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ORIGINAL ARTICLE

A review of the effectiveness of short-time work programmes: The Spanish case from a comparative perspective

Alberto Vaquero García

ECOBAS-Universidade de Vigo, Spain and Faculty of Business Studies and Tourism, GEN-Universidade de Vigo, Campus of Ourense, 32004, Spain
Email: vaquero@uvigo.es

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Abstract

This article evaluates short-time work (STW) schemes, known as temporary labour adjustment plans in Spain, from a comparative perspective. The use of STW schemes in the European Union during the COVID pandemic contained the redundancy processes that traditionally occur during adjustments to economic crises. These programmes not only made it possible to maintain employment but also allowed for a much faster economic recovery. The main contribution of this article is that it studies the functioning and results of this type of action in Spain and also considers the effects in other countries. This policy watch exercise also points to some recommendations for improving the functioning of STW schemes.

Keywords: Economic recovery; employment maintenance; incentives; lay-offs; short-time work schemes

JEL Codes: J53; J48; J65

Introduction

Short-time work (STW) schemes in the European Union (EU) helped to maintain many employment relationships that, without this type of public aid programme, would have been lost in the complicated moments of the economic crisis caused by the COVID pandemic. Although these schemes had advantages for all countries that opted for this type of practice, those that usually have higher unemployment rates, such as Spain, benefited more from the application of these measures.

STW schemes in Spain, called temporary labour adjustment plans (TLAPs) (Expedientes de Regulación Temporal de Empleo), have played a relevant role in modifying the labour market. Traditionally, the labour markets in many European countries – and Spain here is a clear example – have adapted to economic crises by terminating labour contracts, using dismissal as the main method of adjustment. The TLAP scheme means that this process is slower in Spain, which has made it possible to prevent the effects of a crisis being transmitted to workers with permanent contracts. The effect of STW on temporary

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contracts in Spain, however, has not been as positive, despite them being included in the TLAP scheme since 2020. Considering the results in Spain and taking into account the experience in other countries, the aim of this article is to carry out a policy watch analysis and provide a set of recommendations to improve the functioning of STW in Spain.[1]

To carry out this exercise, an analysis will be made of the main results at the European level, but the aim will always be to focus on the Spanish case as the fundamental axis of this research.

The structure of this paper reflects a very similar scheme to that of other research (Boeri & Bruecker, 2011; Casey & Mayhew, 2023; Elia & Becker, 2023), which takes a more general perspective first, before focusing on the Spanish case. Therefore, this article is structured as follows: the second section examines STW models for some EU countries. This is followed by the results of empirical work for these countries and then a discussion of the benefits and costs of STW in the EU. The fifth section focuses the study on the Spanish case after which, based on the European evidence, recommendations are formulated on the functioning of STW in Spain, with a view to improving its performance; these recommendations can also be applied to other countries. Finally, conclusions are drawn.

Models of short-time work schemes in the EU

STW schemes can be defined as programmes of a public nature that allow companies facing some kind of economic problem to opt for a reduction in their workers' working hours by guaranteeing financial assistance from the state for the time not worked. Therefore, the aim of STW is to encourage companies facing an adverse situation to adjust their workforce by reducing the number of hours worked as opposed to laying off workers (Boeri & Bruecker 2011).

STW was used in all European countries during the COVID pandemic, albeit with varying intensity, and significantly curbed the negative effects of the pandemic on employment: (see Giupponi et al (2022) for several countries; Brey and Hertweck (2020) for European countries; Kopp and Siegenthaler (2021) for Switzerland; Izquierdo et al (2021, 2022), García-Serrano (2022), Díaz et al (2023), García-Clemente et al (2023), Osuna and García-Pérez (2022), and Carrasco et al (2024) for Spain; Bellmann et al (2023) for Germany; Meriküll and Paulus (2023) for Estonia; and Bělín and Veselkova (2024) for Slovakia.[2] However, the implementation of STW can have negative effects (see Giupponi et al (2022) for Italy, Díaz et al (2023) for Spain, and Bellmann et al (2023) for Germany).

The following is a description of the most relevant elements of the STW schemes in a number of European countries. The choice of this set of countries is based on the list of studies used in the following section of this article, which focuses on the impact of STW in the EU.

Austria (*Kurzarbeitsbeihilfe*). In order to be eligible for STW-COVID, it was necessary for a company to justify its economic need and apply for financial support from the Public Employment Service. The STW-COVID did not cover workers with a mini-job or public employees.

Before the pandemic, *Kurzarbeitsbeihilfe* guaranteed 55% of the net salary, including social security contributions, for hours not worked. During the pandemic, the STW-COVID replacement rate was between 70% and 90% of the net salary, although workers with an apprenticeship contract were guaranteed 100% (Tamesberger & Moser 2021; Tamesberger & Theurl 2021).[3] The cost of the programme was fully covered by the state. The maximum duration of the programme was 17 months (it ended on 31 December 2021), and the employer bore the labour cost corresponding to the hours actually worked. In addition, STW-COVID established the need for workers to undertake training activities offered by their employers, although employers were not obliged to offer such training. Finally,

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although it was not necessary to have trade unions involved in the design and implementation of STW-COVID, a certain degree of negotiation was sought in the measures to be applied.

In addition, since 1 June 2022, the *Kurzarbeitsbeihilfe* has been available in two ways.[4] The first has a high level of funding and is aimed at companies that have been hit hard by the pandemic. The second, applicable to all other companies, is a less generous model. During the implementation of the *Kurzarbeitsbeihilfe*, the unemployment rate did not exceed 6.2% (in 2021) compared to 4.5% in 2019, while the decline in GDP from 2019 to 2020 was 6.6% (€16,258 million). Moreover, as in the German case, Austria did not request financial support from the European Commission for the implementation of the programme.

Estonia (*Töötasu hüvitis – Wage subsidy*). To be eligible for STW-COVID, at least two of the following three requirements had to be met: a decrease in turnover or income of 30% or more; not being able to guarantee work for at least 30% of the employees on the payroll; and having to reduce the wages of at least 30% of the workers by at least 30%. During the pandemic, no groups were excluded from the programme, with a replacement rate of between 50% and 70% of the total workforce previous average gross monthly wage but limited to €1,000 per month and with a minimum of €584 per month. The aid was paid in full by the state, for a maximum duration of 14 months. In addition, the employer's contributions of €150 or more were paid by the public unemployment protection system. The need for training courses was not envisaged, and collective bargaining played virtually no role in the design and implementation of the STW-COVID scheme. The maximum number of beneficiary workers was more than 120,000, and the number of companies covered by the system reached 16,000 (Kallaste 2021). The unemployment rate rose from 4.4% in 2019 to 6.9% in 2020, while GDP registered a decline of 1.0% (€521 million).

France (*Chômage partiel*). The French government has a partial unemployment scheme, known as the *chômage partiel* or STW scheme (European Trade Union Confederation 2020). Because of the effects of the pandemic, the scope of application was extended to almost all categories of employees, although the self-employed continued to be excluded. The STW-COVID replacement rate was 80% (100% for apprentices); from 1 April 2021 it was reduced to 60%.[5]. As a result of the pandemic, the initial duration of six months (Vicent 2021) was extended, with the programme ending on 31 December 2022 (maximum duration 21 months). The compensation payment was 100% and was paid by the state. Companies were allowed to offer training and, if training was offered, the workers benefiting from the programme were obliged to undertake it. Finally, although it was not compulsory to have the trade unions' agreement to the STW-COVID scheme, an important part of the content of the programme was negotiated with them.

The number of beneficiaries in the labour market at the height of the pandemic crisis reached 8.6 million (Müller & Schulten 2020), and the unemployment rate did not exceed 8% during the pandemic, which was a similar figure to that obtained in 2019. The decline in GDP from 2019 to 2020 was 10.4% (€109,272 million).

Germany (*Kurzarbeit*). The *Kurzarbeit* is the workers' compensation system that operates in Germany as an STW scheme. This German programme is designed to provide aid for overcoming particular crises. The regulation covering the *Kurzarbeit* dates back to 1927[6] and is one of the oldest in the world, although it has undergone several modifications since 1927 (Brecht-Heitzmann 2019; European Trade Union Confederation 2020; International Monetary Fund 2020a). Its main objectives are to mitigate job destruction and to prevent companies from losing qualified personnel. The Federal Employment Agency (Bundesagentur für Arbeit) pays an amount up to 66% of each employee's salary in order to avoid mass lay-offs in times of severe economic crisis (Müller 2021; Müller & Schulten 2020). The preconditions are that the employer has experienced economic difficulties and can prove a drop in production, irrespective of previous profits. Before the pandemic, it was necessary that the temporary reduction in employment had affected

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one-third of the workforce, but because of the pandemic this requirement was reduced to 10%.[7] In addition, during the time of the health emergency, some groups that were initially excluded were also included as beneficiaries – for example, the self-employed and those with a mini-job.[8]

STW-COVID had an initial maximum duration of 12 months, and this was then extended to 21 months, ending on 31 December 2021. The programme was 100% state funded. On 23 April 2020, the German executive branch approved a reform that increased the amount of the benefit according to its duration.[9] In addition, social contributions, which until the reform had been paid by the employer were paid by the Federal Employment Agency. An attempt was made to encourage the beneficiaries of STW-COVID to take up placements in training programmes by requiring the company to pay part of the employee's social security contributions if the company did not offer training. The role of trade unions was also relevant in the design and implementation of the programme.

The number of STW beneficiaries reached its maximum of 5.4 million in June 2020. During the implementation of the *Kurzarbeit*, the number of people unemployed in Germany did not exceed 3 million, which meant that the unemployment rate did not rise above 5.9% during the worst months of the pandemic in 2020, while the unemployment rate had been 5.0% in 2019. Between these two years, a decline of 3.8% in GDP was registered.[10] Moreover, the financing of this measure did not depend on EU aid, as Germany did not make use of the financial support approved by the European Commission for maintaining employment.

Italy (*Cassa integrazione guadagni straordinaria*). The *Cassa integrazione guadagni straordinaria* was the name given to the STW in Italy (European Trade Union Confederation 2020). The scheme was intended for those companies which, for reasons arising from COVID, had to require the suspension or reduction of working hours, and this made it possible for companies to take advantage of these measures without having to agree the reductions with the trade union representatives.

The amount received by workers in this situation reached 80% of their previous gross salary, with a maximum duration of 12 months (until March 2021). The Italian government also prohibited dismissal for economic reasons linked to the pandemic. This programme initially did not entail any cost for employers, as all benefits were paid out of state funds (Faioli & Bologna 2021), although co-financing by employers was subsequently considered. Moreover, no legislative provisions were adopted that linked the STW-COVID benefits to training, retraining, or reorientation. As regards the role of trade unions, it was necessary to negotiate the conditions of application at company level for entities with more than five employees. Between 2019 and 2020, GDP in Italy fell by the significant percentage of 9.9% (€135,409 million), while the unemployment rate recorded a slight increase, from 9.2% in 2019 to 10% in 2020.

Netherlands (*Werktijdverkorting*). The STW scheme in the Netherlands, called the *werktijdverkorting,* is a programme that applies in situations other than normal business risk, such as fires, epidemics and floods.[11] To be eligible for the programme, companies were required to prove that the reduction in working hours was at least 20% over a period of between 2 and 24 weeks (Cremers 2021). Moreover, there were no exceptions for qualifying for this programme, as long as the worker's hours had been reduced by at least the minimum.

The compensation available under the STW scheme depended on the economic loss experienced by the business: if the business profit was reduced by 100%, 50%, or 25%, the compensation granted was 90%, 45%, or 22.5%, respectively. During the pandemic, state funds covered 30% of pension contributions and employee bonuses, and, in the case of the self-employed, a special allowance of €1,050 (per month) was created for three months. The STW-COVID scheme started on 17 March 2020 and extended until December 2021 (21 months). In addition, the entire subsidy – including social contributions – was financed by

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the state. While, in the early months of the pandemic, no obligations were placed on workers benefiting from the STW, when restrictions on mobility began to be relaxed, it was recommended that workers be trained and retrained. Employers were required to maintain the wage bill and to continue to employ the beneficiaries. It was also recommended that they offer training and, if a worker were dismissed, they had to help the worker to look for a job. Finally, despite the urgency of implementation, it was possible for trade unions to negotiate some elements of the programme.

During the implementation of the *werktijdverkorting,* the unemployment rate did not exceed 4.9% in 2020, compared to 3.4% in 2019; over these two years, GDP fell by 3.9% (€13,304 million). The Netherlands also did not request financial assistance from the European Commission for the implementation of its STW.

Slovakia (*First Aid*). *First Aid* was the employment preservation scheme set up in Slovakia in March 2020 with the aim of supporting businesses, securing employment for workers and enabling some remuneration during the pandemic (Kováčová 2021). To be eligible for this programme, workers were required to be unable to continue working or to have had their working time reduced by an administrative decision. STW-COVID left outside its protection temporary workers and public employees. The replacement rate was 80% of gross salary. The maximum amount per beneficiary ranged from €540 to €810 per month. The maximum duration of the programme was 16 months. The number of beneficiaries reached 33% of all workers (European Trade Union Confederation 2020). During STW-COVID, employers were required to continue paying social security and health insurance contributions for their workers. In addition, employers were entitled to an allowance if the worker remained in employment for at least three months, and STW beneficiaries could not be dismissed until at least one month after the end of the payment of benefits. For the implementation of STW-COVID, the authorisation of the union representatives was required. Although GDP decreased by 3.3% (€980 million) from 2019 to 2020, the unemployment rate in this period increased only slightly (from 5.8% to 6.7%).

Spain (*Expediente de Regulación Temporal de Empleo- ERTE*). In Spain, COVID TLAPs or ERTE made it possible for companies to suspend employment contracts for workers who had been linked to the company for a certain period of time, without the need to pay any remuneration. The STW-COVID scheme applied to all businesses (and self-employed people) that were forced to close by an administrative decision. The catering, transport, leisure, tourism, and commercial sectors benefited the most; moreover, no collective was excluded. The replacement rate was 70% of the previous gross salary for the first six months, then 50% from the seventh month onwards, with 100% of the benefit being paid out of state funds. In addition, new hiring or outsourcing was prohibited as long as the STW was applicable, and there was a 100% or 90% rebate, respectively, on employer social security contributions for companies with fewer than 50 or more than 50 workers (Izquierdo et al 2021, 2022). The beneficiary workers were considered as a priority group for training, with a focus on digital skills courses, as well as the implementation of sectoral and cross-sectoral training plans. The dismissal of workers was prohibited for at least six months after the end of the TLAP; in addition, no overtime could be worked, nor could activities carried out by workers on the STW-COVID scheme be contracted out or subcontracted. As COVID was a *force majeure* event, no agreement between the worker and the employer was necessary (Cruces 2021; Izquierdo et al 2021, 2022), although some elements of STW-COVID were, in practice, negotiated. Between 2019 and 2020 the unemployment rate increased from 13.8% to 16.3%, while a decline of 11.2% in GDP (€126,503 million) was recorded.

Switzerland (*Kurzarbeitsentschädigung*). Switzerland, Germany, and Austria were among the first countries to opt for the application of STW as a measure to contain unemployment and maintain employment during a crisis. The main objective of STW in Switzerland is to prevent workers from having to be dismissed, in exchange for which a

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reduction in working time is made possible. STW is reserved for situations involving a temporary cessation or reduction of a company's operations for extraordinary reasons. The beneficiaries of STW-COVID were employees who had experienced a reduction of at least 10% of their working time for economic reasons. STW-COVID also included self-employed workers and those on temporary contracts.

The programme made it possible for workers to receive 80% of their previous income during the pandemic (Baumann 2021). The applicable Swiss canton paid this compensation to the employer and the employer passed it on to the worker. This programme was in place during the pandemic for 18 months, until 31 December 2021. The employer was obliged to pay full social security contributions into the STW-COVID programme, with no further obligations in respect of the beneficiaries; in addition, trade union representatives were able to negotiate some elements of the programme. The maximum number of workers benefiting from this programme was 1,300,000, in April 2020. GDP declined by 2.1% from 2019 to 2020, and the unemployment rate picked up from 6.8% to 8.5%.

United Kingdom (*Coronavirus Job Retention Scheme*). The *Coronavirus Job Retention Scheme* (CJRS) was the temporary programme designed to address the impact of COVID on the UK labour market.[12] It was approved on 20 March 2020 and was extended several times until 30 September 2021. While initially only workers who experienced a 100% reduction of their working time for at least 3 weeks were eligible for this programme, from 1 July 2020, the eligibility criteria were relaxed. The programme sought to ensure that workers maintained their wages and employment, while at the same time enabling businesses to maintain their human capital and avoid an increase in unemployment and a lack of worker protection (Eurofound 2020). Through this programme, the employee could receive up to 80% of their salary through state aid, with a limit of €2,800 per month for a maximum period of two years (Fulton 2021). Payment of the benefit was fully covered by the state. In addition, the replacement rate was reduced to 60% in the last months of the programme. During the entire time the CJRS was in place, the companies stopped paying social security contributions for their workers. There was no obligation on the part of the worker to undergo training, although the state authorities encouraged this practice. Finally, although agreement with the trade unions was not required for the implementation of STW-COVID, it was possible to negotiate an important part of the programme.

In the months when the effects of COVID on the labour market were most intense, the number of beneficiaries of the CJRS reached 9 million and the unemployment rate did not rise above 4.8% in 2021, compared to 3.8% in 2019. GDP in 2020 showed a decrease of 9.0% on the 2019 figure (€135,409 million). Table 1 summarises this information for all the countries analysed.

The impact of short-time work schemes in the EU

In the last two decades, the world's economies have faced two major crises, which have had different repercussions for the labour market. The first, known as the Great Recession (2007–2013), originated in the construction sector and its complementary activities, where there was uncontrolled growth as a result of recourse to easy credit. This was a consequence of the generosity of financial institutions in granting loans to both individuals and companies (International Monetary Fund (2020b) at international level, Alcalá (2020) for Spain). This speculative spiral ended with the abrupt slowdown experienced by the construction sector, which was immediately transferred to the financial sector, causing numerous closures of companies due to their high level of indebtedness and the significant levels of default of those families exposed to credit (BBVA Research 2020 for Spain). Subsequently, the effects were transferred through the entire economy, especially to consumers (see Alcalá 2020 for Spain).

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Table 1. Implementation of STW-COVID in some European countries

	Austria	Estonia	France
Name of programme	*Kurzarbeitsbeihilfe*	*Töötasu hüvitis*	*Chômage partiel*
Eligibility criteria	Justification of economic necessity by the company	Two out of three of the following: a decrease in turnover or income equal to or greater than 30% during the month in which aid was requested; inability to guarantee work for at least 30% of employees; and a reduction in wages for at least 30% of the workforce	Companies forced by administrative decision to reduce working time or to close down
Exceptions	Mini-jobs and public employees	None	Self-employed workers
Substitution rate	Level depended on the original wage: 90% of net wage if gross wage €1,700 or less; 85% of net wage if gross wage between €1,700 and €2,685; 80% of net wage if gross wage between €2,685 and €5,370. For apprentices, 100% of net wage.	Between 50% and 70% of gross salary	100% of previous remuneration for apprentices paid below the minimum wage and 80% in all other cases. From 1 April 2021, percentage reduced to 60%
Duration	Applicable from March 2020 to December 2021 (21 months)	March 2020 to May 2021 (15 months)	March 2020 to December 2022 (21 months)
Benefit payment	State paid 100% of STW benefit	State paid STW benefit almost entirely	State paid 100% of STW benefit
Cost to employer	Employer bore labour costs corresponding to hours actually worked	Employer had to pay employees who received wage subsidies at least €150	Wage subsidies covered by state budget and French Public Unemployment Insurance scheme (67% and 33% respectively)
Obligations for covered workers	Workers had to take training courses offered by employers during the hours not worked but employers not obliged to provide such training	No programme linking STW to training	Workers benefiting from programme had to receive training
Obligations for beneficiary companies	None	None	None
Role of trade unions	Trade union agreement not required to implement the STW scheme, but in practice trade union representatives were able to negotiate some elements of the programme	Collective bargaining had no role in negotiation of STW	Trade union representatives negotiated some elements of STW

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	Germany	Italy	Netherlands
Name of programme	*Kurzarbeitergeld*	*Cassa integrazione guadagni straordinaria*	*Werktijdverkorting*
Eligibility criteria	Until February 2020, the temporary reduction was required to affect one-third of the workforce. In March 2020 this percentage was reduced to 10%	All categories of employees	Companies anticipating a loss of turnover of at least 20%
Exceptions	Before the pandemic, self-employed and mini-jobs. From March 2020, no exclusions	None	None
Substitution rate	During the first 3 months, 60% of the previous gross salary (claimants without children) or 67% (with children); between the 4th and 6th months 70% (without children) or 77% (with children); from the 7th to the 12th month 80% (without children) or 87% (with children)	80% of gross pay for hours not worked, up to maximum limits	100% of the gross starting salary, although reduced as time went on, ranging from 85% to 17%
Duration	Applicable from March 2020 to December 2021 (21 months)	March 2020 to December 2022 (21 months)	March 2020 to June 2021 (15 months)
Benefit payment	State paid 100% of STW benefit. From March 2020 until 31 June 2021, State/ Federal Employment Agency paid all social security contributions	State initially paid 100% of STW benefit	State paid 100% of STW benefit
Cost to employer	Employer only paid for time worked	STW fully funded by state (indirectly by European SURE programme), but co-financing with employers was established later	Subsidies paid by state, including social security contributions
Obligations for covered workers	From September 2020, an incentive for training was included. From August 2021, state continued to cover 100% of social security contributions only if the beneficiary underwent training, paying only 50% if not	No special legislative provisions linking STW benefits to training, requalification or reorientation	No requirements in first months of pandemic, but later focus on retraining and training of workers
Obligations for beneficiary companies	None	Funding of part of the cost of the programme	Employers had to maintain the same wage bill, keep workers employed, encourage the training of workers, and help workers find a job if they were made redundant
Role of trade unions	Trade union representatives able to negotiate the STW-COVID scheme	Employers with more than 5 workers needed to negotiate with trade unions	Trade union representatives able to negotiate some elements of STW

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	Slovakia	Spain
Name of programme	*First Aid*	*Expediente de Regulación Temporal de Empleo*
Eligibility criteria	Workers who were unable to work – or whose working time was reduced – because their employer was forced to close down or limit its activities by an administrative decision	All enterprises forced to close down by an administrative decision. Focused on catering, transport, leisure, tourism, and trade activities
Exceptions	Temporary workers and public employees	None
Substitution rate	80% of gross salary	70% of gross salary for first 6 months and 50% from 7th month onwards
Duration	March 2020 to July 2021 (16 months)	18 March 2020 to 31 May 2022 (26 months)
Benefit payment	State covered total amount of support received	State covered total amount of aid received
Cost to employer	Employer paid social security and health insurance contributions	Companies with fewer than 50 employees had an exemption of 100% of social security contributions and those with 50 or more employees a 90% exemption. Exemption reduced as economic conditions improved
Obligations for covered workers	No requirements for training	Beneficiaries considered a priority group for vocational training. Specific training for the acquisition of digital skills and training plans for sectoral and cross-sectoral application
Obligations for beneficiary companies	Employer entitled to claim a job maintenance allowance if job kept for at least 3 months. Dismissal of workers prohibited for at least 1 month from the end of benefit payments	No overtime work or hiring new workers or subcontracting activities carried out by workers in STW. Companies had to keep beneficiary workers for at least 6 months after the end of the support
Role of trade unions	Authorisation of trade union representatives required for implementation of STW	Trade union representatives negotiated some elements of STW
	Switzerland	United Kingdom
Name of programme	*Kurzarbeitsentschädigung*	*Coronavirus Job Retention Scheme*
Eligibility criteria	Employees who had their working hours reduced by at least 10% for economic reasons	Between 1 March and 30 June 2020 the scheme was only applicable to workers who experienced a 100% reduction in working time for at least 3 weeks. From 1 July 2020 the eligibility criteria were relaxed.
Exceptions	None	Public employees
Substitution rate	80% of gross salary	In the first months of the pandemic 80% of salary (up to €2,810), plus social contributions. In later months 60% of salary and no social contributions
Duration	March 2020 to December 2021 (21 months)	Applicable from March 2020 to September 2021 (19 months)
Benefit payment	State paid STW benefit almost entirely	State paid 100% of STW benefit
Cost to employer	Employer paid social security contributions in full	Employer bore labour costs corresponding to hours actually worked

(*Continued*)

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Table 1. (*Continued*)

	Switzerland	United Kingdom
Obligations for covered workers	No programme linking STW and training activities	No obligation to undergo training during STW periods, although this practice was encouraged
Obligations for beneficiary companies	None	None
Role of trade unions	Trade union representatives able to negotiate some elements of the STW	Trade union agreement not required for implementation of the STW, but trade union representatives were able to negotiate some aspects of the STW

Source: European Trade Union Institute (2021) and Eurofound (2023)

However, the COVID crisis (2020–2022) was due to the inability of workers to go to their workplaces, and the limitations placed on how consumers could buy goods and receive services. The severe restrictions imposed by governments initially brought economic activity to a near standstill. Although these restrictions were later relaxed, the measures slowed down the economy, especially in commercial activities, tourism, restaurants, and transportation (Alcalá (2020) for Spain). Consequently, the COVID crisis was not of a financial nature – as the Great Recession had been – but rather, was the result of administratively imposed health restrictions. Therefore, the origins of the crises are totally different (International Monetary Fund (2020b) at international level); something similar can be noted for the economic policy measures taken to mitigate the effects of the two crises (Ingham (2022) at international level Torres and Fernández (2022) and Revista de la Seguridad Social (2020) for Spain).

Various studies have assessed the role of STW in economic crises, both the crisis arising from financial issues in 2008 and the crisis caused by the 2020 pandemic. Studies analysing STW from an economic perspective during the Great Recession tend to point to its positive effects, albeit that they are rather limited. Hijzen and Venn (2011) used cross-country data from 19 OECD countries to analyse the impact of STW schemes during the 2008–2009 crisis, and found that these schemes can create jobs even in situations of job destruction. In a subsequent article, Hijzen and Martín (2013) reported for 23 EU countries that STW schemes have a positive impact on the elasticity of hours to GDP, but a negative effect on the elasticity of employment.[13] Boeri and Bruecker (2011), based on a sample of 21 EU countries, concluded that the effects of STW are improved if other measures are applied, such as hiring subsidies, establishing mechanisms of co-participation in the financing of the programme and allowing access to workers with temporary contracts. In addition, the use of these programmes is particularly recommended for jobs with high productivity. It seems that the effectiveness of such measures is much higher in the short term than in the medium and, especially, the long term (Giupponi & Landais (2023) for Italy). Finally, on the firm side, STW also enables higher survival rates (Cahuc et al (2018) for France), especially for companies with higher levels of human capital and higher firing costs, with the effects being more concentrated in manufacturing and construction, a result obtained from a sample of 20 EU countries (Lydon et al 2019).

As has been pointed out, during the pandemic, most European countries activated their employment protection mechanisms with programmes that sought to allow companies to temporarily suspend contracts and/or reduce the working time of part or all of their

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workforce through an STW scheme. Müller and Schulten (2020) note that, as of April 2020, more than 42 million workers in the EU-27 (27% of all employed persons) were protected by STW.[14] By country, the impact was very uneven, and depended on the degree of generosity and the speed at which new measures were applied, or the adequacy of existing measures. In Switzerland, France, Italy, and Luxembourg, STW protected between 40% and 50% of workers. In Spain, the percentage reached 24%,[15] while in Germany, the UK, and the Netherlands, it was 27%.

Regarding the economic results of the application of STW-COVID schemes, most studies point out the good effect of these instruments (as reformed at the beginning of the pandemic) on employment and unemployment (Kopp and Siegenthaler (2021) for Switzerland; García-Serrano (2022), Díaz et al (2023), Osuna and García-Pérez (2022) and Carrasco et al (2024) for Spain; Meriküll and Paulus (2023) for Estonia). Brey and Hertweck (2020), on the basis of an analysis for several European countries, point out that the effectiveness of an STW scheme is greater in the early stages since its results are lost as the measure is extended over time; this result was confirmed for Spain in the work of Izquierdo et al (2021, 2022).

However, not everything related to STW schemes is positive. As a subsidy, there are also undesirable effects typical of this type of aid, notably deadweight[16] and displacement effects.

[17]Moreover, STW can delay the recovery of employment and the mobility of workers to more productive enterprises. Thus, Giupponi et al (2022), based on an analysis of several EU countries, point out that those programmes that combine STW with unemployment insurance can affect the reallocation of labour resources, so that STW should be used together with other measures such as hiring subsidies. Díaz et al (2023), for the Spanish case, point out the advantage of avoiding the application of an STW scheme to all types of jobs, as this avoids problems of reallocation and the hoarding of labour in those sectors or activities where it is not efficient, in order to ensure employment. A similar result is obtained by Bellmann et al (2023) for Germany. The drawbacks do not end there, as these protective measures may result in the survival of firms that would have had to close down in the absence of the aid, which are often labelled zombie firms (Banerjee & Hofmann 2018).[18]

A very important question to consider is whether the resources used for the temporary maintenance of employment have had an adequate impact and, especially, whether it is necessary to rely on high economic stimuli. Based on the work of Bělín and Veselkova (2024) for Slovakia, it can be noted that in Slovakia, despite the relatively low expenditure compared to the significant investments in other countries, the results were very positive. Thus, the programme allowed the survival of enterprises, the recovery of jobs and the protection of workers' incomes. Moreover, the strong targeting of particular sectors made it possible to focus on the cases that needed it most. The positive effects were much greater as COVID cases increased, so the employment maintenance scheme helped to save jobs at risk. Askenazy et al (2024) identify a number of strategies that could have been implemented in the workplace to mitigate the effects of the pandemic and ameliorate the effects of STW. Askenazy points to the need to implement integrated programmes and not just focus public action on temporary income maintenance subsidies. Finally, empirical evidence shows that STW is only effective in a severe economic downturn, so that it is necessary to limit its use in milder recessions and during recovery phases; in other words, it is necessary to de-escalate the protection measures when the economic situation improves (García Clemente et al (2023) for Spain). Table 2 summarises the main results of these studies.

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Table 2. Some results for STW schemes in the financial crisis and COVID crisis

Author(s)	Country	Results
Hijzen and Venn (2011)	19 OECD countries	STW schemes have a very positive effect on avoiding unemployment. The countries where the effects have been most positive are Germany and Japan, where job creation was even possible after the onset of the financial crisis, accounting for between 0.8 and 0.9% of total employment between 2008 and 2009. The total number of jobs saved was 580,000 and 445,000, respectively
Boeri and Bruecker (2011)	20 EU countries	STW should only be applied during an economic crisis and should become less intense after the economic upturn. In addition, it is advisable to accompany STW with actions to facilitate recruitment. Furthermore, consideration should be given to the possibility of employers sharing – at least in part – the costs of these measures. Finally, it is advisable that STW be extended to all types of workers and not only those with stable contracts, in order to favour the employment stability of this type of worker in a recession situation
Hijzen and Martín (2013)	23 OECD countries	STW schemes have a positive impact on the elasticity of hours worked to GDP, but a negative effect on employment elasticity. The best STW performance occurs in situations of deep recession if the recession is short-lived. Due to the deadweight and displacement effects, the net effect in the recovery phase may be negative
Arranz et al (2015)	Spain	STW schemes are more likely to be successful for workers with higher employment protection (older workers and senior workers), for those with manual jobs, for less educated workers, and for workers in SMEs and in manufacturing industries
Giupponi and Landais (2023)	Italy	STW schemes during the Great Recession have enabled 45% of jobs to be maintained, although this effect has been transitory. The effects are very positive when aid is initially received. STW schemes have also delayed lay-offs but have not generated permanent employment gains. Unlike most countries, which did not set a minimum threshold of employees for a company to benefit from the programme, Italy extended the programme only to companies with more than 15 employees
Cahuc et al (2018)	France	STW had a positive impact on employment, with permanent effects on employment (11% of the workforce) and on the survival rate of enterprises (an increase of 9 percentage points). STW saved 0.2 jobs for each beneficiary worker
Lydon et al (2019)	20 EU countries	Firms turn to STW schemes as a response to negative demand shocks. The main beneficiaries are firms with higher levels of human capital and higher firing costs. Countries with stricter employment protection legislation are more likely to use STW. STW has reduced the number of redundancies, especially in certain sectors, such as manufacturing and construction
Brey and Hertweck (2020)	Several EU countries	The dampening effect of STW-COVID schemes on the unemployment rate was greatest in the early stages of the crisis, with the benefits diminishing as the instrument became more widespread. STW schemes perform better when used as an automatic stabiliser in an immediate response
Kopp and Siegenthaler (2021)	Switzerland	The STW-COVID scheme had a positive impact on employment. There was a lasting effect on the redundancy rate (10% reduction in the inflow into unemployment) and on the survival rate of enterprises (between 6 and 9 percentage points). The STW scheme saved between 0.21 and 0.34 jobs for each beneficiary of the programme
Izquierdo et al (2021)	Spain	The probability of returning to work in the third quarter of 2020 after having been unemployed in the second quarter was 30 percentage points higher for those within TLAPs (STW-COVID in Spain). However, this difference was only 9 percentage points if the job was lost in the third quarter

(*Continued*)

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Table 2. (*Continued*)

Author(s)	Country	Results
Giupponi et al (2022)	Several countries	Those countries that applied STW-COVID experienced smaller increases in unemployment in the first months of the pandemic. STW-COVID is one way to mitigate the social costs of excessive lay-offs in recessionary situations. However, unemployment insurance and short-time work can affect the reallocation of labour resources, so these actions, such as hiring subsidies, must be coordinated in order to stimulate labour demand and avoid allocation problems
Izquierdo et al (2022)	Spain	The probability of returning to employment was higher for men than for women in TLAPs, but only for short programme durations. The effect of TLAPs for men was reduced for longer durations. The effect on job retention became stronger and more persistent as the age of the worker increased. The results were better and more durable for permanent contracts than for temporary contracts. The effect was stronger for the low-skilled and for those working in the industrial sector
García-Serrano (2022)	Spain	TLAPs and telecommuting made it possible to reduce the negative effects on employment and unemployment of the pandemic and of the measures that restricted economic activity. TLAPs had a very significant effect on the maintenance of employment, affecting more than 3 million workers in the first 2 months of their application (1 out of every 5 employees)
Díaz et al (2023)	Spain	While TLAPs made the containment of unemployment rates possible due to the stabilisation effect on workers in the sectors most affected by the pandemic, these programmes could also generate 'hoarding' of labour by employers. This could result in reduced turnover rates, increased production volatility, and limited reallocation of workers away from sectors that were not as hard hit by the recession. In addition, TLAPs would be better suited for high value-added jobs
García-Clemente et al (2023)	Spain	While during the pandemic TLAPs had a positive effect on the likelihood of programme beneficiaries returning to work, the effect was greater in the early stages. Consequently, and in line with other studies for the Spanish case, the intensity of the return to work is higher if the time of absence from work is shorter. All in all, the STW made it possible to reduce the increase in unemployment
Bellmann et al (2023)	Germany	STW-COVID schemes prevented an increase in involuntary redundancies, especially when combined with teleworking. However, at the same time, some negative effects were observed, especially in relation to staff turnover due to the 'lock-in effect' of the insurance mechanism
Osuna & García-Pérez (2022)	Spain	The unemployment rate – based on a counterfactual model – could have been close to 42% if only lay-off measures had been applied during the pandemic. TLAPs made it possible to contain the unemployment rate
Meriküll and Paulus (2023)	Estonia	Measures to maintain employment through STW-COVID had a positive effect. The same result can be extrapolated for enterprises. STW prevented unemployment rates from rising by 2–4 percentage points during the hardest stages of the pandemic. Moreover, the costs of the measure were almost offset by the benefits derived from the implementation of the programme

(*Continued*)

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Table 2. (*Continued*)

Author(s)	Country	Results
Bělín and Veselkova (2024)	Slovakia	The STW-COVID scheme significantly reduced the number of redundancies among the beneficiary entities. The catering and hospitality sectors, which benefited most from the aid, allowed the STW benefit to focus on the most needy enterprises. Despite the fact that the aid was significantly lower in budgetary terms than in other countries in relation to GDP, the effects on employment maintenance were considerable, which highlights the value of this type of temporary action to maintain employment and contain unemployment
Askenazy et al (2024)	France	STW-COVID needed to be accompanied by other strategies such as teleworking to preserve economic activity. Those centres and activities with experience in teleworking achieved better results in terms of maintaining employment and production. On the contrary, when there was little or no experience in teleworking, the support was through STW and the recovery of the activity was slower
Carrasco et al (2024)	Spain	Workers with permanent contracts who were TLAP beneficiaries in April 2020 were 24 percentage points more likely to remain employed than those who were laid off. For workers with temporary contracts, this difference, in December 2021, was 13 points higher for programme beneficiaries. In addition, the probability of remaining employed under the TLAP scheme was 10 points higher for temporary workers than for permanent workers. Finally, participation in the TLAP scheme led to a wage improvement for temporary workers: 10% and 5% for those who did or did not change companies, respectively. For permanent workers, wage improvement was only obtained for those who changed companies

Source: own elaboration based on the referenced studies.

The costs and benefits of short-time work schemes in the EU

With STW schemes, employers limit their loss of income in the short term, while the effects of the crisis on the capital and labour market are reduced in the medium and long term (Alujas Ruiz, 2022). Moreover, by retaining skilled workers, companies avoid redundancy costs, which can be a significant outlay for long-serving permanent workers because of the level of compensation to be paid. At the same time, STW allows them to sidestep the costs of hiring new (or the same) workers and subsequently training them once the temporary crisis situation has subsided. STW schemes can thus help to achieve economic recovery in a shorter period of time (Albertini et al 2022).

The decision of governments to intervene to prevent massive job losses during the COVID crisis was a milestone in EU employment policy (European Commission 2023); it was only possible because of the significant funding commitments made by the EU when the pandemic started. By 2020, more than 40 million workers were supported by employment protection. Although the interventions to safeguard employment were very costly for public budgets, they were less costly than the payment of unemployment benefits and the other investments needed to return to normality.

The costs of mass unemployment, both economic and non-economic, are very high. The economic costs include the payment of unemployment benefits, the loss of skill among the labour force due to not being able to work, a slower recovery after the crisis as labour is not immediately available, a fall in the purchasing power of both workers themselves and companies due to a lower demand for their products, and the cost of reintegrating unemployed workers. Other costs are of a social nature, such as the foreseeable increase in the number of families falling into poverty, the decrease in welfare levels and the increase in social exclusion (Alujas Ruiz, 2022). All of these repercussions, and not just the

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Table 3. Summary of SURE main actions (2020–2022)

Year	Main actions
2020	STW schemes benefited almost one-third of the EU workforce (31.5 million employees and self-employed people) and more than 25% of enterprises (2.5 million) in the 19 Member States that benefited from SURE. The main beneficiaries were SMEs, hotels and restaurants, the wholesale and retail trade and manufacturing industry. The European Commission estimates that, as a result of SURE, 1.5 million people did not become unemployed in 2020, despite the significant drop in production.
2021	In the first half of the year, the programme benefited 15% of the workforce (9 million employees and self-employed people), reaching 900,000 enterprises in the 15 Member States that applied for the programme. During the second year of SURE, activities focused on those sectors still heavily affected by the pandemic. SURE's activities were concentrated in the first quarter of 2021, when strict containment measures were still in place.
2022	During the last year of the programme, national support measures were gradually phased out. In the first quarter of 2022, they reached 350,000 individuals and 40,000 enterprises in the four Member States that decided to continue EU support. The total disbursements of €98,400 million of financial assistance under SURE were paid to 19 Member States: Belgium, Bulgaria, Cyprus, Estonia, Greece, Spain, Croatia, Hungary, Ireland, Italy, Lithuania, Latvia, Malta, Poland, Portugal, Romania, Slovenia, Slovakia, and the Czech Republic. Germany, France, the Netherlands, Denmark, Finland, Sweden, Austria, and Luxembourg, although they had national allocations, decided not to apply for loans from the European Commission. Italy and Spain were the two largest beneficiaries of the SURE programme, with loans of €27,438 million and €21,324 million, respectively, accounting for half of the funds available for the EU-27. According to the European Commission, countries that borrowed through the SURE programme saved €9.03 billion. The SURE programme ended on 31 December 2022, as health data confirmed that the exceptional circumstances that justified its use were no longer in place.

Source: European Commission (2021a, 2021b, 2022a, 2022b, 2023)

immediate economic costs of the programme, must be considered when evaluating STW schemes as a whole.

Because of the high costs, the EU offered Member States significant assistance through the Support mitigating Unemployment Risks in Emergency (SURE) instrument, which ran from 2020 to 2022. SURE was the European Commission's temporary support instrument to mitigate unemployment risks in the face of the pandemic,[19] and it had a budget of €100,000 million, one of the highest investments in employment protection in the EU. The total number of beneficiaries in the EU under this income and employment maintenance programme was 31.5 million employed and self-employed persons, and it reached more than 2.5 million enterprises. SURE made it possible for Member States to avail themselves of an alternative to reduced working time schemes for several months. It also supported the *NextGenerationEU* recovery plan.

Table 3 summarises the main actions carried out between 2020 and 2022. Half of the budget went to finance working time reduction schemes for employees, while 33% went to similar measures for the self-employed. Wage subsidy schemes accounted for 12% and the remaining 5% went to health-related measures.

[20]Moreover, according to European Commission estimates, Member States saved approximately €9 billion in interest payments by resorting to SURE, thanks to the EU's high credit rating, as the bonds were issued at a very low interest rate (European Commission 2023).

In Spain, SURE helped to limit the effects of the restrictions on economic activity resulting from the March 2020 state of alert, which allowed the decline in GDP (of over 10%) to be accompanied by a much smaller reduction in employment than in previous crises, in terms of both duration and the number of unemployed. Thus, the unemployment rate in Spain during the 2008–2013 financial crisis reached 26.1% in 2013, from 8.2% in

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2008, while during the 2020–2022 pandemic crisis, the unemployment rate rose from 14.1% in 2019 to 15.5% in 2020. This was possible because of the internal flexibility granted by the TLAP scheme following the 2020 regulatory changes, which made it possible to sustain employment in many non-core sectors and those affected by restrictions and without teleworking potential (Ruesga & Viñas 2021, 2022).

[21]The changes introduced in 2020 on the functioning of TLAPs in Spain also made it possible to overcome the limited results demonstrated by previous studies (Arranz et al 2015), where the estimates obtained suggested that such programmes had limited use before the reform.[22] The positive results of STW-COVID in Spain have also been pointed out by García-Serrano (2022), who indicated how TLAPs – together with other measures such as teleworking – enabled a reduction of the negative effects of the pandemic in labour matters. Osuna and García-Pérez (2022) point out that the potential unemployment rate would have shot up if the labour adjustment had only been carried out by means of lay-offs. Carrasco et al (2024) report that the probability of not losing their jobs was much higher for STW-COVID beneficiaries than for those who did not benefit from this programme, whether they were on permanent or temporary contracts.

Consequently, the modifications approved after the early stages of the pandemic contributed greatly to the success of TLAPs in Spain, especially when the duration of coverage was short (Izquierdo et al 2021, 2022; García-Clemente et al 2023). This issue, as we shall see, suggests the establishment of certain limitations on the extent of TLAP schemes, especially if we consider that Spain allocated more resources and applied TLAPs for longer (25 months) than most other EU countries. Specifically, in 2020, the allocation amounted to 1.8% of GDP (Drahokoupil & Müller 2021). Moreover, it is not possible to ignore the existence of certain negative effects of the programme application, as pointed out by Díaz et al (2023), among others, who argue that, although the TLAPs allowed unemployment in Spain to be contained, they may also have generated a 'hoarding effect' on the labour force, limiting the reallocation of workers to those sectors or activities not particularly affected by the recession.[23]

Temporary labour adjustment plans (TLAPs) in Spain[24]

A TLAP is an administrative procedure that allows a firm to temporarily suspend or reduce its employment relationship with its workers if the company can demonstrate an economic need to do so. TLAPs did not just appear at the time of the 2020 pandemic in Spain: they first appeared in the 1980 Workers' Statute[25] and were maintained after the 1995[26] amendment of that statute. However, the use of TLAPs before 2020 was very limited (Lahera 2021). By way of example, in 2009, because of the financial crisis, the number of TLAPs was slightly over 13,300 and covered 465,600 workers (Méndez & Sánchez-Moral, 2023), which accounts for only 0.5% of all employees between 2009 and 2012 (Izquierdo et al 2021).[27]

As a result of the powerful impact of the COVID pandemic on the Spanish labour market, seven extensions of the STW scheme were approved, extending the coverage for two years. The latest extension, through Royal Decree-Law 2/2022, of 22 February 2022,[28] made it possible to extend a TLAP until 31 March 2022, with the extension period being intended as a transition period towards the full recovery of economic activity. With this latest regulatory change, neither TLAP ETOP (for Economic, Technical, Organisational or Productive reasons) nor force majeure TLAP was abolished, but the administrative conditions for applying for them were modified. In addition, new types of TLAP were created based on the RED mechanism[29] to cover situations of general or sectoral crisis under two modalities, cyclical and sectoral, to address exceptional needs (García-Serrano 2022). The former refers to situations of cyclical economic crisis requiring labour flexibility measures, with a maximum duration of one year. The sectoral type is reserved for when a

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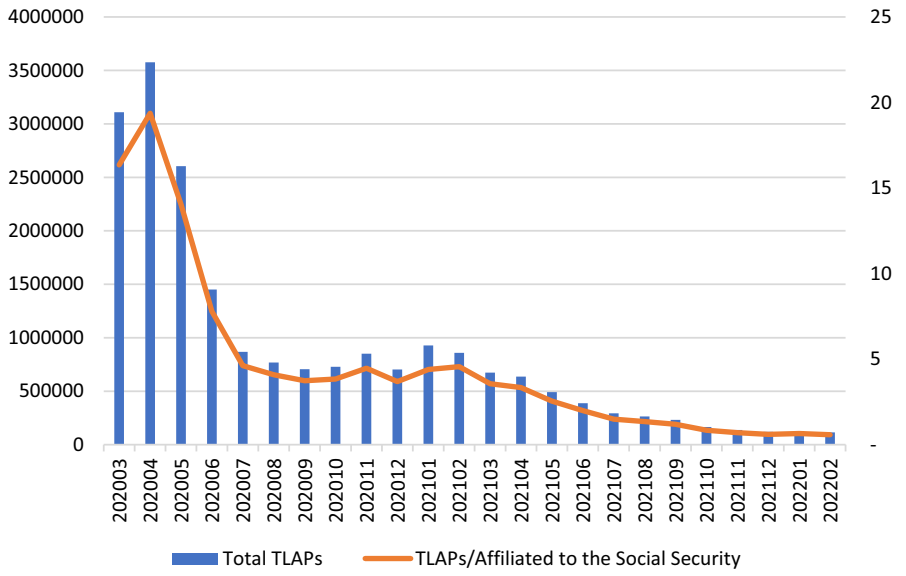

Figure 1. Evolution of temporary labour adjustment plans, TLAPs (March 2020 – February 2022). Source: Labour Force Survey. National Statistics Institute (various years).

given sector undergoes permanent changes that require the retraining or professional transition of workers.[30] The maximum duration of a sectoral TLAP is one year – the same as for the cyclical modality – but with the possibility of two extensions of six months each; such TLAPs also require a retraining plan for the persons concerned. With the 2022 reform, the administrative procedures for requesting a TLAP were simplified, and the processing times were reduced (Ramírez 2023).[31] As a result, after the pandemic, the labour measures would continue to reinforce the number of TLAPs as STW schemes in Spain and try to discourage the use of TLAP.

After outlining the main regulatory changes adopted for TLAPs in Spain, the next step is to describe how these changes have affected unemployment, unemployment rates, and employment – both for workers with permanent and those with temporary contracts – during the last two major economic crises: the financial crisis and the COVID crisis.

Figure 1 shows the changing number of TLAPs between March 2020 and February 2022 and their relationship with social security enrolment. The peak of the series appeared in April 2020, when almost 3.6 million workers were under a TLAP. Of these, most (3.2 million) were in the category of total suspension of their activity, while more than 405,000 were under partial suspension. If we add the 800,000 people who lost their jobs (most of whom were on temporary contracts) to the 3.6 million workers under TLAPs, the number of workers who stopped working was 4.4 million.

The incidence of TLAPs shows a downward trend as the confinement measures were relaxed and the economy reactivated. The number of workers reached a figure slightly above 115,000 and has been stable at that figure since March 2022. As for the distribution by type of TLAP suspension, there has been hardly any difference between total and partial suspensions since March 2022. This translates into a situation of clear stability in terms of the employment of the TLAP scheme.

Figure 2 compares the total number of people with permanent and temporary employment contracts between 2008 and 2023, to determine how the labour adjustment occurred, comparing the 2008 crisis with the 2020 pandemic. There was a significant decline in the number of employees, from more than 17 million in the first quarter of 2008

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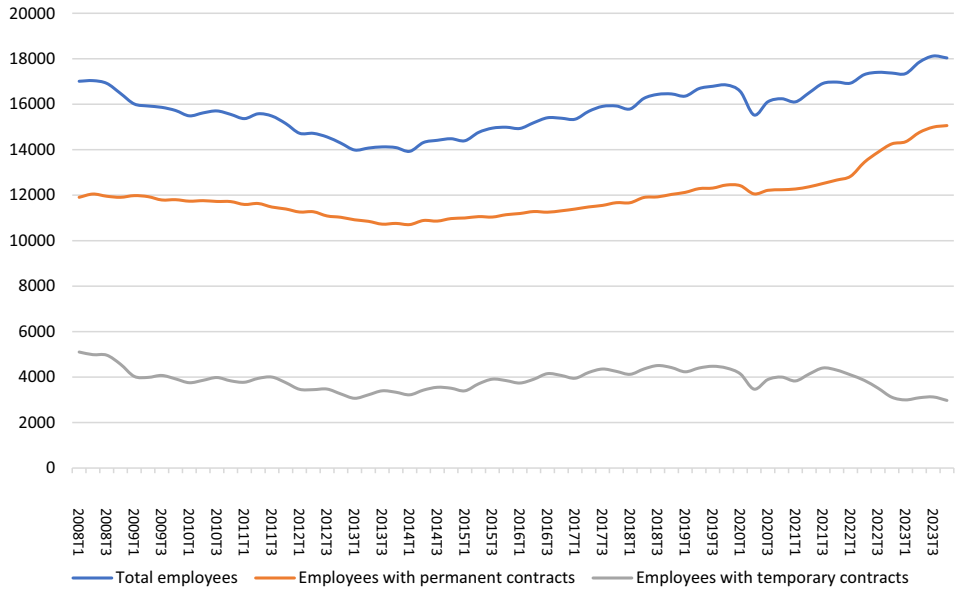

Figure 2. Evolution of total number of employees with permanent and temporary contracts (January 2008 – March 2023), in thousands.
Source: Labour Force Survey. National Statistics Institute (various years).

to 13.9 million in the first quarter of 2013; this meant a loss of more than three million employees. Most of these were on temporary contracts – just over two million compared with one million workers on permanent contracts (Figure 3).

By contrast, the figures for employees during the pandemic were completely different, with a maximum reduction of 742,000 jobs between the fourth quarter of 2019 and the first quarter of 2021; of this decline, 565,800 of the jobs lost were for employees on temporary contracts and 176,200 for workers on permanent contracts. By the end of 2023, the number of employees exceeded 18 million, of which just over 15 million were on permanent contracts and almost 3 million on temporary contracts. García-Serrano (2022), Díaz et al (2023), García-Clemente et al (2023), Osuna and García-Pérez (2022) and Carrasco et al (2024) point out that the use of TLAPs thus made it possible to maintain employment for a large proportion of employees in Spain who would otherwise have lost their jobs. However, as previously pointed out, we cannot ignore certain negative effects of the application of TLAPs on the reallocation of the labour force (Díaz et al 2023), or that its usefulness in relation to job permanence is diluted as the protection programme is extended over time (Izquierdo et al 2021, 2022; García-Clemente et al 2023).

Figure 4 compares the evolution of the unemployment rate and the number of people unemployed during the last two economic crises. During the period 2008–2013, the number of unemployed and the unemployment rate both continued to rise despite TLAPs. However, during the pandemic, TLAPs made it possible to smooth out the growth of both the unemployment rate and the number of people unemployed, despite the decline in GDP in 2020 of 11.2%, a figure even higher than the decline of 8.0% between 2008 and 2013.

There are also important differences between the profiles of TLAP beneficiaries during the two crisis periods. Among the smaller number of workers benefiting from a TLAP after the 2008 crisis, the dominant profile was a relatively senior man in a job linked to construction and its related industries or to commerce; the profile corresponding to the COVID crisis, however, turned out to be very different. In December 2020, the presence of women was slightly higher than that of men, and this difference was accentuated in

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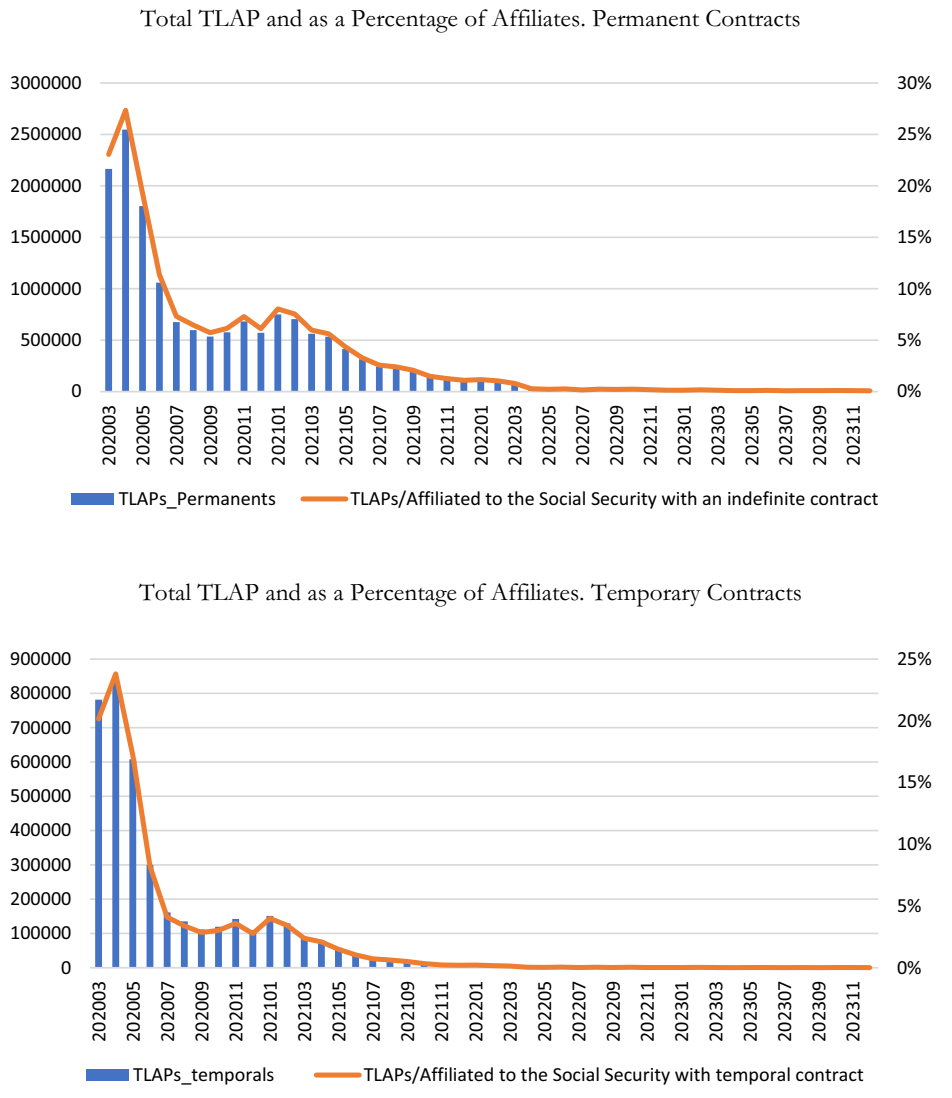

Figure 3. Evolution of temporary labour adjustment plans (TLAPs) for employees with permanent and temporary contracts (March 2020 – November 2023).
Source: Labour Force Survey. National Statistics Institute (various years).

December 2021 (53.5%). Another significant difference corresponds to the beneficiaries by type of contract: 90% of beneficiaries during the pandemic were workers with permanent contracts. By level of education, the 2008 crisis meant that many TLAPs applied to people with a university education, but during COVID most beneficiaries had lower levels of education. With regard to age profile, a considerable proportion of beneficiaries during the financial crisis were workers aged 55–64 years, which was not the case during the pandemic, which affected workers of all ages (Felgueroso & De la Fuente 2021; Izquierdo et al 2021, 2022). These differences may be at least partially due to the very uneven presence of TLAPs by sector, especially the service sector, which was one of the sectors most affected by the confinement measures. Another major difference is that, because of COVID, the extraordinary severance benefit for self-employed workers who were severely

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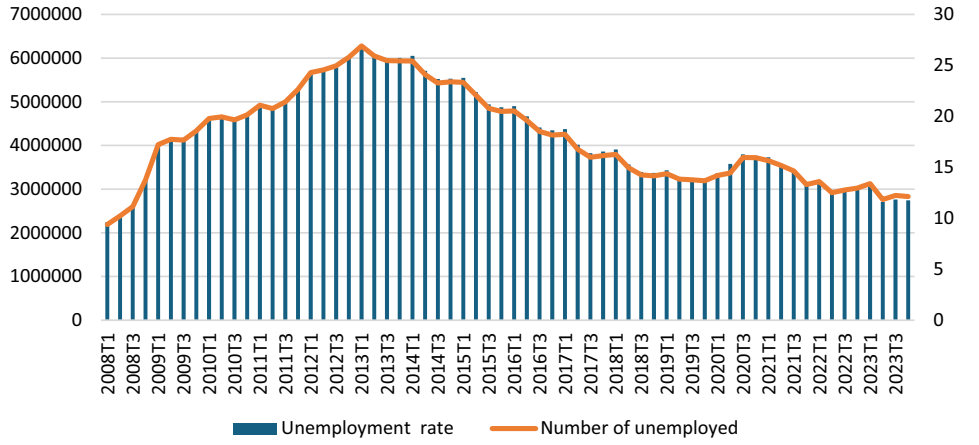

Figure 4. Evolution of the unemployment rate and number of people unemployed (first quarter 2008 – last quarter 2023).
Source: Labour Force Survey. National Statistics Institute (various years).

Table 4. Profile of beneficiaries of temporary labour adjustment plans (TLAPs) (Financial Crisis and COVID Crisis)

TLAPs during the financial crisis	TLAPs during the COVID crisis
• Men particularly affected • Greater presence of university-educated workers • High proportion of workers with long service in employment • Concentration of beneficiaries in manufacturing • Lower intensity in construction and some service sectors	• Almost equal presence by gender • Workers with lower education levels particularly affected • Most beneficiaries held jobs with little seniority • Prevalence in the hotel and catering industry

Source: Izquierdo et al (2021, 2022).

affected by the pandemic was approved. In fact, during the financial crisis of 2008, these workers had no severance pay until it was approved in 2010. Moreover, with this measure, only those self-employed workers who voluntarily paid contributions for this concept were entitled to the 2010 protection, which meant a reduced number of beneficiaries. From 2019, this contribution was compulsory (Revista de la Seguridad Social 2020). Table 4 summarises this information.

What can be done to improve the functioning of short-time work schemes?

The response to solving economic crises from the perspective of labour market adjustment follows two fundamental routes. The first is through mechanisms of external flexibility that favour dismissal, with an immediate increase in unemployment rates: the lower the firing costs, the greater the use of this first channel. At the same time, if the cost of hiring and training is low, the lay-offs have greater intensity, as the cost of replacing human capital is lower. The second path is through internal flexibility and the modification of working conditions and working time while sustaining employment levels. This requires public subsidies to maintain jobs (Ruesga & Viñas 2021). This second path is the one that has been followed in, for example, Germany or Austria for many years with the *Kurzarbeit* schemes. In recent years, other European countries have also tried to opt for the second

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path, based on the flexicurity argument (Mandl et al 2010), as in the case of the Netherlands. In these countries, a flexible labour market, a high level of unemployment protection and a strong commitment to active training policies have been the approaches adopted.

As has been indicated, in Spain, there have been STW schemes (TLAPs) for more than four decades, although until the pandemic they had little practical applicability. In Spain, force majeure TLAPs helped to cushion the effects of the COVID crisis and were demonstrated to be effective in mitigating loss of employment and income. These good results make it advisable to continue these programmes for future critical situations. However, it is necessary to improve their functioning for future crisis situations. The aim of this section is to make a series of economic policy recommendations for the Spanish case based on the comparative study. Moreover, since the functioning of STW schemes is broadly similar in most European countries, we believe that this exercise has a much wider scope.

1. Limit the duration of STW schemes. Empirical studies tend to agree that STW is useful and has a positive effect in maintaining employment during a recession if the lack of work is transitory. If the recession is prolonged, however, this effect is exhausted (Bělín & Veselkova 2024; Boeri & Bruecker 2011; Stuart et al 2021). That is, if there are permanent mismatches between labour supply and demand, structural transformation becomes necessary. If this is not done, STW only prolongs the need, but at a high, unproductive cost. Hijzen and Martín (2013) found that, while STW had a positive effect during the 2008 crisis, its continued use during the recovery had a negative influence on employment. The net effect on employment fell and STW even generated more costs than benefits, although STW schemes have proved to be suitable for transient situations (Malo 2021). Econometric studies for Spain (García-Clemente et al 2023; Izquierdo et al 2021, 2022) have also shown that STW schemes are appropriate for protecting labour relations, and that their effectiveness is higher for short periods. Moreover, if the employer estimates that the mismatch situation is short-lived, they will try not to do without labour, by internalising the potential effect, thus reducing the need for STW (Díaz et al 2023; Brey & Hertweck 2020; Izquierdo et al 2021, 2022).

2. Find a mechanism that favours the flexibility of STW schemes. In order for a programme to function properly and to perform in the desired way, it needs to be continuously adapted to the economic situation of the company, through flexible and simple procedures of varying intensity depending on the degree of need for the insurance instrument. Therefore, the operation of the programme must be free from rigid mechanisms (Felgueroso & Jansen 2020; Panayiotis & Bekker 2023). Contributory unemployment benefits, which seek to guarantee a certain income while an individual is searching for a job, provide for a gradual reduction of aid to avoid excessive dependence and incentivise the search process, and similar mechanisms should be chosen for STW.

3. Incentivise the reincorporation of workers benefiting from STW schemes. An STW scheme must have sufficient incentives to encourage the reincorporation of workers at a pace in line with the performance of the economy. As can be seen, the programme worked very well in the early stages of the economic crisis, but as the duration of the programme was extended, the effects diminished (Boeri & Bruecker 2011; Izquierdo et al 2021, 2022; Stuart et al 2021). Improvements to the design are therefore needed. One possibility would be to narrow the eligibility requirements, such as by requiring a company to demonstrate much greater economic need, or to add conditions for the receipt of benefits by firms and workers, such as searching for a job and/or taking part in training while participating in the programme (Hijzen & Venn 2011). Another option would be the inclusion of a certain penalty for abuse of the STW; for example, employers who systematically used this type of instrument would have to bear higher costs in their unemployment contributions (Arpaia et al 2010). Another possibility would be to target STW on jobs with high productivity and not to extend the scheme to all types of jobs. At the same time, increasing the cost of STW

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for employers – for example through a co-payment system – could be considered so that it would only be profitable for high productivity jobs (Díaz et al 2023).

4. Improve incentives for the training and re-skilling of workers. Although this should be a general policy, it should have greater intensity in those sectors or activities where worker reincorporation is more difficult. This is the case in markets where there are serious problems for the mobility of workers between sectors and even activities, but the benefits of active labour market policies are severely limited when they are not complemented by other active employment policies (Brey & Hertweck 2020; Kopp & Siegenthaler, 2021; Müller & Schulten 2020). Incentives for training and re-skilling could be provided by, for example, improving STW conditions with lower social contributions after the end of the programme if firms offer training to their employees during the time they are out of work. At the same time, it is necessary to make working conditions more flexible for STW to function in situations of severe economic crisis and to improve the survival rates of firms (Askenazy et al 2024). However, the comparison shows that most countries have considered training as optional from both the employer's and the employee's point of view. Although, in general, the STW-COVID schemes allowed a containment of unemployment rates, especially considering – as has been pointed out – the sharp declines in GDP between 2019 and 2020, it is none the less true that it is necessary to complement STW schemes with other measures such as distance working, to improve their results (García-Serrano 2022).

5. Improve the impact of STW on workers with temporary contracts. STW schemes usually benefit workers with stable contracts (permanent contracts), but they are not always extended to those with temporary contracts, who are precisely the people who have the greatest difficulty in re-entering the labour market (Boeri & Bruecker 2011; Cahuc & Carcillo 2011; Hijzen & Venn 2011). This may be because firms use the available flexibility tools (and STW is one of them) to protect the 'most valuable' workers in particular, and these workers also tend to be those with a permanent employment contract and more experience (Crimmann et al 2012). This fact calls for the inclusion of measures to improve the situation of temporary workers during future economic downturns, which would prevent the entire adjustment from being borne by such temporary workers. Although in some countries, such as Spain,[32] this group was included among the beneficiaries of public aid, an adjustment was then made for workers with temporary contracts.[33] Indeed, a recent paper by Carrasco et al (2024) points out the benefits of STW for workers with temporary contracts in Spain, since this type of worker benefited more from these employment maintenance programmes, both in terms of the probability of being employed and in terms of wage improvements.

6. Extend STW schemes to the self-employed. Some countries – such as Spain or Germany – have extended their STW schemes to workers on temporary contracts and provided substantial support to the self-employed, and STW schemes in other countries should also be extended to the self-employed (Casey & Mayhew 2023; Elia & Bekker 2023; Izquierdo et al 2021). The comparison exercise carried out in this research for a group of European countries shows that most of them do not consider self-employed workers as a group eligible for protection, but who have also suffered greatly from the effects of the pandemic, hence the need to include them.

7. Make companies at least partially responsible for STW schemes. To try to limit the abuse of STW schemes, it is necessary for companies to incur costs. To avoid abuse, the subsidy could be converted into a credit – at no interest or a very low interest rate – to be repaid when the programme ends (Boeri & Bruecker 2011; Felgueroso & Jansen 2020; Stuart et al 2021). In this way, only firms truly facing a temporary shock and without access to liquidity to cover the cost would apply to participate in the programme. A second possibility would be for companies in difficulty to bear the cost, but to repay it through delayed social security contributions, as is the case in the Netherlands. Finally,

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a co-payment system could also be considered, to introduce co-responsibility for the STW, as was proposed in Estonia, with a minimum payment for each worker benefiting from the STW, in Switzerland, where employers bore part of the social costs; or in Italy, where employers were obliged to contribute part of the subsidy after a certain period of time from the granting of the aid.

8. Evaluate the results of STW schemes. The high financial cost involved in the programme implies a very considerable increase in public expenditure, both through increased unemployment benefits for workers and through subsidies for the employers' contributions. If sustained over long periods of time, this would generate high deficit levels. The allocation of aid granted should thus be assessed over time, always verifying the appropriateness of this action (Bělín & Veselkova 2024; Stuart et al 2021). One of the pending issues at the labour level – at least in Spain – is the need to improve the measurement of the results of active policies in general (AIREF 2019; Arranz & García-Serrano, 2022; Rebollo-Sanz & García-Pérez, 2021), something that should be done for the TLAPs.

9. Avoid improvisation in taking measures. Some European countries used existing instruments to try to solve labour imbalances, as was the case in Spain, but others, such as the United Kingdom, had to create new schemes through very generous labour subsidies. The pandemic thus revealed the advisability of having the necessary instruments in place, provided they are negotiated with trade unions and employers. The ideal would be to have prior tripartite agreements to anticipate possible crises. The comparative analysis by country included in this research shows that in most cases – possibly due to the urgency of implementing the measures – it was not initially envisaged that trade unions or business organisations should be involved, although in practice they were involved in the design of the STW. It is therefore advisable always to include social partners in order to improve the approach.

10. Ensure the financing of STW schemes. It is necessary to have a fiscal space that allows for the availability of economic resources in the event of a generalised crisis. It would thus be advisable for the European Commission to consider this possibility in its budgets for when an economic recession, such as the one suffered during the pandemic, occurs again in the future. As has been pointed out, some countries – especially Italy and Spain – allocated a large amount of resources from European funds to finance the STW. This strong demand for resources from the European Commission contrasts with the absence of a request for European resources from Germany or France. This result highlights the different economic situation of the countries when facing this type of actions, and hence the need to foresee the creation of special funds for their implementation, especially considering that the implementation of the STW benefits workers and employers (Bělín & Veselkova 2024; Meriküll & Paulus 2023).

Conclusion

As noted above, STW schemes can be effective in mitigating the negative effects of a crisis, if they are temporary. All the studies analysed show that if the shock is temporary, the schemes can not only generally maintain employment but also seem to go towards avoiding an increase in unemployment (OECD 2020). STW schemes at the European level – like the TLAP in Spain – were one of the most widely used instruments in most European countries for dealing with the economic effects of the pandemic and especially for protecting employment. Although force majeure STW schemes have existed in Spain for more than four decades, they underwent major changes during the pandemic, operating from March 2020 until the first quarter of 2022. During the time the STW schemes were in use, the effects of COVID on the labour market were notably smaller than would have been

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expected for a severe crisis. Thus, data indicate that the expected growth of the unemployment rate, especially considering the significant decline in GDP, was contained. The good performance of this employment maintenance programme reveals it as an option to be considered for situations that may lead to a significant number of redundancies, although there is always room for improvement. The current design of the STW scheme has clearly been oriented towards the specific needs of the pandemic, and it is necessary to extrapolate what has been learned for future crises to improve the programme and increase its potential.

This article has analysed the role of STW schemes in several countries, and from this concludes, as stated in a series of previous investigations, that they can be useful as a temporary mechanism to avoid important increases in unemployment rates, although at the same time, they have a high cost and lose their effectiveness as their duration increases. In addition, the application of STW can generate a 'hoarding effect' or 'lock-in effect' in the allocation of human capital, due to certain types of employment in certain activities or sectors being overprotected when the employees should be transferred because of the crisis. At the same time, the effectiveness of STW is greater in the short term, since, as public aid is extended over time, the probability of returning to employment decreases. Finally, it would be advisable to be somewhat more selective in the application of the programmes and not to make them more general, unless there is an economic crisis that affects all types of sectors and activities.

Consequently, it seems reasonable to limit the operation of STW programmes to generalised economic crises and for short periods of time. Although this action applies generally to all the countries analysed, it is more relevant in those countries with high unemployment rates and where spending on unemployment benefits is already high, as is the case in Spain. For this reason, a series of economic policy recommendations have been established to improve the application of the STW for those countries that have been using this instrument, but particularly for cases such as Spain.

As the European economy is slowing down and, in some countries, even stagnating, the time is ripe to apply the lessons learned and to put in place an STW system that can be implemented when needed. European governments must learn from their best practices and have the necessary tools to cope with a sudden rise in unemployment.

Finally, it should be noted that the Spanish case provides ample support – but not strictly causal evidence – of the success of the COVID-19 STW programs in Spain. Consequently, the recommendations set out above are useful for improving the design of these programs – but always bearing in mind that they refer to potential lines of improvement of the STW program in Spain and/or to the special characteristics of the Spanish labour market – and, therefore, that they could be addressed in future reforms of this line of action.

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Notes

1 Although the objectives of STW schemes in all European countries are basically the same, being to protect business, to ensure that workers do not lose their jobs, to enable the fastest possible exit from a crisis and to control the unemployment rate, there are differences in the number of beneficiaries of the different programmes, in the way the aid is granted and in the amount of aid.

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2 Moreover, STW schemes had already been in use in the EU for some years because of the effects of the Great Recession of 2007, although they had been used less intensively than during the pandemic. The results were also positive (Hijzen and Venn (2011) and Hijzen and Martín (2013) for several OECD countries; Boeri and Bruecker (2011) and Lydon et al (2019) for several EU countries; Arranz et al (2015) for Spain; Giupponi and Landais (2023) for Italy; and Cahuc et al (2018) for France).

3 The amount received was 90% of the net salary if the gross salary was €1,700 or less; 85% of the net salary if the gross salary was between €1,700 and €2,685; and 80% of the net salary if the gross salary was between €2,685 and €5,370.

4 https://www.arbeiterkammer.at/beratung/arbeitundrecht/corona/Kurzarbeit.html

5 https://travail-emploi.gouv.fr/emploi-et-insertion/accompagnement-des-mutations-economiques/activite-partielle-chomage-partiel/

6 The Employment and Unemployment Insurance Act of 16 July 1927, which approved an unemployment insurance and short-term employee compensation programme, was used during the first oil crisis in the early 1970s, again in the 1990s after German reunification and then in the wake of the 2008 crisis. For example, between 1973 and 1974, the number of beneficiaries rose from 44,000 to 292,000. In the 2008 crisis, the programme covered 1.4 million workers, or 4% of the labour force (Fernández and Garicano 2009).

7 For the pandemic, the maximum duration was extended to 21 months or the end of 2021, primarily to avoid redundancies.

8 The salary for a mini-job cannot exceed 450 €/month, with a maximum working week of 14 hours. In addition, the worker will have to take out accident insurance at his/her own expense.

9 For the first three months, the assistance received was 60% of the previous net salary (for those without children) or 67% (for those with children); between the 4th and the 6th months, the rates were 70% (for those without children) and 77% (for those with children); and between the 7th and 12th months, the rates were 80% (for those without children) and 87% (for those with children).

10 From 2019 to 2020, GDP in Germany declined by €45,320 million.

11 https://www.government.nl/latest/news/2020/03/19/coronavirus-dutch-government-adopts-package-of-new-measures-designed-to-save-jobs-and-the-economy

12 https://www.gov.uk/government/publications/coronavirus-job-retention-scheme-screening-equality-impact-assessment/coronavirus-job-retention-scheme

13 This paper argues, based on evidence from the 2008 crisis, that STW must meet a number of requirements to be effective. First, there should be a minimum (to curb the use by firms in financial difficulties) and a maximum (to reduce temporary lay-offs) number of reduced hours to encourage job sharing. Secondly, to reduce deadweight, an eligibility process should be established, targeting such programmes to companies that really need them. Thirdly, the beneficiaries of the aid should actively seek employment, and companies should establish a recovery plan and not lay off workers who have benefited from the STW. Finally, the generosity of the aid should be limited.

14 This study underlines the fact that the effectiveness of STW will depend on a series of conditions: extending it to all sectors, companies, and categories of work, reaching at least 80% of the previous wage, guaranteeing special protection for workers with lower wages, extending the aid programme beyond the duration of the state of emergency, establishing a period of prohibition of dismissal for workers benefiting from the STW, allowing only those companies that really need it to access the programme and guaranteeing the participation of employers, trade unions and workers in the design of the programme.

15 In Spain, 3.4 million workers were covered by TLAP at the end of April 2020, a figure almost identical to the number of all workers whose contracts had been suspended since 1993.

16 The deadweight effect arises when the jobs included in an STW scheme would have been preserved in the absence of aid.

17 This refers to the situation in which the STW scheme makes it possible to preserve jobs that, after recovery, are not viable without aid.

18 These types of companies are less productive, as they allocate fewer resources to profit generation and employment.

19 SURE ended in December 2022, and was a crucial element of the EU's overall strategy to protect jobs and workers in response to the COVID pandemic.

20 Among others, preventive actions against COVID, costs for recruiting and supporting health personnel, and procurement of health material and medicines.

21 During the years of the financial crisis, the use of STW was much lower, as the 2008 shock was permanent, unlike the effect generated from COVID, which was temporary. This meant that the use of STW during the Great Recession was not incentivised. Consequently, both the number of beneficiary workers and the total amount spent was much lower during the financial crisis.

22 This article indicated that STW schemes do not produce the expected effect of maintaining employment in the short term (one year after implementation), as the beneficiaries are between 5 and 10 percentage points less likely

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to continue working with the same employer one year later than other similar workers who have not benefited from the STW scheme. They also only have slight success in linking jobs and workers to enterprises.

23 This effect is also reported by Bellmann et al (2023) and Giupponi et al (2022).

24 After the bibliography there is a summary of the labour regulations that have modified the functioning of STW in Spain.

25 Article 47 of Law 8/1980, of 10 March 1980, on the Workers' Statute (the repealed provision) stated that an employment contract could be temporarily suspended for technological or economic reasons or because of force majeure.

26 Royal Legislative Decree 2/2015, of 23 October, approving the revised text of the Workers' Statute Law.

27 Law 27/2009 established a 50% rebate on social security contributions for companies undergoing temporary lay-offs or reductions in working hours. Subsequently, Royal Decree 10/2010 increased the rebate to 80% if the company adopted certain measures, such as training, to mitigate the effects of the temporary lay-off for the workers concerned.

28 Royal Decree-Law 2/2022, of 22 February, adopted urgent measures for the protection of the self-employed, for the transition to structural mechanisms for the defence of employment and for the economic and social recovery of the island of La Palma, while extending measures to deal with situations of social and economic vulnerability.

29 Article 47 bis of the Royal Legislative Decree 2/2015, of 23 October, defines the RED Employment Flexibility and Stabilisation Mechanism as an employment flexibility and stabilisation instrument which, once activated by the Council of Ministers, will allow companies to request measures to reduce working hours and suspend employment contracts for a given sector of the economy or for a given temporary cycle.

30 Sectoral TLAPs were activated on 29 March 2022 for travel agencies, which suffered a deep crisis due to COVID.

31 The consultation period following the notification of a TLAP was reduced from 15 to 7 days for companies with fewer than 50 employees, while maintaining the 5-day period for organisations with a larger workforce.

32 For Italy, Casarico and Lattanzio (2022) report that workers with temporary contracts are 8 percentage points more likely to lose their jobs than those with permanent contracts. For Portugal, Nunes et al (2023) found that the employment effects of COVID were greater in regions with high rates of temporary employment than in those where permanent employment predominated. In a study of the United States, the United Kingdom and Germany, Adams-Prassl et al (2020) found that permanent workers were less likely to be affected by unemployment than temporary workers. The same results were found by Kikuchi et al (2021) in Japan and Aum et al (2021) in South Korea.

33 In EU countries, temporary workers accounted for less than 10% of the year-on-year increase in laid-off workers in 2020 (Eurofound 2022). In Spain, the number of temporary workers benefiting from the programme in April 2020 was 750,000 out of a total of 3.5 million employees; in December 2021, temporary employees benefiting from STW amounted to 3%, after accounting for more than 10% of the total during the initial months of the pandemic (Carrasco et al 2024).

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Alberto Vaquero García has been professor at the Carlos III University of Madrid and Specialized Advisor to the Study Cabinet of the Economic and Social Council of the Kingdom of Spain and Advisor to the Study Cabinet of the Ministry of Education and Science. Currently associate professor and researcher in the Department of Applied Economics of the Faculty of Business Sciences and Tourism of the University of Vigo (ECOBAS-GEN research group). He has published several research articles in indexed international journals and different international ebook chapters. His main lines of research are: Education Economics, Labor Economics, Public Economics and Regional Economics.

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