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**Research Report**

## Short-time work during the COVID-19 crisis: Lessons learned

IAB-Forschungsbericht, No. 5/2023en

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## 5|2023en Short-time Work during the COVID-19 Crisis: Lessons learned

Bernd Fitzenberger, Ulrich Walwei

# Short-time Work during the COVID-19 Crisis: Lessons learned

Bernd Fitzenberger (IAB),  
Ulrich Walwei (IAB)

In der Reihe IAB-Forschungsberichte werden empirische Analysen und Projektberichte größeren Umfangs, vielfach mit stark daten- und methodenbezogenen Inhalten, publiziert.

The IAB Research Reports (IAB-Forschungsberichte) series publishes larger-scale empirical analyses and project reports, often with heavily data- and method-related content.

## Key Findings

- During COVID-19 crisis, the use of short-time work in Germany reached unprecedented levels, as during the financial crisis of 2008/2009, thus proving its usefulness as key rescue measure for the labour market. Especially in the early phase of the crisis, the extensive use of short-time work prevented a massive decline in employment and contributed to stabilizing the economy, because the payments reached the affected firms very quickly.
- Contrary to popular belief, the widely feared "zombification", in which unprofitable companies are artificially kept alive in the short term, possibly only delaying insolvencies and mass layoffs, failed to materialize.
- At the same time, the extensive use of short-time work, with up to six million short-time workers in Germany, has led to a very high administrative burden. As a result, it took a comparatively long time for all short-time work compensation claims to be fully processed.
- It is also not satisfactory that short-time work in Germany - contrary to the legislator's intentions - is comparatively rarely used for further training.
- A comparative look at other countries shows: With regard to the avoidance of free riding losses, the approach taken in Germany hitherto can be assessed positively.
- Wage subsidies such as those in the U.S. or Australia were not well targeted and generated substantial free riding. Therefore, they cannot be classified as a better alternative to short-time work.
- However, supplementary regulations should be considered when developing the German short-time work regulations. For example, countries such as France and Spain have succeeded better than Germany in combining short-time work with further training. Germany also performs rather poorly with regard to the exit from short-time work. In addition, the high administrative cost of an extensive use as during the COVID-19 crisis poses a problem.
- It is worth considering the implementation of special regulations to supplement the existing German short-time work provisions. These supplementary regulations should aim at simplifying administrative procedures in situations where a massive use of short-time work is expected due to force majeure.

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## Summary

During the COVID-19 crisis, the use of short-time work in Germany reached unprecedented levels, as during the financial crisis of 2008/2009, proving its usefulness as key rescue measure for the labour market. Quickly after the start of the crisis, the German government had considerably eased the conditions for firms and employees to receive short-time working benefits, extending the maximum entitlement period during which the benefits could be drawn and granting higher benefit levels after longer benefit receipt. In light of the high level of economic uncertainty, particularly at the beginning of the crisis, this gave firms a greater planning security with regard to their staff. Despite a rapid decline in short-time working as early as summer 2020, use remained at a historically high level up to the year 2022, after a second temporary peak in winter 2020/21.

Germany was no exception among OECD countries in its heavy use of job retention schemes. Elsewhere, government measures to safeguard employment were also implemented on an unprecedented scale during the crisis. The German model of short-time work has served as a role model for many countries, since the financial crisis at the latest. The measures used internationally range from classic short-time work to wage subsidies, subsidies for periods of leave and bans on dismissals in times of crisis. However, some countries primarily relied on income transfers to employees. In addition, business aid programs played a major role in stabilizing firms. At the beginning of the COVID-19 crisis, the use of job retention schemes in Germany was rather below average compared with other countries, but it declined much more slowly than in most other countries. This was partly due to the fact that in many countries, force majeure measures were activated on a large scale at the beginning of the crisis, and these measures often expired in 2020 or 2021 at the latest, i.e., at a time when the economic recovery was on its way faster than previously expected.

This research report investigates the development of the use of short-time work in Germany and compares it with the use of employment stabilization measures in the US, Australia, France, Italy, and Spain.

The stabilizing effect of short-time work was also evident in the European countries considered here, France, Italy, and Spain. These countries made it even easier to use short-time work. It is noteworthy that with the strong use of short-time work Spain, for example, succeeded for the first time in noticeably mitigating the effects of a GDP decline on employment, while a comparable effect of securing employment was not observed in the USA key reason for this is probably that the U.S. short-time work program - not applied in all states - could not be scaled up in the same way as in Europe. In contrast, Australia succeeded in securing employment with an alternative to short-time work, namely a wage subsidy.

The use of short-time work in Germany was made easier because it was possible to build on an established instrument and the experience gained with it during the economic and financial crisis. Irrespective of this, the use of short-time work on a massive scale by local standards has reached its administrative limits, particularly concerning the high degree of flexibility in the

amount of possible work loss of individual workers compensated for and the multi-stage procedure for applying for and settling short-time work. In contrast to Germany, countries such as France, Italy and Spain referred to force majeure when relaxing their regulations in the context of the COVID-19 crisis. The enormous use of wage subsidies in Australia was the response to the severe consequences of the crisis. There are opportunities and risks associated with declaring such an exceptional situation. If access rules are strongly simplified and benefits made more generous in such a situation, the likelihood of heavy use increases. The goal of stabilizing employment and the economy in the short term can thus be achieved more easily. At the same time, however, the risk of unintended negative incentive effects, such as windfall gains, which have been observed in Italy and France and especially in Australia, increases.

The research report also discusses lessons from the international comparison for the debate in Germany. Basically, in times of a severe economic crisis, countries face the difficult trade-off between (desirable) stabilization effects on the one hand and (undesirable) efficiency losses on the other. The main possible disincentive effects are free riding and the risk of maintaining non-viable firms and slowing down reallocation processes to new, promising fields of business activity. As the international comparison shows, there are three approaches to limiting or compensating for disincentives: Appropriate exit scenarios, suitable models of co-financing by firms, and incentives to strengthen the transformation of the economy.

To take account of the cost efficiency of short-time work, the OECD favours co-financing by firms, the argument being that a long use of short-term work can slow down economic transformation processes. Whether and to what extent this has actually happened cannot be ascertained for the various countries based on what is known so far. The descriptive evidence for Germany shows that long periods of use were only observed for a very small proportion of firms.

In order to reduce disincentives for long use, incentives to end short-time work could be introduced. One possibility is the introduction of an "experience rating" scheme. Firms that use short-time work to a large extent and for a long time during difficult times would have to know in advance that they would then have to make repayments or pay higher contributions in normal times. The revenues could then serve as a reserve for future crises. Similar arrangements exist in Italy and under the short-time work program which is part of the U.S. unemployment insurance system. In order to further counteract an inappropriate preservation of business models through short-time work, the scheme could be used to an even greater extent to support structural change by means of appropriate supplements. Some countries (especially France and Spain) were more successful than Germany in combining short-time work with training. Spain is of particular interest in this context because, in addition to training, incentives were introduced to encourage workers to leave short-time work by fostering mobility at an inter-company level.

Finally, especially in times of severe crises, the use of short-time work must take into account distributional issues. As an insurance benefit, short-time work in Germany, like unemployment benefits, is subject to the equivalence principle and is restricted to employees subject to social insurance contributions; mini-jobbers and the self-employed are not covered by it. In the U.S., for example, the existing short-time work program, which was only used to a limited extent, was extended to the self-employed. If in severe and protracted crises special regulations are used that aim to increase wage replacement rates, one could consider, instead of increasing rates over the course of the reference period (as has been done in Germany), focussing on increasing wage

replacement rates for workers with low incomes, similar to the case of France. In the absence of insurance coverage, as in the case of the self-employed and mini-jobbers, appropriate income support schemes to compensate for hardship should be considered in the event of a severe crisis, similar to what has been done in the U.S.. In Germany, this was done, for example, through simplified access to basic benefits or, most recently, through subsidies in the context of the energy crisis.

## Zusammenfassung

Die Nutzung von Kurzarbeit erreichte in der Coronakrise in Deutschland einen bisher nie dagewesenen Umfang und hat sich wie schon in der Finanzkrise 2008/2009 als zentraler Rettungsschirm für den Arbeitsmarkt bewährt. Zu Beginn der Coronakrise hatte die Bundesregierung die Bedingungen für den Bezug von Kurzarbeitergeld für Betriebe und Beschäftigte erheblich erleichtert, die maximale Bezugsdauer verlängert und die Leistungen bei längerem Bezug erhöht. Angesichts der gerade zu Beginn der Pandemie beträchtlichen wirtschaftlichen Unsicherheit erhielten Betriebe hierdurch ein höheres Maß an Sicherheit für ihre Personalplanung. Trotz eines schnellen Rückgangs schon im Sommer 2020 verharrte die Nutzung von Kurzarbeit nach einer zweiten Spitze im Winter 2020/21 und dem Rückgang danach bis ins Jahr 2022 auf historisch hohem Niveau.

Deutschland war bei der starken Nutzung der Kurzarbeit keine Ausnahme unter den OECD-Ländern. Auch andernorts wurden während Coronakrise in einem bisher nicht gekannten Umfang staatliche Maßnahmen zur Beschäftigungssicherung umgesetzt. Das deutsche Modell der Kurzarbeit diente für viele Länder spätestens seit der Finanzkrise als Vorbild. Die von anderen Ländern genutzten Maßnahmen reichen von der klassischen Kurzarbeit über Lohnkostensubventionen, der Bezuschussung von Zeiten der Beurlaubung bis hin zu Kündigungsverböten in Krisenzeiten. Einige Länder setzten jedoch primär auf Einkommenstransfers an die Beschäftigten. Darüber hinaus spielten Wirtschaftshilfen eine große Rolle zur Stabilisierung der Betriebe. Zu Beginn der Coronakrise war die Nutzung beschäftigungssichernder Maßnahmen in Deutschland im Vergleich zu anderen Ländern eher unterdurchschnittlich, allerdings ging die Nutzung wesentlich langsamer zurück als in den meisten anderen Ländern. Dies lag unter anderem daran, dass in vielen Ländern Maßnahmen zu Beginn der Coronakrise für einen Fall höherer Gewalt (Force majeure) in großem Umfang aktiviert wurden und diese Maßnahmen oft schon im Jahr 2020 oder spätestens im Jahr 2021 ausliefen – denn die Wirtschaft hatte sich in dieser Zeit schneller erholt als erwartet.

In diesem Forschungsbericht wird zunächst die Entwicklung der Nutzung von Kurzarbeit in Deutschland dargestellt und in einem zweiten Schritt mit dem Einsatz beschäftigungssichernder Maßnahmen in den USA, Australien, Frankreich, Italien und Spanien verglichen.

Die Stabilisierungswirkung der Kurzarbeit zeigte sich auch in den hier betrachteten europäischen Ländern Frankreich, Italien und Spanien. Diese Länder hatten die Inanspruchnahme der Kurzarbeit teils noch stärker erleichtert als Deutschland. Bemerkenswert ist dabei, dass es beispielsweise Spanien erstmals gelang, mit dem starken Einsatz von Kurzarbeit die Effekte eines BIP-Rückgangs auf die Beschäftigung spürbar abzubremsen. Einen vergleichbaren



beschäftigungssichernden Effekt gab es dagegen in den USA nicht – trotz umfangreicher Wirtschaftshilfen. Das – dort nicht in allen Bundesstaaten angewendete – Kurzarbeitsprogramm konnte nicht in ähnlicher Weise wie in Europa hochskaliert werden. Im Gegensatz dazu ist es in Australien vor allem in der ersten Phase der Pandemie mit einer Alternative zur Kurzarbeit, nämlich einem Lohnkostenzuschuss, gelungen, Beschäftigung zu sichern.

Die Nutzung der Kurzarbeit in Deutschland wurde dadurch erleichtert, dass auf ein etabliertes Instrument und die damit gemachten Erfahrungen aus der Wirtschafts- und Finanzkrise zurückgegriffen werden konnte. Unabhängig davon stieß der für hiesige Verhältnisse massenhafte Einsatz der Kurzarbeit administrativ an Grenzen, insbesondere angesichts des hohen Maßes an Flexibilität in der Höhe des möglichen Arbeitsausfalls und aufgrund des mehrstufigen Verfahrens der Beantragung und Abrechnung von Kurzarbeit. Im Gegensatz zu Deutschland bezogen sich Länder wie Frankreich, Italien und Spanien bei der Lockerung ihrer Regelungen im Kontext der Coronakrise auf höhere Gewalt (*Force majeure*). Auch der immense Einsatz von Lohnkostenzuschüssen in Australien ist den schweren Folgen der Coronakrise geschuldet. Mit der Erklärung einer solchen Ausnahmesituation sind Chancen und Risiken verbunden. Werden in einer solchen Lage Zugangsregeln massiv vereinfacht und Leistungen ausgeweitet, erhöht sich die Wahrscheinlichkeit einer starken Inanspruchnahme. Das Ziel der kurzfristigen Stabilisierung von Beschäftigung und Konjunktur kann damit zwar leichter erreicht werden, zugleich wächst aber das Risiko von Fehlanreizen – was in Italien und Frankreich sowie insbesondere in Australien der Fall war.

Der Forschungsbericht diskutiert Lehren aus dem internationalen Vergleich für die Diskussion in Deutschland. Grundsätzlich stehen Regierungen in Zeiten einer heftigen Wirtschaftskrise vor der schwierigen Güterabwägung zwischen (erwünschten) Stabilisierungswirkungen einerseits und (unerwünschten) Effizienzverlusten andererseits. Zu bedenkende Fehlanreize sind dabei insbesondere hohe Mitnahmeeffekte und das Risiko, nicht überlebensfähige Unternehmensstrukturen aufrechtzuerhalten und die Umorientierung hin zu neuen zukunftssträchtigen Geschäftsfeldern zu verlangsamen. Um Fehlanreize zu begrenzen oder auszugleichen, gibt es – wie der internationale Vergleich zeigt – drei Ansatzpunkte: Geeignete Ausstiegsszenarien, passende Kofinanzierungsmodelle und Anreize zur Stärkung der Transformation.

Um Kurzarbeit kosteneffizienter zu machen, favorisiert die OECD eine Kofinanzierung durch Firmen. Denn lange Nutzungsdauern können aus Sicht der OECD den betrieblichen Strukturwandel bremsen. Ob und inwieweit dies tatsächlich geschehen ist, lässt sich für die verschiedenen Länder auf dem bisherigen Stand des Wissens nicht abschätzen. Aus deskriptiver Perspektive lässt sich jedoch für Deutschland feststellen, dass eine lange Nutzung nur bei einem recht kleinen Teil von Firmen zu beobachten stattfand.

Um Fehlanreize einer langen Nutzung zu reduzieren, könnten stärkere Anreize zur Beendigung der Kurzarbeit gesetzt werden. Eine Möglichkeit ist dabei die Einführung eines „Experience Rating“. Firmen, die Kurzarbeit in starkem Maße und über längere Zeit in schwierigen Zeiten nutzen durften, müssten vorab darüber informiert sein, dass sie dann in normalen Zeiten Rückzahlungen zu leisten haben oder höhere Beiträge fällig werden. Die Einnahmen könnten dann als Rücklage für kommende Krisen dienen. Entsprechende Regelungen gibt es in Italien und im Rahmen des in die US-Arbeitslosenversicherung integrierten Kurzarbeitsprogramms. Durch

eine passende Firmenbeteiligung an den Kosten der Kurzarbeit (z.B. in Form eines experience rating) könnte man einer unangemessenen Konservierung von betrieblichen Strukturen durch Kurzarbeit entgegenwirken und den notwendigen Strukturwandel unterstützen. Dabei ist es offenkundig einigen Ländern (insbesondere Frankreich und Spanien) in höherem Maße gelungen als Deutschland, Kurzarbeit mit Qualifizierung zu verbinden. Spanien ist in diesem Kontext auch deshalb von besonderem Interesse, weil neben der Qualifizierung auch Anreize für den Arbeitsplatzwechsel aus Kurzarbeitsbetrieben gesetzt wurden.

Schließlich sind auch und gerade in Zeiten schwerer Krisen beim Einsatz von Kurzarbeit Verteilungsfragen ins Blickfeld zu nehmen. Als Versicherungsleistung unterliegt die Kurzarbeit in Deutschland wie das Arbeitslosengeld dem Äquivalenzprinzip und ist auf sozialversicherungspflichtige Beschäftigte beschränkt, Minijobber und Selbstständige sind nicht abgesichert. In den USA beispielsweise wurde das existierende, nur im geringen Umfang genutzte Kurzarbeitsprogramm auf Selbstständige ausgeweitet. Kommen in schweren und langen Krisen Sonderregelungen zum Einsatz, die auf höhere Lohnersatzraten zielen, könnte man erwägen, anstelle einer Anhebung der Sätze im Laufe des Bezugs (wie hierzulande geschehen) sich ähnlich wie in Frankreich dabei auf höhere Lohnersatzraten für niedrigere Einkommen konzentrieren. Fehlt ein Versicherungsschutz, wie bei Selbstständigen und Minijobbern, sind im Falle schwerer Krisen ähnlich wie in den USA geeignete Einkommenshilfen zum Ausgleich von Härtefällen zu prüfen. In Deutschland geschah dies beispielsweise durch den vereinfachten Zugang zur Grundsicherung oder zuletzt durch Beihilfen im Kontext der Energiekrise.

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# 1 Introduction

In times of economic crisis, job-retention measures are a common instrument to stabilize both the economy and the labour market and, if possible, to overcome the recession without major frictions. In Germany, cyclical short-time work compensation (abbreviated to short-time work compensation in the following - the text does not discuss transfer short-time work compensation and seasonal short-time work compensation) is an unemployment insurance benefit aimed at securing employment in the event of a temporary loss of work in firms. Short-time work compensation had already proven itself in Germany as a central rescue measure for the labour market during the financial crisis and more recently during the COVID-19 crisis. To mitigate the impact of the COVID-19 crisis on the economy and the labour market and to strengthen job security, the German government had extended the conditions under which firms and employees could use short-time work compensation quickly after the outbreak of the crisis. Furthermore, the government extended the maximum period of entitlement to short-time work compensation and granted higher benefits for longer periods of entitlement. Given the high level of economic uncertainty, particularly at the beginning of the crisis, this gave firms a higher degree of planning security with regard to their workforce.

The use of short-time work reached unprecedented levels during the COVID-19 crisis (see also Figure 1 in Section 3). The number of individuals on short-time work reached six million and an employment equivalent (number of individuals on short-time work multiplied by the average work lost per individual on short-time work) of three million in April 2020. This number dropped very quickly with the easing of Corona restrictions in summer 2020 and the accompanying economic recovery to two million individuals and an employment equivalent of less than one million in October 2020. In the winter of 2020/21, the number rose again to over three million individuals in light of renewed, prolonged containment measures, and then declined steadily from February 2021 onwards. Despite supply bottlenecks as a later consequence of the crisis and the energy crisis triggered by Russia's war of aggression on Ukraine, use of short-time work did not increase significantly in 2022. By around March 2022, the number stagnated before declining substantially.

The German system of short-time work is very flexible. Firms are able to use short-time work to cover parts of their workforce and do so on a full-time or various part-time basis, depending on their needs. This flexibility comes at the price of a high level of administrative effort. The multi-stage procedure to apply for short-time work initially requires firms to submit notifications, which they can use to secure a potential workforce. Subsequently, they can make full or partial use of this potential. At the end of the process, a precise accounting statement (a tally) has to be provided to justify the payment of funds to firms. The procedure is not only time-consuming, it also hinders the collection of prompt data on the use of short-time work (Fitzenberger et al 2021). Accounting data are not available in a reliable form before six months due to the high flexibility in the use of the instrument and the delays in the time-consuming accounting process. If the use lasts for a long time, the bureaucratic burden increases further.

Germany has not been the only country to implement job retention schemes. The OECD (2021, 2022 a, b) describes the various so-called job retention schemes. These measures range from

classic short-time work (STW), wage subsidies, subsidies for periods of leave (e.g., the furlough scheme in the UK), and bans on dismissals in times of crisis.

In order to obtain an overview of the measures implemented in other countries and their respective opportunities and risks, the IAB initiated a scientific discussion in order to foster exchange on the international experience. As part of this, the IAB has organised workshops and published interviews with country experts (Schludi 2023a, 2023b; Winters 2023a, 2023b, 2023 c; Winters/Schludi 2023a, 2023b). This research report describes the situation in five countries (U.S., Australia, France, Italy and Spain), classifies them in the OECD context and, in light of this, discusses policy advice for Germany ("lessons learned"). Many questions arise in the process: How fast did the countries react? How extensive was the use of job retention schemes and to what extent did they contribute to stabilizing the economy and the labour market? Have any disincentive effects become apparent in the use of the measures? When and at what speed did the exit from the job retention schemes take place? Did the measures support the recovery after the COVID-19 crisis, facilitate the accompanying transformation or did they slow down necessary reallocation processes?

The research report begins by discussing the conceptual considerations on short-time work and examining its extensive use during the economic and financial crisis (Section 1). Section 3 describes the implementation of short-time work in the course of the crisis in Germany before Section 4 outlines the approach of the five countries mentioned in the context of employment protection. Section 5 concludes by asking about the lessons learned and the resulting recommendations for action.

## 2 Conceptual considerations on short-time work and the experience in Germany during the financial crisis 2008/09

The usage of short-time work involves benefits and risks for all sides. The key advantage from the employer's perspective is that, in the event of temporary economic problems, job security enables firms to retain firm-specific skills and avoid layoff and potential re-hiring costs. At the same time, short-time work ensures the containment of income loss on the employee, both in the short run and in the long run, because unemployment can often be avoided and employees return to working their regular hours. It counteracts mass layoffs in a recession and thus the emergence of unemployment is avoided in a situation when it is difficult to find an alternative job anyway. The structure of short-time work also allows a high degree of flexibility in working hours, which allows firms to quickly ramp up economic activities again over the course of the recovery. Short-time work is also flexible because it can be used for all or only some of the employees. However, the benefits of short-time work are also accompanied by risks. Excessive use of short-time work could also finance jobs that are actually unprofitable and which are ultimately lost in the medium run. The necessary reallocation of labour is therefore weakened by too little

fluctuation resulting in a possible shortage of workers in promising business fields. Finally, there is a risk of subsidizing business models with flexible hourly employment.

In order to limit potential risks, the use of short-time work usually involves employees and firms “sharing the costs” of hours not worked: Employees, by receiving a short-time compensation that is lower than their regular earnings at work; firms, by paying social security contributions (if there are no special regulations stating the contrary) and fixed costs for employees (so-called “remanence costs”, see Crimmann/Wießner 2009). Research findings suggest that in economic crises, the advantages outweigh the disadvantages (OECD 2021, Cahuc et al. 2021). Therefore, in the event of severe crises, it is reasonable to facilitate the conditions for receiving short-time compensations for firms and employees and to increase its attractiveness. However, because drawing short-time compensation for a long time can jeopardize the chances of continued employment, the duration of entitlement should be limited and any necessary extensions in a prolonged recession should expire at the end of the economic recession.

Other key aspects of short-time work are its target orientation and the speed of firm support. Particularly in times of crisis, affected firms must receive fast and easy to obtain assistance in order to avoid the loss of profitable jobs or even the closure of a firm. Even though these aspects may not be the main focus of the academic debate, the fundamental considerations should still take into account the operational practicality, the timely payment of benefits to firms, and the flexibility provided by previous regulations. Approved notifications for short-time work provide planning security and allow for a flexible use of short-time work based on the entitlement to draw on short-time work benefits up to the approved limit.

The target group of short-time work are firms with major, short-term economic difficulties and associated work losses. The economic difficulties should not be of a lasting and structural nature and employees should have a realistic chance of continued employment. In principle, short-time work cannot and should not be a permanent condition for the vast majority of the firms and employees affected. In general, employees should be available to the labour market, especially by moving to other firms, where they may have better employment or earnings opportunities.

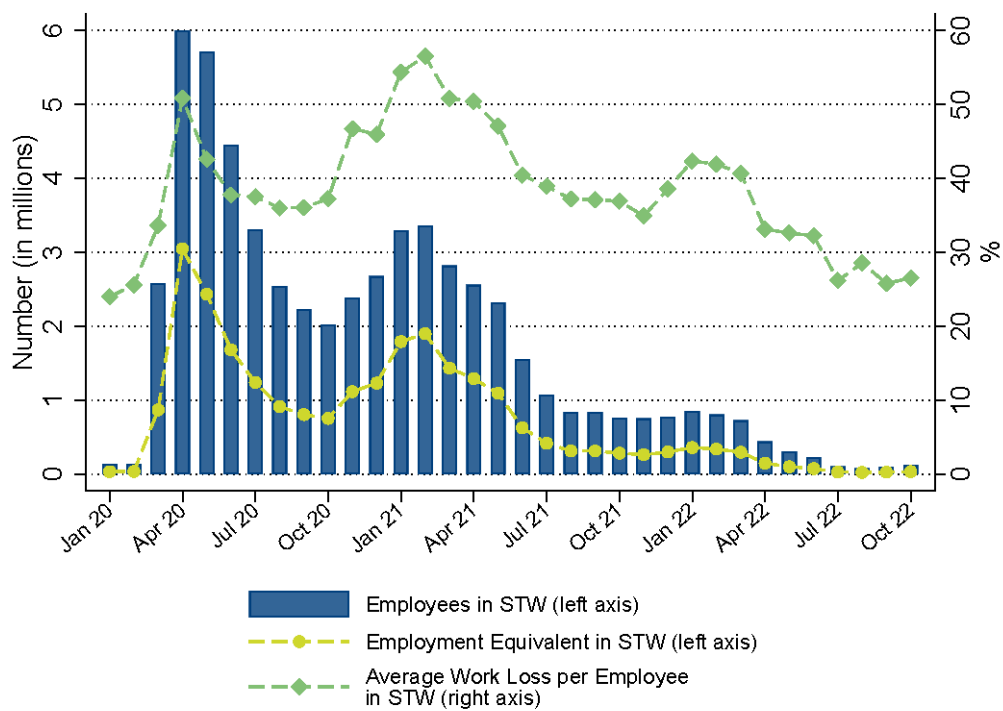
There is a broad consensus among scholars regarding the positive experience with short-time work in Germany during the economic and financial crisis of 2008/09 (Boeri and Brücker 2011, OECD 2022). This concerns several aspects mentioned above: A temporary and target-oriented support took place, which quickly expired after the crisis. At its peak, the number of short-time workers was close to 1.4 million in June 2009; this number declined to about 390 thousand a year later in June 2010. Since short-time work is an established instrument of the Federal Employment Agency and many firms on short-time came from such sectors as manufacturing, which already had experience with short-time work before the crisis, payments were easy to apply for and were transferred quickly.

## 3 Short-time work in Germany during the COVID-19 crisis

In the second quarter of 2020, i.e. at the beginning of the COVID-19 crisis, the economic activity collapsed in a dramatic way, but policymakers responded quickly and with the right measures. By facilitating access to short-time work, the government made a significant contribution to job security, particularly in the early phase of the crisis. However, without this having been anticipated, the state of crisis has now lasted for three years. Facilitated access has been extended several times in the meantime and was only gradually expired. A special characteristic of the COVID-19 crisis compared with previous periods of economic downturn was that contact restrictions and containment measures were imposed by the government, resulting in firms in certain sectors (for example, hotels, restaurants and events) being affected by a complete or partial ban on business. In the subsequent months following autumn 2020, it became evident that the impact of the crisis, but also other economic shocks like supply bottlenecks in the manufacturing sector and the Ukraine war affecting energy-intensive firms, varied considerably across different sectors. At the same time labour demand and employment recovered substantially from spring 2021 onward. Nonetheless, facilitated entitlement to short-time compensation was further extended initially for the entire economy and only gradually reduced at a later stage. At first glance, the current situation raises the question of whether the extensive use of short-time work has retained too many employees in sectors or firms affected by the crisis, even though the general labour market had already recovered significantly by mid-2021 which now results in a labour shortage in many sectors.

Data on the use of short-time work over the past three years show that the early phase of the COVID-19 crisis involved more short-time workers than ever before (Figure 1). In April 2020, the number of individuals on short-time work reached its peak at six million and an employment equivalent of three million. As the economy recovered in response to the relaxation of containment measures in the summer of 2020, the number then fell very quickly to two million individuals and an employment equivalent of less than one million in October 2020. In the winter of 2020/21, the number rose to more than three million individuals in the face of renewed, prolonged containment measures, but then fell steadily from February 2021 onward. Despite the supply shortages often associated with the crisis and the energy crisis triggered by Russia's war of aggression on Ukraine, the use of short-time work ceased to rise significantly. Until around March 2022, a certain stagnation in the use of short-time work set in which even turned into a significant decline from April 2022 onwards. A glance at the specific figures reveals that the number of individuals on short-time work totalled 1.56 million in June 2021, before dropping to 960 thousand in December 2021 and further declining to 392 thousand in June 2022. More recent trends through autumn 2022 continued to be downward (Figure 1).

Figure 1: Use of short-time work in Germany since 2020

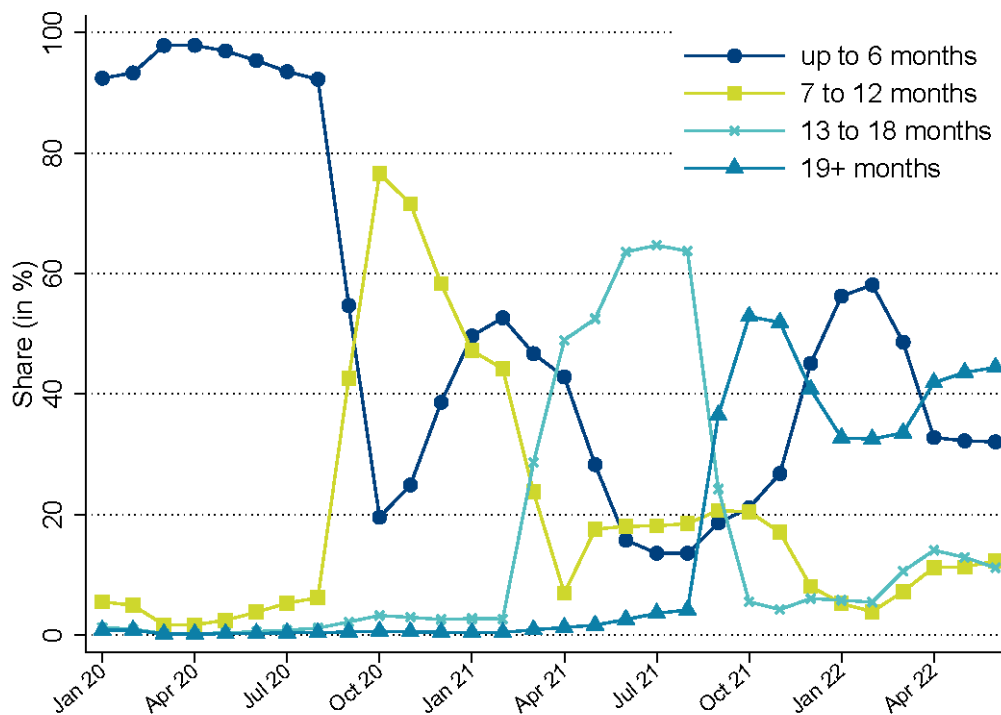


Source: Statistics of the Federal Employment Agency

The trend observed until autumn 2022 has shown that the concern regarding the retention of short-time workers by their firms, without sustainable prospects of further employment, was largely unfounded. An early indication of the stabilizing effect of short-time work in the COVID-19 crisis was the fact that the decline in short-time work uptake was not accompanied by serious employment losses or a significant increase in registered unemployment (Walwei 2021). The development in the number of individuals who have been on short-time work for at least twelve months without interruption confirms this further: In April 2021, this figure leaped to an initial 1.27 million individuals (for around 90 percent of whom short-time work began in March or April 2020). In December 2021, the number was still 448 thousand, but by June 2022, it dropped to only 134 thousand. This represented 44 percent of all individuals on short-time work in December 2021 and 56 percent in June 2022. The declines in the use of short-time work become even more apparent when looking at the development of the average work lost per individual on short-time work. At the start of the crisis in April 2020 and in the winter of 2020/21, this was over 50 percent and then fell steadily – apart from a temporary rise in winter 2021/22 to just over 40 percent – to below 30 percent by summer 2022 (Figure 1).

Figure 2 shows the development of the share of short-time workers in a calendar month by the length of the previous uninterrupted period of receipt of short-time benefits in the short-time workers' firm.

Figure 2: Proportion of short-time work workers by length of time the firm received short-time benefits



Source: Statistics of the Federal Employment Agency

However, if short-time work is used for longer periods, there is a risk of mismanagement or even abuse in individual cases. Firms are increasingly at risk of not being able to maintain employment at the same level after the end of short-time work, even though employees had initially received short-time benefits. After a long use of short-time work, dismissals for operational reasons could still have taken place after all. Indeed, among the firms that were on short-time work during the COVID-19 crisis, a very small share of firms that may have been kept alive even though they would otherwise have had no economic future. Whether this has taken place at a significant scale cannot be assessed due to the lack of information on the history of short-time compensation payments at the individual level. Evidence that this share is unlikely to be very large is provided by the fact that there was no wave of insolvencies despite the sharp drop in the number of individuals on short-time work.<sup>1</sup> Therefore, it is not the case that a large-scale "zombification" of firms took place due to the use of short-time work, which many economists had been afraid of in the early phase of the crisis.<sup>2</sup>

<sup>1</sup> The number of corporate insolvencies fell from 18,749 in 2019 to 15,841 in 2020 and 13,993 in 2021, i.e., during the COVID-19 crisis, corporate insolvencies declined - partly because of the suspension of the obligation to file for insolvency. However, short-time work also likely prevented an increase in insolvencies in 2020 and 2021. Corporate insolvencies rose again in 2022 compared with 2021 (they were 17.9 percent higher in October 2022 than in October 2021, for example), although they were still well below the pre-crisis level (Statistisches Bundesamt 2022a; Statistisches Bundesamt 2022b).

<sup>2</sup> In 2020, the majority of economists surveyed by the ifo Institute as part of the Economists' Panel feared that state support measures would create so-called zombie firms. 86 percent of the respondents feared this because the obligation to file for insolvency had been suspended until October 1, 2020. 50 percent of the respondents believed that the short-time compensation led to zombie firms (ifo Institute 2020).



## 4 Job retention schemes during the COVID-19 crisis in international comparison

The COVID-19 crisis confronted not only Germany but the entire world with immense labour market and social policy challenges. In many countries, it led to extensive state support measures to secure jobs in order to avoid a deepening economic recession and destabilization of the labour market. However, policy measures varied from country to country. OECD (2021) distinguishes between direct wage subsidies and short-time work programs, with and without the possibility of only a partial reduction in working hours. Both types of measures are characterized by the fact that under certain conditions they provide payments to firms and/or employees if the employment relationship continues.

As an alternative or in addition to job retention schemes in the narrower sense, income protection measures are also implemented, especially in the event of job loss, to mitigate job restructurings (see Giupponi et al. 2022 for a discussion of the different measures). In many countries, direct payments to private households for income maintenance were made. In some countries, the duration and level of unemployment benefits were increased.

For the international comparison, the scientific discussion process initiated by the IAB on international experience with job retention programs during the Covid-19 crisis focuses on the countries Australia, France, Italy, Spain and the U.S. Also, we build on the comparative assessment of the OECD on the use of job retention schemes and alternative support measures.

Germany is one of the countries where short-time work is an established support program as part of the unemployment insurance system, which was immediately available as a standard benefit during the crisis.<sup>3</sup> The same applies for France, Italy and Spain. In these countries, access rules were eased during the COVID-19 crisis and support benefits were made more generous. In France and Spain, the declaration of force majeure facilitated administrative access considerably during the crisis. In Italy, the existing programs were standardized and organized more efficiently. Italy and Spain additionally introduced a ban on the dismissal of short-time work benefit recipients at the beginning of the crisis.

The U.S. does have a short-time work program, however, it was not used to a great extent during the COVID-19 crisis. Instead, to mitigate the impact of the crisis, unemployment benefits were made more generous and the duration of support was extended, which constitutes the typical policy response in the U.S. in a recession. This was complemented by additional lump-sum income support measures. Australia is one of the countries that relied on a flat and generous wage subsidy newly introduced as a crisis response in the COVID-19 crisis.

A second dimension concerns the rate at which the use of job retention schemes has declined over the course of the economic crisis caused by the COVID-19 crisis. A key indicator of this is the declining demand from employees and firms to use these measures as the economic situation improved. Given this background, governments have weakened or completely abolished the

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<sup>3</sup> Short-time work is granted in Germany in the event of a severe, unavoidable, temporary loss of working hours if it is expected that jobs will be saved and unemployment can be avoided.

specific crisis measures from the spring of 2020 over the course of the crisis. In some countries, the measures were restricted to firms or employees that were particularly affected by the crisis.

**Table 1: Proportion of employees in job retention schemes at the beginning of the COVID-19 crisis and at the end of the second year of the crisis**

In percent

	Germany	France	Italy	Spain	Australia	U.S.	OECD
April/May 2020	15.5	35.3	31.3	21.6	30.5	0.2	20.1
November/December 2021	2.0	1.6	2.5	0.7	0.0	0.0	1.3
March/April 2022	1.2	1.0	1.1	0.6	0.0	0.0	0.9

Source: OECD (2022a, p. 3, Figure 1) and OECD (2022b, p. 87, Figure 2.2).

In the OECD as a whole, the average share of employees in job retention schemes at the start of the COVID-19 crisis in April/May 2020 was 20 percent (Table 1). In Germany, uptake was below OECD average at 15 percent, far lower than in France (35 percent), Italy (30 percent) and Spain (21 percent). Australia showed a comparatively high use of wage subsidies as a job retention scheme, at 30 percent, while the usage in the United States (U.S.) was below 1 percent.

Over the course of time, the use of short-time work and similar measures declined very rapidly in the OECD countries, reaching 1.3 percent at the end of 2021 and dropping to 0.9 percent in spring 2022 (Table 1). In Australia and the U.S., these measures were very quickly abandoned. Among the considered European countries, the usage in Spain declined the fastest and accounted for only about 0.5 percent in spring 2022. Starting from a higher usage level than in Germany, usage also declined faster in France and Italy than in Germany. All three countries still had a usage of around 1 percent in spring 2022, with Germany's exact percentage value at this point still one of the highest of the six countries examined. In spring 2022, the only OECD countries with a higher usage than Germany were Belgium and Ireland (OECD 2022b, p. 87, Figure 2.2).

The experiences of the five countries examined here are discussed in more detail below.

#### 4.1 U.S.: Short-time work not activated to any significant extent

In the U.S., unemployment rose at an unprecedented speed from below 4 percent to nearly 15 percent at its peak in spring 2020 (OECD 2022b, p. 23, Figure 1.3 - OECD Standardized Unemployment Rate). The U.S. responded to this increase by, among other things, extending and increasing unemployment benefits and further transfer payments. The unemployment rate returned to its pre-crisis level in December 2021 and has remained at a low level since then.

At the same time, the U.S. labour market has undergone structural changes as a result of the COVID-19 crisis: The number of job vacancies is now at record levels, similar to Germany. Many workers have withdrawn from the labour market. Compared to previous crises, a larger proportion of individuals who were laid off during the crisis expressed a reluctance to return to their previous employers. This was particularly evident when their return was contingent upon being physically present in the office, partly due to the fact that working from home has become the norm for many employees in the U.S. The phenomenon of labour market withdrawal, commonly referred to as the "great resignation", was particularly prevalent among older women.

In the U.S., employment levels experienced a slow recovery and did not reach their pre-crisis levels until the summer of 2022 (OECD 2022b, p. 22, Figure 1.2).

During the COVID-19 crisis, two interventions focused primarily on job retention: Short-Time Compensation (STC) and Paycheck Protection Program (PPP), see Autor et al. (2022), Rodriguez et al. (2022), and Winters (2023b).

Using the STC program, employees whose working hours are reduced by 10 to 60 percent can receive proportional unemployment benefits. Short-time work exceeding 60 percent is not possible, i.e. the program in particular does not cover a temporary loss of working hours of 100 percent. This short-time work program already existed before the crisis, but not in all states. The implementation of STC is left to the states' decision. Prior to the crisis, 26 states had this program; Wyoming became the 27th state during the crisis. Benefits are financed by the unemployment insurance system, which is funded by the Federal Employment Tax and the State Unemployment Tax. There are cases in which the income of households receiving STC benefits was greater than in the case of continued employment (Bell et al. 2020).

During the COVID-19 crisis, entitlement to STC was extended to self-employed workers. In addition, firms were allowed to rehire previously laid-off workers under STC on a part-time basis. The entitlement period was limited to 52 weeks. The U.S. federal government reimbursed STC benefits for up to 26 weeks through the end of 2020.

The STC program, i.e. the short-time work program in the U.S., was used to a much lesser extent than in Germany. At its peak, STC comprised just under 5 percent of entries into unemployment insurance benefits; only a few states, such as Michigan, Washington, and Oregon, achieved substantially higher rates of use. Throughout the COVID-19 crisis, there were notable administrative and political challenges to expanding the STC (short-time work) program, which included insufficient infrastructure for automated claim administration and processing.

As part of the unemployment insurance system in the U.S., STC is subject to the experience rating, i.e. firms that have laid off employees in the past or used benefits from the STC program later pay an increased contribution to the unemployment insurance system. The experience rating could be suspended by individual states during the crisis due to federal financial support.

Under the financially very large PPP program, low-interest loans were provided to about 70 percent of all smaller firms in order to maintain pre-crisis wages and employment. If the employer maintains payroll, the share of the PPP loan that is used to cover payroll, interest on mortgage debt, rent, and service charges will be waived. The PPP did not focus on a particular target group. For eligibility, it was sufficient to be affected by the crisis by submitting a self-determination stating the necessity of the loan to support operating activities. Autor et al. (2022) criticize the issue of free riding resulting from the PPP distributing significant funding to firms that did not require financial assistance.

In summary, the U.S. relied primarily on direct income payments and economic aid. The existing short-time work instrument was used intensively in individual states, but overall did not play an important role in job retention. The reasons for this are political and administrative hurdles that prevented extensive application.

## 4.2 Australia: Extensive use of temporary flat-rate wage subsidies

At the start of the COVID-19 crisis, Australia introduced a temporary, flat-rate wage subsidy (JobKeeper wage subsidy) for the first time, aimed at job retention (Cassels and Duncan, 2020). The program was announced on March 30, 2020, and ended on March 28, 2021. When the COVID-19 crisis began, this wage subsidy paid to the firm included \$1,500 AUD (Australian Dollars) per employee every two weeks – regardless of the number of regular hours worked or the number of actual hours worked during the crisis. To receive payment, the only requirement was to assure that a drop in sales of at least 30 or 50 percent was expected. As a result, not only were sales losses compensated, but in some cases, firms were even overcompensated for losses caused by the crisis. At the same time, layoffs were largely avoided during this difficult economic phase, albeit at the expense of a significant increase in government spending (see Winters and Schludi 2023b). JobKeeper was one of the largest labour market policy interventions in Australia's history, originally expected to support nearly half of all workers in the workforce. In the first phase of the crisis, the subsidy was paid to almost 30 percent of the workforce.

JobKeeper offered six months of support to firms that anticipated a substantial sales decline, amounting to at least 30 percent (or 50 percent if sales exceeded one billion Australian dollars), for at least one month at the beginning of the crisis. The program was designed to be administratively simple and quickly implemented, aiming to provide the maximum assistance to firms – and consequently households – in the shortest timeframe possible. The guaranteed support for six months was intended to provide firms with security. The wage subsidy was only provided for firm employees who had been working in the firm for at least twelve months on March 1, 2020. However, this meant that firms could not benefit from the wage subsidy for irregularly employed individuals (e.g. seasonal workers).

The main weakness of the program is that it was likely to involve strong disincentives: On the one hand, this relates to the flat, undifferentiated level of the wage subsidy. On the other hand, the firm could only receive the JobKeeper payment if the expected drop in sales was at least 30 or 50 percent, respectively. The firm had to plausibly demonstrate, on the basis of various simple criteria, that such a drop in sales was to be expected as a result of the COVID-19 crisis and the associated restrictions on business activity. There was no obligation for employers to repay JobKeeper if sales exceeded the subsidy threshold, even when the firm subsequently made large profits. The sales criterion provided a strong incentive to declare the minimum 30 percent or 50 percent sales decline and to realize this level of decline in the short term (Cassels and Duncan, 2020). After all, there was no disincentive for the firm to not expand its business activities during the subsidy's reference period of six months – and in fact the economy in Australia recovered faster than expected in the spring of 2020. Nevertheless, free riding was even more prevalent, and the revenue criterion could hinder economic recovery when it was reintroduced in September 2021.

The original design of JobKeeper was modified in September 2020 by reducing the subsidy to \$1,200 AUD for full-time, employed individuals (working at least 20 hours per week) and to \$750 AUD for part-time, employed individuals with fewer hours. The subsidy level was lowered again in January 2021.

### 4.3 France: High use of short-time work with unbureaucratic rapid approval

At the onset of the COVID-19 crisis, France had one of the highest utilization rates of job retention schemes among OECD countries, reaching 35 percent in March/April 2020. In France, short-time work is an established program that was already used intensively during the economic and financial crisis of 2008/2009 (Cahuc et al. 2021). The latter study warns, however, that although the use of short-time work in France led to a short-term job retention, its use was accompanied by strong and unjustified windfall gains. Firms using short-time work were able to recover quickly after the recession as a result of the job retention. Despite large windfall gains, however, Cahuc et al. (2021) conclude that short-time work was more cost-effective in securing jobs than the possible alternative of general wage-cost subsidies.

The short-time work program in France exists since 1951 and is publicly referred to as *Activité partielle* (partial activity) or *Chômage partiel* (partial unemployment), i.e. partial reductions in working hours are supported by subsidies. In the crisis, the scope and duration of wage replacement benefits were substantially increased and as *force majeure* was assumed at the beginning of the crisis, their approval was quick and unbureaucratic. In France, short-time work can be implemented when one of the following conditions occurs: (i) economic situation; (ii) modernization, restructuring and transformation; (iii) problems with the supply of raw materials and energy; (iv) accident; (v) exceptionally unfavourable weather conditions; (vi) other exceptional circumstances. During the crisis, the net replacement rate reached its highest point, being raised to 100 percent for minimum wage employment and 84 percent for wages above the minimum wage, up to 4.5 times its value. This coverage extended to over 95 percent of wage earners (Cahuc 2020).

In addition, the approval and administrative procedures were simplified. Accordingly, approval to use short-time work was deemed to have been granted within 48 hours of submission of the application if the administrative agency did not respond (previously this period was 15 days). This made the use of short-time work considerably easier, although a certain amount of abuse cannot be ruled out. Pierre Cahuc (see interview) considers the extent of such misappropriation to be very small, although he says empirical verification of this is still pending. During the crisis, the use of short-time work was extended to temporary employment.

After the summer 2020, the generous short-time working arrangement in France was restricted to firms that were subject to administrative closure (e.g. due to restriction measures resulting from the COVID19-crisis). At the same time, a short-time work regulation for long-term use was created in July 2020. This program enabled a reduction in working hours by up to 40 percent of the legally mandated working hours per employee over 24 months within a continuous 36-month period, while simultaneously receiving wage replacement benefits. The option of long-term use expired at the end of 2022. According to the OECD (2022a, Figure 3; 2022b, Figure 2.3), the cost share to be covered by firms for the use of short-time work increased during the crisis.

The more restrictive short-time working regulations in the summer 2020 resulted in a decline in the number of short-time workers to approximately one million. The number rose again to two million in the second wave of the crisis (November 2020 to May 2021). After May 2021, overall short-time work use steadily declined to about 100,000 workers in June 2022.

In France, the short-time work regulations include provisions for the possibility and financial assistance of firm-specific training during periods of reduced working hours (OECD 2022a, Box 2). According to the OECD, participation accounted for around 20 percent and was therefore only used by a small share of short-time workers, although it was still higher than in Germany.

In summary, at the onset of the COVID-19 crisis, France enhanced the generosity of its standard short-time work program to facilitate widespread adoption by firms and their employees, while also considerably simplifying its administrative processes. As a result, this led to a significantly higher use than in Germany. As early as the summer of 2020, however, rapid adjustments took place toward a more tailored instrument for specific cases and the generous crisis rules were successively scaled back, in particular the cost-sharing by firms increased. The subsidization of firm-specific training resulted in a utilization rate of at least 20 percent during periods of reduced working hours. However, the program did not put an emphasis on offering skills that could be transferred when switching to another firm.

#### 4.4 Italy: Unification of a fragmented system and facilitated access

Prior to the COVID-19 crisis, short-time work in Italy was a regular instrument in certain industries, mainly manufacturing and construction. It was extensively used in these sectors throughout the 2010s, surpassing its use in Germany and France (OECD 2022a, Figure 2). During the crisis, access to short-time work became more standardized and organized at the state level. At the same time, mass use was made possible by requiring firms only to report that they were affected by Corona as a reason for use, without having to demonstrate an economic need for it. A special feature was that at the beginning of the crisis the use of short-time work was associated with a firing freeze. The use of short-time work was facilitated for employees on temporary contracts and for employees with short periods of service. Furthermore, the cost-sharing, previously borne by the firms, was suspended. The firms no longer had to advance the financial benefits to the employees; they were paid out immediately by the state. The payments therefore went directly to the employees. During the early stages of the crisis, Italy had a notably higher use of short-time work compared to Germany, although it was eventually surpassed by France (OECD 2022a, Figure 2).

In the course of the COVID-19 crisis, the prohibition on layoffs was quickly repealed. However, after a short increase in dismissals following the repeal, dismissals quickly fell back to pre-crisis levels. The maximum duration of short-time work was extended several times during the crisis, but the benefit level remained unchanged (OECD 2022b, Figure 2.3). There were no financial incentives to stimulate employee training during short-time work. As of autumn 2022, nearly all special schemes had expired, requiring firms to once again demonstrate the economic necessity for implementing short-time work. According to Giulia Giupponi (interview), the simplification and consolidation of various short-time work systems have made these schemes accessible to the entire Italian economy, resulting into a manageable administration of the program.

Starting from a significantly higher utilization level than in Germany, short-time work in Italy declined slowly but steadily over the course of the crisis. One potential reason for the slow decline, aside from the extension of the maximum period of use as indicated by OECD (2022a), could have been the absence of direct cost sharing by firms. Nonetheless, the decline in the use



of short-time work in Italy occurred at a faster rate compared to Germany, ultimately resulting in even lower use by spring 2022.

Italy applies an experience rating system (analogous to unemployment insurance in the U.S.), which was strengthened and unified by institutional reforms during the crisis. In order to finance the short-time work program, firms which have used short-time work in the past have to pay a higher contribution to the fund financing the benefits.

In summary, easier access in Italy has enabled the mass use of short-time work. The crisis led to institutional reforms of the fragmented short-time work schemes. The slow phasing out of special schemes and the lack of direct cost-sharing by firms was accompanied by a slow decline in use. However, by spring 2022, the decline in short-time work use was also eventually faster in Italy than in Germany. Firms participate indirectly in the costs of using short-time work via experience rating.

#### 4.5 Spain: Mass use, rapid exit from special rules, and reform towards support for transformation processes

Short-time work programs were not commonly applied in Spain before the COVID-19 crisis. However, at the beginning of the crisis, the program was modified for the event of force majeure by making it much more generous, i.e. with lower firm cost sharing, and simpler to use. As in Germany, social security contributions were covered 100 percent by the state, short-time compensation was equal to the level of unemployment benefits, and at the same time a firing freeze was imposed on all firms. The existence of a force majeure was reassessed and extended every two weeks. At its peak, 20 percent of employees were on short-time work. Thus, Spain experienced the first recession in which the decline in employment was significantly weaker than the decline in GDP (OECD 2022a, Figure 2).

Spain was the first EU country to phase out the force majeure status in June 2020, followed by a gradual reduction in the implementation of special regulations. The coverage of social security contributions was reduced and differentiated according to firm size, and strong financial incentives were introduced for short-time workers if they accepted a new job. By the end of 2020, the share of employees on short-time work had declined to around 5 percent (OECD 2022a, Figure 2), lower than in Germany, France and Italy at that time.

In 2021, short-time work was again heavily restructured. In addition to the cyclical short-time work program for severe macroeconomic crises, a variation aimed at the structural transformation of individual sectors of the economy was introduced. The reform expanded support for job training and occupational retraining. The reform also introduced an obligation for firms using short-time work to continue employing workers for up to six months after the end of use. There was no general prohibition on dismissals. The reforms increased the firms' share of costs until the end of 2021 to roughly the same extent as in Germany. The eligibility for the maximum duration required that an employment spell covered by social insurance lasting at least six years. The wage replacement rate amounted to 70 percent.

Spain has succeeded in ensuring that almost 30 percent of those on short-time work have been able to participate in firm-specific training (OECD 2022a, box 2), a comparatively high level which - as in France - is far higher than the rate of further training during short-time work in Germany.

In summary, at the beginning of the crisis, Spain made its standard instrument of short-time work more generous for mass firm use and simplified considerably the administration of the program, which led to higher use than in Germany. Already in summer 2020, the cost share of firms was increased on a sector-specific basis and additional incentives for firm changes were introduced. In a comprehensive reform in 2021, a modified version of the short-time work program was introduced specifically for sectors experiencing structural changes. This program offers additional incentives for firm-specific training and requires the continuation of employment once the use of short-time work has ended. Compared to other countries, Spain achieved the highest rate of further training among those on short-time working.

## 5 Conclusions

Especially in the early phase of the COVID-19 crisis, the extensive use of short-time work in Germany had prevented a massive decline in employment and helped to stabilize the economy. As in the economic and financial crisis 2008/09, the established short-time work program thus proved valuable due to its rapid use and the possibilities of facilitated access. The stabilizing effect of short-time work was also evident in the other European countries examined in this report, namely France, Italy and Spain. These countries facilitated the use of short-time work to an even greater extent than Germany. It is worth noting that in Spain, for example, the extensive use of short-time work helped to mitigate the effects of a GDP decline on employment, while a comparable effect was not observed in the U.S. A major reason for this is that the short-time work program applied in the U.S. could not be scaled up in a similar way as in Europe. In contrast, Australia has succeeded in securing employment with an alternative to short-time work, namely a wage subsidy program.

The international case studies also highlight the importance of considering the specific nature of crises when designing potential interventions. Germany's institutional adjustments to job retention schemes and access regulations were less drastic compared to other countries. This was due to their ability to rely on an established instrument and the experience gained from it during the great recession.

The advantage of having a high level of flexibility in regulating work loss comes at the expense of high administrative costs. These costs can be attributed to the multi-stage procedure required from firms for applying for short-time work and then afterwards finalizing the compensation claims. However, it is plausible to assume that an established system of short-time work, such as in Germany, has a stronger stabilizing effect. This is due to the familiarity of the scheme for the firms, existing routines, and the ability to transfer knowledge and experience. In contrast, the usability of a completely new crisis instrument is challenging to assess beforehand for all parties involved.

In contrast to Germany, countries such as France, Italy and Spain used force majeure to relax their regulations in the context of the COVID-19 crisis. The extensive use of wage subsidies in Australia can also be linked to the severe consequences of the crisis. There are opportunities and risks associated with declaring an exceptional situation. If access rules are simplified and



benefits become more generous, increased use is more likely. The goal of stabilizing employment and the economy in the short term can thus be achieved more easily. The discussion on the development of a so-called "crisis short-time compensation" in this country should definitely include experiences from other countries (Weber/Yilmaz 2023). At the same time, however, the risk of disincentives and abuse, which have been reported in Italy and France and especially in Australia, increases. The discussion on the development of a so-called "crisis short-time work compensation" in Germany is still ongoing. An implementation needs to be well designed. The risk would be that the simplification of rules, as in Australia, could be accompanied by considerable negative incentive effects. If the goal is to create an instrument that is administratively easier to handle than cyclical short-time work, it must be strictly limited in time and tied to rules. Thus, the experience of other countries suggests that extensive special regulations should be reviewed in a two-week cycle, as in Spain, for example by a panel of experts.

In times of severe economic crisis, countries are faced with the difficulty of balancing between (desirable) stabilization effects on the one hand and (undesirable) efficiency losses on the other. The main disincentives to be considered are high free riding and the risk of maintaining non-viable corporate structures and slowing down reallocation processes to new, promising business areas. As the international comparison shows, there are three approaches to limit disincentives: Suitable exit scenarios, appropriate co-financing models, and incentives to strengthen the transformation.

- Obviously, the more extensive the special rules to apply force majeure, the more important exit mechanisms become. Thus, it is worth examining the countries that relied on force majeure in implementing short-time work. Spain, for instance, swiftly implemented an exit strategy, resulting in a rapid decrease in the high uptake rates. Similarly, France also experienced a faster exit from the special crisis scenario compared to Germany. By contrast, the exit from the application of special rules was rather slow in Italy. It should be borne in mind that in all European countries the economy and employment had recovered more quickly than previously expected. Also, Australia quickly scaled back its massive wage subsidy program, probably also because of the unmistakable windfall effects.
- To take the cost efficiency of short-time work into account, the OECD (2021, 2022a) favors co-financing by firms. The OECD justifies this by arguing that longer periods of use on the firm side can slow down structural change. Whether and to what extent this has actually happened cannot be assessed for the various countries based on the current state of knowledge. From a descriptive perspective, it can be concluded for Germany that extended use can only be observed for a very small share of firms overall. However, these firms accounted for most of the use of short-time work two years after the onset of the crisis. Nevertheless, short-time work is not a business strategy for the vast majority of firms. In order to minimize this tendency even more, incentives could be introduced to end short-time work if it is used for a longer time. One possibility is the introduction of an "experience rating". Firms that heavily rely on short-time work during challenging periods and for extended durations should be aware that they will have to make repayments or pay higher contributions during normal times. These additional revenues can serve as a reserve fund to help mitigate future crises. There are corresponding regulations in Italy and as part of the

short-time work program integrated into U.S. unemployment insurance. A variant of the experience rating could be to provide for the repayment of social security contributions taken under the special rules of a crisis in normal times (Weber 2021).

- To prevent an inappropriate preservation of firm structures through short-time work, short-time work should be used more extensively as support scheme to facilitate structural change. The latter seems to be particularly useful if the use of short-time work exceeds a certain duration (e.g. six months or more). Some countries (especially France and Spain) have succeeded to a greater extent than Germany in combining short-time work with further training. In this context, Spain is of particular interest because, in addition to further training, incentives have been introduced to encourage workers to leave short-time work by fostering mobility at an inter-company level. The latter appears to be particularly useful if the use of short-time work exceeds a certain period (e.g. six months and more). However, so far there are no valid empirical findings on the effects of such regulations.

After all, especially in times of severe crises, the use of short-time work must consider distributional issues. As an insurance benefit, short-time work, like unemployment benefits, is subject to the equivalence principle. The amount of the short-time compensation depends on the amount of the corresponding wage loss and thus reflects the distribution of wages. As a result, short-time work can be regarded as largely "distribution-neutral" with regard to the individuals affected. However, it should be borne in mind that not all employed individuals, especially the self-employed and the marginally employed (the so-called mini-jobbers), are entitled to short-time work benefits because they lack insurance. In the U.S., for example, the existing short-time work program, which was only used to a limited extent, was extended during the COVID-19 crisis to the self-employed. As a result of being severely affected during the crisis, self-employed individuals and mini-jobbers in Germany have suffered income losses, some of which have been considerable in both absolute and relative terms. These findings lead to two important implications. First, during severe and prolonged crises, it may be advisable to focus on increasing the wage replacement rates of lower incomes, as opposed to raising rates incrementally over the reference period (as done in Germany). This approach aligns with the practice in France and is supported by survey results from the IAB (Osiander et al., 2020), indicating a majority preference for this approach in Germany as well. Second, in situations where insurance coverage is not available, for example, for the self-employed and those with mini-jobs, it is crucial to consider appropriate income support programs that can compensate for hardship during severe crises. This approach is similar to measures taken in the U.S. and deserves careful consideration.

In general, however, there are still many gaps in the understanding the effects of short-time work. In Germany and other countries, this is primarily due to a lack of longitudinal data at the level of firms and employees. Only when such data are available it will be possible to better assess empirically the impact of short-time work in general and its institutional adjustments in particular. In light of the high costs involved, additional insights based on more comprehensive data would be particularly valuable.

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