



Short-time work is an efficient job-saving policy

Short-time work enables companies facing economic difficulties to reduce the hours worked by all or part of their employees.

The ad-hoc recourse to short-time work in response to a drop in activity has helped safeguard jobs in France. Three main lessons may be drawn from the data analysis on the recourse to short-time work based on the economic, financial and social characteristics of companies in France over the period 2002-14: i) the geographical proximity of companies that have already had recourse to this scheme fosters the transmission of information and thus contributes to spreading its use; (ii) the scheme is efficient in safeguarding jobs, despite the adverse effects associated with it, and (iii) inefficiencies are generated by the recurrent recourse to this scheme, particularly in terms of aggregate output.

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4%

share of employees in short-time work in 2009

30,000

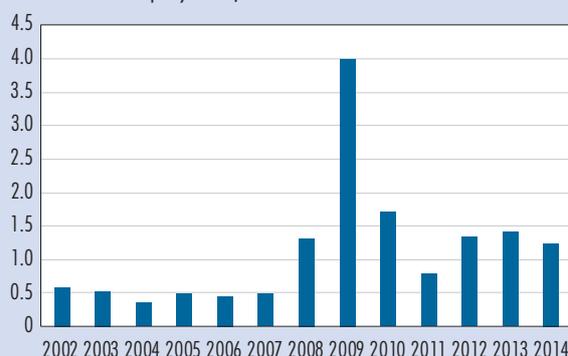
number of jobs saved between 2009 and 2010

40 million euros

loss of aggregate output in 2014

Proportion of employees in short-time work

(as a % of total employment)



Sources: INSEE, annual statutory accounting data declarations (DADS); DGEFP, Sinapse-Short-time work data and Agence de services et de paiement (ASP), Extranet-Short-time work data. Scope: metropolitan France excluding Corsica; market sectors excluding agriculture; companies having recourse to short-time work for economic reasons.



The objective of short-time work is to combat unemployment. Companies facing economic difficulties may use it to reduce the hours worked by all or part of their employees. The earning losses resulting from the reduction in hours worked are compensated jointly by the company and the public

authorities. Recourse to this scheme is strictly regulated by law (see Box 1).

Since the Great Recession of 2008-09, short-time work has seen renewed institutional interest in many countries of the Organisation for Economic Co-operation and

BOX 1

Legislation

With rare exceptions, all private sector companies located in France are eligible for short-time work schemes. They are entitled to have recourse to these schemes for the following reasons:

- economic conditions,
- raw materials and energy supply difficulties,
- transformation, restructuring and modernisation,
- exceptional weather conditions,
- disaster,
- any other circumstance of an exceptional nature.

In the framework of short-time work schemes, the company may either reduce the number of hours worked, or temporarily suspend work for all or part of its workforce. This possibility is given for a maximum of six months (renewable once) and a maximum of 1,000 hours per employee per year.

Each hour not worked under the scheme is compensated up to 70% of the employee's gross hourly wage (about 84% of the net hourly wage, within the limit of the statutory minimum wage). This compensation is initially paid by the company on the same terms as the payment of the usual wage. The company then receives jointly from the State and the unemployment insurance body an hourly allowance per employee, amounting to EUR 7.23 for companies with more than 250 employees and EUR 7.74 for companies with fewer than 250 employees.

To be able to resort to short-time work, a company must ask the relevant territorial unit of the Direccte¹ for prior authorisation. The territorial unit examines this request and gives its decision. When authorisation is granted (in the vast majority of cases), the administration specifies the number of hours, the workforce and the amounts authorised under the scheme and the period during which it can be used. The company can then have recourse to short-time work efficiently and then be compensated by the territorial unit.

¹ Direction régionale des Entreprises, de la Concurrence, de la Consommation, du Travail et de l'Emploi.



Development (OECD), in particular in France (see Box 2 and Chart 1).

The greater recourse to short-time work has revived the interest of academic literature in the subject. The theoretical studies highlight the positive effect of this scheme on employment and wage maintenance (Braun and Bruegemann, 2017, Burdett and Wright, 1989, Niedermayer and Tilly, 2017, Van Audenrode, 1994). They also pinpoint a double adverse effect. On the one hand, some companies may have recourse to short-time work for profitability reasons although they are not

BOX 2

Background

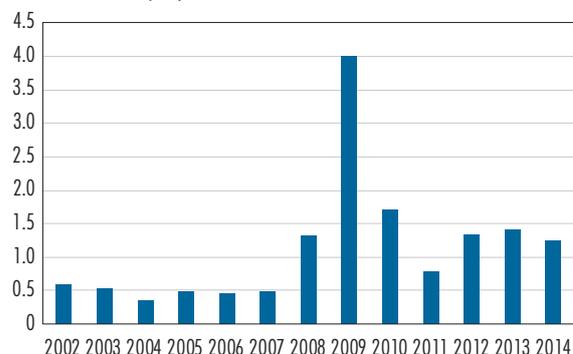
Short-time work schemes have existed for a long time in many countries of the Organisation for Economic Co-operation and Development (OECD), such as Portugal, Denmark, Norway, Austria, France, Spain, Switzerland, Finland, Luxembourg, Germany, Italy and Belgium. However, recourse to these schemes remained limited until the Great Recession of 2008-09. In these economies, the proportion of short-time workers, mainly in the industrial sector, fluctuated around 1% of total employment.

Following this recession, several countries, such as Germany, established such schemes or encouraged their use. In France, since 2009, the Ministry of Labour has enacted laws, raised the scheme's budget, and issued circulars and guidelines to facilitate recourse to short-time work. The scale of the crisis and these reforms have led to a boom in short-time work. The proportion of short-time workers has increased 20-fold, climbing from 0.2% to 4.0% of total employment between 2007 and 2009.

These schemes continued to be reformed after the crisis, in particular in France. Thus, in March 2012, following the requests made by professional unions in the national interprofessional agreement of 13 January 2012, new reforms have been implemented, further facilitating access to the scheme.

CI Proportion of employees in short-time work

(as a% of total employment)



Sources: INSEE, annual statutory accounting data declarations (DADS); DGEFP, Sinapse-Short-time work data and Agence de services et de paiement (ASP), Extranet-Short-time work data. Scope: metropolitan France excluding Corsica; market sectors excluding agriculture; companies having recourse to short-time work for economic reasons.

facing any economic difficulties. Even in the absence of the scheme, these companies would have maintained their level of employment. These windfall effects lead to a decline in hours worked without any effect on employment (Balleer et al., 2016, Burdett and Wright, 1989). On the other hand, some companies facing structural difficulties may also be tempted to resort to the scheme. This limits the reallocation of their labour force towards more productive sectors and thus reduces aggregate output (Cooper et al., 2017).

However, empirical studies of short-time work show considerably mixed results. While macroeconomic studies of OECD countries and US states have largely confirmed previous theoretical intuitions (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), microeconomic studies, mostly devoted to Germany and France, have proved inconclusive, particularly because of methodological problems (Balleer et al., 2016, Bellmann et al., 2015, Bellmann and Gerner, 2011, Boeri and Bruecker, 2011, Kruppe and Scholz, 2014, Niedermayer and Tilly, 2017).

Short-time work remains controversial, especially in France. It is therefore necessary to conduct an economic assessment of its effects. This is the subject of three recent



studies (Marcon et al., 2019, Cahuc et al., 2018, Cahuc and Nevoux, 2017) whose main findings are discussed below.

1 Short-time work benefits from local information externalities

For what reasons do companies have recourse to short-time work? Clearly, the information that companies have about the scheme and its procedure plays a key role. This information is all the more accessible as neighbouring companies have already had recourse to the scheme.

Marcon, Nevoux and Puech (2019) analyse the relevance of this scheme for France over the period 2003-14 (see Box 3 for a presentation of the data). To do this, the authors construct a spatial concentration index applied at company level. First, they measure the proportion of companies having recourse to short-time work in an area surrounding a given company. Second, they calculate this proportion over the whole territory. The concentration index then corresponds to the ratio of these two proportions. Thus, the authors show that recourse to short-time work is concentrated geographically and that this concentration is dynamic (see Chart 2).

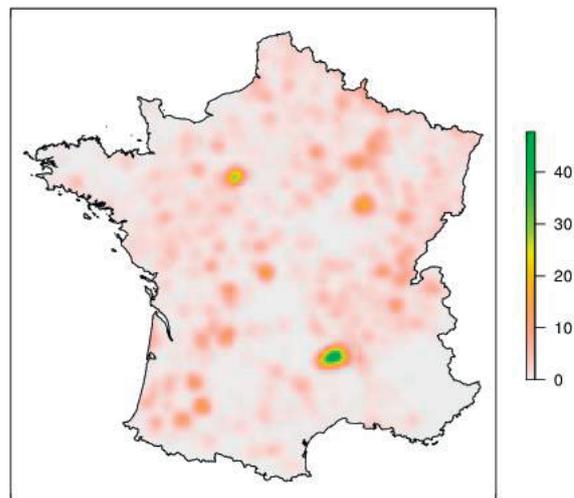
BOX 3

Data

To carry out this assessment, several databases on French companies for the period 2002-14 were used. The Sinapse-Short-time work database of the *Délégation générale à l'emploi et à la formation professionnelle* (DGEFP) and the Extranet-Short-time work database of the *Agence de services et de paiement* (ASP) provide information on short-time work requests since 2002. The annual statutory accounting data declarations (DADS) provide information on the characteristics of the workforce in terms of employment, hours worked and wage. Lastly, the *Fichier complet unifié du système unifié de statistiques d'entreprises* (Ficus) and the *Fichier approché des résultats d'élaboration des statistiques annuelles d'entreprises* (Fare) provide information on the economic and financial situation of companies since 2002.

C2 Relative proportion of companies having recourse to short-time work in 2009, within a one kilometer radius

(concentration index)



Sources: INSEE, annual statutory accounting data declarations (DADS); DGEFP, Sinapse-Short-time work data.

Scope: metropolitan France excluding Corsica; companies in activity.

Note: The concentration index measures individual spatial concentration in 2009, within a one kilometer radius. The higher it is, the higher the concentration. This concentration is defined as the proportion of companies having recourse to short-time work within a one kilometer radius of a company having recourse to short-time work in 2009, relative to the total proportion of companies having recourse to short-time work in 2009 throughout the country. Companies are weighted by their number of employees.

The effects of the diffusion of short-time work at the local level are then evidenced by the ordinary least squares method, by regressing recourse to short-time work of a given company on its potential determinants. Taking into account the company's characteristics in these linear regressions makes it possible to interpret the spatial concentration index as a measure of local information on short-time work and, consequently, to distinguish the effect of this information from other determinants of recourse to short-time work. The results highlight the existence and importance of such local information externalities: the geographical proximity of companies that have already resorted to short-time work facilitates the transmission of information and thus fosters the spread of the scheme. In addition, the diffusion of information seems to intensify with the proximity of companies and this information circulates both within a sector and between sectors.



2 Short-time work, an efficient job-saving policy

A second study (Cahuc, Kramarz and Nevoux, 2018) aims to determine the effect of short-time work on employment in France during the Great Recession. First, the authors develop a theoretical model showing that short-time work helps to safeguard jobs in companies impacted by major economic shocks. For companies facing a smaller loss of turnover, the scheme results in a decrease in hours worked without preserving jobs. The cost of this job-saving policy is lower than that of other employment policies, such as wage or hiring subsidies, insofar as short-time work concerns jobs that are at risk.

This article then implements an empirical strategy based on the instrumental variables method in order to quantify the impact of short-time work on employment. On the one hand, the geographical proximity of companies belonging to multi-company entities and having already resorted to short-time work facilitates the transmission of information and thus promotes recourse to short-time work. On the other hand, the administrative management of the scheme at the departmental level may generate procedural costs for the company, and consequently constitute an obstacle to resorting to short-time work. Two variables in particular cause a change in recourse to short-time work, irrespective of the companies' economic and financial situation:

- the distance to the nearest company belonging to a multi-company entity and having already resorted to short-time work,
- the average time for processing short-time work requests by the departmental administration in charge of the scheme.

By using these variables as instrumental variables, it is possible to overcome the methodological problems encountered by previous studies. In doing so, the effect of short-time work on employment is estimated more precisely.

The theoretical and empirical conclusions complement each other. Between 2009 and 2010, short-time work helped save close to 30,000 jobs in companies facing a considerable decline in their turnover.¹ In the absence of this scheme, these jobs would have been lost. However, only open-ended contract jobs were saved. For companies that resorted to the scheme without experiencing a decline, even a moderate one, in their activity, short-time work resulted in a reduction in hours worked without any positive effect on employment. These companies would have maintained their level of employment unchanged even if they had not had recourse to the scheme. However, the cost of short-time work per job saved is lower than that of wage or hiring subsidies. In addition, short-time work only contributed to saving companies that were structurally viable over the long term: employment growth in the companies that resorted to short-time work in 2009 proved, in the following years, similar to that of companies facing a similar shock but which did not resort to the scheme. Short-time work thus constituted an efficient job-saving policy in France during the Great Recession.

3 Recourse to short-time work is inefficient when it is recurrent

A third article (Cahuc and Nevoux, 2017) looks at the effect on French aggregate output of the 2012-13 reforms of short-time work and of the recurrent recourse to this scheme. By lifting the cost ultimately borne by companies, the reforms conducted during this period made short-time work more attractive. The authors show that these reforms mainly benefited a small number of companies, i.e. those that had a massive recourse to the scheme on a recurrent basis in order to cope with seasonal fluctuations in their activity (see Chart 3).

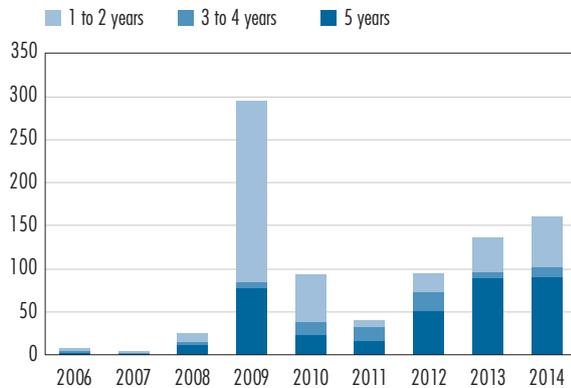
Cahuc and Nevoux (2017) develop a theoretical model in which such reforms lead to a financial transfer towards companies that resort to short-time work on a recurrent basis. These public subsidies are necessarily financed by other sectors and companies. They result in output losses at the macroeconomic level, as they prevent the

¹ Companies whose turnover has declined by more than 13% between 2008 and 2009. This figure corresponds to the first quintile of the distribution of turnover growth rates in the sample considered.



C3 Total short-time work allowance according to the degree of recurrence

(in EUR millions)



Sources: DGEFP, Sinapse-Short-time work data and Agence de services et de paiement (ASP), Extranet-Short-time work data.

Scope: metropolitan France excluding Corsica; market sectors excluding agriculture; companies having recourse to short-time work for economic reasons.

Note: "5 years" represents systematic users resorting to short-time work each year over the past five years; "3 to 4 years" represents frequent users resorting to short-time work 3 to 4 years over the past five years; "1 to 2 years" represents occasional users resorting to short-time work 1 to 2 years over the past five years.

reallocation of labour impacted by seasonal fluctuations in activity to more productive sectors. The authors estimate that the aggregate output loss associated with the current short-time work scheme, relative to the social optimum, amounts to 50% of the total short-time work allowance paid to systematic users, about EUR 40 million in 2014.

In this model, the introduction of a system in which companies participate in the financing of unemployment

insurance in proportion to their financial weight in this scheme ("experience rating" system) would make it possible to achieve this social optimum characterised by a maximum aggregate output (Burdett and Wright 1989, Cahuc and Carcillo 2011). This bonus-penalty unemployment insurance would encourage companies to internalise their cost of dismissal and thus keep their staff in employment during periods of low activity. This unemployment insurance would be usefully complemented by short-time work, in order for companies facing temporary difficulties to keep their employees by reducing the number of hours worked. However, the financing of short-time work should be based on the same bonus/penalty logic. Such a mechanism would thus encourage companies to resort to short-time work more efficiently and thereby mitigate the related adverse effects.

Conclusion

The assessment presented in this article shows that short-time work was an efficient job-saving policy in France during the Great Recession of 2008-09.

However, recourse to short-time work can sometimes have adverse effects. One solution would be to target the scheme more at companies affected by major economic shocks. In addition, the introduction of an experience rating system coupled with short-time work and unemployment insurance would also contribute to limiting the adverse effects associated with these two schemes.



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