.5	5.0	6.9	9.2	12.5	15.3	3.6	4.3	3.9	4.0	0.0	0.6	1.0	1.6
Israel[3]	11.2	9.4	3.9	4.5	17.3	16.3	6.7	7.9	9.4	7.8	3.5	4.0	8.7	6.8	2.9	3.1
Italy[2]	10.6	6.2	10.2	9.4	29.7	20.4	29.2	29.4	8.5	5.3	9.8	9.0	4.5	2.4	5.4	5.0
Japan	5.0	4.1	2.5	3.0	9.2	7.7	3.7	4.6	4.1	3.7	2.4	2.8	5.6	3.4	2.0	2.6
Korea	4.6	3.4	3.8	4.0	10.8	8.7	10.4	10.5	4.0	3.1	3.5	3.7	2.9	2.2	3.0	3.3
Latvia	14.5	6.2	6.5	8.4	22.1	10.6	12.4	14.9	14.0	5.7	5.9	7.9	9.6	4.5	6.6	8.1
Lithuania	16.7	4.3	6.5	8.8	30.2	8.4	11.9	19.6	15.6	4.0	5.8	7.4	11.2	3.7	6.9	9.9
Luxembourg	2.4	4.1	5.6	6.8	6.4	15.2	17.0	23.2	2.0	3.4	4.7	5.7	1.4	2.1	4.1	4.1
Mexico	2.6	3.8	3.7	4.5	5.1	7.2	7.2	8.0	1.8	2.9	3.0	4.0	1.4	1.9	1.9	2.6
Netherlands	3.1	4.2	3.4	3.9	6.1	9.4	6.7	9.1	2.5	3.0	2.6	2.9	2.1	4.4	3.2	2.7
New Zealand	6.2	3.8	4.3	4.8	13.5	10.1	11.3	12.4	4.7	2.6	3.0	3.5	4.7	1.4	2.7	2.8
Norway[2]	3.3	2.5	3.8	4.5	10.5	7.4	10.0	11.3	2.4	1.9	3.2	3.9	1.0	0.9	1.6	2.0
Poland	16.4	9.7	3.3	3.2	35.2	21.7	9.9	10.8	13.9	8.4	2.9	2.8	9.4	6.8	2.4	2.1
Portugal	4.2	8.5	6.7	7.1	8.6	16.7	18.3	22.6	3.5	7.7	5.7	6.0	3.2	6.5	6.2	5.9
Slovak Republic	18.8	11.0	5.8	6.8	37.0	20.1	16.1	19.3	15.5	10.1	5.3	6.2	12.3	8.1	4.7	4.8
Slovenia	6.9	5.0	4.5	5.0	16.3	10.1	8.1	14.2	5.6	4.5	4.2	4.6	5.3	3.3	4.5	3.7
Spain[2]	13.9	8.3	14.2	15.6	25.3	18.1	32.5	38.3	12.3	7.2	12.9	14.5	9.4	6.0	12.6	12.5
Sweden[2]	5.9	6.2	6.9	8.5	11.7	19.2	20.0	24.0	4.9	4.4	5.3	6.8	6.1	3.9	4.6	5.8
Switzerland	2.7	3.7	4.5	5.0	4.8	7.1	8.0	8.6	2.3	3.1	4.1	4.6	2.7	3.1	3.9	3.9
Turkey	6.7	10.5	14.0	13.4	13.1	20.0	25.4	25.1	4.9	8.5	12.2	11.8	2.1	4.3	8.1	7.2
United Kingdom[2]	5.4	5.2	4.0	4.6	11.7	13.7	11.3	13.3	4.3	3.8	2.9	3.3	4.2	2.9	2.9	3.7
United States[2]	4.0	4.7	3.7	8.1	9.3	10.5	8.4	14.9	3.1	3.7	3.1	7.1	2.5	3.1	2.6	6.7
OECD[4]	6.3	6.0	5.6	7.3	12.1	12.6	11.8	15.0	5.3	5.1	4.9	6.5	4.9	4.0	3.8	5.2
Brazil	..	8.3	11.9	13.9	..	16.8	26.7	31.3	..	6.1	9.2	11.1	..	2.9	5.7	7.9
China[5]	3.7	..	..	..	8.8	..	..	..	2.8	..	..	..	0.4	..	..	..
India	4.4	..	8.9	..	10.1	..	28.1	..	2.9	..	5.7	..	1.6	..	3.3	..
Indonesia	6.3	9.8	5.5	..	19.9	25.3	18.6	..	2.9	5.9	3.2	..	0.4	2.2	1.1	..
Russia	10.7	6.1	4.6	5.8	20.7	14.4	15.5	17.3	9.2	5.1	4.1	5.3	7.3	3.1	2.9	3.6
South Africa	..	22.3	28.7	29.4	..	46.5	57.0	59.3	..	18.6	26.4	27.6	..	5.6	9.9	11.2

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/p3b982

Table D2. Unemployment rates by selected age groups - Men

As a percentage of the male labour force in each age group

Percentage

	Men (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	6.6	4.1	5.4	6.8	12.9	9.5	12.8	15.3	5.1	3.0	3.8	5.1	5.3	2.8	4.1	5.4
Austria	3.3	4.6	4.7	5.6	5.0	9.3	9.2	11.3	2.8	3.8	4.2	5.0	5.4	3.4	3.8	4.4
Belgium	5.8	6.7	5.8	5.8	15.3	17.1	16.0	15.5	4.9	5.9	5.1	5.1	3.0	3.6	4.3	4.6
Canada	7.0	6.5	6.2	9.8	13.8	12.1	12.2	20.7	5.7	5.4	5.0	7.8	5.5	5.2	5.8	8.3
Chile[1]	9.7	7.2	6.9	10.9	21.2	18.2	18.5	22.9	7.6	5.4	6.2	10.4	8.0	4.8	3.8	6.9
Colombia	..	8.9	8.3	13.0	..	17.8	16.5	21.6	..	6.6	6.5	11.4	..	6.3	6.6	10.3
Costa Rica	4.4	3.3	9.5	15.7	9.3	8.3	28.4	35.3	2.8	1.7	6.3	12.7	2.6	2.0	4.8	10.3
Czech Republic	7.4	4.3	1.8	2.3	16.7	10.6	5.4	7.2	6.0	3.5	1.5	2.1	5.0	4.5	1.9	1.7
Denmark	3.9	3.0	4.7	5.4	6.8	7.6	10.4	12.6	3.4	2.2	4.1	4.2	3.3	2.3	2.7	4.2
Estonia	16.0	5.5	4.1	7.1	21.7	11.8	9.8	17.4	15.0	4.2	3.2	5.8	15.0	6.9	5.1	7.9
Finland	9.1	6.5	7.3	8.1	18.9	14.8	16.9	20.6	7.2	4.8	5.3	5.9	9.3	6.9	8.1	8.1
France	7.4	7.7	8.6	8.2	15.6	18.9	20.8	20.3	6.6	6.5	7.3	7.0	5.0	4.8	6.8	5.8
Germany	7.6	8.6	3.6	..	9.2	12.2	6.6	..	6.6	7.8	3.3	..	11.5	9.7	3.0	..
Greece	7.6	5.3	14.1	13.7	21.6	15.5	33.5	31.4	6.2	4.7	13.3	13.1	3.7	2.9	12.1	11.6
Hungary	7.1	7.2	3.4	4.1	13.8	17.4	11.9	11.9	6.2	6.5	2.8	3.6	3.7	4.8	2.3	3.2
Iceland[2]	1.8	2.4	4.5	6.8	5.7	8.4	12.8	12.6	1.1	1.3	3.2	6.5	0.5	0.9	2.4	3.9
Ireland	4.2	5.0	5.1	5.3	6.8	10.2	14.2	15.3	4.2	4.2	4.2	4.3	0.0	0.9	1.7	2.8
Israel[3]	11.1	9.0	3.8	4.7	17.3	15.3	6.1	7.6	9.1	7.4	3.4	4.3	10.4	7.4	3.0	3.6
Italy[2]	8.2	5.0	9.3	8.6	25.4	18.4	27.8	27.9	6.3	4.0	8.7	8.0	4.4	2.6	5.8	5.1
Japan	5.1	4.1	2.6	3.1	10.4	8.3	3.9	5.0	3.9	3.6	2.5	3.0	6.8	4.1	2.2	2.9
Korea	5.1	3.8	4.0	4.0	13.5	11.1	11.1	11.1	4.5	3.6	3.6	3.6	3.9	2.7	3.7	3.6
Latvia	15.5	6.7	7.3	9.4	20.9	11.0	14.2	14.4	15.3	6.1	6.6	8.9	10.7	4.9	7.3	9.6
Lithuania	19.1	4.3	7.3	9.6	32.1	7.0	14.1	21.5	17.7	3.9	6.6	8.1	13.7	4.1	7.0	10.7
Luxembourg	1.8	3.6	5.7	6.6	5.7	13.5	17.8	24.8	1.4	2.8	4.6	5.2	2.0	2.3	4.7	4.8
Mexico	2.3	3.5	3.6	4.7	4.4	6.6	6.8	7.6	1.5	2.7	3.0	4.2	1.5	2.4	2.3	3.2
Netherlands	2.5	3.3	3.4	3.7	5.3	9.4	7.3	9.2	1.9	1.9	2.5	2.8	2.5	4.3	3.3	2.6
New Zealand	6.4	3.5	4.0	4.4	14.5	10.0	11.1	12.2	4.6	2.2	2.6	3.0	5.5	1.5	2.8	2.9
Norway[2]	3.4	2.6	4.1	4.8	10.5	8.3	10.4	12.1	2.5	1.9	3.4	4.1	1.2	1.0	2.0	2.3
Poland	14.6	9.1	3.1	3.1	33.3	20.0	9.6	10.3	12.1	7.8	2.5	2.6	9.1	7.4	2.6	2.5
Portugal	3.3	7.0	6.1	6.9	6.3	13.8	15.5	21.0	2.7	6.1	5.0	5.6	3.6	7.1	6.2	6.6
Slovak Republic	19.0	9.8	5.7	6.5	39.7	20.3	14.0	18.3	15.2	8.6	5.2	5.8	13.5	7.7	4.0	4.4
Slovenia	6.6	4.1	4.1	4.5	14.6	9.4	7.4	12.7	5.4	3.4	3.7	4.0	6.6	3.0	4.6	3.5
Spain[2]	9.6	6.5	12.5	14.0	19.4	15.2	30.9	37.1	8.0	5.5	11.0	12.6	8.6	5.0	11.7	11.5
Sweden[2]	6.3	6.0	6.8	8.6	12.1	18.6	20.4	25.1	5.3	4.1	5.0	6.5	6.8	4.3	5.1	6.5
Switzerland	2.3	3.0	4.3	4.8	5.6	6.8	8.8	9.2	1.6	2.3	3.5	4.2	3.0	2.6	4.1	4.5
Turkey	6.8	10.2	12.7	12.6	13.7	19.6	22.5	22.5	5.0	8.5	11.0	11.2	2.9	5.4	9.5	8.4
United Kingdom[2]	6.0	5.5	4.2	5.0	13.2	15.3	13.2	14.6	4.7	3.7	2.8	3.5	5.2	3.5	3.2	4.4
United States[2]	3.9	4.8	3.8	7.9	9.7	11.6	9.4	15.0	2.9	3.7	3.0	6.9	2.4	3.2	2.5	6.4
OECD[4]	5.9	5.7	5.4	7.1	12.0	12.6	12.0	14.8	4.8	4.7	4.7	6.2	5.3	4.2	4.0	5.3
Brazil	..	6.1	9.9	11.9	..	12.9	22.7	26.8	..	4.2	7.2	9.3	..	3.0	5.9	7.9
China[5]	3.6	..	..	..	9.2	..	..	..	2.7	..	..	..	0.6	..	..	..
India	4.5	..	8.9	..	10.1	..	27.8	..	2.9	..	5.6	..	1.6	..	3.4	..
Indonesia	5.9	8.6	5.6	..	19.7	23.3	18.4	..	2.7	5.0	3.4	..	0.4	2.3	1.2	..
Russia	10.9	6.4	4.8	5.9	19.5	14.5	15.1	16.4	9.6	5.4	4.1	5.3	7.5	3.5	3.6	4.4
South Africa	..	18.8	27.0	28.0	..	41.1	53.2	55.4	..	15.1	24.7	26.1	..	6.4	11.7	13.0

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/f17gaq

Table D3. Unemployment rates by selected age groups - Women

As a percentage of the female labour force in each age group

Percentage

	Women (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	6.1	4.8	5.3	6.5	11.2	9.2	10.6	13.2	4.9	3.9	4.2	5.3	3.2	2.6	3.8	4.8
Austria	3.8	5.4	4.4	5.3	5.2	9.6	7.8	9.5	3.5	4.7	4.2	5.0	4.7	3.5	2.9	3.6
Belgium	8.7	8.5	5.0	5.4	20.3	20.9	12.3	15.1	7.6	7.4	4.4	4.9	2.9	5.3	3.9	3.6
Canada	6.7	5.8	5.4	9.5	11.4	9.8	9.6	19.4	5.8	4.9	4.5	7.8	5.5	5.1	4.8	7.7
Chile[1]	12.7	11.1	8.1	11.1	31.3	26.9	20.0	25.8	9.4	8.7	7.5	10.3	4.3	4.6	3.7	6.9
Colombia	..	15.1	14.1	21.0	..	28.6	26.7	34.9	..	12.3	12.2	19.2	..	5.0	5.9	10.7
Costa Rica	6.7	6.9	15.7	25.6	14.2	15.1	37.5	52.1	4.2	4.6	12.8	22.2	3.3	2.1	7.5	15.1
Czech Republic	10.6	6.8	2.4	3.0	17.4	11.0	6.0	9.1	9.9	6.7	2.3	2.8	5.4	4.8	2.0	2.4
Denmark	5.1	3.9	5.1	6.0	6.4	7.4	9.7	10.6	4.9	3.2	4.7	5.5	4.6	3.4	2.1	4.0
Estonia	13.5	3.9	5.1	6.9	23.0	7.2	11.7	18.4	12.9	4.2	4.9	6.0	7.5	0.9	3.2	5.5
Finland	10.6	7.3	6.3	7.6	21.8	16.8	15.5	19.4	8.8	5.8	4.9	5.8	9.4	6.0	5.2	6.9
France	10.0	8.4	8.4	8.0	18.0	20.1	18.2	19.9	9.2	7.5	7.6	7.1	7.0	4.2	6.8	5.8
Germany	8.1	8.9	2.8	..	7.5	11.1	4.8	..	7.5	8.1	2.6	..	13.6	11.2	2.4	..
Greece	17.5	13.0	21.7	20.0	38.2	31.7	37.1	39.3	15.1	12.0	21.7	20.0	4.3	4.3	15.4	13.0
Hungary	5.7	7.8	3.5	4.5	11.2	18.9	10.6	14.0	5.0	7.3	3.2	4.1	1.6	3.9	2.1	2.7
Iceland[2]	2.8	2.6	3.5	6.5	3.6	6.5	5.8	11.1	2.4	1.8	3.4	5.9	3.2	1.0	1.5	4.2
Ireland	3.6	4.8	3.9	4.6	7.1	7.9	10.6	15.3	2.9	4.4	3.5	3.7	0.0	0.0	0.0	0.0
Israel[3]	11.2	9.9	4.0	4.2	17.4	17.3	7.2	8.2	9.7	8.4	3.6	3.7	6.0	6.0	2.7	2.4
Italy[2]	14.6	7.9	11.3	10.4	35.4	23.3	31.2	31.8	12.1	7.1	11.3	10.4	4.7	2.1	5.0	4.9
Japan	4.7	3.9	2.3	2.7	7.9	7.1	3.4	4.1	4.4	3.9	2.3	2.7	3.6	2.4	1.8	2.1
Korea	3.8	2.8	3.6	4.0	9.1	7.2	9.9	10.1	3.0	2.4	3.3	3.7	1.6	1.3	2.1	2.7
Latvia	13.4	5.7	5.7	7.4	23.7	10.0	10.1	15.5	12.8	5.3	5.2	6.9	8.0	4.1	6.1	6.8
Lithuania	14.3	4.4	5.7	8.0	27.5	10.4	9.3	17.3	13.5	4.0	5.0	6.7	8.1	3.4	6.8	9.1
Luxembourg	3.2	4.7	5.5	7.0	7.3	17.5	16.0	21.3	2.9	4.0	4.8	6.2	0.0	1.7	3.4	3.3
Mexico	3.4	4.1	3.7	4.3	6.2	8.2	8.1	8.8	2.4	3.2	3.1	3.8	0.9	1.0	1.1	1.5
Netherlands	3.9	5.2	3.4	4.0	7.0	9.3	6.2	9.0	3.3	4.3	2.7	3.0	1.5	4.7	3.1	2.9
New Zealand	6.0	4.0	4.6	5.2	12.4	10.2	11.5	12.6	4.8	3.0	3.5	4.1	3.6	1.3	2.7	2.8
Norway[2]	3.2	2.5	3.5	4.2	10.5	6.6	9.5	10.5	2.2	1.9	2.9	3.6	0.8	0.8	1.1	1.7
Poland	18.4	10.4	3.7	3.3	37.3	23.8	10.3	11.5	16.0	9.1	3.3	3.0	9.7	5.7	2.0	1.6
Portugal	5.2	10.1	7.3	7.3	11.6	20.3	21.4	24.5	4.4	9.5	6.3	6.4	2.6	5.8	6.3	5.1
Slovak Republic	18.6	12.6	6.0	7.1	33.8	19.9	19.7	21.2	15.8	11.9	5.3	6.7	8.7	9.1	5.4	5.3
Slovenia	7.2	6.0	5.0	5.7	18.5	11.2	9.2	16.2	5.8	5.6	4.8	5.3	2.5	3.8	4.4	4.1
Spain[2]	20.6	10.7	16.1	17.5	32.9	21.7	34.5	39.7	18.9	9.5	15.0	16.6	11.3	7.7	13.8	13.7
Sweden[2]	5.4	6.5	7.0	8.5	11.3	19.8	19.5	22.8	4.5	4.7	5.6	7.1	5.4	3.5	4.2	5.1
Switzerland	3.2	4.6	4.8	5.1	3.9	7.4	7.2	8.0	3.1	4.1	4.7	5.1	2.3	3.8	3.6	3.2
Turkey	6.5	11.3	16.8	15.1	11.9	20.8	30.6	29.9	4.6	8.8	14.7	13.0	0.5	1.1	4.2	3.8
United Kingdom[2]	4.7	4.9	3.7	4.2	10.2	12.0	9.3	12.0	3.8	3.8	2.9	3.1	2.8	2.1	2.5	2.9
United States[2]	4.1	4.6	3.6	8.3	8.9	9.4	7.3	14.8	3.3	3.8	3.1	7.3	2.5	3.0	2.7	7.1
OECD[4]	6.9	6.4	5.8	7.6	12.3	12.6	11.6	15.4	6.1	5.6	5.3	6.8	4.4	3.7	3.5	5.1
Brazil	..	11.0	14.3	16.2	..	21.9	31.8	37.1	..	8.5	11.4	13.1	..	2.7	5.5	7.9
China[5]	3.8	..	..	..	8.4	..	..	..	2.9	..	..	..	0.2	..	..	..
India	4.2	..	8.8	..	10.2	..	29.5	..	2.6	..	6.3	..	1.6	..	3.1	..
Indonesia	7.0	11.7	5.5	..	20.1	28.4	19.0	..	3.2	7.5	2.9	..	0.4	2.1	0.9	..
Russia	10.4	5.7	4.5	5.8	22.2	14.4	15.9	18.5	8.8	4.8	4.0	5.4	7.1	2.6	2.3	2.9
South Africa	..	26.4	30.7	31.3	..	52.8	61.7	64.0	..	22.6	28.5	29.4	..	4.5	7.8	8.9

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. New labour force survey since April 2010. To remove the break, data prior to 2010 are spliced using *new-to-old* chaining coefficients based on data of the fourth quarter of 2009.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Redesigned monthly labour force survey since January 2012. To remove the break, data prior to 2012 are spliced using *new-to-old* chaining coefficients between monthly and quarterly surveys based on data of the fourth quarter of 2011.
4. Weighted average.
5. Data up to 2010 for China can be found in the database.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/fu4sq9

Table E. Employment/population ratios by educational attainment, 2019

Persons aged 25-64, as a percentage of the population in each gender

Percentage

	Total			Men			Women		
	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education
Australia	61.9	79.0	84.6	70.5	85.7	89.6	53.8	70.6	80.5
Austria	55.6	78.1	86.5	63.1	81.8	89.6	50.5	74.0	83.3
Belgium	47.4	74.6	86.4	56.0	80.2	89.2	37.4	68.2	84.2
Canada	56.4	74.5	83.1	65.0	80.0	86.6	44.7	67.2	80.3
Chile[1]	62.4	71.9	84.5	82.1	85.4	90.9	45.2	59.9	79.1
Colombia	69.5	73.8	81.4	87.7	87.1	88.8	50.3	61.3	75.6
Costa Rica	65.6	72.8	82.2	85.8	88.3	89.2	44.6	59.1	76.0
Czech Republic	55.3	84.0	86.6	66.0	90.5	94.9	47.4	76.6	79.3
Denmark	60.7	82.1	87.6	69.5	85.8	90.7	49.9	77.5	85.2
Estonia	62.4	80.6	86.6	67.3	84.9	92.4	53.6	74.8	83.2
Finland	54.9	76.6	86.4	61.0	78.9	88.0	44.6	73.6	85.3
France	52.5	73.2	85.6	60.9	77.2	87.9	44.6	68.9	83.7
Germany	61.9	82.8	89.3	71.0	86.1	92.4	54.0	79.7	85.7
Greece	52.4	62.3	76.0	66.6	75.2	82.5	36.9	49.6	70.2
Hungary	57.0	79.9	85.8	68.0	87.3	93.8	48.0	71.1	80.2
Iceland	76.0	86.3	91.6	81.8	91.1	93.5	68.4	79.0	90.2
Ireland	53.4	74.7	85.6	65.1	84.4	90.4	37.8	64.8	81.6
Israel	51.1	73.5	87.7	64.3	77.6	90.6	36.3	68.4	85.4
Italy	52.8	71.4	81.4	67.9	81.5	86.1	36.2	61.3	77.9
Japan[2]	..	..	..	..	..	..	..	..	..
Korea	63.6	72.2	77.7	72.2	82.9	87.7	57.8	61.1	66.2
Latvia	61.9	79.0	84.6	70.5	85.7	89.6	53.8	70.6	80.5
Lithuania	55.2	74.8	91.3	59.5	78.0	92.3	47.5	71.0	90.5
Luxembourg	61.6	74.7	85.6	67.8	77.8	89.6	55.3	70.8	81.6
Mexico	65.6	71.5	79.7	88.2	89.1	88.1	46.0	56.0	71.8
Netherlands	63.3	82.3	89.7	75.0	87.0	91.9	51.9	77.5	87.5
New Zealand	71.7	82.9	88.3	79.6	89.7	92.5	63.9	76.0	85.0
Norway	61.5	80.8	89.5	67.4	85.0	90.7	54.9	75.2	88.5
Poland	45.0	70.7	89.0	57.9	81.1	93.6	30.7	58.4	85.8
Portugal	70.3	84.8	88.6	77.5	87.1	89.9	62.5	82.6	87.7
Slovak Republic	38.0	78.4	83.8	45.8	83.6	91.3	31.4	72.3	78.4
Slovenia	50.6	76.8	90.3	57.4	80.9	92.8	44.0	71.2	88.5
Spain	58.5	71.9	81.9	68.3	78.9	85.5	47.2	65.1	78.9
Sweden	67.0	85.6	90.3	75.5	88.2	91.2	56.4	82.0	89.5
Switzerland	68.8	82.1	89.4	76.7	86.9	93.0	62.0	77.8	85.0
Turkey	50.1	60.0	73.6	71.9	78.9	83.0	28.9	32.8	62.2
United Kingdom[3]	65.4	81.4	86.6	74.5	86.7	90.0	56.0	75.8	83.7
United States	56.1	71.0	82.7	68.1	77.6	87.5	42.1	64.0	78.7
OECD[4]	59.1	76.5	85.6	69.5	83.4	90.1	48.1	68.8	81.6
Brazil[5]	58.8	72.0	82.6	73.3	83.2	88.8	43.9	62.1	78.4
Indonesia[1]	73.0	74.1	85.1	91.3	90.8	91.9	56.7	52.4	78.5
Russia[5]	54.0	73.5	83.2	62.0	81.4	89.7	44.1	63.6	78.6
South Africa[5]	43.9	57.1	84.6	51.5	64.4	88.2	36.3	50.1	81.2

.. Not available

Note: Data refer to ISCED 2011, except for Brazil and the Russian Federation (ISCED-97). See the description of the levels of education in www.oecd.org/els/emp/definitions-education.pdf.

1. Year of reference 2017.
2. Education levels are grouped somewhat differently. Data can be found in the database.
3. Includes completion of intermediate upper secondary programmes. See notes to Table A5.1 of *Education at a Glance 2017*, https://dx.doi.org/10.1787/eag-2017-en.
4. Unweighted average.
5. Year of reference 2018.

Source: OECD (2020), *Education at a Glance 2020: OECD Indicators*, www.oecd.org/education/education-at-a-glance.

StatLink https://stat.link/3f9tvg

Table F. Labour force participation rates by educational attainment, 2019

Persons aged 25-64, as a percentage of the population in each gender

Percentage

	Total			Men			Women		
	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education
Australia	65.8	82.4	87.1	75.7	88.8	92.3	56.5	74.1	82.9
Austria	61.7	81.0	89.0	71.7	85.0	91.8	55.1	76.6	86.1
Belgium	52.9	78.2	89.0	62.4	84.0	92.0	41.8	71.5	86.6
Canada	61.8	79.1	86.6	71.0	85.1	90.3	49.1	71.1	83.6
Chile[1]	66.6	77.3	89.5	86.9	91.3	95.8	48.9	64.9	84.2
Colombia	75.0	81.7	89.7	92.9	93.9	95.9	56.1	70.3	84.9
Costa Rica	72.6	79.8	87.5	91.8	93.9	93.6	52.5	67.3	82.2
Czech Republic	61.5	85.4	87.5	72.5	91.8	95.7	53.5	78.2	80.1
Denmark	64.8	85.0	91.3	74.2	88.5	94.3	53.1	80.9	89.0
Estonia	67.7	84.5	89.0	72.1	88.1	94.7	59.7	79.6	85.5
Finland	61.5	81.7	89.9	68.0	84.3	92.0	50.5	78.2	88.4
France	60.7	79.4	89.8	69.9	83.1	92.4	52.0	75.5	87.6
Germany	67.1	85.0	91.0	78.0	88.7	94.1	57.6	81.5	87.3
Greece	65.5	76.8	86.0	80.2	88.0	89.8	49.5	65.8	82.6
Hungary	62.0	82.0	87.0	73.5	89.4	95.0	52.6	73.2	81.4
Iceland	78.6	89.0	93.8	84.6	93.5	95.8	70.6	82.0	92.3
Ireland	57.2	78.3	88.1	69.9	88.2	93.1	40.2	68.2	84.1
Israel	53.3	76.5	90.2	67.2	80.6	93.1	37.6	71.5	87.9
Italy	60.6	77.6	86.3	76.6	87.4	90.4	42.8	67.8	83.2
Japan[2]	..	..	..	..	..	..	..	..	..
Korea	66.2	74.9	80.2	76.5	86.3	90.6	59.2	63.0	68.4
Latvia	73.0	80.8	92.6	78.7	85.2	95.1	63.4	75.9	91.2
Lithuania	66.7	81.2	93.9	70.8	84.6	95.4	59.5	77.2	92.9
Luxembourg	65.2	78.9	89.0	72.2	81.2	93.2	58.2	75.9	84.8
Mexico	67.2	73.8	83.0	90.4	92.0	91.7	47.0	57.7	74.8
Netherlands	66.1	84.6	91.6	78.0	89.4	93.9	54.4	79.7	89.3
New Zealand	75.2	85.4	90.3	83.2	91.9	94.3	67.2	78.7	87.1
Norway	65.5	83.0	91.4	72.2	87.3	92.8	57.7	77.4	90.2
Poland	49.0	72.9	90.6	62.8	83.1	95.2	33.7	60.7	87.5
Portugal	75.1	90.0	93.0	82.1	91.8	94.2	67.5	88.3	92.2
Slovak Republic	52.8	82.0	85.8	64.4	87.1	93.1	42.8	76.0	80.4
Slovenia	55.7	80.4	93.1	64.3	83.9	94.9	47.2	75.4	91.8
Spain	72.2	82.4	89.1	81.2	88.0	91.8	61.7	76.9	86.8
Sweden	78.0	89.0	93.5	85.3	91.4	95.0	68.8	85.5	92.5
Switzerland	74.8	85.5	92.4	83.3	90.3	95.6	67.5	81.2	88.5
Turkey	57.2	68.2	82.4	82.1	87.1	90.6	33.1	40.8	72.4
United Kingdom[3]	68.8	83.6	88.5	78.2	89.0	91.9	59.0	78.0	85.5
United States	59.9	74.0	84.5	72.6	80.9	89.4	45.4	66.5	80.3
OECD[4]	65.0	80.8	89.0	76.2	87.7	93.3	53.3	73.3	85.2
Brazil[5]	65.1	80.0	87.4	80.2	90.4	92.9	49.7	70.8	83.8
Indonesia[1]	74.2	76.4	87.5	93.1	93.6	94.6	57.4	54.0	80.5
Russia[5]	61.0	77.6	85.5	69.7	85.6	92.2	50.1	67.7	80.8
South Africa[5]	58.8	76.8	90.2	68.2	84.3	93.4	49.3	69.6	87.2

.. Not available

Note: Data refer to ISCED 2011, except for Brazil and the Russian Federation (ISCED-97). See the description of the levels of education in www.oecd.org/els/emp/definitions-education.pdf.

1. Year of reference 2017.
2. Education levels are grouped somewhat differently. Data can be found in the database.
3. Includes completion of intermediate upper secondary programmes. See notes to Table A5.1 of *Education at a Glance 2017*, https://dx.doi.org/10.1787/eag-2017-en.
4. Unweighted average.
5. Year of reference 2018.

Source: OECD (2020), *Education at a Glance 2020: OECD Indicators*, www.oecd.org/education/education-at-a-glance.

StatLink https://stat.link/awtb0c

Table G. Unemployment rates by educational attainment, 2019

Persons aged 25-64, as a percentage of the labour force in each gender

Percentage

	Total			Men			Women		
	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education	Below upper secondary education	Upper secondary and post-secondary non-tertiary education	Tertiary education
Australia	5.9	4.1	2.9	6.8	3.6	2.9	4.8	4.8	2.9
Austria	10.0	3.6	2.8	12.0	3.8	2.5	8.3	3.4	3.2
Belgium	10.4	4.6	2.9	10.3	4.5	3.0	10.5	4.7	2.8
Canada	8.6	5.8	4.0	8.5	6.0	4.1	8.9	5.4	3.9
Chile[1]	6.3	7.0	5.6	5.5	6.5	5.1	7.6	7.7	6.1
Colombia	7.3	9.7	9.3	5.6	7.2	7.4	10.4	12.8	10.9
Costa Rica	9.6	8.8	6.1	6.6	6.0	4.7	15.2	12.3	7.6
Czech Republic	10.2	1.6	1.0	9.0	1.4	0.8	11.3	2.0	1.1
Denmark	6.2	3.5	4.1	6.4	3.1	3.8	6.0	4.1	4.3
Estonia	7.8	4.6	2.6	6.7	3.6	2.5	10.3	6.0	2.8
Finland	10.7	6.2	3.9	10.3	6.4	4.4	11.8	5.9	3.5
France	13.5	7.9	4.7	12.9	7.2	4.9	14.2	8.7	4.5
Germany	7.7	2.6	1.8	9.0	3.0	1.8	6.3	2.3	1.8
Greece	20.0	18.8	11.6	17.0	14.5	8.1	25.4	24.6	15.0
Hungary	8.1	2.5	1.4	7.5	2.4	1.2	8.7	2.8	1.5
Iceland	3.2	3.0	2.3	3.3	2.6	2.4	3.1	3.6	2.3
Ireland	6.6	4.6	2.9	6.8	4.4	2.8	6.0	4.9	2.9
Israel	4.2	4.0	2.8	4.4	3.8	2.7	3.7	4.4	2.9
Italy	12.8	8.0	5.6	11.4	6.7	4.7	15.5	9.6	6.4
Japan[2]	..	..	..	..	..	..	..	..	..
Korea	3.9	3.5	3.2	5.6	3.9	3.2	2.4	3.0	3.2
Latvia	11.0	7.0	3.6	10.8	7.1	4.2	11.5	6.9	3.3
Lithuania	17.3	8.0	2.8	15.9	7.9	3.2	20.2	8.1	2.6
Luxembourg	5.5	5.2	3.9	..	..	3.9	..	6.7	3.8
Mexico	2.3	3.1	4.0	2.5	3.1	4.0	2.2	3.0	4.0
Netherlands	4.2	2.8	2.1	3.9	2.7	2.0	4.6	2.8	2.1
New Zealand	4.6	2.9	2.2	4.3	2.4	1.9	4.9	3.4	2.4
Norway	6.0	2.7	2.1	6.7	2.7	2.2	4.9	2.7	1.9
Poland	8.2	3.0	1.8	7.8	2.4	1.6	8.9	3.8	2.0
Portugal	6.4	5.8	4.8	5.7	5.2	4.5	7.4	6.4	4.9
Slovak Republic	27.9	4.4	2.3	29.0	4.0	2.0	26.5	4.9	2.6
Slovenia	9.1	4.4	3.0	10.7	3.7	2.2	7.0	5.6	3.5
Spain	18.9	12.7	8.1	15.8	10.3	6.9	23.5	15.3	9.2
Sweden	14.1	3.8	3.5	11.6	3.6	3.9	18.1	4.1	3.2
Switzerland	8.1	2.5	1.4	7.5	2.4	1.2	8.7	2.8	1.5
Turkey	12.4	11.9	10.7	12.4	9.4	8.4	12.5	19.7	14.2
United Kingdom[3]	4.9	2.7	2.1	4.8	2.5	2.1	5.1	2.9	2.1
United States	6.5	4.0	2.1	6.1	4.1	2.2	7.2	3.8	2.0
OECD[4]	9.2	5.5	3.8	8.9	4.9	3.5	10.1	6.4	4.2
Brazil[5]	9.7	10.0	5.5	8.6	8.0	4.4	11.6	12.3	6.4
Indonesia[1]	1.6	3.0	2.7	1.9	3.0	2.9	1.2	2.9	2.6
Russia[5]	11.4	5.4	2.7	11.1	5.0	2.7	12.0	6.0	2.7
South Africa[5]	25.4	25.6	6.2	24.6	23.6	5.5	26.5	28.0	6.9

.. Not available

Note: Data refer to ISCED 2011, except for Brazil and the Russian Federation (ISCED-97). See the description of the levels of education in www.oecd.org/els/emp/definitions-education.pdf.

1. Year of reference 2017.
2. Education levels are grouped somewhat differently. Data can be found in the database.
3. Includes completion of intermediate upper secondary programmes. See notes to Table A5.1 of *Education at a Glance 2017*, https://dx.doi.org/10.1787/eag-2017-en.
4. Unweighted average.
5. Year of reference 2018.

Source: OECD (2020), *Education at a Glance 2020: OECD Indicators*, www.oecd.org/education/education-at-a-glance.

StatLink https://stat.link/1nmgqi

Table H. Incidence and composition of part-time employment

Persons aged 15 and over, percentages

Percentage

	Part-time employment as a proportion of total employment												Women's share in part-time employment			
	Total				Men				Women							
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia[1]	..	23.7	25.5	..	..	12.3	15.3	..	..	37.7	37.1	..	..	71.5	68.3	..
Austria	11.7	17.3	20.0	19.7	2.4	5.6	7.7	7.7	23.9	31.4	34.0	33.2	88.6	82.4	79.6	79.2
Belgium	19.3	18.1	16.9	16.7	6.9	6.4	7.0	7.3	35.5	32.2	28.0	27.3	79.5	80.7	78.1	76.7
Canada	18.1	18.3	19.0	18.0	10.3	11.2	13.0	12.3	27.2	26.3	25.6	24.5	69.2	67.7	64.0	63.8
Chile	4.7	8.0	18.0	16.1	3.1	5.2	13.2	12.0	8.7	13.9	24.7	21.9	53.9	56.9	57.3	56.1
Colombia	..	14.5	16.3	14.6	..	9.2	9.0	8.5	..	22.8	26.5	23.9	..	61.3	67.5	64.6
Costa Rica	..	..	19.1	17.7	..	..	11.4	11.6	..	..	31.4	28.1	..	..	63.5	58.7
Czech Republic	3.2	3.5	5.3	4.9	1.6	1.7	3.0	2.7	5.4	5.9	8.3	7.7	72.5	72.3	68.7	69.2
Denmark	15.3	17.3	19.2	18.6	9.1	11.9	14.7	14.1	22.4	23.4	24.3	23.7	68.1	63.3	59.6	59.9
Estonia	7.2	6.8	9.6	9.6	4.6	3.6	5.9	6.3	10.0	10.1	13.5	13.0	67.9	73.2	68.2	65.9
Finland	10.4	11.7	14.6	14.1	7.1	8.2	10.7	11.3	13.9	15.5	18.7	17.2	63.8	63.7	61.8	58.5
France	14.2	13.3	13.4	13.1	5.3	4.9	6.9	6.9	24.3	22.8	20.4	19.7	80.1	80.5	73.5	73.2
Germany	17.6	22.0	22.0	..	4.8	7.8	9.5	..	33.9	39.1	36.3	..	84.5	80.7	77.0	..
Greece	5.3	7.7	10.5	9.8	3.0	4.1	6.7	6.1	9.4	13.3	15.7	14.8	65.0	67.7	63.2	64.2
Hungary	3.2	3.1	4.1	4.4	1.7	1.8	2.5	2.7	4.7	4.5	5.8	6.4	71.2	68.6	66.1	66.3
Iceland[1, 2]	20.2	15.8	15.6	16.9	9.1	7.9	9.7	10.8	32.8	25.3	22.5	24.1	76.0	72.8	66.5	65.5
Ireland	18.1	19.9	20.5	19.1	7.3	7.4	9.9	9.0	32.0	35.0	32.8	30.7	77.1	79.8	74.3	74.7
Israel	15.6	16.1	15.1	14.3	7.4	8.1	9.1	8.5	25.4	25.3	21.5	20.5	74.5	73.3	68.8	69.4
Italy[2]	11.7	15.3	18.0	17.9	5.4	5.5	7.9	8.0	22.5	29.8	31.8	31.5	70.9	78.2	74.9	74.0
Japan[3]	15.9	18.9	25.2	25.8	7.1	9.2	14.2	15.0	29.0	32.6	39.1	39.5	73.7	71.5	68.5	67.4
Korea[3]	7.0	8.8	14.0	15.4	5.1	6.2	8.9	10.4	9.8	12.4	20.8	22.1	57.6	58.9	63.5	60.8
Latvia	8.8	5.4	7.3	7.2	6.3	3.4	5.1	5.1	11.4	7.4	9.4	9.2	64.6	67.5	65.3	64.7
Lithuania	10.6	6.1	5.8	5.5	7.7	3.6	4.1	3.9	13.5	8.6	7.4	6.9	64.5	69.9	65.9	65.1
Luxembourg	13.0	13.1	11.6	12.8	2.1	1.4	4.4	5.3	28.9	27.6	20.2	21.3	90.4	93.9	79.7	78.0
Mexico	13.5	17.8	17.6	17.7	7.1	11.4	11.7	12.4	25.6	28.5	26.9	26.2	65.1	60.0	59.7	57.3
Netherlands	32.1	35.9	37.0	36.9	13.1	16.1	19.4	19.4	57.3	59.9	56.9	56.8	76.7	75.5	72.1	72.1
New Zealand	22.2	21.9	19.5	19.7	10.9	11.0	10.6	11.2	35.7	34.5	29.5	29.3	73.2	73.2	71.3	69.8
Norway[2]	20.2	20.8	20.1	19.9	8.7	10.8	12.7	13.1	33.4	32.0	28.5	27.5	77.0	72.7	66.5	64.9
Poland	12.8	10.1	5.8	5.8	8.8	6.0	3.3	3.3	17.9	15.0	9.0	8.9	61.7	67.0	68.8	68.5
Portugal	9.3	10.0	7.1	6.2	4.9	6.3	4.2	3.8	14.7	14.4	9.9	8.6	70.9	66.7	70.3	69.8
Slovak Republic	1.9	2.4	4.8	4.5	1.0	1.1	3.3	2.8	2.9	4.0	6.7	6.6	70.6	74.0	62.8	65.7
Slovenia	4.9	7.8	7.2	7.1	3.9	6.3	4.6	4.8	6.1	9.7	10.4	9.7	56.8	56.2	65.6	62.9
Spain[2]	7.5	10.5	13.2	12.5	2.6	3.6	6.2	5.9	16.1	20.1	21.4	20.3	78.3	80.0	74.9	74.7
Sweden[2]	14.0	14.4	13.7	14.1	7.3	9.5	10.5	11.4	21.4	19.7	17.3	17.1	72.9	65.0	59.8	57.3
Switzerland	23.0	26.8	26.9	26.7	8.4	10.1	11.0	11.1	42.7	47.1	44.9	44.3	79.2	79.4	78.2	77.8
Turkey	9.4	8.1	9.5	11.3	5.7	4.4	6.4	8.3	19.3	18.6	16.2	18.1	55.4	59.6	54.1	49.5
United Kingdom[2]	23.3	22.9	23.4	22.4	8.5	9.7	11.8	11.4	40.7	38.2	36.2	34.5	80.2	77.2	73.4	73.6
United States[2, 4]	12.6	12.6	12.4	11.7	7.7	7.6	8.3	8.0	18.0	17.9	16.8	15.7	68.1	68.4	65.4	64.5
OECD[5]	13.9	15.4	16.7	16.7	6.7	7.9	9.7	9.9	23.7	25.2	25.4	25.1	72.4	71.2	68.2	67.2
Brazil	..	18.3	16.0	14.4	..	10.3	11.0	9.7	..	29.1	22.5	20.6	..	67.6	61.4	62.0
Russia	7.4	5.1	4.0	4.1	4.9	3.5	3.0	3.1	10.0	6.6	5.2	5.2	66.0	64.8	62.4	61.6
South Africa	..	..	9.3	10.3	..	..	6.4	7.5	..	..	13.1	13.9	..	..	61.6	59.2

.. Not available

Note: Part-time employment refers to persons who usually work less than 30 hours per week in their main job.
Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. Part-time employment based on hours worked at all jobs.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Data are based on actual hours worked.
4. Data are for wage and salary workers only.
5. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/dtq3vc

Table I. Incidence and composition of involuntary part-time employment

Persons aged 15 and over, percentages

Percentage

	Involuntary part-time employment as a proportion of total employment												Involuntary part-time employment as a proportion of part-time employment			
	Total				Men				Women							
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	6.3	6.6	..	..	4.3	4.5	..	..	8.8	9.3	..	..	23.8	23.5	..	..
Austria	1.8	2.7	2.4	2.5	0.9	1.0	1.2	1.2	3.0	4.6	3.7	4.0	11.1	11.8	8.6	9.0
Belgium	4.6	3.2	1.4	1.1	1.7	1.5	1.0	0.7	8.4	5.5	1.9	1.6	22.1	14.6	5.7	4.5
Canada	4.6	4.0	3.7	4.2	2.8	2.6	2.8	3.2	6.6	5.6	4.7	5.3	25.4	22.1	19.5	23.3
Chile	..	..	9.9	..	..	..	8.0	..	..	..	12.5	..	..	..	47.4	..
Colombia	..	..	5.9	6.2	..	..	3.9	4.2	..	..	8.6	9.3	..	..	36.1	42.5
Costa Rica	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	1.4	0.8	0.3	0.5	0.3	0.3	0.2	0.4	2.9	1.4	0.5	0.7	27.1	16.4	4.6	7.2
Denmark	2.9	3.1	2.9	3.0	1.1	1.3	1.8	2.0	5.1	5.0	4.1	4.2	13.8	13.0	13.3	14.2
Estonia	..	1.2	0.8	0.9	..	0.7	0.5	0.6	..	1.8	1.1	1.3	..	15.3	6.2	7.0
Finland	3.5	2.9	4.0	4.1	1.5	1.3	2.4	2.7	5.7	4.6	5.7	5.6	28.7	20.7	23.4	24.9
France	4.6	5.2	6.5	5.9	2.3	1.8	3.1	2.7	7.3	9.0	10.2	9.2	27.0	29.9	36.2	33.3
Germany	2.3	5.3	2.4	..	0.8	2.7	1.3	..	4.2	8.4	3.7	..	12.0	20.3	8.5	..
Greece	1.9	2.4	5.8	5.4	1.2	1.2	4.0	3.7	3.2	4.3	8.3	7.7	42.9	42.7	63.2	62.0
Hungary	0.7	1.1	0.9	1.0	0.4	0.7	0.7	0.7	1.2	1.6	1.2	1.2	19.0	26.3	17.6	16.8
Iceland[1]	2.2	1.2	3.4	4.3	0.8	..	1.5	2.5	3.8	2.6	5.7	6.5	8.5	5.2	15.4	18.3
Ireland	2.7	1.8	3.6	2.7	2.2	1.3	3.2	2.4	3.4	2.6	4.0	3.1	16.4	10.3	21.6	17.5
Israel	3.6	4.2	1.4	1.2	1.6	1.9	0.8	0.8	6.1	6.8	2.0	1.6	15.9	17.6	6.4	5.6
Italy[1]	3.2	5.2	12.2	11.9	1.8	2.4	6.5	6.4	5.4	9.5	19.9	19.6	37.1	38.3	64.1	64.5
Japan	..	4.5	4.1	5.5	..	2.6	2.2	3.6	..	7.1	6.5	7.9	..	23.6	16.3	21.3
Korea	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Latvia	..	1.4	1.7	2.0	..	1.0	1.0	1.9	..	1.8	2.3	2.1	..	22.2	18.4	20.9
Lithuania	..	2.4	1.5	1.9	..	2.0	1.1	1.4	..	2.9	1.9	2.3	..	26.6	20.1	25.8
Luxembourg	0.8	0.8	2.1	2.1	0.2	0.4	0.7	1.0	1.7	1.3	3.8	3.3	6.8	4.4	12.3	11.2
Mexico	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Netherlands	1.4	2.1	2.4	2.7	0.9	1.1	1.8	2.1	2.2	3.3	3.2	3.5	3.6	4.6	5.0	5.5
New Zealand	5.9	3.8	4.5	5.1	3.4	2.4	2.8	3.1	8.9	5.3	6.5	7.4	26.1	17.1	22.9	25.9
Norway[1]	2.7	3.4	1.2	1.3	1.1	1.1	0.6	0.7	4.5	6.0	1.9	1.9	10.5	12.6	4.4	4.9
Poland	..	2.0	0.9	0.8	..	1.3	0.6	0.5	..	2.8	1.3	1.1	..	21.3	12.5	11.3
Portugal	2.5	3.3	3.5	3.3	1.0	1.5	2.0	2.0	4.3	5.4	5.0	4.7	22.4	26.8	33.7	33.8
Slovak Republic	0.7	0.9	1.8	1.6	0.2	0.3	1.4	1.3	1.3	1.6	2.3	2.0	33.5	33.8	36.1	32.6
Slovenia	..	0.4	0.4	0.5	..	0.3	0.2	0.3	..	0.6	0.6	0.7	..	4.6	4.3	5.5
Spain[1]	1.8	3.9	8.0	7.3	0.6	1.4	4.1	3.9	3.8	7.4	12.6	11.3	22.1	33.6	54.6	51.9
Sweden[1]	5.1	6.0	1.6	1.6	2.3	2.6	1.1	1.1	8.2	9.8	2.1	2.1	23.8	25.2	7.3	7.1
Switzerland	1.3	1.8	2.1	2.0	0.8	0.8	1.1	1.0	1.9	3.1	3.1	3.1	4.4	5.7	5.5	5.3
Turkey	..	0.6	1.4	1.8	..	0.5	1.4	2.0	..	0.7	1.3	1.4	..	7.3	14.5	14.8
United Kingdom[1]	2.4	2.3	2.9	3.0	1.8	1.8	2.4	2.4	3.2	3.0	3.5	3.5	9.7	9.3	11.1	11.6
United States[1]	0.7	0.8	0.9	0.8	0.5	0.6	0.7	0.7	0.9	1.0	1.0	1.0	4.1	4.8	4.0	4.4
OECD[2]	2.3	2.9	3.1	3.2	1.3	1.6	1.9	2.1	3.5	4.5	4.5	4.6	13.3	15.7	14.2	15.5
Russia	0.3	0.1	0.2	3.3	0.3	0.1	0.1	2.6	0.4	0.2	0.3	4.1	3.0	1.9	2.7	27.4

.. Not available

Note: Involuntary part-time employment refers to part-time workers who could not find full-time work. Part-time employment is based on national definitions. Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.

2. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/s93qzm

Table J. Incidence and composition of temporary employment

As a percentage of dependent employment in each age group

Percentage

	Total (15+)				Youth (15-24)				Prime age (25-54)				Women's share in temporary employment			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	..	6.3	..	..	..	6.0	..	..	..	6.4	..	..	..	52.3	..	..
Austria	7.9	8.8	8.7	8.2	33.0	34.8	33.5	34.6	3.8	4.3	5.7	5.1	47.1	47.5	49.1	48.0
Belgium	9.1	8.7	10.9	10.2	30.8	31.6	48.5	48.3	6.9	6.6	8.3	8.0	58.3	57.3	51.5	51.6
Canada	12.5	13.0	12.9	11.6	29.1	28.8	30.7	30.2	8.8	9.2	9.3	8.4	51.0	51.8	52.2	51.2
Chile	..	..	27.0	25.4	..	..	43.5	43.3	..	..	27.0	25.3	..	..	39.7	39.9
Colombia[1]	..	29.7	28.8	27.3	..	42.3	41.1	39.1	..	27.9	27.8	26.4	..	44.3	46.5	44.8
Costa Rica	..	..	7.0	6.5	..	..	12.0	10.9	..	..	6.2	5.7	..	..	26.7	25.9
Czech Republic	9.3	8.6	8.3	7.4	19.6	17.4	26.4	25.1	5.2	5.6	6.8	6.3	46.6	54.3	57.4	54.6
Denmark	9.7	9.1	10.9	10.9	27.4	22.5	34.0	33.8	6.6	6.9	7.4	7.8	54.8	55.7	53.6	55.5
Estonia	3.0	2.1	3.1	2.8	6.4	6.6	12.7	11.3	2.6	1.6	2.3	2.2	27.4	37.6	51.2	52.2
Finland	16.5	16.0	15.8	14.9	45.6	42.4	41.6	40.3	13.0	13.2	13.1	12.8	60.3	61.8	59.2	59.0
France	15.4	15.1	16.3	15.4	55.1	53.6	56.0	55.8	11.6	11.1	12.8	12.0	49.6	52.5	51.4	52.1
Germany	12.7	14.6	12.0	..	52.4	57.4	50.9	..	7.5	9.1	8.7	..	46.2	46.7	46.8	..
Greece	13.5	11.0	12.5	10.1	29.5	26.5	30.7	22.3	11.6	10.0	12.1	10.0	46.5	50.9	52.4	52.6
Hungary	7.1	7.3	6.6	5.9	13.9	18.9	12.4	12.1	5.9	6.5	5.9	5.3	43.8	44.0	50.3	51.2
Iceland[2]	12.2	12.3	7.6	8.2	28.9	32.0	20.6	24.0	7.5	8.8	5.9	6.3	53.3	53.8	56.7	54.6
Ireland	6.0	8.5	9.8	9.0	15.9	21.2	35.2	34.9	3.0	5.6	6.0	5.4	55.1	56.6	53.2	52.3
Israel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Italy[2]	10.1	13.2	17.0	15.1	26.6	42.2	63.3	58.9	8.5	11.4	16.2	14.5	48.1	51.7	46.3	46.0
Japan[3]	14.5	13.9	15.7	15.4	24.9	26.4	17.6	16.3	9.5	10.9	11.0	10.5	61.7	65.1	62.4	61.8
Korea	..	24.7	24.4	26.1	..	30.0	30.1	31.7	..	21.3	17.4	18.6	..	44.3	49.3	49.4
Latvia	6.6	4.1	3.2	2.8	10.9	9.0	11.2	5.6	6.0	3.5	2.7	2.6	33.6	33.8	41.2	47.1
Lithuania	4.4	3.8	1.5	1.3	9.4	10.5	7.6	7.0	4.1	3.1	0.9	0.8	38.0	33.0	51.1	48.8
Luxembourg	3.4	6.8	9.2	7.7	14.5	34.1	36.7	34.4	2.3	5.3	7.4	6.1	54.0	49.9	45.8	51.4
Mexico	20.5	..	..	..	25.7	..	..	..	17.8	..	..	..	19.7	..	..	..
Netherlands	13.7	18.1	20.3	18.0	35.5	45.1	53.0	50.3	9.1	12.9	14.8	13.0	53.7	51.1	51.2	51.4
New Zealand	..	..	7.7	7.6	..	..	18.2	18.2	..	..	5.4	5.4	..	..	57.0	55.9
Norway[2]	9.3	9.6	8.0	7.8	28.5	28.2	26.0	26.4	6.9	7.4	6.1	5.9	58.8	59.7	56.9	56.4
Poland	..	28.2	21.8	18.6	..	65.7	59.1	54.7	..	24.0	19.4	16.5	..	45.9	49.7	49.9
Portugal	19.9	22.3	20.8	17.8	41.4	53.1	62.2	56.0	16.4	19.7	19.2	16.9	50.0	49.1	51.9	52.5
Slovak Republic	4.8	5.1	8.2	6.8	10.5	13.7	19.9	21.4	3.4	3.7	6.9	5.9	44.6	48.3	52.1	53.8
Slovenia	13.7	18.5	13.4	11.0	46.3	68.3	61.8	55.9	9.4	12.9	10.2	8.7	51.3	52.4	53.8	53.2
Spain[2]	32.2	31.6	26.3	24.1	68.3	62.7	69.5	66.4	27.7	29.3	25.7	23.9	40.7	45.4	49.6	51.0
Sweden[2]	15.2	17.5	16.6	15.4	49.5	57.3	53.8	53.8	11.9	13.0	12.0	11.5	57.6	56.9	54.8	54.9
Switzerland	11.5	12.9	12.7	12.9	47.0	50.3	51.0	52.0	5.1	6.4	7.4	7.8	50.1	47.1	47.2	47.2
Turkey	20.3	11.9	11.6	10.9	23.7	12.4	23.8	22.7	18.6	11.3	8.9	8.5	12.1	21.6	29.2	25.0
United Kingdom[2]	7.0	5.8	5.2	5.3	14.2	13.4	14.0	13.9	5.4	4.2	3.7	3.9	54.4	53.9	54.1	53.3
United States[2, 4]	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
OECD[5]	11.9	12.5	12.1	11.4	24.5	25.9	25.2	23.8	9.1	10.4	10.1	9.6	45.6	47.1	47.5	45.9
Russia	5.5	12.3	8.0	7.5	14.5	23.1	20.9	20.5	4.2	11.2	7.5	6.9	36.5	41.9	35.4	35.6

.. Not available

Note: Temporary employees are wage and salary workers whose job has a pre-determined termination date as opposed to permanent employees whose job is of unlimited duration. They include: i) persons with a seasonal job; ii) persons engaged by an employment agency or business and hired out to a third party for carrying out a "work mission"; iii) persons with specific training contracts (including apprentices, trainees, research assistants, probationary period of a contract, etc.). Country-specific exceptions to this generic definition may be found in (PDF) www.oecd.org/els/emp/lfsnotes_sources.pdf.

Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. The data cover only salaried employees who reported a written labour contract.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Japan applies a maximum duration threshold of one year to classify jobs as temporary employment. As a result, a regular employee with a fixed-term contract lasting more than one year is not included in temporary employment.
4. Refer to the database for available years.
5. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

Stat https://stat.link/or7z2a

Table K1. Incidence of job tenure shorter than 12 months - Total

As a percentage of total employment in each age group

Percentage

	Total (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	..	23.6	20.8	..	..	47.7	41.9	..	..	20.1	18.7	..	..	10.2	9.0	..
Austria	..	15.5	16.5	14.6	..	39.7	42.6	39.1	..	12.3	14.9	13.2	..	5.0	5.2	4.6
Belgium	13.2	13.0	12.3	11.3	50.8	48.8	48.7	45.1	10.1	10.7	10.8	10.2	2.4	2.7	3.6	3.0
Canada	21.4	21.1	19.5	16.2	54.0	53.1	50.0	44.6	16.2	16.2	16.0	13.5	8.0	8.4	8.0	6.5
Chile	..	..	26.6	26.7	..	..	57.6	58.4	..	..	25.9	26.2	..	..	16.0	15.0
Colombia	..	37.4	37.3	39.2	..	65.0	64.7	65.6	..	32.6	34.3	36.4	..	19.6	19.0	21.5
Costa Rica	..	..	22.8	22.1	..	..	46.8	47.0	..	..	21.6	21.0	..	..	11.3	11.0
Czech Republic	..	10.7	9.6	8.7	..	35.0	37.2	35.0	..	8.8	8.8	8.0	..	7.6	5.1	4.2
Denmark	22.5	26.0	19.9	19.3	53.5	56.4	45.9	44.8	18.9	23.3	17.5	17.3	6.5	10.2	8.5	7.3
Estonia	..	15.1	17.8	15.6	..	42.5	51.0	49.2	..	12.7	16.5	14.5	..	7.9	9.6	7.9
Finland	20.6	20.3	21.1	18.9	65.2	62.6	63.0	58.9	16.1	16.8	18.3	16.6	5.8	6.3	8.2	7.3
France	15.8	15.4	15.1	13.8	56.7	55.0	54.6	52.8	12.6	12.3	13.0	11.8	3.6	4.6	5.0	4.1
Germany	14.9	14.9	14.0	..	38.8	40.9	41.0	..	13.0	12.7	13.1	..	4.7	4.9	4.8	..
Greece	9.5	8.4	11.2	9.3	31.0	28.8	41.5	34.7	7.7	7.5	10.9	9.2	2.8	3.1	5.0	4.1
Hungary	11.7	11.7	13.8	13.6	29.7	39.1	41.1	40.7	9.3	10.3	12.8	12.7	4.5	5.3	7.5	7.4
Iceland[1]	25.4	22.5	17.2	16.1	59.1	53.1	41.4	41.0	20.0	18.3	15.0	14.0	6.1	7.2	4.7	3.9
Ireland	19.4	18.0	17.6	14.8	46.8	45.0	49.4	44.1	13.6	14.1	15.1	12.6	5.7	4.6	2.3	2.6
Israel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Italy[1]	10.6	11.6	11.3	10.1	36.8	41.1	45.3	42.0	8.9	10.3	11.0	10.0	3.3	3.7	4.3	3.9
Japan	..	14.1	..	..	..	41.2	..	..	..	10.3	..	..	..	6.3	..	..
Korea[2]	..	40.0	29.5	28.4	..	72.0	70.0	70.3	..	35.6	24.8	24.1	..	46.4	32.5	30.7
Latvia	..	19.3	15.3	13.6	..	50.1	47.2	37.4	..	15.7	14.2	12.9	..	10.2	9.5	9.4
Lithuania	14.2	15.0	19.4	18.8	37.1	45.3	54.9	56.3	12.7	13.1	18.3	17.9	5.7	6.7	11.1	10.7
Luxembourg	11.6	10.6	14.3	12.4	40.4	44.0	48.7	41.5	9.6	9.0	12.6	11.3	0.5	1.9	5.8	5.5
Mexico	..	24.1	21.2	21.6	..	45.7	44.8	45.4	..	19.3	17.4	18.1	..	10.4	9.6	9.3
Netherlands	..	9.8	18.0	15.9	..	34.3	46.6	43.5	..	8.2	14.5	12.8	..	2.5	5.8	4.6
New Zealand	..	..	24.8	22.6	..	..	55.0	51.9	..	..	22.3	20.3	..	..	9.8	9.0
Norway[1]	..	20.9	15.2	15.0	..	52.5	41.3	40.7	..	18.1	13.4	13.3	..	4.9	3.9	3.9
Poland	13.7	15.7	11.1	9.2	41.2	47.3	39.2	33.9	11.0	12.8	9.8	8.2	6.0	6.9	4.4	4.1
Portugal	14.1	13.1	15.7	12.9	39.2	40.0	50.6	47.0	11.4	11.7	14.9	12.5	3.2	3.6	4.9	1.6
Slovak Republic	..	11.8	10.0	8.8	..	35.7	30.6	33.0	..	9.5	9.3	8.3	..	6.3	6.7	4.0
Slovenia	..	13.9	12.0	11.0	..	51.1	50.2	43.8	..	10.5	10.3	10.1	..	2.8	3.7	4.5
Spain[1]	21.2	21.9	17.7	15.1	54.5	55.5	60.6	56.0	17.8	19.8	17.2	14.8	6.5	6.1	6.9	5.8
Sweden[1]	15.8	20.4	20.8	18.3	49.4	65.4	59.8	57.1	14.0	17.0	18.5	16.2	4.6	6.5	8.0	7.0
Switzerland	16.5	15.3	17.6	17.1	44.6	41.4	42.1	40.8	13.4	12.7	16.4	16.3	3.9	4.2	6.0	5.8
Turkey	..	19.6	25.8	24.2	..	41.6	57.1	56.8	..	15.7	21.6	20.0	..	6.4	12.9	12.7
United Kingdom[1]	19.8	17.9	16.7	14.8	48.5	46.0	44.1	40.2	16.1	14.5	14.3	12.6	8.1	7.2	7.4	6.8
United States[1, 2]	27.1	..	..	23.0	61.8	..	..	57.1	21.7	..	..	19.6	11.2	..	..	9.7
OECD[3]	20.2	20.4	19.6	18.9	49.3	50.3	51.8	49.8	16.2	16.7	16.6	16.2	8.4	8.6	8.5	8.4
Brazil	..	18.8	22.3	20.0	..	37.6	46.4	42.9	..	14.7	19.5	17.9	..	6.5	10.2	9.7

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
2. Data refer to dependent employment.
3. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/l937ut

Table K2. Incidence of job tenure shorter than 12 months - Men

As a percentage of male employment in each age group

Percentage

	Men (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	..	22.2	20.5	..	..	45.6	42.2	..	..	19.0	18.4	..	..	9.9	8.7	..
Austria	..	14.7	16.1	13.7	..	39.8	40.5	37.7	..	11.6	15.0	12.4	..	5.0	4.6	4.4
Belgium	12.8	12.5	11.9	11.0	49.3	46.2	45.8	42.2	9.9	10.4	10.6	10.0	2.5	2.8	3.7	3.1
Canada	20.6	20.9	19.4	16.2	53.8	52.7	49.5	43.8	15.6	16.3	16.3	13.7	8.2	8.8	8.4	6.9
Chile	..	..	27.6	28.0	..	..	59.4	60.4	..	..	27.1	27.6	..	..	16.8	15.7
Colombia	..	35.5	35.2	37.6	..	62.1	62.1	63.1	..	30.7	32.0	34.9	..	19.4	17.7	20.3
Costa Rica	..	..	22.5	21.1	..	..	47.6	46.8	..	..	20.9	19.9	..	..	11.5	9.5
Czech Republic	..	9.5	7.9	7.5	..	34.3	33.1	31.7	..	7.5	6.9	6.6	..	6.0	4.4	3.8
Denmark	20.7	24.1	19.1	18.0	49.5	51.6	44.4	43.5	17.5	21.7	16.6	16.0	6.1	9.8	9.6	6.6
Estonia	..	14.6	16.1	14.8	..	39.2	50.3	49.2	..	11.9	14.0	12.8	..	7.7	10.0	8.8
Finland	19.5	18.9	19.5	17.4	62.5	60.2	60.8	57.8	15.3	15.2	16.6	14.8	5.8	6.9	7.6	6.7
France	15.7	15.2	15.1	13.5	56.7	53.3	52.1	49.9	12.4	12.1	13.0	11.4	4.1	4.5	5.1	4.4
Germany	13.8	14.4	13.7	..	37.9	39.7	39.9	..	12.0	12.4	12.7	..	4.1	4.9	4.6	..
Greece	8.6	7.6	10.0	8.3	29.0	26.5	36.8	33.7	7.1	6.8	9.8	7.9	2.5	3.2	4.8	4.1
Hungary	11.8	11.9	13.4	12.7	29.1	38.2	40.3	37.8	9.6	10.4	12.2	11.9	4.5	6.2	7.4	6.6
Iceland[1]	23.9	21.1	15.5	14.1	58.0	52.1	37.3	35.4	19.4	17.1	14.0	12.7	2.8	6.4	4.0	3.9
Ireland	17.1	16.3	16.7	14.5	44.0	40.8	47.7	43.6	12.2	13.2	14.5	12.4	4.9	4.2	2.9	3.3
Israel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Italy[1]	9.6	10.4	10.7	9.5	36.2	38.7	43.0	39.2	8.0	9.0	10.2	9.1	3.2	3.5	4.2	3.8
Japan	..	10.7	..	..	..	39.6	..	..	..	7.1	..	..	..	6.3	..	..
Korea[2]	..	36.3	27.4	26.7	..	81.9	75.8	75.4	..	32.3	23.1	22.4	..	42.3	31.5	31.2
Latvia	..	20.8	16.4	13.9	..	47.7	46.1	37.3	..	16.9	15.0	12.7	..	12.3	10.9	10.5
Lithuania	16.4	16.7	21.7	20.7	36.4	45.7	55.1	54.4	14.9	14.4	20.5	19.7	7.8	8.5	13.3	12.8
Luxembourg	10.3	10.0	13.8	12.1	41.2	43.8	51.3	45.9	8.3	8.2	11.9	10.8	0.8	1.3	6.0	5.2
Mexico	..	22.5	19.8	20.0	..	43.1	41.6	41.9	..	17.9	15.9	16.5	..	9.9	9.0	8.8
Netherlands	..	9.3	16.9	14.9	..	31.5	44.9	42.2	..	8.1	13.7	12.1	..	2.6	5.8	4.3
New Zealand	..	..	23.3	21.3	..	..	52.0	50.1	..	..	20.7	18.7	..	..	9.9	8.8
Norway[1]	..	20.2	14.9	14.6	..	51.1	39.3	38.5	..	17.9	13.4	13.4	..	5.1	4.6	4.0
Poland	14.6	15.8	10.6	8.5	40.3	45.5	37.1	31.5	12.2	13.1	9.3	7.5	6.2	7.6	4.7	4.1
Portugal	14.0	13.0	15.7	13.1	38.6	38.4	48.3	43.9	11.1	11.5	14.9	12.7	3.7	3.5	5.8	2.1
Slovak Republic	..	11.6	9.3	8.5	..	34.8	28.4	29.6	..	9.5	8.2	7.8	..	5.3	6.2	3.9
Slovenia	..	13.5	11.2	10.6	..	49.4	48.5	42.1	..	9.9	9.3	9.4	..	3.1	3.5	4.6
Spain[1]	19.4	20.4	17.4	14.5	52.8	53.2	59.2	53.0	16.3	18.6	16.7	14.1	6.2	5.7	7.1	6.0
Sweden[1]	16.0	20.3	20.2	17.4	46.2	62.7	56.3	55.3	14.7	17.3	18.2	15.4	4.7	7.3	8.3	6.6
Switzerland	15.2	13.8	16.8	16.3	41.8	39.2	40.2	38.7	12.6	11.3	15.8	15.6	4.2	3.6	6.1	5.8
Turkey	..	19.7	25.7	24.1	..	43.3	57.5	57.4	..	15.9	21.6	20.1	..	7.2	13.0	12.7
United Kingdom[1]	18.7	17.3	15.8	14.1	47.1	44.4	41.9	38.9	15.1	14.1	13.5	12.0	8.6	7.8	7.5	7.0
United States[1, 2]	25.9	..	..	21.9	59.4	..	..	54.8	20.6	..	..	18.5	11.3	..	..	9.8
OECD[3]	18.6	19.4	18.9	18.0	47.3	48.7	50.1	47.7	14.9	15.8	15.9	15.2	8.1	8.4	8.6	8.4
Brazil	..	18.0	21.9	19.7	..	35.3	43.8	41.5	..	14.1	19.2	17.6	..	6.4	10.2	9.8

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
2. Data refer to dependent employment.
3. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/xps5qh

Table K3. Incidence of job tenure shorter than 12 months - Women

As a percentage of female employment in each age group

Percentage

	Women (15-64)				Youth (15-24)				Prime age (25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	..	25.4	21.2	..	..	50.1	41.6	..	..	21.4	19.1	..	..	10.6	9.3	..
Austria	..	16.3	16.9	15.5	..	39.6	45.0	40.8	..	13.1	14.8	14.0	..	5.1	5.9	4.9
Belgium	13.8	13.6	12.8	11.6	52.7	52.0	51.9	48.5	10.4	10.9	11.1	10.3	2.2	2.7	3.5	3.0
Canada	22.3	21.4	19.5	16.2	54.2	53.5	50.6	45.4	16.9	16.1	15.8	13.3	7.6	7.9	7.6	6.0
Chile	..	..	25.2	25.0	..	..	55.3	55.4	..	..	24.3	24.3	..	..	14.8	13.8
Colombia	..	40.2	40.1	41.5	..	69.7	68.6	69.6	..	35.4	37.4	38.7	..	19.9	20.9	23.6
Costa Rica	..	..	23.2	23.8	..	..	45.4	47.4	..	..	22.5	22.8	..	..	10.9	14.0
Czech Republic	..	12.3	11.8	10.1	..	36.1	42.9	40.4	..	10.5	11.1	9.8	..	10.1	5.9	4.8
Denmark	24.6	28.2	20.8	20.8	58.1	61.7	47.4	46.2	20.4	24.9	18.4	18.8	7.2	10.7	7.2	8.0
Estonia	..	15.7	19.7	16.5	..	46.9	51.9	49.3	..	13.5	19.5	16.4	..	8.1	9.4	7.1
Finland	21.7	21.9	22.7	20.5	67.9	64.9	65.1	59.9	17.0	18.5	20.2	18.6	5.8	5.8	8.7	7.9
France	15.9	15.6	15.1	14.0	56.7	57.2	57.6	56.2	12.8	12.6	13.0	12.1	2.9	4.6	4.9	3.8
Germany	16.4	15.5	14.5	..	39.8	42.2	42.3	..	14.2	13.0	13.6	..	5.8	4.9	5.0	..
Greece	11.0	9.6	13.0	10.8	34.0	32.6	47.3	36.1	8.9	8.5	12.5	10.8	3.2	3.1	5.3	4.1
Hungary	11.5	11.5	14.4	14.6	30.4	40.3	42.4	44.7	9.0	10.2	13.6	13.7	4.5	4.2	7.6	8.5
Iceland[1]	27.1	24.2	19.1	18.3	60.1	54.2	45.4	46.3	20.7	19.7	16.2	15.5	10.1	8.2	5.4	3.9
Ireland	22.6	20.3	18.7	15.1	50.2	49.8	51.3	44.5	15.7	15.1	15.8	12.8	7.7	5.4	1.7	1.8
Israel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Italy[1]	12.4	13.5	12.2	11.0	37.7	44.7	48.9	47.0	10.4	12.2	12.1	11.1	3.3	4.0	4.4	4.0
Japan	..	18.6	..	..	..	42.9	..	..	..	14.5	..	..	..	6.4	..	..
Korea[2]	..	45.2	32.2	30.7	..	65.7	65.9	66.7	..	40.7	27.2	26.3	..	53.1	33.8	30.1
Latvia	..	17.7	14.2	13.4	..	53.4	48.5	37.6	..	14.4	13.4	13.2	..	8.3	8.4	8.6
Lithuania	12.0	13.1	17.2	16.8	38.0	44.7	54.7	58.4	10.6	11.8	16.1	15.9	3.3	4.9	9.4	8.9
Luxembourg	13.6	11.4	14.8	12.8	39.4	44.4	45.5	37.0	11.5	10.1	13.4	11.9	..	2.6	5.5	6.0
Mexico	..	26.8	23.4	23.9	..	50.3	50.8	51.3	..	21.6	19.6	20.4	..	11.4	10.6	10.1
Netherlands	..	10.5	19.2	17.0	..	37.7	48.2	44.8	..	8.3	15.4	13.4	..	2.3	5.8	4.9
New Zealand	..	..	26.5	24.1	..	..	58.2	53.8	..	..	24.2	22.0	..	..	9.7	9.3
Norway[1]	..	21.7	15.6	15.4	..	53.9	43.4	43.1	..	18.3	13.5	13.3	..	4.5	3.1	3.8
Poland	12.7	15.5	11.6	10.1	42.4	49.9	42.0	37.3	9.7	12.5	10.4	9.2	5.8	5.6	4.0	4.1
Portugal	14.2	13.3	15.6	12.8	39.9	42.1	53.6	51.0	11.8	11.8	14.9	12.3	2.5	3.7	3.8	1.1
Slovak Republic	..	12.1	11.0	9.3	..	37.0	34.8	39.0	..	9.5	10.5	8.9	..	8.6	7.3	4.1
Slovenia	..	14.3	13.0	11.6	..	53.5	52.5	46.2	..	11.1	11.6	10.8	..	2.3	3.9	4.4
Spain[1]	24.3	23.9	18.2	15.8	57.0	58.5	62.4	59.9	20.4	21.5	17.7	15.6	7.3	6.8	6.7	5.5
Sweden[1]	15.7	20.5	21.5	19.2	52.7	68.3	63.4	59.0	13.3	16.6	19.0	17.1	4.4	5.6	7.6	7.4
Switzerland	18.2	17.1	18.4	18.1	47.6	43.8	44.1	43.0	14.5	14.3	17.0	17.1	3.5	5.0	5.9	5.8
Turkey	..	19.5	26.1	24.2	..	38.2	56.3	55.5	..	15.1	21.7	20.0	..	4.3	12.8	12.7
United Kingdom[1]	21.1	18.6	17.6	15.5	49.9	47.6	46.4	41.5	17.3	15.0	15.1	13.3	7.3	6.3	7.3	6.7
United States[1, 2]	28.4	..	..	24.2	64.2	..	..	59.4	22.9	..	..	20.8	11.2	..	..	9.5
OECD[3]	22.3	21.8	20.4	19.9	51.7	52.3	53.9	52.2	18.0	17.9	17.5	17.3	8.8	8.8	8.5	8.4
Brazil	..	19.7	22.9	20.3	..	41.0	50.2	45.0	..	15.5	19.9	18.2	..	6.7	10.1	9.6

.. Not available

Note: Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
2. Data refer to dependent employment.
3. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/hvuzby

Table L. Average annual hours actually worked per person in employment

National accounts concepts unless otherwise specified

Hours per person per year

	Total employment								Dependent employment							
	1979	1983	1990	1995	2000	2007	2019	2020	1979	1983	1990	1995	2000	2007	2019	2020
Australia	..	..	1 853	1 870	1 852	1 803	1 722	1 683	..	..	1 814	1 797	1 781	1 751	1 696	1 670
Austria	..	..	..	1 653	1 675	1 606	1 509	1 400	..	..	..	1 540	1 542	1 502	1 430	1 322
Belgium	1 727	1 675	1 663	1 578	1 589	1 594	1 576	1 481	..	..	..	1 447	1 459	1 465	1 442	1 360
Canada	1 841	1 779	1 797	1 775	1 787	1 744	1 690	1 644	1 812	1 761	1 782	1 768	1 778	1 739	1 703	1 668
Chile	..	..	2 422	2 338	2 263	2 128	1 930	1 825	..	..	..	..	2 318	2 168	1 989	1 886
Colombia	..	..	..	..	..	..	2 172	..	..	..	..	..	..	..	2 353	..
Costa Rica	..	..	2 358	2 345	2 362	2 387	2 060	1 913	..	..	2 398	2 403	2 423	2 465	2 155	2 048
Czech Republic	..	..	..	1 832	1 900	1 775	1 784	1 705	..	..	..	1 987	2 018	1 914	1 798	1 718
Denmark	1 564	1 546	1 441	1 419	1 466	1 433	1 381	1 346	1 506	1 501	1 401	1 379	1 421	1 401	1 362	1 325
Estonia	..	..	..	..	1 884	1 903	1 711	1 654	..	..	..	..	1 836	1 880	1 694	1 642
Finland	1 751	1 709	1 671	1 677	1 650	1 605	1 539	1 531	1 664	1 636	1 593	1 596	1 571	1 539	1 496	1 492
France	1 816	1 696	1 645	1 601	1 558	1 537	1 511	1 402	1 625	1 516	1 511	1 480	1 444	1 435	1 421	1 320
Germany	..	..	..	1 531	1 466	1 454	1 383	1 332	..	..	..	1 446	1 377	1 377	1 330	1 284
Greece	..	2 072	1 976	2 001	1 998	2 001	1 920	1 728	..	..	..	1 793	1 792	1 858	1 703	1 537
Hungary[1]	..	2 226	2 082	1 948	1 932	1 788	1 722	1 660	..	1 829	1 710	1 765	1 795	1 778	1 776	1 748
Iceland	1 697	1 684	1 665	1 641	1 696	1 605	1 480	1 435	..	..	..	..	..	..	1 493	1 447
Ireland	2 162	2 074	2 081	1 963	1 933	1 865	1 771	1 746	..	..	..	1 885	1 875	1 811	1 687	1 679
Israel	..	1 929	1 904	2 014	2 033	1 967	1 898	1 783	..	..	..	2 002	2 022	1 955	1 900	..
Italy	..	..	..	1 856	1 850	1 818	1 715	1 559	..	..	1 671	1 681	1 697	1 652	1 583	1 452
Japan[2]	2 126	2 095	2 031	1 884	1 821	1 785	1 644	1 598	..	..	..	1 910	1 853	1 808	1 669	1 621
Korea	..	..	..	..	..	..	1 967	1 908	..	..	..	..	..	..	1 957	1 927
Latvia	..	..	..	..	1 728	1 643	1 631	1 577	..	..	..	..	1 696	1 611	1 606	1 561
Lithuania	..	..	..	1 527	1 630	1 681	1 665	1 595	..	..	..	..	1 612	1 660	1 631	1 573
Luxembourg	..	..	..	1 593	1 602	1 566	1 506	1 427	..	..	..	1 594	1 605	1 570	1 505	1 424
Mexico	..	..	..	2 161	2 174	2 045	2 139	2 124	..	..	..	2 360	2 360	2 337	2 336	2 326
Netherlands	1 559	1 527	1 454	1 482	1 464	1 429	1 440	1 399	1 512	1 491	1 434	1 433	1 403	1 366	1 371	1 340
New Zealand	..	..	1 809	1 841	1 836	1 774	1 783	1 739	..	..	1 734	1 766	1 777	1 754	1 776	1 774
Norway	1 580	1 553	1 503	1 488	1 457	1 406	1 381	1 369	1 515	1 493	1 447	1 438	1 415	1 383	1 365	1 354
Poland	..	..	..	1 901	1 869	1 850	1 781	1 766	..	..	..	1 744	1 775	1 763	1 691	1 683
Portugal	1 859	1 817	1 806	1 749	1 770	1 755	1 745	1 613	..	..	..	1 705	1 715	1 705	1 702	1 578
Slovak Republic	..	..	..	1 853	1 816	1 791	1 692	1 572	..	..	..	1 800	1 738	1 698	1 606	1 501
Slovenia	..	..	..	1 755	1 710	1 655	1 601	1 515	..	..	..	..	1 606	1 593	1 557	1 474
Spain	1 954	1 848	1 763	1 755	1 753	1 701	1 688	1 577	1 864	1 769	1 696	1 686	1 705	1 648	1 613	1 530
Sweden	1 384	1 396	1 423	1 483	1 486	1 463	1 452	1 424	..	..	..	1 425	1 432	1 407	1 407	1 381
Switzerland[3]	..	..	..	1 720	1 713	1 669	1 549	1 495	..	..	..	1 662	1 663	1 638	1 545	..
Turkey	1 964	1 935	1 866	1 876	1 937	1 911	..	..	..	..	..	..	..	..	..	..
United Kingdom	1 662	1 568	1 618	1 586	1 558	1 541	1 537	1 367	1 577	1 489	1 535	1 530	1 517	1 504	1 513	1 368
United States	1 834	1 822	1 833	1 839	1 832	1 795	1 777	1 767	1 834	1 829	1 835	1 844	1 831	1 797	1 784	1 784
OECD[4]	1 901	1 877	1 860	1 842	1 825	1 789	1 743	1 687	1 813	1 797	1 796	1 801	1 783	1 758	1 718	1 662
Russia	..	..	..	1 891	1 982	1 999	1 965	1 874	..	..	..	1 886	2 000	2 020	1 983	1 893

.. Not available

Note: Total hours worked per year divided by the average number of people in employment. The data are intended for comparisons of trends over time; they are unsuitable for cross-country comparisons of the level of average annual hours of work for a given year, because of differences in their sources and method of calculation. Part-time and part-year workers are covered as well as full-time workers.

1. Data for dependent employment refer to establishments in manufacturing with five or more employees.
2. Data for dependent employment refer to establishments with five or more regular employees.
3. OECD estimates on hours per worker are obtained by dividing total hours worked by average employment based on *Statistique de la Population Active Occupée (SPAO)*, both according to domestic concept.
4. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/16tw0u

Table M1. Incidence of long-term unemployment, 12 months and over - Total

As a percentage of total unemployment in each age group

Percentage

	Total (15+)				Youth (15-24)				Prime(25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	18.3	18.5	..	..	20.3	19.0	..	..	17.6	18.8	..	..	12.7	15.4	..	..
Austria	25.8	27.2	25.1	24.5	12.7	13.4	17.9	11.7	25.5	30.2	23.9	24.4	50.6	58.4	46.5	48.8
Belgium	54.2	50.4	43.5	41.6	29.1	29.7	22.6	21.7	61.9	54.8	46.2	42.9	79.4	81.4	64.7	66.6
Canada	11.2	7.1	8.5	5.1	4.0	1.4	3.2	2.7	14.0	8.9	9.0	5.3	18.6	13.2	14.6	8.9
Chile	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	..	12.0	11.5	6.8	..	8.4	8.3	5.9	..	14.2	12.4	7.1	..	17.5	18.2	7.9
Costa Rica	..	..	12.9	7.7	..	..	7.0	8.5	..	..	16.3	7.4	..	..	20.0	7.1
Czech Republic	48.8	53.4	30.3	22.3	37.8	33.6	23.5	16.6	53.3	58.3	28.4	21.8	45.6	52.4	44.5	31.0
Denmark	21.7	16.1	16.6	16.7	2.1	4.2	..	..	24.7	16.6	..	..	41.0	39.4	..	..
Estonia	45.1	49.8	20.0	17.2	26.3	30.5	7.6	5.9	49.4	52.7	18.6	18.0	48.3	72.2	36.7	24.0
Finland	29.0	23.0	18.5	15.9	8.8	5.5	3.1	3.0	34.0	25.9	21.5	17.6	56.5	47.6	34.8	32.4
France	42.6	39.9	38.8	36.7	20.6	24.6	24.5	21.5	45.3	43.0	38.7	37.7	69.6	68.0	62.1	59.7
Germany	51.5	56.6	38.2	..	23.5	32.2	20.7	..	51.0	57.5	38.2	..	69.1	77.1	55.1	..
Greece	54.7	49.7	70.1	66.5	50.2	41.4	54.1	54.8	56.9	51.5	70.3	66.4	57.1	58.6	81.1	75.8
Hungary	48.9	47.5	32.8	27.2	37.8	36.6	24.1	22.5	52.6	49.6	34.1	27.1	61.7	54.4	44.6	35.9
Iceland[1, 2]	11.8	9.7	7.5	10.4	..	1.9	0.8	2.2	17.0	11.4	9.5	12.8	33.2	35.6	11.7	13.7
Ireland	37.3	30.0	33.3	24.0	19.9	21.0	..	..	44.9	33.5	..	..	48.6	44.0	..	..
Israel	12.0	24.9	5.7	4.9	6.1	13.2	3.6	2.5	13.5	27.3	5.5	4.2	20.7	41.6	10.9	11.9
Italy[2]	61.8	47.5	57.0	52.4	57.5	41.1	47.4	44.1	63.8	49.4	58.3	53.3	64.2	53.7	63.3	59.6
Japan	25.5	32.0	32.3	28.0	21.5	20.0	18.2	19.2	22.5	33.1	35.4	31.6	32.8	37.5	32.0	25.0
Korea[1]	2.3	0.6	0.9	0.6	0.9	0.4	0.8	0.2	2.8	0.7	1.0	0.8	3.1	..	0.9	0.5
Latvia	58.6	27.1	38.2	27.3	43.4	11.1	24.4	12.8	61.3	30.6	37.1	26.8	65.0	37.6	48.5	37.5
Lithuania	49.8	32.4	30.6	29.0	43.1	21.1	6.1	9.8	51.4	33.0	28.6	28.7	51.5	45.9	51.3	42.3
Luxembourg[1]	22.4	28.7	22.8	25.5	14.3	23.0	10.1	12.3	24.9	29.9	25.1	28.3	26.4	43.7	40.2	45.1
Mexico	1.2	1.9	1.7	1.4	0.9	0.9	1.2	0.8	1.2	2.1	2.0	1.6	5.4	7.5	2.3	2.6
Netherlands	..	39.4	31.4	24.0	..	12.6	9.0	8.5	..	44.1	32.6	27.5	..	75.0	59.6	48.7
New Zealand	19.9	6.0	12.8	8.9	9.8	2.4	5.1	4.1	23.1	8.6	15.2	10.8	45.2	15.2	29.5	17.3
Norway[1, 2]	10.2	18.4	24.1	20.9	3.1	8.1	9.3	10.3	14.7	23.6	29.1	24.7	32.7	41.6	52.8	38.4
Poland	37.9	45.9	21.6	20.0	28.0	30.0	14.6	15.1	41.5	50.6	22.6	20.3	42.9	58.6	29.3	29.7
Portugal	42.2	47.2	42.6	33.5	21.2	27.4	..	..	47.9	49.6	..	..	69.4	67.5	..	..
Slovak Republic	54.6	70.8	55.0	45.0	43.1	53.9	37.5	36.8	59.9	74.5	58.0	44.7	59.9	82.9	61.6	57.5
Slovenia	61.4	45.7	43.0	38.8	42.4	29.2	21.9	25.0	67.9	49.8	42.9	38.7	86.8	57.4	61.3	59.7
Spain[2]	41.7	20.4	37.8	32.1	29.3	10.1	18.5	17.3	45.0	21.2	37.8	31.1	58.4	46.8	57.8	52.8
Sweden[2]	26.4	12.8	12.1	11.7	8.9	3.5	2.0	1.8	26.6	16.4	14.6	14.5	49.3	28.7	28.6	24.1
Switzerland	29.0	40.8	37.8	34.6	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	21.1	30.3	23.5	25.0	19.8	26.6	17.0	18.6	21.8	32.2	25.3	27.0	31.3	40.4	36.1	34.9
United Kingdom[2]	26.7	23.8	24.1	20.1	12.3	15.7	14.7	13.3	32.9	28.4	26.9	22.1	43.4	35.8	39.9	29.0
United States[2]	6.0	10.0	12.7	5.6	3.9	6.5	7.9	4.7	6.6	11.1	13.9	5.7	10.7	14.9	18.0	6.9
OECD[3]	31.0	27.4	25.7	18.4	20.0	15.7	14.2	11.3	34.3	30.8	28.3	20.3	43.7	41.9	37.7	24.8
Russia	46.2	40.6	23.8	18.8	32.6	28.6	13.2	12.7	50.2	45.9	25.4	19.4	61.0	43.0	34.1	26.0
South Africa	..	57.7	64.8	61.3	..	36.2	38.3	42.5	..	61.8	67.5	62.7	..	80.5	75.0	68.6

.. Not available

Note: For country details related to data on unemployment by duration of job search, see www.oecd.org/els/emp/lfsnotes_sources.pdf. Persons for whom no duration of unemployment was specified are excluded from the total used in the calculation.

Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. Data based on small sample sizes.

2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.

3. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/dph5x3

Table M2. Incidence of long-term unemployment, 12 months and over - Men

As a percentage of male unemployment in each age group

Percentage

	Men (15+)				Youth (15-24)				Prime(25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	17.7	17.7	..	..	20.2	19.0	..	..	17.1	17.3	..	..	11.1	14.6	..	..
Austria	28.1	26.9	26.3	26.6	10.0	14.0	17.8	12.6	27.2	29.2	24.7	26.0	56.4	56.4	48.8	53.5
Belgium	54.1	49.3	44.7	44.3	27.2	30.1	23.7	26.1	62.8	53.0	47.7	44.7	75.1	82.4	66.8	68.8
Canada	12.3	8.1	8.9	5.9	4.4	1.5	4.2	3.3	15.6	10.8	9.1	5.9	20.4	13.0	14.6	10.4
Chile	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	..	10.8	9.1	5.7	..	8.3	7.6	4.5	..	12.0	8.4	5.8	..	17.7	15.7	8.5
Costa Rica	..	..	6.7	4.8	..	..	6.0	5.8	..	..	6.3	4.2	..	..	10.2	3.1
Czech Republic	47.5	51.7	32.9	22.8	37.2	35.4	23.6	18.2	53.3	56.5	31.5	22.3	44.6	55.8	47.4	31.3
Denmark	21.0	15.6	16.1	13.8	0.9	3.3	..	..	25.2	17.6	..	..	37.4	36.3	..	..
Estonia	47.1	53.3	23.8	18.3	31.3	33.8	7.1	10.0	51.2	55.2	22.8	18.4	50.1	79.2	42.7	24.3
Finland	32.2	26.5	19.9	17.1	8.8	5.9	3.4	3.6	39.1	30.2	24.1	20.0	58.3	52.4	33.6	32.5
France	41.2	40.2	39.4	36.9	20.0	28.8	26.9	20.8	43.8	42.1	39.4	38.4	68.7	67.2	62.2	61.0
Germany	50.1	56.7	40.0	..	23.7	33.5	23.4	..	49.1	57.9	40.2	..	69.1	76.5	56.7	..
Greece	48.0	41.5	68.4	64.8	42.9	32.8	53.7	53.0	49.9	42.5	67.4	63.9	57.1	56.2	82.9	76.6
Hungary	51.1	47.2	33.1	28.7	40.7	38.0	26.8	25.1	54.4	48.9	34.1	28.1	65.1	54.3	42.9	36.9
Iceland[1, 2]	8.7	9.7	5.6	12.4	..	..	1.1	2.4	17.1	16.5	7.0	15.2	..	13.0	12.9	16.4
Ireland	46.7	35.4	38.1	25.4	21.5	24.8	..	..	56.1	39.6	..	..	59.3	46.7	..	..
Israel	13.5	28.9	6.1	5.5	8.1	15.7	3.3	2.1	13.7	31.0	5.1	4.3	23.9	45.6	14.7	13.1
Italy[2]	61.8	45.6	57.4	52.5	56.7	41.0	48.6	45.7	64.0	46.7	57.9	52.6	67.3	54.1	65.9	62.8
Japan	30.7	40.3	41.5	34.8	26.3	24.0	25.0	21.4	29.4	43.0	46.4	41.5	32.7	43.3	40.0	30.0
Korea[1]	3.1	0.7	1.0	0.6	1.4	0.3	0.5	..	3.5	0.9	1.0	0.8	3.7	..	1.1	0.5
Latvia	58.8	30.1	40.9	29.9	46.7	11.6	31.7	8.4	61.1	37.2	39.9	31.4	63.4	30.4	50.2	36.1
Lithuania	51.4	34.9	28.8	27.4	50.2	22.9	5.3	7.4	52.0	34.6	28.1	27.5	48.8	54.0	51.3	43.0
Luxembourg[1]	26.4	35.4	22.7	24.5	20.4	30.5	8.7	18.0	28.7	36.5	26.0	24.6	26.4	46.5	36.6	42.1
Mexico	0.6	2.0	1.4	1.5	..	0.8	1.0	0.9	0.5	2.1	1.5	1.6	7.1	8.2	2.2	3.0
Netherlands	..	41.8	31.5	23.9	..	12.2	8.8	10.3	..	45.9	33.3	26.3	..	76.2	56.7	43.3
New Zealand	23.7	6.6	14.1	9.2	12.1	2.3	5.7	3.5	27.4	10.0	15.9	11.7	47.5	16.7	33.3	19.4
Norway[1, 2]	13.1	20.2	26.0	22.3	3.7	7.6	9.8	10.4	18.4	28.0	30.6	27.1	39.6	38.7	53.2	35.0
Poland	34.1	45.8	23.0	20.2	25.5	31.0	15.3	16.8	37.3	49.9	23.8	19.3	42.1	58.9	32.2	31.6
Portugal	43.9	47.6	43.7	33.6	20.3	26.2	..	..	47.5	50.1	..	..	74.6	66.2	..	..
Slovak Republic	54.1	72.3	57.8	46.6	43.9	57.8	43.9	41.7	59.2	75.6	61.2	46.5	60.5	86.4	58.2	57.1
Slovenia	62.8	45.3	43.8	34.8	41.7	27.8	21.3	23.7	68.9	51.1	42.3	32.9	87.0	57.9	67.6	62.6
Spain[2]	35.3	17.4	34.9	29.2	25.5	8.6	20.6	16.9	35.9	17.4	33.5	27.8	59.1	42.4	55.9	49.4
Sweden[2]	29.3	14.2	13.7	11.7	11.0	3.3	2.5	2.6	30.1	18.9	16.2	13.8	48.6	29.0	32.2	24.7
Switzerland	28.2	37.9	37.1	34.0	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	18.1	27.0	18.7	20.4	16.0	23.3	12.9	14.5	19.0	28.3	19.1	21.2	31.3	39.6	34.2	34.6
United Kingdom[2]	32.6	28.5	27.7	21.7	14.6	18.9	18.3	14.1	40.2	34.7	31.8	23.0	49.2	39.8	41.8	32.0
United States[2]	6.7	10.7	13.9	6.2	4.5	7.6	9.5	5.3	6.7	11.4	14.8	6.3	13.8	17.2	20.0	7.9
OECD[3]	29.9	27.5	25.2	18.3	19.2	16.4	14.8	11.5	32.6	30.5	27.1	19.7	43.6	42.3	37.4	25.8
Russia	42.7	39.1	23.1	19.2	31.2	28.4	13.7	12.9	45.7	43.7	24.2	19.5	58.1	43.5	34.6	28.2
South Africa	..	52.6	60.0	56.7	..	34.2	31.8	35.8	..	55.5	62.6	58.2	..	80.7	72.9	66.1

.. Not available

Note: For country details related to data on unemployment by duration of job search, see www.oecd.org/els/emp/lfsnotes_sources.pdf. Persons for whom no duration of unemployment was specified are excluded from the total used in the calculation.

Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. Data based on small sample sizes.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/znrl93

Table M3. Incidence of long-term unemployment, 12 months and over - Women

As a percentage of female unemployment in each age group

Percentage

	Women (15+)				Youth (15-24)				Prime(25-54)				Older population (55-64)			
	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020	2000	2007	2019	2020
Australia	19.0	19.3	..	..	20.4	19.1	..	..	18.3	20.1	..	..	17.2	16.6	..	..
Austria	22.8	27.6	23.7	22.1	16.5	12.8	18.0	10.6	23.5	31.1	22.9	22.6	34.0	61.5	42.5	41.4
Belgium	54.3	51.4	42.0	38.3	30.8	29.3	21.0	16.4	61.3	56.6	44.3	40.8	89.1	80.3	61.9	63.2
Canada	9.8	5.8	7.8	4.2	3.5	1.4	1.9	2.0	12.1	6.6	8.7	4.7	15.8	13.6	14.4	7.0
Chile	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Colombia	..	13.1	13.5	7.8	..	8.6	8.8	7.1	..	16.1	15.2	8.2	..	17.1	22.8	6.9
Costa Rica	..	..	18.4	10.4	..	..	8.1	11.2	..	..	23.1	10.0	..	..	30.7	12.0
Czech Republic	49.8	54.7	27.9	21.8	38.5	31.1	23.4	14.7	53.3	59.4	26.0	21.4	47.5	47.2	41.1	30.7
Denmark	22.4	16.6	17.1	19.7	3.5	5.3	..	..	24.4	15.8	..	..	45.1	42.3	..	..
Estonia	42.6	44.4	16.6	15.9	19.4	22.8	8.0	1.6	47.3	49.9	15.3	17.6	44.3	29.6	29.1	23.6
Finland	26.2	19.5	16.7	14.5	8.8	5.0	2.8	2.4	29.6	21.8	18.3	15.0	54.5	42.2	36.4	32.3
France	43.7	39.7	38.2	36.6	21.1	19.9	21.2	22.2	46.5	43.9	37.9	37.1	70.5	68.9	62.0	58.5
Germany	53.1	56.5	35.4	..	23.2	30.4	16.0	..	52.9	57.0	35.4	..	69.0	77.8	53.0	..
Greece	59.2	54.4	71.6	68.0	55.1	46.7	54.4	56.5	61.2	56.3	72.4	68.4	57.0	61.9	79.1	74.6
Hungary	45.7	47.9	32.5	25.6	33.1	34.7	19.5	19.5	50.1	50.3	34.1	26.0	45.7	54.4	47.1	34.6
Iceland[1, 2]	14.1	9.7	10.4	7.8	..	5.5	..	1.8	16.9	7.1	12.2	9.4	25.5	77.5	9.4	10.8
Ireland	23.0	21.7	27.2	22.4	18.1	15.5	..	..	26.2	23.9	..	..	20.5	38.3	..	..
Israel	10.4	20.9	5.3	4.3	4.2	11.2	3.9	2.9	13.2	23.8	5.9	4.0	12.8	34.7	5.8	9.9
Italy[2]	61.8	49.2	56.7	52.3	58.3	41.1	45.8	41.7	63.6	51.5	58.7	54.1	56.8	52.8	59.3	55.1
Japan	17.1	19.4	19.4	18.2	14.8	15.0	10.0	16.7	13.8	20.6	20.9	18.4	33.3	20.0	20.0	16.7
Korea[1]	0.8	0.3	0.8	0.6	0.5	0.5	1.1	0.3	0.9	0.2	0.9	0.7	1.2	..	0.4	0.5
Latvia	58.3	23.4	34.6	24.0	39.3	10.4	11.7	18.0	61.5	22.8	33.4	20.4	67.8	45.2	46.7	39.2
Lithuania	47.7	29.9	32.9	30.9	31.4	19.3	7.4	13.3	50.7	31.5	29.3	30.3	57.3	36.3	51.3	41.7
Luxembourg[1]	18.8	22.3	22.9	26.6	8.4	14.8	12.0	4.6	21.9	24.0	24.2	31.8	..	39.1	47.3	50.7
Mexico	2.0	1.7	2.3	1.3	2.1	1.1	1.5	0.6	1.9	2.1	2.8	1.6	..	3.6	2.9	1.1
Netherlands	..	37.1	31.2	24.1	..	13.0	9.4	6.8	..	42.7	31.9	28.6	..	72.9	63.4	55.0
New Zealand	14.9	5.4	11.6	8.6	7.0	2.4	4.6	4.6	18.1	7.5	14.5	10.0	39.1	13.3	25.0	14.8
Norway[1, 2]	6.7	16.4	21.7	19.2	2.5	8.6	8.8	10.2	9.9	19.1	27.0	21.7	20.2	45.7	51.8	44.1
Poland	41.3	46.0	20.1	19.8	30.7	29.0	13.8	13.1	45.1	51.3	21.4	21.4	43.9	58.1	24.0	25.8
Portugal	41.0	46.9	41.7	33.3	21.8	28.3	..	..	48.2	49.3	..	..	59.9	69.5	..	..
Slovak Republic	55.1	69.4	51.7	43.2	42.0	48.5	29.5	29.5	60.5	73.5	54.2	42.9	56.5	76.6	64.2	57.9
Slovenia	59.8	46.1	42.2	42.4	43.0	31.1	22.5	26.3	66.9	48.9	43.4	43.8	85.5	56.7	53.3	56.7
Spain[2]	46.3	22.8	40.4	34.7	32.4	11.3	16.1	17.9	50.8	24.0	41.3	33.8	57.1	52.1	59.8	56.1
Sweden[2]	22.8	11.3	10.4	11.6	6.4	3.7	1.4	0.9	22.1	14.0	13.0	15.2	50.3	28.3	23.8	23.3
Switzerland	29.7	43.0	38.6	35.3	..	..	..	..	..	..	..	..	..	..	..	..
Turkey	29.8	38.9	30.8	33.3	28.5	32.9	22.3	24.5	31.3	43.8	34.5	37.6	..	50.0	48.4	36.7
United Kingdom[2]	18.1	17.6	19.6	18.1	9.4	11.2	9.3	12.2	22.6	21.4	21.9	21.0	28.0	26.2	37.2	23.8
United States[2]	5.3	9.0	11.4	5.0	3.1	5.1	5.8	4.1	6.4	10.7	12.9	5.1	7.3	12.2	16.0	6.0
OECD[3]	32.3	27.3	26.4	18.6	21.0	14.9	13.3	11.1	36.0	31.3	29.6	20.8	43.9	41.2	38.2	23.6
Russia	50.0	42.4	24.5	18.4	34.2	28.7	12.6	12.4	55.1	48.3	26.8	19.3	65.1	42.3	33.2	22.1
South Africa	..	62.3	70.5	66.9	..	38.3	45.7	50.3	..	66.9	73.1	68.3	..	79.8	78.9	73.3

.. Not available

Note: For country details related to data on unemployment by duration of job search, see www.oecd.org/els/emp/lfsnotes_sources.pdf. Persons for whom no duration of unemployment was specified are excluded from the total used in the calculation.

Please refer to the Box entitled "Major breaks in series" in the introduction to the Statistical Annex.

1. Data based on small sample sizes.
2. The lower age limit is 16 instead of 15. For Iceland up to 2008, Italy after 2007, Norway up to 2005 and Sweden up to 2006.
3. Weighted average.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/l53rtu

Table N. Real average annual wages and real unit labour costs in the total economy

Annualised growth rates

Percentage

	Average wages in 2020 USD PPPs[1]	Average wage (%)[2]					Unit labour costs (%)[2]				
		2000-2007	2007-2020	2007	2019	2020	2000-2007	2007-2020	2007	2019	2020
Australia	55 206	1.5	0.7	2.8	0.9	2.2	0.9	0.3	2.1	1.3	-0.2
Austria	53 132	0.9	0.3	0.6	0.7	-1.0	-1.1	0.0	-1.1	0.8	-0.8
Belgium	54 327	0.4	0.2	-0.2	1.1	-3.0	-0.5	-0.3	-1.0	0.6	-0.1
Canada	55 342	1.4	1.0	2.9	0.7	2.3	0.9	0.7	2.5	0.9	0.1
Chile[3]	26 729	1.0	2.2	2.8	3.5	..	-0.6	1.2	1.7	4.0	1.3
Colombia	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	29 885	4.8	1.9	3.0	3.2	-1.5	0.8	0.1	-0.1	1.6	1.2
Denmark	58 430	1.7	0.9	1.1	0.3	0.8	1.1	0.2	3.6	-0.9	-0.6
Estonia	30 720	8.4	2.5	16.3	7.3	2.6	2.1	1.7	7.7	3.0	3.2
Finland	46 230	1.7	0.4	1.4	1.0	0.0	-0.2	-0.1	-1.6	0.8	-3.3
France	45 581	1.2	0.6	0.4	0.5	-3.3	0.1	0.3	-0.5	-1.6	-0.1
Germany	53 745	0.3	1.1	-0.3	1.5	-0.5	-1.7	0.2	-2.1	2.2	-0.1
Greece	27 207	2.8	-1.5	0.0	1.2	0.7	1.7	0.6	0.3	1.1	-0.4
Hungary	25 409	4.7	1.0	-0.7	3.2	3.8	0.7	-0.5	-1.0	-1.7	0.8
Iceland[3]	67 488	3.0	0.1	3.0	-2.9	-4.1	1.1	0.4	0.5	-3.4	6.6
Ireland	49 474	2.6	0.9	2.8	1.9	-0.1	1.0	-1.4	0.8	-1.0	-3.2
Israel	39 322	-0.4	0.8	1.9	1.9	-0.5	-0.5	0.2	-0.1	0.3	2.1
Italy	37 769	0.5	-0.6	0.0	0.4	-5.9	0.6	0.4	0.0	1.0	-0.2
Japan	38 515	0.1	0.0	-0.3	1.5	-1.3	-0.6	0.0	-0.5	1.5	-0.3
Korea	41 960	2.8	1.3	2.2	1.6	-0.8	0.4	0.2	0.0	0.8	-0.1
Latvia	29 876	9.1	2.5	23.4	5.7	4.3	2.3	2.1	14.9	3.5	1.4
Lithuania	31 811	9.3	2.8	6.5	7.7	7.1	2.7	1.1	2.0	4.0	1.1
Luxembourg	65 854	1.2	0.5	2.6	-0.9	-1.5	0.7	1.1	-1.6	1.2	2.8
Mexico[3]	16 230	1.2	-0.6	0.4	0.8	-3.2	0.7	-0.6	-0.6	2.0	-0.8
Netherlands	58 828	0.8	0.5	1.4	-0.2	2.4	-0.8	-0.4	-0.1	0.9	-0.8
New Zealand[3]	45 269	2.7	1.0	5.9	2.2	0.4	2.1	0.7	2.8	1.3	0.4
Norway	55 780	3.2	1.1	4.5	1.9	0.0	2.2	2.0	6.2	2.7	-1.1
Poland	32 527	1.1	2.8	3.2	5.8	1.8	-1.4	0.5	2.3	1.2	0.7
Portugal	28 410	-0.3	0.2	0.7	2.6	1.5	-0.7	-0.7	-1.8	1.1	0.8
Slovak Republic	23 619	3.4	2.0	6.1	3.3	0.8	-2.7	0.0	-3.0	2.3	3.4
Slovenia	41 445	2.9	1.3	2.2	2.9	2.3	-0.2	-0.1	-1.2	2.7	0.0
Spain	37 922	-0.1	0.0	1.1	0.1	-2.9	0.1	-0.8	0.7	1.8	-0.6
Sweden	47 020	2.2	1.2	3.5	1.1	1.3	0.4	0.8	2.9	0.6	0.1
Switzerland	64 824	1.3	0.3	1.2	1.5	-1.6	0.2	0.3	-0.2	1.7	-0.9
Turkey	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	47 147	2.5	-0.1	2.7	1.5	-1.6	1.3	-0.1	1.4	1.9	0.3
United States	69 392	1.2	1.1	2.0	1.7	4.5	-0.5	-0.1	0.8	0.7	0.4
OECD[4]	49 165	1.2	0.7	1.4	1.5	0.4	-0.5	-0.1	0.3	0.7	-0.2

.. Not available

Note: Average annual wages per full-time equivalent dependent employee are obtained by dividing the national-accounts-based total wage bill by the average number of employees in the total economy, which is then multiplied by the ratio of average usual weekly hours per full-time employee to average usual weekly hours for all employees. Please note that data for 2020 are provisional estimates. For more details, see: https://www.oecd.org/employment/emp/average_wages.pdf.

1. Average wages are converted in USD PPPs using estimated 2020 USD PPPs for private consumption.
2. Average annual wages and unit labour costs are deflated by a price deflator for private final consumption expenditures in 2020 prices.
3. Real compensation per employee (instead of real wages).
4. The OECD average wages and real wage growth are a weighted average based on dependent employment weights in 2020 for the countries shown.

Source: *OECD Employment Database*, www.oecd.org/employment/emp/onlineoecdemploymentdatabase.htm and www.oecd.org/els/emp/lfsnotes_sources.pdf.

StatLink https://stat.link/0w36fh

Table O. Earnings dispersion and incidence of high and low pay

Percentage

	Earnings dispersion[1]						Incidence of			
	9th to 1st earnings deciles Ratio		9th to 5th earnings deciles Ratio		5th to 1st earnings deciles Ratio		Low pay %[2]		High pay %[3]	
	2009	2019	2009	2019	2009	2019	2009	2019	2009	2019
Australia	3.33	3.13	2.00	1.88	1.67	1.66	14.5	15.4	..	..
Austria	3.36	3.17	1.94	1.92	1.73	1.65	16.0	14.7	20.8	20.6
Belgium	2.30	2.44	1.70	1.66	1.36	1.47	3.7	9.2	11.7	11.9
Canada	3.70	3.37	1.90	1.89	1.95	1.78	20.6	19.4	22.1	22.7
Chile	4.29	4.00	2.89	2.63	1.48	1.52	9.7	10.6	28.7	27.8
Colombia	6.30	4.69	2.86	2.75	2.20	1.70	18.3	13.8	25.9	24.2
Costa Rica	5.38	4.82	2.80	2.96	1.92	1.63	..	12.0	..	26.1
Czech Republic	3.55	3.25	1.87	1.79	1.89	1.81	20.0	18.4	..	..
Denmark	2.40	2.60	1.68	1.76	1.43	1.48	7.3	8.7	2.4	2.3
Estonia	4.44	4.00	2.06	1.91	2.15	2.09	21.4	19.7	25.0	21.0
Finland	2.59	2.56	1.76	1.75	1.47	1.47	8.5	8.6	16.7	17.0
France	2.81	2.86	1.94	1.92	1.45	1.49	5.8	7.7	22.0	21.0
Germany	3.32	3.28	1.79	1.85	1.86	1.78	18.8	17.6	17.1	18.7
Greece	2.99	3.46	1.87	1.89	1.60	1.83	12.5	16.4	19.0	26.0
Hungary	4.28	3.22	2.43	2.12	1.76	1.52	21.8	16.0	..	..
Iceland	2.65	2.66	1.71	1.70	1.55	1.57	6.5	7.6	22.0	21.0
Ireland	3.64	3.73	1.93	2.09	1.89	1.79	17.7	14.9	24.0	28.0
Israel	4.83	4.72	2.60	2.50	1.86	1.89	22.2	22.4	28.2	..
Italy	2.64	2.57	1.76	1.83	1.50	1.40	8.1	3.7	18.0	19.0
Japan	2.99	2.78	1.85	1.81	1.62	1.54	14.7	11.8	..	12.5
Korea	4.72	3.63	2.36	2.28	2.00	1.59	25.0	17.0	..	..
Latvia	4.48	4.08	2.23	2.17	2.01	1.88	22.0	21.9	32.0	25.0
Lithuania	4.31	3.54	2.18	2.01	1.98	1.76	23.9	21.6	29.0	23.0
Luxembourg	3.35	3.29	2.05	2.19	1.64	1.51	14.7	11.1	23.0	24.0
Mexico	3.75	3.49	2.15	2.00	1.74	1.74	16.9	17.1	22.1	17.6
Netherlands	2.87	2.92	1.77	1.81	1.64	1.63	7.8	6.4	25.0	29.0
New Zealand	2.84	2.70	1.83	1.85	1.55	1.46	12.9	6.9	..	..
Norway	2.23	2.36	1.63	1.64	1.37	1.44	3.7	3.6	18.0	19.0
Poland	3.96	3.70	2.01	2.01	1.97	1.84	22.7	21.1	..	..
Portugal	4.50	3.43	2.78	2.47	1.62	1.39	15.9	4.2	32.0	28.0
Slovak Republic	3.60	3.21	2.00	1.92	1.80	1.67	20.0	16.0	..	..
Slovenia	3.34	3.19	2.03	1.94	1.64	1.65	17.8	17.1	23.0	22.0
Spain	3.10	3.10	1.93	1.97	1.60	1.61	10.6	10.8	25.0	26.0
Sweden	2.04	2.13	1.58	1.58	1.29	1.35	1.5	2.3	15.0	15.0
Switzerland	2.76	2.74	1.84	1.82	1.50	1.50	7.8	6.2	19.0	19.0
Turkey	3.80	3.36	3.22	2.36	1.18	1.42	0.7	1.0	32.0	29.0
United Kingdom	3.60	3.34	1.99	1.97	1.81	1.70	20.6	18.1	..	..
United States	4.98	5.00	2.36	2.48	2.11	2.02	24.8	23.4	..	..
OECD[4]	3.58	3.33	2.09	2.03	1.70	1.64	14.5	13.0	22.2	21.3

.. Not available

Note: Estimates of earnings used in the calculations refer to gross earnings of full-time wage and salary workers. Country-specific variations from this definition as well as national data sources and earnings concepts can be found at: https://stats.oecd.org//Index.aspx?QueryId=18974.

1. Earnings dispersion is measured by the ratio of 9th to 1st deciles limits of earnings, 9th to 5th deciles and 5th to 1st deciles. Year 2009 refers to 2010 for Costa Rica, Estonia, France, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Slovenia, Spain and Turkey. Year 2019 refers to 2018 for Australia, Belgium, Estonia, France, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Portugal, Slovenia, Spain and Turkey and to 2017 for Chile.
2. The incidence of low pay refers to the share of workers earning less than two-thirds of median earnings. See note 1 for countries with different time periods. Calculations for Norway, Sweden and Switzerland are based on data from the European Structure of Earnings Survey and refer to year 2010 and 2018 instead of 2009 and 2019.
3. The incidence of high pay refers to the share of workers earning more than one-and-a-half times median earnings. See note 1. for countries with different time periods. See note 2. for Norway, Sweden and Switzerland.
4. Unweighted average for the above countries.

Source: *OECD Earnings Distribution Database*, www.oecd.org/employment/emp/employmentdatabase-earningsandwages.htm.

StatLink https://stat.link/xriayp

Table P. Relative earnings: Gender, age and education gaps

Percentage

	Gender[1]		Age[2]				Education[3]			
	Women/Men		15-24/25-54		55-64/25-54		Low/Medium		High/Medium	
	2009	2019	2009	2019	2009	2019	2010	2018	2010	2018
Australia	16	16	40	37	-2	-1	14	9	-37	-25
Austria	19	14	35	32	-21	-20	23	24	-51	-47
Belgium	7	3	31	32	-26	-24	..	11	..	-38
Canada	20	18	41	38	-1	1	21	21	-39	-33
Chile	9	13	42	44	-22	4	..	29	..	-141
Colombia	3	4	45	40	-10	-19	..	28	..	-128
Costa Rica	0	0	38	38	-18	-20	..	26	..	-101
Czech Republic	18	15	32	27	3	5	25	37	-103	-58
Denmark	10	15	38	41	-1	-2	11	10	-26	-24
Estonia	23	17	28	25	18	20	13	9	-29	-37
Finland	20	19	35	34	-6	-3	..	-1	..	-34
France	9	12	38	33	-23	-17	7	7	-48	-46
Germany	17	14	43	42	-12	-11	..	24	..	-57
Greece	10	6	43	44	-38	-28	..	19	..	-38
Hungary	4	5	37	36	-11	0	27	23	-104	-76
Iceland	16	13	35	36	2	-7	..	..	..	..
Ireland	14	8	41	47	-12	-7	..	5	..	-55
Israel	21	22	..	..	-17	15	27	25	-56	-49
Italy	6	6	31	25	-27	-19	18	21	-43	-37
Japan	32	29	42	40	0	-1	..	..	..	..
Korea	39	32	44	40	9	6	12..	11	-40..	-38
Latvia	19	20	23	24	12	24	..	10	..	-45
Lithuania	11	12	22	25	2	15	..	..	..	..
Luxembourg	5	-3	44	41	-25	-26	..	17	..	-46
Mexico	17	19	34	26	1	0	..	20	..	-58
Netherlands	18	13	46	45	-11	-15	14	14	-48	-46
New Zealand	8	7	35	32	2	-1	19	10	-25	-29
Norway	8	4	35	39	-4	-10	12	14	-27	-18
Poland	7	11	34	26	-15	6	..	15	..	-55
Portugal	16	12	41	35	-27	-20	31	22	-71	-69
Slovak Republic	16	14	31	29	4	8	26	22	-75	-55
Slovenia	1	8	35	32	-22	-12	25	18	-86	-65
Spain	14	9	35	35	-20	-14	15	16	-35	-48
Sweden	10	8	30	31	-8	-8	..	17	..	-19
Switzerland	20	15	38	37	-9	-13	24	21	-44	-45
Turkey	3	10	38	36	-49	-19	..	22	..	-67
United Kingdom	21	16	44	40	4	1	30	13	-61	-37
United States	20	18	46	44	-8	-6	32	29	-70	-71
OECD[4]	14	12	37	35	-10	-6	20	18	-53	-52

.. Not available

1. See note to Table O. The gender wage gap is unadjusted and is calculated as the difference between median earnings of men and women relative to median earnings of men. Year 2009 refers to 2010 for Costa Rica, Estonia, France, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Slovenia, Spain, Switzerland and Turkey. Year 2019 refers to 2018 for Belgium, Estonia, France, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Slovenia, Spain, Switzerland and Turkey and to 2017 for Chile.
2. Age wage gaps are calculated as the difference between mean earnings of 25-54 year-olds and that of 15-24 year-olds (respectively 55-64 year-olds) relative to mean earnings of 25-54 year-olds. Data refer to 55-year-olds and over for Hungary and Norway. Year 2009 refers to 2010 for Austria, Costa Rica, Estonia, France, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Portugal, Slovenia, Spain, Switzerland and Turkey and to 2011 for Colombia. Year 2019 refers to 2018 for Australia, Austria, Denmark, Estonia, Finland, France, Greece, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Slovenia, Spain, Switzerland and Turkey; to 2017 for Belgium and Chile; and to 2016 for Hungary.
3. Earnings by skill (or education) levels refer to mean annual full-time full-year earnings of 25-64 year-old employees except for Korea where they refer to mean monthly full-time earnings. Earnings gaps by skill levels are calculated as the difference between mean earnings of medium-skilled employees and low- (respectively high-) skilled employees relative to mean earnings of medium-educated employees. The skill levels are based on the International Standard Classification of Education (ISCED, 2011), except for Korea which refers to ISCED, 1997. *Low skills* corresponds to less than upper secondary; *Medium skills* to upper secondary and post-secondary non-tertiary; and *High skills* to tertiary education. For Korea, tertiary education refers to ISCED, 1997 Levels 5 and 6. The years retained are those available in the database. Year 2018 refers to 2017 for Belgium, Canada, Chile, Finland and Spain; and to 2016 for France and Italy.
4. Unweighted average for the above countries.

Source: *OECD Earnings Distribution Database*, www.oecd.org/employment/emp/employmentdatabase-earningsandwages.htm for earnings gap by gender and age; and OECD (2020), *Education at a Glance*, www.oecd.org/education/education-at-a-glance for earnings gap by education levels. For Korea, data on earnings by education are provided by national authorities.

StatLink https://stat.link/m6is7h

Table Q. Public expenditure and participants stocks in labour market programmes in OECD countries

Percentage

	Public expenditure (% of GDP)								Participant stocks (% of labour force)			
	Total		Active programmes		*of which:* Active measures not including PES and administration		Passive programmes		Active measures not including PES and administration		Passive programmes	
	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018
Australia	0.85	0.78	0.24	0.23	0.09	0.09	0.61	0.55	2.36	2.41	6.24	5.73
Austria	2.19	2.07	0.78	0.75	0.60	0.58	1.41	1.32	3.93	3.82	7.47	7.03
Belgium	2.24	2.10	0.87	0.88	0.54	0.55	1.37	1.23	9.62	9.96	11.87	10.60
Canada	0.78	0.70	0.22	0.21	0.11	0.10	0.56	0.49	0.59	0.69	2.57	2.25
Chile	0.51	0.48	0.14	0.12	0.11	0.09	0.37	0.37	..	..	2.03	2.09
Colombia	..	..	..	..	..	..	..	..	..	..	..	..
Costa Rica	..	..	..	..	..	..	..	..	..	..	..	..
Czech Republic	0.46	0.46	0.31	0.31	0.19	0.19	0.16	0.14	1.31	..	1.62	1.42
Denmark	3.03	2.87	1.95	1.89	1.56	1.51	1.08	0.98	7.37	7.51	4.60	4.17
Estonia	0.79	0.87	0.41	0.47	0.28	0.33	0.38	0.40	4.08	4.85	4.30	4.37
Finland	2.55	2.21	0.98	0.94	0.84	0.79	1.57	1.27	4.71	4.79	10.76	9.27
France	2.85	2.66	0.90	0.75	0.65	0.52	1.95	1.90	5.88	4.86	13.67	13.66
Germany	1.42	1.39	0.66	0.68	0.27	0.25	0.76	0.70	1.91	1.82	5.61	5.23
Greece	..	..	..	..	0.18	0.21	0.50	0.52	0.70	..	5.19	5.38
Hungary	1.05	0.84	0.84	0.63	0.78	0.57	0.21	0.20	4.86	4.65	3.26	3.00
Iceland	..	..	..	..	..	..	..	..	..	..	..	..
Ireland	1.25	1.04	0.42	0.36	0.36	0.31	0.83	0.68	3.19	4.14	9.81	8.14
Israel	0.61	0.58	0.17	0.16	0.14	0.13	0.44	0.43	4.40	4.41	3.92	3.74
Italy	..	1.56	..	0.42	..	0.36	1.21	1.14	9.30	6.97	5.58	5.43
Japan	0.30	0.31	0.15	0.15	0.08	0.09	0.15	0.16	..	..	..	..
Korea	0.60	0.75	0.30	0.36	0.26	0.31	0.31	0.38	..	..	..	..
Latvia	0.59	0.58	0.19	0.18	0.13	0.12	0.41	0.40	1.07	0.97	3.46	3.14
Lithuania	0.54	0.66	0.30	0.27	0.24	0.22	0.24	0.39	1.46	1.15	2.28	3.26
Luxembourg	1.38	1.26	0.79	0.72	0.73	0.66	0.59	0.54	10.01	9.28	3.69	3.95
Mexico	0.00 n	0.00 n	0.00 n	0.00 n	0.00 n	0.00 n	0.00 n	0.00 n	..	..	..	..
Netherlands	2.14	1.94	0.64	0.57	0.42	0.37	1.50	1.37	3.81	2.81	8.60	7.62
New Zealand	0.56	0.57	0.24	0.22	0.11	0.10	0.32	0.35	1.36	1.31	2.54	2.88
Norway	0.97	0.79	0.47	0.42	0.32	0.28	0.49	0.37	1.80	1.59	2.39	1.90
Poland	0.62	0.50	0.42	0.36	0.34	0.30	0.20	0.15	3.72	3.48	1.73	1.48
Portugal	1.43	1.30	0.40	0.34	0.36	0.30	1.03	0.95	3.94	3.92	5.62	5.23
Slovak Republic	0.56	0.55	0.23	0.24	0.19	0.20	0.33	0.31	2.57	2.48	1.75	1.75
Slovenia	0.68	0.61	0.25	0.23	0.17	0.16	0.43	0.38	1.36	1.61	1.90	1.75
Spain	2.21	2.16	0.69	0.71	0.54	0.55	1.52	1.45	10.90	13.21	8.04	7.76
Sweden	1.65	1.56	1.12	1.10	0.85	0.82	0.52	0.46	4.57	4.21	5.06	4.72
Switzerland	1.28	1.17	0.61	0.59	0.50	0.48	0.67	0.58	2.20	2.16	2.59	2.29
Turkey	..	..	..	..	..	..	..	..	..	..	..	..
United Kingdom	..	..	..	..	..	..	..	..	..	..	..	..
United States	0.24	0.25	0.10	0.10	0.08	0.08	0.14	0.15	..	..	..	..
OECD	1.17	1.11	0.51	0.48	0.37	0.35	0.68	0.63	4.19	..	4.80	..

.. Not available; n Nil or less than 0.005

Note: Please note that these data will be updated at a later date. The data shown are not strictly comparable across countries or through time, since data may differ from standard definitions and methods and certain programmes or programme categories are not always included in the data for participants stocks. OECD is an unweighted average using the latest available data. Fiscal years for Australia, Canada, Japan, New Zealand, the United Kingdom and the United States.

Source: For European Union countries and Norway, European Commission (2020), *Labour Market Policy*, https://webgate.ec.europa.eu/empl/redisstat/databrowser/explore/all/lmp?display=cardlabour-market-policy/database and detailed underlying data supplied to the OECD by the European Commission with certain Secretariat adjustments. For other countries: *OECD Database on Labour Market Programmes*, https://dx.doi.org/10.1787/data-00312-en.

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OECD Employment Outlook 2021

NAVIGATING THE COVID-19 CRISIS AND RECOVERY

The 2021 edition of the *OECD Employment Outlook* focusses on the labour market implications of the COVID-19 crisis. Chapters 1-3 concentrate on the main labour market and social challenges brought about by the crisis and the policies to address them. Chapters 4-5 cover long-standing structural issues but also discuss their relevance and implications for the COVID-19 crisis. More specifically, Chapter 1 monitors the impact of the crisis on the labour market, with a particular focus on vulnerable groups in the medium and long term. Chapter 2 provides a preliminary assessment of the role of job retention schemes in preserving jobs during the COVID-19 crisis. Chapter 3 analyses how active labour market policies and public employment services have responded to the challenges posed by the crisis. Chapter 4 assesses the extent and consequences of domestic outsourcing for the labour market in general, and for low-wage occupations in particular. Chapter 5 provides a detailed review of statutory and negotiated regulations governing working time – including teleworking – as well as an overview of trends in working time patterns and time use across OECD countries and socio-demographic groups.

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