Centre for Economic Performance

Discussion Paper ISSN 2042-2695

No. 1875
October 2022

Labor market insurance policies in the XXI century

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Abstract
The recovery from the Covid-19 crisis will force governments to accelerate transformation in their menu of labor market policy tools. The crisis was a stress test for unemployment insurance schemes as it involved a sudden and unexpected shutdown of a very large set of activities. This forced countries to introduce, often from scratch, income support schemes for workers under new forms of employment, and the self-employed. There was also a considerable expansion of short-time work schemes notably towards the small business. The challenge ahead of us is perhaps even harder as post-Covid19 labor markets are likely to be characterized by substantial labor reallocation. Major innovations in labor market policy are required to smooth consumption of workers involved in this reallocation. We survey the large body of research on schemes reducing the costs of reallocation complementary to unemployment insurance. Our attention is on short-time work (preventing layoffs by subsidizing hours reductions), partial unemployment insurance (enabling workers to combine unemployment benefits with low-income jobs), and wage insurance (offering a temporary wage subsidy to workers changing jobs). The properties of these new schemes are first presented and compared to those of standard unemployment benefits. Next the main results of the empirical literature on the effects of wage insurance, partial unemployment insurance and short-time work are presented. A final section is devoted to discussing directions for further research.

Key words: partial unemployment insurance, wage insurance, short-time work
JEL codes: H5; J6

This paper was produced as part of the Centre's Labour Markets Programme. The Centre for Economic Performance is financed by the Economic and Social Research Council.

We thank Giulia Giupponi for very useful comments.

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Published by
Centre for Economic Performance
London School of Economics and Political Science
Houghton Street
London WC2A 2AE

Introduction

The reallocation of jobs is a huge process in all countries. In advanced economies, about 15% of jobs are destroyed every year and about the same proportion is created. The reallocation of jobs is accompanied by an even more important reallocation of manpower across jobs. This phenomenon is an essential ingredient of productivity growth. It is linked to globalization and technological progress, which create new products and new business models, likely to foster growth and improve well-being for all. But this structural change also has social costs. It is well established that job loss can have significant detrimental effects on the earnings of individuals for decades, especially for long-tenured workers who are then dislocated. This is observed in the US, where earning inequalities are drastic and where the welfare state is limited, but also in European countries, where the social safety net is tighter and earnings inequalities are less pronounced. [4] Technological progress changes the nature of jobs too. With the automation of tasks and the spread of online platforms, the new economy reshapes workplaces, inducing a substantial rise in the incidence of such alternative work arrangements as temporary work, part-time work, self-employment, and the new kinds of work relationship emerging in the "online gig economy". [5] These changes offer a host of opportunities for more employee-friendly options such as flexible schedules and working from home, which can favor the entry of persons, in particular women with young children, who might have experienced barriers to entering the traditional workforce.[6] But they also raise concerns about job quality and stability.

The Covid-19 pandemic has accelerated this process. On the one hand, it has forced a huge increase in remote working blurring the border between dependent employment and self-employment, changing the location of work well beyond the lockdown periods. On the other hand, it has also induced a major reallocation of workers across jobs and further reallocation is expected to occur in the years to come. The recreational and hospitality sectors have been particularly affected by this increased reallocation (Aaronson, 2021; David, 2021) which, unlike previous recessions, occurred not only *within* sectors, but also *across* sectors (Barrero et al., 2021). This phenomenon is likely to be amplified by the green transition (IMF, 2022).

Unemployment insurance (UI) plays a key role in providing growing numbers of individuals with a degree of support in maintaining a flow of income while transitioning between jobs. By allowing liquidity constrained workers to smooth consumption when they lose their jobs and by providing resources to help them look for jobs and acquire new skills, UI can improve the well-being of workers and facilitate their reallocation towards more productive jobs. However, standard UI requires rather demanding entitlement conditions in terms of length of contribution periods and imposes a strong separation

[4] Sullivan and von Wachter (2009), Davis and von Wachter (2011), Bertheau et al. (2022).
[5] Katz and Krueger (2018).
[6] Mas and Pallais (2017).

between employment and non-employment spells. In a labor market in which workers enter and exit unemployment at high frequencies, many jobs are part-time or involve a few hours per week, as in gig activities, standard unemployment benefits would under-insure workers and leave entire segments of the workforce without any shelter.

In this paper we survey the large body of (mostly applied) research on schemes reducing the costs of reallocation complementary to UI. Our attention is on the three main schemes adapted and used more intensively during the health crisis: short-time work (preventing layoffs by subsidizing hours reductions); partial UI (enabling workers to combine unemployment benefits with low income jobs) and wage insurance (offering a temporary wage subsidy to workers changing jobs). Designing effective schemes of these types is not an easy task because there are important selection and moral hazard issues, as in all insurance systems.

One needs to know in detail how systems work in practice and how people behave in order to understand systemic impacts and thus be in a position to evaluate the effectiveness of policies. This paper reviews how part-time unemployment benefits, short-time work and wage insurance operate in different OECD countries and what is known about their impact, both from a theoretical and an empirical perspective. The paper is organized as follows. Section 1 is devoted to short-time work, Section 2 to part-time unemployment benefits and Section 3 to wage insurance. Section 4 supplies concluding comments on how these schemes can cope with the new challenges imposed by the health crisis.

1. Short-time work

1.1. Short-time work regulations in OECD countries

Short-time work (STW) is a public program intended to preserve jobs in firms experiencing temporarily low revenues by providing income support to employees whose hours of work are reduced. STW schemes provide additional funds so that employees can reduce their hours of work without a proportional reduction in their take-home pay. In general, the employees earn less than they do when they work usual hours, but more than they would receive in unemployment benefits. The cost of supplementing the employee's income is typically shared by the employer and the state.

The Great Recession at first, and the pandemic later on induced most OECD countries to introduce, often from scratch, schemes of this sort or expand the scope of existing ones. STW is indeed designed to prevent large scale job losses when firms are facing temporary adverse shocks, just as those experienced during the lockdown measures taken by most OECD countries in 2020. A few countries (Greece, Latvia, Slovenia, and the UK) opted for introducing instead a furlough scheme.

Short-time work schemes differ from temporary layoffs or furlough schemes (mandatory and unpaid leaves of absence), widely used in the US also during the pandemic,[7]in that they do not necessarily require the worker to reduce working hours to zero. In other words, they operate to a large extent on the intensive margins encouraging employers to adjust hours of work rather than discontinuing, even temporarily, the employment relationship. Moreover, there is a much stronger commitment to preserve the job in a STW than in a furlough scheme.[8]

At the same time, STW entitlement conditions concern firms rather than workers, and typically subsidies are anticipated by employers and then repaid by the social security administration. As the pandemic hit the small business sector much more than during previous recessions, STW had to be extended to many small firms that were not initially eligible for it. This required transforming STW into a kind of credit line quickly usable by small businesses, as self-employed workers with dependent employees dramatically

[7] Half of the US states had STW schemes in place even before the pandemic. The US also had a sort of STW scheme for small firms, notably the Paycheck Protection Programme providing small firms with loans to cover labor costs (Autor et al. 2020). However, the allocation of these resources was difficult and take-up rates relatively low.

[8] Hunt and Borland (2021) estimate that around one-third of temporary layoffs were actually recalled during the pandemic in Australia. Torrence and Rejda (1987) estimate that the costs of retraining workers involved in temporary layoffs may well exceed the costs of STW.

needed liquidity to cover their payroll while facing a free fall of their revenues during the lockdown. While temporary loans to firms could in principle be preferable to STW in dealing with liquidity constraints, they generally required longer procedures for disbursement than STW.

The design of short-time work schemes

The design and regulation of short-time work schemes vary greatly across countries.[9] Firms are usually required to meet a number of eligibility criteria to enter into short-time work arrangements. These criteria include evidence of slowdown in their economic activity documenting some reduction in production or sales, the existence of collective agreements which allow take-up of short-time work, and consultation with employees or individual agreements. While some countries offer STW to all workers irrespective of their employment status (Denmark, Finland, Ireland, Spain, UK), workers qualify for STW only if they have a minimum contribution record in most countries. This prevents many workers with fixed-term contracts or part-time workers with few working hours to be eligible to STW. In the course of the Great Recession and in the pandemic, these eligibility criteria were relaxed for workers with atypical contracts in many countries.

STW is often conditional on actions to be taken by firms or employees. These include the commitment not to dismiss employees for a certain period after STW compensation comes to an end, job search requirements, the design of a recovery plan, and training of employees.

Working-time reductions can be either total or partial, depending on the size of the economic slowdown. In several countries, including Germany, STW involves fixed-cost per worker for employers (e.g. in terms of social security contributions to be paid independently of the number of hours worked). This reduces the incentive to use STW as a sort of subsidized furlough scheme, down to 100% hours reductions.

A maximum duration of compensation prevails in all countries, notably because short-time work must be temporary by nature. In most countries, income falls progressively as hours fall further below their usual level. In a majority of countries, employers bear a share of the total cost of compensation for each reduced hour. This is a way to incentivize firms and employees not to abuse the system.

The coverage of short-time work

In normal years the fraction of the labor force using STW is low in most OECD countries. This low coverage in normal years is associated with a low share of public expenditure,

[9] Hijzen and Venn, (2010), Cahuc and Carcillo, (2011).

which is well below 1% of GDP in most countries. The take-up increases dramatically during recessions. From involving less than one per cent (often much less than 1%) of the workforce in all OECD countries in 2018, by April 2020 in the OECD area about one worker out of five was involved in these schemes with peaks of 50% in countries such as New Zealand.

The dispersion of take-up rates across countries in normal years is clearly related to differences in STW schemes.[10] The take-up is positively correlated with the permissible reductions in weekly working hours that can be compensated, with the maximum duration of the scheme and with the share of labor cost of hours reductions which is subsidized. Surprisingly, take-up rates do not appear to be related to such stringencies in the conditions required to benefit from STW compensation as the commitment to not dismiss employees for a certain period after the end of STW compensation, the job search requirements, the design of a recovery plan, or the training of employees. It might be that these conditions do not play an important role because their enforcement is difficult.

STW schemes also tend to be more developed in countries with stricter employment protection rules, measured by the OECD employment protection indicator.[11] This positive relation between STW and job protection reflects a trade-off in regulations affecting internal (employment adjustment within the firm) and external (ease of dismissals) flexibility. Countries which favor internal flexibility combine stringent employment protection regulations and generous STW while external flexibility is associated with weak employment protection and no or very little STW use. At first sight, internal flexibility might seem preferable, insofar as it reduces job destruction during recessions, preventing inefficient layoffs. However, internal flexibility also has disadvantages. First, internal flexibility does not benefit all workers. It is clearly beneficial to workers in permanent jobs, but it can be detrimental to outsiders, whose access to employment can be more difficult if STW reduces job turnover. This disadvantage is particularly relevant in strongly segmented labor markets. Second, STW may dampen the reallocation of workers towards more productive jobs, a consideration which is particularly important taking into account the legacy of the pandemic.

Involvement of small business and liquidity constraints

As mentioned above, several countries during the pandemic have considerably broadened entitlement conditions enabling more workers and firms to have access to STW. The major extension has been towards small businesses in the service sector. Unlike previous recessions which hit particularly hard large exporting manufacturing plants, the pandemic has been very tough with small employers, e.g., in the retail trade, tourism and entertainment sectors.

[10] Hijzen and Venn (2011), Cahuc and Carcillo (2011).
[11] Hijzen and Venn (2011), Cahuc and Carcillo (2011), Boeri and Bruecker (2011), Lyndon et al. (2019).

This extension poses a number of problems to the design of STW. Traditionally STW operate as a sort of ex-post compensation to firms: employers get the authorisation to draw from the STW fund based on a check of the entitlement conditions. Once the authorisation is provided, the employer advances the payments to the workers involved and gets ex-post a refund from social security. This mechanism allows firms to achieve maximum flexibility in carrying out hours reductions. They do not have to pre-commit to a given number of workers being involved in short-time work and a pre-defined structure of hours reduction; they will just report ex-post to the social security administration the number of workers involved and the extent of the hours reduction.

There are at least two problems in extending this design to the small business. First, small employers are likely to be liquidity constrained and hence not in a position to anticipate the subsidy to the workers. Second, controls from the social security administration are not possible when reductions are declared only ex-post. This may increase moral hazard problems as employers can use STW as a wage subsidy without implementing any hour reduction. It is precisely to discourage moral hazard that it can be desirable to introduce experience-rating, that is, force employers making use of STW to pay higher contributions to the fund the more they draw from it. However, experience rating may make the scheme too costly for liquidity constrained small employers genuinely restructuring their activities if increases in contributions are not sufficiently postponed.

1.2. The theory of short-time work

The rationale for STW is that firms may dismiss workers *inefficiently* (from a social welfare perspective) when their revenue drops. From this perspective, it can be appropriate to use STW to allow firms facing temporary drops in their activity to retain their employees. However, STW may also induce inefficient reductions in hours worked and may prevent the reallocation of labor toward more productive firms.

Reducing layoffs

The introduction of STW arrangements is often seen as a mean to avoid drastic layoffs (Fitzroy and Hart 1985, Burdett and Wright, 1989). In presence of fixed costs per worker, savings on labor costs can be better achieved by acting on the extensive margin (Boeri and vanOurs, 2021). However, layoffs generate large negative externalities and employers have limited incentives to take into account the social costs of their dismissal decisions. Fiscal externalities of layoffs are numerous and sizeable: they include the unemployment benefits, the social transfers paid to unemployed workers, and the drop in taxes and social contributions induced by the removal of their jobs. To these costs we may add the increase in health expenditure and the rise in criminality induced by unemployment (Fougère et al., 2009).

Experience-rating systems, where employers' social contributions depend on the induced social costs of their firing decisions, can be used to reduce excess layoffs (Feldstein 1976, Blanchard and Tirole 2007, Cahuc and Zylberberg, 2008). These inefficient layoffs can be completely eliminated when each firm fully covers the induced social cost of its firing decisions. However, there are limits to experience-rating. Notably, many firms may face financial constraints which can prevent them from keeping their employees. This is a particularly serious issue for the small business. Moreover, evidence on employment adjustment during the Great Recession in the US shows that highly leveraged firms experienced larger employment losses in response to declines in local demand (Giroud and Mueller, 2017). These highly leveraged firms were not less productive. Nevertheless, their high leverage reduced their capacity to raise additional short and long-term debt in response to a decline in local demand. As a consequence, they experienced more layoffs and were more likely to close down. In these circumstances, STW arrangements may not avoid inefficient job destructions due to capital market imperfections (Burdett and Wright, 1989).

STW may also be an effective means to subsidize employment compared to wage or hiring subsidies because STW can directly target those firms with jobs at risk of being destroyed, and even the most fragile jobs within those firms. Other policies have no such possibility. Insofar as it is more profitable for firms to reduce the hours worked of temporarily low-productive workers, STW induces firms to retain low-productivity jobs much more precisely than wage or hiring subsidies. Hence, STW can help sustain employment in recessions at a small cost, relative to other policies providing financial support to firms (Cahuc et al. 2021, Giupponi et al., 2022)

It has also been argued that STW is more equitable because it is a "work-sharing" scheme distributing the adjustment burden over a large number of workers, who reduce their hours of work, compared to a situation where some workers are dismissed outright (Abraham and Houseman, 1994, Walsh et al., 1997, Vroman and Brusentev, 2009). This is particularly true when STW is implemented in the context of "solidarity agreements" aimed at preventing layoffs.

Limits to short-time work

Although short-time work can be useful to avoid inefficient job destructions, it also has some disadvantages.

First, STW distorts downwards the number of hours worked per employee. Thus, STW may be used to reduce the hours of work of workers who would not have not been dismissed in the absence of the STW, inducing inefficient reductions in hours worked. This can be particularly important if STW is strongly subsidized, and hence there are strong

incentives to use STW when the firm's activity slows down. Firms facing seasonal activity fluctuation can frequently use STW (Cahuc and Nevoux, 2017) benefitting from cross-subsidies, which reduce aggregate production. To limit these cross-subsidies, it is desirable to rely on experience rated systems, provided that these additional costs can be faced gradually by firms. Experience rating would then allow firms facing short-term financial constraints to sustain employment without inducing cross-subsidies which reduce aggregate production.

Second, STW may dampen the reallocation of jobs toward the most productive firms. Inasmuch as STW causes fewer workers to be released into the unemployment pool from incumbent firms, new firms find it more costly to hire labor. In this context, STW may prevent labor from flowing towards the most productive firms, and generate adverse effects on global production (Cooper, Meyer and Schott, 2017).

Third, as STW mostly benefits permanent workers, it may accentuate the labor market segmentation between stable and unstable jobs. The complementarity between STW and the stringency of employment protection legislation across OECD countries suggests that this phenomenon is potentially important. Indeed, empirical research finds that several STW schemes saved permanent jobs but had no effects on temporary jobs (Giupponi and Landais, 2022; Hizjen and Martin, 2013).

Fourth, problems in monitoring hours reductions may become more severe in the post-pandemic organization of work. The expansion of remote working, in particular, reduces the importance of statutory working hours and the observability of hours worked. In this context, there is a high risk that STW can be used as a wage subsidy benefitting firms that make the largest use of remote working.

All in all, the relative weight of advantages and disadvantages of STW depends on the behavior of workers and firms. This is an empirical issue which is covered in the next section.

1.3. The empirics of short-time work

Empirical evaluations of short-time work can be classified in two broad categories. The first category relies on country-level or cross-sector-level data, while the second category relies on firm-level data.

Macroeconomic evaluations

Macroeconomic evaluations, using cross-country data (Abraham and Houseman, 1994, Boeri and Bruecker, 2011, Brey and Hertweck, 2016, Cahuc and Carcillo, 2011, Hijzen and Martin, 2013, Hijzen and Venn, 2011, Van Audenrode, 1994) or cross-state data in the United States (Abraham and Houseman, 2014) have generally identified a positive impact

of STW on employment. Their conclusions are mostly drawn from a small number of observations, limiting their ability to identify a causal relation between STW and employment.

This being said, it has been found that STW did stabilize employment and reduced unemployment during the 2008–2009 recession (Boeri and Bruecker, 2011, Cahuc and Carcillo, 2011, Hizjen and Venn, 2011). A one percentage point increase in STW take-up rates is associated with a decrease of one percentage point in unemployment and an increase of one percentage point in employment. Overall, these evaluations suggest that STW compensation programs had an important impact on preserving permanent jobs during the economic downturn. The largest impacts were in Germany and Japan, where 0.7–0.8% of jobs were saved.

Microeconomic evaluations

The first microeconomic evaluations mostly used firm level sources in Germany and France. In Germany, all analyses rely on the IAB Establishment Panel, an annual survey with approximately 16,000 firms, representing 1% of all firms and 7% of all employees. Resulting estimates do not provide unambiguous results mainly because of the inadequacy of data to deal with the selection into STW.[12] This literature runs regressions where employment growth is explained by STW use and by a set of control variables including the revenue growth of the firm. To avoid bias induced by selection of firms with specific adjustment of employment into STW, the prior experience of firms with the program is used to instrument short-time work. Using this approach, it is found that each employee on short-time work saved about 0.35 jobs during the great recession in Germany -- with a 95% confidence interval equal to [0.04,0.70].[13] However, this result should be interpreted cautiously since empirical evidence shows that firms which use STW tend to adjust employment more strongly when output falls than firms which do not use short-time work (Bellmann et al., 2015). This behavior of STW users may result from technical constraints: firms have more incentives to use STW if features of their production process imply that it is more costly to store production or to find productive activities for incumbent employees when demand drops. At the same time several studies indicated that STW effectively selects firms hit by negative shocks as measured by revenues or labor productivity (Giupponi and Landais, 2020). Hence, instrumenting program use with prior experience does not fully solve the selection issue and is likely to lead to an underestimate of the potential positive impact of STW on employment. This may explain why several contributions using this instrument found no positive effect on

[12] Balleer et al. (2016), Boeri and Bruecker (2011), Niedermayer and Tilly (2017) find positive effects of short-time work on employment. Bellmann and Gerner (2011), Bellmann et al. (2015), Kruppe and Scholz (2014) find no effects of short-time work on employment.
[13] In line with Boeri and Bruecker (2011) who used the same identification strategy.

employment. Studies using French data face a similar difficulty. Their results tend to show that establishments authorized to use short-time work are more likely to go bankrupt. [14]

More recent studies find positive employment effects of STW in France and in Italy. Cahuc et al. (2018, 2021) devise a causal identification strategy based on the geography of the program. They find that short-time work saved jobs in firms faced with large drops in their revenues during the Great Recession, in particular when highly leveraged, but only in these firms. The measured cost per saved job is shown to be very low relative to that of other employment policies because short-time work targets those at risk of being destroyed. The identification of Giupponi and Landais (2020) relies on the interaction between two sources of variation in eligibility in Italy: sector and firm size. They find large and significant negative effects of STW on hours worked, but large and positive effects on headcount employment. Contrary to Cahuc et al., employment effects disappear when the program stops. Giupponi and Landais also identify the presence of significant negative reallocation effects of STW on employment growth of untreated firms in the same local labor market. Siegenthaler and Kopp (2021) use as control group firms that did not get the authorization to use STW in Switzerland during the Great Recession, and find that the policy paid for itself.

Christl et al (2021) investigate the impact of the COVID-19 pandemic on German household income using a micro-level approach. They find the consequences of the crisis to be highly regressive with a strong impact on the poorest households. However, this effect is nearly entirely offset by automatic stabilisers and discretionary policy measures. STW schemes and especially the one-off payments for children are effective in cushioning the income loss of the poor.

All in all, empirical evidence indicates that STW can be effective at saving jobs in recessions. STW has the advantage of limiting the loss of specific human capital following the separation of employees from their firm. However, STW reduces the number of hours of work and limits the reallocation of workers to more productive jobs. The effectiveness of STW depends on the magnitude of each of these phenomena, which is currently insufficiently known empirically (Giupponi et al. 2022). In addition, the effectiveness of STW is highly dependent on employment protection regulations. In environments where wages are downward rigid and labor contract termination is long and costly, corporate downsizing during recessions can significantly increase business failures. STW is then essential to dampen recessionary shocks. On the other hand, when adjustments at the extensive margin are less costly, as is the case in the United States, there may be less need to rely on STW for the survival of firms.

[14] Calavrezo et al. (2010) rely on propensity score matching to deal with the selection issue.

2. Partial unemployment insurance

In a growing number of situations and even more so after the rise of remote working inherited from the pandemic, the hours worked are less well defined, which reduces the scope of STW. At the same time the rise in alternative work arrangements predating the Covid-19 crisis, has blurred the border between employment and unemployment. Under these conditions, more and more people entitled to unemployment benefits are finding temporary jobs of very short duration. This means that many people are likely to enter and exit unemployment with high frequency. At the limit, unemployed persons may have paid work one day, and an entitlement to the dole for the next day. Under these circumstances, what should be the entitlement conditions of an efficient insurance?

To deal with this type of situation, many UI systems use *partial unemployment benefits,* enabling claimants to keep part of their unemployment benefits while earning low incomes (paying less than the unemployment benefits) from work. In several countries, the unemployment benefits which are not paid to the claimant while she is working create the right to extend the potential duration of unemployment benefits. Partial UI induces unemployed workers to accept part-time jobs, or jobs of short duration, that they might have had to refuse if the unemployment benefits eligibility rules required that recipients have zero labor earnings.

2.1. The design of partial unemployment insurance in OECD countries

Partial UI refers to benefits paid to persons working with occasional or part-time (henceforth marginal) jobs who have lost a full-time job or an additional part-time one, and are seeking a new job in order to work more hours. This scheme is different from STW, which refers to benefits compensating for the loss of wage or salary due to short-time working arrangements, and/or intermittent work schedules, where the employer/employee relationship continues. Partial UI exists in many European countries and in North-America. It covers about 0.25% of the labor force in OECD countries in 2019.[15] Its design is very heterogeneous across countries.

There is indeed a great diversity of rules concerning the relation between the current earnings of individuals from short or part-time employment and current unemployment benefits, about the implications of current partial unemployment benefits on future unemployment benefits entitlement, and about the duration of partial unemployment benefits.

[15] OECD stats: Public expenditure and participant stocks. This figure if obtained by adding the "Partial unemployment benefits" and the "Part-time unemployment benefits" schemes" as defined by the OECD.

Earnings and partial unemployment benefits

Two types of rules can be distinguished concerning the relation between labor earnings of unemployed workers from marginal jobs and partial unemployment benefits.

According to the first type of rules, recipients accepting marginal jobs can earn up to a specific amount (e.g. 165 Euros in Germany), called the "*earning disregard*", with no reduction in benefits during the reference period, which can be the week or the month. Above the disregard, the current benefits are reduced in proportion to the labor earnings. Above this earning level then the benefit-reduction rate can be very high, up to 100% creating traps in short or part-time activities. There is a disregard of this kind in Australia, Austria, Belgium, Finland, Germany, Luxembourg, New Zealand, the U.K. and in most US states (the exception being the state of New York).

According to the second type of rules, unemployment benefits are not discontinued once the individual accepts a job offer, but are reduced in proportion to all labor earnings, or hours or days worked, during the reference period. However, there is not a 100% marginal effective tax rate at work in these reductions at least up to a given threshold. In other words, only a fraction of the incomes earned are deducted from the unemployment benefits maintaining some incentive to accept marginal jobs: This means that the implicit *effective* tax rate is lower than 100%; per each Euro earned, there is not a one Euro reduction in the level of the benefit. The threshold above which the benefit-reduction is 100% is often defined at the level of the monthly or weekly wage before the job displacement. Canada, France, Ireland, Italy, The Netherlands, Norway, Slovenia, Switzerland and the US have schemes of this sort.

Implications for unemployment benefits entitlement

In some countries, the savings on benefits, which are not paid to claimants for periods in which they work, are carried forward and made available to these claimants at the end of the period of benefit entitlement. This is the case in Canada, Finland, France, Israel, Norway, Poland, Sweden and the U.S. In some countries (e.g. Finland, France) all unpaid benefits are carried forward. In other countries, benefits are carried forward only for periods (week or month) when the individual claimed no benefits at all because he or she had enough work (e.g. Canada). In addition to lengthening the potential duration of the current period of benefit entitlement, the income earned by part-time unemployed workers allows them to gain eligibility to new periods of benefit entitlement. This is the case in France, for instance, where every day of work while on claim lengthens the current period of benefit entitlement and generates one day of further benefit entitlement once the current period is exhausted, provided that at least 130 days (910 hours) have been worked over the last 24 months.

In other countries (e.g. Germany, Hungary, Portugal), unpaid benefits are not carried forward to the end of the period of benefit entitlement. However, the income earned by partial unemployment benefit recipients does allow them to get eligibility for new periods of benefit entitlement.

Duration of part-time unemployment benefits

Partial UI could induce unemployed workers to remain in marginal jobs instead of striving to access full-time employment. In general, the duration of partial UI is limited by the potential duration of unemployment benefit entitlement. However, as discussed above, this potential duration can be extended by partial unemployment benefits if the benefits which are not paid to claimants for periods in which they work are carried forward to the end of the period of benefit entitlement or even more so if the income earned by partial unemployment benefit recipients allows them to start new periods of benefit entitlement.

In order to limit the possibility that individuals remain entitled to partial unemployment benefits for long periods, several systems limit their potential duration. For instance, in Denmark, the land where such "policy circles" of unemployment benefits were widespread back in the 1990s, the right to supplementary unemployment benefits is limited to 30 weeks within the last 104 weeks.

2.2. The theory of partial unemployment insurance

Partial unemployment benefits aim at making marginal jobs more attractive for unemployed job seekers raising employment and production and reducing the costs of UI. Nevertheless, partial UI can lock workers into marginal jobs, thereby reducing the total number of hours worked.

The potential effects of part-time unemployment insurance

Partial UI encourages job seekers who are looking for stable full-time jobs to accept marginal jobs in the meantime.

Accepting marginal jobs can have several advantages. These jobs can favor access to full-time and more stable jobs if employers use these short spells of employment to screen workers (Neugart and Storrie, 2002, Houseman et al., 2003). Accessing marginal jobs can broaden the job search network and reduce human capital depletion of jobseekers. Finally, while working on marginal jobs, unemployed workers generally pay taxes and get lower unemployment benefits and social transfers, which improves public finances.

Promoting marginal jobs may also have disadvantages. Many people who work on these jobs would like to get full-time and stable jobs. However, when partial UI provide income at levels close to that of stable and full-time jobs for relatively long periods, this may reduce the appeal of full-time and stable employment (Eck and Holmlund, 2015). This has many negative effects. It raises income uncertainty, it reduces the incentives to invest in human capital, it worsens career prospects and long-term earning opportunities, it reduces the ability to obtain credit, it makes child care arrangements more complicated and it degrades the state of public finances.

The optimal design of partial unemployment insurance

Economic analysis provides limited guidance when it comes to the optimal design of partial UI. The canonical analysis of optimal UI overlooks the choice of the number of hours of work and the possibility of partial unemployment benefits (Baily, 1978, Chetty, 2006). It assumes that individuals can be in only two states: either full-time unemployed or full-time employed. In this framework, the optimal level of unemployment benefits increases with risk aversion and decreases with the elasticity of unemployment duration with respect to unemployment benefits. Introducing partial UI in this framework is not an easy task. One needs to account for labor supply at the extensive (working or not working) and at the intensive margins (choice of the number of hours worked conditional on working) in a dynamic and stochastic context. This type of problem has been studied by the literature on optimal taxation and optimal insurance. This literature shows that it is essential to coordinate the tax system with UI. It suggests that the optimal level of partial unemployment benefits should depend on the inter-temporal elasticity of labor supply and on labor market frictions which limit the adjustment of hours worked (Fahri and Werning, 2013, Werquin, 2016). Beyond these results, no simple conclusion providing clear guidance to designing optimal partial UI has emerged so far. Much remains to be done on this issue.

From this perspective, the contribution of Le Barbanchon (2017), focusing on partial UI in the United States, is particularly interesting. In the systems analyzed by Le Barbanchon, insurance recipients accepting part-time jobs can earn up to the "disregard" with no reduction in benefits. For every dollar earned above the disregard, current benefits are reduced on a dollar-per-dollar basis: the static marginal benefit-reduction rate is 100%. However, the reduction in benefits is not lost, it can be paid in a later week. The corresponding benefit transfer delays the potential benefit exhaustion date. Accordingly, forward-looking recipients make decisions based on a dynamic marginal tax rate, which is lower than the static benefit-reduction rate. Le Barbanchon analyzes the consequences of changes in the benefit-reduction rate. He finds that setting the benefit-reduction rate at 80% instead of 100% would be welfare-improving. Moreover, he shows that the optimal benefit-reduction rate should vary over the unemployment spell and should depend on the arrival rate of job offers.

2.3. The empirics of partial unemployment insurance

The main issue addressed by the empirical literature is the impact of partial unemployment benefits on access to non-regular and regular employment. This literature faces important difficulties when it comes to causal effects, insofar as non-observable characteristics of workers involved in partial UI are likely correlated with the possibilities individuals have to access regular jobs. In particular, it may be that people with identical observable characteristics who access marginal jobs more easily also have easier access to full-time and stable jobs. Therefore, if it turns out that recipients of partial unemployment benefits do find stable and full-time jobs faster than full-time unemployed workers, this does not mean that partial unemployment benefits do per se foster accession to stable and full-time employment. The empirical literature has developed different strategies to deal with this issue.

Natural experiments

The seminal contribution of McCall (1996) exploits variations in the design of part-time unemployment benefits across U.S. states from 1986 to 1992. In most U.S. states, UI recipients accepting part-time jobs can earn income up to the level of the disregard, with no reduction in benefits. Above the disregard, current benefits are generally reduced on a dollar-per-dollar basis. The disregard varies across states and within states over time. A 10% increase in the disregard is estimated to raise the probability of part-time re-employment for UI recipients from 3.9 to 5.7% in the first three months of unemployment. Moreover, a 10% increase in the disregard is found to reduce expected joblessness durations within a range from 0.3 to 0.9%. McCall (1998) finds that the effects of partial unemployment benefits are heterogeneous across demographic groups. An increase in the disregard is found to significantly raise the probability of part-time re-employment for blue-collar youth during the first three months of joblessness. However, no significant impact on the re-employment behavior of white-collar youth is detected.

Le Barbanchon (2017), relying on a similar identification strategy with U.S. data, estimates that partial unemployment benefits do increase labor supply. An additional factor operating in this direction is the possibility to carry forward benefits (Le Barbanchon, 2021).

AitBihiOuali et al. (2017) draw on a reform that in France reduced by 20% the threshold number of hours below which persons are entitled to the disregard. Exits to jobs with hours just below the threshold increased after the reform. The elasticity of hours with respect to the earnings from partial UI is about .14.

Timing-of-events

Several studies rely on a timing-of-events approach (Abbring and Van den Berg , 2003) to disentangle causal from selection effects of flows into partial unemployment. This approach compares the behavior of groups of individuals who differ in the timing of the transition from full-time unemployment to partial unemployment, assuming that this timing is random during their unemployment spell. In this set-up, individuals who take up partial unemployment benefits earlier in their unemployment spell belong to the treatment group, which is compared to the (control) group of individuals who take up these benefits later in their unemployment spell. Note, however, that this approach makes it possible to identify the effects of working while on claim in marginal jobs on exits from unemployment, but does not make it possible to identify the effects of the partial unemployment benefits per se, since the search behavior of individuals who did not start working while on claim may be influenced by the partial unemployment benefit.

Relying on this approach, Kyyrä (2010) found that starting work while on claim unemployment speeds up the access to regular employment in Finland. The impact of starting work while on claim on access to regular jobs is large and significant: when the applicant takes up a short full-time job that qualifies for partial unemployment benefits, the hazard rate to regular employment increases almost by one-half.

Kyyrä et al (2013) highlight the importance of the design of partial UI in Denmark. Receiving partial unemployment benefits and working part-time reduce unemployment durations on average. However, the sign and magnitude of the impact of starting work while on claim vary with individual characteristics and with the timing and length of the partial unemployment benefit period. Longer spells of partial UI tend to prolong unemployment duration, in particular for married women, white collar workers and manufacturing workers. The effects are much less detrimental for young workers and immigrants with short supplementary benefit periods.

Starting work while on claim is also estimated by Cox et al, (2012) to foster access to regular employment for young women in Belgium. The survivor rate in unemployment of partially unemployed workers is reduced by 27 percentage points one year after the start of receipt of part-time unemployment benefits, compared to that of full-time unemployed workers.[16]

Gerfin et al. (2004) found that starting work while on claim exerts a positive impact on entries into regular employment in Switzerland.[17] The chances that participants in partial

[16] Contrary to the finding of Kyyra et al. (2013) described above, Cox et al. do not find that the spell of unemployment benefit affects the transition to regular employment. These results should be interpreted with caution since many transitions are missing in the data of Cox et al.

[17] Gerfin et al. (2004) analyze the impact of partial unemployment benefits on the chance of getting a job of duration of at least 3 months with earnings of at least 90% of those in the previous job.

unemployment benefits programs will get a regular job 15 months after starting work while on claim are about 7–9 percentage points better than those of non-participants. The effects are heterogeneous across workers. Starting work while on claim is ineffective for unemployed persons who can find jobs easily anyway, or are having a short unemployment spell.

In France, Fremigacci and Terracol (2013) find a lock-in effect of starting work while on claim when individuals are eligible for partial unemployment benefits and an increased transition rate to regular jobs once unemployed workers are no longer eligible. These effects are significantly less important for low-skilled and low-experience unemployed workers, who face greater difficulties in finding jobs. This suggests that partial UI can create incentives to remain longer in partial unemployment, and then seek regular jobs once the opportunity to get partial unemployment benefits is exhausted.

Controlled experiments

Oleary (1997) and Lee et al. (2021) analyze the consequences of the Washington State UI Earnings Deduction Experiment in which for one year, starting in October 1994, Washington conducted a large randomized experiment to investigate the effects of reducing the amount of benefits deducted from claimants who worked while on claim. They find that the tax reduction had no positive effects on labor supply and increased the UI expenditure because it raised the propensity to claim benefits. They conclude that increasing the weekly benefit is more efficient than reducing the tax.

Cahuc et al. (2021) and Altman et al. (2021) ran large randomized controlled experiments in France and Denmark. They took advantage of the lack of knowledge of job seekers regarding partial UI and provided information about this scheme. In both cases, the information provision had a significant positive impact on the propensity to work while on claim, but reduced the unemployment exit rate, showing important lock-in effects into unemployment associated with partial unemployment benefits.

All in all, the empirical literature points that the adaptation of UI to the development of new forms of employment has to be undertaken cautiously. To limit the substitution of marginal employment for regular employment, the contributions from marginal jobs should balance the partial benefits. Several countries have introduced voluntary schemes for marginal workers to avoid raising contributions for non-standard workers (OECD, 2018). However, the take-up to these voluntary schemes is low and suffers adverse selection issues, insofar as workers with the highest risks of unemployment have more incentives to participate. From this perspective, it is desirable to adjust the eligibility conditions for each type of worker to ensure that their contributions balance their benefits, for instance by offering a menu of insurance contracts (Barnichon and Zylberberg, 2022). This framework presents the advantage to deal with the selection issue

and to facilitate transitions between standard and non-standard employment. It is also important to counsel and monitor partially unemployed workers to help them in finding full-time jobs.

3. Wage insurance

Wage insurance (WI) programs, which provide a temporary wage supplement that partially reduces the wage loss experienced by newly reemployed workers, also aim at inducing unemployed workers to accept low-paid jobs. WI differs from partial UI because individuals are no longer recipients of unemployment benefits once they have been reemployed in WI programs. In practice, WI is generally targeted at permanently long-tenured workers who find themselves displaced. For instance, in 2016, President Obama proposed WI as a program for helping all dislocated workers as they recover from the permanent loss of a job. He argued that if a "hardworking American loses his job—we shouldn't just make sure that he can get UI; we should make sure that program encourages him to retrain for a business that's ready to hire him. If that new job doesn't pay as much, there should be a system of WI in place so that he can still pay his bills".[18]

The case for WI is motivated by the large scale reallocation that may follow the pandemic (Barrero, 2021) notably in the case where the mostly affected sectors (leisure and hospitality to start with) would not rapidly recover from the crisis (Basso, 2022). It is also motivated by the large wage losses experienced by long-tenured displaced workers when they find a new job (Chan and Stevens, 1999), and by the fact that some new job opportunities related to the consequences of the health crisis at the low end of the skill distribution (e.g., disinfection related jobs) are relatively low-paid and expose to a high epidemiological risk.

3.1. Wage insurance regulations

WI provides partial replacement of lost wages to displaced workers who accept pay cuts. WI benefits are temporary and are reserved for workers who face wage losses when they change jobs. Unlike partial UI, WI provides compensation not only for marginal jobs, but also for full-time and stable jobs if the remuneration of the new job is smaller than that of the previous job.

As shown above, partial UI exists in many countries. A large set of countries also use permanent in-work benefits to incentivize unemployed workers to accept low paid jobs. Time-limited in-work benefits are scarcer (Van der Linden, 2021). Most of them are targeted at unemployed welfare recipients. WI schemes are even more scarce.[19] Their size

[18] Barack Obama, State of the Union address, January 12, 2016, quoted by Wandner (2016).
[19] Information is gathered from labor market researchers in Austria, Belgium, Denmark, France, Germany, Italy, the Netherlands, Portugal, Spain, Sweden, Switzerland, United Kingdom and from the OECD publication series, "Back to work", which identifies wage insurance programs in Canada and in the United

is generally very small and they can be part of programs which include other components, especially job search assistance and training.

The US Trade Adjustment Assistance (TAA) is a federal transfer program established under the 1962 Trade Expansion Act which provides assistance to workers permanently separated from their jobs due to international trade. The program aimed at coupling trade liberalization with insurance for adversely affected workers. TAA contains several program components. It provides benefits up to $10,000 for workers enrolled in training programs, up to a maximum of three years. Recipients are also entitled to extended UI benefits while training. In the interest of promoting rapid re-employment, and because training may not pay off for older workers, the Trade Act of 2002 established a WI program, called the Alternative Trade Adjustment Assistance for Older Workers (ATAA). TAA-certified that workers age 50 or older can get ATAA wage subsidies if they obtain full-time jobs that pay no more than $50,000, earn less than they did in their prior jobs, and find employment within 26 weeks of becoming unemployed. The subsidy is equal to 50 percent of the wage drop for up to two years. It is capped at $10,000. The ATAA program is small: yearly inflows into the scheme are of less than 100,000 workers.[20]

In Japan, the "Employment Continuation Benefits for Older Workers" program, compensates workers from age 60 to 65 whose wage drops by at least 25%. The compensation goes up to 15% of their current wage until they reach age 65. This program is limited in size. About 190,000 workers were enrolled in 2012.[21]

In Germany, the "Remuneration for older workers" program[22] introduced in 2003 is targeted at workers aged above 50. Workers finding a new job paying less than their previous jobs are eligible for a compensation of 50% of the earnings drop in the first year and 30% in the second year. The compensation is proportional to hours worked. For instance, if 40 hours per week were worked on the previous job and 20 in the new job, the earnings difference was computed using ½ of the previous earnings. The program was limited in size. It had less that 10,000 participants until 2006 and about 20,000 when it was cancelled in 2011.

In France, since 2011, companies with fewer than 1,000 employees and companies of all sizes engaged in reorganization or liquidation proceedings, which dismiss employees for economic reasons, must offer them the option of joining the "Job security contract"[23] program. This program sets them on a return-to-work path including support for the professional goals of the individual, as well as training and work periods. Workers finding a new job paying less than their previous jobs are eligible to have their drop in earnings

States only, among nine countries: Australia, Canada, Denmark, Finland, Japan, Korea, New Zealand, Sweden and the United States.

[20] Schochet et al. (2012) and Wandner (2016) provide extensive surveys of wage insurance in the US.

[21] OECD (2015), p 120.

[22] Entgeltsicherung für ältere Arbeitnehmer, see Steiner (2017) and van der Berg et al. (2017).

[23] Contrat de sécurisation professionnelle, see Boum Galiana et al. (2016).

fully offset for a period that may not exceed 12 months, and within a maximum amount of up to 50% of their residual rights to UI benefits. Unlike the US, Japanese and German WI programs, the French job security contract is not reserved for the elderly. Nevertheless, its size remains small. About 80,000 workers were enrolled in 2016 and most of them were involved in training programs.

The Earnings Supplement Project implemented in Canada in 1995-98 was a demonstration project run in Manitoba, Ontario and Quebec aimed at testing the effects of a financial incentive designed to stimulate the re-employment of displaced workers and repeat users of UI (Bloom et al., 1999). The program bridged 75 percent of the earnings loss for up to two years, for workers working at least 32 hours per week within 26 weeks of the offer date.

3.2. The theory of wage insurance

WI aims to compensate displaced workers for wage losses with a temporary subsidy. It has pros and cons. Its proponents argue that it improves labor market equity for workers adversely affected by economic restructuring. They also argue that WI would reduce the periods of unemployment and increase employment and earnings. Its opponents question its equity and raise concerns about its negative impact on the career prospects of recipients of WI.

Equitable sharing of the gains from jobs reallocation

A substantial body of empirical contributions has shown that long-tenured displaced workers face significant and persistent problems, including unemployment, earning losses, and health problems, which affect not only themselves, but also their children (Oreopoulos et al., 2008, Bertheau et al. 2022). WI can help in solving these problems insofar as it compensates individuals affected by significant persistent negative shocks. By smoothing the social costs of job reallocation, WI can help improve the level of public support for international trade, and more widely, public acceptance of technological changes. This idea was an important motivation for the implementation of WI in the United States at a time of great fear of the adverse impact of international trade on American jobs (Wandner , 2016).

Although it is obvious that WI can compensate long-tenured displaced workers, the question is whether these long-tenured workers should benefit from special treatment. Empirical studies show that cross-worker wage differentials are explained by characteristics of workers and firms. The importance of labor market frictions implies that the firm fixed effects explain a significant share of the wage distribution, meaning that workers identically motivated and productive can be paid very differently (Abowd et al, 2013, Song et al, 2016). In this context, lucky workers are matched with successful firms, in which they can win long and satisfy career paths. Less lucky workers find jobs

in less successful firms. These jobs offer lower wages and are less stable. From this perspective, compensation for the wage losses of long-tenured displaced workers may do no more than help to reproduce and prolong the inequality between those workers who have been lucky at the start of their career, and those who have been less lucky. Designing an equitable insurance system requires precise information about the process that governs wage dynamics over the life cycle of all workers, and not just those who lose their job after a long career in the same firm. In the current state of knowledge, there is no strong argument on grounds of equity in favor of compensating long tenured workers specifically for wage losses. Given that job loss for older workers is a one way street (Boeri and vanOurs, 2021), a case could be possibly made for targeting WI to displaced workers on the basis of their age until they reach the pensionable age.

A related issue concerns the definition of the conditions under which WI could be provided. For instance, in the United States, only earning losses related to international trade are offset, while those induced by technological shocks are not. This creates differences of treatment that are also difficult to justify on equity grounds. The only justification may be a political one: workers appear to oppose more trade related labor market adjustment, than restructuring associated to technological change (Di Tella and Rodrik, 2020).

Incentives for reemployment

An important argument in favor of WI is that it provides incentives for finding jobs. The literature on optimal UI does suggest that in-work benefits can be desirable (Hopenhayn and Nicolini, 1997, 2009) because they supply incentives to look for and to accept job offers. The use of in-work benefits may allow the UI system to set more generous benefits over longer spells in optimal fashion and to improve the welfare of workers.

However, in the real world, the design of in-work benefits in UI systems has to depend on many parameters, which implies that they are difficult to implement. In particular, optimal in-work benefits should be temporary to avoid excessive costs and lock-in effects in subsidized low-productivity jobs. But if in-work benefits are temporary, workers may have incentives to go back to unemployment once they stop getting them. From this perspective, time-limited in-work benefits are fully justified if they do function as stepping stones toward stable employment. We will see that empirical evidence provides very little support for this assumption. For these reasons, in-work benefits are seldom used in UI systems and there is no reason to assess the situation of recipients of WI differently from that of other unemployed workers. This means that there are no strong arguments justifying WI by its positive impact on reemployment.

Job quality and career prospects

WI can induce workers to accept low quality jobs and to remain in these jobs as long as they are getting compensated for their wage loss. Hence WI can create disincentives to building human capital and looking for better jobs. This is detrimental to the career path of WI recipients and to the overall efficiency of the labor market (Michau, 2021). But these disadvantages may be mitigated by monitoring and training programs provided to WI recipients. Actually, there are complementarities between, on the one hand, financial incentives to finding jobs, and, on the other hand, training and monitoring programs. In any case, this suggests that WI should not be isolated from other active labor market policies. The French "Job security contract" program, which includes training, job search counseling and monitoring together with compensation for earnings drops, relies on such premises.

By reducing uncertainty in the returns on investment in human capital, WI can also have direct positive effects on human capital accumulation. If access to potentially long-tenured jobs requires employees to make important investments in specific human capital that cannot be valorized in other jobs, there can be room for WI for long-tenured displaced workers. However, insofar as employees have limited incentives to invest in specific human capital (Becker, 1964, Acemoglu and Pischke, 1999), it is likely that the impact of WI in this area is limited.

All in all, the most solid justification of WI relies on its potential positive impact on the reemployment prospects of older displaced workers. Determining whether compensation for the wage losses of these workers does in fact yield strong incentives to find jobs is an empirical issue taken up in the next section.

3.3. The empirics of wage insurance

The scarcity of WI programs entails that very few evaluations are available.[24] Nevertheless, they confirm evaluations of work-related benefit programs, and in particular time-limited work-related benefit programs, which show that they have an impact on employment and earnings that disappears when benefits work-related are no longer paid.

[24] Schochet et al. (2012) and Hyman (2018) evaluate the impact of the Trade Adjustment Act in the United-States, but their evaluations are not focused on the wage insurance component of this scheme.

Evaluations of time-limited in-work benefits programs

Several empirical studies have shown that time-limited in-work benefits can promote employment among low-wage workers. Four trials in Canada and in the United-States have randomly assigned people either to a program group which was eligible for earnings supplements, or to a control group that was not. Their findings are consistent (Michalopoulos, 2005; Card and Hyslop, 2005). These programs all increased employment, earnings, and income. However, their effects diminished over time. The effects on employment and earnings were larger and more persistent for long-term welfare recipients with limited education and work experience. The combination of time-limited earnings supplements with employment-related services aimed at helping those eligible to find and keep jobs has effects that exceed those from earnings supplements alone (Robins et al., 2008). Evidence from an experimental program for unemployed welfare recipients in the UK is in line with these findings (Dorsett, 2014). It found that time-limited in-work benefits combined with post-employment services raised employment. Furthermore, positive but non-significant effects on employment retention are observed. These results suggest that time-limited in-work benefits have temporary positive employment effects, which vanish when the benefits stop being paid.

Evaluations of wage insurance programs

The Canadian Earnings Supplement Project involved an experimental design (Bloom et al., 1999). Treated workers were offered payments of 75% of their earnings loss for up to two years if they became employed in a nearly full-time job (32 hours per week) within 26 weeks of the offer date. The program was tested on two groups comprising a total of 5,912 individuals in 1995 and 1996. The program had a small positive and short-lived impact on reemployment and negative effects on wages. Almost 50% of treated workers remained in the scheme for the full two years. It had almost no effect on the amount or duration of unemployment benefits.

The effects of the WI program for older workers in place in Germany during the period 2003–2011 have been evaluated by a field experiment involving an information treatment sending information about the program to 2,328 eligible persons. This treatment is used as an instrument to estimate the effects of the program. Receipt of this information increased the share of individuals informed about the program by around 20 percentage points. A survey shows that more than 70% of workers think that this program is suited to bring older unemployed individuals back into jobs. Only around 20% answered that in-work benefits stigmatize workers and around two-thirds that they are preferable to wage subsidies to employers. Nevertheless, the employment impact of in-work benefits is mixed. For workers aged from 50 to 54 and 60 to 64, receiving the information has no significant effect on employment. There is a small positive impact on employment of individuals aged from 55 to 59. Moreover, there are small negative effects on the earnings of those aged from 50 to 54 (Van den Berg et al., 2017).

Hyman et al. (2021) evaluate the impact of the US Trade Adjustment Assistance program which included a WI program available to workers aged 50 and over who were laid off in a trade-related displacement. They compare the employment and earnings trajectories for workers exceeding this age threshold against those for slightly younger workers. They find that wage insurance–eligible workers are more likely to be employed in the years just after displacement and that their earnings are higher during this period, but this difference is entirely accounted for by the higher probability of employment. The gaps in employment probability and earnings progressively fade away and cancel out after five years.

All in all, current evaluations do not provide much support for the effectiveness of wage insurance to boost employment. The employment impact of time-limited in-work benefits seems to be smaller for displaced workers than for welfare recipients, perhaps because they have higher reservation wages and need time to revise their expectations about career prospects. It is possible that combining wage insurance with counseling and employment-related services could make wage insurance more effective. Much research is needed before convincing lessons can be drawn in this realm.

4. Concluding remarks

Partial UI, short-time work, and wage insurance have been tried, at different scales in several countries, and evaluated, to a lesser extent, by economists and social scientists. From our survey of these experiments and evaluations, we can draw the following lessons.

First, partial UI, which exists in many countries must indeed play a key and increasing role to support the development of new forms of employment. However, the adaptation of UI to the development of new forms of employment, more unstable and more often part-time, has to be undertaken cautiously. To limit the substitution of non-regular employment for regular employment, the contributions of non-standard workers should balance the benefits they receive. From this perspective, it is desirable to adjust the mandatory and the eligibility conditions for standard and non-standard workers to ensure that their contributions balance their benefits. This framework presents the advantage to deal with selection issues and to facilitate transitions between standard and non-standard employment.

Second, due to capital market imperfections, STW can be effective at saving jobs in recessions. It can avoid inefficient job destructions. In any case, it is clear that the scope of short-time work should be limited to firms facing genuine difficulties, and time-limited to avoid reducing hours worked excessively and dampening the reallocation of jobs

toward productive firms. It should also be experience-rated in order to prevent abusive and repeated use.

Third, to date the rare evaluations we do have of the scarce wage insurance systems that do exist provide little support for the two arguments advanced by the proponents of wage insurance in terms of protection of long-tenured workers. Targeting wage insurance on this basis risks benefiting the insiders to the detriment of outsiders. Moreover, empirical evidence suggests that time-limited in-work benefits provided by wage insurance systems have little incentive effects for individuals to find and keep regular jobs. A case could be possibly made for targeting wage insurance to older workers displaced from their previous job.

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