

## **MAPPING SHORT-TIME-WORK POLICIES: A BIBLIOMETRIC STUDY**

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**ABSTRACT:** *In the context of accelerated global economic transformations, short-time work (STW) schemes - also referred to as Kurzarbeit - have emerged as essential policy instruments for safeguarding employment and preserving social equilibrium. The present study conducts a bibliometric analysis of the Web of Science literature on short-time work, following the PRISMA framework. From an initial corpus of 215 records, 106 relevant articles were retained after applying filters by research area (Economics, Industrial Relations, etc.), country (with Germany leading with 50 publications), and language. The findings reveal six thematic clusters derived from 56 keywords, 12 prominent authors, and leading journals such as the Journal for Labour Market Research. The analysis indicates an exponential increase in scholarly interest after 2020 and emphasizes key determinants such as the fiscal capacity of smaller states, which often surpass larger economies in this respect. In conclusion, short-time work represents a strategic paradigm shift that promotes human capital retention over large-scale layoffs, while underscoring the need for further investigations in emerging economies.*

**KEY WORDS:** *Short-time-work, Kurzarbeit, labor market crisis, employment retention.*

**JEL CLASSIFICATIONS:** *J22, J63, J65.*

### **1. INTRODUCTION**

At the global level, economic changes in recent years have had rapid effects on the labor market, prompting governments and companies to adapt and seek innovative solutions to protect jobs and maintain social and economic equilibrium. In this context, active policies aimed at preserving employment have become essential for organizational sustainability. The challenges of the pandemic crisis, followed by accelerated digitalization, have made short-time work a frequent organizational measure through which companies have adapted their operational structures. This approach has enabled them not only to manage operational costs and preserve jobs, but also to create opportunities for rapid adaptation to digital remote collaboration tools (Niță & Isac,

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2016, Popescu et al., 2021). The term short-time work is recognized in employment policies of certain countries as *Kurzarbeit* - a German term composed of two words, "Kurz" (short) and "Arbeit" (work) - and was introduced in Germany in 1910 as a response to the crisis in the extractive industry, becoming institutionalized in 1924 during the Weimar period.

With over a century of history, short-time work has reemerged today as a necessary instrument through which many firms have demonstrated that productivity is not necessarily proportional to the number of hours worked, but rather to the degree of employee engagement and the efficiency of digital processes.

Nevertheless, Casey and Mayhew (2023) argue that the pandemic served merely as a catalyst for the frequent use of short-time work and highlight the potential role that the German model could play in reducing long-term unemployment. Other specialists, such as Cahuc et al. (2018), emphasize its effectiveness only in the short term and during crisis situations where social factors are critical, as it enables the reduction of job destruction through work-sharing and firm subsidies.

Accordingly, short-time work typically takes the form of government programs aimed at preserving jobs through reduced hours; even though wages fall below normal levels, they still exceed typical unemployment benefits (Cahuc, 2024). The financial support for income top-ups under short-time work schemes is shared between companies and governments (Cahuc, 2024), while simultaneously providing employees with financial assistance for unworked hours (European Commission, 2020).

During the pandemic period, short-time work was one of the most widely used policies in many countries. Thus, in EU countries in 2020, there were over 42 million employees on reduced schedules, representing more than 25% of the total EU workforce; including the UK and Switzerland, the number of applications for short-time work programs rose to over 50 million (Müller & Schulten 2020).

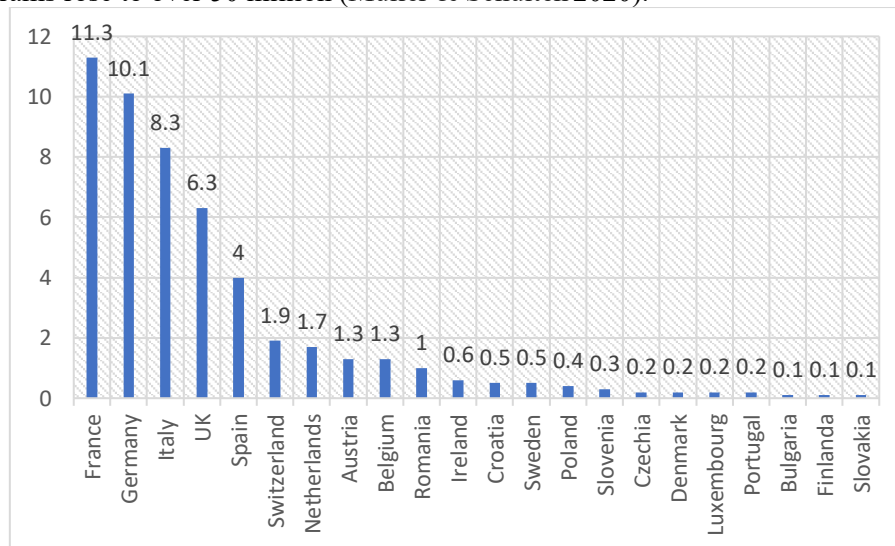


Figure 1. Situation of employees benefiting from short-time-work in 2020

Even though countries such as France, with 11.3 million employees, and Germany, with 10.1 million, mobilized a large number of workers into short-time work schemes - accounting for nearly 50% of the European total - their coverage rates (47.8% and 26.9%, respectively) are lower than those in smaller states like Luxembourg (80%) or the UK (63%). This demonstrates that large countries with substantial workforces and diversified economies face administrative and fiscal constraints that prevent them from extending short-time work to the same proportional extent as smaller nations, where such schemes can protect a greater share of the labor force.

In the United States as well, the COVID-19 pandemic revived the implementation of short-time work in the form of furloughs - a mechanism for the temporary suspension of jobs - which proved to be an alternative to layoffs amid economic uncertainty. In the USA, the share of furloughs surged to a historically unprecedented level of 78.3% in April 2020, compared to 13.8% in February 2020. Although furloughs signal employer distress, they offer clear advantages over permanent layoffs for workers, employers, and the speed of economic recovery (Groshen, 2020). Thus, furloughs immediately mitigated the impact of the economic crisis during the pandemic and alleviated financial pressure on the population.

Despite the challenges faced during the crisis period with implications for short-time work, investigating the sustainability of this organizational instrument is of significant interest and warrants further study. It is essential to examine its role in achieving labor market equilibrium under crisis conditions (Dura & Drigă, 2023).

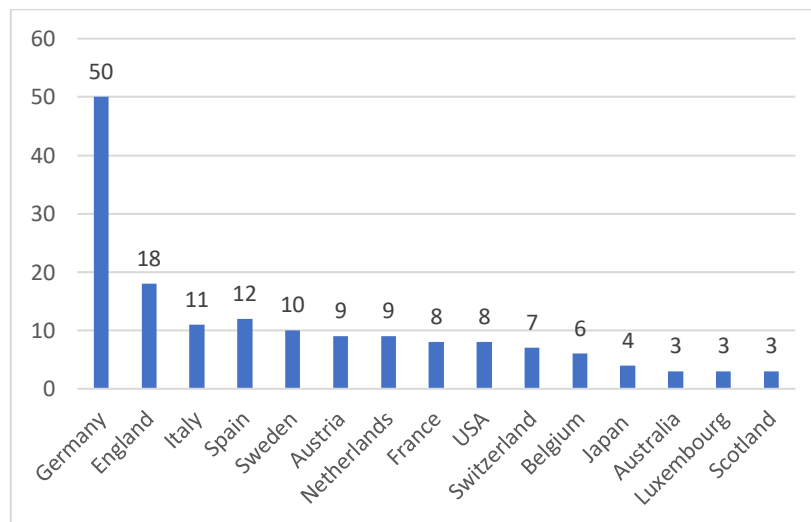
For this reason, conducting a systematic literature review to map the existing body of knowledge on the factors driving the implementation of short-time work is highly valuable. Building on these arguments, the present study employs a bibliometric analysis to synthesize and map the extant knowledge on short-time work and the principal factors enabling its implementation - namely, crises, unemployment, and the trend toward reducing working hours. By expanding the understanding of these dynamics, the findings can inform decision-making by companies and governmental institutions, such as labor agencies and municipalities.

## 2. METHODOLOGY

This bibliometric review aims to explore the effects of work instruments such as short-time work within the context of crisis periods, rising unemployment, and trends in the reduction or increase of working hours. To achieve this, the study adopts the PRISMA framework, following its four main stages: identification, screening, eligibility, and inclusion (Page, et al., 2021; Dura, 2024). A detailed presentation of these steps is shown in the Figure. 2. Following the PRISMA guidelines, a systematic search was conducted in the Web of Science database to identify relevant literature on short-time work. The search process involved a series of structured filtering stages to ensure the inclusion of high-quality and pertinent sources:

- ✓ *Identification Phase.* An initial search was conducted using the keywords: “short-time work” OR “Kurzarbeit” OR furlough AND crisis AND unemployment AND working hours. The search encompassed all research areas, yielding 215 records;

- ✓ *Screening Phase.* To ensure relevance and scientific rigor, only scientific articles were retained. This filtering reduced the dataset to 197 records, excluding conference papers, editorials, and other non-scientific sources. Subsequently, the period 2007–2024 was selected, resulting in 168 records. This timeframe was chosen to capture literature emerging from the 2007–2009 economic crisis—when 6 million employees in Europe benefited from STW—and the surge during the COVID-19 pandemic. Articles prior to 2007 were excluded due to their low number. The 2007–2019 period averages 5 articles per year, with numbers rising sharply post-2020, peaking at 33 articles in 2022. This pattern indicates heightened author interest in STW since the pandemic;
- ✓ *Eligibility Phase.* To maintain thematic coherence, several irrelevant fields were eliminated, and the focus was narrowed to Economics (64), Industrial Relations Labor (40), Management (10), Public Administration (11), Business (4), and Social Issues (9), resulting in 119 records;
- ✓ *Inclusion Phase.* Finally, to ensure accessibility and analytical coherence, only publications from countries with at least 3 articles were included, leading to a final selection of 106 records. Figure 2 shows that the most prolific country is Germany with 50 papers, followed at a considerable distance by England with 18 papers. Subsequently, language selection was also applied, eliminating 2 papers in French and one paper in German.



Source: Author's own construction

**Figure 2. Publication distribution by country during the period 2007-2024**

This structured approach ensures that the reviewed literature is not only aligned with the research objectives but also methodologically robust and thematically relevant. Following the application of inclusion criteria in the Web of Science database, the results were exported in CSV format and organized in Microsoft Excel. For the bibliometric analysis of information from the 106 papers, VOSviewer software was used.

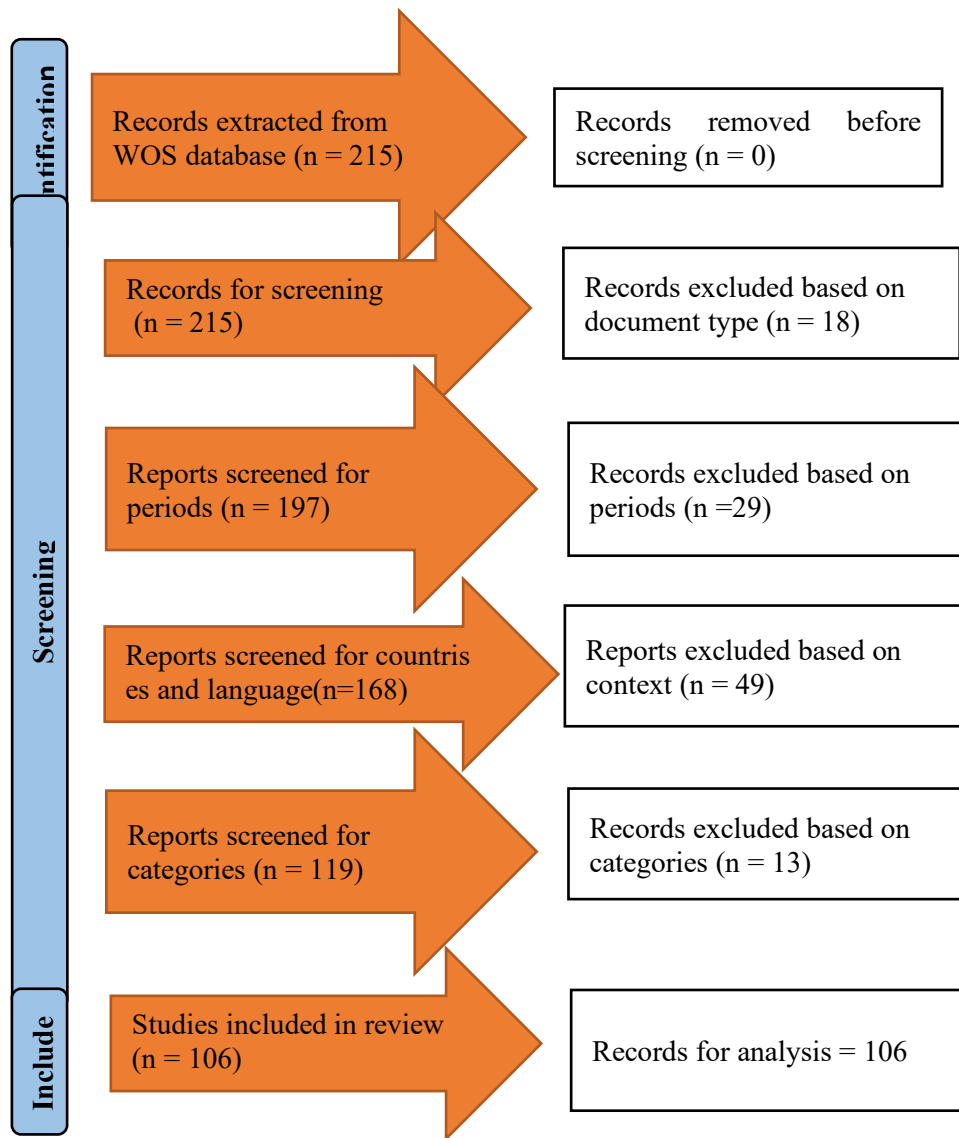


Figure 3. A representation of papers' collection strategy, based on PRISMA framework

### 3. MAIN FINDINGS

The bibliometric analysis of keyword co-occurrence identified a total of 56 elements grouped into six clusters. The keyword co-occurrence analysis highlighted a multidimensional structure of the field, reflected in six interconnected thematic clusters that capture the interplay between macroeconomic, policy-related, and organizational dimensions of contemporary labor research. (figure 4).

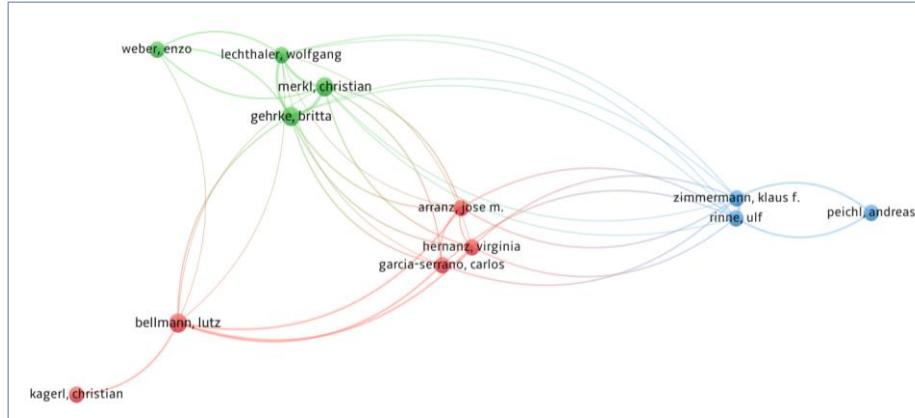


by Merkl Christian with 102 citations and Lechthaler Wolfgang with 100 citations (Table 1).

**Table 1. Distribution of publications and citations per author**

No	Author	Publications	Citations
1	Gehrke Britta	4	92
2	Merkl Christian	4	102
3	Bellman Iutz	4	31
4	Lechthaler Wolfgang	3	100
5	Rinne Ulf	3	122
6	Zimmermann Klaus	3	122
7	Arranz Jose	3	19
8	Garcia-Serrano Carlos	3	19
9	Hernanz Virginia	3	19
10	Weber Enzo	3	20
11	Peichl Andreas	3	37
12	Kagerl Christian	3	24

VOSviewer generated the network visualization of these authors, presented in Figure 6. The green cluster holds a prominent position with authors such as Gehrke Britta from Freie Universität Berlin, Merkl Christian from Friedrich-Alexander-Universität Erlangen-Nürnberg, and Lechthaler Wolfgang from the Austrian National Bank.



Source: Author's own construction

**Figure 6. Network visualization of authors**

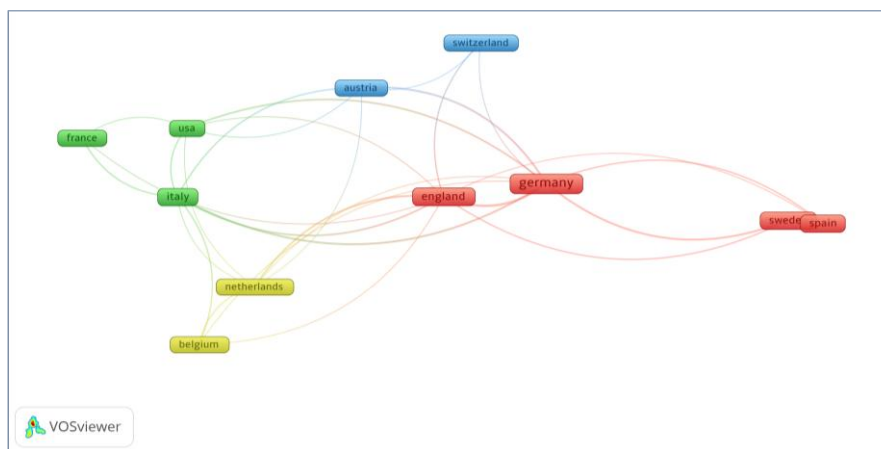
Figure 7 presents the distribution of records by journal title. The highest number of publications, namely 8, appears in the *Journal for Labour Market Research*, followed by 5 papers in *Transfer: European Review of Labour and Research*, and 4 papers each in *International Journal of Manpower* and *European Journal of Industrial Relations*. Although Web of Science records show that the first publication referencing short-time work dates to 1975, the frequency remained low until the onset of the COVID-19

pandemic—one per year at most, or even years without any publications. The highest frequency occurred after the pandemic's outbreak; for instance, the 8 papers on this topic in *Journal for Labour Market Research* were all published after 2021.



Source: Author's own construction

**Figure 7. The publication trend of papers 2007-2024**



Source: Author's own construct

**Figure 8. Co-authorship by countries**

The bibliometric analysis of co-authorship by country identified 11 articles within the network, forming 4 clusters containing 4, 3, or 2 articles each. A prominent co-authorship network by countries comprises Germany, England, Sweden, and Spain—the top-ranked countries, excluding Italy, which forms the green cluster with France and the USA. The other two clusters are also noteworthy, consisting of neighboring countries: Austria and Switzerland, as well as Belgium and the Netherlands (Figure 8).

### 3. CONCLUSIONS

This bibliometric analysis of the specialist literature has highlighted the exponential growth in researchers' and policymakers' interest in short-time work practices, leading to a gradual increase in the volume and diversity of studies on this topic, particularly following the outbreak of the COVID-19 pandemic. However, the number of publications remains relatively limited and predominantly concentrated in crisis-specific institutional and economic contexts. Moreover, the majority of these studies were conducted in developed countries with mature social protection systems and robust administrative infrastructure.

The bibliometric analysis enabled the identification of several key factors for the implementation and sustainability of short-time work, such as governmental institutional involvement, cycles of economic and social crises, and organizational flexibility. Among these, the institutional factor and the state's fiscal capacity were found to have a significant impact on the coverage rate and effectiveness of short-time work programs: smaller economies (Luxemburg, UK) achieved high workforce inclusion rates approaching 80%, while larger economies like Germany or France reached rates not exceeding 47%, indicating an inverse relationship between economy size and administrative capacity to implement short-time work programs.

Consequently, the dynamics and long-term sustainability of short-time work depend, on one hand, on organizational flexibility and the integration of digitalization in restructuring processes, and on the other hand, on the strategic directions that states can support financially and organizationally to protect employees during crisis periods. From a human resource management perspective, Bellmann et al. (2023) posit that short-time work represents a paradigm shift, with emphasis moving from a rapid crisis response through massive and involuntary layoffs—with significant workforce reductions—to a strategic response that enables the retention of loyal employees and the sustainability of human capital (Bellman, et al., 2024).

As research on this topic continues to gain momentum and relevance in occupational policy debates, domain specialists can pursue additional investigations to analyze the long-term effects of short-time work on employee retention and wage dynamics.

Given that most existing studies have been conducted in developed countries with established administrative infrastructure, there is an urgent need to research the implementation of short-time work programs in developing and even emerging countries, where SMEs frequently face financial resource constraints and administrative capacity limitations that hinder such programs. From another perspective, short-time work can serve as an aid for firms where business dynamics are non-linear and characterized by alternating periods of growth and decline, often occurring over multiple months. Additionally, since institutional factors and social partners are key to the sustainability of short-time work, it is vital for governments, trade unions, and employers' associations to actively demonstrate their support for these practices (Räscolean, et al., 2014).

## REFERENCES:

- [1]. Adams-Prassl, A., Boneva, T., Golin, M., Rauh, C. (2020) *Inequality in the impact of the coronavirus shock: Evidence from real time surveys*. Journal of Public economics, 189, 104245
- [2]. Balleer, A., Gehrke, B., Merkl, C. (2017) *Some surprising facts about working time accounts and the business cycle in Germany*. International Journal of Manpower, 38(7), 940-953
- [3]. Bellman, L., Bellman, L., M., Hübler, O (2023) *Labour Mobility in German Establishments during the COVID-19 Crisis: Panel Data Analyses with Special Reference to Short-Time Work and Working from Home*, (No. 15935). IZA Discussion Papers
- [4]. Bellman, L., Bellman, L., M., Hübler, O (2024) *Labour mobility, short-time work and working from home: establishments' behaviour during the COVID-19 crisis*, International Journal of Manpower, 45(6), 1262-1278
- [5]. Brey, B., Hertweck, M.S. (2020) *The extension of short-time work schemes during the Great Recession: A story of success?*. Macroeconomic Dynamics, 24(2), 360-402
- [6]. Burda, M.C., Hunt, J. (2011) *What explains the German labor market miracle in the Great Recession?* (No. w17187). National bureau of economic research
- [7]. Cahuc, P. (2024) *The micro and macro economics of short-time work*, in Handbook of Labor Economics, 5, 385-433, Elsevier
- [8]. Cahuc, P., Kramarz, F., Nevoux, S. (2018) *When short-time work works*. Working papers. Banque de France
- [9]. Casey, B. H., & Mayhew, K. (2023) *Kurzarbeit/short time working: experiences and lessons from the COVID-induced downturn*, National Institute Economic Review, 263, 47-60
- [10]. Dura, C. (2024) *A Bibliometric Analysis on the Drivers of SME'S Sustainability Practices*, Annals of the University of Petroșani. Economics, 24(1), 65-74
- [11]. Dura, C., Drigă, I. (2023) *The Impact of Teleworking upon the Dimensions of Sustainability*, Annals of the University of Petroșani, Economics, 23(1), 5-14
- [12]. Groshen, E.L. (2020) *COVID-19's impact on the US labor market as of September 2020*. Business Economics (Cleveland, Ohio), 55(4), 213
- [13]. Müller, T., Schulten, T. (2020) *Ensuring fair short-time work-a European overview*. ETUI Research Paper-Policy Brief, 7
- [14]. Niță, D., Isac, C. (2016) *Labour issues through temporary employment agencies*. Annals of the University of Petroșani, Economics, 16(1), 191-198
- [15]. Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., Moher, D. (2021) *The PRISMA 2020 statement: an updated guideline for reporting systematic reviews*, BMJ, 372
- [16]. Popescu, M., Isac, C., Dura, C., Niță, D., Nițescu, A., Ghicajanu, M., Csiminga, D., Dobre, C. (2021) *Ghidul antreprenorului*, Ed. Universitat, Petrosani, 50-55
- [17]. Răscolean, I., Dura, C., Isac, C. (2014) *Economia și gestiunea întreprinderii: fundamente teoretice și studii de caz*. Editura Sitech, Craiova
- [18]. European Network of Public Employment Services (2020) *Short-Time Work Schemes in the EU*, May, Study Report