



TWING PROJECT

Spain: Desk Research Report

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1. Introduction

This section aims to summarise the changes in the prevalence of telework and the composition of the teleworking population at national level since the outbreak of the pandemic crisis. The section begins by analysing the changes in the prevalence and patterns of telework at national level. Then, the section analyses changes in the prevalence of telework at sectoral level. Finally, the section revises recent literature analysing change in telework prevalence and patterns at regional level.

1.1 Prevalence and composition of the teleworking population

The most accurate and commonly used source for estimating the prevalence of telework in Spain is the Labour Force Survey (*Encuesta de Población Activa, EPA*) (Observatorio Nacional de Tecnología y Sociedad, 2022b, 2022c, 2022b; Red.es, 2022). The most recent estimation shows a decrease in the prevalence of teleworking from 13.6% in 2021 to 12.5% in 2022, including workers who regularly and occasionally telework (Observatorio Nacional de Tecnología y Sociedad, 2022b).

Before the pandemic, the prevalence of telework varied in terms of three main factors: gender, age and educational level. Differences in some of these factors have remained salient while in others they have been reduced.

The distribution of telework among men and women has changed in the post-pandemic period. Before the pandemic, women were slightly more likely to work from home than men on a permanent basis but less likely to work from home on an occasional basis. This gap increased somewhat in

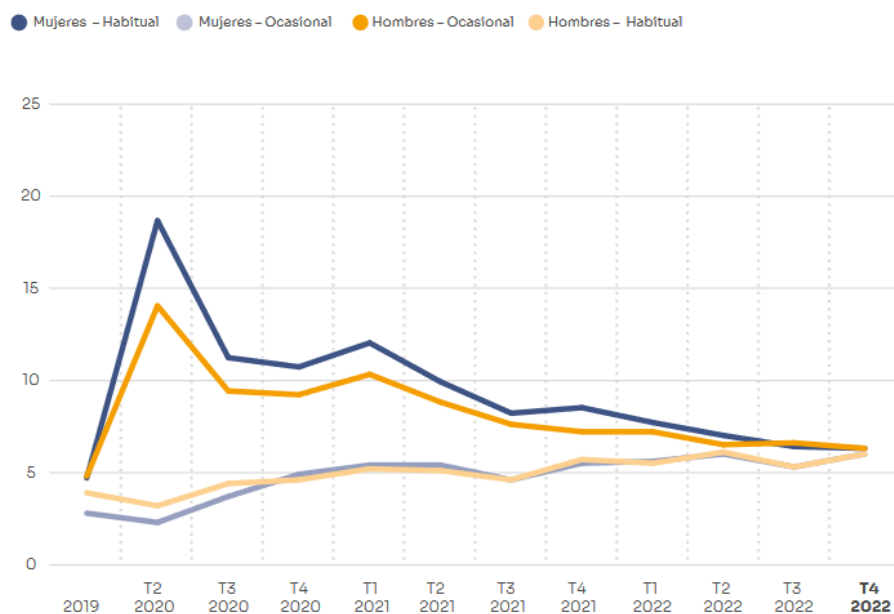


Figure 1. Incidence of occasional and regular telework in Spain by sex (2019-2022) (Observatorio Nacional de Tecnología y Sociedad, 2022b). Source: Labour Force Survey (INE)

2020 but it has been narrowed in 2022 (Observatorio Nacional de Tecnología y Sociedad, 2022b, see figure 1).

The experience of the pandemic has also exacerbated existing differences in the prevalence of telework by age groups. Overall, telework is more prevalent among people over 45 years old as compared with younger groups, and this is also the age group recording higher increases in the prevalence of telework following the pandemic. There are also differences in terms of telework patterns: occasional telework has become more common among workers over 45 years old while regular telework is more prevalent among younger cohorts.

Telework opportunities also vary by levels of educational attainment. Telework options for workers tend to increase along with their educational attainment and income levels (Ministerio de Asuntos Sociales y Transformación Digital, 2022). Indeed, most of the studies conducted during the pandemic show how telework is still bounded to highly qualified workers' profiles.

A comprehensive description of the changes in the profiles of the teleworking population during the pandemic is provided by Peiró and Todolí-Signes (2022) on the basis of a representative survey data for the Valencia region conducted in June 2022. Their findings show that 65.7% of total teleworking population started to work from home following the COVID-19 outbreak, but this share was significantly higher for women (72.4%), workers aged under 36 (72.4%) and among workers with medium levels of educational attainment (70%). Survey findings also highlight the compulsory nature of telework in the pandemic and preferences for telework in the future (77.4% of respondents state their telework arrangement was decided by the company and 70.8% showed a general preference for working more regularly at company's premises). In addition, only 25.6% of employees with the lowest level of education started to telework after the outbreak of the pandemic.

1.2 Prevalence of telework across sectors

The two main data sources for the assessment of the prevalence of telework across sectors and other socioeconomic characteristics in Spain are the Labour Force Survey (LFS) and the Survey on Equipment and Use of Information and Communication Technologies in Households (SICTH), issued by the National Statistical Institute on a yearly basis. However, research evidence about changes in the prevalence of telework across sectors during the pandemic is rather limited. The focus of recent publications is placed on the potential to telework in different sectors and occupations but evidence on the actual extension of telework in the sectors covered by the project is missing.

As an example, a report issued by the Bank of Spain (Anghel, 2020) on the basis of LFS microdata for 2019. This study found the largest potential for the increase of telework among workers in the insurance and the ICT consulting sectors. Difference between the estimates for potential for telework and those for the actual share of teleworkers amounted to 51 and 41 percentage points in

these two sectors, respectively. On the other hand, these differences significantly reduced to 32 percentage points in the public administration.

A similar study based on more recent data from the SICTH 2021 point to the ICT sector and financial and insurance activities as those sectors recording higher increases in the prevalence of telework as a consequence of the pandemic. In particular, 74% of respondents from the ICT sector and 51.3% in the financial and insurance service activities stated to work from home during the week. The share of teleworkers in public administration remains at much lower levels (27.4%) but well above other industries, and still higher than in the education sector (20.4%). The study also shows differences in teleworkers' future preferences across sectors. By 41% of teleworkers in the public administration expressed their preference to telework more in the aftermath of the pandemic, while 25% showed preference to reduce the frequency of telework. In contrast, around a third (31.7%) of teleworkers in the ICT sector expected to telework less in the future against a 18.6% that wanted to telework more (Observatorio Nacional de Tecnología y Sociedad, 2022a).

Bearing in mind the limited comparability of sources, it can be argued that the pandemic has contributed to the extension of telework in most sectors and economic activities, but especially in the ICT and financial activities, and has contributed to narrow the gap between actual and potential levels of telework.

1.3 Other indicators for the prevalence of telework

In this section we consider other variables which may be relevant to the characterisation of the prevalence of telework in Spain but not addressed in previous section, notably company size and territorial differences.

The national Survey on ICT use and e-commerce in companies (*Encuesta sobre el uso de TIC y comercio electrónico en las empresas*) show relevant differences in the feasibility of telework across companies and regions. Overall, telework is more feasible and prevalent among large companies but relevant differences also exist across regions, which mirror differences in their economic structure. Survey results for 2022 show that 39.6% of Spanish companies with 10 or more employees allow their staff to work from home, but this share falls to 16.6% among micro-SMEs (Observatorio Nacional de Tecnología y Sociedad, 2022c). Research suggests that the extension of telework during the pandemic is largely due to its adoption by large companies (Belzunegui-Eraso and Erro-Garcés, 2020; Martín Folgueras et al., 2021), and stress the increased effort that its adoption by small and medium-sized companies (Aranda, 2020).

At territorial level, large differences exist with regard to the options to telework. More than 50% of companies in Madrid and Catalunya regions allow their employees to telework, while it remains around 25% in rural regions of Extremadura, Murcia and la Rioja (Observatorio Nacional de

Tecnología y Sociedad, 2022c, Ministerio de Asuntos Económicos y Transformación Digital et al., 2022; Observatorio Nacional de Tecnología y Sociedad, 2022b). Differences in the spatial distribution and composition of the teleworking population in the region of Madrid have been also addressed by Sánchez-Moral et al. (2022), whereas two other studies explained the prevalence of telework in the regions of Andalusia and Valencia, the former obtaining the changes of the prevalence of telework before and during the pandemic (Caparrós Ruiz, 2022; Peiró & Todolí Signes, 2022).

Finally, we also found a general preference to remote working on employees (Observatorio Nacional de Tecnología y Sociedad, 2022a; Peiró & Todolí Signes, 2022). Indeed, studies only provide evidence of a very a low proportion of employees wishing to return to the employers' facilities. For instance, in the study carried out by Las Heras & Barraza (2021) only 4% of employees surveyed wanted to return to full-time work at the employers' facilities (Las Heras & Barraza, 2021). The main motives were the lack of technological means (62%) and the preference to lead a team in-place (54%).

2. Working conditions and main debates

In this section, we present the main research findings on the implications of telework on working conditions at national level. The outcomes of the research have been reported along the dimensions set in the background note, but almost no evidence in the four sectors covered in the project have been obtained. Most of the literature addressing the impact of telework in working conditions in Spain has been based on the experience of the pandemic, and there has been practically no publications on the topic between 2016 and 2020.

2.1 Working time and work-life balance

The above-mentioned study by Peiró and Todolí-Signes (2022) show that teleworkers tend to worker longer and under more irregular hours than non-teleworkers. Their findings show that nearly half of the teleworkers covered in the sample (N=684) work during night (sometimes or frequently) and during weekends, while working on irregular hours was carried out by 79.8% of teleworkers at least occasionally (20.2% did it very frequently). Results also point that 20% of teleworkers agreed that telework reduce their flexibility. The following paragraphs summarise relevant results along different variables:

- A higher share of men reported working during the weekends at least sometimes (5.3pp) and working overtime more frequently than women (8.3pp). However, the share of female teleworkers working during the weekends always or almost always is higher than the share of male teleworkers (4.6pp). They argued that this contradicts the idea that women tend to

work more than men only during the weekdays for caring needs. This finding suggests that women may be making up working time during the weekends.

- Low-educated people tended to work during the weekend (51.1%) and more than 10 hours per day (46.7%) more frequently than high-educated people (46.3% and 39.3%, respectively). Conversely, they worked less frequently on irregular working hours (outside their regular working hours, 65.1%) than high-educated people (71.7%). Note that mid-educated presented the lowest incidences within these magnitudes (41.2%, 33.4% and 59.7%, respectively).
- Young people worked more frequently during the weekends than people greater than 36 (5.8pp), and people aged from 36 performed overtime more often than workers aged below 36 (7.8pp), as well as irregular hours.
- Employees working in the the public administration performed much less night work (29.7%) and worked less during the weekend (33.9%) than workers in the information, finance, professionals and science sector (46%) and workers in the education and artistic sector (61.3%). However, less employees in the public sector reported having flexibility to organise their working time.
- Teleworkers who started to telework before the pandemic were more likely to work more often on irregular hours (78.8% compared to 62,4% of employees not having performed telework before the pandemic). They were more prone to do night work, had a higher chance of working during the weekends (63% compared to 36.4%) and performed overtime more frequently (14.8pp).
- Working on big companies also increased the likelihood of working more than ten hours per day (9.3pp) and of working during the weekends (12.5pp) than working on small companies.

In a similar vein, results from an online survey conducted over a sample of teleworkers from Catalonia in 2020 found that 78% of respondents agree in that telework entailed and increase in workloads, while 33% reported difficulties to setting limits to the length of the workday. The most recurrent statements of this sample of workers were feelings of never-ending days, working days exceeding 12 hours, tiredness of constant availability, the lack of concentration, and the lack of a formal space and the inability to achieve work-life balance when having children in households with dual full-time teleworkers (Valenzuela-Garcia, 2020).

Romeo et al. (2021) surveyed the negative and positive work-home interactions on a sample of university staff in Barcelona (N=1328). Their findings show that that teleworking (and remote learning) resulted increased interferences between work and home in both directions. More specifically, they found that academical staff worked longer hours and felt exposed to expectations

of constant availability for work requests, and these effects were more prominent prevalent among women compared to men. Conversely, administrative staff did not suffer significantly from these effects, which can be explained by the fact that they telework less intensively than teachers and researchers.

On the other hand, there is also evidence on the impact of exacerbation of gender roles during lockdowns on women's well-being and work-family conflict. Results from a qualitative study based on a sample of teleworking mother during the pandemic (N=18) by Loezar-Hernández et al. (2023) point to increased fatigue, anxiety and stress due to difficulties for balancing work and family roles, as well as feelings of guilt and loss of emotional control because of their failure to meet expectations as both mothers and professionals. Women adopted different coping strategies in cooperation with their partners resulting in the fragmentation of schedules and longer working hours. Compared to men, women faced more difficulties in setting boundaries between their work and personal domains, and they were more often exposed to interruptions and coordination problems with other co-workers. Similar research conducted prior to the pandemic by Gálvez et al. (2020) already stressed how telework involves a temporal and spatial restructuring of the domestic sphere and the blurring of boundaries between work and non-work domains, from the analysis of focus groups and interviews to 78 women. Work-life balance was found to be particularly challenging for women, since they are expected to put in extra effort to fulfill both household chores and professional tasks. The resistance against the requirements, expectations and interferences from both directions has been defined as a new sort of agency. On the basis of a decision-making capacity, female teleworkers are able to redefine work and home spheres. Ethics and professional identity were found to be determinant factors in these micro-practices of resistance. More recently, considering the greater burden of tasks on women during the pandemic, another study based on a national survey identified the same agency for female teleworkers. Women, in some cases, succeeded in achieving a more egalitarian amount of time devoted to domestic tasks and work with their couples when they were also teleworking (Seiz, 2020).

Finally, a critical concerning the monitoring of working time of teleworkers was addressed in Master thesis publication (Lafer Margall, 2020). A survey to human resources' managers from four companies in the insurance sector during the pandemic found that only two companies provided mechanisms for registering working time for teleworkers. In one of these cases a specific mechanism was implemented, but on a voluntary basis (Lafer Margall, 2020).

2.2 Occupational health

All research outcomes about occupational health of teleworkers were obtained during the pandemic, with almost no research on that topic between 2016 and 2020. Research on the topic has focused on the prevalence of psychosocial issues and well-being and musculoskeletal disorders due to poor

ergonomics when working from home. Overall, research is not conclusive on whether teleworking has impact on stress and on the positive effects for teleworking for work-life balance. Other issues are concerned with the risk of social and professional isolation (Ledesma, 2021).

Blahopoulou (2022) analysed a survey of 111 respondents (80% women) during mandatory telework via regression analysis with lagged effects. Their results support for the hypothesis of a positive relationship between telework satisfaction and self-rated performance, and this effect is mediated by improved subjective well-being. Another relevant result was that having children was found to be a demand and at the same time a resource, because of the lower probability of feeling isolation. This explains the fact that telework satisfaction is usually lower among this subgroup, while their subjective well-being higher. It should be noted that these results may be biased by the sample composition and the special circumstances of the lockdown period, which entails many differences if compared to conventional telework.

Results from other studies point to gender differences in the subjective experience of telework during the pandemic. Morilla-Luchena et al (2021) analysis over a sample of professionals in the social services sector (N=560) through factor analysis show that men made a better overall assessment of their experience than women. A better evaluation was also found among professionals with children, people aged more than 47 and people with postgraduate studies. Telework was also found to be associated with a greater perception of being overcome by the situation and of a worsening in working conditions. These results are explained by the emergency situation, because many workers were performing telework more intensively, with the subsequent loss of face-to-face interactions that is an intrinsic part of their jobs.

Rymaniak et al. (2021) analysed an online survey questionnaire for teleworkers in Poland, Lithuania and Spain (484 answers in Spain and 1599 in total), consisting in a self-assessment by 25 questions about the workplace conditions grouped into five categories of analysis (space, ergonomics, design, health and technology) and their comparison between stationary workplaces (before the pandemic) and remote workplaces (during the pandemic). Starting from a resource-based view and job characteristics modelling theories, it was obtained that telework in Spain during the lockdown entailed a deterioration of working conditions in dimensions such as space, ergonomics, quality and health, concluding that it was harder in this country compared to others in the EU due to the higher percentage of people living in flats in Spain. Only a slight improvement in the self-perception of technological quality were identified due to the major use of technologies. They also found that those workers reporting a worsening of working conditions felt that there would be more at risk of layoffs, wage cuts, or job instability.

Cuerdo-Vilches et al. (2021a, 2021b) performed an online survey of 58 questions to 256 teleworkers in the region of Madrid to assess the adequacy of telework spaces in homes during the lockdown in

Madrid. A third of respondents stated that they lack an adequate space to work from home, also highlighting the lack of digital resources (poor digital infrastructure). The authors stressed that teleworkers' assessment was also conditioned by city infrastructures and design, as well as lifestyles. However, no relationship was found for income, which is explained by the very extension of telework during the pandemic.

In a similar vein, the same authors conducted another similar study with a mixed methodology, taxonomizing the teleworking space and its adequacy during the lockdown period. Respondents were asked to fill an online survey (N=1271) with a self-assessment and open reflections and to upload a workspace photograph along with some labels to characterize it and five contextual questions. With these data, they measured the telework space adequacy index (TSAI). Similar to the results of their previous research, they obtained that 25% of respondents found their workspace at home too small or not suitable for telework. This happened more frequently to young workers, workers living with children under 5 years of age, people living in rented and smaller houses and workers with no fixed place to telework. Other issues identified through the analysis were poor ergonomics of furniture and digital devices, mostly laptops, which are far from adapted to extensive telework (Cuerdo-Vilches, Navas-Martín, & Oteiza, 2021).

Urdiales Claros & Sánchez Álvarez (2021) analysis on the psychological implications of the lockdown (N=1,558) found that the shift to telework was associated to higher risks of depressive symptoms and suicidal ideation. People changing to partial telework were at a higher risk of experiencing depression and/or suicidal ideation than workers with no change in their working arrangement. Workers changing to full-time telework did not experience as much risk as workers changing to partial telework. They point to the absence of external supervision, schedules and work-life balance, which can cause overload and stress. Similar results were obtained by Caparrós Ruiz (2022) in her analysis on regional and national surveys. She found that teleworkers and essential employees were the groups at higher risks of anxiety, anguish and sleep disturbances. These results contrast with those from a similar study based in the region of Galicia (N= 451), which show that the only group that did not present significant alterations in the quality of sleep were individuals who began teleworking during the lockdown (Diz-Ferreira et al., 2021).

Research also shows that telework during the COVID-19 lockdown was found to increase the risk of suffering impaired psychological well-being by 8.36% with respect to people who continue to work at their usual workplace, from an online survey accessible from 11 April to 7 May in 2020 (Escudero-Castillo et al., 2021). Among men, the higher the income, the lower the risk of suffering from impaired psychological well-being. Conversely, women with higher levels of income were exposed to higher levels of risk of suffering from impaired psychological well-being.

Finally, a literature review issued before the pandemic by González-Menéndez et al (2019) focused on the risks entailed by the use of mobile digital devices, such as laptops, smartphones and tablets. Main issues raised by research are related to the prevalence of Computer Visual Syndrome, categorized in eye disorders (e.g. decrease in the frequency of blinking), visual disturbances and asthenopia (e.g. blurry vision) and extraocular disorders, the latter including bad postures resulting from the use of digital devices (e.g. Blackberry Thumb Syndrome and Text Neck). Finally, other relevant literature reviews were issued in Spain recently. Ledesma (2021) analyzed the topics of interest and concerns in the Spanish and English scientific literature on telework, and Herrero et al. (2018) analyzed the scientific literature on telework, focusing on the modalities of telework and the advantages of disadvantages issued.

2.3 Control and surveillance

No publications on control and surveillance have not been found to be published in Spain during this period, with the only exception of Molina et al. (2021) The authors asked for the use of digital monitoring systems on a sample of employees that shifted to telework during the early stages of the pandemic (March - April 2020, N= 656). 25.46% of respondents witnessed the introduction of new surveillance mechanisms to assess their productivity. Only 6% affirmed to have registered their working time daily, and 15% of employees claimed not to account for their working time in any way. In fact, the assessment of the results (46% of employees) and telematic communication (28% of employees) were the most prevalent mechanisms for the monitoring of their performance, the latter especially in the banking and insurance sectors.

2.4 Equal treatment

There has been practically no research dealing with this dimension in Spain, only some pilot studies, case studies in companies and qualitative studies have been identified.

A pilot study by the International Center for Work and Family (IESE Business School) focused on the introduction of flexible schedules, found that working mothers showed a higher increase in their productivity, quality, subjective well-being than other groups. They explained these effects by the fact that working at home involved lesser necessity of multitasking and less necessity to deal with different conversations. Findings from another study based on a survey to employees from other companies included in the same publication show that the more flexible working hours, the more perception of gender equality in terms of training and promotion, even though the gap does not disappear (Las Heras and Barraza, 2021 and Las Heras and Barraza, 2020, cited in Las Heras and Barraza, 2020).

In connection with telework, the above-mentioned study by Gálvez et al. (2020) show that women opting for this work arrangement have the feeling of being penalized. Female teleworkers stated that on-site work was better valued than telework for promotion and they felt being penalized and guilty. Finally, other studies conducted prior to the pandemic account for the prevalence of flexibility stigma and its gender implications. A study on a group of SME (N=11) found that women were less likely to be promoted than men because career advancement opportunities were still conceived by managers as a reward for extended availability and longer working hours. Indeed, male employees had resort to statutory right to request working time reductions for care purposes because the uptake of such measures were seldom promoted by the company. In general, managers showed a general distrust to telework as it is perceived as detrimental to team cooperation and for the quality of services involving face-to-face interactions (Morales et al., 2020).

3. Regulation

This section analyses the regulation of telework in Spain. First section subheading **¡Error! No se encuentra el origen de la referencia.** elaborates on the different statutory regimes for teleworking that have succeeded in Spain over the last decade. A more in-depth analysis of the current statutory legislation is provided in Section 3.2**¡Error! No se encuentra el origen de la referencia.**, both for private sector and public sector, by means of the review of the legal literature and the analysis of the normative text in force. Finally, in Section **¡Error! No se encuentra el origen de la referencia.** an analysis of collective bargaining is carried out for each sector analysed in the TWING project, through legal literature and the review of the most relevant collective agreements.

3.1 Regulatory framework and recent reforms at national level

The most important regulation in telework for the private sector came through Law 3/2012, which reformed Article 13 of Workers' Statute by introducing the 'distance work' regulation, which was criticized by the trade unions stressing the need to rely on collective bargaining on this matter (Sanz de Miguel, 2020). Previously, the Law 11/2007 on electronic access to public services included an additional provision for the regulation of telework. In terms of collective bargaining, telework or similar arrangements were barely regulated in sectoral collective bargaining until the outbreak of the pandemic crisis (Sanz de Miguel, 2020).

In the public administration, telework was not much common, but there were pilot programs at national and regional level, such as the Plan Concilia and Order APU/1981/2006, by which telework

was promoted as a measure for work-life balance, granting preferential access to caregivers, parents and pregnant women¹ (Quintanilla Navarro, 2020, p. 66).

Following the declaration of the State Emergency in March 2020, Royal Decree-Law 8/2020 on urgent and extraordinary measures to confront the economic and social impact of COVID-19 was passed, regulating emergency telework. Telework was mandatory in case it was technically feasible and the adaptation effort was proportional. After successive extensions, the urgency legislation was replaced by the Royal Decree-Law 28/2020 on remote working (RDL 28/2020) in September 2020, regulating telework in the private sector. Right after, Royal Decree-Law 29/2020 (RDL 29/2020) targeting public administration was approved.

More recently, Law 10/2021 on Remote Work (LTD) has been approved in August 2021, but it has not introduced significant changes. This regulation excludes public employment, whose teleworking regimes are still governed by RDL 29/2020.

Finally, regarding collective bargaining, a strong increase in collective agreements including telework at sectoral and company level have been identified in public and private sectors. However, its development is still limited (Cruces, 2022; Eurofound, 2022; de la Puebla Pinilla, 2020; Quintanilla Navarro, 2020). Following the approval of RDL 29/2020 the Agreement of the General Administration of the State, many regional and local administrations have addressed the regulation of telework through collective agreements at that time.

3.2 Statutory legislation

In this section, we analyse the current statutory legislation for both the private sector (Section **¡Error! No se encuentra el origen de la referencia.**), and the public sector (Section **¡Error! No se encuentra el origen de la referencia.**). Each section provides an analysis of the regulatory text, as well as a review of the legal literature on this topic which includes the most relevant reflections upon the actual regulation of telework. The laws revised in this section are Law 10/2021 on Distance Work (LTD) and articles 34 and 37 of the Workers' Statute, while Royal Decree-Law 29/2020 (RDL 29/2020) has been analysed for statutory legislation in the public employment. The right to disconnect, provided by Organic Law 3/2018 on Protection of Personal Data and guarantee of digital rights (LOPDGDD), is applicable to both sectors and it has also been analysed. Each section is introduced with details on the replaced regulatory framework and their approval, based on the literature review.

¹Arguments in favour of a modernization of the organization of work were also common.

Table **¡Error! No se encuentra el origen de la referencia.** summarizes the current legal framework for the public and private sectors. The analysis of statutory regulation has been obtained by identifying relevant provisions for telework in each of the sectors and for each dimension studied. These dimensions have been established, following the approach given by Eurofound (2022), and including the most relevant reflections and debates from the legal literature.

Sector	Statutory legislation
Private sector	Law 10/2021 on Distance Work (LTD), replacing Royal Decree-Law 29/2020
	Workers' Statute (only articles 34 and 37)
	Right to disconnect (given by Law 3/2018; LOPDGDD)
Public sector	Royal Decree-Law 28/2020 (RDL 28/2020)
	Right to disconnect (given by Law 3/2018; LOPDGDD)

Table 1. Specific statutory legislation for teleworkers in Spain, per sectors, analysed in this section.

3.2.1 Law 10/2021 (LTD) on Remote Work and Workers' Statute (ET)

Following a tripartite agreement, Royal Decree-Law 28/2020 (RDL 28/2020) provided a new regulatory framework to telework in the private sector. The agreement, ratified with the subsequent approval of Law 10/2021 (LTD), meant a milestone in the regulation of telework both in a national and in a European level because of the range of aspects addressed (Eurofound, 2022).

Despite being approved during the pandemic, RDL 28/2020 regulated telework arrangements under normal conditions (De la Puebla Pinilla, 2020; Rodríguez Escanciano, 2021). Thus, for a certain period of time three different legal frameworks applied, including emergency telework, telework arrangements with their own regimes (collective agreements approved before the legislation) and telework for work-life balance purposes, the former driven by Royal Decree-Law 8/2020 and the latter driven by RDL 28/2020 (Cruz Villalón, 2021; De la Puebla Pinilla, 2020).

Since LTD has not introduced almost any change compared to RDL 28/2020, most studies about RDL 28/2020 are still valid. In fact, De Heredia Ruiz (2022) indicates that the main changes concern tightening of sanctions against employers for non-compliance with the law. Nor has it altered any provision relating to collective bargaining that was already regulated by RDL 28/2020 (Cruz, 2022, p. 12). A more detailed comparison can be found in Gala Durán (2021b, see Appendix).

3.2.1.1 Objectives and scope

This section deals with objectives, motivations and scope of the regulation as have been determined from the explanatory statement, written in the body of the most recent regulation (Law 10/2021 on

remote work; LTD), the legal definition of telework and the analysis of the legal literature on this topic.

3.2.1.1.1 Objectives and motivations

As stated above, RDL 28/2020 (and after LTD) aimed at providing a common regulatory framework of reference for any form of remote work. A framework for the recognition of general rights has been established, enabling social partners to adapt its specific provisions through **collective bargaining**, with a preference towards sectoral collective bargaining.

Telework is considered favourable, and the main motivations for this regulation are the **spread of this work modality** due to the pandemic and highlights and the **advantages** for employees, employers and for the **environment**. More specifically, telework is promoted to tackle the **economic problems** (GDP contraction and unemployment), the consequences and/or challenges of the **COVID-19** pandemic, and to contribute to the fight against **depopulation** in rural areas.

Yet, the grounds for the Law also include references to **psychosocial risks** in connection with telework (isolation, informatic fatigue, 'always on', technostress, loss of work identity, constant availability and poor communication), as well as technical means (like compensation of costs, control and surveillance, access to ICT and risk assessment) are considered supporting elements for this regulation. However, reference to gender issues and **co-responsibility** of domestic work in the adoption of teleworking, even being included in further provisions, are not explicitly mentioned in the ground of the Law. Instead, the latter only includes the advantages of telework for work-life balance, despite the lack of strong scientific evidence in support of this claim (De la Puebla Pinilla, 2020:50).

3.2.1.2 Definition of telework

The analysis of the definition of telework has been carried out taking into following dimensions employed in previous studies (Eurofound, 2022): technology, regularity, workplace and type of arrangement.

The definition of telework in Spain is provided by Law 10/2021. Providing specific definitions for "**trabajo a distancia**" (distance work), "**teletrabajo**" (telework) and "**trabajo presencial**" (face-to-face work), the definition of telework matches the definition provided by the European Framework Agreement for Telework (2002). However, the object of the regulation is, always, distance work, as telework is only a type of distance work. As a result, the wording "telework" is used only to emphasize the importance of some specific provisions due to hyper-connectivity, but this may only be due to the fact that prior regulations (Workers' Statute) always used the term "distance work".

As in previous studies (Eurofound, 2022; European Agency for Safety and Health at Work, 2021), the more relevant dimensions analysed for the definition of telework are technology, place of work and the regularity criterion, which are provided in Table 2.

As can be seen below, occasional telework falls outside this regulation. In this situation, general regulation (the Workers' Statute) and the right to disconnect shall apply.

Concept	Use of ICT	Workplace	Regularity	Type of employment relation
Telework	Essential	Not specified, but it has to be agreed.	At least 30% of the working time, subject to modification by collective bargaining.	Work arrangement
Distance work	Not specified	Not specified, but it has to be agreed.	At least 30% of the working time, subject to modification by collective bargaining.	Work arrangement

Table 2. Concepts provided by Law 10/2021 on Distance Work

The exclusion of occasional teleworkers from the scope of the legislation has been criticized, but some scholars argue that, provided that LTD is based upon a recognition of general rights, occasional teleworkers are not likely to be excluded (Heredia Ruiz, 2022; Ouro, 2022). Conversely, others have concluded that the establishment of the regularity criterion is not clear enough for cases of non-consecutive periods of telework and for overtime (Francisco Javier, 2021). Differently, some have highlighted that the recent introduction of the regularity criterion could lead to potential transition issues since previous agreements without that clause can be left out from this regulation (De la Puebla Pinilla, 2020, pp. 31-32).

3.2.1.3 Telework regime

Analytic dimensions under telework regime category are also taken from the principles for any telework arrangement raised by European Framework Agreement for Telework (2002), similarly to Eurofound (2022).

For this section, the analysis focuses on the following dimensions in LTD and ET:

- Legal mechanism to agree on a telework arrangement (contract or specific agreement), if any, and its requirements.
- Voluntarily and reversibility principles.
- Any kind of entitlements to access to a telework regime depending on the social or individual characteristics, drawing special attention to the implementation of Directive 2019/1158 on work-life balance for parents and carers which enacted the right to request flexible working and telework.

The teleworking regime is established through a specific **agreement in written** and does not have to be included in the employment contract but agreed in advance. The content² may be determined and/or modified by collective bargaining, or otherwise, by the individual agreement. In this sense, it has been considered that the individual agreement has too much weight and entail some risk of arbitrariness on the part of the employer (Pedrosa González, 2021).

The **right to access** a teleworking regime (along with the right of reduction or reorganization of working time and other forms of flexible working) is granted to victims of gender violence, sexual violence or terrorism, if their activity is compatible with telework, in accordance with art. 37 of the Workers' Statute (ET).

In compliance with European Directive 2019/1158, workers with children up to twelve years³ are entitled to the **right to request** any of the arrangements mentioned in the previous paragraph to achieve work-life balance, by art. 38 of the ET, which is not an entitlement. National legislation refers to collective bargaining to regulate the terms of the exercise of this right. If not in place, it includes the obligation of collective bargaining (or individual bargaining in the absence of the former) to seek a proposal within a maximum period of 30 days. However, the company can make an alternative proposal to make effective the conciliation of the worker, or refuse indicating the "objective reasons on which the decision is based".

Finally, there are specific provisions, in the LTD, for **gender equality** in access to teleworking, but it only refers to collective bargaining for the mechanisms to access to remote work, which must avoid the perpetuation of gender roles and have to promote co-responsibility. It is considered that access to a remote work regime is subject to diagnosis and treatment by the company's equality plan, which are mandatory for companies with at least 50 employees. The inclusion of equality considerations aims to prevent telework to become a new form of gender segregation in the labour market, since more women than men request telework for work-life balance purposes (Fernández Prol, 2021). However, the lack of specificity in the regulation may lead to collective bargaining to establish exclusive measures contrary to the purpose of law (Quintanilla Navarro, 2020).

3.2.1.4 Working conditions

In this section, specific legal provisions concerning working conditions of teleworkers have been analysed. The specific working conditions dimensions addressed in this section are grouped into the following sets: working time and work-life balance, the right to disconnect, occupational health

²The issues that the collective agreement has to cover are included in the legislation (LTD).

³In fact, it is not specified which profile of workers are entitled. However, in the end of art. 38 this right seems to be limited to this type of workers.

and safety, surveillance and equal treatment. The regulatory framework considered in the analysis is the Law 10/2021 on remote work (LTD), if not specified.

3.2.1.4.1 Working time and work-life balance

Under this section the following dimensions have been analysed in the case of the specific legislation for teleworkers in Spain, similarly to Eurofound (2022):

- Flexible working time (e. g. the ability to manage his/her working time).
- The establishment of breaks and rest periods.
- Recording and monitoring of working time.

The Spanish regulation gives the teleworker **autonomy** for the self-organisation of working time, but under the terms of collective bargaining. In fact, the same worker under a telework arrangement is granted more flexibility than when working at employer's premises, if agreed in collective bargaining. This has been criticized by B. Torres (2021, pp. 49-50), arguing that it can discourage employers to promote teleworking.

Breaks and rest periods regulation refer to general regulation in the provisions regulating the autonomy of teleworkers. Instead, they are considered part of the risk assessment, and they are also mentioned for the enforcement of the right to disconnect⁴.

There are not further provisions for **recording working time**, since in Spain it is mandatory for all employees to register start time and end time. There is only the obligation to register working time, whose register system must be reliable and will be established by collective bargaining.

3.2.1.4.2 Occupational health and Safety

Under this heading, the following dimensions have been addressed:

- Risk prevention. This dimension addresses the terms and conditions under which risk assessment is conducted as part of the agreement on telework.
- Provisions addressing specific risks for teleworking, including both psychosocial risks and musculoskeletal disorders).

Regarding risk assessment at teleworkers' home, legal provisions limit the area for health and safety inspections at teleworkers' home-office, and always subject to prior agreement with the worker concerned. Subsequently, remote self-assessments can be enabled by collective or individual bargaining, which contrasts to other national legislations that specifically obliges teleworkers to attend the visit of specialists on risk prevention. It specifically refers to Law 31/1995 on the

⁴It is only stated to be rest periods respected.

Prevention of Occupational Risks, which requires a permanent action to monitor preventive activity, as with on-site workers. As a result, risk assessment can be considered a precondition even it is not explicitly stated in the regulation.

Specific **risks** for teleworkers are to be included in the prevention policies. Psychosocial risks and musculoskeletal disorders are only mentioned⁵, only specifying that the “distribution of the working day, the availability times and the guarantee of breaks and disconnections during the day” have to be taken into account⁶ This has been favourably recognized by some scholars (Carrizosa, 2021; Fernández Prol, 2021; Pérez Campos, 2021), since the first regulation⁷ did not address some important aspects of teleworking regulation already set up in the European Framework Agreement on Telework, such as the intensive use of information and communication technologies (ICT) (Cruces, 2022, pp. 264-265).

Finally, it is also worth noting that the right to disconnect has recently been included into OSH risk prevention in the framework of telework regulation (Carrizosa, 2021). Details on the right to disconnect are included in the following section.

3.2.1.4.3 Right to disconnect

The analysis of the right to disconnect is addressed in this sub-heading for its relevance both in a national and European level. Considering prior studies and the specific relevance of the Spanish regulation in a comparative perspective, the following dimensions have been considered (Eurofound, 2020b, 2021; Lerouge & Trujillo Pons, 2022):

- Scope (it applies to all employees regardless of they are engaged in a telework arrangement).
- Enforcement.
- Logics.

The right to disconnect was first approved in Law 3/2018 (LOPDGDD) on Protection of Personal Data and Guarantee of Digital Rights, and it provides the right to not attend any communication outside their working hours applies to **all employees**.

⁵However, it does not prevent regulation of many aspects such as percentages of face-to-face attendance, time flexibility, duration of the teleworking agreement, guarantee of teleworkers' rights or even costs.

⁶As it has been said above, hyper-connectivity is considered in the Spanish regulation in terms of psychosocial risks in the explanatory statement of the regulation.

⁷Art. 13 of the ET came from the approval of Law 3/2012 (Masfamilia, 2012, p. 56), and was the first important regulation in this field.

Its compliance is considered an **obligation** for the employer, and the company is required to agree an **internal policy** for its exercise on everyday practices and the organisation of **training and awareness activities**, also targeting managers, and establishing **sanctions** for non-compliance.

Thus, a link can be established between the right-to-disconnect with OSH risk prevention and working time management strategies. The recognition of the right to disconnect contribute to the strengthening of the right to rest against the risk of constant connectivity (Ginès i Fabrellas & Peña Moncho, 2023; Molina Navarrete, 2017).

Some scholars have also highlighted the pedagogical approach to the issue and its emphasis on the promotion of reasonable use of new technologies among workers and managers (Lerouge & Trujillo Pons, 2022).

LTD mentions the right to disconnect, but it did not introduce any major development on the right to disconnect beyond a general obligation for compliance. Thus, some argued that the new provisions do not bring anything new, being too much ambiguous and still lacking enough mechanisms for an effective enforcement (Bernabeu, 2021, only for LOPDGDD; Torres, 2021). However, while some argued that the right to disconnect are not linked enough to occupational health and gender equality (Ayerra Duesca, 2022), others considered a great advance that the right to disconnect has recently been included into risk prevention (Carrizosa, 2021; Moll Noguera, 2022a; Montesdeoca, 2022).

Finally, it is worth noting that both pieces of legislation refer to **collective bargaining** for the implementation and enforcement of the right to disconnect.

3.2.1.4.4 Surveillance

This section seeks for specific provisions related to the use of digital monitoring systems and its balance with teleworkers' rights to privacy and data protection. The following dimensions have been considered:

- Principle of proportionality.
- Data protection in relation to the monitoring of the employee.

First, LTD requires the compliance of the **principle of proportionality**, in order to guarantee workers' privacy right. Regarding the second dimension, the law explicitly prohibits installing any form of monitoring software and application on worker-owned devices, and urge companies to establish criteria for use of digital devices in compliance with legal requirements on privacy rights.

3.2.1.4.5 Equal treatment

Finally, specific dimensions for teleworkers defining equal treatment between teleworkers and non-teleworkers have been analysed. Under this category, we have established the following two dimensions:

- Guarantee of equal treatment, in which we identify the application of the principle of non-discrimination (i.e., on specific issues), if stated in the regulation.
- Whether the telework arrangement implies any compensation of costs for the employee.

For the guarantee of equal treatment, we have identified that in Spain there is only a general recognition to the principle of **non-discrimination**. It refers to gender equality and general non-discrimination, and recently included non-discrimination for age, seniority, professional group and disability (if compared to Royal Decree-Law 28/2020, Gala Durán, 2021b), for salary, training, professional development, risk prevention and representation rights. The scientific literature has often considered it too general, and even insufficient regarding gender equality (Ayerra Duesca, 2022). Some claimed that it is a great advance provided that it regulates a legal regime, but only if compared to previous regulations (Heredia Ruiz, 2022; Torres, 2021), even though the principle of equality was already present in the Workers' Statute for teleworkers.

Looking for any provisions for compensation of costs, legislation only sets a **general provision**, by which the teleworker must not assume costs related to the provision of services. Even though, Carrizosa (2021) argued that the Spanish regulation is much exhaustive, if compared to other regulations. In contrast, many others argued that the compensation of costs are too much ambiguous (Torres, 2021, for instance, the lack of specification for private or direct costs) and may require jurisprudence (Pérez del Prado, 2020). Like in most provisions, there is a reference to **collective bargaining** to regulate this issue.

3.2.2 Royal Decree-Law 29/2020

This section's subheading presents the main provisions included in the Royal Decree-Law 29/2020 (RDL 29/2020) on urgent measures on telework in the public administration. In this regard, its content is limited to the amendment of a single article (art. 47 bis.) of the Basic Statute of Public Employees which undertakes the basic regulation of telework for its development in the public administration sector. The main issues addressed are the following:

- A telework **definition** is provided in the same way as RDL 28/2020, but only concerning telework, not distance work (neither providing definition for distance work).
- Regulates state that the possibility to telework shall be compatible **with on-site work**.
- **Voluntary** and **reversibility** principles are included.
- Even though there is no reference to working time patterns or work-life balance (i.e., provisions regulating the autonomy of the teleworker or break/rests periods), it is stated that telework has to contribute to a better organization of work through the **identification of objectives**. This framework specifically considers that new performance standards are to be developed.

- The guarantee of **equal rights**, including regulation of risk preventions, is also stated.
- There is no reference to any kind of cost compensation, but it is stated that the Public Administration must provide and maintain **technological equipment**.

Although apparently no major differences exist compared to the general regulation for the private sector set in the RDL 28/2020, two main issues have been raised (de la Puebla Pinilla, 2020). First, the RDL 29/2020 do not include as many references to the role of collective bargaining. Second, reference to the compensation of costs incurred by teleworkers by the public administration is missing.

In addition, the new regulation has been considered too brief and unclear when compared to LTD, as well as too strict for not allowing the regulation of telework on a full-time basis (Gala Durán, 2021a).

3.3 Collective regulation in the four sectors covered

This section deals with the regulation of telework through collective bargaining in each of the four sectors covered in the project. First, a brief overview of the structure of the industrial relations for each sector is provided. Thereafter, we develop an analysis of the main provisions on telework of the two main relevant collective agreements in each of the sector, either at company or sector level.

3.3.1 Overview of the industrial relations landscape

3.3.1.1.1 ICT Consultancy

The most relevant multi-employer collective agreement in the ICT consultancy sector (NACE 62) is the national sectoral collective agreement for consulting, market studies and public opinion companies. The last agreement expired in 2019 and it was only recently that social partners reached an agreement for its extension for the period 2020-2024⁸. The main organisations involved in sectoral collective bargaining are, on the employer side, the Spanish Association of Consulting Companies (AEC⁹), the Employer Organization of Marketing Companies (ANIMES¹⁰), the National Association of Companies of Market Research and Public Opinion (ANEIMO¹¹). On the trade unions' side, the two signatory organisations are the State Federation of Services of Workers' Commissions

⁸However, it is also true that all employees have a time flexibility framework (less flexible compared to teleworkers).

⁹*Asociación Española de Empresas de Consultoría*

¹⁰*Patronal de investigación del marketing*

¹¹*Asociación Nacional de Empresas de Investigación de Mercados y de la Opinión Pública*

(CC.OO. Servicios¹²) and the State Federation of Services, Mobility and Consumption of the General Union of Workers (FeSMC-UGT¹³).

Other sector-related collective agreement are the national sectoral collective agreement of industry, new technologies and services of the metal industry, and other province-level sector agreements whose scope partially covers some sector's activities. On the other hand, company-level bargaining exists but with have a quite limited coverage.

3.3.1.1.2 Financial activities

The structure of collective bargaining in the financial services sector is divided into three main national sector-level collective agreements covering different parts of the sector:

- xxiv Bank Collective Agreement (2019-2023). It covers NACE 6419 and 91,539 employees.
- xxii Collective Agreement for credit cooperative societies (2019-2023). It covers 14,094 employees, from sub-sector NACE 6492.
- Collective Agreement for Saving Banks and Financial Institutions (2019-2024). It covers NACE 6491 and 67,039 employees.

The employer organisations involved in sectoral collective bargaining are the Spanish Banking Association (AEB¹⁴), the National Union of Credit Cooperatives (UNACC¹⁵), the Business Association of Credit Cooperative Entitites (ASEMECC¹⁶) and the Spanish Confederation of Savings Banks (CECA¹⁷). The trade unions involved in sectoral collective bargaining are FeSMC-UGT, CCOO-Servicios and Federation Force, Independence and Employment (FINE¹⁸). Sector-level bargaining at province level is nearly absent, although the coverage of some existing agreements at this level partially overlaps with sector-related activities (such Collective Agreement for Offices and Dispatches in Valencia). Company collective bargaining play also a prominent role in the regulation of working conditions in the sector.

¹²Federación Estatal de Servicios de Comisiones Obreras

¹³Federación Estatal de Servicios, Movilidad y Consumo de la Unión General de Trabajadores

¹⁴Asociación Española de Banca

¹⁵Unión Nacional de Cooperativas de Crédito

¹⁶Asociación Empresarial de Entidades Cooperativas de Crédito

¹⁷Confederación Española de Cajas de Ahorro

¹⁸Federación Fuerza, Independencia y Empleo

3.3.1.1.3 Chemical Sector

The structure of collective bargaining in the chemical sector is centralised in the national sector-level collective agreement for the Chemical industry, arguably one of the most relevant collective agreements in the Spanish collective bargaining landscape (CCOO-Industria, 2015).

The chemical sector in Spain is covered by the national sector collective agreement in the Chemical industry, arguably one of the most relevant collective agreements in Spain. Employers' representativeness is concentrated in the national employers' organisation of the Chemical Sector (FEIQUE¹⁹). On the unions' side, the signatory organisations are the Industry, Construction and Agro Federation of the General Union of Workers (UGT-FICA²⁰) and Industry Federation of Workers' Commissions (CCOO-Industria).

3.3.1.1.4 Public sector

Collective bargaining structure in the public administration (NACE 84) is more complex compared with other sectors covered in the project. The Basic Statute of Public Employees provides different collective bargaining tables for civil servants depending on the type of civil service (Moll Noguera, 2022b, pp. 305-306):

- The General Board of all Public Administrations (art. 36.1 EBEP).
- The General Board in the State Administration (art. 34.1 EBEP).
- A General Board in each Autonomous Community (regions) (art. 34.1 EBEP).
- A General Board in each local entity or supra-municipal area (art. 34.1 and 34.2 EBEP).
- Boards of sectoral negotiation agreed by the General Boards (art. 34.3 EBEP), covering only these issues where there is no regulation endorsed by the General Boards.
- Common collective bargaining tables for civil servants and labour personnel (art. 326.3).

As a result, in each Board the following trade unions may be involved depending on the region and type of civil service: Independent Union Central and Officials (CSIF²¹), UGT, CCOO, and the Galician Inter-union Confederation (CIG²²).

¹⁹Federación Empresarial de la Industria Química Española

²⁰Federación de Industria, Construcción y Agro de la Unión General de Trabajadores

²¹La Central Sindical Independiente y de Funcionarios

²²Confederación Intersindical Gallega

3.3.2 The regulation of telework in each sector

This section presents the main findings of the analysis of the collective regulation of telework in the four sectors covered in the project. The analysis builds on the two main collective agreements in each sector according to the number of employees covered and the significance of the provisions contained in the agreements. Findings for each sector are grouped into the same categories used in the analysis of the regulation in previous section²³. This is because of the capacity of collective bargaining to modify practically any provision of the legislation and because of the diversity of issues addressed through collective bargaining in the four sectors.

From a general perspective, the coverage of collective bargaining provisions on telework is still low although rising. According to most recent available data for 2021 (provisional), the number of sector-level agreements dealing with the regulation of teleworkers' conditions barely represented the 12% of total agreements in force in 2020 and covers less than a quarter (24.4%) of total employees covered by collective bargaining. Besides, many collective agreements merely reproduce the legal provisions on telework (De la Puebla Pinilla, 2020; Pérez del Prado, 2020; Quintanilla Navarro, 2020). However, many times telework provisions do not imply a legal regime for being a general announcement of rights which are already set up in the legislation (Quintanilla Navarro, 2020, pp. 85-86). This is explained by the low development of telework and due the fact that teleworking is often considered an as inherent to employers' powers for work organisation and not subject to collective bargaining (Quintanilla Navarro, 2020).

The main features of the regulation of telework in a post-outbreak of the pandemic scenario have been systematized by some authors (de la Puebla Pinilla, 2020; Quintanilla Navarro, 2020; Gómez Gordillo et al., 2022). The following are the most relevant elements obtained from these sources:

- Collective agreements tend to paraphrase statutory regulation without providing enough means for enforcement.
- The preferred modality is occasional telework.
- Real priorities and preferences to access to a telework regime are not usually set, but profile of teleworkers preferred are required to access to a telework regime drawing from professional and occupational skills.

²³This includes the analysis of the definition of telework (location, ICT use and regularity criterion), the telework regime (legal mechanisms, voluntariness and reversibility and preference of access) and provisions related to working conditions. The latter includes working time and work-life balance (flexibility, break periods and working time registry), occupational health (risk assessment and consideration of specific risks for teleworkers), the right to disconnect (general recognition, scope, logics and mechanisms of enforcement) and surveillance (proportionality principle and data protection).

- Even though telework is always considered voluntary, reversibility is not always fully respected.
- Telework is often regulated without mentioning work-life balance purposes for access criteria.
- Right to disconnect is normally regulated, but without differentiation among teleworkers and non-teleworkers.
- Provisions for compensation of costs are not clear enough in some cases.

The scientific literature has not identified many differences among sectors in terms of the regulation of telework. A more comprehensive regulation of telework can be found in sectors with a traditionally higher prevalence of telework, such as in the finance sector, which was the first sector regulating telework in a sectoral level (Gómez Gordillo et al., 2022). It is worth to mention that the development of telework in the public sector has relied to a greater extent on its promotion for work-life balance purposes (Gala Durán, 2021a).

Table 3 presents the collective agreements analysed using as a selection criteria the structure of the collective bargaining determined in the previous section.

Sector	Multi-employer/single-employer collective agreement/s	Description
ICT Consultancy (NACE 62)	Pre-agreement for the XVIII State collective agreement of consulting companies, market studies and public opinion	Pre-agreement for a national collective agreement (2020-2024) which covers the entire sector, along with others.
	Collective Agreement for Offices and Dispatches in Valencia	Province collective agreement (2021-2023) which covers NACE 82 but explicitly includes NACE 62 and sub-sectors among other sectors. Among others, it also covers NACE 64 (financial activities). 10,000 employees are covered.
	Collective Agreement of Ibermática S.A.	Company collective agreement covering only NACE 6209, valid from 2019 to 2021. 3,090 employees are covered.
	Collective Agreement of NECOMPLUS, S.L	Company collective agreement covering only NACE 6209, valid from 2022 to 2024. Only 407 employees are covered.

Financial Activities (NACE 64)	xxiv Bank Collective Agreement	National collective agreement (2019-2023) covering the entire sector. It covers NACE 6419 and 91,539 employees.
	xxii Collective Agreement for credit cooperative societies	National collective agreement (2019-2023). It covers 14,094 employees, from sub-sector NACE 6492.
	Collective Agreement for savings banks and financial institutions	67,039 employees. Only NACE 6491. 2019-2024
	Financial El Corte Inglés	Company collective agreement (2021-2024). 837 employees are covered from sub-sector NACE 6499.
	Caixa d'Estalvis and Pensions Banking Foundation of Barcelona "La Caixa"	Company collective agreement (2021-2023). 389 employees are covered, from sub-sector NACE 8899 (other social service activities without accommodation n.e.c.).
Chemical Sectoral (NACE 20)	xx Collective Agreement of the Chemical Sectoral	National collective agreement (2021-2023) covering the entire sector. It covers 300,000 employees from all sub-sectors from NACE 20.
	viii Collective Agreement Iberdrola Grupo	Company collective agreement (2021-2024).
	Collective Agreement of Repsol Chemical	Company collective agreement (2020-2024).
Public Administration (NACE 84)	The Agreement of the General Negotiating table of the General State Administration (article 36.3 TREBEP) on the development of teleworking in the General State Administration	Agreement of the General Board for the General State Administration.
	Decree 79/2020, of September 16, of the Government Council, which regulates the modality of provision of services under the teleworking regime in the Administration of the Community of Madrid.	Statutory regulation coming from an agreement of the Public Administration of Madrid with the trade unions.
	Teleworking Protocol of the Valencia City Council	Teleworking protocol agreed with all trade unions representing employees' in the City Council of Valencia.

Table 3. Multi-employer and single-employer collective agreements analysed. White cells correspond to multi-employer collective agreements, and grey cells to company collective agreements.

3.3.2.1 ICT Consultancy

ICT sector has not regulated telework through collective bargaining. Last national sectoral collective agreement does not cover telework, even though negotiations for its renewal are still ongoing. Only two sector-level agreements in the provinces of Zaragoza and Valencia which partially cover the sector address the regulation of telework. In addition, two of the largest company-level agreements in the sector have been considered in the analysis (Iberamática S.A, and NECOMPLUS S.L).

3.3.2.1.1 Definition of telework

There is no definition of telework in the incoming national sectoral collective agreement, but it is agreed that only regular telework will be covered. Collective Agreement for Offices and Dispatches in Valencia provides a definition of telework close to the one set in the LTD 10/2021, but deviates from it in that it allows the teleworker to freely choose the working place. Conversely, company level agreement at Ibermática S.A. only allows home-based telework, whereas NECOMPLUS S.L. does not provide any detail on the location of telework but in line with the LTD 10/2021.

3.3.2.1.2 Telework regime

All telework agreements require an individual agreement with the conditions for telework (technological means, costs, working place, reversibility, difficulties, working hours, etc.), but the Collective Agreement of Ibermática S.A. only requires an agreement for the tasks to be performed when teleworking (not in written).

The voluntarily principle has been recognised in the Collective Agreement for Offices and Dispatches in Valencia and in NECOMPLUS S.A, but not in Ibermática S.A.

None of the collective agreements analysed for this sector provide access preferences to telework arrangement. Only a **recommendation** to register **vacancies** for teleworkable job positions is stated in Collective Agreement for Offices and Dispatches in Valencia.

3.3.2.1.3 Working conditions

Company collective agreement from Ibermática S.A. provides the teleworkers with **total flexibility** in the organisation of their working hours, but they value the **willingness to come to the office** when required. This entitlement to flexibility is not provided neither in NECOMPLUS S.A. nor in the Collective Agreement for Offices and Dispatches in Valencia. It is worth noting that company collective agreement from NECOMPLUS S.A. obliges to **notify** the worker to come to the office within a minimum term of seven days.

In terms of occupational health, only the Collective Agreement for Offices and Dispatches in Valencia includes specific provisions, by which it entitles the teleworker to refuse the visit of a

specialist and it promotes **face-to-face** links to avoid **isolation**²⁴. Similarly, for the **right to disconnect**, only Collective Agreement for Offices and Dispatches in Valencia specifies measures for its enforcement and a measure is put forward. For surveillance, only this collective agreement establishes criteria for the utilization of digital means and obliges the company to provide information of the tools in place.

Finally, the **equality principle** is only stated in the Collective Agreement for Offices and Dispatches in Valencia²⁵. The compensation of costs has been included in almost all collective agreements. A compensation of costs of **€38** per month (proportional to working time teleworking) and the provision and maintenance of technological means are established in the Collective Agreement for Offices and Dispatches in Valencia. For the incoming collective agreement, a compensation of **€17** per month in full-time workers is agreed, whereas NECOMPLUS S.L establishes a compensation of **€15** per month along with the provision and maintenance of the equipment.

3.3.2.2 Financial activities

As above mentioned, the regulation of telework in the financial sector is highly developed in comparison with other sectors. All national sector-level agreements and many company agreements address the regulation of telework along with other relevant aspect.

- National sector agreement in the banking sector and the company-level agreement for Financiera El Corte Inglés stand out for their recognition of trade union information right through companies' internal communication channels, and for putting forward measures to ensure the right to disconnect. Besides, xxiv Bank Collective Agreement refused to promote full-time telework to prevent from psychosocial risks²⁶ (de la Puebla Pinilla, 2020; Quintanilla Navarro, 2020, p. 93).
- “La Caixa” Collective Agreement was highlighted for providing the right to telework for pregnant women (which was considered exceptional) (de la Puebla Pinilla, 2020).
- Agreement for the conditions for teleworking in BBVA were found remarkable for stating the teleworking conditions, including provisions for the telework regime and the working time of the teleworker (Quintanilla Navarro, 2020, pp. 91-92), and for the permanency (Gómez Gordillo et al., 2022).
- Deutsche Bank SAE Partial Telework Agreement was highlighted because it requires workers to indicate the reasons why they believe they can telework and it promotes telework for the

²⁴Meetings have to be organized within the limits of the working hours, trying to not expand beyond them, and counting as effective working hours if happens.

²⁵Only for training, promotion, collective rights, communication and retribution.

²⁶In these cases, there are provisions for different compensation of costs regime.

most productive employees. Collective agreement from Kutxabank (2019-2021, covering 3,503 employees in NACE 6419), was also studied (Gómez Gordillo et al., 2022).

3.3.2.2.1 Definition of telework

No explicit definition of telework is provided by any collective agreements. However, it is remarkable that xxiv Banking Collective Agreement adopts the definition set in LTD 10/2021 and leaves **up to the company** to decide whether **telework below the regularity threshold**²⁷ is covered or not. In contrast, the xxii Collective Agreement for credit cooperative societies telework **must be regular**. None of the collective agreements of this sector determines a specific location for telework²⁸. Thus, definition of telework in these agreements are close to the statutory definition.

3.3.2.2.2 Telework regime

All collective agreements require an individual agreement to engage in a teleworking arrangement. No multi-employer collective agreement provide for the consideration of individual preferences to telework, with some exceptions. Instead, “La Caixa” entitles **pregnant women** and workers who **temporarily have reduced mobility** to telework. Employees with **children with a disability or special needs** can combine 20 hours per week of mandatory on-site work with telework²⁹. It is remarkable that in xxiv Bank Collective Agreement, xxii Collective Agreement for credit cooperative societies and in Financial el Corte Inglés, employers must provide a **census** or a **list of vacancies** of teleworkable job positions. In these collective agreements, telework is **voluntary** and **reversible** with conditions.

3.3.2.2.3 Working conditions

There are no general provisions for the organisation of working time of teleworkers.

For **the right to disconnect**, measures are proposed in all collective agreements for its enforcement, including e-mail automatic responses, avoiding meetings in certain hours and the elaboration of an **internal plan** for the use of ICT devices. Moreover, company collective agreement of j Financial el Corte Inglés added the limiting of calls, the elimination of the unnecessary displacements and

²⁷In this organization there is an implementation of a **voluntary** telework agreement for **all the employees** one day per week.

²⁸Financial el Corte Inglés sets a maximum of €23 per month. The maximum set in xxii Collective Agreement for credit cooperative societies is €55 per month and in xxiv Bank Collective Agreement is €130.

²⁹Second homes can be included if working conditions allow it, being this decision reversible for both parties, if it accomplishes with some requirements, including the allowance to the employee to reach the office in a maximum term of 24 hours (or less if required), the obligation to be and the same country and if it has a stable connection and **not** through mobile data usage and the compliance with risk prevention requirements.

training and awareness activities for the rational use of ICT devices. Besides, “La Caixa” included an internal plan with specific measures in their intranet along with sanctions for non-compliance, which includes work-life balance considerations.

For occupational health, xxii Bank Collective Agreement and Financial El Corte Inglés state that **risk assessment** will be performed **preferably on remote basis**, but only the former advise to maintain face-to-face relationship to avoid isolation.

All multi-employer collective agreements include **right to privacy** for data protection for employees. xxiv Bank Collective Agreement states a **right in front of algorithms**, which consists on the exclusion of algorithms from decision-making processes and providing employees with information on the use of digital monitoring systems.

All multi-employer collective agreements and Financial El Corte Inglés provide provisions for **compensation of costs**³⁰ and technological means provided by the employer. There are more references to equal treatment in almost all collective agreements for equal treatment in collective rights and information.

3.3.2.3 Chemical sector

Research on the topic has highlighted different aspects of the collective regulation of telework in the chemical sector.

- In regard to risk prevention, XIX national sector level agreement in the chemical industry rejects promoting the adoption of full-time telework arrangements in order to prevent psychosocial risks (Quintanilla Navarro, 2020).
- In regard with the right to disconnect, the Iberdrola company agreement has been highlighted for the measures aimed at the enforcement of the right to disconnect (de la Puebla Pinilla, 2020; Quintanilla Navarro, 2020).
- In terms of work-life balance, sector-level agreement includes a general provision for the flexibilization of working time (Quintanilla Navarro, 2020).

3.3.2.3.1 Definition of telework

The multi-employer collective agreement refers to statutory regulation. The two company agreements only provide the option for occasional telework: the Iberdrola Group company agreement only considers **home-based telework two days per week**, while in the case of Repsol

³⁰Only an agreement with the representation of workers for more flexibility of working time including distance work, in compliance with art. 38 of Workers’ Statute.

company agreement, the possibility to work on remote is restricted to specific tasks and with a frequency below the legal threshold.

3.3.2.3.2 Telework regime

The multi-employer collective agreement does **not** provide for **eligibility** criteria or criteria for preferential access to telework³¹. Instead, it obliges companies to inform annually to the representation of workers about teleworkable job positions.

Other requirements are set for the access to telework arrangements. Repsol Chemical company agreement only allows telework for **full-time workers**. In addition, the two company agreements limit access to telework to certain professional skills requirements (Repsol) and highly qualified technicians whose job positions and whenever their job position allow it.

3.3.2.3.3 Working conditions

National sector collective agreement does not include many provisions on the regulation of working conditions. Both single-employer collective agreements include the legal obligation for the recording of working time³². In the case of Iberdrola it also provides a definition for effective working time for teleworkers which does not include rest times. In addition, company-level bargaining provides for some forms of working time flexibility. In the Iberdrola Group company agreement employees are allowed to work flexibly while they are available to work during “core hours”. In Repsol Chemical, some teleworkers are granted with flexible working hours depending on the job position. It is noteworthy that in some cases flexibility is a requirement for the employee. Thus, in Repsol Company being available for work demands in the days/afternoons of work in the same week may be a requirement before engaging in a teleworking arrangement.

In regard with the right to disconnect, sector-level collective agreement only states that companies’ internal policies shall consider the specificities of telework arrangements. In contrast, the Iberdrola Group company agreement puts forward specific measures aimed at its effective enforcement, through the promotion of changes in work practices and in the use of ICT.

Data protection is not addressed in any of these collective agreements. Instead, Repsol Chemical only considers **data protection for the employer perspective**.

Provisions for **equal treatment** concerning teleworkers’ collective rights and the compensation of costs can be found in all collective agreements. In the case of Repsol company agreement, these provisions also apply to wages, training opportunities, workload and occupational health and safety.

³¹Extensions of no more than two years in General State Employees.

³²This authorization normally comes from the direct supervisor. In General State Employees’, it depends on the budget needs and the feasibility.

With regard to the **compensation of costs**, the national sector collective agreement sets a minimum compensation of €35 a month (proportional to the working time on remote). The two company agreements covered in the sector do not provide for specific cost compensation policies and in the case of Repsol, it is only stated that the employer is responsible for provision and maintenance of the ICT equipment.

3.3.2.4 Public Sector

Negotiations of the General Boards of public servants started just after the approval of Royal-Decree Law 29/2020. However, this sector had already promoted pilot programs for work-life balance purposes, and is considered to take into account work-life balance in a greater extent for teleworked if compared with the other sectors (de la Puebla Pinilla, 2020; Quintanilla Navarro, 2020). General Agreement of the General Board of Public Administration was already analysed (de la Puebla Pinilla, 2020; Moll Noguera, 2022).

Many local Administrations have recently regulated telework. Telework protocol in Valencia, which has been recently approved, is considered the most extensive telework agreement in the public service.

Finally, UPV/EHU collective agreement was found relevant, and the Code of Good Practices of the Basque Country, which was found historical (from 2010-2011) endorsing telework (Gómez Gordillo et al., 2022).

3.3.2.4.1 Definition of telework

Telework, in all cases, cannot be carried out in a full-time basis, but **alternating with face-to-face work**. The employee can choose the location in the agreement of the region of Madrid.

3.3.2.4.2 Telework regime

General State Administration permits a special modality of telework for demographic decline in some regions and areas with difficult coverage (at least 10% of the working time), but the general modality is **3 days of telework** and 2 days of face-to-face work, similarly to the regulation of telework for public employees in the region of Madrid³³. In the teleworking protocol of the City Council of Valencia, a **maximum of four days of telework** per week is set. In the latter, there are also different modalities of telework (for organizational or work-life balance, combined with determined or undetermined period).

³³ They make use of CITRIX and an VPN, which is also used for confidentiality.

Access to telework is through **periodic public calls** in all cases, needing an authorization before applying³⁴, and the procedure is detailed extensively in all collective agreements. General State Employees only considers a possibility some criteria such as disability, health, terrorism or gender violence, but teleworking protocol of the City Council of Valencia consider health and **work-life-balance** within a **system of points** to access to a telework regime.

There are also **requirements** to access to at telework regime, in addition to teleworkability. For instance, in the region of Madrid the **capacity to establish at least two objectives** is mandatory, and in the region of Valencia the job position must be **autonomous**.

It is remarkable that a **census of teleworkable job positions** (occupied or not) is mandatory for the Administration, at the disposal of the trade unions, with the details of the job position and data of the employee performing telework. A general **assessment** of telework (individual and/or collective) is also established in all collective agreements. Note that individual assessment is normally realized through objectives (City Council of Valencia and General State Employees').

3.3.2.4.3 Working conditions

In all collective agreements it is stated that teleworkers must respect a **mandatory schedule** of working hours daily. In the region of Madrid and in the City Council of Valencia, minimum periods of interconnectivity can be set. General State Employees' and employees in City Council Employee cannot fractionate daily working time. Registering of **working time** is established only in the City Council of Valencia through specific platforms (CITRIX and the VPN used for data protection – employer side). The right to disconnect is only stated, but there are no explicit measures in any collective agreement.

Collective agreement for General State Employees' considers psychosocial risks (technostress) and isolation. **Risk assessment** will be through **auto-evaluation** and region of Madrid and in the General State Employees', while in the region of Valencia it is only stated that it must respect intimacy.

Control and surveillance is only considered in General State Employees' collective Agreement, which is permitted for assessment of commissioned workers.

In terms of references to **equal treatment**, there are stated in all collective agreements, like gender equality, co-responsibility, right to intimacy, right to disconnect, collective rights, salary, promotion, communication, in all collective agreements.

Finally, there are **no compensation of costs** in any of the collective agreements. Instead, the Administration has to provide the necessary technological means in all cases. It is remarkable the

³⁴Others include disabled employees or multi-employed workers.

telework protocol of the region of Valencia, which provides more detail on the way the Administration can provide the technological means, but also makes the employee responsible for the maintenance (operating system updates) for data protection of the Administration.

4. Conclusions

4.1 Prevalence of telework

The incidence of telework in Spain has noticeably increased since 2019: 12.6% of employees performed telework in 2022, compared to 8.4% of employees in 2019, including regular and occasional telework. However, this figure has been decreasing since 2020 and remains low compared to EU average.

The prevalence of telework still varies according to socio-demographic variables (sex and age) and educational level. Since the outbreak of the pandemic crisis, differences in the prevalence of telework between men and women have been narrowed, while preexisting differences in the prevalence of telework by age groups has been exacerbated (workers older than 45 years record a higher prevalence of occasional telework). Evidence also suggests that differences in the prevalence of telework according to educational level remain

Research evidence about changes in the prevalence of telework across sectors during the pandemic is rather limited. However, it can be argued that the pandemic has contributed to the extension of telework, especially in those sectors in which telework was more common (ICT and financial activities).

4.2 The impact of telework in working conditions

Most research findings on the implications of telework on working conditions focus on working time, work-life balance and occupational health and safety. Almost no evidence has been found at sectoral level.

Quantitative and qualitative research outcomes are not conclusive due to the effect of the extraordinary period of the pandemic crisis. However, several studies show a worsening of working conditions in dimensions such as working time and work-life balance. Teleworkers tend to work long hours, under more irregular hours and on holidays, but these outcomes varied along educational attainment and occupational sector. Despite having more autonomy, teleworkers were more likely to have poor work-life balance. In addition, the negative outcomes of telework normally had a more detrimental effect on employees with more intensive teleworking arrangements and in women. Female teleworkers had an increase in the workload because they are expected to fulfil both

domestic tasks and job demands. Thus, women are still taking on most of the burden, but some evidence suggests that egalitarian divisions are being more common in some socioeconomic profiles of teleworkers.

Research focused on occupational health and safety show a mixed picture. In some cases, telework was associated to a worsening of occupational health in psychological well-being, which was found to be worse for women and teleworkers with less teleworkable jobs. Studies also suggest that teleworking in Spain during the lockdown entailed an increase of ergonomic risks due to the lack of adequate of workplace for telework and the use of non-ergonomic digital resources. However, there are also studies which show positive outcomes of telework in subjective well-being.

Almost no evidence has been found on control and surveillance and equal treatment. In terms of control and surveillance, some quantitative evidence suggests that special mechanisms beyond assessment of the outcomes were rarely adopted during the lockdown. With regard to equal treatment, the picture is mixed. Women were found to be less likely to be promoted than men because career advancement opportunities were still conceived by managers as a reward for extended availability and longer working hours. Even though cases of transforming leadership have been identified, it seems that there is a general distrust to telework among managers.

4.3 The regulation of telework

Law 10/2021 on Remote Work (LTD) provided a new regulatory framework for teleworking arrangements in the private sector. This legislation consists in a general approach of recognition of rights, referring to collective bargaining to accommodate the regulation on each sector/company.

Many debates have been issued by the legal literature. The exclusion of occasional telework has been extensively criticised. Similarly, concerns have been raised because of the lack of a real right to access to a teleworking regime for work-life balance purposes.

In terms of occupational health and safety, there are on-going debates. Some scholars have positively assessed the inclusion of specific risks of teleworking for the first time in the Spanish legislation and their relationship with the right to disconnect, whereas others criticised the lack of clarity and ambiguity concerning occupational health. Similarly, the right to disconnect was found to be ambiguous for some scholars, but others stressed their attempt to raise awareness of the use of ICT in the workplace by means of implemental internal plans.

In the public sector, telework was regulated through Royal Decree-Law 29/2020 (RDL). This legislation is similar to LTD, but some differences were obtained by scholars. Thus, RDL 29/2020 provides less references to the role of collective bargaining, it does not ensure the compensation of costs and excludes full-time telework from its scope.

Collective bargaining dealing with telework has significantly increased after the outbreak of the pandemic. However, some scholars agreed that this increase occurred within those sectors in which telework was most relevant and/or already regulated before the pandemic. Moreover, they agree that the coverage of telework through collective agreement still remains low. Besides, many collective bargaining tend to replicate the statutory legislation, being ambiguous in dimensions such as the right to access to telework arrangements, the compensation of costs and the reversibility principle. Some scholars also criticise that many collective agreements involving telework in Spain usually do not include work-life balance purposes.

After analysing multi-employer and company collective agreements in the four sectors analysed by the TWING project, some trends have been highlighted. The ICT consultancy sector has the lowest number of telework provisions regulated through collective bargaining. In this sector, collective agreements usually provide total flexibility for teleworkers to organise their working time. However, collective bargaining barely addressed other dimensions such as telework access or occupational health and safety.

Collective agreements in the financial sector are more likely to provide preferences of access to a telework arrangements, and a census of teleworkable jobs is often required. The possibility to regulate occasional telework has been obtained in multi-employer collective agreements. This sector usually provides specific measures for enforcing the right to disconnect and regulates data protection in a greater extent than other sectors.

In the chemical sector there are specific measures for enforcing the right to disconnect. In this sector, profiles of teleworkers may be required before engaging in a telework arrangement (requiring professional and personal skills, such as responsibility and flexibility). Full-time telework is often not allowed.

Finally, in the public administration full-time telework is not allowed. This sector stands out for providing periodic public calls for accessing in a teleworkable job position and for not providing any kind of compensation of costs. Specific measures for enforcing the right to disconnect are provided. Teleworking in the public sector is often promoted claiming for societal reasons, such as demographic decline and modernization of work.

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